



**Final**

**Action Memorandum for  
Time-Critical Removal Action at  
Former Inland Burn Area/Railroad Sidings  
Excavation Area (UXO Sites 9 and 3)**

**Former Naval Weapons Station Seal Beach  
Detachment Concord  
Concord, California**

**November 16, 2012**

Prepared by:

**Department of the Navy  
Base Realignment and Closure  
Program Management Office West  
San Diego, California 92108**

Prepared under:

**Naval Facilities Engineering Command Southwest  
Contract Number: N62473-11-C-5010**

TRIE-5010-0001-0005

**TABLE OF CONTENTS**

---

ACRONYMS AND ABBREVIATIONS ..... iii

I. PURPOSE ..... 1

II. SITE CONDITIONS AND BACKGROUND ..... 3

    A. SITE DESCRIPTION ..... 3

    B. OTHER ACTIONS TO DATE ..... 8

    C. STATE AND LOCAL AUTHORITIES’ ROLES ..... 14

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT,  
AND STATUTORY AND REGULATORY AUTHORITIES ..... 14

    A. INTRODUCTION ..... 14

    B. THREATS TO PUBLIC HEALTH OR WELFARE AND THE ENVIRONMENT ..... 15

    C. SECONDARY THREATS TO PUBLIC HEALTH OR WELFARE AND THE  
    ENVIRONMENT ..... 15

    D. SELECTION OF FINAL REMOVAL GOALS AND ATTAINMENT CRITERIA ..... 17

IV. ENDANGERMENT DETERMINATION ..... 18

V. PROPOSED ACTIONS AND ESTIMATED COSTS ..... 18

    A. PROPOSED ACTION ..... 18

    B. ESTIMATED COSTS ..... 24

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE  
DELAYED OR NOT TAKEN ..... 26

VII. PUBLIC INVOLVEMENT ..... 26

VIII. OUTSTANDING POLICY ISSUES ..... 26

IX. RECOMMENDATION ..... 26

REFERENCES ..... 29

**APPENDIX**

---

- A Development of Risk-Based Ecological Removal Goals
- B Applicable or Relevant and Appropriate Requirements
- C Index of Administrative Record for Site 13 and the Former Inland Burn/Railroad Sidings  
Excavation Area, Former Naval Weapons Station Seal Beach Detachment Concord
- D Responses to Regulatory Agency Comments on the Draft Action Memorandum

## FIGURES

---

1	Former Inland Burn Area/Railroad Sidings Excavation Area
2	Site Features and TCRA Work Areas
3	Proposed TCRA Excavation Areas
4	Barium, Cadmium, Copper, and Lead in Soil - Excavation Area A
5	Barium, Cadmium, Copper, and Lead in Soil - Excavation Areas B, C, and D
6	Barium, Cadmium, Copper, and Lead in Soil - Excavation Areas E, F, and G
7	Barium, Cadmium, Copper, and Lead in Soil - Excavation Area H
8	Barium, Cadmium, Copper, and Lead in Soil - Excavation Area I

## TABLES

---

1	Results of 1997 Remedial Investigation Human Health Risk Assessment.....	10
2	MPPEH-Based Action Goals.....	15
3	Health-Based Action Levels.....	16
4	Ecological-Based Action Levels.....	17
5	Proposed Removal Action Capital Costs.....	25

## ACRONYMS AND ABBREVIATIONS

---

µg/dL	Micrograms per deciliter
µg/L	Micrograms per liter
§	Section
§§	Sections
ARAR	Applicable or relevant and appropriate requirement
bgs	Below ground surface
BRAC	Base Realignment and Closure
Cal. Code Regs.	California Code of Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CHHSL	California Human Health Screening Level
COPC	Chemical of potential concern
COPEC	Chemical of potential ecological concern
CRLF	California red-legged frog
CTS	California tiger salamander
DoD	Department of Defense
DTSC	Department of Toxic Substances Control
EOD	Explosive Ordnance Disposal
EPA	U.S. Environmental Protection Agency
EPC	Exposure point concentration
ERA	Ecological risk assessment
ESS	Explosives safety submission
FIB/RSE	Former Inland Burn Area/Railroad Siding Excavation site
FS	Feasibility study
HHRA	Human health risk assessment
IAS	Initial assessment study
IC	Institutional control
IR	Installation restoration
MC	Munitions constituents
MDAS	Material documented as safe
MDEH	Materials documented as an explosive hazard
mm	Millimeter
msl	Mean sea level

## ACRONYMS AND ABBREVIATIONS (Continued)

---

MEC	Munitions and explosives of concern
mg/kg	Milligram per kilogram
MGFD	Munition with the Greatest Fragmentation Distance
MK	Mark
MMRP	Military Munitions Response Program
MPPEH	Materials potentially presenting an explosives hazard
NAVWPNSTA	Naval Weapons Station, Seal Beach Detachment Concord
Navy	Department of the Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	No further action
OB	Open burning
OEHHA	Office of Environmental Health Hazard Assessment
PA	Preliminary Assessment
PRC	PRC Environmental Management, Inc.
RAB	Restoration Advisory Board
RATM	Risk assessment technical memorandum
RCRA	Resource Conservation and Recovery Act
RI	Remedial investigation
ROD	Record of decision
RSL	Regional screening level
SI	Site Inspection
SVOC	Semivolatile organic compound
TCRA	Time-critical removal action
Tetra Tech	Tetra Tech EM Inc.
tit.	Title
TPH	Total petroleum hydrocarbon
TTLC	Total threshold limit concentration
U.S.C.	United States Code
UXO	Unexploded ordnance
VOC	Volatile organic compound
Water Board	San Francisco Bay Regional Water Quality Control Board

**ACTION MEMORANDUM  
FORMER NAVAL WEAPONS STATION SEAL BEACH DETACHMENT CONCORD  
CONCORD, CALIFORNIA**

---

Department of the Navy  
Base Realignment and Closure  
Program Management Office West  
1455 Frazee Road, Suite 900  
San Diego, California 92108

November 16, 2012

SUBJECT: Action Memorandum for Time-Critical Removal Action at Former Inland Burn Area/Railroad Sidings Excavation Site (UXO Sites 9 and 3), Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

<b>Site Status:</b>	National Priorities List
<b>Category of Removal:</b>	Time-Critical Removal Action
<b>CERCLIS EPA ID:</b>	CA7170024528
<b>Site ID:</b>	UXO Sites 09 and 3

**I. PURPOSE**

This Action Memorandum is to document, for the administrative record, the Department of the Navy's (Navy) decision to undertake a time-critical removal action (TCRA) at the Former Inland Burn Area/Railroad Siding Excavation (FIB/RSE) Site (Unexploded Ordnance [UXO] Sites 09 and 3), at former Naval Weapons Station (NAVWPNSTA) Concord in Concord, California (Figure 1). The TCRA will remove potential explosive hazards posed by munitions-related material from the FIB/RSE site. During the removal of munitions-related material, soil containing metals that pose potentially unacceptable risk to human health or the environment will also be removed. 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 of the United States Code (U.S.C.) Section (§) 9604, 10 U.S.C. § 2705, and federal Executive Order 12580 and 13016. This TCRA is consistent, to the extent practicable, with Chapter 6.8 of the California Health and Safety Code (Cal. Health and Safety Code).

The TCRA will be done in the portions of the FIB/RSE site with the densest concentrations of buried metals, as determined from the results of geophysical surveys (Figure 2). It is assumed, based on known site usage and previous excavations on-site, that the majority of these buried munitions potentially present an explosive hazard (MPPEH). Removal action excavation areas for munitions were developed based on results of geophysical surveys at the site indicating locations with a heavy density of subsurface anomalies (heavy anomaly areas). Specifically, the TCRA will consist of excavating and screening soils to remove all MPPEH. Removal of MPPEH will be accomplished by removing all munitions 20 millimeters (mm) or larger and subsequent confirmation activities. Munitions smaller than 20 mm, if detected, will be removed

as they are encountered. When these activities are complete, the areas will be considered cleared of munitions. MPPEH removed during the TCRA will be treated on-site. Material documented as safe (MDAS) will be demilitarized either on-site or at an off-site facility before they are disposed of or recycled. Demilitarization generally involves smelting or shredding the metal items so that they no longer resemble munitions.

Some of the soils excavated during the operations to remove MPPEH may contain elevated concentrations of lead, barium, cadmium, or copper. Therefore, action levels were developed for lead, barium, cadmium, and copper for the protection of human health and the environment. These contaminated soils will be characterized and disposed of at an appropriate off-site facility.

After soil excavation, the areas will be backfilled with clean soil from the site excavations (that is, metals concentrations were below action levels) or, if necessary, clean imported fill. The backfilled areas will be hydromulch seeded to prevent erosion. The proposed TCRA will substantially reduce the potential for human exposure to MPPEH. In addition, the proposed TCRA will also substantially reduce lead in soil and wildlife exposure to barium, cadmium, copper, and lead in soil at the FIB/RSE site. The TCRA is anticipated to remove unacceptable risks from MPPEH and co-located barium, cadmium, copper, and lead. If any soils with elevated levels of metals are left on site after the TCRA has been completed, these soils will be evaluated and documented in the remedial investigation (RI) report. Institutional controls (IC) may be ultimately needed to inform future land owners of potential risk from undiscovered MPPEH. The need for ICs will be addressed during the subsequent RI and feasibility study (FS) for FIB/RSE.

The proposed removal action for this site is deemed consistent with the factors set forth in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Title 40 of the Code of Federal Regulations (CFR) Part 300 based on the findings of:

- Actual or potential exposure to nearby animals or the food chain from hazardous substances or pollutants or contaminants (§ 300.415(b)(2)(i) of NCP, § 25356.1 et seq.).

These findings are discussed in more detail in [Section III](#). The proposed removal action for this site is deemed consistent with Chapter 6.8 of the Cal. Health and Safety Code.

The following nine criteria required by 40 CFR § 300.430 (f)(1) of the NCP for removal action selection were considered for the proposed TCRA at the FIB/RSE site:

- **Overall protection of human health and the environment.** [Section III](#) discusses how the TCRA provides adequate protection of human health and the environment. The protectiveness evaluation focuses on how site risks are reduced by the proposed action.
- **Compliance with applicable or relevant and appropriate requirements (ARAR).** [Section V.A.5](#) provides a detailed analysis of how the proposed action meets all identified federal and state ARARs or whether justification exists for waiving one or more ARARs.

- **Long-term effectiveness and permanence.** [Section V.A.2](#) discusses how the proposed action is anticipated to result in the removal of all MPPEH and soil presenting unacceptable risks from elevated concentrations of barium, cadmium, copper, and lead from FIB/RSE. This would provide long term effectiveness and permanent protection to human health and the environment..
- **Reduction of toxicity, mobility, or volume through treatment.** [Section V.A.3](#) discusses the evaluation of alternative technologies, including on-site treatment.
- **Short-term effectiveness.** [Section V.A.3](#) presents how human health (such as workers during field work and the nearby community) and the environment are protected during the construction and implementation phase until the removal action objectives are met.
- **Implementability.** [Section V.A.3](#) addresses the technical and administrative feasibility of implementing the proposed action and the availability of various services and materials during its implementation.
- **Cost.** [Section V.B](#) provides the costs associated with the proposed action including direct and indirect capital costs and annual operation and maintenance costs. In accordance with CERCLA guidance (U.S. Environmental Protection Agency [[EPA](#)] 1988), the accuracy of the cost estimate for the proposed action is within the range of 50 percent above to 30 percent below the estimate.
- **State acceptance.** [Section II.C](#) discusses the involvement of the state’s representative agencies at the FIB/RSE site and acceptance of the proposed TCRA.
- **Community acceptance.** [Section VII](#) describes the steps taken by the Navy to meet the community involvement requirement for the TCRA at the FIB/RSE site.

There are no nationally significant or precedent-setting issues for this site.

## II. SITE CONDITIONS AND BACKGROUND

This section presents the description, location, and background for the FIB/RSE site and the physical characteristics, past releases from the site, the site regulatory status, and current and previous actions.

### A. SITE DESCRIPTION

The FIB/RSE site is in the Inland Area of former NAVWPNSTA, in Concord, California ([Figure 1](#)). The FIB/RSE site encompasses approximately 50 acres and is bounded on the northwest by the Contra Costa Canal, on the southeast by Tawara Way, and on the southwest by Wake Way. The portion of the site covered in this TCRA includes approximately 14.67 acres in the central portion of the FIB/RSE site. The FIB Area was used from the late 1940s through the 1970s to destroy ordnance and napalm by open burning (OB). The OB operations took place on the hillside in gullies, depressions, trenches, and a burn pit referred to as IA-53 ([Figure 2](#)). An estimated 500,000 pounds of explosives were destroyed between 1967 and 1969. Residual

material was reportedly removed and disposed of off-site; however, some scattered surface munitions debris is still present.

A 5-inch rocket motor was found in the heavy anomaly area designated as A-4 on [Figure 2](#) at approximately 4 feet below ground surface (bgs) during RI field work in 2011. The rocket motor presented an explosive hazard not previously anticipated for the FIB/RSE site. There is the potential that other items of similar explosive potential may be present on-site and will need to be removed through this TCRA.

## 1. Removal Site Evaluation

A removal site evaluation was done pursuant to § 300.410 of the NCP to define the framework for performing the TCRA at the FIB/RSE site.

Previous investigations and actions at the FIB/RSE site include:

- Initial Assessment Study (IAS) – 1982 ([Ecology & Environment, Inc. 1983](#)) (see [Section II.B.1.1](#))
- Confirmation Study – 1984 ([Anderson Geotechnical Consultants, Inc. and Brown and Caldwell 1984](#)) (see [Section II.B.1.2](#))
- Site Investigation (SI) – 1992 (PRC Environmental Management, Inc. [[PRC](#)] and [Montgomery Watson, Inc. 1993](#)) (see [Section II.B.1.3](#))
- RI– 1997 (Tetra Tech EM Inc. [[Tetra Tech](#)] and [Montgomery Watson, Inc. 1997](#)) (see [Section II.B.1.4](#))
- Groundwater Investigations – 2003-2006 ([Tetra Tech 2006](#)) (see [Section II.B.1.5](#))
- Military Munitions Response Program (MMRP) Preliminary Assessment (PA) – 2007 ([Malcolm Pirnie, Inc. 2007](#)) (see [Section II.B.1.6](#))
- MMRP Site Inspection ([Tetra Tech 2010a](#)) (see [Section II.B.1.7](#))
- Risk Assessment Technical Memorandum (RATM) ([Tetra Tech 2010b](#)) (see [Section II.B.1.8](#))
- MMRP RI Field Work (see [Section II.B.1.9](#))

Soil samples collected during post-IAS investigations were analyzed for metals, volatile organic compounds (VOC), semivolatile organic compounds (SVOC), and petroleum hydrocarbons. Human health risk assessments (HHRA) in 1997 and 2010 concluded there were no unacceptable risks to human health. Napalm was removed from a trench at FIB in 1997 based on recommendations in the SI and RI.

Groundwater was analyzed for metals, perchlorate, total petroleum hydrocarbons (TPH), VOCs, and SVOCs and was not recommended for further action ([Tetra Tech and Montgomery Watson, Inc. 1997](#); [Tetra Tech 2006](#)).

The IAS identified the FIB portion of the FIB/RSE site (Installation Restoration [IR] Site 13) as a burning area for various types of ordnance (Mark [MK] 1 and MK 13 flares, 5-inch rockets, and photoflash cartridges) and small arms items. Various explosive powders and napalm-like substances were burned on the hillside during operations in the 1960s. Much of the burning was done in a 25 by 25-foot subsurface concrete pit (IA-53). IA-53 was approximately 11 to 12 feet deep to the unlined soil bottom during use and had concrete sidewalls lined with a 3/8-inch steel plate.

The 1984 confirmation study, 1992 SI, 1997 RI, and 2003-2006 groundwater investigations focused on the risks from chemical contamination from the munitions burning and disposal at the FIB/RSE site.

The 2007 preliminary assessment identified the potential for explosive hazards at the FIB portion of the FIB/RSE site and recommended an MMRP SI. A geophysical survey done during the 2010 SI identified areas with dense concentrations of buried metal (heavy anomaly area) presumed to be MPPEH (Figure 2). Trenching in 2010 as part of RI field work confirmed the buried metal was primarily MPPEH.

A 5-inch rocket motor was excavated from approximately 4 feet bgs during RI field work in 2011. The rocket motor was located in the heavy anomaly area designated as A-4 on Figure 2. Based on the potential explosive hazard posed by the rocket motor, work in the heavy anomaly area was ceased. The potential presence of additional 5-inch rocket motors or other ordnance with a similar explosive hazard is the impetus for performing this TCRA.

Based on these results, the Navy concluded a TCRA is necessary for protection of human health from exposure to MPPEH, in soil at the FIB/RSE site.

A 2012 update to human health and ecological risk assessments indicated that soil containing barium, cadmium, copper, and lead at concentrations that pose unacceptable risks to human health and the environment will need to be excavated to do removal of MPPEH. Although not specifically a reason for performing the TCRA, the handling and disposal of the soil contaminated by these metals is addressed in this Action Memorandum.

Removal action goals for human health were developed for MPPEH. Action levels for concentrations of barium, cadmium, copper, and lead in soil that will require special handling and disposal have also been developed for this TCRA. Removal action excavation areas for MPPEH were developed based on these removal goals (Figures 3 and 4).

## **2. Physical Location**

Former NAVWPNSTA Concord is a former munitions transport and shipment facility that encompasses approximately 5,000 acres in the north-central portion of Contra Costa County, California, about 30 miles northeast of San Francisco (Figure 1). The facility is bounded by Military Ocean Terminal Concord to the north and the City of Concord to the south and west. Public access is currently restricted. The FIB/RSE is on the side of a hill sloping westward in the west portion of Former NAVWPNSTA Concord (Figure 1). It is bounded on the northwest by

the Contra Costa Canal, on the southeast by Tawara Way, and on the southwest by Wake Way. The area extends up to the top of a northwest-trending ridgeline.

The nearest communities are portions of the Cities of Concord (1,500 feet south of the site) and Clyde (1.4 miles northwest of the site).

### **3. Site Characteristics**

The FIB/RSE site is primarily open land with no prominent structures. The only aboveground structure is an abandoned concrete slab formerly used to support a cattle watering tank in the north central part of the site. There is a burn pit area (IA-53) that includes a concrete subsurface structure approximately 24 feet by 25 feet. The structure was approximately 11 to 12 feet deep to the unlined soil bottom during use. The burn pit was constructed of 12-inch-thick concrete and the sidewalls were lined on the inside with a 3/8-inch steel plate. Since the 1970s, the FIB/RSE has been used for cattle grazing. The City of Concord's future reuse plans for the site include residential use ([City of Concord 2011](#)).

The soil boring logs and trench excavation logs from the 1997 RI show the FIB/RSE site is underlain by alluvium consisting of interbedded clay, silt, sand, and gravel. Cross sections show the alluvium can be subdivided into two units. Sediments above an elevation of 80 to 90 feet above mean sea level (msl) are composed primarily of clay and silt with discontinuous interbeds of sand and gravel. Alluvium below an elevation of 80 to 90 feet msl is composed primarily of sand and gravel ([PRC and Montgomery Watson, Inc. 1993](#)).

Depending on the surface elevation, groundwater is typically encountered throughout most of this area at 35 to 118 feet bgs and rises about 15 to 19 feet bgs in completed monitoring wells ([Figure 2](#)) ([Malcolm Pirnie, Inc. 2007](#)). The topography is relatively flat in the southern portion of the area, and the area is at the lowest elevation. Groundwater in this southern portion is first encountered in clayey soils between 10 and 14 feet bgs and above a deep, laterally extensive sand and gravel unit. The gravel unit was observed in all of the deeper wells installed for the SI and RI in the northern portion of the FIB/RSE site, suggesting that it is laterally continuous beneath the area ([Malcolm Pirnie, Inc. 2007](#)). Vertical permeability of the water-bearing soils in the northern portion of the area ranges from 0.0000001 to 0.15 centimeters per second. Groundwater flow is toward the west-southwest, with an average gradient of 0.0022 foot per foot. Groundwater flow in the southern portion of the area is moving in a generally western direction, with a gradient of 0.0096 foot per foot ([Tetra Tech 2006](#)).

The mean annual rainfall for the area is 14 inches. As in most of northern California, about 84 percent of the rainfall occurs from November through March. Intermittent ponds and drainages in site flow through and accumulate in its trenches, gullies, and ravines. Surface water from the area crosses below Wake Way, through culverts beneath the road, and pools behind the eastern levee of the Contra Costa Canal. Ephemeral wetlands may occur at the site, but a recent survey of the former NAVWPNSTA Concord did not delineate specific wetland areas in the FIB/RSE site ([Kellogg and others 2008](#)).

The vegetation is considered mostly valley and foothill grasslands. The vegetation is primarily nonnative grass species, such as wild oat, ripgut grass, Mediterranean barley, and Italian rye grass. A nonnative forb species, yellow star thistle, has become established on many of the disturbed grassland areas. Common fauna include mammals (voles, deer, mice, ground squirrels, opossum, rabbits, and coyotes), amphibians and reptiles (western whiptails and Pacific gopher snakes), and birds (western meadowlarks, red-tailed hawks, savannah sparrows, and barn swallows).

A search of the California Natural Diversity Data Base identified 10 sensitive species within 1 mile of the boundary of former NAVWPNSTA Concord Inland Area (Kellogg and others 2008). Sensitive plant species included Contra Costa goldfields, San Joaquin sparscale, caper-fruited tropidocarpum, round-leaved filaree, and slender silver-moss. Sensitive wildlife species included the threatened California tiger salamander (CTS), the threatened California red-legged frog (CRLF), Western burrowing owl, hoary bat, and the pallid bat. The habitat in the FIB/RSE site was identified as having low suitability for both the CTS and the CRLF (EDAW 2008; Kellogg and others 2008).

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

The threat posed to human health and safety from MPPEH in subsurface soil and at scattered surface locations is the reason for doing a TCRA at FIB/RSE. The types of MPPEH at the site include 5-inch rocket motors that could pose a significant explosive and ballistic hazard. Other MPPEH known to be present includes fuzes, flares, and solid propellants that pose explosive hazards, and there is the potential for unknown types of MPPEH to be present. MPPEH in the subsurface may become exposed through erosion, activity of burrowing mammals, or livestock crossing the site. If exposed, there would be an increased potential explosive hazard.

Therefore, given the potential of exposing receptors to explosive safety hazards posed by MPPEH, a response action that either eliminates or minimizes this hazard is required.

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

Former NAVWPNSTA Concord was added to the National Priorities List (CERCLIS EPA ID No. CA7170024528) on December 16, 1994. In 2005, the Inland Area was included on the Base Realignment and Closure (BRAC) list.

Investigations at the FIB portion of the FIB/RSE site under the Navy's IR program include an IAS (Ecology & Environment, Inc. 1983), a confirmation study (Anderson Geotechnical Consultants, Inc. and Brown and Caldwell Consulting Engineers 1984), an SI (PRC and Montgomery Watson, Inc. 1993), an RI (Tetra Tech and Montgomery Watson, Inc. 1997), and a supplemental groundwater investigation (Tetra Tech 2006). Investigations at the FIB/RSE site under the Navy's Military MMRP program include a PA (Malcolm Pirnie, Inc. 2007), SI (Tetra Tech 2010a), Risk Assessment Technical Memorandum (RATM) (Tetra Tech 2010b), and RI field work (RI report pending).

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

Figure 1 shows the location of the FIB/RSE site and former NAVWPNSTA Concord. Figure 2 is the site features map. Figure 3 shows the proposed TCRA excavation areas for soil. Figures 4 through 8 show the proposed TCRA excavation boundaries to remove barium, cadmium, copper, and lead in soil in Excavation Areas A through I.

### **B. OTHER ACTIONS TO DATE**

#### **1. Previous Actions**

The previous investigations and actions at the FIB/RSE site are summarized in the following sections. Most of the FIB was investigated (as IR Site 13) for chemicals that included munitions constituents (MC).

##### **1.1 Initial Assessment Study (1983)**

The 1983 IAS report recommended IR Site 13 (referred to as FIB in this report) for further investigation based on previous use of the site as a burning area from the late 1940s to approximately 1974 (Ecology & Environment, Inc. 1983). The IAS stated the trenches where these materials were burned were constructed specifically for this activity, as was Building IA-53, and the unlined-bottom burn pit at the site (Ecology & Environment, Inc. 1983). The IAS indicated all types of ordnance items except projectiles were disposed of at FIB. The list of items burned off or buried in the burn pit included thousands of MK 1 and MK 13 flares, powder from approximately 40,000 5-inch rockets, and several thousand photoflash cartridges.

The IAS states that, between 1967 and 1969, an estimated 500,000 pounds of explosives (both black and smokeless powder) were destroyed in this area, in the pit and by OB. The material remaining in the fire pit was reportedly disposed of off-site. FIB was used for the disposal of small arms ammunition, thermite generators were disposed of at FIB by igniting them and placing them into dumpsters filled with water, and powder and other loose material from the ammunition ships were disposed of by OB. Approximately one pickup truck load of these materials was collected for each off-loading operation, approximately 40 times per year between 1944 and 1974.

FIB was also used as an area for firefighter training; in 1966 or 1967, at least 35 napalm bombs were ignited in a ditch at the base of the hill.

##### **1.2 Confirmation Study (1984)**

The 1984 confirmation study included collection of 25 shallow soil samples (less than 1.5 feet bgs) at IR Site 13 (now FIB). All samples were analyzed for arsenic, barium, copper, and lead; one sample was analyzed for extractable organics. Because metals concentrations were below the total threshold limit concentration (TTL) for California hazardous waste, the site was not recommended for further action (Anderson Geotechnical Consultants, Inc. and Brown and Caldwell Consulting Engineers 1984).

### **1.3 Site Investigation (1993)**

In 1993, the Navy did an SI, including an Explosive Ordnance Disposal (EOD) visual inspection, trenching, soil and groundwater sampling, and a geophysical survey to identify debris and the locations of target test pits at IR Site 13. No live ordnance was encountered, although spent ordnance, related debris, and miscellaneous scrap were found. During the SI, a 3- to 5-inch layer of a semisolid, dark honey-colored material was encountered during trenching in one of the gullies at the site. High concentrations of VOCs were measured in the air where the material was lifted from the ground.

As part of the SI preliminary investigation a representative of the Public Works Department of former NAVWPNSTA Concord indicated some of the trenches at FIB had been excavated to construct additional railcar revetments but that construction of the railcar revetments was canceled after the trenches were excavated. Some burning took place in gullies formed by the natural erosion process (PRC and Montgomery Watson, Inc. 1993).

Soil sampling was done in two phases; the first phase included drilling five soil borings to investigate soil conditions at depths up to 30 feet.

The second phase was biased soil sampling in 14 excavated shallow (less than 5 feet deep) trenches or test pits. These areas were identified by a surface geophysical survey and surface inspection. Visual inspection identified ordnance-related debris or discoloration of the soil. Observed discoloration included “blackening of the soil, presumably due to burning activities.” Samples were preferentially collected from areas with visual indications of contamination. After sampling, trenches and test pits were backfilled with excavated soil, and soil was compacted with a backhoe.

Groundwater samples were collected from one monitoring well (BUAMW002) installed as part of this investigation (Figure 2).

The SI recommended portions of IR Site 13 for immediate removal action (for napalm in test pit BUA13), and IR Site 13 was recommended for an RI (PRC and Montgomery Watson, Inc. 1993).

### **1.4 Remedial Investigation (1995-1997)**

The RI at IR Site 13 included soil sampling in gullies where burning took place, in drainage channels, and at unbiased grid locations. Monitoring wells were installed, and two rounds of groundwater samples were collected.

Biased soil samples were collected from five additional Geoprobe borings in trench excavations where visibly stained soil appeared to continue deeper than the excavation depth of 5 feet bgs.

