

**DRAFT**

**ACTION MEMORANDUM/REMOVAL ACTION WORK PLAN  
NON-TIME-CRITICAL REMOVAL ACTION FOR**

**INSTALLATION RESTORATION SITE 44/45  
NAVAL WEAPONS STATION SEAL BEACH  
ORANGE COUNTY, CALIFORNIA**

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Site Status:	Non-National Priorities List
Category of Removal:	Non-Time-Critical Removal Action
Site ID:	IR Site 44/45
Date:	June 30, 2006

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## **ACRONYMS/ABBREVIATIONS**

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ARAR	applicable or relevant and appropriate requirement
bcy	bank cubic yard
bgs	below ground surface
Cal. Code Regs.	California Code of Regulations
Cal. Health & Safety	California Health and Safety Code
CDFG	California Department of Fish and Game
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
C.F.R.	Code of Federal Regulations
CNDDB	California National Diversity Database
ch.	chapter
COPC	chemical of potential concern
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DON	Department of the Navy
DTSC	(California Environmental Protection Agency) Department of Toxic Substances Control
EE/CA	engineering evaluation/cost analysis
ELCR	excess lifetime cancer risk
ESA	Endangered Species Act
Exec. Order No.	Executive Order Number
FFSRA	Federal Facility Site Remediation Agreement
Foster Wheeler	Foster Wheeler Environmental Corporation
FSI	focused site inspection
HI	hazard index
HQ	hazard quotient
IAS	initial assessment study
IR	Installation Restoration
IRP	Installation Restoration Program

## ACRONYMS/ABBREVIATIONS (continued)

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lcy	loose cubic yard
mg/kg	milligrams per kilogram
NACIP	Navy Assessment and Control of Installation Pollutants (Program)
NAVWPNSTA	Naval Weapons Station
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NPL	National Priorities List
NTCRA	Non-Time-Critical Removal Action
NWR	National Wildlife Refuge
OU	Operable Unit
PRG	preliminary remediation goal
pt.	part
RAC	remedial action contractor
RAO	removal action objective
RAP	removal action plan
RCRA	Resource Conservation and Recovery Act
RFA	RCRA facility assessment
RWQCB	(California) Regional Water Quality Control Board
§	section
SCAQMD	South Coast Air Quality Management District
SDFE	Stationary Demilitarization Furnace Facility
SES-TECH	Sealaska Environmental Services LLC and Tetra Tech FW, Inc
STLC	solubility threshold limit concentration
SWMU	solid waste management unit
TCLP	toxic characteristic leaching procedure
tit.	title
UCL	upper confidence limit
ULBV	upper limit background value
U.S.C.	United States Code
U.S. EPA	United States Environmental Protection Agency
WET	California) Waste Extraction Test

Southwest Division  
Naval Facilities Engineering Command  
Contracts Department  
1220 Pacific Highway  
San Diego, California 92132-5190

## **DRAFT**

**ACTION MEMORANDUM/REMOVAL ACTION WORK PLAN FOR REMOVAL  
ACTION AT NAVAL WEAPONS STATION SEAL BEACH INSTALLATION  
RESTORATION SITE 44/45,  
SEAL BEACH, ORANGE COUNTY, CALIFORNIA**

Site Status: Non-National Priorities List

Category of Removal: Non-Time-Critical Removal Action

Site ID: IR Site 44/45

Date: June 30, 2006

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## **I. PURPOSE**

The purpose of this Action Memorandum/Removal Action Work Plan (hereinafter “Action Memorandum”) is to document, for the Administrative Record, the Department of the Navy’s (DON’s) decision to undertake a non-time-critical removal action (NTCRA) for nickel and zinc impacted sediments at Naval Weapons Station (NAVWPNSTA) Seal Beach (Figure 1) Installation Restoration Site (IR Site) 44/45, Former Waste Otto Fuel Drum Storage Area and Building 88 Floor Drain Outlet. The Department of Defense (DoD) has the authority to undertake Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response actions, including removal actions, under Title 42 United States Code (U.S.C.) Section (§) 9604, 10 U.S.C. § 2705, and federal Executive Order Number (Exec. Order No.) 12580. Furthermore, this Action Memorandum satisfies the requirements of California Health and Safety Code (Cal. Health & Safety Code), Chapter (ch.) 6.8.

This document is prepared in accordance with United States Environmental Protection Agency (U.S. EPA) instructions. These instructions are in the Superfund Removal Procedures: Action Memorandum Guidance (U.S. EPA 1990).

Generally, this entire process is also governed by the Federal Facility Site Remediation Agreement, (FFSRA). The FFSRA was signed in 1991 by the DON, California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) (Department of Health Services at that time), and California Regional Water Quality Control Board (RWQCB) Santa Ana Region. The FFSRA was amended in August 1994. IR Site 44 is part of Operable Unit (OU) 6 and IR Site 45 is part of OU 5. Both sites are included in the FFSRA. To the extent the FFSRA continues to be applicable, all activities related to IR Site 44/45 will be performed in accordance with the FFSRA.

The goal of the NTCRA is to reduce risk to ecological receptors from exposure to nickel and zinc-contaminated sediments at IR Site 44/45. To accomplish this goal, the DON is proposing to excavate, remove, and dispose of approximately 185 bank cubic yards (bcy) (in-place soil volume) of contaminated sediments at IR Site 44/45. This proposed action will eliminate the

identified pathways of exposure to current aquatic ecological receptors at the site. Excavated sediments will be transported to a permitted landfill for disposal.

This removal action is deemed consistent with National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Title 40 Code of Federal Regulations (C.F.R.) Part (pt.) 300, and Cal. Health & Safety Code ch. 6.8, based on the findings of “actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants” action (40 C.F.R. § 300.415 [b] [2] [ii]).

There are no nationally significant or precedent setting issues associated with this site.

## II. SITE CONDITIONS AND BACKGROUND

According to the Preliminary Assessment (PA) addendum, IR Site 44/45, which consists of overlapping Sites 44 and 45, was used as a storage area for storing drums of unused Otto fuel. The drums were stored in a bermed area in the northeast portion of the Building 88 compound from mid 1940s to the late 1970s. By late 1970s the unused Otto fuel was no longer stored in this area. No spillage was observed at this site. In the 1990s, Building 88 and the surrounding fenced compound were used for salvaging operations. Five underground storage tanks (UST), which were located in Building 88, were removed between 1991 and 1994. No leaks were reported during the removal of the tanks.

After being identified in the Addendum to the Preliminary Assessment (NEESA, 1990), Site 44/45 was investigated under OU 5 & OU 6 Site Inspection (SI) (Southwest Division, Naval Facilities Engineering Command [SWDIV], 1998a), Focused SI for OUs 5 and 6 (SWDIV, 1998b), Screening Ecological Risk Assessment for OUs 5 and 6 (SWDIV, 1999), and Phase II Focused SI (SWDIV, 2002). Environmental media investigated and documented in these reports include soil, groundwater, and sediment. It was concluded in the Phase II Focused SI that there are no significant risks to marine ecological receptors because of low levels of dissolved nickel and zinc in groundwater discharging into POLB Mitigation Pond 2. The exposure of soil to terrestrial receptors does not cause significant risks at Site 44/45. The SI report also concluded that the maximum and arithmetic mean concentrations of nickel and zinc in sediment collected from the drainage ditch exceeded the background level and ecological risk screening levels for sediment. This indicates possible ecological risks to aquatic life in the ditch. The sampling results of sediment samples are shown in Figure 2 (Attachment C).

NAVWPNSTA Seal Beach is part of the Commander Navy Region Southwest. The station provides fleet combatants with ready-for-use ordnance. Because of its geographic location, the station serves as a supply point for operating Navy and Marine Corps bases in southern California.

Site conditions and background information have been compiled from previous field investigations reports.

## **A. Site Description**

This section addresses U.S. EPA Removal Action Work Plan requirements.

### **1. Removal Site Evaluation**

The Navy began investigating potentially contaminated sites at NAVWPNSTA Seal Beach with the commencement of the 1985 initial assessment study (IAS) (NEESA 1985). The identification of potentially contaminated sites was based on the results of record searches, aerial photographs, field inspections, and interviews with NAVWPNSTA Seal Beach personnel. The IAS work was conducted under the Navy Assessment and Control of Installation Pollutants (NACIP) Program, which was instituted by the DON in response to the Department of Defense's (DoD's) Installation Restoration Program (IRP) requirement. With the passage of the Superfund Amendments and Reauthorization Act in 1986, the DON adopted the CERCLA terminology and process by replacing the NACIP program with the current IRP.

NAVWPNSTA Seal Beach and the DON have been actively engaged in the IR Program since 1980. There have been no previous removal actions taken at IR Site 44/45. The following summarizes the results of previous investigations conducted at IR Site 44/45.

In 1989, A.T. Kearney, Inc. performed a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) at NAVWPNSTA Seal Beach. The RFA identified and evaluated solid waste management units (SWMUs) and other areas of concern (AOCs) at NAVWPNSTA Seal Beach. During the assessment, 69 SWMUs and nine AOCs were identified. In the RFA, IR Site 44 is referred to as SWMU 14, the former waste Otto fuel drum storage area which was a bermed area behind Building 88 on the north side. There was no file evidence of releases from this unit. The RFA reported the Building 88 floor drain outlet at IR Site 45, referred to as SWMU No. 15 in the report, emptied into the tidal marsh at one time. However interviews with personnel on site indicated no knowledge of the drain referred to. Based on the quantity of material at Building 88 and the fact that the marsh areas are across Bolsa Avenue, the RFA report concluded that a release to the marsh seemed remote.

In 2002, CH2M Hill conducted a FSI Phase II at IR Site 44/45. The objective of the FSI Phase II was to determine the extent of metals (nickel and zinc) and PAHs both outside the drainage ditch and inside the drainage ditch and to screen for ecological and human-health risks. Surface soil samples outside the ditch were taken at a depth of 0.5 feet below ground surface (bgs) and the sediment samples inside the ditch were taken at a depth of 0 to 0.25 feet bgs. A total of 6 groundwater samples were also collected at IR Site 44/45. These samples were analyzed for dissolved metals. The results and conclusions are as follows:

- Total nickel and zinc were detected in all the surface soil samples collected at the IR Site 44/45. But neither nickel nor zinc was detected at concentrations above their respective ULBVs.
- The groundwater samples were only analyzed for nickel and zinc. Almost all samples contained total nickel and zinc at concentrations above their respective ULBVs.
- Dissolved nickel and zinc were also detected above ULBVs in at least one of the groundwater samples. The ULBVs were derived from dissolved metals results. From the surface soil and groundwater data, no correlation between the concentrations of nickel and zinc and the increasing distance from Building 88, was apparent. The metals in soils and groundwater do not show a concentration gradient towards the National Wildlife Refuge. (NWR)
- In sediments, inside the ditch, nickel and zinc were detected above their respective ULBVs in 40% of the samples.
- All PAHS except acenaphthene, acenaphthylene, dibenzo(a,h)anthracene, fluorine, and naphthalene were detected in at least one of the six sediment samples collected at Site 44/45. The maximum concentrations were detected at the sampling stations closest to the drainage outlet from Building 88.
- Except acenaphthene, acenaphthylene, dibenzo(a,h)anthracene, fluorine, fluoranthene, and naphthalene, all PAHs were detected in at least one of the 10 sediment samples collected at the IR Site 44/45.
- As the PAH concentrations in the surface soils were low and the soils are fine-

grained (silts and clays), the PAHs are not likely to impact the groundwater. Therefore, the groundwater migration pathway is not of concern.

- Based on the human health risk screening there are insignificant risks to human health from Chemicals of Potential Concern (COPCs) in the soil at IR Site 44/45. The likelihood of humans coming in contact with the sediments in the drainage ditch is minimal. Also, the groundwater at IR Site 44/45 is saline and not potable. Thus, the soil, sediment and groundwater pathways are incomplete and do not pose any risks to the humans at the Site.
- Based on the ecological risk screening, there is no significant risk to the ecological receptors from the soil. There are no significant risks to the aquatic ecological receptors because a significant amount of metals-contaminated groundwater is not being discharged to the POLB Mitigation Pond 2. The mitigation pond is on the north side of the railroad berm which is on the north side of IR Site 44/45. During the Phase II Focused Site Inspection (FSI) the concern was that groundwater had been impacted and potentially discharging to the PLOB mitigation pond. Sampling was performed to evaluate this concern. Results of the Phase II FSI indicated that the only area of ecological concern was the ditch on the south side of IR Site 44/45.
- There is a significant risk to the aquatic ecological receptors from the concentrations of nickel and zinc in the sediments at concentrations above ULBVs and sediment screening levels within the draining ditch.
- As a result, a removal action was recommended in the FSI Phase II for IR Site 44/45 in the area within the drainage ditch. Significant risks to aquatic ecological receptors from exposure to the sediments within the drainage ditch were the primary basis for this recommendation.

In 2004, MARRS Services, Inc. began preparation of the Engineering Evaluation/Cost Analysis (EE/CA) The Final EE/CA, 22 December 2005, was developed to identify and compare removal action alternatives for addressing elevated metal concentrations in sediments at IR Site 44/45.

## 2. Physical Location

NAVWPNSTA Seal Beach is approximately 26 miles south of the city of Los Angeles. It consists of about 5,000 acres of land along the Pacific Coast within the city of Seal Beach in Orange County, California. The cities that surround NAVWPNSTA Seal Beach include Seal Beach, Los Alamitos, Westminster, and Huntington Beach. NAVWPNSTA Seal Beach is bordered to the southwest by Anaheim Bay, to the north by Interstate 405 (San Diego Freeway), to the east by Bolsa Chica Street, to the west by Seal Beach Boulevard, and to the southeast by an Orange County flood control channel. Landing Hill, a low coastal hill, is located along the western edge of NAVWPNSTA Seal Beach. Adjacent to Landing Hill on the east is Sunset Gap, a wetlands composed of coastal salt marsh and tidal mudflats Figure 1 (Attachment C).

The primary mission of NAVWPNSTA Seal Beach is to provide material and technical support for ammunition, assigned weapons, and weapon systems; maintain and operate an explosive ordnance out-loading facility; and perform additional tasks as directed by Commander Navy Region Southwest.

The climate of the NAVWPNSTA Seal Beach area is typical of the Southern California coastal region. The adjacent Pacific Ocean has a moderating effect on temperatures. In the winter months, the maximum temperature usually ranges from the middle to high 50s (degrees Fahrenheit [<sup>o</sup>F]). In the summer months, maximum temperatures in the high 70s and low 80s are common, while low temperatures vary between the high 50s and the mid 60s <sup>o</sup>F (NEESA 1987).

The Seal Beach coastal area has an average rainfall of 10 to 12 inches, with the greatest rainfall occurring during the winter months. Prevailing winds at the stations are from the west. Occasionally, strong, dry, northeasterly winds descend mountain slopes during fall, winter, and early spring months. During the winter months, Santa Ana wind conditions are common. Santa Ana winds occur when high pressure builds in the Great Basin area of Utah and Nevada. The clockwise circulation around the high-pressure system produces north-to-northeast winds, which can persist from several hours to a few days and reach sustained speeds of up to 60 miles per hour (JEG 1995). The highest winds at NAVWPNSTA Seal Beach were recorded in association

with the winter and spring storms that invade southern California from the Pacific Ocean (NEESA 1987).

The ecological habitats at NAVWPNSTA Seal Beach include open water, tidal channels, mudflats, and salt marshes. More than 900 acres of NAVWPNSTA Seal Beach have been designated as the Seal Beach National Wildlife Refuge (NWR) (Figure 1). The NWR consists of a 700-acre tidal salt marsh and 200 upland acres. The main purpose of the NWR is to preserve and enhance the area's living resources. Recreational activities (including beach swimming, picnicking, and fishing) are authorized for military, retired military, and civilian personnel.

