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Contracts Department  
1220 Pacific Highway, Building 127, Room 112  
San Diego, CA 92132-5190

CONTRACT NO. N68711-98-D-5713  
CTO No. 0023

**DRAFT**

**2006 FIRST SEMIANNUAL POST-CLOSURE  
INSPECTION AND MAINTENANCE REPORT**

**June 19, 2006**

**INSTALLATION RESTORATION PROGRAM SITE 7  
(FORMER STATION LANDFILL)  
NAVAL WEAPONS STATION SEAL BEACH  
SEAL BEACH, CALIFORNIA**

**DCN: FWSD-RAC-06-0957**

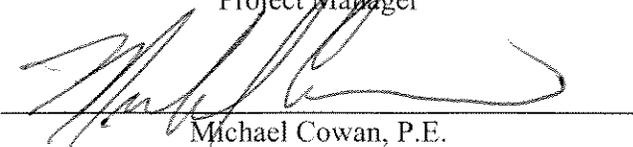
Prepared by:



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## ABBREVIATIONS AND ACRONYMS

bgs	below ground surface
DON	Department of the Navy
IR	Installation Restoration
IRP	Installation Restoration Program
NAVFAC SW	Naval Facilities Engineering Command, Southwest
NAVWPNSTA	Naval Weapons Station
NTCRA	non-time-critical removal action
PCIMP	Post-Closure Inspection and Maintenance Plan
SBNWR	Seal Beach National Wildlife Refuge
TtEC	Tetra Tech EC, Inc.
TtFW	Tetra Tech FW, Inc.

## 1.0 INTRODUCTION

This report describes the results and findings of the 2006 first semiannual post-closure inspection conducted at the Installation Restoration Program (IRP) Site 7 Area 1, also referred to as the Former Station Landfill, located at Naval Weapons Station (NAVWPNSTA) Seal Beach in Seal Beach, California (Figures 1-1 and 1-2). The post-closure inspection was conducted on February 14, and subsequent periodic inspections and site visits were conducted on March 8, April 9, April 18, and May 9, 2006. The inspections were conducted in accordance with procedures outlined in the Post-Closure Inspection and Maintenance Plan (PCIMP) (Tetra Tech FW, Inc. [TtFW], 2004a). The PCIMP (TtFW, 2004a) describes the procedures and requirements for post-closure inspections and maintenance activities for IRP Site 7 Area 1.

A Registered Civil Engineer (CE-41963) in the state of California, with experience in landfill design and site development, conducted the landfill cover inspections. The report was prepared under the direct supervision of a Registered Civil Engineer. This report contains information generated during the February 14, 2006, inspection, and subsequent inspections and site visits conducted following several rainfalls during site visits in March and April 2006.

The purpose of this report is to document the condition of the landfill cover and access road, any changes to the landfill cover such as settlement, changes to the surface water management system, and the condition and performance of the vegetation cover that was found during the late winter and early spring of 2006 inspections. Several rainfall events had occurred following last year's inspections that were conducted in November 2005 (prior to the start of the rainy season).

The monitoring and inspection of the landfill cover, drainage, and vegetation cover conducted on February 14, is the first semiannual monitoring conducted at IRP Site 7 for the year 2006. The inspection was conducted as part of 3 years of monitoring and inspection described and proposed in the PCIMP (TtFW, 2004a). This report will be kept on file with the NAVWPNSTA Installation Restoration (IR) Program Coordinator and NAVWPNSTA Seal Beach Administration Records. Copies will also be kept in the Naval Facilities Engineering Command, Southwest (NAVFAC SW) Administrative Record files. This report includes a description of inspections conducted, documents the monitoring and inspection results and findings, and provides recommendations.

This report documents the condition of the cover at the time of the inspection to ensure that the soil cover is 1) functioning adequately to isolate the buried waste from the surface, 2) that it continues to provide adequate drainage and minimize erosion of the cover, and 3) that any settlement and subsidence of the cover are not jeopardizing the cover integrity. The inspections conducted during this reporting period focused on the functional aspects of the cover. Therefore, the soil cover was inspected to document whether it is intact and free of major cracking (defined as cracks 2 inches or wider, deeper than 12 inches, and longer than 20 feet). The cover was also

inspected to detect erosion (deeper than 6 inches) and surface depressions that could cause ponding or any unusual surface conditions. A visual inspection of surface drainage swales and slopes was also conducted by grid walking. The vegetation cover was inspected to document any soil losses due to precipitation, lack of vegetation cover, and winds, and to identify the causes of erosion problem areas. The vegetation inspection also focused on characterizing the vegetation species composition and vegetation cover at the site.

The pertinent PCIMP (TtFW, 2004a) inspection forms completed during the inspections are attached as Appendix A to this report. Photographs taken during the inspections are provided in Appendix B.

## **1.1 SITE HISTORY AND BACKGROUND**

This section describes the facility and site locations and provides a description of the past history of operations at IRP Site 7, along with a brief description of the nature and extent of the contamination.