Groundwater samples were collected from eight monitoring wells including three new wells and five existing wells. Monitoring well locations are shown on Figure 2, except for two off-site wells that are not shown in the area depicted in the figure.

An HHRA was done during the 1997 RI ([Tetra Tech and Montgomery Watson, Inc. 1997](#)) to estimate risks associated with exposure to soil and groundwater. The results are in Table 1:

**TABLE 1: RESULTS OF 1997 REMEDIAL INVESTIGATION HUMAN HEALTH RISK ASSESSMENT**  
FIB/RSE Former NAVWPNSTA Concord

Scenario	Industrial Worker				Resident			
	Cancer Risk	Cancer COCs	Non-cancer Hazard	Non-cancer COCs	Cancer Risk	Cancer COCs	Non-cancer Hazard	Non-cancer COCs
Surface Soil	$6.7 \times 10^{-7}$	None	0.02	None	$3.6 \times 10^{-6}$	Beryllium	0.75	None
Subsurface Soil	$1.5 \times 10^{-6}$	None	0.02	None	$3.6 \times 10^{-6}$	Beryllium and BAP	0.75	None
Groundwater	NE	NE	NE	NE	NA	NA	3.4	Manganese

Notes:

BAP Benzo(a)pyrene

COCs Chemicals of concern are defined as having a chemical-specific cancer risk greater than  $1 \times 10^{-6}$  or a noncancer hazard greater than 1.

FIB/RSE Former Inland Burn Area/Railroad Sidings Excavation

NA Not applicable; no chemicals having carcinogenic effects were detected in groundwater.

NE Not evaluated; exposure to groundwater by an industrial worker is an incomplete pathway.

Lead was detected in soil during the 1997 RI and exposure point concentrations (EPC) were developed for lead in surface (106 milligrams per kilogram [mg/kg]) and subsurface (33 mg/kg) soils. The EPCs were compared with the industrial (1,000 mg/kg) and residential (130 mg/kg) screening levels used at that time ([Tetra Tech and Montgomery Watson, Inc. 1997](#)); no action was recommended because the EPC did not exceed residential standards and lead was not detected in soil at levels exceeding the screening values that were used at that time. See [Section II.B.1.8](#) for the results of the subsequent HHRA and ecological risk assessment (ERA) conducted in 2010.

A qualitative ERA done during the RI found there was potential risk to the coyote and California quail from cadmium and lead. However, based on the ecological risk screening evaluations, site observations, and site land use, no further action was recommended ([Tetra Tech and Montgomery Watson, Inc. 1997](#)).

The RI recommended removal of napalm residue and napalm-related constituents detected in one burn trench. After the residue was removed, no additional action was recommended ([Tetra Tech and Montgomery Watson, Inc. 1997](#)).

Based on the findings of the RI and subsequent targeted investigations, soils contaminated with apparent residue from burning napalm were excavated in October 1997 from a trench where burning formerly took place at IR Site 13. Confirmation samples collected after the soil was removed indicated the residual napalm had been removed and the action was complete.

## **1.5 Groundwater Investigations (2003-2006)**

Results of the RI and the soil removal were used as the basis for a no further action (NFA) decision documented in a Record of Decision (ROD) in 2002 for IR Sites 13 and 17. The ROD was reissued with an NFA decision only for IR Site 17 to allow for evaluation of perchlorate in groundwater at IR Site 13 (Navy 2005). Site 17 (Building IA-24) has no relation to FIB/RSE.

The first perchlorate groundwater sampling was done at IR Site 13 in 2003. Three of the four monitoring wells sampled had detectable, but low levels of perchlorate. The highest perchlorate concentration detected in groundwater was 2 micrograms per liter ( $\mu\text{g/L}$ ), below the California Public Health Goal of 6  $\mu\text{g/L}$  (Office of Environmental Health Hazard Assessment 2004). Based on these detections, the Navy installed four more monitoring wells (Figure 2). The Navy collected samples quarterly from the eight monitoring wells from August 2005 to May 2006 and analyzed them for perchlorate (Tetra Tech 2006). The highest concentration of perchlorate detected was 0.93  $\mu\text{g/L}$  (Tetra Tech 2006). All perchlorate concentrations detected during these sampling were below the California Public Health Goal (6  $\mu\text{g/L}$ ) and the EPA Drinking Water Level (24.5  $\mu\text{g/L}$ ) for perchlorate.

## **1.6 MMRP Preliminary Assessment (2005-2007)**

The MMRP PA was done to evaluate the potential for explosive hazards at the site. Scattered MPPEH was observed on the surface during a March 2005 visual survey. Former installation EOD personnel stated there was previously target practice with .50-caliber machine guns at the FIB/RSE site (Malcolm Pirnie, Inc. 2007). Based on suspected MPPEH at the site and the potentially complete pathways identified in the conceptual site model, an SI was recommended to further investigate MC and munitions and explosives of concern (MEC).

## **1.7 MMRP Site Inspection**

The MMRP SI was done with the objective of evaluating the presence of MPPEH on the surface and any metal anomalies in the subsurface of the FIB/RSE site, along with any chemical contaminants associated with the MPPEH. Field work for the MMRP SI included soil sampling, visual and detector-aided surface sweeps, and a geophysical survey of the entire site. MPPEH and non-munitions related debris were identified on the surface of the FIB/RSE site. Six heavy anomaly areas or clusters were identified during the geophysical survey, indicating a large amount of buried metal. Two long, nearly perpendicular, linear anomalies appear to be buried pipelines, indicating possible firing lines used to ignite ordnance to be burned or detonated. In addition to the six anomaly areas, approximately 7,300 individual metallic items or “targets” for removal were identified in the subsurface.

After the MEC investigation, 20 surface and subsurface soil samples were collected and analyzed for explosive- and propellant-related compounds (metals, polycyclic aromatic hydrocarbons, SVOCs, and VOCs). Maximum concentrations of these compounds were compared with EPA residential regional screening levels (RSL). Benzo(a)pyrene, benzo(b)fluoranthene, benzo(e)pyrene, aluminum, antimony, arsenic, barium, chromium, cobalt, iron, lead, and manganese were identified as chemicals of potential concern (COPC). All of these COPCs were recommended for further evaluation in an HHRA.

The risk screening for ecological receptors identified the following chemicals of potential ecological concern (COPEC) based on detection at the FIB/RSE site and the lack of screening criterion: nitroglycerin, 2-chlorophenol, 2,4-dinitrotoluene, 2-methylnaphthalene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(e)pyrene, benzoic acid, chrysene, fluoranthene, naphthalene, o-xylene, pyrene, iron, selenium, silver, and strontium. The following COPECs were identified because at least one sample in soil exceeded the ecological soil screening levels and former NAVWPNSTA Concord background concentrations: aluminum, antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, thallium, vanadium, and zinc. All of these COPECs were recommended for further evaluation.

The SI recommended performing an RI to further evaluate the nature and extent of MPPEH and the risk associated with chemicals present in soil at the FIB/RSE site ([Tetra Tech 2010b](#)).

### **1.8 Risk Assessment Technical Memorandum (2010)**

A baseline HHRA and baseline ERA were done prior to the RI because of the substantial amount of analytical data already available for the FIB/RSE site. The results of the baseline HHRA and ERA were reported in the RATM ([Tetra Tech 2010b](#)). The purpose of the RATM was to determine whether any special soil handling would be necessary for the planned RI field work and it was also used to determine what additional sampling would be needed to collect a comprehensive dataset to refine the risk assessments.

The RATM indicated there were no chemicals in soil at the FIB/RSE site that presented an unacceptable risk to human health or that would require special soils handling for protection of human health during RI field work.

ERA results indicated barium, cadmium, copper, and lead in soil may pose unacceptable risks to one or more ecological receptors at the FIB/RSE site. This finding was driven by concentrations of these metals at two localized areas: (1) surface soil at sample locations BUASB002 and BUATP024C ([Figure 4](#)), and (2) soil from 0 to 3 feet bgs at sample locations BUA-09-TP and BUATP39C ([Figure 8](#)). Concentrations of cadmium and lead at the first area, and barium, cadmium, copper, and lead in soil at the second area, are elevated compared with other soil samples collected from the FIB/RSE site. The ERA did not identify any other chemicals of concern for ecological receptors.

### **1.9 MMRP Remedial Investigation Field Work (2010, 2011)**

MMRP RI field work was done during three separate mobilizations, one each in 2010, 2011, and 2012; the Navy investigated the FIB/RSE site for analysis of MC and MEC to be in an RI report scheduled to be finalized in March 2013. The following activities were conducted:

#### **2010**

- Excavated 12 trenches approximately 2 feet wide and up to 10 feet deep ([Figure 2](#)) with a backhoe in areas suspected to have dense accumulations of MPPEH. The trenches were dug to evaluate the types and depths of MPPEH in these areas.

- Investigated metal “targets” identified from the 2008 SI geophysical survey in the areas suspected to have a less dense accumulation of MPPEH. Locations of the targets were reacquired by survey and then excavated manually with a shovel for identification.
- Tested the effectiveness of a scraper (RangeMaster) that automatically excavates and screens MPPEH from shallow soil. This test was done in the kickout area (assumed less dense MPPEH accumulation) and heavy-anomaly area (assumed dense MPPEH accumulation). A geophysical survey done after the RangeMaster scraped the test areas indicated it was able to remove about 50 percent of the targets.
- Three soil borings were advanced in the former IA-53 burn pit footprint, and three soil samples were collected from each boring at approximately 6 feet bgs, 12 feet bgs, and 15 feet bgs and analyzed for explosives, nitroglycerin, and metals.

## 2011

- A supplemental RI field investigation was done in the summer and fall of 2011 to obtain additional information on the nature and extent of MPPEH in the heavy anomaly and kickout areas of the site. The excavation in the heavy-anomaly area had to be shut down on the second day of work because of the discovery of a 5-inch rocket motor. Sufficient safety protocols were not in place to address its potential explosive hazard. Targets in 15.4 acres of the kickout were investigated during this mobilization.
- Plant tissue samples and soil samples for earthworm bioassay tests were collected in 2011 in areas with elevated metals concentrations.
- Four step-out soil samples were collected and analyzed for metals in 2011 to verify previous results and characterize the horizontal extent of the elevated metals concentrations.

## 2012

- The supplemental RI field investigation continued with the purpose of investigating targets in the remaining portions of the kickout area. This supplemental investigation was completed, which left only portions of the site where the TCRA will be done containing suspected MPPEH.
- As part of the protocol established, “step-out” areas were investigated outside the FIB/RSE site boundary where MPPEH had been found within 100 feet of the site boundary.

## 2. Current Actions

The Navy will solicit comments from the appropriate environmental regulatory agencies (see [Section C](#)) and notify the public (see [Section VII](#)) on the TCRA at the FIB/RSE site. No other government or private entities are currently undertaking any actions to address munitions or chemicals at the FIB/RSE site.

## **C. STATE AND LOCAL AUTHORITIES' ROLES**

This section discusses the roles of regulatory agencies with potential involvement in the removal action for the FIB/RSE site.

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

The Navy is the lead federal agency at the FIB/RSE site pursuant to the Defense Environmental Restoration Act at 10 U.S.C §§ 2701 through 2710 and CERCLA, the NCP, and the delegation of Presidential authority under federal Executive Orders 12580 and 13016. EPA is the lead environmental regulatory agency. Pursuant to 10 U.S.C. § 2705, the Navy is required to ensure state and local officials be given timely opportunity to review and comment on the Navy's proposed response actions. Accordingly, the California Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (Water Board) provide technical advice and environmental regulatory oversight during investigations and activities at the FIB/RSE site. DTSC and Water Board were involved in planning meetings for this TCRA. Both regulatory agencies support and accept the Navy's decision to do a TCRA at the FIB/RSE site.

The Restoration Advisory Board (RAB) consists of interested community members and public interest groups, and provides input and feedback on the Navy's Environmental Restoration Program. The Navy made presentations on the 2010 and 2011 field investigations at the FIB/RSE site to the RAB at a site tour held in June 2011. A presentation was given at the July 11, and October 3, 2012, RAB meeting summarizing the FIB/RSE TCRA.

No enforcement orders or agreements have been issued relevant to the TCRA.

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

EPA, DTSC, and the Water Board provided and are expected to continue providing technical advice, environmental regulatory oversight, and assistance throughout the Navy's Environmental Restoration Program. The Navy's Defense Environmental Restoration Program 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**

### **A. INTRODUCTION**

In accordance with the NCP, the following threats must be considered in determining the appropriateness of a removal action [40 CFR § 300.415(b)(2)]:

- Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or food chains
- Actual or potential contamination of drinking water supplies or sensitive ecosystems

- Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or bulk storage containers that may pose a threat of release
- High concentrations of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate
- Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released
- Threat of fire or explosion
- The availability of other appropriate federal or state response mechanisms to respond to the release
- Other situations or factors that may pose threats to public health or welfare or the environment

**B. THREATS TO PUBLIC HEALTH OR WELFARE AND THE ENVIRONMENT**

The following threat to public health or welfare, as listed in [Section III.A](#), applies to the FIB/RSE site:

- Actual or potential exposure to explosive hazards associated with MPPEH.

Geophysical surveys at the FIB/RSE site identified portions of the site with large amounts of subsurface metal that is likely MPPEH. Trenches excavated in these areas confirmed the subsurface metal was primarily MPPEH ([Figure 2](#)). Thus, MPPEH has been identified as a human health concern for inclusion in the removal action subject to this Action Memorandum. MPPEH poses a threat to the environment because accidental human or livestock contact with it could cause an explosion. Table 2 shows the goals for MPPEH at the FIB/RSE site.

**TABLE 2: MPPEH-BASED ACTION GOALS**  
FIB/RSE, Former NAVWPNSTA Concord

Item or Chemical of Concern	Cleanup Goal Basis	Residential User Scenario	Industrial Worker Scenario
MPPEH	Complete removal of explosive hazard	Removal of all metal items 20 mm or larger	Removal of all metal items 20 mm or larger

Notes:

mm Millimeter

MPPEH Materials presenting a potentially explosive hazard

**C. SECONDARY THREATS TO PUBLIC HEALTH OR WELFARE AND THE ENVIRONMENT**

The primary objective of the TCRA is removal of MPPEH. The removal will require excavation of collocated soil that contains metals at concentrations that may pose unacceptable risks to human health (see below) or the environment (see [Section III.C](#)). This soil cannot be used as

backfill and will be disposed off-site. Soil that does not pose unacceptable risks to human health or the environment will be used as backfill once the clearance of MPPEH is confirmed.

The HHRA in the RATM did not identify any chemicals in soil that posed an unacceptable risk to human health. Additional data were collected at the FIB site in 2010 and 2011 after the RATM was finalized. Based on the new data, and with consideration of screening levels for lead that were updated since the issuance of the final RATM, the Navy concluded that lead was present in soil at concentrations greater than the DTSC’s Office of Environmental Health Hazard Assessment (OEHHA) residential and industrial California Human Health Screening Levels (CHHSL) (DTSC 2009). OEHHA established a goal of an estimated blood lead level of 1 microgram per deciliter (µg/dL) for its CHHSLs for residential and industrial exposures (DTSC 2009). The Navy established a modified CHHSL for Concord so that exposure to soils does not result in increased lead levels in blood to more than 1 µg/dL above background for the residential or industrial receptors. Accordingly, the Navy used the residential action level of 113 mg/kg, which is the sum of the background value for lead (33 mg/kg) and the residential OEHHA CHHSL (80 mg/kg). Likewise, the industrial action level for lead of 353 mg/kg reflects the CHHSL (320 mg/kg) combined with the background value. Based on the modified CHHSLs, lead was identified as a human health chemical of concern and excavated soil containing unacceptable levels of lead will not be used as backfill at the site. Table 3 shows the health-based action level goal for lead at the FIB/RSE site. These action levels are intended to be used on a point-by-point basis during the removal action. The actual risk remaining at the site will be evaluated in the upcoming RI report.

**TABLE 3: HEALTH-BASED ACTION LEVELS**  
FIB/RSE, Former NAVWPNSTA Concord

Chemical of Concern	Cleanup Goal Basis	Residential User Scenario	Industrial Worker Scenario	Background Level
Lead <sup>a</sup>	Risk-Based Level	113 mg/kg	353 mg/kg	33 mg/kg

Notes:

a Action level of 113 mg/kg for lead is based on DTSC’s California Human Health Screening Level (CHSSL) of 80 mg/kg for a resident added to the background value of 33 mg/kg. Likewise, the action level of 353 mg/kg for lead is based on DTSC’s CHHSL of 320 mg/kg for an industrial worker added to the background value of 33 mg/kg.

mg/kg Milligram per kilogram

Lead was detected at concentrations exceeding the residential action level in soil at 13 locations, 5 of which also exceeded the DTSC industrial CHHSL. The action level represents the concentration at which, when exceeded, special soil handling and disposal procedures will be needed.

In the process of removing MPPEH, soil with concentrations of barium, cadmium, copper, and lead that pose unacceptable risk to the environment will be excavated. This soil cannot be used as backfill. The evaluation of potential ecological risk was in a 2010 RATM (Tetra Tech 2010b) and development of risk-based ecological action levels is in Appendix A.

Table 4 shows the risk-based ecological action levels calculated for protection of the environment for the TCRA. These action levels are intended to be used on a point-by-point basis during the removal action. The actual risk remaining at the site will be evaluated in the upcoming RI report.

**TABLE 4: ECOLOGICAL-BASED ACTION LEVELS**  
FIB/RSE, Former NAVWPNSTA Concord

Ecological Receptor	Exposure Medium	Risk-Based Ecological Action Levels (mg/kg)			
		Barium	Cadmium	Copper	Lead
American Robin	Surface Soil (0 to 1.5 feet bgs)	NA	0.49	1,340	211
Western Harvest Mouse	Surface Soil (0 to 1.5 feet bgs)	947	NA	NA	NA
Background Level		560	0.29	65	33

Notes:

bgs Below ground surface

mg/kg Milligram s per kilogram

NA Not applicable (Step 3a refinement food chain model dose calculations did not indicate unacceptable risk to receptor using the site-wide exposure point concentration. As indicated in [Section A2.0 of Appendix A](#), the Step 3a risk refinement determined that no unacceptable risk was posed to the America robin based on the site-wide exposure point concentration, but a risk-based removal goal was calculated to guide the soil removal.)

Soil excavated for the TCRA with concentrations of barium, cadmium, copper, and lead that exceed the action levels cannot be used as backfill and will require off-site disposal.

The risk-based action levels for ecological health shown in [Table 3](#) were compared with site background concentrations to ensure they are technically achievable. There are multiple background data sets for former NAVWPNSTA Concord. The selected background concentrations for the FIB/RSE site are based on the 95<sup>th</sup> percentile background levels for IR Sites 13 and 22 that have similar soils ([Tetra Tech 2007](#)).

#### D. SELECTION OF FINAL REMOVAL GOALS AND ATTAINMENT CRITERIA

Attainment criteria for achievement of removal action goals for MPPEH are:

- Remove all metallic items (including MPPEH) 20 mm or larger.
- After one 12-inch lift of soil is found to be free of MPPEH, remove another 12-inch lift to confirm all MPPEH has been removed.
- Use geophysics to confirm there is not MPPEH below the bottom of the excavation after confirmation 12-inch lift is found to be clear of MPPEH.

One confirmation sample will be collected for every 1,000 cubic yards of soil excavated. If concentrations of barium, cadmium, copper and lead in the confirmation sample are less than the action levels established for each chemical, that soil is appropriate for backfill. If concentrations exceed any action levels, the soil will be segregated and prepared for off-site disposal.

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

Actual or threatened releases of MPPEH from the FIB/RSE site, if not addressed by implementing the response action selected in this Action Memorandum, may present potential endangerment to human health and the environment.

#### **V. PROPOSED ACTIONS AND ESTIMATED COSTS**

This section describes the TCRA to remove MPPEH from the FIB/RSE site. This section also describes alternative technologies considered, discusses ARARs, and presents the estimated costs for the TCRA.

##### **A. PROPOSED ACTION**

This section describes the proposed action of soil screening for munitions-related items, which was the selected alternative, as well as other alternatives evaluated but not selected. ARARs and the proposed schedule are also discussed. The discussion of the proposed removal action herein and the associated work plan will satisfy the substantive requirements for removal action work plans in Cal. Health and Safety Code § 25323.1, as further discussed in [Section V.A.5](#).

##### **1. Proposed Action Description**

The proposed action for the FIB/RSE site to substantially reduce potential threats to human health and the environment consists of the following tasks:

- Soil will be excavated in 12-inch lifts in the areas shown as Heavy Anomaly Areas in Unit 1 and Unit 2 and in all of Unit 3 ([Figure 3](#)). Excavated soil will be processed through a screening plant or similar device to remove all MPPEH and other debris 20 mm or larger. Depths of excavations will be dictated by the presence or lack of presence of MPPEH.
- Screened soil excavated from the areas shown on [Figures 4 through 8](#) that will not be used as backfill will be stockpiled separately from other “clean” soils and disposed of off-site in an approved landfill.
- Screened soil excavated from areas other than those shown in [Figures 4 through 8](#) will be staged for use in backfilling the excavations. The soil will be used as backfill only after samples show human health or environmental action levels ([Tables 3 and 4](#)) are not exceeded (according to the attainment criteria in [Section III](#)).

- In the areas outside of the Heavy Anomaly Areas in Units 1 and 2, individual targets identified from the geophysical survey during the SI will be reacquired and removed.
- UXO technicians will determine if metal items 20 mm or larger are MPPEH or scrap metal. MPPEH will be further classified, if possible, by the Navy-appointed UXO technicians as material documented as an explosive hazard (MDEH) or MDAS. If uncertainty exists regarding the explosive hazard after investigation, the material will remain designated as MPPEH, but will be handled as MDEH.
- MDAS will be sent to a facility for demilitarization and recycling. Scrap metal will also be sent off-site for recycling
- MPPEH and MDEH will be detonated on-site to remove the explosive hazard and then sent off-site for demilitarization and recycling.
- Sufficient soil samples (one per every 100 square feet) will be collected from the bottom of excavations and analyzed for metals (EPA Method 6010/7471) and explosives (EPA Method 8330). Geophysics will be used to confirm there is not MPPEH below the bottom of the excavation. After the analyses, the excavated areas will be backfilled with on-site soil or off-site soil borrow as required to match existing grade and compacted to at least 85 percent standard proctor density. Hydromulch seed all disturbed areas to prevent future erosion.

Removal areas and the areas known to have soil with concentrations greater than action levels are shown on [Figures 3 through 8](#).

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

All MPPEH and MDEH will be treated on-site. MDAS and scrap metal will be treated or recycled off-site. Soils containing concentrations of lead, barium, cadmium, or copper that may pose potential risk to human health or the environment will be removed and disposed of off-site as part of the TCRA. No further action for lead, barium, cadmium, or copper is anticipated to be required at the FIB/RSE site after the TCRA has been completed. No additional removal of MPPEH is expected to be required at the FIB/RSE site; as such, the removal action is anticipated to provide long-term effectiveness and permanent protection for the environment. Evaluation of site conditions during the RI and FS may indicate an additional response action and ICs may be needed to ensure long term effectiveness.

## **3. Description of Alternative Technologies**

The Navy considered the following alternatives for the proposed removal action at the FIB/RSE site:

- **Alternative 1, Excavation, Processing through a Screening Plant and Backfilling:** This alternative involves excavating soil in the heavy anomaly areas, transporting it to an on-site screening plant to remove metal items 20 mm or larger, and backfilling once the excavation is cleared. Soil with concentrations of COCs above action levels will be disposed of off-site. Items screened out of the soil will then be evaluated by UXO technicians and classified as scrap metal or MPPEH. MPPEH will be further classified, if possible, as MDEH or MDAS and placed in the appropriate storage areas. Items where the explosive hazard cannot be determined through visual inspection will remain designated as MPPEH, but will be handled as MDEH as a safety precaution. Scrap metal will be recycled off-site. MDAS will be demilitarized and recycled or disposed of off-site. MDEH and MPPEH will be detonated on-site so that it is no longer an explosive hazard.

This alternative is appropriate because it removes the explosion hazard in a timely manner (effective), is implementable, complies with federal and state regulations, and is cost effective. This alternative lowers the risk to UXO technicians because screening is automated inside an armored system. This alternative has less chance of missing an item than manual screening because it relies on screens that will physically screen out items 20 mm or larger. While similar in cost to manual screening, this alternative is much faster because of the high throughput of the screening plant. In areas where large distances are required by the explosives safety submission (ESS), remote equipment could be used for both excavation and screening if necessary.

- **Alternative 2, In-Situ Scraping and Screening:** This alternative is not appropriate because it is effective only to 18 inches bgs and there are areas at the site known to contain material below 18 inches. Confirmation of MPPEH removal from underlying soil is not possible prior to backfilling because the soil is immediately placed back on the ground after screening. During a pilot test in 2010, using the Range Master manufactured by Timberline Environmental Services, only about 50 to 60 percent of the anomalies were removed in the shallow soil. This method would require additional screening and removal to achieve the desired results.
- **Alternative 3, Excavation, Spreading and Manual Screening:** This alternative is appropriate because it removes the source of contamination in a timely manner (effective), is implementable, complies with federal and state regulations, and is cost effective. This alternative could pose additional risk to UXO technicians during manual screening and is more time consuming and costly than other options.

The selected alternative for the proposed removal action is Alternative 1, Excavation, Screening through a Screening Plant and Backfilling. This alternative is evaluated in this Action Memorandum against the three selection criteria of effectiveness, implementability, and cost. The proposed removal action would effectively protect human health and the environment at the FIB/RSE site by destroying MEC and MPPEH on-site and removing MDAS and contaminated soil and disposing of (or recycling) the materials at an off-site facility, while complying with the chemical-, location-, and action-specific ARARs discussed in [Section V.A.5](#) and identified in [Appendix B](#).

The proposed removal action would provide effective short- and long-term reduction of exposure to MPPEH by its proper handling and destruction, if necessary. In the short term, worker exposure during the TCRA would be minimized through the proper use of engineering controls (armored excavation and screening equipment), specialized training for UXO technicians, and personal protective equipment. Public exposure would be minimized by destroying the MDEH and MPPEH on-site away from the public and using appropriate truck routing and equipment during transportation of contaminated soil from the site to the disposal facility.

Residual concentrations of lead, barium, cadmium, and copper at the excavation site shown on [Figures 3 and 4](#) would be below the action levels after the TCRA, so exposure of humans and ecological receptors at the FIB/RSE site to unacceptable levels of lead, barium, cadmium, and copper would be reduced. All explosive materials would be removed from the site, providing a long-term solution to this explosion hazard. This alternative does not present any technical or administrative constraints on implementability. The estimated cost of the proposed alternative is \$4,813,050 (see [Section V.B](#)).

#### **4. Engineering Evaluation and Cost Analysis**

An engineering evaluation and cost analysis was not done for the removal action because it has been deemed time critical [40 CFR § 300.415(b)(4)].

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

The purpose of the evaluation of ARARs is to identify and evaluate federal and state ARARs and set forth the Navy's determinations on the ARARs for this TCRA.

NCP § 300.415(j) provides that removal actions must attain ARARs to the extent practicable, considering the exigency of the situation.

NCP § 300.5 defines applicable requirements as “those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstances at a CERCLA site.”

NCP § 300.5 defines relevant and appropriate requirements as “cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not ‘applicable’ to a hazardous substance, pollutant, or contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well-suited to the particular site.”

Only substantive requirements are considered as possible ARARs because CERCLA on-site response actions do not require permitting. Administrative requirements such as approval of, or consultation with, administrative bodies, issuance of permits, documentation, reporting, recordkeeping, and enforcement are not ARARs for CERCLA actions confined to the site.