Potable water is supplied to NAVWPNSTA Seal Beach by the city of Seal Beach. Non-potable water used for agricultural purposes is supplied by on-station agricultural wells with screen intervals between 232 feet and 619 feet bgs. Because of the distance of these wells from the site (nearest well is approximately 4000 feet east of IR Site 44/45) and their screen intervals, contaminants at IR Site 44/45 are not expected to impact the water quality in these wells.

Approximately 1.24 miles west of IR Site 44/45 is the J. H. McGaugh Elementary School, located on the west side of Seal Beach Boulevard between Bolsa Avenue and Marlin Avenue. The area approximately 1.23 miles west of IR Site 44/45 is used for military housing.

### **3. Site Characteristics**

NAVWPNSTA Seal Beach is an operational facility owned and operated by the DON. Land use within the base is generally classified as a "military operating area" for both current and future use. Housing and personnel support, public works, and supply facilities are located in the southwestern corner of NAVWPNSTA Seal Beach.

In November of 2005 the removal action contractor, (RAC) Sealaska Environmental Services LLC and Tetra Tech FW, Inc (SES-Tech), consulted with local ecologists and resource management plans were reviewed regarding biological resources within the Seal Beach United States Geological Survey (USGS) 7.5-minute quad [California Department of Fish and Game (CDFG), 2005] to determine the locations and types of biological resources that could exist in the project impact areas within Naval Weapons Station Seal Beach. Information on species

occurrences was gathered from the California Natural Diversity Database (CNDDDB) maintained by CDFG. Contact was also made with the local DON ecologist, Bob Schallmann and is presented in Table F2-1 of Attachment C.

A pedestrian field survey of each of the three proposed remediation sites was conducted on November 10, 2005. The survey focused on identification and evaluation of potential impacts to the biological resources at each of the three locations.

The NWR's salt marsh includes common salt marsh plant species such as saltwort, pickleweed, alkali heath, saltgrass, and cordgrass. There are seven endangered and/or threatened species found in the vicinity of NWR. Of the seven special status species listed, two are plants and 5 are avian. Both special status plant species (salt marsh bird's beak and *Ventrua* marsh milk-vetch), are not known to inhabit the NWR's salt marsh, or observed in the vicinity of the proposed excavation areas. (Personal communications with SBNWR biologist, Bob Schallman, November 28, 2005)

A variety of marine and land birds inhabit the Seal Beach area. The NWR is also an essential part of the Pacific Flyway bird migration route. It includes habitat for five endangered bird species: the light-footed clapper rail, Belding's savannah sparrow, California brown pelican, western snowy plover and California least tern. These species inhabit, nest, and/or forage in the pickleweed stands, saltwater ponds, and open sandy areas of the salt marsh. (SES-TECH 2006)

A human health risk evaluation was previously conducted for Site 44/45 as part of the OUs 4 and 5 FSI. An assessment of this evaluation concluded that there were no significant risks to human health from COPCs in sediments or soil at Site 44/45 (SWDIV, 1998c)." The likelihood of humans coming in contact with sediments within the drainage ditch is minimal; therefore, the soil and sediment pathways are not of concern at Site 44/45. In addition, the groundwater pathway is incomplete because the groundwater at Site 44/45 is saline and not potable. Therefore, there are no human health risk concerns at Site 44/45 (CH2M Hill 2002).

#### **4. Release or Threatened Release of a Hazardous Substance, or Pollutant of Contaminant into the Environment**

Analytical results of samples collected from IR SITE 44/45 during the FSI Phase II indicated that metals were present at concentrations above the reporting limits in the sediment samples collected in the adjacent ditch. Summary statistics for the analytical results are presented in Table 2-1 of the EE/CA (Attachment B). Evaluation of the analytical results indicated that elevated metals concentrations in sediments presented an unacceptable risk to ecological receptors and nickel and zinc was the primary concern. (Section 2.5 of the EE/CA provides a more detailed explanation of the risk screening results.)

The only receptors of potential concern are the following terrestrial ecological receptors that live on or otherwise use IR Site 44/45.

- The California ground squirrel has been observed in terrestrial habitats throughout NAVWPNSTA Seal Beach; it spends a high percentage of time in the study area and its burrowing and foraging activities increase its chances of exposure from soil borne COPCs (CH2M Hill 2002).
- The American kestrel has also been observed in terrestrial habitats throughout NAVWPNSTA Seal Beach. Because the American kestrel is considered high on the food chain, its exposure potential to COPCs that biomagnify is increased through ingestion (CH2M Hill 2002).
- The clapper rail has been observed in terrestrial habitats in the NWR at NAVWPNSTA Seal Beach. Because the clapper rail spends a high percentage of time close to the study area; its exposure potential to COPCs increased through ingestion of soil/sediments and invertebrates (CH2M Hill 2002).
- The loggerhead shrike has been observed in the terrestrial habitats in the (NWR) at NAVWPNSTA Seal beach. The loggerhead shrike spends limited time in the study area; and feeds on insects, earthworms and aquatic life in the drainage ditch.

- Aquatic ecological receptors in the drainage ditch. Because the aquatic ecological receptors spend all the time in the study area; their exposure potential to COPCs is highly increased through inhalation and ingestion of sediments.

## **5. National Priorities List Status**

The National Priorities List (NPL) was developed by U.S. EPA and lists hazardous waste sites nationwide that pose the greatest risk to public health and, thus, warrant priority responses under CERCLA. NAVWPNSTA Seal Beach is not on the NPL, nor is it proposed to be added to the NPL.

Because IR Site 44/45 is included in the DoD IRP at NAVWPNSTA Seal Beach, it is being investigated in accordance with CERCLA and other relevant federal, state, and local regulations.

The IRP forms the basis for investigation and cleanup of DoD bases. It is designed to identify, assess, characterize, and clean up or control contamination from past hazardous waste disposal operations and hazardous material spills.

## **6. Maps, Pictures, And Other Graphic Representations**

The following are provided as Attachments C:

- Figure 1 – Site Location Map
- Figure 2 – Nickel and Zinc Concentrations
- Table A2-1 – Summary Table Potential Federal Chemical-Specific ARARs by medium
- Table A3-1 – Summary Table Potential Federal Location-Specific ARARs
- Table A3-2 – Summary Table Potential State Location-Specific ARARs
- Table A4-1 – Summary Table Potential Federal Action-Specific ARARs
- Table A4-2 – Summary Table Potential State Action-Specific ARARs

- Table F 2-1– Summary Special-Status Species Potentially Occurring Within the Project Area

## **B. Other Actions to Date**

Previous and current actions at IR Site 44/45 are discussed below.

### **1. Previous Actions**

Previous actions conducted at IR Site 44/45 are discussed in Section 2.2 of the EE/CA (Attachment B and in Section II. A. 1 of this report.

### **2. Current Actions**

No government or private actions are currently being conducted at IR Site 44/45.

As the lead federal agency, the DON has initiated the following community relations activities at NAVWPNSTA Seal Beach:

- public meetings and technical workshops
- development of a restoration advisory board
- preparation of fact sheets and brochures describing the IR process
- maintenance of information repositories accessible to the public

To gain a more thorough understanding of the activities associated with this NTCRA, the public is encouraged to review documents contained in the information repositories. These repositories are located at NAVWPNSTA Seal Beach, Building 110; and at the Seal Beach Public Library, Mary Wilson Branch, 707 Electric Avenue, Seal Beach, California 90740, telephone (562) 431-3584. The library hours (as of February 2006) are:

- Mon and Tues – 12 p.m. to 8 p.m.
- Wed and Thurs – 10 a.m. to 6 p.m.

- Sat – 10 a.m. to 5 p.m.
- Fri and Sun – closed

The complete Administrative Record is located at 1220 Pacific Highway, San Diego, California, and is maintained by Ms. Diane Silva, Southwest Division Naval Facilities Engineering Command Administrative Record Coordinator, (619) 532-3676. Attachment D contains the portion of the Administrative Record Index, which lists documents relevant to IR Site 44/45.

### **C. State and Local Authorities' Role**

State and local actions to date and the potential for their continued response are discussed below.

#### **1. State and Local Actions to Date**

Federal Exec. Order No. 12580 delegates to DoD, the President of the United States' authority to undertake CERCLA response actions. Congress further outlined this authority in its Defense Environmental Restoration Program (DERP) Amendments, which can be found at 10 U.S.C. §§ 2701–2705. Both CERCLA § 120(f) and 10 U.S.C. § 2705 require DON facilities to assure that state and local officials be given the timely opportunity to review and comment on DON response actions. CERCLA § 120 further requires the DON to apply state removal and remedial action regulatory requirements at its facilities.

There is an existing Federal Facility Site Remediation Agreement (FFSRA). Accordingly, the following state agencies have provided technical advice, oversight, and approval during previous activities conducted at IR Site 44/45, which include the RFA, FSI Phase II, and EE/CA phases of the IR process:

- DTSC
- RWQCB Santa Ana Region

DTSC will prepare a California Environmental Quality Act document that will discuss the impact of the IR SITE 44/45 NTCRA on the environment. The preparation of this document will

include a 30-day public comment period, which satisfies the requirements as set forth in the Cal. Health & Safety Code for remedial action plans.

## **2. Potential for Continued State and Local Response**

The DTSC and RWQCB currently provide technical oversight to the IRP, assist at monthly program management meetings for NAVWPNSTA Seal Beach, and review documents produced under the IRP for this removal action. It is anticipated that technical oversight will continue throughout the IR process and that the DON's DERP account funds will continue to be the exclusive source of funding for this program.

### **III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

In accordance with the NCP, the following factors must be considered in determining the appropriateness of a removal action (40 C.F.R. § 300.415[b][2]):

- (i) actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants
- (ii) actual or potential contamination of drinking water supplies or sensitive ecosystems
- (iii) hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release
- (iv) high levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate
- (v) weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released
- (vi) threat of fire or explosion
- (vii) the availability of other appropriate federal or state response mechanisms to respond to the release
- (viii) other situations or factors that may pose threats to public health or welfare or the environment

Of the above factors, the following factor applies to the current conditions at IR Site 44/45:

- (i) actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants

This factor has been identified based on the threat to the environment at IR Site 44/45. This section describes the potential threats posed to ecological receptors by

exposure to nickel and zinc-impacted sediments at IR Site 44/45 as determined by the risk assessment (CH2M Hill 2000).

#### **A. Threats to Public Health or Welfare**

The evaluation of the human health risk evaluation was previously conducted for Site 44/45 as part of the OUs 4 and 5 FSI. The evaluation concluded that there are insignificant risks to human health from COPCs in soil at Site 44/45 (SWDIV, 1998c). The likelihood of humans coming in contact with sediments within the drainage ditch is minimal; therefore, the soil and sediment pathways are not of concern at Site 44/45. In addition, the groundwater pathway is incomplete because the groundwater at Site 44/45 is saline and not potable. Therefore, there are no human health risk concerns at Site 44/45 (CH2M Hill 2002).

#### **B. Threats to the Environment**

A screening level ecological risk assessment was performed for contaminants present in the soil, sediment and groundwater at IR Site 44/45. The concentrations of nickel and zinc were lower in the samples collected closest to POLB Mitigation Pond 2. Therefore, Site 44/45 is not likely to be discharging significant amounts of metals to POLB Mitigation Pond 2 via groundwater. Also, potential discharges of low concentrations of metals would be diluted by surface water upon entering the pond. The maximum concentrations of benzo(a)pyrene and other PAHs in soil were below the safe ecological PRGs for ground squirrel, the American kestrel, and the clapper rail. Therefore, there are no risks to terrestrial receptors using the salt marsh adjacent to IR Site 44/45.

The metals nickel and zinc that were detected in the sediments collected from the drainage ditch south of Site 44/45 exceeded the safe ecological PRGs, thus posing a threat to the aquatic life in the drainage ditch from metals originating at Site 44/45. The FSI Phase II Report (CH2M Hill 2002) recommended a cleanup goal for metals based on the possible ecological risks to aquatic receptors. It is also recommended that a removal action using a confirmation sampling approach to remove sediments with metal concentrations above ULBV be used.

#### **IV. ENDANGERMENT DETERMINATION**

Risk assessment results documented in Section III (B) and presented in the EE/CA (Attachment B), and pertinent information contained in the Administrative Record confirm that current conditions at IR Site 44/45 present a threat to ecological receptors and warrant the implementation of an NTCRA.

Actual or potential releases of hazardous substances from the site, if not addressed by implementing the removal action selected in this Action Memorandum, may present future endangerment to ecological receptors and the environment.

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## V. PROPOSED ACTIONS AND ESTIMATED COSTS

In the EE/CA, the following three removal action alternatives were considered for evaluation:

- Alternative 1, no action;
- Alternative 2, partial removal with off-site disposal; and
- Alternative 3, excavation with off-site disposal.

The no action alternative was evaluated for comparison purposes only. Alternative 3 was considered to be the most effective alternative because the nickel and zinc-contaminated sediments with concentrations above the cleanup goal will be removed from IR Site 44/45.

### A. Proposed Action

On the basis of a comparative analysis of removal action alternatives in Section 6.0 of the EE/CA, (Attachment B) alternative 3 (excavation with off-site disposal) was chosen as the recommended alternative. This alternative is recommended because it will greatly reduce risks to ecological receptors by removing sediments contaminated with nickel and zinc concentrations above the cleanup goal. This alternative will meet RAOs and comply with applicable or relevant and appropriate requirements (ARARs) and other guidance, and is technically and administratively feasible. The materials to implement this alternative are available commercially. The cost for this alternative is comparable to similar removal actions conducted previously at this facility, and unforeseen future costs are unlikely. In addition, this site is highly accessible and visible, which further supports selection of Alternative 3.

The RAO for IR Site 44/45 is to reduce the risk to ecological receptors from nickel and zinc-impacted sediments to acceptable levels.

Although the land use is not expected to change following implementation of this alternative, it is difficult to predict the future land use of this Site. NAVWPNSTA Seal Beach is not slated for closure or changes in land use. However, should the land use change, the Navy will use the National Environmental Policy Act (NEPA) review process to determine the adequacy of a Site

to be used for any purpose other than its current use. Should the planned usage of IR Site 44/45 change in the future, analysis and documentation of historical land use and cleanup activities will be conducted in accordance with the NEPA provisions.

## **1. Proposed Action Description**

Under Alternative 3, sediments with nickel and zinc concentrations above the proposed cleanup goal would be excavated and disposed of at a permitted landfill.

Contaminated sediments would be excavated from the drainage ditch to 12 feet beyond the furthest sample locations as identified on Figure 2. The excavation would be 12 feet wide, and to a depth of 1 foot bgs. Conclusions of the Phase II FSI indicated that the galvanized gutters are a potential source of the nickel and zinc contaminants found in the drainage ditch. Replacing the gutters with concrete will eliminate this potential source of future contamination. The locations of the highest levels of contamination within the drainage ditch were noted in the immediate vicinity of the outfalls of the gutters. The gutter removal/replacement will be part of the CERCLA remedy. The three galvanized gutters, one on the western end, one center of the ditch and one on the eastern end would be demolished and replaced by concrete gutters. The eastern most galvanized gutter would be demolished and a concrete gutter would be installed 10 to 15 feet west of its original location.