IRP Site 7 consists of six distinctive areas (designated as Areas 1 through 6) totaling approximately 33 acres located near the southern boundary of NAVWPNSTA Seal Beach and at the eastern boundary of the Seal Beach National Wildlife Refuge (SBNWR) (Figure 1-2). Landfill activities were reportedly conducted at the site from approximately 1955 to 1973. A large variety of wastes generated by NAVWPNSTA Seal Beach during the period of active landfilling may have been buried in trenches at IRP Site 7. Almost any type of waste generated on the station may have been disposed of at IRP Site 7. The major types of waste reportedly disposed of in the landfill include small, mostly empty containers that once contained paints, petroleum products, various solvents, used rags, batteries, asbestos, and inert construction debris.

Area 1 lies in the northeast portion of the IRP Site 7. It covers approximately 8 acres. Most of the waste disposal and landfilling activities took place in Area 1 in a series of unlined trenches lying in an east-west orientation (Naval Energy and Environmental Support Activity, 1985). Exploration during a supplemental characterization indicated that the depth of the debris varied between 5.5 and 9 feet below ground surface (bgs), with an average depth of 6.4 feet bgs (Southwest Division, Naval Facilities Engineering Command, 1999).

The Department of the Navy (DON) completed a non-time-critical removal action (NTCRA) at IRP Site 7 in April 2004. The intent of the NTCRA was to minimize any potential threats to human health and the surrounding environment. The removal action decision for IRP Site 7 was documented in the joint *Final Action Memorandum/Non-Time-Critical Remedial Action Plan at the Naval Weapons Station Seal Beach, California, Site 7 and Site 4 Areas of Potential Concern 1A and 2A*, prepared by the DON (CH2M Hill, 2004).

Under the DON's directive, Tetra Tech EC, Inc. (TtEC), as General Contractor, implemented the removal action at the site under Remedial Action Contract Number N68711-98-D-5713. The removal action was conducted in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act and National Oil and Hazardous Substances Pollution Contingency Plan requirements.

The removal action at IRP Site 7 Area 1 involved repair to the existing soil cover by placing additional cover in areas where waste was exposed or there was cover thickness deficiency. The intent of the removal action at IRP Site 7 Area 1 was to repair the existing landfill soil cover and ensure a minimum of 2 feet of soil cover over the buried waste, thus, preventing direct contact with buried waste and eliminating the potential migration of contamination through windblown dust and surface runoff. Removal action at the remaining areas of IRP Site 7 involved removal of buried and surface debris. The removal action at IRP Site 7 (Areas 1 through 6) is documented in the *Final Project Closeout Report, Non-Time-Critical Remedial Action Installation Restoration Site 7 (Station Landfill) and Site 4 (Perimeter Road AOPCs 1A and 2A), Naval Weapons Station Seal Beach, California* (TtFW, 2004b). Only Area 1 (Former Station Landfill) requires post-closure inspection and maintenance.

A PCIMP (TtFW, 2004a) was developed following the completion of the removal action to describe the post-closure annual inspections and maintenance activities for IRP Site 7 Area 1.

Based on the recommendations made in the *Final 2005 First Semiannual Post-Closure Inspection and Maintenance Report* (TtEC, 2005), landfill cover maintenance was conducted to repair several settlement and ponding areas at the western portion of the landfill and to reseed and revegetate the western portion following the regrading and repairs of the settlement areas. Landfill maintenance was conducted in September 2005.

## **1.2 SCOPE OF FIRST 2006 SEMIANNUAL INSPECTION**

This report addresses landfill cover maintenance, cover inspection, vegetation inspection, and drainage inspections conducted as part of the first semiannual inspection for 2006. This report and the inspections conducted during this event do not include groundwater monitoring, landfill gas monitoring, or leachate monitoring.

The DON has developed a groundwater monitoring program for IRP Site 7 to monitor the status and condition of groundwater at this site, which is currently being implemented at the landfill by another DON consultant. Hence, groundwater monitoring data, findings and recommendations are not addressed in this report.

The IRP Site 7 landfill does not have a landfill gas control, recovery or emissions and migration monitoring system. There are no perimeter landfill gas migration monitoring wells at this site. Previous investigations conducted at IRP Site 7 have indicated insignificant landfill gas at this

site (CH2M Hill, 2002). No surface or subsurface emissions of landfill gas, in particular methane gas, have been detected at IRP Site 7 during previous site investigations.

The IRP Site 7 landfill does not have a liquid management system and none is planned for this site. The site does not produce any liquids associated with collection, monitoring and disposal of landfill gas condensate, groundwater seepage, leachate collection system, groundwater extraction wells, or groundwater storage tanks and sumps.

### **1.3 LAND USE CONTROL**

Currently, there are no structures or buildings present on the site and none are planned for the future. No regular station activities have taken place at IRP Site 7 Area 1. Future developments or agricultural activities on the landfill are very unlikely. The future land use at this site is open space, and the site will continue to be maintained as such.

## **2.0 SOIL COVER MAINTENANCE AND INSPECTION**

This section addresses and describes landfill inspections conducted on February 14, 2006, and subsequent periodic inspections conducted on March, 8, April 9, and April 18, 2006, of the IRP Site 7 landfill cover soil and cover vegetation. The inspection and field observation results were evaluated relative to the performance standards and requirements provided in the PCIMP (TtFW, 2004a). No maintenance activities were conducted during this reporting period.