There are three types of ARARs. The first type includes “chemical-specific” requirements. These ARARs set limits on concentrations 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 set restrictions on certain types of activities based on site characteristics. These ARARs include restrictions on activities in wetlands, floodplains, and historic sites. The third type of ARAR includes action-specific requirements. These ARARs are technology-based restrictions triggered by the type of action under consideration. Examples of action-specific ARARs are Resource Conservation and Recovery Act (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. The discussion that follows is an analysis for the most important ARARs for the proposed alternative. It may include ARARs that potentially apply but may ultimately be eliminated when actual fieldwork provides more specific information.

As the lead federal agency, the Navy has primary responsibility for identifying ARARs for the TCRA at the FIB/RSE site at former NAVWPNSTA Concord. The federal and state ARARs the Navy identified are in [Appendix B](#).

The following subsections set forth the federal and state ARARs for the FIB/RSE site.

### **1. Chemical-Specific ARARs**

Chemical-specific ARARs are health- or risk-based numerical values or methodologies that, when applied to site-specific conditions, result in establishment of numerical cleanup values. These values establish the acceptable amount or concentration of a chemical found in or discharged to the ambient environment that is protective of human or ecological health.

Soil is the only environmental medium of concern at the FIB/RSE site. The only chemical-specific ARARs are the requirements applicable to identification and land disposal of hazardous waste and munitions. The Navy will characterize excavated soil to determine if it is RCRA hazardous waste. The Navy identified the substantive provisions of the following RCRA requirements as potential ARARs:

- RCRA, California Code of Regulations (Cal. Code Regs.) title (tit.) 22, §§ 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100 are ARARs because they define RCRA hazardous waste. Soil excavated from the FIB/RSE site will be characterized to determine if it is hazardous waste.

The Navy will determine whether hazardous waste munitions are present. The Navy identified the substantive provisions of the Military Munitions Rule as potential ARARs:

- Military Munitions Rule identification of hazardous waste munitions and treatment and storage requirements for hazardous waste munitions at 40 CFR Part 266, subpart M.

If scrap metal is found in the excavation, it will be recycled. Scrap metal is exempted from regulation under California hazardous waste laws when recycled, so if scrap metal is found it will not be considered a solid waste and RCRA hazardous waste disposal requirements are not applicable. The Navy identified the substantive provisions of the following requirements as ARARs:

- Cal. Code Regs. tit. 22 § 66260.10 and 66261(a)(3) defining and regulating scrap metal.

The Navy will also characterize the excavated soil according to the substantive provisions of the following state ARARs:

- Cal. Code Regs. tit. 27, §§ 20210, 20220 and 20330 (defining designated waste, nonhazardous waste and inert waste).
- Cal. Code Regs. tit. 22, §§ 66261.22(a)(3) and (4), 66261.24(a)(2) through (a)(8), 66261.101, 66261.3(a)(2)(C), or 66261.3(a)(2)(F) (defining non-RCRA state-regulated hazardous waste).

## **2. *Location-Specific ARARs***

Location-specific ARARs are restrictions on concentrations of hazardous substances or the conduct of activities as a result of the characteristics of the site or its immediate environment. The FIB/RSE site is not in a coastal zone or floodplain; there are no wetlands, no buildings of archaeological historical significance are present; and no threatened or endangered species are likely to be present. Migratory birds may be present at the site, so the Migratory Bird Treaty Act (16 U.S.C. §§ 703–712) is an ARAR.

## **3. *Action-Specific ARARs***

Action-specific ARARs are technology-based restrictions triggered by the type of action under consideration. The substantive provisions of the following requirements are Federal action-specific ARARs for the proposed action:

- Cal. Code Regs. tit. 22, §§ 66262.10(a) and 66262.11: Requiring generators determine if a waste is hazardous.
- Cal. Code Regs. tit. 22, § 66264.13(a) and (b): Requiring generators analyze waste to determine if it is hazardous.
- 40 CFR § 264.554(d)(1)(i–ii) and (d)(2), (e), (f), (h), (i), (j), and (k): Allowing the temporary staging of soil for up to 2 years prior to off-site disposal.
- Cal. Code Regs. tit. 22, § 66264.258(a) and (b) except references to procedural requirements: RCRA waste pile closure requirements.

- 40 CFR §§266.203, 266.205 and 266.206: Standards for transportation and storage of solid waste military munitions and treatment and disposal of waste military munitions.
- The Clean Air Act, Bay Area Air Quality Management District Regulation 6-302: Prohibiting emissions from any source equal to or greater than 20 percent opacity for a period more than 3 minutes in any hour.
- The Clean Water Act § 402(p) and implementing regulations at 40 CFR § 122.44(k)(2) and (4) setting forth the requirements for the Phase I stormwater National Pollutant Discharge Elimination System (NPDES) requirements.

The Navy accepts the substantive provisions of the following requirements as state ARARs:

- The requirement to accurately characterize wastes under Cal. Code Regs. tit. 27, § 20200(c).
- The discharge requirements for designated waste to Class I or Class II waste management units at Cal. Code Regs. tit. 27, § 20210.
- The discharge requirements for nonhazardous solid to classified units at Cal. Code Regs. tit. 27, §§ 20220(b), (c), and (d).

## 6. Project Schedule

Removal of contaminated soil at the FIB/RSE site is began in August 2012 and is anticipated to be completed in November 2012. The project schedule will be regularly updated as the project progresses. The Navy will inform all key project personnel of any known or anticipated delays or acceleration of project activities. If schedule modifications are needed or anticipated, the Navy will develop and outline the methods needed to maintain the overall project schedule.

## B. ESTIMATED COSTS

The Navy calculated a present-worth estimate of the removal action costs including the direct and indirect capital costs of the proposed removal action. Post-removal site control costs are not needed for this TCRA. The need for post-removal controls will be evaluated as part of the RI and FS for FIB/RSE. The items listed below are considered to be capital costs.

### Direct Capital Costs

Anomaly surveying  
 Digital mapping  
 Equipment and material  
 Excavation and screening  
 Biological Monitoring  
 Transport and disposal  
 Treatment of MEC, MPPEH and MDAS

### Indirect Capital Costs

Engineering and design  
 Plan and report documentation  
 Project management  
 Construction management

Backfill and grading  
 Hydromulch Seeding  
 Stormwater Best Management Practices  
 Demolition  
 Sampling  
 Analytical  
 Contingency allowances  
 Disposal treatment and operations

Table 5 summarizes the capital costs for the proposed removal action.

**TABLE 5: PROPOSED REMOVAL ACTION CAPITAL COSTS**  
 FIB/RSE, Former NAVWPNSTA Concord

Item Cost	Estimated Cost in 2012
<b>Direct Cost</b>	
Mobilization	\$95,000
Excavation, screening, and backfill (including UXO oversight)	\$1,980,000
Transportation, treatment, and disposal	\$550,000
Total Direct Cost:	\$2,625,000
Indirect Cost:	\$210,400
<b>Total Cost:</b>	<b>\$2,835,400</b>

The following assumptions were made to develop the cost estimate:

- The total area for excavation for removal of MPPEH (Units 1 through 3) is about 14.67 acres and will generate about 66,100 tons of soil. Soil from these areas will be excavated, screened for MPPEH, and then backfilled with the screened soil.
- The excavated material would be screened through the screening plant and/or spread out on the ground and screened by hand if needed. The location of the screening plant would be west of Unit 1, approximately 100 feet from Wake Way.
- Assume metals contaminated soil areas (Areas A through I) are excavated first and the soil is segregated and disposed of off-site. Assume five areas 5 feet in diameter and 2 feet deep, two areas 5 feet in diameter and 3 feet deep, one area 120 feet by 60 feet and 4 feet deep and one area 70 feet by 60 feet by 7 feet deep resulting in 3,240 tons of soil to be disposed of off-site.
- After removal of the top 2 feet, do a geophysical survey on the excavated area (14.67 acres) to locate burn pits or any deeper items.

- Assume that eight burn pits of 10 feet by 10 feet by 50 feet long are discovered, which adds approximately 2,300 tons of soil for screening. For the total of 68,400 tons of soil, it would take approximately 137 days (23 weeks with 6-day weeks) at 500 tons per day throughput for the screening plant (not including time for the geophysics and backfilling as work progresses with no additional contaminated soil discovered).

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

If action is delayed or not taken, humans at the FIB/RSE site could be exposed to an explosive hazard. Delay or no action at the site will not be protective of the environment and may result in increased future cleanup costs.

## **VII. PUBLIC INVOLVEMENT**

This Action Memorandum has been made available to the RAB for review and comment, and the Administrative Record is available to the public at the Information Repository located at the Concord Public Library. The Navy will comply with 40 CFR § 300.415(n) that requires a notice of availability of the Administrative Record be published in a major local newspaper within 60 days after the on-site removal action begins. An index of the Administrative Record for Site FIB/RSE, at former NAVWPNSTA Concord, is included as [Appendix C](#). The regulations also require that a public comment period of not less than 30 days be provided from the time the Administrative Record file is made available to the public, and that a written response be prepared for significant comments as required by 40 CFR § 300.820(b)(3). The Navy will respond to public comments on the TCRA in the Removal Action Completion Report after the TCRA.

## **VIII. OUTSTANDING POLICY ISSUES**

No outstanding policy issues are associated with the FIB/RSE site.

## **IX. RECOMMENDATION**

This Action Memorandum was developed in accordance with current EPA and Navy guidance documents for removal actions under CERCLA ([EPA 1990](#); [Navy 2006](#)). This Action Memorandum documents, for the Administrative Record, the Navy's decision to undertake a TCRA at the FIB/RSE site.

In arriving at this decision, three alternatives were identified and evaluated. These alternatives included (1) excavation, processing through a screening plant, and backfilling, (2) in situ scraping and screening, and (3) excavation, spreading, and manual screening. Based on the evaluation of the removal action alternatives completed in [Section V.A.3](#), the removal action selected is Alternative 1. Alternative 1 involves mass excavating soil in the heavy anomaly areas, transporting it to an on-site screening plant to remove all metals 20 mm or larger, and using the soil as backfill once the excavation is cleared. Oversized items screened out of the soil will be evaluated by UXO technicians and classified as scrap metal, MEC, MPPEH, or MDAS and placed in the appropriate storage areas. Scrap metal will be recycled off-site. MDAS will be

demilitarized and recycled or disposed of off-site. MEC and MPPEH will be detonated on-site so that they are no longer a hazard. Alternative 1 is recommended because it removes the source of contamination in a timely manner, complies with federal and state regulations, and is safer and is cost effective.

Alternative 1 also satisfies the following nine criteria required by 40 CFR § 300.430 (f)(1) of the NCP:

- **Overall protection of human health and the environment.** The proposed action will remove MPPEH and will be protective of human health and the environment.
- **Compliance with ARARs.** The proposed action meets all identified federal and state ARARs.
- **Long-term effectiveness and permanence.** Removal of MEC and MPPEH 20 mm or larger will permanently remove MPPEH threats to human health.
- **Reduction of toxicity, mobility, or volume through treatment.** On-site treatment was evaluated as a removal action alternative ([Section V.A.3](#)) and will be used for any MPPEH discovered. On-site treatment (detonation) of MPPEH will eliminate the explosive hazard.
- **Short-term effectiveness.** The proposed action includes appropriate engineering controls (armored excavators and screening plant) to minimize potential human and ecological exposure to MPPEH.
- **Implementability.** Implementation of the proposed action is technically and administratively feasible. Services and materials necessary for the proposed removal action are available during its implementation.
- **Cost.** The proposed action is similar in cost to the other alternatives evaluated.
- **State acceptance.** DTSC and Water Board were involved in the planning meetings for the TCRA and concur with the TCRA Action Memorandum and work plan for the protection of the environment. Responses to regulatory agency comments on the draft Action Memorandum are provided in [Appendix D](#).
- **Community acceptance.** The proposed action is anticipated to be acceptable to the community because it will permanently remove the MPPEH and contaminated surface soil from the site with minimal disturbance to the community during the removal action field work. The Navy will make the administrative record for the FIB/RSE site available to the public for review and will include responses to any comments in the Removal Action Completion Report.

This decision document represents the selected removal action for the FIB/RSE site in the Inland Area at former NAVWPNSTA Concord in Concord, California, developed in accordance with CERCLA, as amended by the Superfund Amendments and Reauthorization Act, and it is consistent with the NCP. This decision is based on the Administrative Record for the site.



---

SCOTT ANDERSON  
Department of the Navy  
BRAC Environmental Coordinator  
Base Realignment and Closure  
Program Management Office West

16 NOV 2012

---

Date

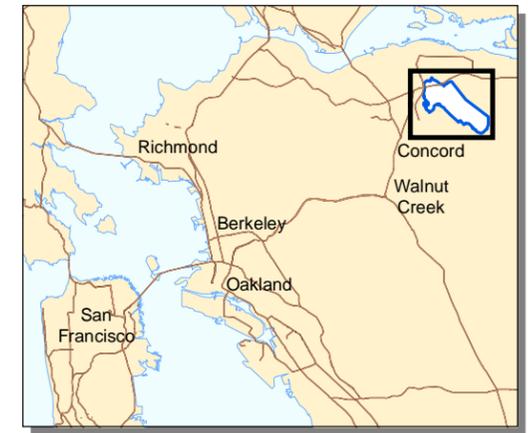
## REFERENCES

- Anderson Geotechnical Consultants, Inc. and Brown and Caldwell Consulting Engineers. 1984. "Draft Confirmation Study Report, NWS Concord." Department of the Navy, Naval Facilities Engineering Command, San Bruno, California.
- California Department of Toxic Substances Control (DTSC). 2009. "Revised California Human Health Screening Levels for Lead." Integrated Risk Assessment Branch, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. September.
- ChaduxTt. 2010. Final Remedial Investigation Work Plan for the Eagle's Nest Explosive Ordnance Disposal Site (Unexploded Ordnance Site 10), and the Former Inland Burn/Railroad Sidings Excavations Area (IR Site 13, Unexploded Ordnance Sites 9 and 3), Military Munitions Response Program, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California. June 30.
- City of Concord. 2011. Concord Reuse Project Area Plan. Book 1. Available on-line at: <http://www.concordreuseproject.org/pdf/losMedanos2010.pdf>
- Department of the Navy (Navy). 2005. "Final Record of Decision for Inland Area Site 17, Naval Weapons Station Seal Beach Detachment Concord, Concord, California." February.
- Navy. 2006. "Navy Environmental Restoration Program Manual."
- Ecology & Environment, Inc. 1983. "Initial Assessment Study of Naval Weapons Station, Concord, California." NEESA 13-013, Naval Energy and Environmental Support Activity, Port Hueneme, California.
- EDAW. 2008. California Tiger Salamander Upland Habitat Study Report, Naval Weapons Station Seal Beach Detachment Concord, Contra Costa County, California. Prepared for the Department of Navy, Naval Base Realignment and Closure Program Management Office, San Diego, California.
- Kellogg, E.M and others. 2008. Wetland Delineation and Aquatic Habitat Inventory for the Inland Area, Naval Weapons Station Seal Beach Detachment Concord, Concord, California. January. Tierra Data, Inc., Escondido, California.
- Malcolm Pirnie, Inc. 2007. "Final Preliminary Assessment, Military Munitions Response Program, Naval Weapons Station Seal Beach Detachment Concord, Concord, California." August.
- Office of Environmental Health Hazard Assessment. 2004. "Public Health Goals for Chemicals in Drinking Water, Perchlorate." March. Available on-line at: <http://www.oehha.ca.gov/water/phg/pdf/finalperchlorate31204.pdf>

- PRC Environmental Management, Inc. (PRC). and Montgomery Watson, Inc.. 1993. "Inland Area Sites Site Investigation Report, Draft, Naval Weapons Station Concord, California."
- Tetra Tech EM Inc. (Tetra Tech) and Montgomery Watson, Inc. 1997. "Draft Final Remedial Investigation Report, Inland Area Sites 13, 17, 22, 24A, and 27, Naval Weapons Station Concord, California." October.
- Tetra Tech. 2006. "Final Groundwater Sampling Summary Report for Site 13, Naval Weapons Station Seal Beach Detachment Concord, California." August 25.
- Tetra Tech. 2007. "Final Remedial Investigation Report for Installation Restoration Site 22, Naval Weapons Station Seal Beach, Detachment Concord, Concord, California." February 20.
- Tetra Tech. 2010a. "Final Site Inspection for Eagle's Nest Explosive Ordnance Disposal Area and the Former Inland Burn/Railroad Sidings Excavations Area, Military Munitions Response Program, Naval Weapons Station Seal Beach Detachment Concord, Concord, California." June 9.
- Tetra Tech. 2010b. "Final Risk Assessment Technical Memorandum, Eagle's Nest Explosive Ordnance Disposal Area (UXO Site 10) and the Former Inland Burn/Railroad Sidings Excavations Area (IR Site 13, UXO Sites 9 and 3), Military Munitions Response Program Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California." July 29.
- U.S. Environmental Protection Agency (EPA). 1990. "Superfund Removal Procedures: Action Memorandum Guidance." Office of Solid Waste and Emergency Response Directive 9360.3-01. September.
- Weston Solutions, Inc. 2002. "Final Inland Environmental Status Report for the Naval Weapons Station Seal Beach Detachment Concord, California." August.

## FIGURES

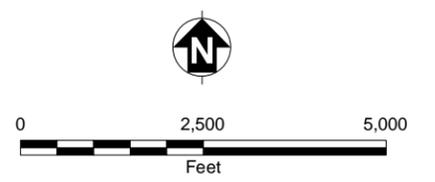
---



-  Former Inland Burn/  
Railroad Sidings Excavations Area Boundary
-  Ammunition Magazine
-  Building
-  Former Naval Weapons Station Seal Beach  
Detachment Concord Boundary
-  Clayton Fault
-  Street

Note:  
Aerial imagery courtesy of  
Google Earth Pro, October 2011.

FIB/RSE    Former Inland Burn Area/  
Railroad Sidings Excavation Area



**FORMER NAVAL WEAPONS STATION  
SEAL BEACH DETACHMENT CONCORD**

**FIGURE 1  
FORMER INLAND BURN AREA/  
RAILROAD SIDINGS EXCAVATION AREA**  
Action Memorandum for FIB/RSE



- Soil Sampling Location
- ⊕ Monitoring Well

**TCRA Units**

- Unit 1 (7.2 Acres)
- Unit 2 (4.9 Acres)
- Unit 3 (2.57 Acres)

- Heavy Anomaly
- Former IA-53 Inland Burn Pit Area (11-ft. deep, 12-ft. x 12-ft. Concrete Pit With 12-in. Thick Walls)
- Former Burn Area as Shown in 1949 and 1951 Maps
- Former Inland Burn/ Railroad Sidings Excavation Area
- Former Napalm Trench/Ephemeral Pool
- FIB Trench Locations
- Fence

Notes:  
Entire area (outside of the heavy anomaly areas) has been cleared.

- FIB      Former Inland Burn
- ft        Feet
- in        Inch
- SI        Site Inspection
- TCRA    Time-Critical Removal Action

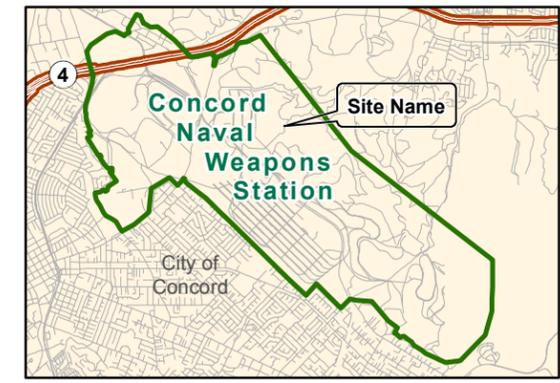


**FORMER NAVAL WEAPONS STATION  
SEAL BEACH DETACHMENT CONCORD**

**FIGURE 2  
SITE FEATURES AND  
TCRA WORK AREAS**

Action Memorandum for FIB/RSE





- Soil Samples Sampled for Barium, Cadmium, Copper and Lead (0 - 10 ft bgs)<sup>a</sup>
- Proposed TCRA Excavation Area<sup>b</sup>
- Heavy Anomaly
- TCRA Units**
- Unit 1<sup>c</sup> (7.2 Acres)
- Unit 2<sup>c</sup> (4.9 Acres)
- Unit 3<sup>c</sup> (2.57 Acres)
- - - FIB/RSE Site Boundary
- ××× Fence

a Only sampling locations associated with TCRA Excavations Areas A through I are labeled. See Figures 4 through 8 for sample results associated with the TCRA excavation areas for the four metals of concern.

b TCRA Excavation Areas will be excavated to depths between 2 and 7 feet, depending on the depths of results exceeding action levels for barium, cadmium, copper, and lead. Excavation areas shown on the map are not to scale.

c TCRA Units will be excavated to a depth of between 1.5 and 12 feet, depending on observations during trenching. The entire area of Units 1, 2, and 3 will be excavated to remove MPPEH.

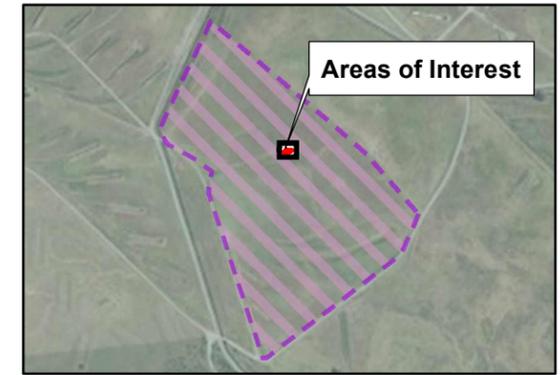
FIB/RSE Former Inland Burn Area/Railroad Sidings Excavation Area  
 ft bgs Feet below ground surface  
 TCRA Time-Critical Removal Action  
 MPPEH Materials potentially presenting an explosives hazard



**FORMER NAVAL WEAPONS STATION  
 SEAL BEACH DETACHMENT CONCORD**

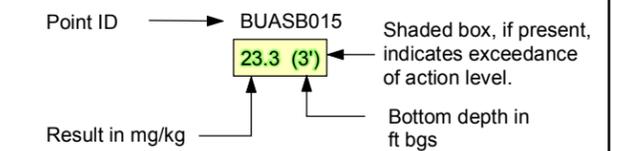
**FIGURE 3  
 PROPOSED TCRA  
 EXCAVATION AREAS**

Action Memorandum for FIB/RSE



- Barium Result Present
- Cadmium Result Present
- Copper Result Present
- Lead Result Present
- Proposed TCRA Excavation Area\*

Action Levels (mg/kg) With Depth Intervals of Concern		
Barium	947	0 - 6 ft bgs
Cadmium	0.49	0 - 1.5 ft bgs
Copper	1,340	0 - 1.5 ft bgs
Lead	113	0 - 10 ft bgs



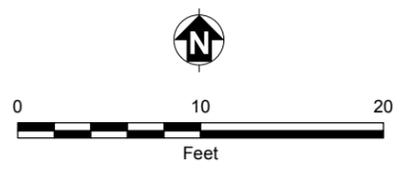
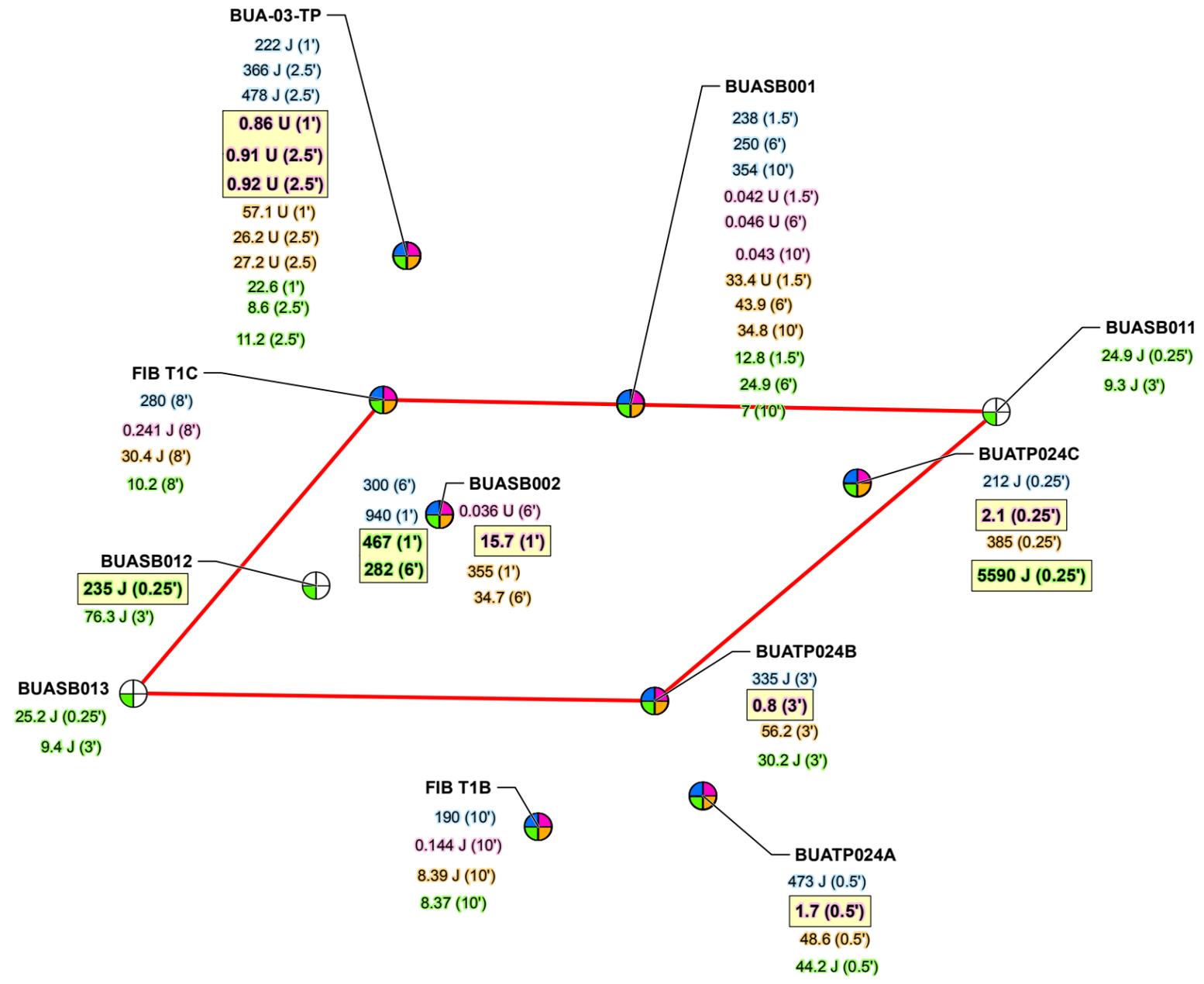
\* Soil to a depth of 3 feet bgs is proposed for removal at TCRA excavation areas B, C, and D  
 FIB/RSE Former Inland Burn Area/Railroad Sidings Excavation Area  
 ft bgs Feet below ground surface  
 J Estimated value  
 mg/kg Milligrams per kilograms  
 TCRA Time-Critical Removal Action  
 U Non-detect



**FORMER NAVAL WEAPONS STATION  
 SEAL BEACH DETACHMENT CONCORD**

**FIGURE 4  
 BARIUM, CADMIUM, COPPER, AND  
 LEAD IN SOIL – EXCAVATION AREA A**

Action Memorandum for FIB/RSE



**FIB T2C**  
 92.9 (7')  
 0.174 J (7')  
 27.5 J (7')  
 8.23 J (7')

**FIB T2B**  
 52.2 (7')  
 0.346 J (7')  
 47.7 J (7')  
 7.85 J (7')

**FIB T2A**  
 282 (7)  
 0.272 J (7')  
 33.6 J (7')  
 9.02 J (7')

**FRSB15**  
 498 (1')  
 306 (6')  
**1.98 (1')**  
 0.285 J (6')  
 133 J (1')  
 28.7 (6')  
**384 J (1')**

**FIB T3C**  
 216 (7')  
**0.759 (7')**  
 46.7 J (7')  
 30.9 J (7')

**D**

**FIB T3A**  
 267 (7')  
 0.231 J (7')  
**31.2 J (7')**  
 8.67 J (7')

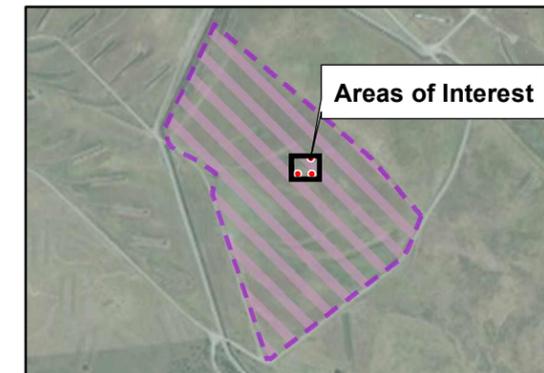
**FIB T3B**  
 184 (7')  
 0.273 J (7')  
 34.4 J (7')  
 16.7 J (7')

**B**

**BUA-04-TP**  
 427 J (1')  
 241 J (2.5')  
 0.85 U (1')  
 0.89 U (2.5')  
 49.4 U (1')  
 104 (1')

**C**

**FRSB14**  
 532 (1')  
 140 (6')  
**1.58 (1')**  
 0.162 J (6')  
 103 J (1')  
 37.5 (6')  
 104 J (1')



- Barium Result Present
- Cadmium Result Present
- Copper Result Present
- Lead Result Present
- Proposed TCRA Excavation Area\*

Action Levels (mg/kg) With Depth Intervals of Concern		
Barium	947	0 - 6 ft bgs
Cadmium	0.49	0 - 1.5 ft bgs
Copper	1,340	0 - 1.5 ft bgs
Lead	113	0 - 10 ft bgs

Point ID → BUASB015 → Shaded box, if present, indicates exceedance of action level.