### **a) Excavation**

Based on current analytical data and interpretation of the extent of soil contamination (Section 2.3), approximately 185 bank cubic yards (bcy) (in-place soil volume) would be excavated at IR Site 44/45. Excavation and removal of the contaminated sediments would be performed using standard construction equipment (e.g., backhoes and front-end loaders). Although not expected, dust monitoring would be initiated if considered necessary. In addition, it is not anticipated that excavation activities would be required on Bolsa Avenue. If this should change, provisions would have to be made to ensure the integrity of Bolsa Avenue is not compromised.

**b) Confirmation Soil Sampling**

Confirmation sampling would be performed to establish concentrations of nickel and zinc for sediments remaining in place after excavation has been completed. The field sampling design, including proposed locations of confirmation samples, would be included in the project work plan prepared by the RAC. Final confirmation sampling locations would be recorded using surveying techniques. For cost-estimating purposes, it was assumed that one confirmation sample will be collected for every 20 linear feet along each sidewall and every 10 feet along the bottom floor. Approximately 65 confirmation samples would be collected from around the base and perimeter of the excavation. It is assumed that the confirmation samples will be analyzed for total nickel and zinc using EPA Method 6010B or 6020.

The Removal Action cleanup goal is the same goal as was proposed in the Phase II FSI. The proposed cleanup goals are based on the Technical Memorandum, Stationwide Background Study (Jacobs et. al., August 1995). Based on the levels found during the Phase II F/SI, relative to the background levels established in the background study. Analytical results for confirmation sampling would be compared to the proposed cleanup goal. Based on this comparison, a decision to terminate excavation activities would be made. Additional confirmation sampling would be required if additional excavation is required.

**c) Backfilling and Re-vegetation**

When the results of the confirmation sample analyses indicate that the sediments containing nickel and zinc at concentrations exceeding the proposed cleanup goal have been removed, the excavation would be backfilled with clean fill material and compacted to original grade.

Revegetation will be accomplished by re-planting with the following types of native vegetation:

- Pickleweed (*Salicornia virginica*) – approximately 800 seedlings will be spaced and planted in the areas where habitat was removed.
- Salt grass (*Distichlis spicata*) – Seeds will be hand-sowed in the areas where disturbance has occurred in higher elevation areas. (SES-TECH 2006)

#### **d) Soil Profiling and Disposal**

Excavated sediments would be stockpiled on and covered with plastic (minimum 20-millimeter thickness) until it can be sampled and classified for appropriate disposal. Approximately every 125 loose cubic yards (lcy) of stockpiled sediments would be analyzed for total metals and toxic characteristic leaching procedure (TCLP) of metals (lcy is defined as a 25-percent swell factor of soil once it is removed from the excavation). This quantity may also be analyzed for contaminant soluble threshold limit concentration (STLC) values using Cal-EPA waste extraction test (WET) methods. Sediments would be transported and disposed at an EPA-certified disposal facility.

### **2. Contribution to Remedial Performance**

The proposed removal action will eliminate immediate and potential exposure risks to ecological receptors by excavating nickel and zinc-impacted sediments and properly disposing it in an appropriate landfill facility.

### **3. Descriptions of Alternative Technologies**

The evaluation of removal alternatives in Section 5.0 of the EE/CA describes three alternatives that were considered before the proposed action was selected. On the basis of the evaluation of the nature and extent of contamination and the definition of the RAOs presented in Section 3.0 of the EE/CA, three removal action alternatives were identified for consideration and subjected to a detailed screening analysis. These alternatives represent a range of options that address site-related conditions and incorporate technologies that are applicable to the nickel and zinc-impacted sediments found at IR Site 44/45. The following three alternatives were identified and evaluated:

- Alternative 1, no action;
- Alternative 2, partial excavation with off-site disposal;
- Alternative 3, excavation with off-site disposal.

## **Alternative 1 – No Action**

This alternative does not include additional characterization of sediments or further action to remove contaminated sediments or reduce risk posed by contaminated sediments at the site.

### **Effectiveness**

This alternative will not reduce the risk of exposure to contaminated sediments at the site and will not meet the RAOs. Toxicity, mobility, and volume of nickel and zinc will not be reduced. The, no action alternative does not activate ARARs.

### **Implementability**

This alternative is technically feasible because it requires no action; however, the no action alternative, is not expected to be acceptable to the state or the public.

### **Cost**

No costs are associated with this alternative.

## **Alternative 2 – Limited Removal with Engineering/Institutional Controls**

Under Alternative 2, sediments with nickel and zinc concentration hotspots above the proposed cleanup goal would be excavated and disposed of at a permitted landfill.

Contaminated sediments would be excavated 12 feet in each direction from each sediment locations exceeding the cleanup goal and to a depth of 1 foot bgs (Figure 2). The three galvanized gutters, one on the western end one in the center of the ditch and the other on the eastern end, would be demolished and replaced by concrete gutters. The eastern most galvanized gutter would be demolished and a concrete gutter would be installed 10 to 15 feet west of its original location.

## **Effectiveness**

Alternative 2 is considered to be reliable and effective but some residual nickel and zinc contaminated sediment may be left in-place at the site.

Alternative 2 would be effective, but since residual nickel and zinc contaminated sediments could remain after the proposed removal action, potential risk to ecological receptors from nickel and zinc may exist. Although implementation of Alternative 2 would temporarily disrupt the local environment, the site would be restored to its original state in a relatively short period of time by placing clean backfill in the excavation and compacted to original grade.

Under Alternative 2, for excavated sediment disposition, waste handling and land filling technology is well developed. However, off-site disposal of sediments classified as hazardous waste cannot be considered permanent remediation of the contaminated material because the excavated sediments would not be treated to reduce nickel and zinc concentrations. There would be some degree of uncertainty regarding potential future liability if excavated sediments were to be disposed of as hazardous waste at an off-site facility.

Short-term effectiveness addresses the effects of the alternative during implementation before the removal objectives have been met (EPA 1993). The primary considerations of this criterion are protection of the community, protection of workers, and environmental impacts that occur during implementation and until the proposed removal action is completed. This removal action will be performed in accordance with well established guidelines and requirements; hence it will meet these considerations.

## **Implementability**

This alternative can be readily implemented at areas where no surface structures are located. Alternative 2 is technically and administratively feasible and does not require special techniques, material, permits, or labor for implementation.

## **Cost**

The total cost estimate for Alternative 2 is \$194,620, based on an assumed project start date of September 2006 and project duration of approximately 2-3 weeks. The net present value, based on May 2005 dollars, is \$185,350. Table 5-1 of the EE/CA (Attachment B) describes the major cost items and the estimated costs. Table 5-3 of the EE/CA (Attachment B) provides a comparison of the total costs for each alternative.

### **Alternative 3 –Excavation with Off-Site Disposal**

Under Alternative 3, sediments with nickel and zinc concentrations above the proposed cleanup goal would be excavated and disposed of at a permitted landfill.

Contaminated sediments would be excavated from the drainage ditch to 12 feet beyond the furthest sediments borings as identified on Figure 2. The excavation would be 12 feet wide, and to a depth of 1 foot bgs. The three galvanized gutters, one on the western end, one in the center of the ditch and the other on the eastern end would be demolished and replaced by concrete gutters. The eastern most galvanized gutter would be demolished and a concrete gutter would be installed 10 to 15 feet west of its original location.

### **Effectiveness**

Alternative 3 would be very effective over the long term. All nickel and zinc impacted sediments above the cleanup goal would be removed from the area. This would reduce the potential risk to ecological receptors from nickel and zinc in sediments at the site. Although implementation of Alternative 3 would temporarily disrupt the local environment, the site would be restored to its original state in a relatively short period of time by placing clean backfill in the excavation and compacted to original grade.

Under Alternative 3, for excavated sediments disposition, waste handling and land filling technology is well developed. However, off-site disposal of sediments classified as hazardous

waste cannot be considered permanent remediation of the contaminated material because the excavated sediments would not be treated to reduce nickel and zinc concentrations. There would be some degree of uncertainty regarding potential future liability if excavated sediments were to be disposed of as hazardous waste at an off-site facility.

Short-term effectiveness addresses the effects of the alternative during implementation before the removal objectives have been met (EPA 1993). The primary considerations of this criterion are protection of the community, protection of workers, and environmental impacts that occur during implementation and until the proposed removal action is completed. This removal action will be performed in accordance with well established guidelines and requirements; hence it will meet these considerations.

### **Implementability**

This alternative can be readily implemented in areas where no surface structures are located. Alternative 3 is technically and administratively feasible and does not require special techniques, material, permits, or labor for implementation.

### **Cost**

The total cost estimate for Alternative 3 is \$242,700, based on an assumed project start date of September 2006 and project duration of approximately 1 month. Table 5-2 of the EE/CA (Attachment B) describes the major cost items and the estimated costs. Table 5-3 of the EE/CA (Attachment B) provides a comparison of the total costs for each alternative.

### **Comparative Analysis of Alternatives**

Section 6.0 and Table 4-1 of the EE/CA (Attachment B) analyze the effectiveness, implementability, and cost for the three alternatives. Effectiveness was evaluated based on the overall protection of human health and the environment (through assessment of long term effectiveness and permanence, compliance with ARAR's and short term effectiveness) and

reduction of toxicity, mobility or volume through treatment. Implementability was judged based on technical feasibility, required materials and services, as well as state and public acceptance, which tend to have great variability between the three alternatives. Under Alternative 2 and 3, there are capital costs and indirect costs, but there are no long-term operation and maintenance (O&M) costs. Alternative 1, has the lowest cost because of no action. However, Alternative 1 would pose health risks to ecological receptors exposed to nickel and zinc-impacted sediments, and this alternative does not comply with all RAOs for this project.

#### **4. Engineering Evaluation/Cost Analysis and Action Memorandum**

An EE/CA (Attachment B) was developed for this NTCRA that identified and compared cleanup alternatives to address the risk to ecological receptors from nickel and zinc-impacted sediments. The draft EE/CA was released for public review and comment during the period from 3 November 2005 to 3 December 2005

This Action Memorandum documents the DON's decision to conduct the removal action and presents the selected removal action alternative. The EE/CA, Action Memorandum, and other related project documents are maintained in the Administrative Record, which is open to the public.

#### **5. Applicable or Relevant and Appropriate Requirements**

Section 121(d) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, 42 United States Code [U.S.C.] Section [§] 9621[d]), as amended, states that remedial actions on CERCLA sites must attain (or the decision document must justify the waiver of) any federal or more stringent state environmental standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate.

Although Section 121 of CERCLA does not itself expressly require that CERCLA remedial actions comply with ARARs, the United States Environmental Protection Agency (U.S. EPA) has promulgated a requirement in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) mandating that CERCLA remedial actions “. shall, to the extent

practicable considering the exigencies of the situation, attain applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws” (Title 40 Code of Federal Regulations [C.F.R.] § 300.415[j]) (40 C.F.R. § 300.415[j]). It is DON policy to follow this requirement. Certain specified waivers may be used for remedial actions, as is the case with removal actions.

Applicable requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address the situation at a CERCLA site. The requirement is applicable if the jurisdictional prerequisites of the standard show a direct correspondence when objectively compared to the conditions at the site. An applicable federal requirement is an ARAR. An applicable state requirement is an ARAR only if it is more stringent than federal ARARs.

If the requirement is not legally applicable, then the requirement is evaluated to determine whether it is relevant and appropriate. Relevant and appropriate requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not applicable, address problems or situations similar to the circumstances of the proposed removal action and are well suited to the conditions of the site (U.S. EPA 1988a). A requirement must be determined to be both relevant and appropriate in order to be considered an ARAR.

To constitute an ARAR, a requirement must be substantive. Therefore, only the substantive provisions of requirements identified as ARARs in this analysis are considered to be ARARs. Permits are considered to be procedural or administrative requirements. Provisions of generally relevant federal and state statutes and regulations that were determined to be procedural or non-environmental, including permit requirements, are not considered to be ARARs. CERCLA Section 121(e)(1), 42 U.S.C. § 9621(e)(1), states that “No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely on-site, where such remedial action is selected and carried out in compliance with this section.” The term on-site is defined for purposes of this ARARs discussion as “the areal extent of contamination and all

suitable areas in very close proximity to the contamination necessary for implementation of the removal action” (40 C.F.R. § 300.5).

There are three types of ARARs. The first includes chemical-specific requirements. This type of ARAR sets limits on the concentration of specific hazardous substances, contaminants, and pollutants in the environment. Examples of this type of ARAR are ambient water quality criteria and drinking water standards. The second type of ARAR includes location-specific requirements that restrict certain types of activity based on site characteristics. These include restrictions on activity in wetlands, floodplains, and historic sites. The third type of ARAR includes action-specific requirements. These are technology-based restrictions that are triggered by the type of action under consideration. Examples of action-specific ARARs are RCRA regulations for waste treatment, storage, and disposal.

ARARs must be identified on a site-specific basis from information about specific chemicals at the site specific features of the site location, and actions that are being considered as removal actions.

Identification of ARARs is a site-specific determination that involves a two-part analysis: a determination of whether a given requirement is applicable and, if not applicable, whether it is relevant and appropriate. A requirement is deemed applicable if the specific terms of the law or regulation directly address the COPC, removal action, or place involved at the site. If the jurisdictional prerequisites of the law or regulation are not met, a legal requirement may, nonetheless, be relevant and appropriate if the Site circumstances are sufficiently similar to circumstances in which the law otherwise applies and if it is well suited to the conditions of the site.

As the lead federal agency, the DON has the primary responsibility for the identification of federal ARARs for IR SITE 44/45. As the lead state agency, DTSC has the responsibility for identifying state ARARs. The DON conducted the federal and state ARARs identification process, and the following is a summary discussion. A more detailed evaluation of ARARs is

provided in the EE/CA (Attachment B) and in the ARARs summary tables (Attachment C) of this document.

Many of the ARARs identified by the state agencies were not relevant to the activities planned for IR Site 44/45 and are not discussed in this document.

In general the federal and state hazardous waste management regulations promulgated in the California Code of Regulations (Cal. Code Regs.) Title (tit.) 22 will be the controlling ARARs for the removal action at IR Site 44/45. These regulations characterize the hazardous nature of the excavated material, and specify how the excavated material must be managed and disposed after excavation if it is hazardous. If the excavated sediments are non-hazardous, the controlling ARARs for sediments management will be the State Water Resources Control Board waste discharge to land requirements (Cal. Code Regs. tit. 23, ch. 15). Additionally, various rules and regulations of the South Coast Air Quality Management District (SCAQMD), promulgated pursuant to the Clean Air Act, are ARARs for soil excavation activities.

**a) Chemical-Specific ARARs**

The proposed removal action involves nickel and zinc-impacted sediments. Summaries of the federal and state chemical-specific ARARs for soil are discussed below.

**(1) Federal Chemical-Specific ARARs**

At IR Site 44/45, the excavation of nickel and zinc-impacted sediments alternative will produce solid wastes—the excavated sediments. Therefore, certain substantive requirements of RCRA are potential ARARs for handling the waste material from IR Site 44/45 (Table A2-1 Attachment C).

The federal RCRA requirements at 40 C.F.R. pt. 261 do not apply in California because the state RCRA program is authorized. The authorized state RCRA requirements are, therefore, considered potential federal ARARs (Table A2-1 Attachment C). The applicability of RCRA requirements

depends on whether the waste is a RCRA hazardous waste; whether the waste was initially treated, stored, or disposed after the effective date of the particular RCRA requirement; and whether the activity at the Site constitutes treatment, storage, or disposal as defined by RCRA. However, RCRA requirements may be relevant and appropriate even if they are not applicable. Examples include activities that are similar to the definition of RCRA treatment, storage, or disposal for waste that is similar to RCRA hazardous waste.