The purpose and the primary function of the soil cover are to isolate the buried waste from the surface, promote drainage and minimize erosion or abrasion of the cover, and accommodate settlement and subsidence so that the cover integrity is maintained. In order to perform these functions, the soil should remain intact and free of major cracking (defined as cracks 2 inches or wider, deeper than 12 inches, and longer than 20 feet), erosion (deeper than 6 inches), and surface depressions that could cause ponding.

### **2.1 INSPECTION PROCEDURES**

Routine visual inspection of the soil cover was conducted on February 14, 2006, and inspections were conducted during subsequent site visits following major rain events. A California-registered Civil Engineer performed the visual inspections of the soil cover. The following inspection procedures were followed in accordance with the PCIMP:

- Inspection and observation for any surface cracking, ponding or unusual surface conditions
- Inspection and observation of all surface drainage swales and slopes (All slopes and drainage areas were visually inspected in detail by grid walking and documented on Forms 101 and 102 in Appendix A.)

### **2.2 SUMMARY OF FIELD OBSERVATIONS**

No cover damage was detected or identified during the February 14, 2006, inspections and subsequent site visits. No slope failures due to stormwater runoff were identified. No waste exposure due to lack of soil cover, unstable cover, or unusual surface conditions were identified or observed during the inspections. No rainwater ponding areas were observed.

The soil cover in the western portion of the landfill that was reworked, regraded, and reseeded in September of 2005, prior to the rainy season or fall of that year, has not produce adequate vegetative ground coverage in the western portion of the landfill.

No localized settlement/depressions were observed during the inspections. No wet areas, standing water, and depressions with ponded water were noted over the landfill during the

inspection events. The landfill cover was determined to be stable, and no settlements were noted during the inspections.

### **2.3 SOIL COVER FINDINGS AND RECOMMENDATIONS**

The eastern half of the landfill appears to be in good condition with good vegetative soil cover and was found to satisfy the requirements of the PCIMP (TtFW, 2004a) and project specifications. The western half of the landfill cover was regraded and reseeded in September 2005. The soil did not generate adequate vegetative ground cover during the wet season or current spring growing season. The entire western portion of the landfill (an area of approximately 3.5 acres) that was regraded, does not have adequate ground cover to prevent future soil erosion/loss that could be triggered by heavy rain or excessive winds. Figure 2-1 shows the approximate limits of the western portion of the landfill which lack vegetation.

There were no unstable surface depressions, deep cracks, soil loss, or excessive rodent burrowing observed during the February inspections. No depressions or ponding of rainwater were observed in the cover during the inspections.

No vector controls for the soil cover will be required at this time.

### 3.0 VEGETATION COVER MAINTENANCE AND INSPECTION

The *Final 2005 First Semiannual Post-Closure Inspection and Maintenance Report* (TtEC, 2005) recommended that topsoil maintenance (topsoil amendment) and supplemental seeding be initiated immediately due to prevalence of areas (in particular in the western portion of the landfill) that contained greater than 20 percent bare grounds.

In September 2005, the western portion of the landfill cover was reseeded following backfilling of the settlement areas and depressions and regrading of this portion of the landfill. The purpose and the primary function of the vegetative cover are to provide erosion control and visual enhancement across the landfill top and slopes. The vegetation cover at IRP Site 7 Area 1 was designed to evolve into a natural climax vegetation community, which will enable long-term succession of the vegetation to blend with the natural character of adjacent open spaces. Restoration of the vegetation cover at the IRP Site 7 landfill, following the completion of the cover maintenance at this site, consisted of an application of a native site-specific botanical species seed mix, which was based on substantial local vegetation data, as well as general knowledge from involved resource agencies. The vegetative cover is intended to turn green during the rainy season and is expected to fade to brown during the dry season. The plants will need to survive on seasonal rainfall.

The following seed mix was used for the landfill cover:

- *Hordeum jubatum* – 4 pounds per acre
- *Heterotheca grandiflora* – 4 pounds per acre
- *Lotus scoparius* – 3 pounds per acre
- *Lasthenia glabrata* (annual flower) – 1 pound per acre
- *Camissonia cheiranthifolia* (annual plant/ground cover) – 2 pounds per acre

The seed mix was applied on 4- to 6-inch-thick topsoil placed over the compacted fill and over the entire western portion of the regraded landfill surface.

#### 3.1 PROTECTIVE VEGETATION COVER

During the February, March and April 2006 inspections, the overall condition of the vegetation growth on the eastern half of the landfill cover was observed to be satisfactory. The western portion of the landfill had no significant vegetative growth. To address possible future soil loss due to erosion in this area, silt fences were constructed along the sheet flow drainage paths. No significant amounts of silt buildup were observed along the silt fences that were erected at the site in September 2005. There was no evidence of soil cover erosion during the inspection events and

subsequent site visits, mainly because the reseeded cover maintenance was completed with a mulch mix that protected the soil cover during the rainy season.

### **3.2 VEGETATION COVER FINDINGS AND RECOMMENDATIONS**

The vegetation on the eastern portion of the landfill was in satisfactory condition; however, the western portion lacks adequate coverage. Deep rooting vegetation was not observed during the inspections. The reseeded of the western half of the landfill cover, conducted in September 2005, has not produced any significant vegetative growth. Therefore, the vegetative growth over this portion of the landfill would have to be re-evaluated. Possible options would be to reseed the area with a mix that will provide better and faster growth coverage. Temporary irrigation may be required to establish the new seed mix if applied too late in the growing season. Topsoil sampling test may also be warranted to review soil conditioning, if needed.