Result in mg/kg → **23.3 (3')** → Bottom depth in ft bgs

Notes:  
 Concentrations exceeding the Action Levels are enlarged and in BOLD".

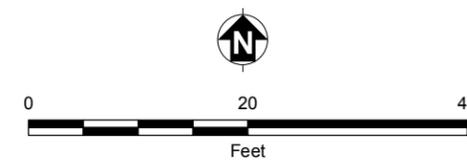
\* Soil to a depth of 3 feet bgs is proposed for removal at TCRA excavation areas B, C, and D.  
 FIB/RSE Former Inland Burn Area/Railroad Sidings Excavation Area  
 ft bgs Feet below ground surface  
 J Estimated value  
 mg/kg Milligrams per kilograms  
 TCRA Time-Critical Removal Action  
 U Non-detect

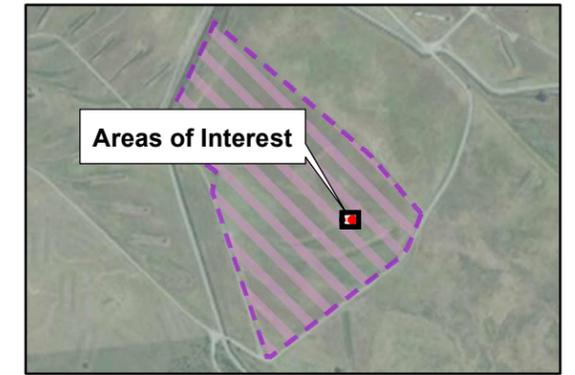
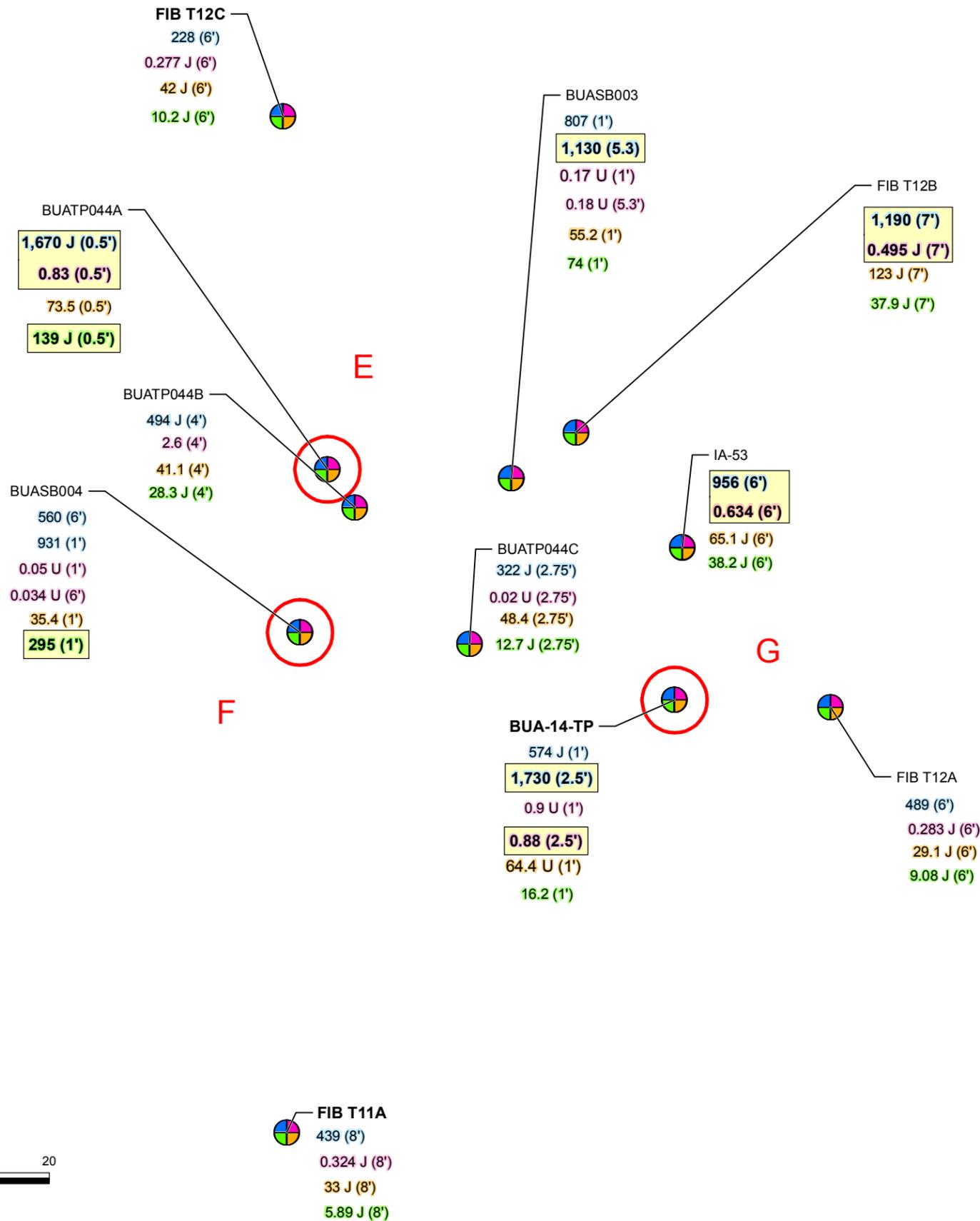


**FORMER NAVAL WEAPONS STATION  
 SEAL BEACH DETACHMENT CONCORD**

**FIGURE 5  
 BARIUM, CADMIUM, COPPER, AND LEAD IN SOIL – EXCAVATION AREAS B, C, AND D**

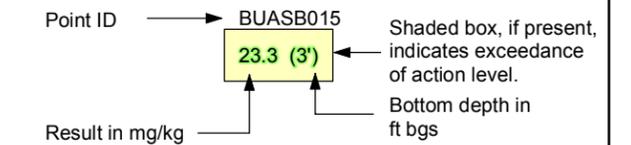
Action Memorandum for FIB/RSE





- Barium Result Present
- Cadmium Result Present
- Copper Result Present
- Lead Result Present
- Proposed TCRA Excavation Area\*

Action Levels (mg/kg) With Depth Intervals of Concern		
Barium	947	0 - 6 ft bgs
Cadmium	0.49	0 - 1.5 ft bgs
Copper	1,340	0 - 1.5 ft bgs
Lead	113	0 - 10 ft bgs



Notes:  
 Concentrations exceeding the Action Levels are enlarged and in BOLD".

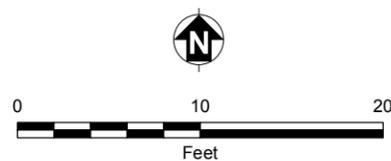
- \* Soil to a depth of 3 feet bgs is proposed for removal at TCRA excavation areas E, F, and G.
- FIB/RSE Former Inland Burn Area/Railroad Sidings Excavation Area
- ft bgs Feet below ground surface
- J Estimated value
- mg/kg Milligrams per kilograms
- TCRA Time-Critical Removal Action
- U Non-detect



FORMER NAVAL WEAPONS STATION  
 SEAL BEACH DETACHMENT CONCORD

**FIGURE 6**  
**BARIUM, CADMIUM, COPPER, AND LEAD IN SOIL – EXCAVATION AREAS E, F, AND G**

Action Memorandum for FIB/RSE



**BUASBE05**  
 329 (1.2')  
 640 (3.5')  
 0.28 U (1.2')  
 0.27 U (3.5')  
 22.4 (1.2')  
 22.6 (3.5')  
 7.4 (1.2')  
 6.7 (3.5')

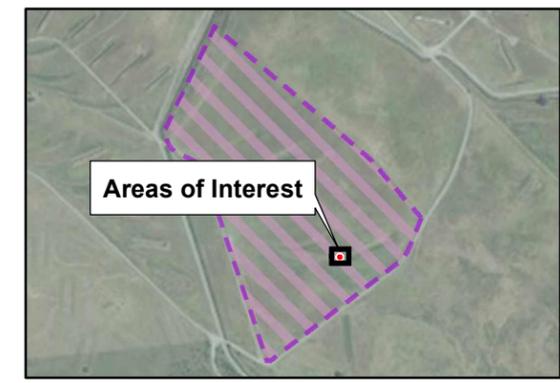
**BUATP038A**  
 260 (0.5')  
 0.57 (0.5')  
 34 (0.5')  
**195 J (0.5')**

**BUASB016**  
 36.1 J (0.25')  
 4.9 J (3')

**BUATP038B**  
 170 (4.5')  
 0.048 U (4.5')  
 34.9 (4.5')  
 5.6 J (4.5')

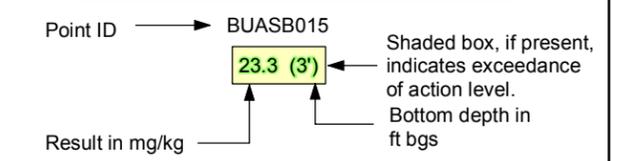
**BUATP038C**  
 223 (2.75')  
 0.036 U (2.75')  
 34.4 (2.75')  
 9.1 J (2.75')

**BUA-08-TP**  
 222 (1')  
 195 (2.5')  
 0.93 U (1')  
 0.89 U (2.5')  
 35.8 (1')  
 37.1 (2.5')  
 19.3 (1')  
 22.5 (2.5')



- Barium Result Present
- Cadmium Result Present
- Copper Result Present
- Lead Result Present
- Proposed TCRA Excavation Area\*

Action Levels (mg/kg) With Depth Intervals of Concern		
Barium	947	0 - 6 ft bgs
Cadmium	0.49	0 - 1.5 ft bgs
Copper	1,340	0 - 1.5 ft bgs
Lead	113	0 - 10 ft bgs



Notes:  
 Concentrations exceeding the Action Levels are enlarged and in BOLD".

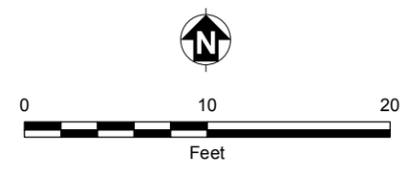
- \* Soil to a depth of 3 feet bgs is proposed for removal at TCRA excavation area H, and soil to a depth of 4 feet
- FIB/RSE Former Inland Burn Area/Railroad Sidings Excavation Area
- ft bgs Feet below ground surface
- J Estimated value
- mg/kg Milligrams per kilograms
- TCRA Time-Critical Removal Action
- U Non-detect

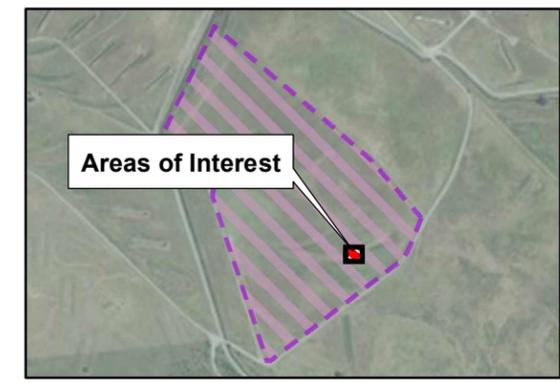
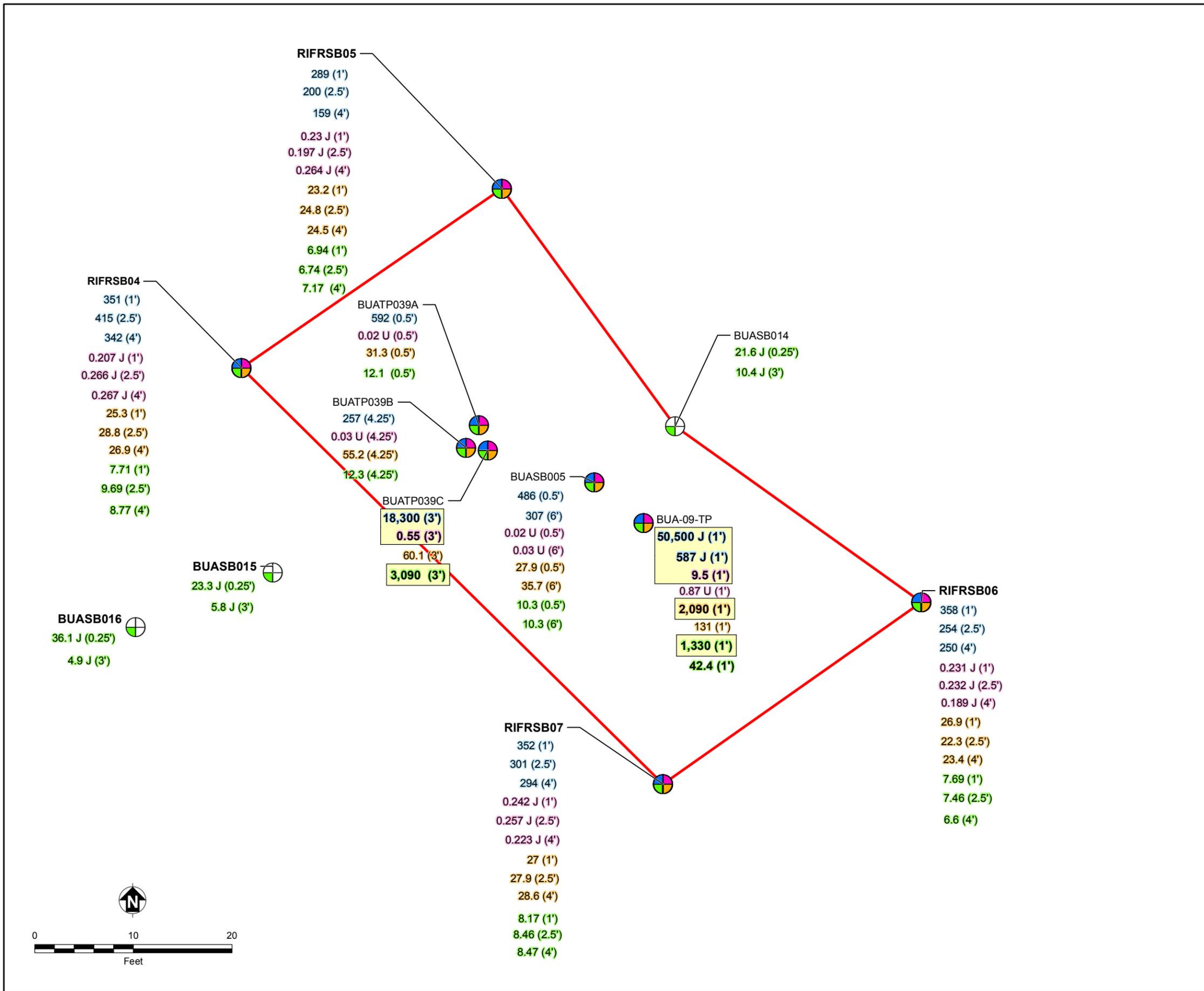


**FORMER NAVAL WEAPONS STATION  
 SEAL BEACH DETACHMENT CONCORD**

**FIGURE 7  
 BARIUM, CADMIUM, COPPER, AND LEAD IN SOIL – EXCAVATION AREA H**

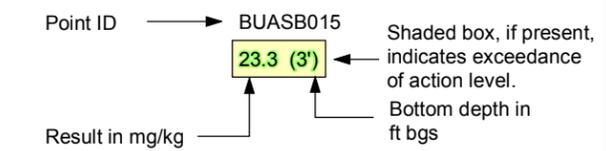
Action Memorandum for FIB/RSE





- Barium Result Present
- Cadmium Result Present
- Copper Result Present
- Lead Result Present
- Proposed TCRA Removal Area\*

Action Levels (mg/kg) With Depth Intervals of Concern		
Barium	947	0 - 6 ft bgs
Cadmium	0.49	0 - 1.5 ft bgs
Copper	1,340	0 - 1.5 ft bgs
Lead	113	0 - 10 ft bgs



Notes:  
 Concentrations exceeding the Action Levels are enlarged and in BOLD".

\* Soil to a depth of 4 feet bgs is proposed for removal at TCRA excavation area I.  
 FIB/RSE Former Inland Bum Area/Railroad Sidings Excavation Area  
 ft bgs Feet below ground surface  
 J Estimated value  
 mg/kg Milligrams per kilograms  
 TCRA Time-Critical Removal Action  
 U Non-detect



**FORMER NAVAL WEAPONS STATION  
 SEAL BEACH DETACHMENT CONCORD**

**FIGURE 8  
 BARIUM, CADMIUM, COPPER, AND LEAD IN SOIL – EXCAVATION AREA I**

Action Memorandum for FIB/RSE

**APPENDIX A**  
**DEVELOPMENT OF RISK-BASED ECOLOGICAL REMOVAL GOALS**

---

**TABLE OF CONTENTS**

---

ACRONYMS AND ABBREVIATIONS ..... A-iii

A1.0 INTRODUCTION ..... A-1

A2.0 SITE BACKGROUND AND SUMMARY OF ECOLOGICAL RISK  
ASSESSMENT ..... A-1

A3.0 METHODOLOGY FOR DEVELOPING RISK-BASED ECOLOGICAL  
ACTION LEVELS..... A-2

A4.0 RISK-BASED ECOLOGICAL ACTION LEVELS ..... A-4

A5.0 REFERENCES ..... A-6

## LIST OF TABLES

---

- A-1 Dose Parameters for the American Robin (*Turdus migratorius*)
- A-2 Dose Parameters for the Western Harvest Mouse (*Reithrodontomys megalotis*)
- A-3 Dose Parameters for the California Ground Squirrel (*Spermophilus beecheyi*)
- A-4 Summary of Site-Specific Bioaccumulation Factors for Plants and Invertebrates
- A-5 Summary of Literature Bioaccumulation Models for Plants
- A-6 Summary of Literature Bioaccumulation Models for Invertebrates
- A-7 Ecological Risk-Based Action Level Back-Calculations

## ACRONYMS AND ABBREVIATIONS

---

bgs	Below ground surface
BAF	Bioaccumulation factor
COEC	Chemical of ecological concern
COPEC	Chemical of potential ecological concern
EPA	U.S. Environmental Protection Agency
FIB/RSE	Former Inland Burn Area/Railroad Sidings Excavation
HQ	Hazard quotient
IR	Ingestion rate
kg/day	Kilogram per day
mg/kg	Milligram per kilogram
Navy	Department of the Navy
RI	Remedial Investigation
SLERA	Screening-level ecological risk assessment
SUF	Site use factor
Tetra Tech	Tetra Tech EM Inc.
TRV	Toxicity reference value

## A1.0 INTRODUCTION

This appendix describes the development of risk-based ecological action levels used in the Action Memorandum for the Former Inland Burn Area (FIB)/Railroad Sidings Excavation (RSE) Area at Naval Weapons Station Seal Beach Detachment Concord (former NAVWPNSTA Concord) in Concord, California. Risk-based action levels are concentrations in environmental media that correspond to a specific, acceptable target risk or hazard level when an ecological receptor contacts the contaminated media according to a defined exposure scenario. Risk-based action levels were developed based on the potential risks at the site to guide the soil removal. The goals are intended to protect the environment from concentrations of chemicals in soil that could result in an unacceptable risk to potential ecological receptors.

The primary objectives of this appendix are to: (1) present the approach for developing risk-based action levels for the chemicals of ecological concern (COEC) identified in the Remedial Investigation (RI), and (2) recommend risk-based action levels based on this approach. Section A2.0 summarizes the site background, and [Section A3.0](#) presents the methodology used to develop ecological risk-based action levels. [Section A4.0](#) provides the ecological risk-based action levels for COECs, and [Section A5.0](#) lists the references used in preparing this appendix.

## A2.0 SITE BACKGROUND AND SUMMARY OF ECOLOGICAL RISK ASSESSMENT

The RI report for the FIB/RSE Area presents the results of the screening-level ecological risk assessment (SLERA) and Step 3a risk refinement. The purpose of the risk assessment was to evaluate whether concentrations of chemicals of potential ecological concern (COPEC) at the FIB/RSE Area result in unacceptable risks to ecological receptors based on the data collected prior to and during the RI and, if so, to recommend that specific areas with elevated concentrations are evaluated further or addressed with a soil removal.

Risks to plants, invertebrates, birds, and mammals were evaluated. Data for soil (0 to 1.5 and 0 to 6 feet below ground surface [bgs]) were used to support the SLERA and Step 3a risk refinement. Data from 0 to 1.5 feet bgs were used in the evaluation of invertebrates, birds, and non-burrowing mammals. Data from 0 to 6 feet bgs were used in the evaluation of plants and the California ground squirrel, a burrowing mammal. The results indicated several metals pose unacceptable risks to ecological receptors and are therefore considered COECs:

- Barium, particularly at locations BUA-09-TP and BUATP039C, poses unacceptable risk to plants, invertebrates, the western harvest mouse, and the California ground squirrel.
- Cadmium, particularly at locations BUASB002 and BUA-09-TP, poses unacceptable risk to the American robin.
- Lead, particularly at locations BUATP024C, BUA-09-TP, and BUATP039C, poses unacceptable risk to plants and the American robin ([Tetra Tech 2012](#)).

Although the site-wide risk estimates for copper for all ecological receptors did not show unacceptable risk, soil associated with location BUA-09-TP should be removed to enhance protection of ecological resources. Therefore, an ecological-risk based action level for copper was calculated for the American robin, the most sensitive vertebrate receptor, to guide the soil removal.

Although the SLERA and Step 3a risk refinement determined that barium and lead at the FIB/RSE Area pose risk to plants and that barium poses risk to invertebrates, it is recommended that risk management decisions and remedial actions be based on the more complete estimates of risk for birds and mammals. For this reason, ecological risk-based action levels were calculated for vertebrate receptors only.

The findings of the SLERA and Step 3a risk refinement are driven by concentrations of barium, cadmium, copper, and lead at two localized areas: (1) surface soil at sample locations BUASB002 and BUATP024C located in the central portion of the site, and (2) soil from 0 to 3 feet bgs at sample locations BUA-09-TP and BUATP039C, located in the southeast portion of the site. Concentrations of cadmium and lead at the first area, and of barium, cadmium, copper, and lead in soil at the second area, are notably elevated compared with concentrations of these metals measured in other soil samples at the FIB/RSE site.

The SLERA or Step 3a risk refinement did not identify any other chemicals of concern for ecological receptors. A soil removal focusing on these two areas is recommended to minimize the risk to ecological receptors from barium, cadmium, copper, and lead in soil at the FIB/RSE Area.

### **A3.0 METHODOLOGY FOR DEVELOPING RISK-BASED ECOLOGICAL ACTION LEVELS**

The method used to calculate risk-based action levels for COPECs was developed in accordance with the following U.S. Environmental Protection Agency (EPA) and Department of the Navy (Navy) guidance documents:

- “Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final” (EPA 1997)
- “Navy Policy for Conducting Ecological Risk Assessment” (Navy 1999)
- “Navy Guidance for Conducting Ecological Risk Assessments” (Navy 2004)

Risk-based action levels for the FIB/RSE Area were calculated using the same modeling methods and parameters presented in the FIB/RSE RI ([Tetra Tech 2012](#)). First, the potential risk from COPECs was assessed with the use of a food chain model, which is described in the text below. Site-specific soil-to-plant and soil-to-invertebrate bioaccumulation factors (BAF) were calculated using collocated soil and plant tissue data, and collocated soil and earthworm bioassay data using soil collected from the four sample locations of concern (BUASB002, BUATP024C, BUA-09-TP, and BUATP039C).

Tables A-1 through A-3 present the exposure parameters used in the model, Tables A-4 through A-6 present both the site-specific and literature BAFs, and Table A-7 presents the calculations of risk-based action levels for birds and mammals.

During the RI, a food-chain modeling approach was used to estimate risk to birds and mammals. Cadmium, copper, and lead pose risk to the American robin (*Turdus migratorius*), an omnivore, and barium poses risk to the western harvest mouse (*Reithrodontomys megalotis*), an omnivore, as well as the California ground squirrel (*Spermophilus beecheyi*), an herbivorous burrowing mammal. Ecological risk-based action levels were calculated for all three vertebrate receptors for all COECs.

To estimate risk to vertebrates in the RI, food-chain modeling was used to calculate an estimated daily dose, which is the amount of a chemical ingested by a bird or mammal while foraging at a site. The dose was calculated using the following equation:

$$\text{Dose} = \frac{([IR_{\text{food}} \times C_{\text{food}}] + [IR_{\text{soil}} \times C_{\text{soil}}]) \times \text{SUF}}{\text{BW}} \quad (\text{A-1})$$

where:

- Dose = Estimated dose from ingesting food and soil (milligram per kilogram [mg/kg] body weight per day)
- IR<sub>food</sub> = Ingestion rate of food in dry weight (kilogram per day [kg/day])
- IR<sub>soil</sub> = Ingestion rate of soil in dry weight (kg/day)
- C<sub>food</sub> = Concentration of chemical in food in dry weight (mg/kg)
- C<sub>soil</sub> = Concentration of chemical in soil in dry weight (mg/kg)
- SUF = Site use factor—the ratio of the site area and receptor’s foraging range (unitless)
- BW = Body weight of receptor (kilogram)

The estimated dose was compared with high and low toxicity reference values (TRV) to estimate the potential adverse biological effects on each ecological receptor. A low TRV represents a chronic no-effects level, and a high TRV represents a low or mid-range effect level. The resulting dose was then divided by high and low TRVs to derive the hazard quotients (HQ) (see equation below).

$$\text{Hazard Quotient} = \frac{\text{Dose}}{\text{TRV}} \quad (\text{A-2})$$

where:

- TRV = Toxicity reference value (mg/kg body weight per day)

The risk-based action level was calculated by setting the HQ equal to 1.0 and then solving for the soil concentration that results in the corresponding dose. This process is known as back-calculating. Back-calculations were conducted using the low and high TRV, but the high TRV was used to identify the risk-based action levels because actual toxicological effects are associated with the high TRV and not with the low TRV. Both site-specific BAFs and literature BAFs were used to estimate the concentrations of COECs in prey tissue based on the concentrations of COECs in soil. The TRVs used in the back-calculation are the same as those used in the FIB/RSE Area RI report (Tetra Tech 2012).