The determination of whether a waste is a RCRA hazardous waste can be made by comparing the site waste to the definition of RCRA hazardous waste. The RCRA requirements at Cal. Code Regs. tit. 22, § 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100 are potentially applicable ARARs because they define RCRA hazardous waste. A waste meets the definition of hazardous waste if it has the toxicity characteristic of hazardous waste. This determination is made by using the TCLP. The maximum concentrations allowable for the TCLP listed in § 66261.24(a)(1)(B) are potential federal ARARs for determining whether the site has hazardous waste. If the site waste has concentrations exceeding these values, it is determined to be a characteristic RCRA hazardous waste. Based on the evaluation in Appendix A of the EE/CA Section A1.4, the sediments subject to removal are considered to be a potential RCRA hazardous waste and will be treated as such during on-site activities.

## **(2) State Chemical-Specific ARARs**

State RCRA requirements included within the U.S. EPA authorized RCRA program for California are considered to be potential federal ARARs and are discussed above. When state regulations are either broader in scope or more stringent than their federal counterparts, they are considered potential state ARARs. State requirements (e.g., the non-RCRA, state-regulated hazardous waste requirements) may be potential state ARARs because they are not within the scope of the federal ARARs (57 Federal Register 60848). The Cal. Code Regs. tit. 22, Division 4.5 requirements that are part of the state-approved RCRA program will be potential state ARARs for non-RCRA, state-regulated hazardous waste.

The site waste characteristics need to be compared to the definition of non-RCRA, state-

regulated hazardous waste. The non-RCRA, state-regulated waste definition requirements at Cal. Code Regs. tit. 22, § 66261.24(a)(2) are potentially applicable state ARARs for determining whether other RCRA requirements are potential state ARARs. Table 9 of the EE/CA (Attachment B) lists the total threshold limit concentrations, the soluble threshold limit concentrations (STLCs), and the TCLP for those chemicals identified in the Cal. Code Regs. The site waste may be compared to these thresholds to determine whether it meets the characteristics for a non-RCRA, state-regulated hazardous waste. However, based on the evaluation in Appendix A of the EE/CA, Section A1.4, the sediments subject to removal will be treated as potential RCRA hazardous waste and, as a result, the state RCRA requirements are not applicable for on-site activities.

## **b) Location-Specific ARARs**

Cultural and other natural resources are the resource categories relating to location-specific requirements potentially affected by the IR Site 44/45 removal action alternatives. The conclusions for ARARs pertaining to these resources are presented in the following sections.

### **(1) Federal Location-Specific ARARs**

The proposed removal action at IR Site 42 lays within the low-lying, relatively flat area of the NWR wetlands. Flooding brought about by a 100-year or a 500-year occurrence would impact low-lying areas. The requirements for wetlands protection and floodplain management are potentially applicable (Table A3-1 Attachment C).

A variety of marine and land birds inhabit the Seal Beach area. The NWR is also an essential part of the Pacific Flyway bird migration route. It includes habitat for five endangered bird species: the light-footed clapper rail, Belding's savannah sparrow, California brown pelican, western snowy plover and California least tern. These species inhabit, nest, and/or forage in the pickleweed stands, saltwater ponds, and open sandy areas of the salt marsh (SES-TECH 2006).

There are no known reported sightings of these species at the site designated for the removal

action. The proposed remedial alternatives are expected to mitigate potential threats to endangered species. However, substantive requirements of the Endangered Species Act of 1973 have been identified as relevant and appropriate. Migratory birds have been observed at NAVWPNSTA Seal Beach, but the proposed remedial alternatives at IR Site 42 could potentially impact breeding of Belding's Savannah sparrows light-footed clapper rails, California brown pelicans, western snowy plovers and the California least terns that nest in the area. The species' breeding seasons are from March through August at NAVWPNSTA Seal Beach. Timing the removal action to coincide with non-breeding periods would eliminate the potential for harming these endangered species. Substantive requirements of the National Wildlife Refuge System Administration Act of 1996 have been identified as potentially applicable.

## **(2) State Location-Specific ARARs**

Proposed removal options for IR Site 44/45 do not entail the taking of animals or birds. However, the substantive requirements of California Fish and Game Code (Cal. Fish & Game Code) § 3005(a) regarding the taking of birds and mammals are potentially relevant and appropriate (Table A3-2 Attachment C).

## **c) Action-Specific ARARs**

Action-specific ARARs are technology-based restrictions that are triggered by the type of action under consideration (in this case, the excavation, stockpiling, and off-site disposal of soil at IR Site 44/45).

Accordingly, the substantive provisions of California Fish and Game Code 1908 regarding the take of rare or endangered native plants are potentially relevant and appropriate to the proposed remedial alternatives. Section 2080 of the California Fish and Game Code prohibits the take of endangered species and is a potentially applicable ARAR because several species, listed as endangered by either federal or state agencies, are known to inhabit NAVWPNSTA Seal Beach, the NWR, and its associated wetlands.

## **(1) Federal Action-Specific ARARs**

The key threshold question for sediment ARARs is whether or not the waste generated during the proposed removal action at IR Site 44/45 would be classified as a hazardous waste. The sediments may be classified as federal hazardous waste as defined by RCRA and the state-authorized program, as non-RCRA state-regulated hazardous waste, or as non-hazardous waste. If the sediment is determined to be hazardous waste, the appropriate requirements will apply. Comparing the site waste to the definition of RCRA hazardous waste can make the determination of whether a waste is a RCRA hazardous waste. The RCRA requirements at Cal. Code Regs. tit. 22, §§ 66262.10(a), 66262.11, 66264.13(a) and (b), and 66262.34 are potentially applicable ARARs because they identify the RCRA hazardous waste requirements associated with generation and on-site accumulation (Table A4-1 Attachment C).

## **(2) State Action-Specific ARARs**

Actions impacting birds or mammals are regulated in Cal. Fish & Game Code § 3005(a). These requirements prohibit the taking of birds and mammals, including the taking by poison. Though it is not anticipated that birds or mammals will be taken during removal activities at IR Site 44/45, the substantive provisions pertaining to the take of birds or mammals with a poisonous substance are potentially applicable (Table A4-2 Attachment C).

SCAQMD Rule 403 applies to any source of dust or fumes. The rule states activities shall not cause or allow emissions of fugitive dust such that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source and shall not cause or allow levels of particulate matter less than 10 micrometers in diameter to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples. This rule is potentially applicable to removal activities at the site.

## 6. Project Schedule

The removal action is expected to begin in the middle of September 2006 and to be completed within approximately 2 to 3 weeks. The project schedule is included as Attachment G.

### B. Estimated Costs

The DON has made a present-worth estimate of the removal action costs. The estimated costs include the direct and indirect capital costs of each alternative. The following items show some components of direct and indirect capital costs:

- direct capital costs
  - Construction costs
  - Equipment and material costs
  - Transport and disposal costs
  - Analytical costs
- Indirect costs
  - Overhead
  - Profit

The estimated costs for the proposed action (Alternative 3) are as follows:

<b>Description</b>	
<b>Direct capital costs</b>	
Mechanical excavation (for cost estimating purposes, assume 185 bank cubic yards) and backfill (244 lcy)	\$7,287
Load and transport excavated material for disposal (185 lcy)	\$39,007
Profile sediments sampling for disposal (one composite sample per 125 lcy = 1 sample analyzed for TCLP metals [U.S. EPA Method 1311 and U.S. EPA Method 6010B/7000 series], and STLC [Cal-EPA WET])	\$737
Confirmation sediments sampling (one sample per 10- by 10-foot area + 20 percent for QC = 65 samples analyzed for total lead (U.S. EPA Method 7000 series)	\$26,996
Demolition and disposal of the galvanized gutters (3 EA)	\$2,400
Installation of concrete gutters (3 EA)	\$27,200
Cleanup and Landscaping (sodding) (0.12 acre)	\$4,108
Professional labor (project oversight)	\$15,338
Site Close-out Documentation (includes storage for 7 years)	\$10,909
<b>Total direct capital costs (based on November 2004 cost database)</b>	<b>\$133,983</b>
<b>Indirect costs (e.g., general conditions, overhead, profit and owner cost) (based on November 2004 cost database)</b>	<b>\$74,325</b>
<b>Contingency<sup>a</sup></b>	<b>\$25,349</b>
<b>Escalation<sup>b</sup></b>	<b>\$9,043</b>
<b>TOTAL COST (start date of September 2006)</b>	<b>\$242,700</b>

Notes:

<sup>a</sup> 15 percent contingency has been added to cover cost increases that may result from unforeseen conditions and changes that typically occur on removal and remediation projects

<sup>b</sup> escalation is 3.87%

Acronyms/Abbreviations:

Cal-EPA – California Environmental Protection Agency

lcy – loose cubic yard

STLC – soluble threshold limit concentration

TCLP – toxicity characteristic leaching procedure

U.S. EPA – United States Environmental Protection Agency

WET – (Cal-EPA) Waste Extraction Test

## **VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

If action should be delayed or not taken, the potential for exposure to ecological receptors to nickel and zinc-impacted sediments at IR Site 44/45 will continue. Contamination could spread from the site to nearby areas from wind erosion and surface-water runoff. This spread of contamination will result in an increased health risk to the exposed population. Delayed action will also increase risks to the ecological receptors through prolonged exposure to nickel and zinc-impacted sediments.

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## **VII. PUBLIC INVOLVEMENT**

The draft EE/CA was released for public review and comment during the period from 3 November 2006 to 3 December 2006. Following the public comment period, the comments were evaluated and a responsiveness summary prepared describing what actions would be taken with regard to each comment. The EE/CA, Action Memorandum, and other related project documents are maintained in the Administrative Record, which is open to the public.

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## **VIII. OUTSTANDING POLICY ISSUES**

There are no outstanding policy issues with regard to the proposed removal action.

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## IX. RECOMMENDATIONS AND SIGNATURES

To date, the DON has not acquired evidence identifying other potentially responsible parties at this site. However, information acquired in the future, including but not limited to information acquired during the implementation of this removal action, or future response actions at the site could result in the identification of other potentially responsible parties.

This Action Memorandum was performed in accordance with current U.S. EPA and U.S. Navy guidance documents for NTCRA's under CERCLA. The purpose of this Action Memorandum was to identify and analyze removal actions to address a NTCRA for nickel and zinc-impacted sediments at IR Site 44/45 at NAVWPNSTA Seal Beach. Three alternatives were identified, evaluated for cost, and ranked:

- Alternative 1 – no action;
- Alternative 2 – partial excavation with off-site disposal; and
- Alternative 3 – excavation with off-site disposal.

Based on comparative analysis of the removal action alternatives completed in Section 6.0 of the EE/CA, the DON recommends Alternative 3, excavation with off-site disposal. This alternative best meets NCP criteria of overall protectiveness to ecological receptors; compliance with ARARs; long-term effectiveness; reduction of mobility, toxicity, or volume through treatment; short-term effectiveness; implementability; cost; and state and community acceptance.

This decision document represents the selected removal action for IR Site 44/45 (Former Waste Otto Fuel Drum Storage Area and Building 88 Floor Drain Outlet), NAVWPNSTA Seal Beach, Orange County, California, developed in accordance with CERCLA as amended, and is consistent with the NCP. This decision is based on the Administrative Record for the site.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

R. W. Fowler  
Captain, U.S. Navy  
Commanding Office

## REFERENCES

- BNI. *See* Bechtel National, Inc.
- CH2M Hill. 2002. Draft Final Focused Site Inspection Phase II Report, Naval Weapons Station, Seal Beach, California. Volumes 1 and 2. 28 January.
- Jacobs Engineering Group Inc. 1995. Installation Restoration Program Final Remedial Investigation Report for Operable Units 1,2, and 3, Volume I, CLE-C01-01F258-B7-0004. Naval Weapons Station Seal Beach, Seal Beach, California – CTO 0258. December.
- JEG. *See* Jacobs Engineering Group Inc.
- Kearney, A.T. 1989. RCRA Facility Assessment Report. Seal Beach Naval Weapons Station, Seal Beach, California. March.
- Naval Energy and Environmental Support Activity. 1987. Plan of Verification Study. Volume 1. April.
- NEESA. *See* Naval Energy and Environmental Support Activity.
- Southwest Division Naval Facilities Engineering Command. 1997. Naval Weapons Station Seal Beach, Seal Beach, California. Technical Memorandum Stationwide Background Study. Phase II, Final. March.
- . 2000. Installation Restoration Program Focused Site Inspection Phase II Work Plan. WPNSTA, Seal Beach, Seal Beach, California. 27 January.
- SES-TECH, *See* Draft Non-Time-Critical Removal Action Work Plan Installation Restoration Sites 42, 44/45 and SWMU 57, Naval Weapons Station Seal Beach Seal Beach, California, Revision 0, December 5, 2005
- SWDIV. *See* Southwest Division, Naval Facilities Engineering Command.
- United States Environmental Protection Agency. 1988. Guidance on conducting remedial investigations and feasibility studies under CERCLA, OSWER directive 9355.1.
- U.S. EPA. *See* United States Environmental Protection Agency.
- Wheeler, Mark (NAVSPNSTA, Seal Beach). Personal communication. 28 January 1999.

**ENGINEERING EVALUATION/COST ANALYSIS  
NON-TIME-CRITICAL REMOVAL ACTION  
INSTALLATION RESTORATION SITE 44/45  
NAVAL WEAPONS STATION SEAL BEACH  
SEAL BEACH, CALIFORNIA**

**[To be included in the Final Action Memorandum]**

## Figures 1 and 2

These detailed station maps have been deleted from the Internet-accessible version of this document as per Department of the Navy Internet security regulations.

**TABLE F.2-1**

**SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING  
WITHIN THE PROJECT AREAS**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Habitat Present?</b>
Ventura marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	—	Endangered	No
Salt marsh bird's beak	<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	Endangered	Endangered	No
Belding's savannah sparrow	<i>Passerculus sandwichensis beldingi</i>	—	Endangered	P
California least tern	<i>Sterna antillarum browni</i>	Endangered	Endangered	No
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	Threatened	—	No
Light-footed clapper rail	<i>Rallus longirostris levipes</i>	Endangered	Endangered	P
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	Threatened	—	P

**Notes:**

Present [P] - general, potential, marginal or sub-marginal habitat may be present within project areas.