The most recent examination of the western portion of the site (conducted on May 9, 2006) indicates that some germination is occurring, and it is possible that continued growth may result in a satisfactory cover (see pictures presented in the last slide of the photographic log in Appendix B). If it is determined that additional seeding is required, it is recommended that small test plots to be seeded with additional plant species to determine which species might be best adapted to the soils of the area that are exhibiting poor growth. The test plots could be completed at a relatively low cost and would provide information needed to ensure a successful vegetation cover.

## **4.0 SURFACE WATER MANAGEMENT SYSTEM INSPECTION**

The scope, data summary and evaluation of surface water management are provided herein.

### **4.1 SCOPE OF SURFACE WATER MANAGEMENT SYSTEM INSPECTION**

This section of the report addresses and describes the observations made of the surface water management system during the February 14, 2006, and subsequent periodic inspections. The inspections included the following:

- All surface drainage swales and slopes were visually inspected.
- The visual inspection included inspection of the cover system for any eroded areas (no erosions deeper than 6 inches were observed).
- Inspection and observation of ponding areas and surface drainage conditions were conducted (no ponding of water or depressions were observed).

The landfill cover inspection conducted on February 14, 2006, was the first semi-annual inspection conducted subsequent to the cover maintenance performed in September 2005. The inspections were conducted following several rainfalls, which occurred during early 2006. One purpose of the inspections was to identify any failure of the surface drainage and sheet flow system, paying attention in particular to observe any cover erosions, wet or saturated cover soils, ponding or areas where there is a potential for increased infiltration.

### **4.2 SUMMARY OF FIELD OBSERVATIONS**

No pollutant-to-stormwater discharges were noted in IRP Site 7 Area 1 as of February 14, 2006, and no soil cover washouts or areas of heavy erosion were observed. Inspection observations were documented in the field on Form 102 and included in Appendix A.

The eastern half of the landfill did not show any evidence of soil loss. This indicates that the vegetation and ground cover in this area have been effective in minimizing soil erosion. The western portion of the landfill cover had no vegetative ground cover since it was regraded and reseeded in September 2005. To prevent or minimize soil loss during the rainy season, new silt fences were erected along the southern and western boundaries and along the sheet flow path over the landfill. No areas of erosion were noted at IRP Site 7 Area 1.

### **4.3 FINDINGS AND RECOMMENDATIONS**

Neither cover system washout nor waste exposure were observed during the February 14, 2006, inspection event and subsequent periodic inspections conducted in March and April. The surface water drainage system complied with the landfill cover system performance criteria described in

the PCIMP (TtFW, 2004a). Maintenance corrective actions conducted in September 2005 corrected ponding and the shallow depressions in the western portions of the landfill. The corrective measures implemented in September 2005 have resulted in providing adequate continuous sheet flow runoff and minimizing ponding during the rainy season.

## **5.0 LANDFILL SURVEY**

The scope, data summary and evaluation of landfill settlement are provided herein.

### **5.1 SURVEY SCOPE**

This section of the report addresses settlement surveys of the landfill as it relates to the performance of the cover system.

### **5.2 SUMMARY OF FIELD OBSERVATIONS**

Visual site inspection findings are documented in photographs taken of the site condition and presented in Appendix B and described below. No major earthquakes and no sloughing, cracks, or cover deformation occurred during this reporting period that would require a topographic survey by a licensed land surveyor.

### **5.3 DATA EVALUATION**

A settlement-related visual site inspection was conducted for routine cover maintenance repairs. No depressions, settlements, or ponding of rainwater were observed during the first semiannual inspections conducted in early 2006.

### **5.4 FINDINGS AND RECOMMENDATIONS**

Currently, there are no areas that need repairs or corrective action.

The landfill cover grading provides adequate sheet flow drainage to minimize future ponding.

## **6.0 ACCESS ROADS MAINTENANCE AND INSPECTION**

The scope, data summary and evaluation of access roads are discussed herein.

### **6.1 ACCESS AND BENCH ROADS SCOPE**

This section of the report addresses and describes observations made during the February 14, 2006, inspection of the access roads.

### **6.2 DATA EVALUATION**

The unpaved access road along the northwest and west side of the IRP Site 7 was found to be well-graded and adequately maintained and would continue to provide access to the site during all weather conditions. The access road along the north side of the site is partially paved and partially covered with gravel and, as a result, would provide the necessary safe access to the site in the event of an emergency.

### **6.3 FINDINGS AND RECOMMENDATIONS**

The access roads around the landfill were found to be in good condition and continue to provide adequate access to the landfill for maintenance and inspections.

No unstable ground or surfaces and no major erosion or loss of road base were observed during the February 2006 inspections of the access roads along the north and west sides of IRP Site 7. No maintenance is recommended for the access roads.