The equation below was used to back-calculate ecological risk-based action levels for barium, cadmium, copper, and lead at the FIB/RSE Area.

$$C_{soil} = \frac{(High\ TRV/SUF) \times BW}{[IR_{Soil} + (BAF_{food} \times IR_{food})]} \quad (A-3)$$

where:

$BAF_{food}$  = Bioaccumulation factor for food or prey (kilograms dry soil per kilograms dry tissue)

Exposure parameters used in the equation above and the resulting back-calculated values for each ecological receptor are provided in Table A-7. The ecological receptor with the lowest risk-based action level is the “most sensitive receptor.” Risk-based action levels developed for the most sensitive receptor are expected to be protective of all ecological receptors in the FIB/RSE area.

Risk-based ecological action levels were calculated using both site-specific and literature BAFs. The risk-based action levels calculated using the site-specific BAFs may overestimate actual risk at the site because the site-specific BAFs were calculated using tissue and soil samples collected at the most contaminated areas of the site. Therefore, the higher of the two goals calculated for each receptor and COEC was selected, as the site-wide average BAFs would be expected to decrease once the soil associated with the four locations of concern are removed.

#### A4.0 RISK-BASED ECOLOGICAL ACTION LEVELS

Risk-based action levels for each COEC are listed in the table below.

Risk-Based Ecological Action Levels (mg/kg)					
Ecological Receptor	Exposure Medium	Barium <sup>1</sup>	Cadmium	Copper	Lead
American Robin	Surface Soil (0 to 1.5 feet bgs)	NA	0.49	1,340	211
Western Harvest Mouse	Surface Soil (0 to 1.5 feet bgs)	947	NA	NA	NA
California Ground Squirrel	Subsurface Soil (0 to 6 feet bgs)	1,373	NA	NA	NA

Notes:

NA Not applicable (Step 3a refinement food chain model dose calculations did not indicate unacceptable risk to receptor using the site-wide exposure point concentration. As indicated in Section A2.0, the Step 3a risk refinement determined that no unacceptable risk was posed to the America robin based on the site-wide exposure point concentration, but a risk-based action level was calculated to guide the soil removal.)

The comparison of risk-based action levels identified the western harvest mouse as the most sensitive receptor for exposure to barium; therefore, the risk-based action level for the western harvest mouse was selected as the action level for soil between 0 and 6 feet bgs.

The risk-based action levels shown in the table above were compared with the 95<sup>th</sup> percentile background levels for Sites 13 and 22 (560 mg/kg for barium, 0.29 mg/kg for cadmium, 65 mg/kg for copper, and 33 mg/kg for lead). None of the background levels was greater than the ecological risk-based action levels. The final ecological action levels are presented in the table below.

<b>COEC</b>	<b>Exposure Medium</b>	<b>Risk-Based Ecological Action Level (mg/kg)</b>
Barium	Surface and Subsurface Soil (0 to 6 feet bgs)	947
Cadmium	Surface Soil (0 to 1.5 feet bgs)	0.49
Copper	Surface Soil (0 to 1.5 feet bgs)	1,340
Lead	Surface Soil (0 to 1.5 feet bgs)	211 *

Notes:

1 Because the ecological action level for lead is higher than the goal developed for human health, the human health goal was selected as the final action level for the FIB/RSE Area for the 0 to 10 feet bgs depth interval.

bgs Below ground surface

COEC Chemical of ecological concern

## A5.0 REFERENCES

- Department of the Navy (Navy). 1999. "Navy Policy for Conducting Ecological Risk Assessment." April 5. Available Online at: <http://web.ead.anl.gov/ecorisk/policy/pdf/policy.pdf>.
- Navy. 2004. "Navy Guidance for Conducting Ecological Risk Assessments." Available Online at: <http://web.ead.anl.gov/ecorisk/index.cfm>. Last update on March 16, 2004.
- Tetra Tech EM Inc. (Tetra Tech). 2012. "Draft Remedial Investigation for the Former Inland Burn/Railroad Sidings Excavations Site (Unexploded Ordnance Sites 9 and 3), Military Munitions Response Program, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California.
- U.S. Environmental Protection Agency. 1997. "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final." EPA/540/R-97/006. Office of Solid Waste and Emergency Response. June.

## **TABLES**

---

**TABLE A-1: DOSE PARAMETERS FOR THE AMERICAN ROBIN (*Turdus migratorius*)**

Action Memorandum for Time-Critical Removal Action at the Former Inland Burn/Railroad Sidings Excavations Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion Rate <sub>food</sub>	1.23E-02	kg/day	Calculated with body weight of 77.3 grams using the equation for the food requirement for intake of dry matter for passerines (food ingestion rate = $[0.630[BW(\text{grams})]^{0.683}]/1000$ ) (Nagy 2001).
Ingestion Rate <sub>plant</sub>	3.07E-03	kg/day	Based on 25 percent of food ingestion rate.
Ingestion	9.21E-03	kg/day	Based on 75 percent of food ingestion rate.
Ingestion Rate <sub>soil</sub>	1.23E-03	kg/day	10% of total ingestion based on the turkey and woodcock (Beyer and others 1994).
Soil Concentrations	Lower of the Maximum and 95 UCL Concentration	mg/kg	Based on the lower of the maximum concentration and the 95 UCL concentration of all site-collected surface (0 to 1 feet bgs).
Food Concentrations	Food Chain Model	mg/kg	Food concentrations were estimated using uptake models using concentrations at the site or by multiplying concentrations in soil at the site by BAFs for plants and invertebrates. The plant concentration of arsenic was based on site-collected tissue data.
Diet Composition <sup>a</sup>	25%	Plant Tissue	Food will consist of 25 percent plant tissue and 75 percent invertebrate tissue because the American robin was selected as representative species for omnivorous birds.
	75%	Invertebrates	
Foraging Range	1.50E-01	Hectare	Based on lowest mean foraging range (Weatherhead and McRae 1990 as cited in EPA 1993).
Site Use Factor	1.00E+00	Unitless	The site area (20.2 hectares) divided by home range is greater than 1, so a site use factor of 1.0 is assumed.
Body Weight	7.73E-02	kg	Mean body weight of adults throughout the United States (Clench and Leberman 1978 as cited in EPA 1993).

**TABLE A-1: DOSE PARAMETERS FOR THE AMERICAN ROBIN (*Turdus migratorius*) (Continued)**

Action Memorandum for Time-Critical Removal Action at the Former Inland Burn/Railroad Sidings Excavations Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Notes:

a	Animal matter predominates in the American robin's breeding season diet while in the nonbreeding season robins eat more berries and other fruits, seeds, seedlings and sprouts (Bent 1949 and Martin and others 1961, both as cited in Zeiner and others 1990a).
BAF	Bioaccumulation factor
bgs	Below ground surface
BW	Body weight
EPA	U.S. Environmental Protection Agency
ERA	Ecological Risk Assessment
kg	Kilograms
kg/day	Kilograms per day
mg/kg	Milligrams per kilogram

References:

Beyer, W.N., E.E. Connor, and S. Gerould. 1994. Estimates of Soil Ingestion by Wildlife. *J.Wildl. Manage.* 58(2): 375-382.

Nagy, K.A. 2001. "Food requirements of wild animals: predictive equations for free-living mammals, reptiles, and birds." *Nutrition Abstracts and Reviews, Series B.* Volume 71. Number 10. Pages 2R-12R.

U.S. Environmental Protection Agency (EPA). 1993. "Wildlife Exposure Factors Handbook." December. 1993.

EPA. 1997. "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final." Environmental Response Team, Edison, New Jersey.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990a. "California's Wildlife: Volume II, Birds." CWHR System. State of California, the Resource Agency, CDFG. Sacramento, California.

**TABLE A-2: DOSE PARAMETERS FOR THE WESTERN HARVEST MOUSE (*Reithrodontomys megalotis*)**

Action Memorandum for Time-Critical Removal Action at the Former Inland Burn/Railroad Sidings Excavations Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion Rate <sub>food</sub>	2.42E-03	kg/day	Calculated with body weight of 13 grams using the equation for the food requirement for intake of dry matter for rodents (food ingestion rate = $[0.332[BW(\text{grams})]^{0.774}]/1000$ ) (Nagy 2001).
Ingestion Rate <sub>plant</sub>	9.67E-04	kg/day	Based on 40 percent of food ingestion rate.
Ingestion	1.45E-03	kg/day	Based on 60 percent of food ingestion rate.
Ingestion Rate <sub>soil</sub>	4.83E-05	kg/day	2.0 percent of food ingestion rate based on white-footed mouse (Beyer and others 1994).
Soil Concentrations	Lower of the Maximum and 95 UCL Concentration	mg/kg	Based on the lower of the maximum concentration and the 95 UCL concentration of all site-collected surface (0 to 1 feet bgs).
Food Concentrations	Food Chain Model	mg/kg	Food concentrations were estimated using uptake models using concentrations at the site or by multiplying concentrations in soil at the site by BAFs for plants. The plant concentration of arsenic was based on site-collected tissue data.
Diet Composition <sup>a</sup>	40%	Plant Tissue	Food will consist of 40 percent plant tissue and 60 percent invertebrate tissue because the western harvest mouse was selected as representative species for omnivorous mammals.
	60%	Invertebrates	
Foraging Range	4.80E-01	Hectare	Median of ranges from Brant 1962 and Meserve 1977 as cited in Zeiner and others 1990.
Site Use Factor	1.00E+00	Unitless	The site area (20.2 hectares) divided by home range is greater than 1, so a site use factor of 1.0 is assumed.
Body Weight	1.30E-02	kg	Mean body weight from Davis and Schmidly (1994).

## TABLE A-2: DOSE PARAMETERS FOR THE WESTERN HARVEST MOUSE (*Reithrodontomys megalotis*) (Continued)

Action Memorandum for Time-Critical Removal Action at the Former Inland Burn/Railroad Sidings Excavations Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

### Notes:

a	The western harvest mouse eats seeds, insects, fruits, and shoots from ground surface, and in bushes (Zeiner and others 1990).
BAF	Bioaccumulation factor
bgs	Below ground surface
BW	Body weight
EPA	U.S. Environmental Protection Agency
ERA	Ecological Risk Assessment
kg	Kilograms
kg/day	Kilograms per day
mg/kg	Milligrams per kilogram

### References:

- Beyer, W.N., E.E. Connor, and S. Gerould. 1994. Estimates of Soil Ingestion by Wildlife. *J.Wildl. Manage.* 58(2): 375-382.
- Davis, W.B. , and D.J. Schmidly. 1994. *The Mammals of Texas.* Austin, Texas,: Texas Parks & Wildlife, Nongame and Urban Program: Distributed by University of Texas Press, 338 pages.
- Nagy, K.A. 2001. "Food requirements of wild animals: predictive equations for free-living mammals, reptiles, and birds." *Nutrition Abstracts and Reviews, Series B.* Volume 71. Number 10. Pages 2R-12R.
- EPA. 1997. "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final." Environmental Response Team, Edison, New Jersey.
- Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990b. "California's Wildlife: Volume III, Mammals." CWHR System. State of California, the Resource Agency, CDFG. Sacramento, California.

**TABLE A-3: DOSE PARAMETERS FOR THE CALIFORNIA GROUND SQUIRREL (*Spermophilus beecheyi*)**

Action Memorandum for Time-Critical Removal Action at the Former Inland Burn/Railroad Sidings Excavations Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

<b>Parameter</b>	<b>Average Adult</b>	<b>Units</b>	<b>Reference/Notes</b>
Ingestion Rate <sub>food</sub>	4.89E-02	kg/day	Calculated with body weight of 632 grams using the equation for the food requirement for intake of dry matter for rodents (food ingestion rate = $[0.332[BW(\text{grams})]^{0.774}]/1000$ ) (Nagy)
Ingestion Rate <sub>plant</sub>	4.89E-02	kg/day	Based on 100 percent of food ingestion rate.
Ingestion Rate <sub>soil</sub>	1.17E-03	kg/day	2.4 percent of food ingestion rate based on the meadow vole from EPA (1993).
Soil Concentrations	Lower of the Maximum and 95 UCL Concentration	mg/kg	Based on the lower of the maximum concentration and the 95 UCL concentration of all site-collected surface (0 to 6 feet bgs).
Food Concentrations	Food Chain Model	mg/kg	Food concentrations were estimated using uptake models using concentrations at the site or by multiplying concentrations in soil at the site by BAFs for plants. The plant concentration of arsenic was based on site-collected tissue data.
Diet Composition <sup>a</sup>	100%	Plant Tissue	Food will consist of 100 percent plant tissue because the California ground squirrel was selected as representative species for herbivorous mammals.
Foraging Range	1.00E-01	Hectare	Average range for adult males from Evans and Holdenreid 1948 as cited in DFG 2005.
Site Use Factor	1.00E+00	Unitless	The site area (20.2 hectares) divided by home range is greater than 1, so a site use factor of 1.0 is assumed.
Body Weight	6.32E-01	kg	Average of mean adult weights from Cal/EPA 2003.

### TABLE A-3: DOSE PARAMETERS FOR THE CALIFORNIA GROUND SQUIRREL (*Spermophilus beecheyi*) (Continued)

Action Memorandum for Time-Critical Removal Action at the Former Inland Burn/Railroad Sidings Excavations Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

#### Notes:

a	The California ground squirrel eats seeds, nuts, fruits, bulbs, fungi, and stems and leaves of grasses and forbs. They also eat some insects, bird eggs, and carrion. (DFG 2005).
BAF	Bioaccumulation factor
bgs	Below ground surface
BW	Body weight
Cal/EPA	California Environmental Protection Agency
DFG	California Department of Fish and Game
EPA	U.S. Environmental Protection Agency
ERA	Ecological Risk Assessment
kg	Kilograms
kg/day	Kilograms per day
mg/kg	Milligrams per kilogram

#### References:

- DFG. 2005. California Interagency Wildlife Task Group. California Wildlife Habitat Relationships version 8.1 personal computer program. Sacramento, California.
- Cal/EPA. 2003. California Wildlife Exposure Factor and Toxicity Database. Office of Environmental Health and Hazard Assessment. Ecotoxicology Unit. Sacramento, California. [www.oehha.org/cal\\_ecotox/default.htm](http://www.oehha.org/cal_ecotox/default.htm)
- Nagy, K.A. 2001. "Food requirements of wild animals: predictive equations for free-living mammals, reptiles, and birds." Nutrition Abstracts and Reviews, Series B. Volume 71. Number 10. Pages 2R-12R.
- EPA. 1993. "Wildlife Exposure Factors Handbook." December.
- EPA. 1997. "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final." Environmental Response Team, Edison, New Jersey.

**TABLE A-4: SUMMARY OF SITE-SPECIFIC BIOACCUMULATION FACTORS FOR PLANTS AND INVERTEBRATES**

Action Memorandum for Time-Critical Removal Action at the Former Inland Burn/Railroad Sidings Excavations Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

COEC	Plant BAF - Above Ground Only <sup>1,2</sup>	Plant BAF - Below Ground Only <sup>1,3</sup>	Plant BAF - Above and Below Ground <sup>1,4</sup>	Invertebrate BAF <sup>1,5</sup>
Barium	0.36	1.28	0.82	0.10
Cadmium	1.1	12.6	11.2	22.3
Copper	0.23	0.57	0.40	0.025
Lead	0.047	0.95	0.50	0.069

Notes:

- 1 The bioaccumulation factor was calculated by dividing the site-collected plant tissue or earthworm bioassay tissue concentration by the collocated soil sample concentration. All BAFs are unitless. Plant and invertebrate tissue chemical concentrations were reported in mg/kg dry weight. The average BAF calculation across the four locations was selected for use to calculate the ecological risk-based removal goals.
- 2 Plant tissue collected from above ground was used to calculate the above ground plant BAF.
- 3 Plant roots collected from below the ground surface was used to calculate the below ground plant BAF.
- 4 Plant tissue and roots collected from above and below ground was used to calculate the above and below ground plant BAF.
- 5 Concentrations of chemicals in invertebrate tissue were estimated by submitting site soil samples to a laboratory, and conducting a 28-day soil bioaccumulation bioassay with commercially sourced earthworms.

BAF Bioaccumulation factor  
 COEC Chemical of ecological concern  
 mg/kg Milligram per kilogram

## TABLE A-5: SUMMARY OF LITERATURE BIOACCUMULATION MODELS FOR PLANTS

Action Memorandum for Time-Critical Removal Action at the Former Inland Burn/Railroad Sidings Excavations Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Taxa	Analyte	Transfer Type	Summary Statistics for BAFs				Parameters for Log-Linear Uptake Model					Reference
			N	Minimum	Median	Maximum	N	Slope	Intercept	R-square	p (model)	
Plants	Barium	soil-to-biota	28	0.036	0.156	0.92	na	na	na	na	na	Bechtel-Jacobs 1998
Plants	Cadmium	soil-to-biota	17	0.003	0.037	0.22	na	0.546	-0.475	na	na	EPA 2007
Plants	Copper	soil-to-biota	180	0.0011	0.12432	7.4	180	0.394	0.668	0.31	0.0001	Bechtel-Jacobs 1998
Plants	Lead	soil-to-biota	na	na	na	na	na	0.561	-1.328	na	na	EPA 2007

Notes:

Highlighted data represent recommended selected bioaccumulation data.

Regression Formula:  $\ln(\text{tissue concentration}) = Y\text{-intercept} + \text{slope} * (\ln [\text{soil concentration}])$

BAF Bioaccumulation factor  
 EPA Environmental Protection Agency  
*ln* Natural log  
 N Number of studies or observations  
 na Not available  
 p Probability

References:

Bechtel-Jacobs. 1998. Empirical Models for the Uptake of Inorganic Chemicals from Soil by Plants. Bechtel Jacobs Company LLC, Oak Ridge, Tennessee. BJC/OR-133.  
 EPA. 2007. "Attachment 4-1. Guidance for Developing Ecological Soil Screening Levels." April.

**TABLE A-6: SUMMARY OF LITERATURE BIOACCUMULATION MODELS FOR INVERTEBRATES**

Action Memorandum for Time-Critical Removal Action at the Former Inland Burn/Railroad Sidings Excavations Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Taxa	Analyte	Transfer Type	Summary Statistics for BAFs				Parameters for Log-Linear Uptake Model					Reference
			N	Minimum	Median	Maximum	N	Slope	Intercept	R-square	p (model)	
Earthworms	Barium	soil-to-biota	20	0.005	0.091	0.31	na	na	na	na	na	Sample and others 1998
Earthworms	Cadmium	soil-to-biota	na	na	na	na	na	0.795	2.114	na	na	EPA 2007
Earthworms	Copper	soil-to-biota	197	0.002	0.515	5.492	197	0.264	1.675	0.18	0.0001	Sample and others 1999
Earthworms	Lead	soil-to-biota	na	na	na	na	na	0.807	-0.218	na	na	EPA 2007

Notes:

Highlighted data represent recommended selected bioaccumulation data.

Regression Formula:  $\ln(\text{tissue concentration}) = Y\text{-intercept} + \text{slope} * (\ln[\text{soil concentration}])$

- BAF Bioaccumulation factor
- EPA U.S. Environmental Protection Agency
- $\ln$  Natural log
- N Number of studies or observations
- na Not available
- P Probability

References:

Sample, B.E., J.J. Beauchamp, R.A. Efrogmson, G.W. Suter,II, and T.L. Ashwood. 1998. Development and Validation of Bioaccumulation Models for Earthworms. Oak Ridge National Laboratory, Oak Ridge TN. 93 pp, ES/ER/TM-220.

Sample, B.E., J.J. Beauchamp, R.A. Efrogmson, G.W. Suter,II. 1999. Literature-derived bioaccumulation models for earthworms: development and validation. Environ. Toxicol. Chem. 18:2110-2120.

EPA. 2007. "Attachment 4-1. Guidance for Developing Ecological Soil Screening Levels." April.

**TABLE A-7: ECOLOGICAL RISK-BASED ACTION LEVEL BACK-CALCULATIONS**

Action Memorandum for Time-Critical Removal Action at FIB/RSE Area, Inland Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Chemical and Depth Interval of Concern	Chemical of Ecological Concern/Ecological Receptor	Total Ingestion Rate <sup>1</sup> (kg/day)	Plant Ingestion Rate <sup>2</sup> (kg/day)	Plant BAF <sup>3</sup> (kg dry soil/kg dry tissue)	Invertebrate Ingestion Rate <sup>2</sup> (kg/day)	Invertebrate BAF <sup>4</sup> (kg dry soil/kg dry tissue)	Soil Ingestion Rate <sup>5</sup> (kg/day)	Site Use Factor <sup>6</sup>	Body Weight <sup>7</sup> (kilogram)	TRV <sup>8</sup> (mg/kg/day)	Test Species Body Weight <sup>8</sup> (kilogram)	Allometrically Adjusted TRV <sup>9</sup> (mg/kg/day)	Site-Specific Ecological Risk-Based Action Level <sup>10,11</sup> (mg/kg)
Barium in soil, 0 to 1.5 feet bgs	<b>Barium (Site-Specific BAFs)</b>												
	Western Harvest Mouse (High TRV)	0.0024	0.0010	0.36	0.0015	0.10	0.000048	1.0	0.013	19.8	0.35	24.1	584
	Western Harvest Mouse (Low TRV)	0.0024	0.0010	0.36	0.0015	0.10	0.000048	1.0	0.013	5.1	0.44	6.30	152
	<b>Barium (Literature BAFs)</b>												
	Western Harvest Mouse (High TRV)	0.0024	0.0010	0.16	0.0015	0.091	0.000048	1.0	0.013	19.8	0.35	24.1	<b>947</b>
	Western Harvest Mouse (Low TRV)	0.0024	0.0010	0.16	0.0015	0.091	0.000048	1.0	0.013	5.1	0.44	6.30	247
Barium in soil, 0 to 6 feet bgs	<b>Barium (Site-Specific BAFs)</b>												
	California Ground Squirrel (High TRV)	0.049	0.049	0.82	NA	NA	0.0012	1.0	0.632	19.8	0.35	19.1	293
	California Ground Squirrel (Low TRV)	0.049	0.049	0.82	NA	NA	0.0012	1.0	0.632	5.1	0.44	4.99	77
	<b>Barium (Literature BAFs)</b>												
	California Ground Squirrel (High TRV)	0.049	0.049	0.16	NA	NA	0.0012	1.0	0.632	19.8	0.35	19.1	<b>1,373</b>
	California Ground Squirrel (Low TRV)	0.049	0.049	0.16	NA	NA	0.0012	1.0	0.632	5.1	0.44	4.99	358
Cadmium in soil, 0 to 1.5 feet bgs	<b>Cadmium (Site-Specific BAFs)</b>												
	American Robin (High TRV)	0.012	0.0031	1.1	0.0092	22.3	0.0012	1.0	0.077	1.0	1.13	0.58	0.22
	American Robin (Low TRV)	0.012	0.0031	1.1	0.0092	22.3	0.0012	1.0	0.077	0.7	0.51	0.48	0.18
	<b>Cadmium (Literature BAFs)</b>												
	American Robin (High TRV)	0.012	0.0031	0.86	0.0092	9.6	0.0012	1.0	0.077	1.0	1.13	0.58	<b>0.49</b>
	American Robin (Low TRV)	0.012	0.0031	0.86	0.0092	9.6	0.0012	1.0	0.077	0.7	0.51	0.48	0.40
Copper in soil, 0 to 1.5 feet bgs	<b>Copper (Site-Specific BAFs)</b>												
	American Robin (High TRV)	0.012	0.0031	0.23	0.0092	0.025	0.0012	1.0	0.077	52.3	0.41	37.5	<b>1,340</b>
	American Robin (Low TRV)	0.012	0.0031	0.23	0.0092	0.025	0.0012	1.0	0.077	2.3	0.64	1.51	54
	<b>Copper (Literature BAFs)</b>												
	American Robin (High TRV)	0.012	0.0031	0.047	0.0092	0.52	0.0012	1.0	0.077	52.3	0.41	37.5	474
	American Robin (Low TRV)	0.012	0.0031	0.047	0.0092	0.52	0.0012	1.0	0.077	2.3	0.64	1.51	19
Lead in soil, 0 to 1.5 feet bgs	<b>Lead (Site-Specific BAFs)</b>												
	American Robin (High TRV)	0.012	0.0031	0.047	0.0092	0.069	0.0012	1.0	0.077	8.8	0.80	5.5	<b>211</b>
	American Robin (Low TRV)	0.012	0.0031	0.047	0.0092	0.069	0.0012	1.0	0.077	0.014	0.084	0.014	0.53
	<b>Lead (Literature BAFs)</b>												
	American Robin (High TRV)	0.012	0.0031	0.036	0.0092	0.33	0.0012	1.0	0.077	8.8	0.80	5.5	96
	American Robin (Low TRV)	0.012	0.0031	0.036	0.0092	0.33	0.0012	1.0	0.077	0.014	0.084	0.014	0.24

Notes:

- Total ingestion rates for the American robin, California ground squirrel, and western harvest mouse were calculated using the Nagy and others (2001) equations for the dry matter food intake requirement for passerine birds (American robin) and rodents (California ground squirrel, and western harvest mouse).
- Plant and invertebrate ingestion rates for the American robin were assumed to be 25 and 75 percent of the diet. Plant ingestion rate for the California ground squirrel was assumed to be 100 percent of the diet. Plant and invertebrate ingestion rates for the western harvest mouse were assumed to be 40 and 60 percent of the diet.
- Site-specific plant BAFs were calculated using collocated soil and plant tissue data. BAFs for soil from 0 to 1 foot bgs were calculated using plant tissue collected above ground, while BAFs for soil from 0 to 6 feet bgs were calculated using plant tissue from above and below ground (roots). The calculation of the site-specific BAFs is described in the FIB/RSE Remedial Investigation Report (pending -Tetra Tech 2012). Literature soil-to-plant BAFs are from Bechtel-Jacobs (1998) and EPA (2007). The cadmium, copper, and lead BAFs from Bechtel-Jacobs (1998) and EPA (2007) are regression BAFs. A discrete BAF was derived by a two-step process: first, the soil concentration in the food chain model was adjusted so that the HQ based on the high TRV was just slightly greater than 1.0, and then the resultant plant concentration was divided by the soil concentration.
- Site-specific invertebrate BAFs were calculated using collocated soil data and earthworm toxicity data derived from site-collected soil. Literature soil-to-invertebrate BAFs are from Sample and others (1998, 1999) and EPA (2007). The cadmium and lead BAFs from EPA (2007) are regression BAFs. Discrete BAFs were derived by a two-step process: first, the soil concentration in the food chain model was adjusted so that the HQ based on the high TRV was just slightly greater than 1.0, and then the resultant invertebrate concentration was divided by the soil concentration.
- The soil ingestion rate for the American robin was estimated as 10 percent of total ingestion rate based on the rate for turkey and the woodcock (Beyer and others 1994). The soil ingestion rate for the California ground squirrel was estimated as 2.4 percent of total ingestion rate based on the rate for meadow vole (EPA 1993). The soil ingestion rate for the western harvest mouse was estimated as 2 percent of total ingestion rate based on the rate for white-footed mouse (Beyer and others 1994).
- The SUF was based on the assumption that the robin and mouse would forage entirely at the site.
- The body weight for the American robin is from Clench and Leberman (1978, as cited in EPA 1993). The body weight for the California ground squirrel is from CalEPA (2003). The body weight for the western harvest mouse is from Davis and Schmidly (1994).
- The methodology for developing TRVs is described in DTSC (2009), Navy (1998), and Sample, Opresko, and Suter (1996).
- Allometrically adjusted TRVs for the American robin were calculated using the following equation: Receptor Species TRV = (test species TRV) x (test species body weight / receptor species body weight)<sup>(1-1.2)</sup>. Allometrically adjusted TRVs for the California ground squirrel and the western harvest mouse were calculated using the following equation: Receptor Species TRV = (test species TRV) x (test species body weight / receptor species body weight)<sup>(1-0.94)</sup>.
- Site-specific ecological risk-based action levels were back-calculated using the following equation: ecological risk-based action level = [(TRV / SUF) \* BW] / [IR soil + (BAF food \* IR food)].
- Bold values indicate the selected ecological risk-based action levels. The greater of the values calculated using site-specific and literature BAFs was selected as the final action level.