SEAL BEACH NWS

DRAFT ADMINISTRATIVE RECORD FILE INDEX - UPDATE (SORTED BY RECORD DATE/RECORD NUMBER)

DOCUMENTS RELATED TO SITE 45

UIC No. / Rec. No.	Doc. Control No.	Prc. Date	Author Affil.	Record Type	Record Date	Author	Contr./Guid. No.	CTO No.	Recipient Affil.	Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	Location FRC Access. No. FRC/SWDIV Box No. FRC Warehouse Loc. CD No.
N60701 / 000908		07-18-1997	EARTH										SUBSURFACE SOIL INVESTIGATION	ADMIN RECORD	ARSENIC	001	FRC - PERRIS
NONE		<b>06-01-1989</b>	TECHNOLOGY										ANAHEIM BAY MITIGATION FORRESTAL AVENUE SITE		ASBESTOS	004	181-03-0136
RPT		NONE	CORP												INVESTIGATION	006	22 OF 29
NONE		01.1													METALS	007	
00041			NWS SEAL BEACH												PCB	010	41067460
															SA	016	IMAGED
															SB	020	SEAL_008
															SOIL	023	
															VOC	024	
																038	
																044	
																045	
																SWMU 52	
																SWMU 53	
																SWMU 55	
																SWMU 59	
																SWMU 60	
																SWMU 65	

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 000364	12-28-1994	NEESA PORT	ADDENDUM TO THE PRELIMINARY	ADMIN RECORD	IAS	002	CHOICE IMAGING
NEESA 13-062A	<b>08-01-1990</b>	HUENEME	ASSESSMENT (INITIAL ASSESSMENT	INFO	PA	003	SOLUTIONS
RPT	NONE		STUDY) {SEE AR #525 - INITIAL	REPOSITORY		005	
NONE	01.3	NWS SEAL BEACH	ASSESSMENT STUDY}			008	
00150						010	SW06022101
						011	
						012	
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Record Type	Record Date	Author					FRC/SWDIV Box No.	
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.	
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	

046  
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UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 000351	12-28-1994	JACOBS	SITE INSPECTION SCOPING - SUMMARY	ADMIN RECORD	IAS	001		FRC - PERRIS
CLE-I01-01F041-10-S2-0001	<b>09-25-1990</b> 00041	ENGINEERING D. MARK	REPORT		PCB	002		181-03-0136
RPT	01.2	NAVFAC - SOUTHWEST DIVISION			SI	003		10 OF 29
N68711-89-D-9296 00042					SOW	004		
					UST	005		41067460
						006		IMAGED
						007		SEAL_005
						008		
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UIC No. / Rec. No.	Doc. Control No.	Prc. Date	Author Affil.					Location
Record Type	Contr./Guid. No.	Record Date	Author	Subject	Classification	Keywords	Sites	FRC Access. No.
Approx. # Pages	EPA Cat. #	CTO No.	Recipient Affil.					FRC/SWDIV Box No.
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							045	
							046	
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							048	
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							050	
							051	
							BLDG. 241	
							BLDG. 52	
							BLDG. 68	
							BLDG. 88	
							BLDG. 95	
							OU 1	
							OU 2	
							OU 3	
							OU 4	
							OU 5	
							OU 6	
							OU 7	
N60701 / 000365		12-28-1994	JACOBS	INSTALLATION RESTORATION PROGRAM	ADMIN RECORD	IRP	008	FRC - PERRIS
		<b>07-01-1991</b>	ENGINEERING	SITE INSPECTION LETTER REPORT		SI	012	181-03-0136
RPT		00119	J.A. REESE				016	11 OF 29
N68711-89-D-9296		01.2	NAVFAC -				039	
00025			SOUTHWEST				042	41067460
			DIVISION				043	IMAGED
							045	SEAL_004
N60701 / 000403		03-02-1995	JACOBS	DRAFT SITE INSPECTION WORK PLAN	ADMIN RECORD	GW	008	FRC - PERRIS
		<b>08-02-1991</b>	ENGINEERING	(SEE AR #433 - COMMENTS BY NWS SEAL		SI	012	181-03-0136
PLAN		00119	D. ROWLISON	BEACH)		SOIL	016	12 OF 29
N68711-89-D-9296		03.3	NAVFAC -			WORK PLAN	042	
00112			SOUTHWEST				043	41067460
			DIVISION				045	IMAGED
							OU 5	SEAL_004

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 000404	03-02-1995	JACOBS	DRAFT SITE INSPECTION WORK PLAN	ADMIN RECORD	SI	008	FRC - PERRIS
	<b>08-13-1991</b>	ENGINEERING				012	181-03-0136
PLAN	00119	D. ROWLISON				016	12 OF 29
N68711-89-D-9296	03.3	NAVFAC -				042	41067460
00267		SOUTHWEST				043	IMAGED
		DIVISION				045	SEAL_004
						OU 5	

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 000847	06-13-1997	CA DEPT OF	FEDERAL FACILITY SITE REMEDIATION	ADMIN RECORD	CEQA	001		FRC - PERRIS
NONE	<b>09-24-1991</b>	HEALTH	AGREEMENT (SEE AR #628, #629, & #631)	INFO	FFA	002		181-03-0136
MISC	NONE	SERVICES		REPOSITORY	FFSRA	003		21 OF 29
NONE	03.0	NWS SEAL BEACH				004		
00079						005		41067460
						006		IMAGED
						007		SEAL_007
						008		
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Record Type	Record Date	Author		Subject	Classification	Keywords	Sites	FRC Access. No.
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Approx. # Pages	EPA Cat. #	Recipient						FRC Warehouse Loc. CD No.
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							OU 4	
							OU 5	
							OU 6	
N60701 / 000406	03-02-1995	JACOBS		DRAFT SITE INSPECTION WORK PLAN	ADMIN RECORD	SI	008	FRC - PERRIS
CLE-C01-01F119-S3-0001	<b>12-13-1991</b>	ENGINEERING				WORK PLAN	012	181-03-0136
PLAN	00119	D. ROWLISON					016	12 OF 29
N68711-89-D-9296	03.3	NAVFAC -					043	
00414		SOUTHWEST					045	41067460
		DIVISION					OU 5	IMAGED
								SEAL_011
N60701 / 000564	03-28-1996	NWS SEAL BEACH		MARCH 10, 1992 TRC MEETING MINUTES	ADMIN RECORD	MTG MINS	008	FRC - PERRIS
	<b>05-27-1992</b>	S.G. WRIGHT		{SEE AR #558}			012	181-03-0136
LTR	NONE	TRC MEMBERS					014	17 OF 70
NONE	10.3						016	
00027							041	41067460
							042	IMAGED
							043	SEAL_007
							045	
							NWR	
							OU 5	
N60701 / 000442	05-22-1995	JACOBS		FINAL SITE INSPECTION WORK PLAN	ADMIN RECORD	SI	008	FRC - PERRIS
	<b>08-19-1992</b>	ENGINEERING					012	181-03-0136
PLAN	00119	J.A. REESE					016	14 OF 29
N68711-89-D-9296	01.2	NAVFAC -					042	
00490		SOUTHWEST					043	41067460
		DIVISION					045	IMAGED
							OU 5	SEAL_004

UIC No. / Rec. No.								Location
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Record Type	Record Date	Author						FRC/SWDIV Box No.
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Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 000864	06-19-1997	NWS SEAL BEACH	ENVIRONMENTAL FACT SHEET 1	ADMIN RECORD	ESI	001		FRC - PERRIS
NONE	11-17-1992			INFO	FACT SHEET	002		181-03-0136
MISC	NONE	PUBLIC		REPOSITORY	IRP	003		22 OF 29
NONE	10.3				PIM	004		
00004					PR	005		41067460
					PUBNOT	006		IMAGED
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					SI	008		
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Record Type	Record Date	Author					FRC/SWDIV Box No.	
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Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
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						SWMU 17		
						SWMU 22		
						SWMU 24		
						SWMU 41		
						SWMU 42		
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						SWMU 62		
						SWMU 63		
						SWMU 64		

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Record Type	Record Date	Author						FRC/SWDIV Box No.
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Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	

SWMU 65  
SWMU 66  
SWMU 69

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 000367	12-29-1994	JACOBS	DRAFT COMMUNITY RELATIONS PLAN	ADMIN RECORD	CRP	001	SOUTHWEST
CLE-C01-01F229- B3-0001	<b>01-01-1993</b> 00229	ENGINEERING B. WONG				002	DIVISION - BLDG.
PLAN	10.2	NAVFAC - SOUTHWEST				003	1
N68711-89-D-9296 00090		DIVISION				004	
						005	PROBLEM
						006	SHELVING
						007	
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UIC No. / Rec. No.							Location	
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.	
Record Type	Record Date	Author					FRC/SWDIV Box No.	
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.	
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
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						OU 6		
						OU 7		
						SWMU 11		
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						SWMU 16		
						SWMU 19		
						SWMU 22		
						SWMU 24		
						SWMU 26		
						SWMU 27		
						SWMU 28		
						SWMU 39		
						SWMU 40		
						SWMU 47		
						SWMU 48		
						SWMU 49		
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						SWMU 58		
						SWMU 59		
						SWMU 6		
						SWMU 60		

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																SWMU 61				
																SWMU 68				
																SWMU 69				
																SWMU 7				
N60701 / 000123		03-01-1994	NAVFAC -										FEDERAL FACILITIES SITE REMEDIATION	ADMIN RECORD	FFSRA	001				
		<b>01-12-1993</b>	SOUTHWEST										AGREEMENT (FFSRA) AGENDA AND		MTG MINS	002				
MM		NONE	DIVISION										MINUTES FROM DECEMBER 16, 1993			003				2 OF 29
NONE		07.1	LAURA DUCHNAK										PROJECT MANAGERS MEETING			005				
00011			DTSC													006				41067460
			LETICIA SEGOVIA													007				IMAGED
																008				SEAL_001
																012				
																016				
																022				
																042				
																043				
																044				
																045				
																OU 1				
																OU 4				
N60701 / 000408		03-02-1995	JACOBS										REVISED RESPONSE TO COMMENTS	ADMIN RECORD	COMMENTS	008				
		<b>06-22-1993</b>	ENGINEERING										DRAFT SITE INSPECTION WORK PLAN		SI	012				
PLAN		00253	J. NEUHAUS													016				12 OF 29
N68711-89-D-9296		03.3	NAVFAC -													043				
00016			SOUTHWEST													045				41067460
			DIVISION													OU 5				IMAGED
																				SEAL_004
N60701 / 000405		03-02-1995	JACOBS										FINAL SITE INSPECTION WORK PLAN	ADMIN RECORD	COMMENTS	008				
CLE-J01-01F253-B6-		<b>07-20-1993</b>	ENGINEERING										RESPONSES TO COMMENTS	INFO	SI	012				
0001		00253	J. NEUHAUS											REPOSITORY	WORK PLAN	016				
PLAN		03.3	NAVFAC -													042				
N68711-89-D-9296			SOUTHWEST													043				41067460
00069			DIVISION													045				IMAGED
																OU 5				SEAL_004

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 000344	12-28-1994	JACOBS	DRAFT COMMUNITY RELATIONS PLAN	ADMIN RECORD	CRP	001	FRC - PERRIS
	<b>08-03-1993</b>	ENGINEERING			IRP	002	181-03-0136
PLAN	00229	B. WONG			PUBNOT	003	10 OF 29
N68711-89-D-9296	00.0	NAVFAC -				004	
00072		SOUTHWEST				005	41067460
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						007	SEAL_004
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UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
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						046		
						051		
						OU 1		
						OU 2		
						OU 3		
						OU 4		
						OU 5		
						OU 6		
						OU 7		
N60701 / 000754	04-16-1997	JACOBS	FINAL INVESTIGATION-DERIVED WASTE	ADMIN RECORD	IDW	008		FRC - PERRIS
	<b>09-07-1993</b>	ENGINEERING	MANAGEMENT PLAN		IDWMP	012		181-03-0136
PLAN	00253	L. ALLEN			WMP	016		20 OF 29
N68711-89-D-9296	02.1	NAVFAC -				042		
00034		SOUTHWEST				043		41067460
		DIVISION				044		IMAGED
						045		SEAL_008
						OU 5		

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 000697	04-09-1997	JACOBS	DECEMBER 16, 1993 PROGRAM	ADMIN RECORD	FS	001	FRC - PERRIS
CLE-C01-01F229-I2-0013	<b>12-28-1993</b> 00229	ENGINEERING B. WONG	MANAGERS MEETING MINUTES		IRP	007	181-03-0136
MM	03.6				MTG MINS	008	19 OF 29
N68711-89-D-9296 00007					OU	012	
					PRG	014	41067460
					RI	016	IMAGED
					SI	019	SEAL_007
					UST	022	
						042	
						043	
						044	
						045	
						BLDG. 235	
						OU 1	
						OU 2	
						OU 3	
						OU 4	
						OU 5	
						OU 6	
						OU 7	
N60701 / 000671	04-07-1997	NWS SEAL BEACH	TRANSMITTAL OF FINAL INVESTIGATION-	ADMIN RECORD	COMMENTS	001	FRC - PERRIS
	<b>01-07-1994</b>	S. WRIGHT	DERIVED WASTE MANAGEMENT PLAN AND		CRP	007	181-03-0136
LTR	NONE	SOUTH COAST	RESPONSE TO COMMENTS OF FINAL SITE		RESPONSE	008	19 OF 29
NONE	01.6	AQMD	INVESTIGATION WORK PLAN (SEE AR		SI	012	
00004		P. FERNANDO	#113, #329, #405, #529, & #754)		WMP	016	41067460
					WORK PLAN	019	IMAGED
						022	SEAL_008
						042	
						043	
						045	
						OU 5	

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 000402	03-02-1995	JACOBS	PRELIMINARY FINAL SITE INSPECTION	ADMIN RECORD	SI	008	FRC - PERRIS
CLE-J01-01F253-B6-0004	<b>03-03-1994</b> 00253	ENGINEERING J. NEUHAUS	REPORT, VOLUME I AND II			012	181-03-0136
RPT	01.5	NAVFAC - SOUTHWEST DIVISION				016	12 OF 29
N68711-89-D-5187 00650						042	
						043	41067460
						044	IMAGED
						045	SEAL_004
						OU 5	
N60701 / 000604	01-08-1997	DTSC LONG BEACH	COMMENTS ON PRELIMINARY FINAL SITE INSPECTION REPORT WITH ATTACHED	ADMIN RECORD	COMMENTS	008	FRC - PERRIS
NONE	<b>09-13-1994</b>	M. GASLAN	LETTER OF APPROVAL / CONCURRENCE		GW	012	181-03-0136
LTR	NONE	NAWS SEAL BEACH	FOR SI REPORT FROM CRWQCB		RISK	016	18 OF 29
NONE	10.1	J. STICKLER	RIVERSIDE DATED 8/2/94 (SEE AR #402 - PRELIMINARY FINAL SI REPORT)		SI	044	
00007						045	41067460
						OU 5	IMAGED
							SEAL_007

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 001392	05-01-2002	JACOBS	FINAL SITE MANAGEMENT PLAN	ADMIN RECORD	AHPA	001	SOUTHWEST
CLE-C01-01F229- S2-0004	<b>10-18-1995</b> 00229	ENGINEERING GROUP	QUARTERLY UPDATE FOR THE INSTALLATION RESTORATION PROGRAM, REVISION 1 (THERE IS NO REV. 0 IN DATABASE)		AOC	002	DIVISION - BLDG. 1
PLAN N68711-89-D-9296 00350		B. WONG NAVFAC - SOUTHWEST DIVISION			ARAR	003	
					ARPA	004	
					AST	005	PROBLEM
					ATEIP	006	SHELVING
					CERCLA	007	
					COPC	008	
					CWA	009	
					DERA	010	
					DMP	011	
					DQO	012	
					DREDGING	013	
					EE/CA	014	
					EIS	015	
					ESA	016	
					FFSRA	017	
					FS	018	
					GW	019	
					HSWA	020	
					IAS	021	
					IRP	022	
					NCP	023	
					NFA	024	
					NHPA	025	
					NPL	035	
					ORDNANCE	036	
					PA	037	
					PCB	038	
					QC	039	
					RAB	040	
					RCRA	041	
					REFUGE	042	
					RFA	043	
					RFI	044	

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
					RI	045		
					ROD	046		
					SAP	047		
					SI	048		
					SLUDGE	049		
					SMP	050		
					SOIL	051		
					STORMWATER	BLDG. 128		
					SWMU	OU 1		
					TCA	OU 2		
					TCE	OU 3		
					TSCA			
					TSDf			
					UST			
					WATER			
N60701 / 000891	07-08-1997	JACOBS	RESPONSE TO PUBLIC COMMENTS ON	ADMIN RECORD	ARAR	001		FRC - PERRIS
	<b>12-16-1995</b>	ENGINEERING	DECEMBER 31 1994 DRAFT FINAL		COMMENTS	002		181-03-0136
RPT	00258	B. WONG	REMEDIAL INVESTIGATION REPORT {SEE		GW	004		22 OF 29
NONE	10.1	NAVFAC -	AR #484 - RI REPORT}		IAS	005		
00120		SOUTHWEST			ORDNANCE	006		41067460
		DIVISION			RESPONSE	007		IMAGED
					RI	008		SEAL_007
					SI	012		
						016		
						019		
						022		
						042		
						043		
						044		
						045		
						OU 1		
						OU 2		
						OU 3		