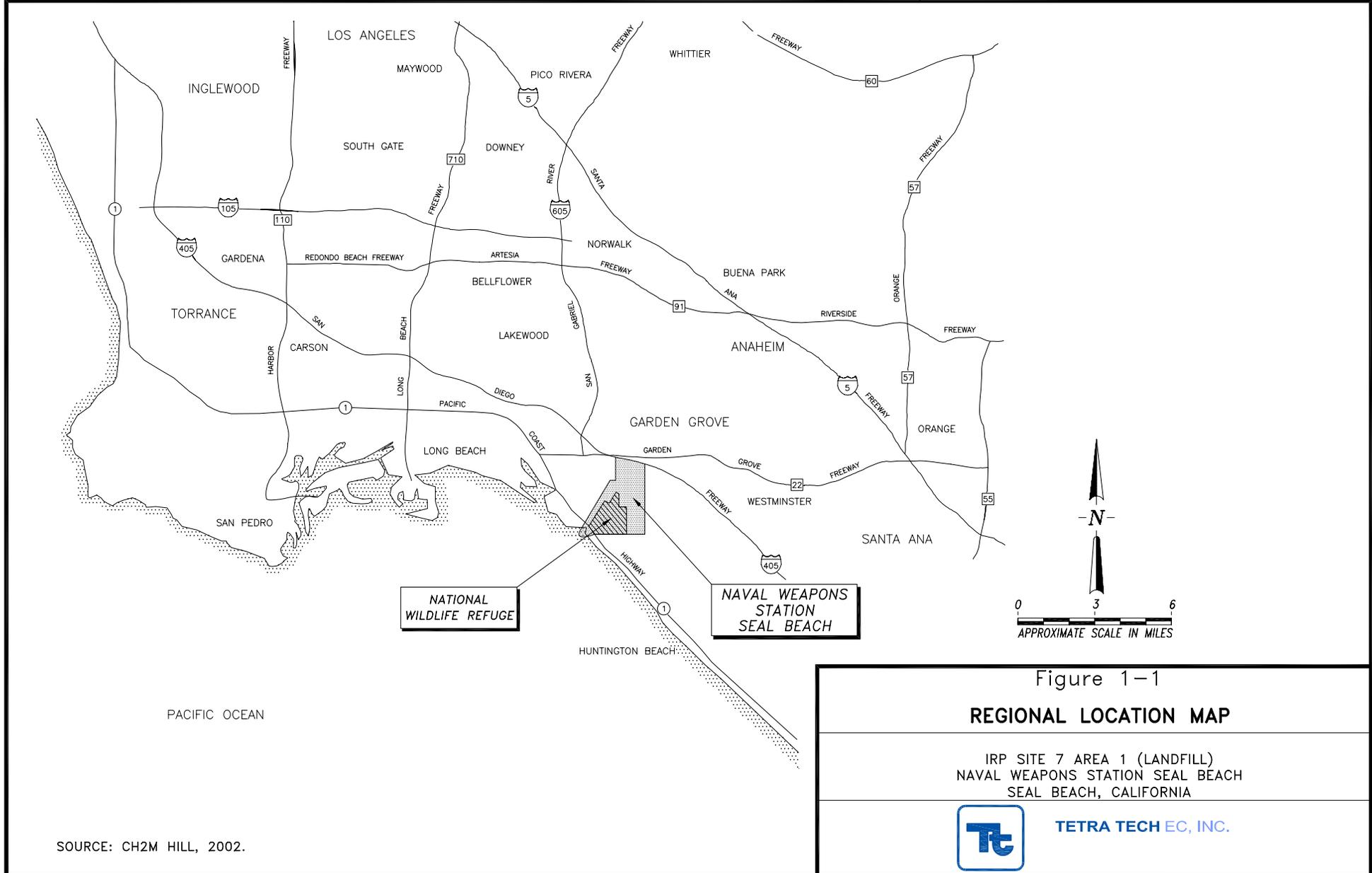
## 7.0 REFERENCES

- CH2M Hill. 2002. *Final Engineering Evaluation/Cost Analysis (EE/CA), Non-Time-Critical Removal Action for Site 7, Station Landfill, Naval Weapons Station, Seal Beach, California*. March 12.
- \_\_\_\_\_. 2004. *Final Action Memorandum/Non-Time-Critical Remedial Action Plan at the Naval Weapons Station Seal Beach, California, Site 7 and Site 4 Areas of Potential Concern 1A and 2A*. January 13.
- Naval Energy and Environmental Support Activity. 1985. *Initial Assessment Study of Naval Weapons Station, Seal Beach, California*. Naval Energy on Environmental Support Activity, Port Hueneme, California. February.
- Southwest Division, Naval Facilities Engineering Command. 1999. *Supplemental Characterization Report Installation Restoration Site 7, Naval Weapons Station, Seal Beach, California*. 21 May.
- Tetra Tech FW, Inc. (TtFW). 2004a. *Final Post-closeout Inspection and Maintenance Plan, Installation Restoration Program Site 7 (Station Landfill), Naval Weapons Station Seal Beach, Seal Beach, California*. December 8.
- \_\_\_\_\_. 2004b. *Final Project Closeout Report, Non-Time-Critical Remedial Action Installation Restoration Site 7 (Station Landfill) and Site 4 (Perimeter Road AOPCs 1A and 2A), Naval Weapons Station Seal Beach, Seal Beach, California*. August 20.
- Tetra Tech EC, Inc. (TtEC). 2005. *Final 2005 First Semiannual Post-Closure Inspection and Maintenance Report*. September 28.