**TABLE A-7: ECOLOGICAL RISK-BASED ACTION LEVEL BACK-CALCULATIONS (CONTINUED)**

Action Memorandum for Time-Critical Removal Action at FIB/RSE Area, Inland Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Notes: (Continued)

Cal/E	California Environmental Protection Agency	kg/day	Kilogram per day
BAF	Bioaccumulation factor	mg/kg	Milligram per kilogram
bgs	Below ground surface	mg/kg/day	Milligram per kilogram per day
BW	Body weight	NA	Not applicable (receptor is herbivorous)
DTSC	California Department of Toxic Substances Control	Navy	Department of the Navy
EPA	U.S. Environmental Protection Agency	SUF	Site use factor
IR	Ingestion rate	TRV	Toxicity reference value

## References:

- Bechtel-Jacobs. 1998. Empirical Models for the Uptake of Inorganic Chemicals from Soil by Plants. Bechtel Jacobs Company LLC, Oak Ridge, TN. BJC/OR-133.
- Beyer, W.N., E.E. Connor, and S. Gerould. 1994. "Estimates of Soil Ingestion by Wildlife." *Journal of Wildlife Management*. Volume 58, Number 2. Pages 375-382.
- Cal/EPA. 2003. California Wildlife Exposure Factor and Toxicity Database. Office of Environmental Health and Hazard Assessment. Ecotoxicology Unit. Sacramento, California. [www.oehha.org/cal\\_ecotox/default.htm](http://www.oehha.org/cal_ecotox/default.htm)
- Davis, W.B., and D.J. Schmidly. 1994. The Mammals of Texas. Austin, Texas.; Texas Parks & Wildlife, Nongame and Urban Program.
- DTSC. 2009. Human and Ecological Risk Division Ecological Risk Assessment. Note 6.
- EPA. 1993. "Wildlife Exposure Factors Handbook." December.
- EPA. 2003. "Guidance for Developing Ecological Soil Screening Levels." November. Revised February 2005.
- EPA. 2007. "Attachment 4-1. Guidance for Developing Ecological Soil Screening Levels." April.
- Nagy, K.A. 2001. "Food requirements of wild animals: predictive equations for free-living mammals, reptiles, and birds." *Nutrition Abstracts and Reviews, Series B*. Volume 71. Number 10. Pages 2R-12R.
- Navy. 1998. "Development of Toxicity Reference Values for Conducting Ecological Risk Assessments at Naval Facilities in California. Interim Final." Prepared by Naval Facilities Engineering Command, Engineering Field Activity West
- Sample, B.E., D.M. Opresko, and G.W. Suter, II. 1996. "Toxicological Benchmarks for Wildlife: 1996 Revision." ES/ER/TM-86/R3. Oak Ridge National Laboratory, Oak Ridge, Tennessee.
- Sample, B.E., J.J. Beauchamp, R.A. Efrogmson, G.W. Suter, II, and T.L. Ashwood. 1998. Development and Validation of Bioaccumulation Models for Earthworms. Oak Ridge National Laboratory, Oak Ridge TN. 93 pp, ES/ER/TM-220.
- Sample, B.E., J.J. Beauchamp, R.A. Efrogmson, G.W. Suter, II. 1999. Literature-derived bioaccumulation models for earthworms: development and validation. *Environ. Toxicol. Chem.* 18:2110-2120.
- Tetra Tech. 2012. Remedial Investigation for the Former Inland Burn/Railroad Sidings Excavations Site (Unexploded Ordnance Sites 9 and 3), Military Munitions Response Program, Former Naval Weapons Station Seal Beach Detachment Concord Concord, California.

**APPENDIX B**  
**APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

---

## TABLE OF CONTENTS

---

ACRONYMS AND ABBREVIATIONS .....	B-iii
B1.0 INTRODUCTION .....	B-1
B1.1 SUMMARY OF COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT AND NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN REQUIREMENTS.....	B-1
B1.2 METHODOLOGY DESCRIPTION .....	B-4
B1.2.1 General.....	B-4
B1.2.2 Identifying and Evaluating Federal ARARs.....	B-4
B1.2.3 Identifying and Evaluating State ARARs.....	B-4
B1.3 OTHER GENERAL ISSUES.....	B-5
B1.3.1 General Approach to Federal RCRA Requirements.....	B-5
B1.4 WASTE CHARACTERIZATION .....	B-6
B1.4.1 RCRA Hazardous Waste Determination .....	B-6
B1.4.2 California-Regulated, Non-RCRA Hazardous Waste.....	B-8
B1.4.3 Other California Waste Classifications.....	B-9
B2.0 CHEMICAL-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS.....	B-9
B2.1 SUMMARY OF CHEMICAL-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS CONCLUSIONS FOR SOIL .....	B-9
B2.2 DETAILED DISCUSSION OF CHEMICAL-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS .....	B-10
B2.2.1 Soil.....	B-10
B2.2.2 Unexploded Ordnance (UXO) and Munitions ARARs .....	B-12
B3.0 LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS.....	B-14
B3.1 SUMMARY OF LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS.....	B-15
B3.1.1 Cultural Resources ARARs Conclusions.....	B-15
B3.1.2 Wetlands Protection and Floodplain Management Conclusions.....	B-15
B3.1.3 Hydrologic Resources Conclusions .....	B-15
B3.1.4 Biological Resources Conclusions.....	B-15
B3.2 DETAILED DISCUSSION OF LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS .....	B-15
B3.2.1 ARARs for Biological Resources.....	B-15

**TABLE OF CONTENTS (Continued)**

---

B4.0 ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS .....B-16

    B4.1 FEDERAL ARARs FOR EXCAVATION AND OFF-SITE DISPOSAL .....B-16

    B4.2 STATE ARARs FOR EXCAVATION AND OFF-SITE DISPOSAL.....B-18

B5.0 REFERENCES .....B-19

**LIST OF TABLES**

---

B-1 Federal Chemical-Specific ARARs

B-2 State Chemical-Specific ARARs

B-3 Federal Location-Specific ARARs

B-4 Federal Action-Specific ARARs

B-5 State Action-Specific ARARs

## ACRONYMS AND ABBREVIATIONS

---

§	Section
§§	Sections
AM	Action memorandum
ARAR	Applicable or relevant and appropriate requirement
Cal. Code Regs.	California Code of Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
ch.	Chapter
CWA	Clean Water Act
Det	Detachment
div.	Division
DoD	Department of Defense
DTSC	Department of Toxic Substances Control
EP	Extraction procedure
EPA	U.S. Environmental Protection Agency
Fed. Reg.	Federal Register
FIB/RSE	Former Inland Burn Area/Railroad Siding Excavation
FWS	U.S. Fish and Wildlife Service
LDR	Land disposal restriction
MDAS	Material documented as safe
MDEH	Material documented as an explosive hazard
MPPEH	Materials potentially presenting an explosive hazard
MOU	Memorandum of Understanding
NAVWPSTA	Naval Weapons Station
Navy	Department of the Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPDES	National Pollutant Discharge Elimination System
OEW	Ordnance or explosive waste
OSWER	Office of Solid Waste and Emergency Response
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
STLC	Soluble threshold limit concentration

## **ACRONYMS AND ABBREVIATIONS (Continued)**

---

TBC	To be considered
TCRA	Time-critical removal action
TCLP	Toxicity characteristic leaching procedure
tit.	Title
TTLC	Total threshold limit concentration
U.S.C.	United States Code
UXO	Unexploded ordnance
WET	Waste extraction test

## **B1.0 INTRODUCTION**

The Navy has decided to undertake a time-critical removal action (TCRA) at the Former Inland Burn Area/Railroad Siding Excavation (FIB/RSE) area, former Naval Weapons Station (NAVWPNSTA) Seal Beach Detachment Concord in Concord, California. This appendix is an attachment to the action memorandum (AM). The TCRA will remove munitions-related materials potentially presenting an explosive hazard (MPPEH), material documented as safe (MDAS), and contaminated soil in the heavy anomaly area of the FIB/RSE area.

This appendix identifies and evaluates federal and State of California applicable or relevant and appropriate requirements (ARAR) from the universe of regulations, requirements, and guidance and sets forth the Department of the Navy (Navy) determinations of ARARs for the TCRA. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section (§) 300.415 provides that removal actions must attain ARARs to the extent practicable, considering the exigency of the situation. This appendix contains the Navy's final determination of ARARs that the TCRA can attain considering the exigency of the situation at the FIB/RSE area.

### **B1.1 SUMMARY OF COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT AND NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN REQUIREMENTS**

Section (§) 121(d) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 United States Code [U.S.C.] Section [§] 9621[d]), as amended, states that remedial actions at 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 determined to be legally applicable or relevant and appropriate. Although CERCLA § 121 does not itself expressly require that CERCLA removal actions comply with ARARs, the U.S. Environmental Protection Agency (U.S. EPA) has promulgated a requirement in the NCP mandating that CERCLA removal 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 [40 CFR] § 300.415[j]). It is Navy policy to follow this requirement. Certain specified waivers may be used for removal actions, as is the case with remedial 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 with 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 response action and are well suited to the conditions of the site (EPA 1988a). A requirement must be determined to be both relevant and appropriate in order to be considered an ARAR.

The criteria for determining relevance and appropriateness are listed in Title 40 of the Code of Federal Regulations (CFR) § 300.400(g)(2) and include:

- The purpose of the requirement and the purpose of the CERCLA action
- The medium regulated or affected by the requirement and the medium contaminated or affected at the CERCLA site
- The substances regulated by the requirement and the substances found at the CERCLA site
- The actions or activities regulated by the requirement and the response action contemplated at the CERCLA site
- Any variances, waivers, or exemptions of the requirement and their availability for the circumstances at the CERCLA site
- The type of place regulated and the type of place affected by the release or CERCLA action
- The type and size of structure or facility regulated and the type and size of structure or facility affected by the release or contemplated by the CERCLA action
- Any consideration of use or potential use of affected resources in the requirement and the use or potential use of the affected resources at the CERCLA site.

According to CERCLA ARARs guidance (EPA 1988a), a requirement may be “applicable” or “relevant and appropriate,” but not both. Identification of ARARs must be done on a site-specific basis and involves a two-part analysis. First, a determination is made of whether a given requirement is applicable. Second, if it is not applicable, a determination is made of whether it is nevertheless both relevant and appropriate. It is important to explain that some regulations may be applicable or, if not applicable, may still be relevant and appropriate. When the analysis determines a requirement is both relevant and appropriate, such a requirement must be complied with to the same degree as if it were applicable (EPA 1988a).

Tables B-1 through B-4 at the end of this appendix present each ARAR with a determination of ARAR status (applicable or relevant and appropriate). For the determination of relevance and appropriateness, the pertinent criteria were examined to determine whether the requirements addressed problems or situations sufficiently similar to the circumstances of the release or response action contemplated, and whether the requirement was well suited to the site.

To qualify as a state ARAR under CERCLA and the NCP, a state requirement must be:

- A state law or regulation
- An environmental or facility siting law or regulation
- Promulgated (of general applicability and legally enforceable)
- Substantive (not procedural or administrative)
- More stringent than federal requirements
- Identified in a timely manner
- Consistently applied.

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 determined to be procedural or non-environmental, including permit requirements, are not considered to be ARARs. CERCLA § 121(e)(1), 42 U.S.C. § 9621(e)(1), states, “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 response action” (40 CFR § 300.5).

Non-promulgated advisories or guidance issued by federal or state governments are not legally binding and do not have the status of ARARs. Such requirements may be useful and are “to be considered” (TBC). TBC [40 CFR § 300.400(g)(3)] requirements complement ARARs, but do not override them and are useful for guiding decisions on cleanup levels or methodologies when regulatory standards are not available.

Pursuant to EPA guidance ([EPA 1988a](#)), ARARs are generally divided into three categories: chemical-specific, location-specific, and action-specific requirements. These classifications aid in the identification of ARARs; some ARARs do not fall precisely into one group or another. ARARs are identified on a site basis for response actions where CERCLA authority is the basis for cleanup.

As the lead federal agency at former NAVWPNSTA Concord, the Navy has primary responsibility for identifying federal ARARs at the FIB/RSE area. Pursuant to the definition of the term *on-site* in 40 CFR § 300.5, the on-site area is the FIB/RSE area and any areas in close proximity to the FIB/RSE area that may be used to implement the TCRA.

The methodology, other general issues, and waste characterization are discussed below. Only the substantive provisions of the specific citations discussed in the following sections are considered ARARs.

## **B1.2            METHODOLOGY DESCRIPTION**

This section describes the methodology used to identify and evaluate ARARs.

### **B1.2.1            General**

As the lead federal agency, the Navy has primary responsibility for identification of ARARs for the FIB/RSE area TCRA. In preparing this ARARs analysis, the Navy undertook the following measures consistent with CERCLA and the NCP:

- Identified federal ARARs for the removal action described in the Action Memorandum, taking into account site-specific information for the FIB/RSE area

This TCRA will remove potential explosive hazards presented by munitions-related materials and soil containing lead and other metals.

### **B1.2.2            Identifying and Evaluating Federal ARARs**

The Navy is responsible for identifying federal ARARs as the lead federal agency under CERCLA and the NCP. The federal government implements a number of federal environmental statutes that are the source of potential federal ARARs, either in the form of the statutes or regulations promulgated thereunder. Examples include the Resource Conservation and Recovery Act (RCRA), the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act, and their implementing regulations, to name a few. See the NCP preamble at 55 Federal Register (Fed. Reg.) §§ 8764–8765 (1990) for a more complete listing.

The Navy reviewed the removal action against all potential federal ARARs, including, but not limited to, those in 55 Fed. Reg. §§ 8764–8765 (1990) to determine if they are applicable or relevant and appropriate using CERCLA and NCP criteria and procedures for ARARs identification by lead federal agencies.

### **B1.2.3            Identifying and Evaluating State ARARs**

The process of identifying and evaluating potential state ARARs by the state and the Navy is described in this subsection.

#### ***B1.2.3.1            Solicitation of State ARARs under NCP***

EPA guidance recommends that the lead federal agency consult with the state when identifying state ARARs for response actions ([EPA 1988b](#)). The state must respond within 30 days after it receives the lead federal agency requests. The remainder of this section documents the Navy's efforts to date to identify and evaluate state ARARs.

### **B1.2.3.2 Chronology of Efforts to Identify State ARARs**

In a letter dated May 21, 2012, the Navy requested state ARARs from the Department of Toxic Substances Control (DTSC) for the TCRA at the FIB/RSE area. To date, DTSC has not responded to this request. If DTSC responds in a timely manner, the Navy will analyze any requirements identified by DTSC to determine if any qualify as state ARARs for the TCRA.

Key correspondence between the Navy and the state agencies relating to this effort is in the Administrative Record for the AM for the FIB/RSE area ([Appendix C](#)).

## **B1.3 OTHER GENERAL ISSUES**

This section discusses the general issues identified during the evaluation of ARARs for the FIB/RSE area.

### **B1.3.1 General Approach to Federal RCRA Requirements**

RCRA is a federal statute enacted in 1976 to meet four goals: (1) protection of human health and the environment, (2) reduction of waste, (3) conservation of energy and natural resources, and (4) elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments of 1984 significantly expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions, and technical requirements. RCRA, as amended, contains several provisions that are potential ARARs for CERCLA sites.

Substantive RCRA requirements are applicable to response actions on CERCLA sites if the waste is a RCRA hazardous waste, and either:

- The waste was initially treated, stored, or disposed of after the effective date of the particular RCRA requirement; or
- The activity at the CERCLA site constitutes treatment, storage, or disposal, as defined by RCRA ([EPA 1988a](#)).

The preamble to the NCP indicates that state regulations that are components of a federally authorized or delegated state program are generally considered federal requirements and potential federal ARARs for the ARARs analysis (55 Fed. Reg. §§ 8666, 8742 [1990]). The State of California received approval for its base RCRA hazardous waste management program on July 23, 1992 (57 Fed. Reg. § 32726 [1992]). The State of California “Environmental Health Standards for the Management of Hazardous Waste,” in California Code of Regulations (Cal. Code Regs.), Title (tit.) 22, Division (div.) 4.5, were approved by EPA as a component of the federally authorized State of California RCRA program. On September 26, 2001, the State of California received final authorization of its revised State Hazardous Waste Management Program by EPA (63 Fed. Reg. § 49118 [2001]).

The regulations of Cal. Code Regs. tit. 22, div. 4.5 are therefore a source of potential federal ARARs for CERCLA response actions. The exception is when a state regulation is “broader in scope” than the corresponding federal RCRA regulations. In that case, such regulations are not considered part of the federally authorized program or potential federal ARARs. Instead, they are purely state law requirements and potential state ARARs.

The EPA July 23, 1992, notice approving the State of California RCRA program (57 CFR § 32726 [1992]) specifically indicated that the state regulations addressed certain non-RCRA, state-regulated hazardous wastes that fell outside the scope of federal RCRA requirements. The Cal. Code Regs. tit. 22, div. 4.5 requirements would be potential state ARARs for such non-RCRA, state-regulated wastes.

A key threshold question for the ARARs analysis is whether excavated soil at the FIB/RSE area constitutes federal hazardous waste as defined under RCRA and the state’s authorized program or qualifies as non-RCRA, state-regulated hazardous wastes. Waste characterization is discussed in Section B1.4.

## **B1.4 WASTE CHARACTERIZATION**

Selection of ARARs involves the characterization of wastes, as described below.

### **B1.4.1 RCRA Hazardous Waste Determination**

Federal RCRA hazardous waste determination is necessary to evaluate whether a waste is subject to RCRA requirements at Cal. Code Regs. tit. 22, div. 4.5 and other state requirements at Cal. Code Regs. tit. 23, div. 3, Chapter (ch.) 15. The first step in the RCRA hazardous waste characterization process is to evaluate contaminated media at the site and determine whether the contaminant constitutes a “listed” RCRA waste. The preamble to the NCP states that “... it is often necessary to know the origin of the waste to determine whether it is a listed waste and that, if such documentation is lacking, the lead agency may assume it is not a listed waste.” (55 Fed. Reg. §§ 8666, 8758 [1990]).

This approach is confirmed in EPA guidance for CERCLA compliance with other laws ([EPA 1988a](#)), as follows below.

To determine whether a waste is a listed waste under RCRA, it is often necessary to know the source. However, at many Superfund sites, no information exists on the source of wastes. The lead agency should use available site information, manifests, storage records, and vouchers in an effort to ascertain the nature of these contaminants. When this documentation is not available, the lead agency may assume that the wastes are not listed RCRA hazardous wastes, unless further analysis or information becomes available that allows the lead agency to determine that the wastes are listed RCRA hazardous wastes.

RCRA hazardous wastes that have been assigned EPA hazardous waste numbers (or codes) are listed in Cal. Code Regs. tit. 22, §§ 66261.30–66261.33. The lists include hazardous waste codes beginning with the letters “F,” “K,” “P,” and “U.”

Knowledge of the exact source of a waste is required for source-specific listed wastes (“K” waste codes). Some knowledge of the nature or source of the waste is required even for listed wastes from nonspecific sources, such as spent solvents (“F” waste codes) or commercial chemical products (“P” and “U” waste codes). These listed RCRA hazardous wastes are restricted to commercially pure chemicals used in particular processes such as degreasing.

“P” and “U” wastes cover only unused and unmixed commercial chemical products, particularly spilled or off-specification products (EPA 1992). Not every waste containing a “P”- or “U”-listed chemical is a hazardous waste. To determine whether a CERCLA investigation-derived waste contains a “P” or “U” waste, there must be direct evidence of product use. In particular, all the following criteria must be met. The chemicals must be:

- Discarded (as described in 40 CFR § 261.2[a][2]),
- Either an off-specification commercial product or a commercially sold grade,
- Not used (soil contaminated with spilled unused wastes is a “P” or “U” waste), and
- The sole active ingredient in a formulation.

The Navy has determined that the mere presence of contamination does not classify the soil as RCRA-listed hazardous waste. The Navy found no information to indicate the wastes at the FIB/RSE area are RCRA listed wastes.

The second step in the RCRA hazardous waste characterization process is to evaluate potential hazardous characteristics of the waste. The evaluation of characteristic waste is described in EPA guidance (EPA 1988a), as follows below.

Under certain circumstances, although no historical information exists about the waste, it may be possible to identify the waste as RCRA characteristic waste. This is important in the event that (1) remedial alternatives under consideration at the site involve on-site treatment, storage, or disposal, in which case RCRA may be triggered as discussed in this section; or (2) a remedial alternative involves off-site shipment. Since the generator (in this case, the agency or responsible party conducting the Superfund action) is responsible for determining whether the wastes exhibit any of these characteristics (defined in 40 CFR Sections 261.21 through 261.24), testing may be required. The lead agency must use best professional judgment to determine, on a site-specific basis, if testing for hazardous characteristics is necessary.

In determining whether to test for the toxicity characteristic using the extraction procedures (EP) toxicity test, it may be possible to assume that certain low concentrations of waste are not toxic. For example, if the total waste concentration in soil is 20 times or less the EP toxicity concentration, the waste cannot be characteristic hazardous waste. In such a case, RCRA requirements would not be applicable. In other instances, where it appears that the substances may be characteristic hazardous waste (ignitable, corrosive, reactive, or EP toxic), testing should be performed.

Hazardous waste characteristics as defined in 40 CFR §§ 261.21 through 261.24 are commonly referred to as ignitability, corrosivity, reactivity, and toxicity. California environmental health standards for the management of hazardous waste in Cal. Code Regs. tit. 22, div. 4.5 were approved by EPA as a component of the federally authorized California RCRA program; therefore, the characterization of RCRA waste is based on the state requirements.

The characteristics of ignitability, corrosivity, reactivity, and toxicity are defined in Cal. Code Regs. tit. 22, §§ 66261.21 through 66261.24. According to Cal. Code Regs. tit. 22, § 66261.24(a)(1)(A), “A waste that exhibits the characteristic of toxicity pursuant to Subsection (a)(1) of this section has the EPA Hazardous Waste Number specified in Table I of this section which corresponds to the toxic contaminant causing it to be hazardous.” Table I assigns hazardous waste codes beginning with the letter “D” to wastes that exhibit the characteristic of toxicity; D waste codes are limited to “characteristic” hazardous wastes.

According to Cal. Code Regs. tit. 22, § 66261.10, waste characteristics can be measured by an available standardized test method or be reasonably classified by generators of waste based on their knowledge of the waste provided that the waste has already been reliably tested or if there is documentation of chemicals used.

The requirements at Cal. Code Regs. tit. 22, § 66261.24 list the toxic contaminant concentrations that determine the characteristic of toxicity. The concentration limits are in milligrams per liter. These units are directly comparable to total concentrations in waste groundwater and surface water. For waste soils, these concentrations apply to the extract or leachate produced by the toxicity characteristic leaching procedure (TCLP).

A waste is considered hazardous if contaminants in the wastewater or in the soil TCLP extract equal or exceed the TCLP limits. TCLP testing is required only if total contaminant concentrations in soil equal or exceed 20 times the TCLP limits because TCLP uses a 20-to-1 dilution for the extract ([EPA 1988a](#)).

#### **B1.4.2 California-Regulated, Non-RCRA Hazardous Waste**

A waste determined not to be a RCRA hazardous waste may still be considered a state-regulated, non-RCRA hazardous waste. The state is broader in scope in its RCRA program in determining hazardous waste. Cal. Code Regs. tit. 22, § 66261.24(a)(2) lists the total threshold limit concentrations (TTLC) and soluble threshold limit concentrations (STLC) for non-RCRA hazardous wastes. The state applies its own leaching procedure, the waste extraction test (WET), which uses a different acid reagent and has a different dilution factor (10-fold). There are other state requirements that may be broader in scope than federal ARARs for identifying non-RCRA wastes regulated by the state. These requirements may be potential ARARs for wastes not covered under federal ARARs. See additional subsections of Cal. Code Regs. tit. 22, § 66261.24. A waste is considered hazardous if its total concentrations exceed the TTLCs or if the extract concentrations from the WET exceed the STLCs.

A WET is required when the total concentrations exceed the STLC, but are less than the TTLCs [Cal. Code Regs. tit. 22, div. 4.5, ch. 11, Appendix II (b)].

### **B1.4.3 Other California Waste Classifications**

For waste discharged after July 18, 1997, solid waste classifications at Cal. Code Regs. tit. 27, §§ 20210, 20220, and 20230 are used to determine applicability of waste management requirements. These classifications are summarized below.

A “designated waste” under Cal. Code Regs. tit. 27, § 20210, is defined at California Water Code § 13173. Under California Water Code § 13173, designated waste is hazardous waste that has been granted a variance from hazardous waste management requirements or nonhazardous waste that consists of or contains pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state.

A nonhazardous solid waste under Cal. Code Regs. tit. 27, § 20220 consists of all putrescible and nonputrescible solid, semisolid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded waste (whether of solid or semisolid consistency), provided that such wastes do not contain wastes that must be managed as hazardous wastes or wastes that contain soluble pollutants in concentrations that exceed applicable water quality objectives or could cause degradation of waters of the state.

Under Cal. Code Regs. tit. 27, § 20230, inert waste is that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives and does not contain significant quantities of decomposable waste.

## **B2.0 CHEMICAL-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

Chemical-specific ARARs are generally health- or risk-based numerical values or methodologies applied to site-specific conditions that result in the establishment of a cleanup level. Many potential ARARs associated with particular remedial alternatives (such as closure or discharge) can be characterized as action-specific but include numerical values or methods to establish them so they fit in both categories (chemical- and action-specific). To simplify the comparison of numerical values, most action-specific requirements with numerical values are included in this chemical-specific section and, if repeated in the action-specific section, the discussion refers back to this section.

### **B2.1 SUMMARY OF CHEMICAL-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS CONCLUSIONS FOR SOIL**

The TCRA will remove potential explosive hazards presented by munitions-related material in the heavy anomaly areas of the FIB/RSE area and contaminated soil. These munitions-related materials may include MPPEH, Material Documented as an Explosive Hazard (MDEH) and MDAS. MPPEH and MDEH will be detonated on-site so they are no longer a hazard; MDAS will be demilitarized and recycled off-site; and scrap metal will be recycled off-site. Some of the

material may be recycled—for example, scrap metal found in the excavation. If the material is recycled, it is not considered a solid waste and RCRA hazardous waste disposal requirements are not applicable. Some of the material may be disposed of off-site as waste. If the material is disposed of as waste, RCRA waste disposal requirements are ARARs. ARARs associated with the munitions-related material are in [Section B2.2.2](#).

Soil is the only environmental medium of concern for the TCRA at the FIB/RSE area. The TCRA includes excavation and off-site disposal of soil. Since the soil would be considered waste, RCRA waste disposal requirements are ARARs. ARARs associated with soil are in [Section B2.2.1](#).

[Tables B-1 and B-2](#) summarize federal and state chemical-specific ARARs.

There are no chemical-specific ARARs for soil or munitions-related material at the FIB/RSE area that establish a cleanup standard.

The Navy is evaluating excavation and off-site disposal of soil and munitions-related material in this Action Memorandum for the FIB/RSE area. The following ARARs require characterization of the waste for proper off-site disposal. The substantive provisions of the following requirements are federal and state chemical-specific ARARs:

- RCRA hazardous waste definitions at Cal. Code Regs. tit. 22, §§ 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100.
- Military Munitions Rule identification of hazardous waste munitions and treatment and storage requirements for hazardous waste munitions at 40 CFR Part 266, subpart M.
- RCRA requirements defining and regulating scrap metal at Cal. Code Regs. tit. 22, §§ 66260.10 and 66261.6(a)(3).
- Non-RCRA, state-regulated hazardous waste definitions at Cal. Code Regs. tit. 22, §§ 66261.22(a)(3) and (a)(4), 66261.24(a)(2) through (a)(8), 66261.101, 66261.3(a)(2)(C) and (a)(2)(F).
- Designated, nonhazardous and inert solid waste definitions at Cal. Code Regs. tit. 27, §§ 20210, 20220 and 20230.