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 000509	11-13-2000	DTSC - HERS -	HERS REVIEW OF DRAFT SITE	ADMIN RECORD	ARSENIC	002		FRC - PERRIS
NONE	<b>01-17-1996</b>	LONG BEACH	INVESTIGATION REPORTS FOR COMMENT		BTEX	003		181-03-0136
MEMO	NONE	L. VALOPPI	ON THE POTENTIAL MIGRATION		COC	004		16 OF 29
NONE		DTSC - OMF -	PATHWAYS OF CONTAMINANTS (SEE AR		DCA	005		
00017		LONG BEACH	#409 - DRAFT SI REPORT)		DDD	006		41067460
		R. ABBASI			DDE	008		IMAGED
					DDT	009		SEAL_008
					GW	012		
					METALS	013		
					OU	016		
					PAH	020		
					PCB	021		
					PESTICIDES	023		
					PRG	035		
					SI	036		
					SOIL	038		
					SOLVENTS	039		
					SVOC	040		
					TPH	042		
					VOC	043		
						044		
						045		
						046		
						BLDG. 10		
						BLDG. 229		
						BLDG. 230		
						BLDG. 235		
						BLDG. 245		
						BLDG. 246		
						BLDG. 247		
						BLDG. 252		
						BLDG. 255		
						BLDG. 410		
						BLDG. 434		
						BLDG. 56		

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites		CD No.
						BLDG. 68		
						BLDG. 69		
						BLDG. 88		
						OU 4		
						OU 5		
N60701 / 001072	11-16-2000	JACOBS	DRAFT ECOLOGICAL ASSESSMENT	ADMIN RECORD	ARSENIC	002		FRC - PERRIS
CLE-C01-01F229-S1-0007	05-07-1997	ENGINEERING	REVISION 0 (SEE AR #927, #936, #937, #938, #939, #1277 - COMMENTS)		BTEX	003		181-03-0136
RPT	00229	B. WONG			COEC	005		25 OF 29
N68711-89-D-9296		NAVFAC -			COPC	006		
00218		SOUTHWEST			DDD	008		41067460
		DIVISION			DDE	012		IMAGED
					DDT	013		SEAL_009
					EOD	016		
					ERA	021		
					GW	023		
					IAS	025		
					METALS	035		
					NFRAP	036		
					ORDNANCE	037		
					PAH	038		
					PCB	040		
					PRG	042		
					RDX	043		
					SI	044		
					SOIL	045		
					SVOC	046		
					SWMU	BLDG. 235		
					TCFM	BLDG. 88		
					TPH	OU 4		
					UST	OU 5		
					VOC			

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 000939	09-15-1997	RAB MEMBER	COMMENTS ON ECOLOGICAL RISK	ADMIN RECORD	ARSENIC	005		FRC - PERRIS
NONE	<b>06-15-1997</b>	J. SPENCER	ASSESSMENT REPORT FOR 21 SITES (SEE		BACKGROUND	008		181-03-0136
LTR	NONE	VARIOUS	AR #1072 - DRAFT ERA)		COMMENTS	012		23 OF 29
NONE	10.1	AGENCIES			DATA	016		
00006					EE/CA	021		41067460
					ERA	037		IMAGED
					FUEL	038		SEAL_008
					GW	040		
					METALS	044		
					RCRA	045		
					RISK	070		
					RSE	OU 4		
					SOIL	OU 5		
					UXO			
N60701 / 000936	09-15-1997	RAB MEMBER	LETTER RECOMMENDING THE	ADMIN RECORD	ERA	042		FRC - PERRIS
NONE	<b>06-17-1997</b>	J. SPENCER	EVALUATION OF ECOLOGICAL RISKS		RISK	044		181-03-0136
LTR	NONE	VARIOUS	ASSOCIATED WITH CERTAIN CHEMICALS,			045		23 OF 29
N68711-89-D-9296	01.6	AGENCIES	FOR THE DRAFT ECOLOGICAL			OU 4		
00001			ASSESSMENT (SEE AR #1072 - DRAFT EA)			OU 5		41067460
								IMAGED
								SEAL_008

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 001277	11-21-2000	DTSC - HERD -	REVIEW BY HUMAN AND ECOLOGICAL	ADMIN RECORD	AMMONIA	002		FRC - PERRIS
NONE	<b>07-25-1997</b>	SACRAMENTO	RISK DIVISION OF DRAFT ECOLOGICAL		AWQC	003		181-03-0136
MEMO	NONE	J. POLISINI	ASSESSMENT, REVISION 0 (SEE AR #1072 -		BTEX	005		29 OF 29
NONE		DTSC -	DRAFT ERA & #1278 - ADDITIONAL		COC	006		
00010		SACRAMENTO	COMMENTS)		COEC	012		41067460
		R. ABBASI			COMMENTS	013		IMAGED
					ERA	016		SEAL_009
					GW	021		
					PESTICIDES	025		
					SOIL	035		
					SVOC	036		
					VOC	037		
					WQA	042		
						044		
						045		
						OU 4		
						OU 5		

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 001145	11-09-1998	NWS SEAL BEACH	FINAL SITE INSPECTION REPORT FOR	ADMIN RECORD	DATA	002		SOUTHWEST
	<b>03-19-1998</b>	D. BAILLIE	OPERABLE UNIT 4 (REVISION 1) (SEE AR		GW	003		DIVISION - BLDG.
RPT	DO003	VARIOUS	#1162 - DTSC APPROVAL OF SI REPORTS)		SI	005		1
N68711-96-D-2299	01.4	AGENCIES			SOIL	006		
00950					WATER	008		PROBLEM
						009		SHELVING
						012		
						013		
						016		
						020		
						021		
						023		
						025		
						035		
						036		
						037		
						038		
						039		
						040		
						042		
						043		
						045		
						046		
						OU 4		

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 000597	11-13-2000	IT CORPORATION	FINAL SITE INSPECTION REPORT (SEE AR	ADMIN RECORD	AIR	008		FRC - PERRIS
PROJECT NO.	<b>03-20-1998</b>	P.F. TAMASHIRO	#1162 - DTSC APPROVAL OF FINAL SI		AOC	012		181-03-0136
141950.03.5S	DO003	NAVFAC -	REPORTS)		BTEX	016		18 OF 29
RPT		SOUTHWEST			CANCER	042		
N68711-96-D-		DIVISION			COC	043		41067460
2299_____					DCA	044		IMAGED
00616					DDT	045		SEAL_008
					EOD		BLDG. 235	
					FFSRA		BLDG. 236	
					FS		BLDG. 413	
					FSP		BLDG. 418	
					GPR		BLDG. 87	
					GW		BLDG. 88	
					H&SP		SWMU 12	
					MBK		SWMU 13	
					MEK		SWMU 41	
					METALS			
					NFA			
					ORDNANCE			
					PA			
					PAH			
					PCB			
					PCE			
					PID			
					PRG			
					QA			
					QC			
					RFA			
					RI			
					SB			
					SI			
					SOIL			
					SVOC			
					SWMU			
					UST			

UIC No. / Rec. No.	Doc. Control No.	Prc. Date	Author Affil.					Location
Record Type	Record Date	Author		Subject	Classification	Keywords	Sites	FRC Access. No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC/SWDIV Box No.
Approx. # Pages	EPA Cat. #	Recipient						FRC Warehouse Loc.
								CD No.
						VOC		
						WATER		
						WELLS		
N60701 / 001167	11-10-1998	CH2M HILL		FINAL FOCUSED SITE INSPECTION	ADMIN RECORD	GW	002	FRC - PERRIS
	<b>04-08-1998</b>	B. WONG		REPORT (SEE AR #1170 - DTSC		METALS	003	181-03-0136
RPT	DO003	VARIOUS		COMMENTS)		SI	005	27 OF 29
N68711-96-D-2299	01.4	AGENCIES					006	
00488							008	41067460
							009	IMAGED
							012	SEAL_009
							013	
							016	
							020	
							021	
							023	
							025	
							035	
							036	
							037	
							038	
							039	
							040	
							042	
							043	
							045	
							046	
							OU 4	
							OU 5	

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 001162	11-10-1998	DTSC CYPRESS	DTSC APPROVAL OF SITE INSPECTION	ADMIN RECORD	SI	002		FRC - PERRIS
	<b>04-17-1998</b>	R. ABBASI	REPORTS (SEE AR #597 - OU 5 SI REPORT			003		181-03-0136
LTR	NONE	NWS SEAL BEACH	& AR #1145 - OU 4 SI REPORT)			005		27 OF 29
NONE	01.6	D. BAILLIE				006		
00003						008		41067460
						009		IMAGED
						012		SEAL_008
						013		
						016		
						020		
						021		
						023		
						025		
						035		
						036		
						037		
						038		
						039		
						040		
						042		
						043		
						045		
						046		
						OU 4		
						OU 5		

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 001170	11-10-1998	DTSC CYPRESS	DTSC REVIEW OF FOCUSED SITE	ADMIN RECORD	COMMENTS	002		FRC - PERRIS
	<b>04-27-1998</b>	R. ABBASI	INSPECTION REPORT WITH NO		SI	003		181-03-0136
LTR	NONE	NWS SEAL BEACH	SIGNIFICANT COMMENTS (SEE AR #1167 -			005		27 OF 29
NONE	01.6	D. BAILLIE	FOCUSED SI)			006		
00003						008		41067460
						009		IMAGED
						012		SEAL_009
						013		
						016		
						020		
						021		
						023		
						025		
						035		
						036		
						037		
						038		
						039		
						040		
						042		
						043		
						045		
						046		
						OU 4		
						OU 5		

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 001234	07-21-1999	CH2MHILL	FOCUSED SITE INSPECTION PHASE II	ADMIN RECORD	AA	012		FRC - PERRIS
NONE	<b>04-30-1999</b>		WORK PLAN		AOC	013		181-03-0136
RPT	DO 7	NAVFAC -			BTEX	016		28 OF 29
N68711-96-D- 2299	03.4	SOUTHWEST DIVISION			CERCLA	025		41067460
00371					COPC	037		IMAGED
					DTSC	038		SEAL_009
					ECS	042		
					EOD	044		
					EPA	045		
					EPRG			
					FSI			
					FSP			
					HSP			
					IAS			
					IRP			
					NWR			
					OSR			
					OU			
					PA			
					PCB			
					PRG			
					QAPP			
					RCRA			
					RFA			
					RT&E			
					SI			
					VOC			

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 000057	09-24-1999	CH2M HILL	DRAFT FOCUSED SITE INSPECTION PHASE	ADMIN RECORD	FS	012	FRC - PERRIS
149228.07.WP	<b>08-30-1999</b>	B. WONG	II WORK PLAN (SEE AR #278, #281, #285,		HAZ WASTE	016	181-03-0136
PLAN	DO007	NAVFAC -	#293 #321 & #322)		QA	025	1 OF 29
N68711-96-D-2299	03.3	SOUTHWEST			QAPP	037	
00403		DIVISION			SI	038	41067460
		A. DICK				042	IMAGED
						044	SEAL_001
						045	
						073	
						BLDG. 128	
N60701 / 000281	05-23-2000	DTSC-GSU-	REVIEW AND COMMENTS BY GEOLOGIC	ADMIN RECORD	BTEX	012	FRC - PERRIS
LOG # 991057A	<b>10-22-1999</b>	SACRAMENTO, CA	SERVICES UNIT OF THE FOCUSED SITE		COMMENTS	016	181-03-0136
LTR	NONE	M. MCCRINK	INSPECTION PHASE II WORK PLAN		COPC	042	7 OF 29
NONE		DTSC - CYPRESS,	(REFERENCE AR #000057, #269, #278,		DQO	044	
00005		CA	#285, & #293)		FSP	045	41067460
		K. LEIBEL			GW	AOC 6	IMAGED
					NFA	BLDG. 128	SEAL_002
					PAH	BLDG. 88	
					PRG	BLDG. 95	
					SI		
					SOIL		
					TPH		
					VOC		

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 000278	05-22-2000	CRWQCB	CALIFORNIA REGIONAL WATER QUALITY	ADMIN RECORD	GW	012		FRC - PERRIS
NONE	<b>10-28-1999</b>	P. HANNON	CONTROL BOARD HAS REVIEWED THE		SOIL	016		181-03-0136
LTR	NONE	NWS SEAL BEACH	DRAFT FOCUSED SITE INSPECTION PHASE		WORK PLAN	025		7 OF 29
NONE		P.F. TAMASHIRO	II WORK PLAN DATED AUGUST 30, 1999			037		
00001			AND HAS APPROVED IT AS PROPOSED			038		41067460
			(REFERENCE AR #57, #269, #281, #285 &			042		IMAGED
			#293)			044		SEAL_002
						045		
						AOC 6		
						BLDG. 128		
						SWMU 24		
						SWMU 56		
						SWMU 57		

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 000313	06-01-2000	CH2MHILL	FINAL OPERABLE UNITS (OU) 4 AND 5	ADMIN RECORD	ARSENIC	005	FRC - PERRIS
PROJ#	12-29-1999	B. WONG	SCREENING ECOLOGICAL RISK	INFO	BTEX	006	181-03-0136
141950.03.EC	NONE	NAVFAC -	ASSESSMENT (REFERENCE AR #314)	REPOSITORY	COEC	012	7 OF 29
RPT		SOUTHWEST			COPC	013	
N68711-89-D-2299		DIVISION			DDD	016	41067460
00280					DDE	025	IMAGED
					DDT	037	SEAL_002
					ERA	038	
					GW	040	
					IAS	042	
					METALS	044	
					PAH	045	
					PCB	OU 4	
					PESTICIDES	OU 5	
					PRG		
					RCRA		
					RDX		
					RFA		
					RSE		
					SI		
					SVOC		
					SWMU		
					TCFM		
					TPH		
					UST		
					VOC		

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 000322	06-01-2000	CH2MHILL	DRAFT FINAL FOCUSED SITE INSPECTION	ADMIN RECORD	AOC	012		FRC - PERRIS
PROJ #	<b>01-27-2000</b>		PHASE II WORK PLAN (SEE AR #57 - DRAFT		BTEX	013		181-03-0136
149228.07.WP	DO007	NAVFAC -	WORK PLAN, #269, & #323, AR #384 - DTSC		COPC	016		8 OF 29
PLAN		SOUTHWEST	COMMENTS, AR #385 - CRWQCB		DQO	025		
N68711-96-D-2299		DIVISION	COMMENTS)		EOD	037		41067460
00498					EPRG	038		IMAGED
					H&SP	042		SEAL_003
					IAS	044		
					IRP	045		
					NFA	073		
					OU	AOC 6		
					PA	BLDG. 128		
					PAH	SWMU 24		
					PCB	SWMU 56		
					PRG	SWMU 57		
					QAPP			
					RCRA			
					RFA			
					SI			
					SVOC			
					SWMU			
					TPH			
					UST			
					VOC			
					WORK PLAN			