## **FIGURES**

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SOURCE: CH2M HILL, 2002.

Figure 1-1  
**REGIONAL LOCATION MAP**

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IRP SITE 7 AREA 1 (LANDFILL)  
 NAVAL WEAPONS STATION SEAL BEACH  
 SEAL BEACH, CALIFORNIA

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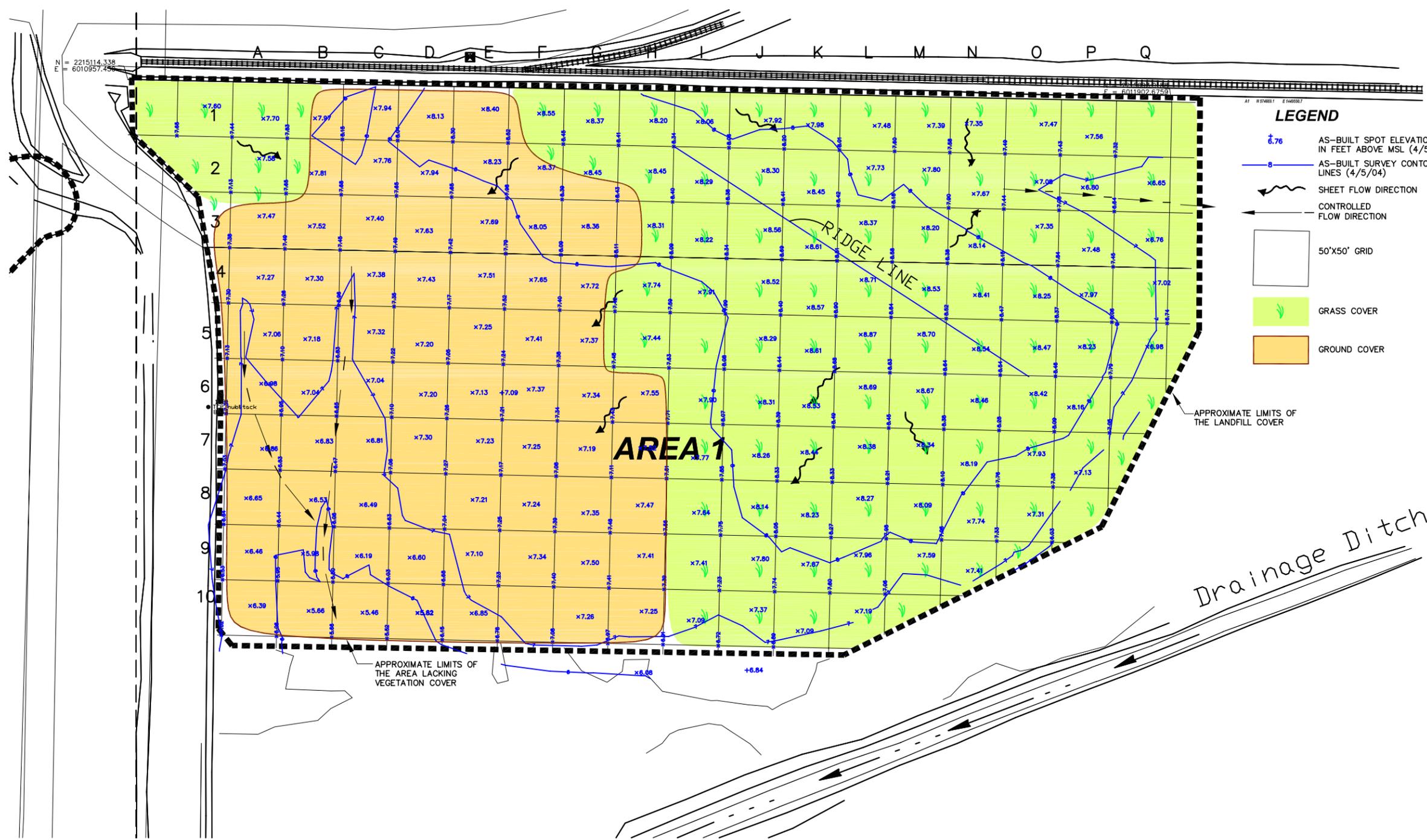
 **TETRA TECH EC, INC.**

## Figure 1-2

This detailed station map has been deleted from the Internet-accessible version of this document as per Department of the Navy Internet security regulations.

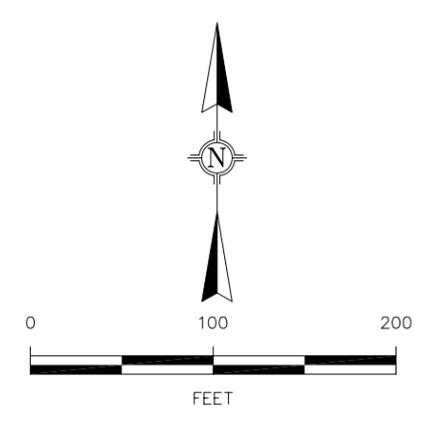
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**LEGEND**