## **B2.2 DETAILED DISCUSSION OF CHEMICAL-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

### **B2.2.1 Soil**

There are no chemical-specific ARARs for soil that present a cleanup standard. There are chemical-specific ARARs for excavation activities that generate waste. These federal and state chemical-specific ARARs are discussed below.

The key threshold question is whether wastes and soil exceeding screening criteria at the FIB/RSE area would be classified as hazardous waste. Waste and soil may be classified as a federal hazardous waste as defined by RCRA and the state-authorized program, or as non-RCRA, state-regulated hazardous waste. If waste and soil are determined to be hazardous waste, the appropriate requirements apply.

#### **B2.2.1.1 Federal ARARs**

##### **Resource Conservation and Recovery Act**

The federal RCRA requirements at 40 CFR Part 261 do not apply in California because the state RCRA program is authorized, so the authorized state RCRA requirements are considered federal ARARs. The applicability of RCRA requirements depends on whether the waste is a RCRA hazardous waste; whether the waste was initially treated, stored, or disposed of 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. 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 similar to RCRA hazardous waste.

The determination of whether a waste is a RCRA hazardous waste can be made by comparing the site waste with 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 ARARs because they define RCRA hazardous waste. These requirements are ARARs for soil and for any other waste generated in performance of the TCRA. A waste can meet the definition of hazardous waste if it meets any of these characteristic waste definitions.

The removal action will result in the excavation of soil or other waste for off-site disposal, which could be classified as RCRA hazardous waste. If the Navy determines that the waste is RCRA hazardous waste, the Navy will comply with all applicable requirements for proper off-site disposal, such as packaging, manifesting, and land disposal restrictions. The CERCLA Off-Site Rule requires that CERCLA wastes may only be placed in a facility operating in compliance with the RCRA or other applicable federal or state requirements (CERCLA Section 121(d)(3) [42 U.S.C. § 9621(d)(3)] and 40 CFR 300.440). The Navy has not identified these requirements as ARARs because the disposal of the waste will take place off-site and regulatory requirements that apply to off-site actions are not ARARs.

As long as the waste remains inside the area of contamination, it will not be subject to RCRA land disposal restrictions (LDR).

#### **B2.2.1.2 State ARARs**

State RCRA requirements included in the EPA-authorized RCRA program for California are considered federal ARARs and are discussed above. When state regulations are either broader in scope or more stringent than their federal counterparts, they are considered state ARARs. State requirements such as the non-RCRA, state-regulated hazardous waste requirements may be state ARARs because they are not within the scope of the federal ARARs (57 Fed. Reg. § 60848).

The Cal. Code Regs. tit. 22, div. 4.5 requirements that are part of the state-approved RCRA program would be state ARARs for non-RCRA, state-regulated hazardous wastes.

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 state ARARs for determining whether other RCRA requirements are state ARARs. This section lists the TTLCs and STLCs. The site waste may be compared to these thresholds to determine whether it meets the characteristics for a non-RCRA, state-regulated hazardous waste. Section 66261.24(a)(2) lists the TTLCs and STLCs. The Navy will determine whether any waste it generates meets the characteristics for a non-RCRA, state-regulated hazardous waste prior to off-site disposal.

### **Cal. Code Reg. tit. 23, div. 3, ch. 15**

The requirements at this section define a hazardous waste that is covered by ch. 15. These requirements are not more stringent than the federal or state RCRA ARARs for identifying hazardous waste; therefore, they are not chemical-specific ARARs.

### **Cal. Code Reg. tit. 27, div. 2, Subdivision 1**

The former requirements at Cal. Code Regs. tit. 23, div. 3, ch. 15 were repealed and recodified at Cal. Code Regs. tit. 27, div. 2, Subdivision 1, and became effective July 18, 1997. The following sections of Cal. Code Regs. tit. 27, div. 2, Subdivision 1 define waste characteristics for discharge of waste to land. These requirements may be applicable for soil left in place that was discharged after the effective date of the requirements. They are not potentially applicable to discharges before that date, but may be relevant and appropriate.

Cal. Code Regs. tit. 27, §§ 20210, 20220 and 20330 are state definitions for designated waste nonhazardous waste and inert waste. They are also state ARARs for excavated soil that will be disposed of off-site. These soil classifications determine state classification and siting requirements for discharging waste to land. The Navy will determine if excavated soil meets the definition of inert, designated, or nonhazardous solid waste at the time it is generated and will dispose of the soil in an appropriate landfill.

## **B2.2.2 Unexploded Ordnance (UXO) and Munitions ARARs**

Federal regulations that are the source of ARARs for military munitions-related material include the military munitions rule, promulgated at 40 CFR part 266, subpart M, and RCRA. Both the military munitions rule and RCRA require proper characterization of munitions-related material for off-site disposal as waste.

Neither munitions-related material nor UXO are, as a class, designated as CERCLA hazardous substances. However, the Navy is addressing ordnance items at the FIB/RSE area through the CERCLA framework, consistent with Department of Defense (DoD) policy.

Addressing the unique problems associated with UXO on military installations requires an approach that modifies the one taken under the CERCLA response and RCRA corrective action

programs. The most significant reason for this difference is the absolute need to minimize explosives safety risks in planning, conducting, and implementing response actions because the acute hazards associated with military munitions-related material (especially UXO) are the primary factors driving the scope, sequence, and types of actions that are possible on the impacted sites. These concerns are unique to military installations in that most actions on CERCLA response or RCRA corrective action sites do not need to consider an explosion hazard posed by the presence of munitions or explosives. Removal actions to address potentially live ordnance items require a different approach to balance the risks and impacts of addressing the military munitions-related material or UXO with the risks of inaction. Minimizing explosives safety risks while achieving the proper balance between these competing concerns is the goal of this removal action. Therefore, before the TCRA begins, an explosives safety remediation plan will be prepared in accordance with the DoD's guidance titled *DoD Ammunition and Explosives Safety Standards*, dated October 5, 2004.

At the FIB/RSE area, the alternative to sift ordnance items from soil would produce solid wastes, including potential ordnance or explosive waste (OEW), OEW scrap, and buried debris. Therefore, certain substantive requirements of RCRA are ARARs for handling the waste material from the FIB/RSE area.

#### **B2.2.2.1 Federal**

##### **Military Munitions Rule**

Ammunition products produced or owned by the DoD are regulated under the Military Munitions Rule (62 Fed. Reg. 6621, February 12, 1997). The Military Munitions Rule identifies when conventional and chemical military munitions become a hazardous waste under RCRA. It also provides for safe storage and transport of such waste. Munitions are defined under 40 CFR § 260.10, and the definition includes items such as explosive rounds and small arms rounds. A military munition is classified as hazardous waste if it is either a listed waste or exhibits a hazardous waste characteristic. The DoD has tested small arms ammunition (less than .50 caliber) and these items were found to not exhibit the RCRA reactive characteristic at 40 CFR § 261.23(a)(6). See Office of Solid Waste and Emergency Response (OSWER) Directives 9442.1994 (06) (November 3, 1994), 9443.1998 (07) (June 6, 1988), and 9443.1984 (10) (November 30, 1984). Munitions rounds of .50 caliber or greater may be reactive and the individual items may constitute a reactive characteristic hazardous waste. Hazardous waste classification analysis of military munitions must also consider other hazardous waste characteristics such as toxicity and ignitability.

The definition of solid waste in regards to OEW is further defined in the military munitions rule at 40 CFR § 266.202. A military munition is not a solid waste when it is used for its intended purpose. An unused military munition is a solid waste when abandoned, removed from storage for treatment or disposal, or is deteriorated or damaged to the point that it is not serviceable. A used or fired military munition is a solid waste when transported off-site for disposal or if collected and disposed by burying or landfilling. A used or fired military munition is a solid waste if it lands off range and is not promptly rendered safe or retrieved. These criteria must be evaluated to determine whether the military munitions or UXO could be a hazardous waste. To be a hazardous waste, the military munitions would have to be a solid waste.

The requirements for military munitions have been consolidated into 40 CFR Part 266, subpart M, with appropriate references to other requirements (such as treatment and disposal). These requirements are applicable if munitions-related material is found at the FIB/RSE area. The State of California has not yet adopted the federal RCRA Military Munitions Rule and continues to regulate ordnance items that meet the definition of “hazardous waste” under Cal. Code Regs. tit. 22 hazardous waste regulations.

## **RCRA**

To be a hazardous waste, the munition-related waste needs to first meet the definition of a solid waste under 40 CFR § 266.202. If the munition-related waste is a solid waste, the substantive provisions of 40 CFR § 266.202 and the RCRA hazardous waste characteristic definitions are ARARs for characterizing the military munitions-related material and unexploded ordnance found in the FIB/RSE area in performance of the TCRA. The RCRA requirements at Cal. Code Regs. tit. 22, § 66261.21, 66261.22(a)(I), 66261.23, 66261.24(a)(I), and 66261.100 are applicable ARARs because they define RCRA characteristic hazardous waste. The Navy will determine if the munitions-related material is a solid waste and a RCRA characteristic waste at the time it is generated. Once those determinations are made, the Navy will dispose of the waste at an appropriate off-site disposal site.

If scrap metal is found in the excavation, it will be recycled. Scrap metal is exempted from regulation under California hazardous waste laws when recycled. Therefore, if scrap metal is found it will not be considered a solid waste and RCRA hazardous waste disposal requirements are not applicable. Cal. Code Regs. tit. 22 § 662610 and 66261(a)(3) regulating scrap metal are ARARs.

### **B2.2.2.2 State**

Cal. Code Regs. tit. 27, div. 2, subdiv. 1, §§ 20210 and 20220 are state definitions for designated waste and nonhazardous waste discussed in [Section B.2.2.1.2](#). These may be applicable ARARs for waste that meets these definitions. Section 20230(a) defines inert waste as waste “that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste.” Section 20230(b) states that “inert wastes do not need to be discharged at classified waste management units.” Sections 20230(a) and (b) may be applicable state ARARs for waste that meets the definition of inert waste at the FIB/RSE area if ordnance items from fill soils would produce solid wastes, including potential OEW, OEW scrap, and buried debris.

## **B3.0 LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

Location-specific ARARs are identified and discussed in this section. The discussions are presented based on various attributes of the site location, such as whether it is in a floodplain.

### **B3.1 SUMMARY OF LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

Eight general resource categories are associated with evaluating and identifying location-specific ARARs. These resource categories are cultural resources, wetland protection, floodplain management, hydrologic resources, biological resources, coastal resources, other natural resources, and geologic characteristics. Biological resources are the only category potentially affected by the response action at the FIB area, as discussed below. No protected wetlands or hydrologic resources are present on the FIB/RSE area, and the FIB/RSE area is not in a floodplain. No regulated geologic characteristics exist at the site and the proposed removal action does not include construction of a RCRA facility within 61 meters of a fault with displacement in Holocene time or disposal of hazardous waste in salt dome formations, salt bed formations, or underground mines or caves. Location-specific ARARs are in [Table B-3](#) at the end of this appendix.

#### **B3.1.1 Cultural Resources ARARs Conclusions**

No cultural resources were identified at the FIB/RSE area that could be affected by the TCRA.

#### **B3.1.2 Wetlands Protection and Floodplain Management Conclusions**

No wetlands or floodplain resources were identified at the FIB/RSE area that could be affected by the TCRA.

#### **B3.1.3 Hydrologic Resources Conclusions**

No hydrologic resources were identified at the FIB/RSE area that could be affected by the TCRA.

#### **B3.1.4 Biological Resources Conclusions**

Migratory birds are the only potential regulated biological resources found at the FIB/RSE area. The Navy identified the substantive provisions of the Migratory Bird Treaty Act as federal ARARs.

### **B3.2 DETAILED DISCUSSION OF LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

Location-specific ARARs are identified and discussed in this section. Location-specific ARARs are in [Table B-3](#).

#### **B3.2.1 ARARs for Biological Resources**

##### ***B3.2.1.1 Federal ARARs***

##### **Migratory Bird Treaty Act of 1972**

The Migratory Bird Treaty Act (16 U.S.C. §§ 703 through 712) prohibits at any time using any means or manner, the pursuit, hunting, capturing, and killing or attempting to take, capture, or kill

any migratory bird. This act also prohibits the possession, sale, export, and import of any migratory bird or any part of a migratory bird, nests and eggs. A list of migratory birds for which this requirement applies is found at 50 CFR § 10.13. It is the Navy's position that this act is not legally applicable to Navy actions; however, Executive Order No. 13186 (dated January 10, 2001) requires each federal agency taking actions that have or are likely to have a measurable effect on migratory bird populations to develop and implement, within 2 years, a memorandum of understanding (MOU) with the U.S. Fish and Wildlife Service (FWS) to promote the conservation of such populations. DoD recently signed (July 2006) a MOU with the FWS ([DOD 2006](#)). The MOU describes the responsibilities of the DOD with respect to conservation of migratory birds for all DoD activities, including "hazardous waste cleanup."

Because migratory birds may be present at the FIB/RSE area, the substantive provisions of the Migratory Bird Treaty Act are ARARs. Implementation of the TCRA will not result in the taking of migratory birds.

#### **B4.0 ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

Action-specific ARARs are identified below for the TCRA. The TCRA will remove potential munitions-related material in the heavy anomaly areas of the FIB/RSE area and soil containing lead above the removal action goal and dispose of them off-site. Federal and state action-specific ARARs are in [Tables B-4 and B-5](#) at the end of this appendix.

##### **B4.1 FEDERAL ARARs FOR EXCAVATION AND OFF-SITE DISPOSAL**

###### **Resource Conservation and Recovery Act**

The Navy identified the following federal ARARs under RCRA for excavation and off-site disposal:

- The requirement to determine if generated waste is hazardous waste at Cal. Code Regs. tit. 22, §§ 66262.10(a) and 66262.11.
- The requirement to analyze generated waste to determine if it is hazardous at Cal. Code Regs. tit. 22, § 66264.13(a) and (b).
- Temporary staging pile requirements at 40 CFR § 264.554(d)(1)(i) through (ii), (d)(2), (e), (f), (h), (i), (j), and (k).
- RCRA waste pile closure requirements Cal. Code Regs. tit. 22, § 66264.258(a) and (b) except references to procedural requirements.

###### **Military Munitions Rule**

The Navy identified the following federal ARARs under the Military Munitions Rule for excavation and off-site disposal:

- 40 CFR §§266.203, 266.205 and 266.206: Standards for transportation and storage of solid waste military munitions and treatment and disposal of waste military munitions.

### **Clean Air Act**

The Navy identified the following federal action-specific ARAR under the Clean Air Act for the excavation:

- The requirement that source emissions not equal or exceed 20 percent opacity under Bay Area Air Quality Management District Regulation 6-302.

### **Clean Water Act**

The Navy identified the substantive provisions of the Clean Water Act (CWA) storm water requirements for small construction activity that affects at least 1 acre because the planned excavation would affect more than 1 acre. On November 16, 1990, EPA final regulations implementing CWA § 402(p) setting forth the requirements for the Phase I stormwater National Pollutant Discharge Elimination System (NPDES) permits were promulgated (55 Fed. Reg. 47990). EPA's Phase I storm water NPDES regulations require that owner/operators of construction activities obtain permit coverage and be in compliance with discharge standards. The Phase II stormwater rule was promulgated on December 8, 1999. On March 10, 2003, the new Phase II regulations went into effect. The Phase II requirements effectively lowered the size limit on construction activities covered by the requirements from those disturbing five acres or more (Phase I) to one acre or more (Phase II).

The substantive provisions of the following Clean Water Act requirements are federal ARARs because the TCRA excavation will disturb at least 1 acre:

- Clean Water Act § 402(p) and implementing regulations at 40 CFR § 122.44(k)(2) and (4) – requiring best management practices to control or abate the discharge of pollutants from stormwater discharges.

Under the Clean Water Act and its implementing regulations, individual permits or coverage under promulgated storm water general permits is required. The State of California promulgated a storm water general permit at Order Number 2010-0014-DWQ. Under CERCLA § 121(e)(1), no federal, state, or local permit is required for any remedial action conducted entirely on-site, where it is selected and carried out in compliance with CERCLA § 121. Therefore, the Navy is not required to obtain an individual storm water permit or submit a notice of intent under the state's general permit. The Navy will use the substantive requirements of the state's general permit for storm water discharges as TBC criteria for complying with the requirement under the Clean Water Act § 402(p) and 40 CFR § 122.44(k)(2) and (4).

## **B4.2 STATE ARARs FOR EXCAVATION AND OFF-SITE DISPOSAL**

The Navy accepts the following state ARARs:

- The requirement to accurately characterize wastes under Cal. Code Regs. tit. 27, § 20200(c).
- The discharge requirements for designated waste to Class I or Class II waste management units at Cal. Code Regs. tit. 27, § 20210.
- The discharge requirements for nonhazardous solid to classified units at Cal. Code Regs. tit. 27, §§ 20220(b), (c), and (d).

## B5.0 REFERENCES

- Department of Defense. 2006. "Memorandum of Understanding Between the United States Department of Defense and the U.S. Fish and Wildlife Service to Promote the Conservation of Migratory Birds." Available Online at:  
<<https://www.denix.osd.mil/denix/Public/Library/NCR/Documents/Migratory-Bird-MOU-FINAL-3-Apr-07.pdf>>
- U.S. Environmental Protection Agency (EPA). 1988a. "CERCLA Compliance With Other Laws Manual: Interim Final." EPA/540/G-89/006. Office of Emergency and Remedial Response. Washington, DC. August. Available Online at:  
<<http://www.epa.gov/superfund/resources/remedy/pdf/540g-89006-s.pdf>>
- EPA. 1988b. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA." Office of Solid Waste and Emergency Response Directives 9355.3-01 and 9355.3-02. EPA/540G-89/004. October. Available Online at:  
<<http://www.epa.gov/superfund/resources/remedy/pdf/540g-89004-s.pdf>>
- EPA. 1991. "ARARs Q's and A's: General Policy, RCRA, CWA, SDWA, Post-ROD Information, and Contingent Waivers." OSWER Directive No. 9234.2-01/FS-A, Washington, DC. June.
- EPA. 1992. "Guide to Management of Investigation-Derived Wastes during Site Inspections." EPA/540/G-91/009. January 15. Available Online at:  
<<http://www.epa.gov/superfund/resources/remedy/pdf/93-45303fs-s.pdf>>

## **TABLES**

---

**TABLE B-1: FEDERAL CHEMICAL-SPECIFIC ARARs FOR SOIL<sup>a</sup>**

Action Memorandum for Time-Critical Removal Action at the FIB/RSE Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Requirement	Prerequisite	Citation <sup>b</sup>	ARAR Determination	Comments
<b>Resource Conservation and Recovery Act (42 U.S.C., ch. 82, §§ 6901 through 6991[i])<sup>c</sup></b>				
These requirements define RCRA hazardous waste. Solid waste is characterized as toxic based on the TCLP results if the waste exceeds the TCLP maximum concentrations or is a RCRA characteristic waste if the waste meets the definition of ignitability, reactivity, corrosivity, or toxicity.	Waste	Cal. Code Regs. tit. 22, §§ 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100	Applicable	Applicable for determining whether waste or munitions-related material waste is RCRA hazardous.
Defines scrap metal to include: (1) manufactured, solid metal objects and products; (2) metal workings, including cuttings, trimmings, stampings, grindings, shavings and sandings; (3) solid metal residues of metal production; or (4) printed circuit boards that are recycled.	Scrap metal	Cal. Code Regs. tit. 22, § 66260.10	Applicable	Applicable if scrap metal is found during excavation.
Scrap metal is exempted from regulation under state hazardous waste laws when recycled.	Scrap metal	Cal. Code Regs. tit. 22, § 66261.6(a)(3)	Applicable	Applicable if scrap metal is found during excavation.
<b>Military Munitions Rule (40 CFR Part 266 Subpart M)<sup>c</sup></b>				
Identification of hazardous waste munitions and treatment and storage requirements for hazardous waste munitions.	Storage of military munitions	40 CFR Part 266, Subpart M	Applicable	Military munitions must be managed in accordance with 40 CFR Part 266, subpart M requirements unless the waste meets the criteria in 40 CFR § 266.205(a)(1)(i)–(vii).

Notes:

- a Many action-specific ARARs may contain chemical-specific limitations and are addressed in the action-specific tables.
- b Only the substantive provisions of the requirements cited in this table are ARARs.
- c Statutes and policies and their citations are provided as headings to identify general categories of ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the Navy accepts the entire statutes or policies as ARARs; specific ARARs are addressed in the table below each general heading; only pertinent substantive requirements of the specific citations are considered ARARs.

§§	Sections	RCRA	Resource Conservation and Recovery Act
ARAR	Applicable or relevant and appropriate requirement	TCLP	Toxicity characteristic leaching procedure
Cal. Code Regs.	California Code of Regulations	tit.	Title
CFR	Code of Federal Regulations	U.S.C.	United States Code
ch.	Chapter		

**TABLE B-2: STATE CHEMICAL-SPECIFIC ARARs FOR SOIL<sup>a</sup>**

Action Memorandum for Time-Critical Removal Action at the FIB/RSE Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Requirement	Prerequisite	Citation <sup>b</sup>	ARAR Determination	Comments
<b>Cal/EPA Department of Toxic Substances Control<sup>c</sup></b>				
Defines “non-RCRA hazardous waste.”	Waste	Cal. Code Regs. tit. 22, §§ 66261.22(a)(3) and (4), 66261.24(a)(2)–(a)(8), 66261.101, 66261.3(a)(2)(C), or 66261.3(a)(2)(F)	Applicable	Applicable for determining whether a waste is a non-RCRA hazardous waste.
<b>California State and Regional Water Quality Control Boards<sup>b</sup></b>				
Definitions of designated waste, non-hazardous waste, and inert waste	Waste	Cal. Code Regs. tit. 27, §§ 20210, 20220 and 20230	Applicable	These requirements are ARARs for classifying waste.

Notes:

- a Many action-specific ARARs may contain chemical-specific limitations and are addressed in the action-specific ARAR tables.
  - b Only the substantive provisions of the requirements cited in this table are ARARs.
  - c Statutes and policies, and their citations, are provided as headings to identify general categories of ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the Navy accepts the entire statutes or policies as ARARs; specific ARARs are addressed in the table below each general heading; only pertinent substantive requirements of specific citations are considered ARARs.
- §§ Sections  
 ARAR Applicable or relevant and appropriate requirement  
 Cal. Code Regs. California Code of Regulations  
 Cal/EPA California Environmental Protection Agency  
 RCRA Resource Conservation and Recovery Act  
 tit. Title

**TABLE B-3: FEDERAL LOCATION-SPECIFIC ARARs**

Action Memorandum for Time-Critical Removal Action at the FIB/RSE Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Location	Requirement	Prerequisite	Citation <sup>a</sup>	ARAR Determination	Comments
<b>Migratory Bird Treaty Act of 1972 (16 U.S.C. §§ 703 through 712)<sup>b</sup></b>					
Migratory bird area	Protects almost all species of native migratory birds in the United States from unregulated “take,” which can include poisoning at hazardous waste sites.	Presence of migratory birds	16 U.S.C. § 703	Relevant and appropriate	Migratory birds have been observed at the FIB/RSE area. The TCRA will not result in the taking of migratory birds.

Notes:

a Only the substantive provisions of the requirements cited in this table are ARARs.

b Statutes and policies and their citations are provided as headings to identify general categories of ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the Navy accepts the entire statute or policy as a ARAR; specific ARARs are addressed in the table below each general heading; only substantive requirements of the specific citations are considered ARARs

§ Section

§§ Sections

ARAR Applicable or relevant and appropriate requirement

FIB/RSE Former Inland Burn Area/Railroad Siding Excavation

TCRA Time critical removal action

U.S.C. United States Code

**TABLE B-4: FEDERAL ACTION-SPECIFIC ARARs**

Action Memorandum for Time-Critical Removal Action at the FIB/RSE Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Action	Requirement	Prerequisite	Citation	ARAR Determination	Comments
<b>EXCAVATION AND OFF-SITE DISPOSAL</b>					
<b>Resource Conservation and Recovery Act (42 U.S.C., ch. 82, §§ 6901 through 6991[i])</b>					
On-site waste generation	Person who generates waste shall determine if that waste is a hazardous waste.	Generator of waste	Cal. Code Regs. tit. 22, §§ 66262.10(a), 66262.11	Applicable	Applicable to operations where waste is generated. The Navy will generate waste in excavating munitions-related material and contaminated soil. The Navy will determine if the waste or munitions-related material is hazardous at the time it is generated.
Excavate soil or generate waste	Requirements for analyzing waste for determining whether waste is hazardous.	Generator of waste	Cal. Code Regs. tit. 22, § 66264.13(a) and (b)	Applicable	Applicable to operations where waste is generated. The Navy will generate waste in excavating munitions-related material and contaminated soil. The Navy will determine if the waste or munitions-related material is hazardous at the time it is generated.
Temporary staging piles	Allows generators to accumulate solid remediation waste in an EPA-designated pile for storage only, up to 2 years, during remedial operations without triggering LDRs.	Hazardous remediation waste temporarily stored in piles	40 CFR §§ 264.554(d)(1)(i-ii) and (d)(2), (e), (f), (h), (i), (j), and (k)	Relevant and Appropriate	The Navy will temporarily store excavated soil in a staging pile prior to use as backfill or off-site disposal.

**TABLE B-4: FEDERAL ACTION-SPECIFIC ARARs (CONTINUED)**

Action Memorandum for Time-Critical Removal Action at the FIB/RSE Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Action	Requirement	Prerequisite	Citation	ARAR Determination	Comments
<b>Resource Conservation and Recovery Act (42 U.S.C., ch. 82, §§ 6901 through 6991[i]) (Continued)</b>					
Closure of temporary staging pile	At closure, owner shall remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste. If waste is left on-site, perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills.	Waste pile used to store hazardous waste.	Cal. Code Regs. tit. 22, § 66264.258(a) and (b) except references to procedural requirements	Relevant and Appropriate	The Navy will close the temporary staging pile according to these ARARs when the excavation and off-site disposal is complete.
<b>Military Munitions Rule (40 CFR pt. 266 subpt. M)<sup>a</sup></b>					
Military munitions	Standards for transportation and storage of solid waste military munitions and treatment and disposal of waste military munitions.	Management of military munitions	40 CFR §§ 266.203, 266.205, and 266.206	Applicable	Military munitions must be managed as a hazardous waste when conditions occur that cause the munitions to be classified as waste. The substantive provisions of these requirements are applicable for transportation, storage and treatment and disposal of military munitions.
<b>Clean Air Act (42 U.S.C. § 7401 et seq.)<sup>a</sup></b>					
Excavation	Prohibits emissions equal to or greater than 20 percent opacity.	Emission from a source.	BAAQMD Regulation 6-302	Applicable	Applicable for excavation activities.

**TABLE B-4: FEDERAL ACTION-SPECIFIC ARARs (CONTINUED)**

Action Memorandum for Time-Critical Removal Action at the FIB/RSE Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Action	Requirement	Prerequisite	Citation	ARAR Determination	Comments
<b>Clean Water Act, as Amended (33 U.S.C., ch. 26, §§ 1251–1387)<sup>a</sup></b>					
Discharge to surface waters, including storm water	Owners and operators of construction activities must be in compliance with discharge standards, including substantive provisions of the general requirements for storm water plans and BMPs.	Construction that affects at least 1 acre	CWA Section 402 (33 U.S.C. ch. 26, § 1342) and 40 CFR § 122.44(k)(2) and (4)	Applicable	The substantive provisions are ARARs the TCRA because the excavation will affect at least one acre and will have the potential to discharge to surface water. Typically, an NPDES permit is required. However, pursuant to CERCLA § 121(e) the Navy does not need to get a permit or submit a notice of intent to discharge under a general NPDES permit. However, the Navy would use the State of California's General Construction Storm Water Permit (SWRCB Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ) as TBC criteria for developing a stormwater plan that complies with these CWA ARARs.