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 000385	09-20-2000	CRWQCB - SANTA ANA	REVIEW AND COMMENT ON DRAFT FINAL FOCUSED SITE INSPECTION PHASE II WORK PLAN. THE WORK PLAN IS APPROVED AS PROPOSED.	ADMIN RECORD	AOC	012		FRC - PERRIS
NONE	<b>03-08-2000</b>	P. HANNON			SI	016		181-03-0136
LTR	NONE	NAVFAC - SOUTHWEST DIVISION			SWMU	025		11 OF 29
NONE		P. TAMASHIRO				037		
00001						038		41067460
						042		IMAGED
						044		SEAL_005
						045		
						AOC 6		
						BLDG. 128		
						SWMU 24		
						SWMU 56		
						SWMU 57		
N60701 / 000407	03-02-1995	JACOBS ENGINEERING	PRELIMINARY FINAL REVIEW SITE INSPECITION WORK PLAN FOR OU 5	ADMIN RECORD	SI	008		SOUTHWEST DIVISION - BLDG. 1
PLAN	00119					012		
N68711-89-D-9296	03.3	NAVFAC - SOUTHWEST DIVISION				016		
00450						042		
						043		PROBLEM
						045		SHELVING
						OU 5		

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
N60701 / 001321	06-06-2001	CH2M HILL	DRAFT COMMUNITY RELATIONS PLAN	ADMIN RECORD	AOC	001		SOUTHWEST
158283.09.RT	<b>05-30-2001</b>				ARSENIC	002		DIVISION - BLDG.
PLAN	DO 9	NAVFAC -			CERCLA	003		12
N68711-96-D-2299		SOUTHWEST			COC	007		
00095		DIVISION			COPC	008		
					CRP	013		PALLET 06 - BX-
					ECOC	016		001
					GW	019		IMAGED
					IRP	021		SEAL_011
					METALS	023		
					MTBE	025		
					NCP	035		
					NPL	036		
					PCB	037		
					PCE	038		
					PIM	040		
					RAB	043		
					ROD	044		
					SOIL	045		
					SVOC	046		
					TPH	070		
					UST	BLDG. 241		
					VOC	OU 1		
						OU 2		
						OU 3		
						OU 4		
						OU 5		

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 001340	09-13-2001	CH2M HILL -	FINAL INSTALLATION RESTORATION	ADMIN RECORD	AOC	001	SOUTHWEST
PROJECT NO.	<b>09-04-2001</b>	SANTA ANA	PROGRAM COMMUNITY RELATIONS PLAN	INFO	CERCLA	002	DIVISION - BLDG.
158283.09.RT	DO 9			REPOSITORY	CRP	003	12
PLAN		NAVFAC -			ORDNANCE	004	
N68711-96-D-2299		SOUTHWEST			PCB	005	PALLET 06 - BX-
00106		DIVISION			PESTICIDES	006	002
					PIM	007	IMAGED
					PUBNOT	008	SEAL_012
					RCRA	009	
					RFA	010	
					SARA	011	
					SOLVENTS	012	
					SWMU	013	
					UST	014	
						015	
						016	
						017	
						018	
						019	
						020	
						021	
						022	
						023	
						024	
						025	
						035	
						036	
						037	
						038	
						039	
						040	
						041	
						042	
						043	
						044	

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Record Type	Record Date	Author					FRC/SWDIV Box No.	
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.	
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
						045		
						046		
						047		
						048		
						049		
						050		
						051		
						070		
						073		
						074		

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Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 001348	11-19-2001	CH2M HILL	DRAFT SITE MANAGEMENT PLAN UPDATE	ADMIN RECORD	AOC	001	SOUTHWEST
PROJECT NO.	<b>11-15-2001</b>	B. WONG	FOR THE INSTALLATION RESTORATION	INFO	ARAR	003	DIVISION - BLDG.
158091.06.RT	DO 6	NAVFAC -	PROGRAM	REPOSITORY	AST	006	12
PLAN		SOUTHWEST			ATEIP	007	
N68711-96-D-2299		DIVISION			BTEX	008	PALLET 06 - BX-
00147		S. LE			CAA	009	002
					CEQA	010	IMAGED
					COC	011	SEAL_012
					COEC	012	
					COPC	013	
					CRP	014	
					CWA	015	
					DDT	016	
					DERA	017	
					DQO	018	
					EIS	019	
					EOD	020	
					FFSRA	021	
					FS	022	
					GW	023	
					IRP	024	
					MONITORING	025	
					MTBE	026	
					MW	027	
					NCP	028	
					NEPA	029	
					NFA	030	
					NHPA	031	
					NPL	032	
					PA	033	
					PAH	034	
					PCB	035	
					PCE	036	
					PID	037	
					QC	038	

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.		Subject		Classification	Keywords	FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient						CD No.
							RAB	039
							RCRA	040
							RFA	041
							RFI	042
							RI	043
							ROD	044
							RSE	045
							SARA	046
							SI	047
							SMP	048
							SVOC	049
							SWMU	050
							TCA	051
							TCE	052
							TPH	053
							TSCA	054
							UST	055
							UXO	056
							VOC	057
								058
								059
								060
								061
								062
								063
								064
								065
								066
								067
								068
								069
								070
								071
								072
								073

UIC No. / Rec. No.							Location	
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.	
Record Type	Record Date	Author					FRC/SWDIV Box No.	
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.	
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	

BLDG. 241  
 OU 1  
 OU 2  
 OU 3  
 OU 4  
 OU 5  
 OU 6  
 OU 7

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 001398	05-01-2002	CH2M HILL	DRAFT FINAL FOCUSED SITE INSPECTION	ADMIN RECORD	ARSENIC	012	SOUTHWEST
CH2MHILL	<b>01-28-2002</b>		PHASE II REPORT	INFO	BTEX	013	DIVISION - BLDG.
PROJECT NO.	DO 7	NAVFAC -		REPOSITORY	COEC	016	12
149228.07.RT		SOUTHWEST			COPC	025	
RPT		DIVISION			DCA	037	
N68711-96-D-2299					DCE	038	PALLET 06 - BX-
01250					DQO	042	003
					DRUMS	044	IMAGED
					EM	045	SEAL_013
					EOD	073	
					GC/MS	074	
					GPR	AOC 6	
					GW	BLDG. 128	
					HAZ WASTE	BLDG. 235	
					MEK	BLDG. 236	
					METALS	BLDG. 88	
					MW	BLDG. 89	
					NFA	BLDG. 95	
					ORDNANCE	OU 4	
					PAH	OU 5	
					PCB	SWMU 24	
					PCE	SWMU 56	
					PESTICIDES	SWMU 57	
					PRG		
					SARA		
					SEDIMENTS		
					SI		
					SOIL		
					SOIL BORING		
					SWMU		
					TCA		
					TCE		
					TPH		
					UST		
					UXO		

UIC No. / Rec. No.							Location	
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.	
Record Type	Record Date	Author					FRC/SWDIV Box No.	
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.	
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	

VOC  
WATER  
WELLS  
WORK PLAN

UIC No. / Rec. No.							Location
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Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 001365	03-27-2002	CH2M HILL	FINAL SITE MANAGEMENT PLAN UPDATE	ADMIN RECORD	ARAR	001	SOUTHWEST
PROJECT	<b>03-19-2002</b>	B. WONG	FOR THE INSTALLATION RESTORATION	INFO	AST	005	DIVISION - BLDG.
NUMBER	DO 6	NAVFAC -	PROGRAM	REPOSITORY	ATEIP	007	12
158091.06.RT		SOUTHWEST			ATIR	008	
PLAN		DIVISION			BTEX	009	
N68711-96-D-2299		S. LE			CEQA	011	PALLET 06 - BX-
00172					COC	012	003
					COEC	013	IMAGED
					COPC	014	SEAL_012
					CRP	015	
					CWA	016	
					DERA	017	
					DQO	018	
					EBS	019	
					EE/CA	020	
					EIS	021	
					EOD	022	
					FFSRA	023	
					FS	024	
					GW	025	
					IRP	035	
					MONITORING	036	
					MTBE	037	
					NFA	038	
					NPL	039	
					ORDNANCE	040	
					PA	041	
					PAH	042	
					PCB	043	
					PCE	044	
					PESTICIDES	045	
					PID	046	
					PRG	047	
					RAB	048	
					RCRA	049	

UIC No. / Rec. No.							Location	
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.	
Record Type	Record Date	Author					FRC/SWDIV Box No.	
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.	
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
					RFA	050		
					RFI	051		
					RI	070		
					ROD	073		
					RSE	074		
					SARA	BLDG. 128		
					SMP	BLDG. 235		
					SVOC	BLDG. 241		
					SWMU	BLDG. 68		
					TCA	OU 1		
					TCE	OU 2		
					TPH	OU 3		
					TSCA	OU 4		
					UST	OU 5		
					UXO	OU 6		
					VOC	OU 7		

UIC No. / Rec. No.							Location
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.
Record Type	Record Date	Author					FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.
N60701 / 001413	07-23-2002	BECHTEL	NEWSLETTER OF THE ENVIRONMENTAL	ADMIN RECORD	AOC	001	SOUTHWEST
CTO-0151/0407	<b>07-01-2002</b>	NATIONAL, INC.	INVESTIGATION AND CLEANUP PROGRAM	CONFIDENTIAL	CAA	002	DIVISION - BLDG.
MISC	00151		(INCLUDES MAILING LIST, PORTIONS OF	INFO	CERCLA	003	12
N68711-92-D-4670		NAVFAC -	WHICH ARE CONFIDENTIAL)	REPOSITORY	CWA	004	
00014		SOUTHWEST			ESA	005	PALLET 06 - BX-
		DIVISION			FS	006	004
					GW	007	IMAGED
					HAZ WASTE	008	SEAL_012
					IRP	009	
					METALS	010	
					NEPA	011	
					NHPA	012	
					ORDNANCE	013	
					PAH	014	
					PCB	015	
					PESTICIDES	016	
					PIM	017	
					RAB	018	
					RCRA	019	
					REFUGE	020	
					REMEDIAL ACTIO	021	
					RSE	022	
					SARA	023	
					SOIL	024	
					SOLVENTS	025	
					SWMU	035	
					TCA	036	
					TCE	037	
					UST	038	
					VOC	039	
					WATER	040	
						041	
						042	
						043	
						044	

UIC No. / Rec. No.							Location	
Doc. Control No.	Prc. Date	Author Affil.					FRC Access. No.	
Record Type	Record Date	Author					FRC/SWDIV Box No.	
Contr./Guid. No.	CTO No.	Recipient Affil.					FRC Warehouse Loc.	
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
						045		
						046		
						047		
						048		
						049		
						050		
						051		
						070		
						073		
						074		
						AOC 6		
						AOC 7		
						BLDG. 235		
						BLDG. 71		
						SWMU 17		
						SWMU 20		
						SWMU 21		
						SWMU 22		
						SWMU 23		
						SWMU 24		
						SWMU 41		
						SWMU 42		
						SWMU 43		
						SWMU 50		
						SWMU 51		
						SWMU 52		
						SWMU 53		
						SWMU 54		
						SWMU 55		
						SWMU 56		
						SWMU 57		
						SWMU 58		
						SWMU 59		
						SWMU 60		
						SWMU 61		

UIC No. / Rec. No.								Location
Doc. Control No.	Prc. Date	Author Affil.						FRC Access. No.
Record Type	Record Date	Author						FRC/SWDIV Box No.
Contr./Guid. No.	CTO No.	Recipient Affil.						FRC Warehouse Loc.
Approx. # Pages	EPA Cat. #	Recipient	Subject	Classification	Keywords	Sites	CD No.	
						SWMU 62		
						SWMU 63		
						SWMU 64		
						SWMU 65		
						SWMU 66		
						SWMU 69		
N60701 / 001519	08-23-2004	DON - SEAL	13 JULY 2004 RESTORATION ADVISORY	ADMIN RECORD	MTBE	007		SOUTHWEST
SER. N45W/0168	<b>07-13-2004</b>	BEACH	BOARD (RAB) AND COMMUNITY MEETING	INFO	MTG MINS	014		DIVISION - BLDG.
MM	NONE		MINUTES SITE TOUR - INCLUDES AGENDA	REPOSITORY	TCE	022		1
NONE			[INCLUDES TRANSMITTAL LETTER BY P.			040		
00008		VARIOUS	TAMASHIRO]			044		
		AGENCIES				045		
						070		
						074		
						SWMU 57		
N60701 / 001549	05-02-2005	NAVFAC -	12 APRIL 2005 REMEDIAL PROJECT	ADMIN RECORD	RPM	004		SOUTHWEST
SWDIV SER	<b>04-18-2005</b>	SOUTHWEST	MANAGERS' (RPM) MEETING MINUTES	INFO		005		DIVISION - BLDG.
EVR.SL/5116	NONE	DIVISION	[INCLUDES SWDIV TRANSMITTAL LETTER	REPOSITORY		006		1
MTG MINS		S. LE	BY S. LE]			007		
NONE		DTSC - CYPRESS				014		
00011		K. LEIBEL				040		
						042		
						045		
						070		
						074		
						SWMU 57		

UIC No. / Rec. No.	Doc. Control No.	Prc. Date	Author Affil.	Record Type	Record Date	Author	Contr./Guid. No.	CTO No.	Recipient Affil.	Subject	Classification	Keywords	Sites	Location FRC Access. No. FRC/SWDIV Box No. FRC Warehouse Loc. CD No.
Approx. # Pages	EPA Cat. #	Recipient												
N60701 / 001565	09-21-2005	NAVFAC -	PROJECT MANAGERS' MEETING MINUTES	ADMIN RECORD	MTG MINS	004	SOUTHWEST							
SWDIV SER	<b>09-13-2005</b>	SOUTHWEST	OF 13 SEPTEMBER 2005	INFO		005	DIVISION - BLDG.							
OPDE.SL/5319	NONE	DIVISION		REPOSITORY		006	1							
CORRESP		S. LE				007								
NONE		DTSC - CYPRESS				022								
00011		K. LEIBEL				040								
						042								
						044								
						045								
						070								
						074								
						SWMU 57								
N60701 / 001570	12-20-2005	SES TECH	DRAFT NON - TIME - CRITICAL REMOVAL	ADMIN RECORD	COPC	042	SOUTHWEST							
SES-TECH-06-0033	<b>12-05-2005</b>	A. ELOSKOF	ACTION WORK PLAN,REVISION 0	CONFIDENTIAL	DCA	044	DIVISION - BLDG.							
RPT	00006	NAVFAC -	(PORTION OF MAILING LIST IS	INFO	DCE	045	1							
N68711-04-D-1104		SOUTHWEST	CONFIDENTIAL)	REPOSITORY	OU	SWMU 57								
00450		DIVISION			PAH									
					PVC									
					SCS									
					TCLP									
					USC									
					VOC									

**Total Estimated Record Page Count: 9,666**

**Total - Administrative Records: 51**

[UIC NUMBER]='N60701'

No Keywords

Sites=045

No Classification

## AFFIDAVIT OF PUBLICATION

STATE OF CALIFORNIA, )  
 ) ss.  
County of Orange )

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of **The Orange County Register**, a newspaper of general circulation, published in the city of Santa Ana, County of Orange, and which newspaper has been adjudged to be a newspaper of general circulation by the Superior Court of the County of Orange, State of California, under the date of 1/18/52, Case No. A-21046, that the notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

November 3, 2005

"I certify (or declare) under the penalty of perjury under the laws of the State of California that the foregoing is true and correct":

Executed at Santa Ana, Orange County, California, on

Date: November 3, 2005

Signature

**The Orange County Register**  
625 N. Grand Ave.  
Santa Ana, CA 92701  
(714) 796-7000 ext. 2209

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This sp

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**Naval Weapons Station Seal Beach  
Proposal to Remove Contaminated Soil at IR Site 42 and SWMU 57 and Contaminated Sediments at IR Site 44/45**

**\*\*\*Public Comment Invited\*\*\***

The Department of the Navy (DON) invites public comment on proposals for performing removal actions at Installation Restoration (IR) Sites 42, 44/45 and Solid Waste Management Unit (SWMU) 57 at Naval Weapons Station (NAWPNSA) Seal Beach, California.