- x 6.76 AS-BUILT SPOT ELEVATIONS IN FEET ABOVE MSL (4/5/04)
- AS-BUILT SURVEY CONTOUR LINES (4/5/04)
- SHEET FLOW DIRECTION
- CONTROLLED FLOW DIRECTION
- 50'X50' GRID
- GRASS COVER
- GROUND COVER



INSPECTOR: \_\_\_\_\_  
 INSPECTION DATE: \_\_\_\_\_

Figure 2-1  
**VEGETATION COVER DURING  
 FEBRUARY 2006 INSPECTIONS**

POST-CLOSEOUT INSPECTION AND MAINTENANCE PLAN  
 IRP SITE 7 AREA 1 (LANDFILL)  
 NAVAL WEAPONS STATION SEAL BEACH  
 SEAL BEACH, CALIFORNIA

**TETRA TECH EC, INC.**

**APPENDIX A**  
**INSPECTION FORMS 101, 102, AND 103**

FORM 101

SOIL COVER INSPECTION

Type of Inspection: Semiannually

Inspector Name: Michael Cowan, PE

Affiliation (Name of Navy Consultant or Representative): TtEC

Date: February 14, 2006

Time: 10:00

Weather Condition: Sunny/Clear

OBSERVATION TYPE AND DETAILED DESCRIPTION:

- Erosion
- Sloughing/Sliding
- Cracks/Fissures
- Subsidence/Depression
- Evidence of Excessive Borrowing Rodents
- Others

Western half lacking adequate ground cover for erosion control, however no soil losses of concern during the inspection were noted.

LOCATION OF OBSERVATION (Show on the attached Figure A-1): Western half of landfill showed no signs of heavy soil erosion or sediment build up in silt fences with lacking ground cover.

RECOMMENDATIONS: Monitor high potential of soil loss during storm event in areas lacking good ground cover vegetation.

REMARKS: There has been no major storm event during this current wet season – monitor area lacking vegetation until May – provide hay cover or vegetative blanket – if needed during the remaining wet season. Reseed in spring 2006.

Signature

Site Inspector/Engineer

*[Handwritten signature]*

Date February 14, 2006

NAVWPNSTA Seal Beach representative (IR Program Coordinator or ROICC)

*[Handwritten signature]*

Date May 07, 2006



FORM 102

STORMWATER/EROSION CONTROL INSPECTION

Date: February 14, 2006 Name of Inspector/Engineer: Michael Cowan, PE

Observations:

- 1. Ponding 5. Lack of Positive Drainage
2. Downstream Drainage Obstructions 6. Silt Deposition at Low Areas
3. Cover Washouts 7. Vegetation Washout
4. Gully Erosion

TYPE OF DEFICIENCY: Ground cover lacking - area recently seeded did not mature to provide adequate ground cover for erosion control

LOCATION OF OBSERVATION (show on attached Figure A-1): Western half of landfill area lacking ground cover.

RECOMENDATIONS: Review seed mix design provide a seed that will produce quick cover to prevent storm water and wind erosion/soil loss.

COMMENTS: Seed mix design provided native vegetation/plants that were slow to grow. The reseed mix needs to add faster growing plants or grasses.

Signature

Site Inspector/Engineer

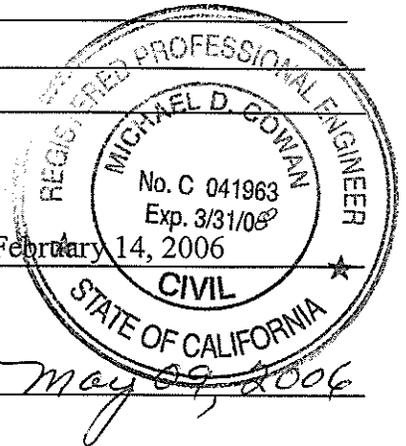
[Handwritten signature of Michael D. Cowan]

Date February 14, 2006

NAVWPNSTA Seal Beach representative (IR Program Coordinator or ROICC)

[Handwritten signature of David Stanley]

Date May 09, 2006



# FORM 103

## PROTECTIVE VEGETATIVE COVER INSPECTION

**Location:** Seal Beach Site 7 **Date and Time:** February 14, 2006 10:00 am

**Boundary Roads:** \_\_\_\_\_ **Inspector:** \_\_\_\_\_

**General Soil Condition:** Wet \_\_\_\_\_ Dry \_\_\_\_\_ **Weather:** \_\_\_\_\_

ITEM	COMMENTS	RECOMMENDATIONS
Grass Cover	None on the western portion of the landfill	Reseed with new mix
Shrubs	No deep rooted shrubs were observed	
Vegetation Loss with Soil Erosion	Not applicable	
Non-native Plants	Not applicable	
Fire Hazard, Dead Vegetation, and Deep Rooted Plants	Not applicable	

Signature

Site Inspector/Engineer *[Signature]*

Date February 14, 2006

NAVWPNSTA Seal Beach representative (IR Program Coordinator or ROICC)

*[Signature]*

Date May 09, 2006



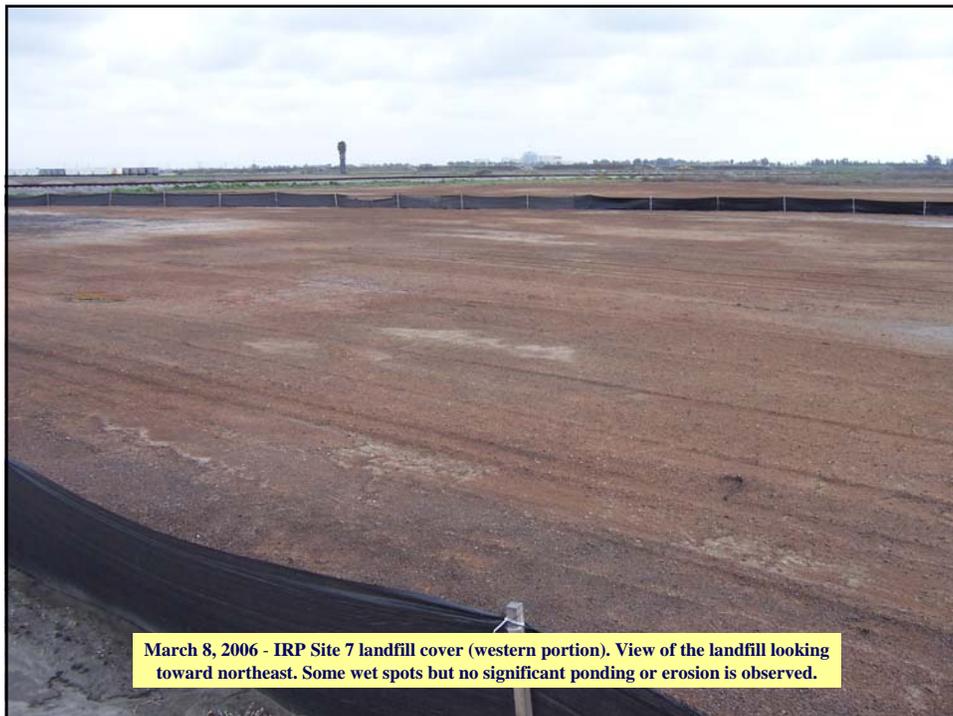
**APPENDIX B**  
**PHOTOGRAPHIC LOG**

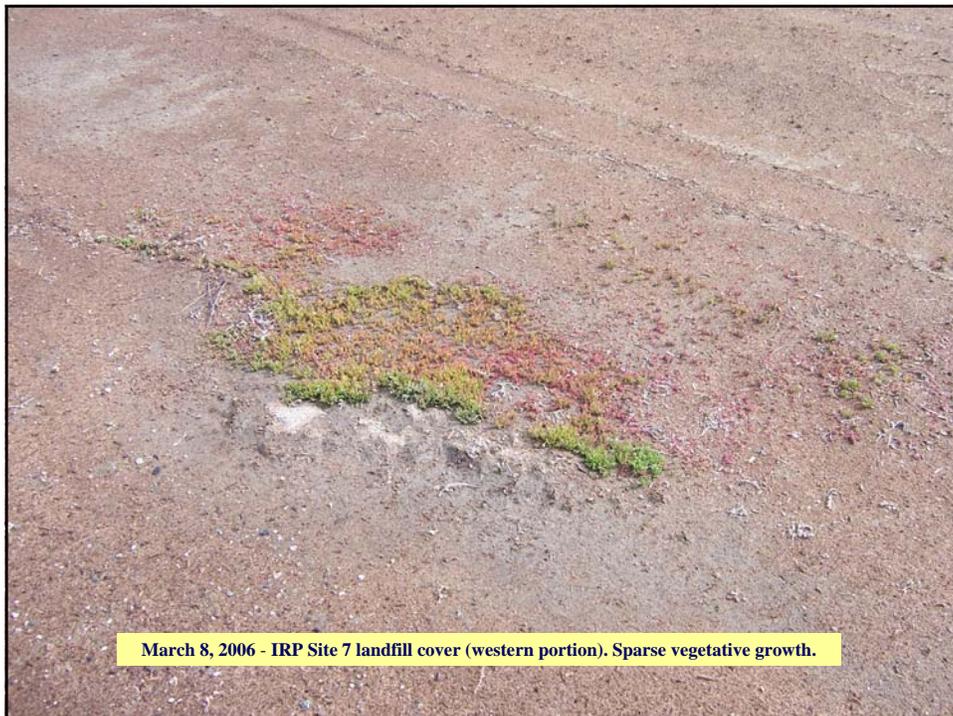


March 8, 2006 - IRP Site 7 landfill cover (western portion). View of the landfill looking toward south. Some wet spots but no significant ponding is observed.



March 8, 2006 - IRP Site 7 landfill cover (western portion). View of the landfill looking toward southeast. Some wet spots but no significant ponding or erosion is observed.







April 8, 2006 - IRP Site 7 landfill cover (western portion). View of the landfill looking toward southeast and the southern silt fence. Some wet spots but no significant ponding or erosion is observed.



April 8, 2006 - IRP Site 7 landfill (western portion). View of the landfill looking toward east. Some sparse vegetative growth is observed.









April 18, 2006 - IRP Site 7 landfill cover (western portion). View of the eastern portion of the landfill. Signs of germination and sprouting are observed.



April 18, 2006 - IRP Site 7 landfill cover (eastern portion). View of the eastern portion of the landfill looking toward southwest. No vegetative growth is observed.