The proposals, called Engineering Evaluation/Cost Analysis (EE/CA), include the results of environmental investigations at the sites; the cleanup alternatives considered; and the removal actions proposed as the best remedy. The public is encouraged to review and comment on these EE/CAs during the 30-day public comment period of November 3, 2005 through December 3, 2005 (see details at the end of this notice). Both the investigations and the proposed removal actions have been carried out with oversight from the California Environmental Protection Agency, Department of Toxic Substances Control and the Regional Water Quality Control Board.

**IR Site 42**  
IR Site 42, associated with the auto shop sump and a waste oil tank, is located approximately at the corner of Nel Road and Kitts Highway, adjacent to Building 238. Several areas of concern were investigated during the Operable Unit (OU) 5 Site Inspection (SI) (Southwest Division, Naval Facilities Engineering Command (SWDIV), 1996a), Screening Ecological Risk Assessment for OUs 4 and 5 (SWDIV, 1999), and Phase II Focused SI (SWDIV, 2002). Based on these investigations, the only area of concern requiring a removal action is located near the mouth of a drainage ditch that discharges storm water to the Seal Beach National Wildlife Refuge (NWR). Metals at concentrations above background levels were detected in soil samples collected from this location. The elevated metal concentrations may be of potential risks to wildlife receptors in the immediate vicinity of the storm water outfall located in the NWR.

**IR Site 44/45**  
IR Site 44/45, associated with floor drains, waste Otto fuel drum storage area, area drains, and ditches is located in the vicinity of Building 88 at NAWPNSA Seal Beach. The site was investigated under OU 5 SI (SWDIV, 1996a), Focused SI for OUs 4 and 5 (SWDIV, 1999b), Screening Ecological Risk Assessment for OUs 4 and 5 (SWDIV, 1999), and Phase II Focused SI (SWDIV, 2002). Environmental media investigated and examined in these reports include soil, groundwater, and sediment. It was concluded in the Phase II Focused SI that the maximum arsenic and lead concentrations of nickel and zinc and sediment metal levels from the drainage ditch exceeded the background level and ecological risk screening levels for sediment. This indicates potential ecological risks to aquatic life in the ditch.

**SWMU 57**  
SWMU 57 is associated with the paint locker near Building 59 at NAWPNSA Seal Beach. During the 1993 Operable Unit (OU) 6 and 7 Confirmation Testing, several metals and volatile organic compounds (VOCs) that may be attributable to paints and solvents were detected in a nearby surface soil background sample, which was collected upslope from the paint locker in an area adjacent to the east corner of Building 59. During the Focused SI Phase I investigation, it was determined that VOCs detected in soil posed no significant risks to human health, but arsenic impacted soil did pose a human health risk at the site. There are no ecological risk concerns because of the absence of terrestrial receptors and the incomplete groundwater pathway.

Each of the three EE/CAs: IR Site 42 (15 July 2005), IR Site 44/45 (23 September 2005) and SWMU 57 (30 September 2005) evaluated three alternatives that could be used in the removal actions (cleanups) of contaminated soil/sediments. Alternatives evaluated in detail included: 1) no action; 2) partial excavation with off-site disposal; 3) excavation with offsite disposal.

The DON is recommending Alternative 3, which involves the following removal actions for the three sites:

- IR Site 42: Removal of approximately 82 cubic yards of upper contaminated soil.
- IR Site 44/45: Removal of approximately 165 cubic yard of nickel and zinc contaminated sediments.
- SWMU 57: Removal of approximately 140 cubic yards of arsenic contaminated soil.

Each of the actions will involve excavation and offsite disposal followed by backfilling with clean imported soil and returning the sites to their original conditions. The on-site field activities are expected to begin in March 2006 and be completed during April 2006.

After all public comments have been considered, a decision will be made and documented in an Action Memorandum/Removal Action Work Plan. All comments will be formally addressed in a responsiveness summary, which will be sent to everyone who provided a comment. A copy will also be placed in the information repositories below.

The draft EE/CAs and other reports regarding the sites are available for public review and copying online at <http://www.sealbeach.navy.mil/>, or at the following public information repositories:

**Seal Beach Public Library, Mary Wilson Branch**  
707 Electric Avenue, Seal Beach, CA  
(562) 431-3584

**Building 110, Naval Weapons Station Seal Beach**  
800 Seal Beach Blvd., Seal Beach, CA  
(562) 626-7897

The full Administrative Record and files pertaining to this matter are available for public review at:

**Southwest Division, Naval Facilities Engineering Command**  
1220 Pacific Highway, San Diego, CA 92132-5150  
Ms. Diane Gilve, Code 440.DS, (619) 532-3576

Written comments will be accepted beginning November 3, 2005 and ending December 3, 2005. Comments must be postmarked (or emailed or faxed) by November 27, 2005 and sent to the address below to be considered:

**Commanding Officer**  
**Environmental Department, Attn: Ms. Pei-Fen Tamashiro, Code 6485**  
**Naval Weapons Station Seal Beach**  
800 Seal Beach Blvd., Seal Beach, CA 90740  
FAX: (562) 626-7131  
email: [peifentamashiro@navy.mil](mailto:peifentamashiro@navy.mil)

Naval Weapons Station Seal Beach has established a Restoration Advisory Board (RAB), made up of members of the community and representatives from local regulatory agencies, which holds regular public meetings to discuss ongoing environmental investigation and cleanup work at the facility. For more information about the RAB or the proposed removal actions, please contact:

Ms. Pei-Fen Tamashiro, Naval Weapons Station Seal Beach (626) 626-7897  
Mr. Gregg Smith, Public Affairs Officer, Naval Weapons Station Seal Beach (662) 626-7215  
Ms. Katherine Leibel, California EPA, Department of Toxic Substances Control (714) 484-5446  
Ms. Joan "JP" Peoples, RAB Community Co-Chair (662) 592-5806

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(2015.5 C.C.P.)

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County of Orange

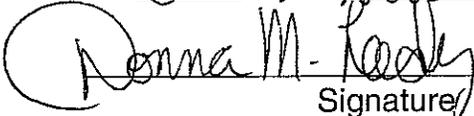
I am a citizen of the United States and a resident of the county aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of the SEAL BEACH SUN, a newspaper of general circulation, printed and published weekly in the City of Seal Beach, County of Orange and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Orange, State of California, under the date of 2/24/75. Case Number A82583; that the notice of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

November 3

all in the year 2005.

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Seal Beach, CA,  
this 3 day of November, 2005.

  
Signature

PUBLICATION PROCESSED BY:  
**THE SEAL BEACH SUN**  
216 Main Street  
Seal Beach, CA 90740  
(562) 430-7555

Proof of Publication of

**Naval Weapons Station Seal Beach  
Proposal to Remove Contaminated Soil at IR Site 42 and SWMU 57 and Contaminated Sediments at IR Site 44/45**

\*\*\*Public Comment Invited\*\*\*

The Department of the Navy (DON) invites public comment on proposals for performing removal actions at Installation Restoration (IR) Sites 42, 44/45 and Solid Waste Management Unit (SWMU) 57 at Naval Weapons Station (NAVWPNS-TA) Seal Beach, California.

The proposals, called Engineering Evaluation/Cost Analysis (EE/CA)s, include the results of environmental investigations at the sites, the cleanup alternatives considered, and the removal actions proposed as the best remedy. The public is encouraged to review and comment on these EE/CAs during the 30-day public comment period of November 3, 2005 through December 3, 2005 (see details at the end of this notice). Both the investigations and the proposed removal actions have been carried out with oversight from the California Environmental Protection Agency Department of Toxic Substances Control and the Regional Water Quality Control Board.

IR Site 42  
IR Site 42, associated with the auto shop sump and a waste oil tank, is located approximately at the corner of Net Road and Kitts Highway, adjacent to Building 236. Several areas of concern were investigated during the Operable Unit (OU) 5 Site Inspection (SI) (Southwest Division, Naval Facilities Engineering Command (SWDIV), 1998a), Screening Ecological Risk Assessment for OUs 4 and 5 (SWDIV, 1999), and Phase II Focused SI (SWDIV, 2002). Based on these investigations, the only area of concern requiring a removal action is located near the mouth of a drainpipe that discharges storm water to the Seal Beach National Wildlife Refuge (NWR). Metals at concentrations above background levels were detected in soil samples collected from this location. The elevated metal concentrations may be of potential risks to wildlife receptors in the immediate vicinity of the storm water outfall located in the NWR.

IR Site 44/45  
IR Site 44/45, associated with floor drains, waste Otto fuel drum

storage area, area drains, and outlet, is located in the vicinity of Building 88 at NAVWPNS-TA Seal Beach. The site was investigated under OU 5 SI (SWDIV, 1998a), Focused SI for OUs 4 and 5 (SWDIV, 1998b), Screening Ecological Risk Assessment for OUs 4 and 5 (SWDIV, 1999), and Phase II Focused SI (SWDIV, 2002). Environmental media investigated and documented in these reports include soil, groundwater, and sediment. It was concluded in the Phase II Focused SI that the maximum and arithmetic mean concentrations of nickel and zinc in sediment collected from the drainage ditch exceeded the background level and ecological risk screening levels for sediment. This indicates potential ecological risks to aquatic life in the ditch.

SWMU 57

SWMU 57 is associated with the paint locker near Building 59 at NAVWPNS-TA Seal Beach. During the 1993 Operable Unit (OU) 6 and 7 Confirmation Testing, several metals and volatile organic compounds (VOCs) that may be attributable to paints and solvents were detected in a nearby surface soil background sample, which was collected upslope from the paint locker in an area adjacent to the east corner of Building 59. During the Focused SI Phase II investigation, it was determined that VOCs detected in soil posed no significant risks to human health, but arsenic-impacted soil did pose a human health risk at the site. There are no ecological risk concerns because of the absence of terrestrial receptors and the incomplete groundwater pathway.

Each of the three EE/CAs, IR Site 42 (15 July 2005), IR Site 44/45 (23 September 2005) and SWMU 57 (30 September 2005) evaluated three alternatives that could be used in the removal actions: (cleanups) of contaminated soils and sediments. Alternatives evaluated in detail included: 1) no action; 2) partial excavation with off-site disposal; 3) excavation with offsite disposal.

The DON is recommending Alternative 3, which involves the following removal actions for the three sites:

IR Site 42: Removal of approximately 82 cubic yards of copper contaminated soil.

IR Site 44/45: Removal of approximately 185 cubic yards of nickel and zinc contaminated sediments.

SWMU 57: Removal of approximately 140 cubic yards of arsenic contaminated soil.

Each of the actions will involve excavation and offsite disposal followed by backfilling with clean imported soil and returning the sites to their original conditions.

The on-site field activities are expected to begin in March 2006 and be completed during April 2006.

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Ms. Diane Silva, Code 4MG.DS, (619) 532-3676

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Environmental Department,  
Attn: Ms. Pei-Fen Tamashiro,  
Code N45S

Naval Weapons Station Seal Beach  
800 Seal Beach Blvd., Seal Beach, CA 90740

FAX: (562) 626-7131  
email: [pei-fen.tamashiro@navy.mil](mailto:pei-fen.tamashiro@navy.mil)

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Ms. Katherine Leibel, California EPA, Department of Toxic Substances Control (714) 484-5446

Ms. Joan "JP" Peoples, RAB Community Co-Chair (562) 592-5606

Published in the Seal Beach Sun 11/3/2005.

**Responses to Comments on this Action Memorandum will be included in the Final  
Action Memorandum**

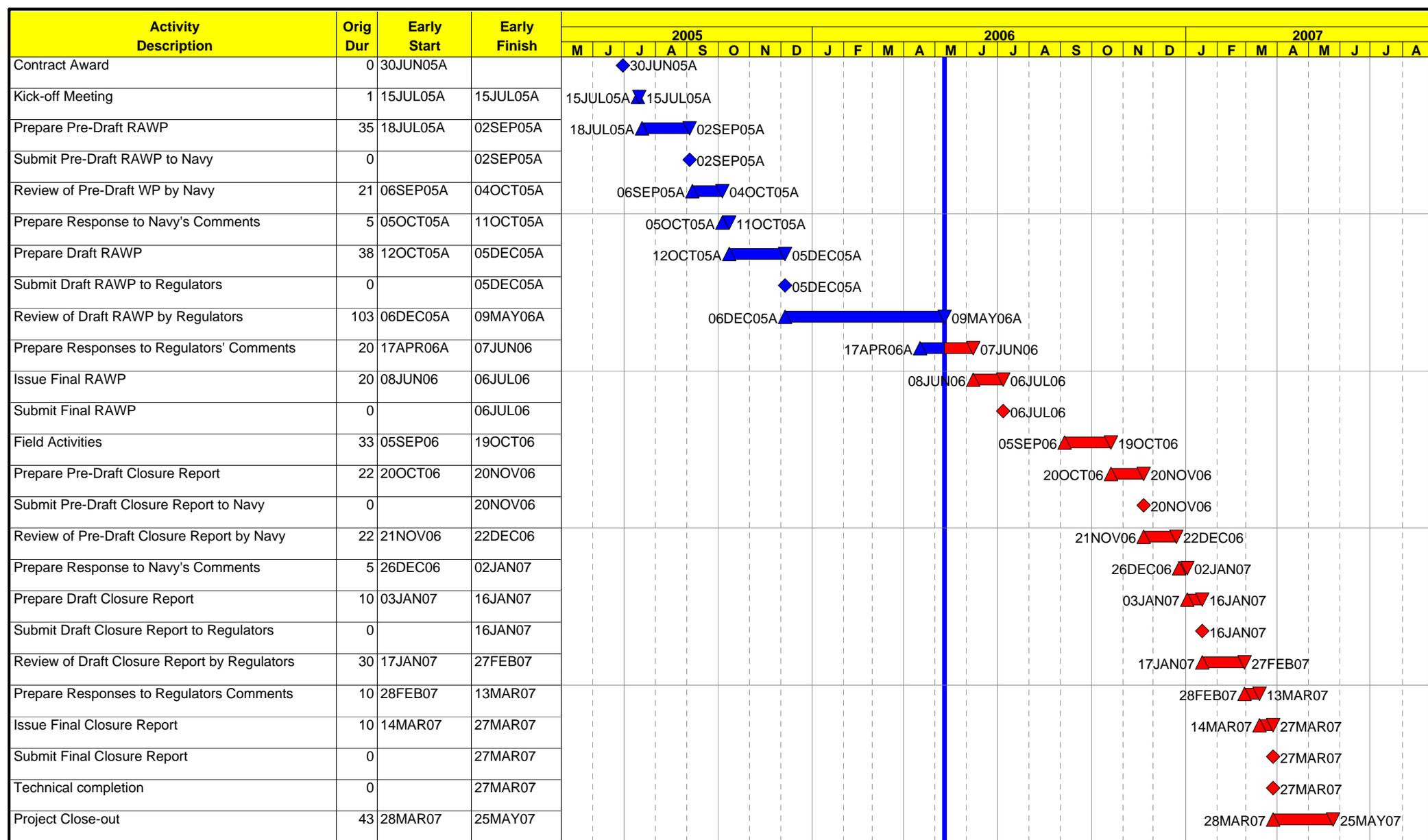


Figure 6-2  
 Project Schedule  
 IR Sites 42, 44/45 and SWMU 57  
 Naval Weapons Station Seal Beach



Start Date 30JUN05  
 Finish Date 25MAY07  
 Data Date 10MAY06  
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