Notes:

a Statutes and policies and their citations are provided as headings to identify general categories of ARARs for the convenience of the reader. Listing the statutes and policies does not indicate that the Navy accepts the entire statutes or policies as ARARs; specific ARARs are addressed in the table below each general heading; only substantive requirements of specific citations are considered ARARs.

§	Section	EPA	U.S. Environmental Protection Agency
§§	Sections	FIB/RSE	Former Inland Burn Area/Railroad Siding Excavation
ARAR	Applicable or relevant and appropriate requirement	LDR	Land disposal restriction
BAAQMD	Bay Area Air Quality Management District	Navy	Department of the Navy
BMP	Best management practice	NPDES	National Pollution Discharge Elimination System
Cal. Code Regs.	California Code of Regulations	RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Liability and Compensation Act	SWRCB	State Water Resources Control Board
CFR	Code of Federal Regulations	TBC	To be considered
ch.	Chapter	tit.	Title
CWA	Clean Water Act	U.S.C.	United States Code
DWQ	Department of Water Quality		

**TABLE B-5: STATE ACTION-SPECIFIC ARARs**

Action Memorandum for Time-Critical Removal Action at the FIB/RSE Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California

Action	Requirement	Prerequisite	Citation	ARAR Determination	Comments
<b>EXCAVATION AND OFF-SITE DISPOSAL</b>					
Off-site disposal of soil	Requires that designated waste as defined at California. Water Code § 13173 be discharged to Class I or class II waste management units.	Discharge of designated waste after July 18, 1997 (nonhazardous waste that could cause degradation of surface or ground waters), to land for treatment, storage, or disposal.	Cal. Code Regs. tit. 27, § 20210	Applicable	Applicable to operations that generate waste. The Navy will generate waste during excavation. The Navy will accurately characterize waste at the time it is generated.
Off-site disposal of soil	Requires that designated waste as defined at California. Water Code § 13173 be discharged to Class I or Class II waste management units.	Discharge of designated waste after July 18, 1997 (nonhazardous waste that could cause degradation of surface or ground waters), to land for treatment, storage, or disposal.	Cal. Code Regs. tit. 27, § 20210	Applicable	Applicable to operations that generate waste. The Navy will generate waste during excavation. The Navy will accurately characterize waste at the time it is generated.
Off-site disposal of soil	Requires that nonhazardous solid waste as defined at § 20220(a) be discharged to a classified waste management unit.	Discharge of nonhazardous solid waste after July 18, 1997, to land for treatment, storage, or disposal.	Cal. Code Regs. tit. 27, § 20220(b), (c), and (d)	Applicable	Applicable to operations that generate waste. The Navy will generate waste during excavation. The Navy will accurately characterize waste at the time it is generated.

Notes:

- a Statutes and policies and their citations are provided as headings to identify general categories of ARARs for the convenience of the reader. Listing the statutes and policies does not indicate that the Navy accepts the entire statutes or policies as ARARs; specific ARARs are addressed in the table below each general heading; only substantive requirements of specific citations are considered ARARs.
- § Section
- §§ Sections
- ARAR Applicable or relevant and appropriate requirement
- Cal. Code Regs. California Code of Regulations
- FIB/RSE FIB/RSE Former Inland Burn Area/Railroad Siding Excavation
- Navy Department of the Navy
- tit. Title

**APPENDIX C  
INDEX OF ADMINISTRATIVE RECORD FOR SITE 13 AND FORMER INLAND BURN  
AREA/RAILROAD SIDINGS EXCAVATION AREA, FORMER NAVAL WEAPONS  
STATION SEAL BEACH DETACHMENT CONCORD**

---

NWS CONCORD

DRAFT ENVIRONMENTAL RESTORATION RECORD INDEX - UPDATE (SORTED BY RECORD NUMBER)

FILTERED DATA BY KEYWORDS/SITES

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.				Location	FRC Accession No.	
Record Type	SSIC No.	Recipient				SWDIV Box No(s)	FRC Warehouse	
Contract No.	CTO No.	Recipient Affil.	Subject	Distribution	Sites	CD No.	— FRC Box No(s) —	
<b>SF_N60036_000043</b>	<b>02-20-2001</b>	RIVERA, G.	TRANSMITTAL OF THE 09 JANUARY 2001	SITE FILE	AOC 000001	FRC - PERRIS	L181-09-0009 BX 0001	
EFAW SER	03-13-2001	NAVFAC - EFA	REMEDIAL PROJECT MANAGER (RPM)		SITE 00013		30099762 SAI	
052GAR/5090	5090.3.C.	WEST	MEETING MINUTES (W/ ENCLOSURE)		SITE 00017	IMAGED		
CORRESPONDENCE	NONE				SITE 00022	CONC_001		
NONE		MULTIPLE			SITE 00027			
14		AGENCIES			SITE 00029			
<b>SF_N60036_000044</b>	<b>03-01-2001</b>	RIVERA, G.	TRANSMITTAL OF THE 13 FEBRUARY 2001	SITE FILE	AOC 000001	FRC - PERRIS	L181-09-0009 BX 0001	
EFAW SER	03-13-2001	NAVFAC - EFA	REMEDIAL PROJECT MANAGERS (RPM)		SITE 00013		30099762 SAI	
052GAR/5090	5090.3.C.	WEST	MEETING MINUTES (W/ ENCLOSURE)		SITE 00017	IMAGED		
CORRESPONDENCE	NONE				SITE 00022	CONC_001		
NONE		MULTIPLE			SITE 00027			
7		AGENCIES			SITE 00029			
<b>SF_N60036_000049</b>	<b>09-04-2003</b>	WILSON, P.	DRAFT GROUNDWATER SAMPLING	SENSITIVE	"PERCHLORATE	FRC - PERRIS	L181-09-0009 BX 0002	
GSA-0212-00004	10-21-2003	TETRA TECH EM,	SUMMARY REPORT [SEE RECORD # 982 -	SITE FILE	" SEARCH -		30099762 SAI	
REPORT	5090.3.C.	INC.	NAVFAC EFAW TRANSMITTAL LETTER]		ROUND 1	IMAGED		
N62474-03-F-4032	CTO 0212				SITE 00013	CONC_001		
107		NAVFAC - EFA			SITE 00022			
		WEST						
<b>SF_N60036_000132</b>	<b>06-15-2008</b>		INTERNAL WORKING DRAFT AMENDMENT	SITE FILE	SITE 00013	NAVFAC -		
SULT-5104-0147-	10-29-2008	SULTECH	TO THE SITE MANAGEMENT PLAN (SMP)		SITE 00022	SOUTHWEST		
0086	5090.3.C.		SCHEDULE, INLAND AREA SITES (CD COPY		SITE 00022A			
REPORT	CTO 0147	BRAC PMO WEST	ENCLOSED)		SITE 00027			
N68711-03-D-5104					SITE 00029			
10					SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			

UIC No. _ Rec. No.	Record Date	Author	Author Affil.	Location	FRC Accession No.		
Doc. Control No.	Prc. Date	Author	Author Affil.	SWDIV Box No(s)	FRC Warehouse		
Record Type	SSIC No.	Recipient	Recipient Affil.	CD No.	FRC Box No(s)		
Contract No.	CTO No.	Subject	Distribution	Sites			
Approx. # Pages							
AR_N60036_000145	08-01-2007	BENNETT, J.	FINAL PRELIMINARY ASSESSMENT, MILITARY MUNITIONS RESPONSE PROGRAM (INCLUDES CD COPY OF APPENDIX B AND PRELIMINARY RESPONSES TO COMMENTS ON THE DRAFT FINAL PRELIMINARY MILITARY MUNITIONS RESPONSE)	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	"PERCHLORATE " SEARCH - ROUND 1 BLDG 0000007SH14 BLDG 0000079 BLDG 0000081 BLDG 0000082 BLDG 0000083 BLDG 0000086 BLDG 0000087 BLDG 0000088 BLDG 0000089 BLDG 0000093 BLDG 0000097 BLDG 0000114 BLDG 0000174 BLDG 0000178 BLDG 0000185 BLDG 0000186 BLDG 0000193 BLDG 0000252 BLDG 0000269 BLDG 0000351 BLDG 0000395 BLDG 0000398 BLDG 0000433 BLDG A-29 BLDG E-108 BLDG E-85 BLDG IA-10 BLDG IA-11 BLDG IA-12 BLDG IA-15 BLDG IA-16 BLDG IA-17	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0005 30099762 SAI BX 0006
NONE	10-02-2007	MALCOLM PIRNIE, INC.					
REPORT	5090.3.A.						
N62472-02-D-1300 7259	NONE	NAVFAC - SOUTHWEST					

UIC No. _ Rec. No.	Record Date	Author						Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.						SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient		Subject		Distribution	Sites	CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.							
Approx. # Pages									

BLDG IA-18  
 BLDG IA-20  
 BLDG IA-24  
 BLDG IA-25  
 BLDG IA-27  
 BLDG IA-37  
 BLDG IA-38  
 BLDG IA-4  
 BLDG IA-41  
 BLDG IA-43  
 BLDG IA-46  
 BLDG IA-48  
 BLDG IA-49  
 BLDG IA-50  
 BLDG IA-51  
 BLDG IA-52  
 BLDG IA-55  
 BLDG IA-56  
 BLDG IA-6  
 BLDG IA-7  
 PARCEL 0572  
 PARCEL 0573  
 PARCEL 0574  
 PARCEL 0575  
 PARCEL 0576  
 PARCEL 0579D  
 PARCEL 0581  
 SITE 00001  
 SITE 00002  
 SITE 00003  
 SITE 00004  
 SITE 00005  
 SITE 00006  
 SITE 00008  
 SITE 00009

UIC No. _ Rec. No.	Record Date	Author						Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.						SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient		Subject		Distribution	Sites	CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.							
Approx. # Pages									

SITE 00013  
 SITE 00014  
 SITE 00016  
 SITE 00017  
 SITE 00019  
 SITE 00021  
 SITE 00022  
 SITE 00023A  
 SITE 00023B  
 SITE 00024A  
 SITE 00024B  
 SITE 00025  
 SITE 00026  
 SITE 00027  
 SITE 00029  
 SWMU 00001  
 SWMU 00002  
 SWMU 00005  
 SWMU 00007  
 SWMU 00008  
 SWMU 00012  
 SWMU 00013  
 SWMU 00014  
 SWMU 00015  
 SWMU 00016  
 SWMU 00017  
 SWMU 00018  
 SWMU 00020  
 SWMU 00022  
 SWMU 00023  
 SWMU 00024  
 SWMU 00026  
 SWMU 00030  
 SWMU 00033  
 SWMU 00037

UIC No. _ Rec. No.	Record Date	Author					Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient		Subject		Distribution	CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								

SWMU 00040  
 SWMU 00044  
 SWMU 00046  
 SWMU 00050  
 SWMU 00051  
 SWMU 00052  
 SWMU 00053  
 SWMU 00054  
 UST 0000001  
 UST 0000002  
 UST 0000003  
 UST 0000004  
 UST 0000350A  
 UST 0000350B  
 WELL 00001  
 WELL 00002  
 WELL 00003  
 WELL 00004  
 WELL 00005  
 WELL 00006  
 WELL 00007  
 WELL 00008  
 WELL 00009  
 WELL 00010  
 WELL 00011  
 WELL 00014  
 WELL 00178-5  
 WELL FTW-1  
 WELL FTW-2  
 WELL FTW-3  
 WELL FTW-4  
 WELL FTW-5  
 WELL IA17  
 WELL RDW-1  
 WELL RDW-2

UIC No. _ Rec. No.	Record Date	Author						Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.						SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient		Subject		Distribution	Sites	CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.							
Approx. # Pages									

WELL RDW-3  
 WELL RDW-4  
 WELL RDW-5  
 WELL RDW-6  
 WELL RDW-7  
 WELL TLW-1  
 WELL TLW-2  
 WELL TLW-3  
 WELL TLW-4  
 WELL TLW-5  
 WELL TLW-6  
 WELL TLW-7  
 WELL UC-01  
 WELL UC-02  
 WELL UC-03  
 WELL UC-04  
 WELL UC-05  
 WELL WHW-1  
 WELL WHW-2  
 WELL WHW-3  
 WELL WHW-4

UIC No. _ Rec. No.	Record Date	Author					Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	CD No.		FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								
<b>AR_N60036_000160</b>	<b>07-01-2007</b>		FACT SHEET: ENVIRONMENTAL RESTORATION PROGRAM - ACTIVITIES IN THE INLAND AREA	ADMIN RECORD	BLDG IA-20		FRC - PERRIS	L181-09-0009 BX 0007
NONE	10-26-2007	BRAC PMO WEST		BASE	BLDG IA-25			30099762 SAI
FACT SHEET	5090.3.A.			INFO REPOSITORY	SITE 00013	IMAGED		
NONE	NONE	MULTIPLE AGENCIES			SITE 00014	CONC_001		
12					SITE 00015			
					SITE 00016			
					SITE 00017			
					SITE 00018			
					SITE 00019			
					SITE 00020			
					SITE 00021			
					SITE 00022			
					SITE 00022A			
					SITE 00023A			
					SITE 00023B			
					SITE 00024A			
					SITE 00024B			
					SITE 00027			
					SITE 00029			
					SWMU 00002			
					SWMU 00003			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
					SWMU 0018D			
<b>SF_N60036_000174</b>	<b>12-01-1991</b>	WELSHANS, G.	DRAFT SITE INVESTIGATION WORK PLAN, INLAND AREA SITES, VOLUMES I THROUGH IV OF IV [SEE RECORDS # 178 AND # 201 - NAVFAC EFAW TRANSMITTAL LETTERS]	SITE FILE	SITE 00008		FRC - PERRIS	L181-09-0009 BX 0007
NONE	04-06-2000	PRC			SITE 00013			30099762 SAI
REPORT	5090.3.C.	ENVIRONMENTAL MANAGEMENT, INC.			SITE 00014	IMAGED		
N62474-88-D-5086	CTO 0132				SITE 00017	CONC_001		
570		BROWN, J.			SITE 00019			
		NWS CONCORD - CONCORD, CA			SITE 00022			
					SITE 00023A			
					SITE 00024A			
					SITE 00024B			
					SITE 00027			

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
<b>AR_N60036_000175</b>	<b>09-15-2008</b>								
SULT-5104-0147-0085	10-29-2008	SULTECH	FINAL AMENDMENT TO THE SITE MANAGEMENT PLAN (SMP) SCHEDULE, INLAND AREA SITES (CD COPY ENCLOSED)	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013 SITE 00022 SITE 00022A SITE 00027 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	NAVFAC - SOUTHWEST			
REPORT N68711-03-D-5104 10	5090.3.A. CTO 0147	BRAC PMO WEST							
<b>AR_N60036_000192</b>	<b>05-02-2008</b>	BROWN, D.	FINAL ACCIDENT PREVENTION PLAN, SITE INSPECTION FOR INLAND AREA MILITARY MUNITIONS RESPONSE PROGRAM SITES, INCLUDING BLACK PIT AT RED ROCK, EAGLE'S NEST EXPLOSIVE ORDINANCE DISPOSAL AREA, (***)SEE COMMENTS)	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0008 30099762 SAI		
TTEM-0055-0305-0011	05-15-2008	TETRA TECH EM, INC.							
REPORT N62467-04-D-0055 378	5090.3.A. CTO 0305	BRAC PMO WEST				IMAGED CONC_003			
<b>AR_N60036_000205</b>	<b>03-01-1992</b>	WELSHANS, G.	FINAL SITE INVESTIGATION WORK PLAN, INLAND AREA SITES, VOLUME I OF IV (SEE RECORDS # 206 AND # 207 - VOLUMES II AND III OF IV, RECORD # 244 - VOLUME IV OF IV, AND RECORD # 208 - NAVFAC EFAW TRANSMITTAL LETTER)	ADMIN RECORD	SITE 00008 SITE 00013 SITE 00014 SITE 00017 SITE 00019 SITE 00022 SITE 00023A SITE 00023B SITE 00024A SITE 00024B SITE 00027	FRC - PERRIS	L181-09-0009 BX 0009 30099762 SAI		
NONE	04-06-2000	PRC ENVIRONMENTAL MANAGEMENT, INC.				IMAGED CONC_001			
REPORT N62474-88-D-5086 150	5090.3.A. CTO 0132	NWS CONCORD - CONCORD, CA							

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_000206</b>	<b>03-01-1992</b>	WELSHANS, G.	FINAL SITE INVESTIGATION WORK PLAN, INLAND AREA SITES, VOLUME II OF IV - SAMPLING PLAN (SEE RECORD # 205 - VOLUME I OF IV, RECORD # 207 - VOLUME III OF IV, RECORD # 244 - VOLUME IV OF IV, AND RECORD # 208 - NAVFAC EFAW TRANSMITTAL LETTER)	ADMIN RECORD	SITE 00008 SITE 00013 SITE 00014 SITE 00017 SITE 00019 SITE 00022 SITE 00023A SITE 00023B SITE 00024A SITE 00024B SITE 00027	FRC - PERRIS  IMAGED CONC_001	L181-09-0009 BX 0009 30099762 SAI	
NONE	04-06-2000	PRC						
REPORT	5090.3.A.	ENVIRONMENTAL MANAGEMENT, INC.						
N62474-88-D-5086	CTO 0132							
102		NWS CONCORD - CONCORD, CA						
<b>AR_N60036_000207</b>	<b>03-01-1992</b>	WELSHANS, G.	FINAL SITE INVESTIGATION WORK PLAN, QUALITY ASSURANCE PROJECT PLAN, INLAND AREA SITES, VOLUME III OF IV (SEE RECORDS # 205 AND # 206 - VOLUMES I AND II OF IV, RECORD # 244 - VOLUME IV OF IV, AND RECORD # 208 - NAVFAC EFAW TRANSMITTAL LETTER)	ADMIN RECORD	SITE 00008 SITE 00013 SITE 00014 SITE 00017 SITE 00019 SITE 00022 SITE 00023A SITE 00023B SITE 00024A SITE 00024B SITE 00027	FRC - PERRIS  IMAGED CONC_001	L181-09-0009 BX 0009 30099762 SAI	
NONE	04-06-2000	PRC						
REPORT	5090.3.A.	ENVIRONMENTAL MANAGEMENT, INC.						
N62474-88-D-5086	CTO 0132							
163		NWS CONCORD - CONCORD, CA						

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient							
Contract No.	CTO No.	Recipient Affil.	Subject	Distribution	Sites	Location	FRC Accession No.		
Approx. # Pages						SWDIV Box No(s)	FRC Warehouse		
						CD No.	FRC Box No(s)		
AR_N60036_000238	06-01-1996	SOOTKOOS, B.	INSTALLATION MANAGEMENT PLAN	ADMIN RECORD	SITE 00001	FRC - PERRIS	L181-09-0009 BX 0010		
NONE	06-10-2008	PRC			SITE 00002		30099762 SAI		
REPORT	5090.3.A.	ENVIRONMENTAL			SITE 00003	IMAGED			
N62474-88-D-5086	NONE	MANAGEMENT,			SITE 00004	CONC_003			
89		INC.			SITE 00005				
		SOOHOO, R.			SITE 00006				
		NWS CONCORD -			SITE 00007				
		CONCORD, CA			SITE 00008				
					SITE 00009				
					SITE 00010				
					SITE 00011				
					SITE 00012				
					SITE 00013				
					SITE 00014				
					SITE 00015				
					SITE 00016				
					SITE 00017				
					SITE 00018				
					SITE 00019				
					SITE 00020				
					SITE 00021				
					SITE 00022				
					SITE 00023A				
					SITE 00023B				
					SITE 00024A				
					SITE 00024B				
					SITE 00025				
					SITE 00026				
					SITE 00027				
					SITE 00028				
					SWMU 00001				
					UST 0000001				
					UST 0000002				

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_000244</b>	<b>04-01-1992</b>	WELSHANS, G.	FINAL SITE INVESTIGATION WORK PLANS, INLAND AREA SITES, VOLUME IV OF IV - HEALTH AND SAFETY PLAN [SEE RECORDS # 205 THROUGH # 207 - VOLUMES I THROUGH III OF IV; AND RECORDS # 209 AND 285 - NAVFAC EFAW TRANSMITTAL LETTERS]	ADMIN RECORD	SITE 00008 SITE 00013 SITE 00014 SITE 00017 SITE 00019 SITE 00022 SITE 00023A SITE 00024A SITE 00024B SITE 00027	FRC - PERRIS  IMAGED CONC_001	L181-09-0009 BX 0010 30099762 SAI	
NONE	04-06-2000	PRC						
REPORT	5090.3.A.	ENVIRONMENTAL MANAGEMENT, INC.						
N62474-88-D-5086	CTO 0132							
166		NWS CONCORD - CONCORD, CA						
<b>AR_N60036_000522</b>	<b>09-13-1996</b>	YEE, R.	TRANSMITTAL OF THE DRAFT NAPALM CLEANUP WORK PLAN FOR THE BURN AREA, INLAND AREA (ENCLOSURE IS RECORD # 580)	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0021 30099762 SAI	
EFAW SER	04-06-2000	NAVFAC - EFA WEST						
1841.2/6390	5090.3.A.							
CORRESPONDENCE	NONE	MULTIPLE AGENCIES				IMAGED CONC_001		
NONE								
2								
<b>AR_N60036_000523</b>	<b>10-21-1996</b>	YEE, R.	TRANSMITTAL OF THE DRAFT REMEDIAL INVESTIGATION REPORT, INLAND AREA SITES, VOLUMES I AND II OF II	ADMIN RECORD INFO REPOSITORY	SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027	FRC - PERRIS	L181-09-0009 BX 0021 30099762 SAI	
EFAW SER	04-06-2000	NAVFAC - EFA WEST						
1841.2/7010	5090.3.A.	SMITH, B.				IMAGED CONC_001		
CORRESPONDENCE	NONE	U.S. EPA - SAN FRANCISCO, CA						
NONE								
3								
<b>AR_N60036_000543</b>	<b>07-14-1997</b>	SANTANA, R.	TRANSMITTAL OF THE RESPONSE TO COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT FOR INLAND AREA SITES (W/ ENCLOSURE) [SEE RECORDS # 592 THROUGH # 594 - COMMENTS]	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027	FRC - PERRIS	L181-09-0009 BX 0022 30099762 SAI	
EFAW SER	04-06-2000	NAVFAC - EFA WEST						
18411/7296	5090.3.A.					IMAGED CONC_001		
CORRESPONDENCE	NONE	MULTIPLE AGENCIES						
NONE								
87								
<b>AR_N60036_000550</b>	<b>10-15-1997</b>	FISHER, C.	TRANSMITTAL OF THE DRAFT FINAL REMEDIAL INVESTIGATION REPORT, INLAND AREA SITES, VOLUMES I AND II OF II (ENCLOSURE IS RECORD # 551)	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027	FRC - PERRIS	L181-09-0009 BX 0022 30099762 SAI	
EFAW SER	04-06-2000	NAVFAC - EFA WEST						
10122/8005	5090.3.A.					IMAGED CONC_001		
CORRESPONDENCE	NONE	MULTIPLE AGENCIES						
NONE								
3								

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
<b>SF_N60036_000551</b>	<b>10-15-1997</b>	POLEK, J.	DRAFT FINAL REMEDIAL INVESTIGATION REPORT, INLAND AREA SITES, VOLUMES 1 AND 2 OF 2 [SEE RECORD # 550 - NAVFAC EFAW TRANSMITTAL LETTER, AND RECORD # 868 - DRAFT SUPPLEMENTAL REMEDIAL INVESTIGATION REPORT]	SITE FILE	SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027	FRC - PERRIS  IMAGED CONC_001	L181-09-0009 BX 0023 30099762 SAI		
NONE	04-06-2000	TETRA TECH EM, INC.							
REPORT	5090.3.C.	FISHER, C.							
N62474-88-D-5086 1655	CTO 0303	NAVFAC - EFA WEST							
<b>AR_N60036_000555</b>	<b>07-18-1997</b>	VIG, A.	RESPONSE TO COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT FOR THE INLAND AREA SITES (SEE RECORDS # 592, 593, AND 594 - COMMENTS)	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0023 30099762 SAI		
NONE	04-06-2000	PRC ENVIRONMENTAL MANAGEMENT, INC.							
CORRESPONDENCE	5090.3.A.	SANTANA, R.							
NONE	NONE	NAVFAC - EFA WEST							
86									
<b>SF_N60036_000580</b>	<b>09-10-1996</b>	VIG, A.	DRAFT NAPALM CLEANUP WORK PLAN FOR THE BURN AREA SITE, INLAND AREA (SEE RECORD # 522 - NAVFAC EFAW TRANSMITTAL LETTER)	SENSITIVE SITE FILE	SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0024 30099762 SAI		
NONE	04-06-2000	PRC ENVIRONMENTAL MANAGEMENT, INC.							
REPORT	5090.3.C.	YEE, R.							
N62474-88-D-5086 21	CTO 0303	NAVFAC - EFA WEST							
<b>AR_N60036_000587</b>	<b>11-14-1996</b>	MCNAUGHTON, E.	REVIEW AND COMMENTS ON THE DRAFT NAPALM CLEANUP WORK PLAN FOR THE BURN AREA SITE, INLAND AREA (SEE RECORD # 580 - DRAFT NAPALM CLEANUP WORK PLAN)	ADMIN RECORD	SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0024 30099762 SAI		
NONE	04-06-2000	U.S. EPA - SAN FRANCISCO, CA							
CORRESPONDENCE	5090.3.A.	YEE, R.							
NONE	NONE	NAVFAC - EFA WEST							
1									
<b>AR_N60036_000588</b>	<b>11-25-1996</b>	GLADSTONE, S.	REVIEW AND COMMENTS ON THE 1) DRAFT NAPALM CLEANUP WORK PLAN FOR THE BURN AREA SITE, INLAND AREA, AND 2) DRAFT FIELD WORK PLAN FOR SUPPLEMENTAL SOIL SAMPLING AT TAYLOR BOULEVARD BRIDGE, TIDAL AREA	ADMIN RECORD	SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0024 30099762 SAI		
NONE	04-06-2000	CRWQCB - OAKLAND, CA							
CORRESPONDENCE	5090.3.A.	PINASCO, J.							
NONE	NONE	DTSC - SACRAMENTO, CA							
1									

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
AR_N60036_000591	11-14-1996	SMITH, B.	REQUEST FOR A 30 DAY EXTENSION FOR THE REVIEW OF THE DRAFT REMEDIAL INVESTIGATION REPORT, INLAND AREA SITES, VOLUMES I AND II OF II	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0024 30099762 SAI	
NONE	04-06-2000	U.S. EPA - SAN FRANCISCO, CA						
CORRESPONDENCE	5090.3.A.	YEE, R.						
NONE	NONE	NAVFAC - EFA WEST						
2								
AR_N60036_000592	01-21-1997	MOUTOUX, N.	REVIEW AND COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT, INLAND AREA SITES	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0024 30099762 SAI	
NONE	04-06-2000	U.S. EPA - SAN FRANCISCO, CA						
CORRESPONDENCE	5090.3.A.	YEE, R.						
NONE	NONE	NAVFAC - EFA WEST						
30								
AR_N60036_000593	01-21-1997	PINASCO, J.	REVIEW AND COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT, INLAND AREA SITES (INCLUDES HERD AND DEPARTMENT OF FISH AND GAME COMMENTS DATED 17 JANUARY 1997, AND VARIOUS ATTACHMENTS)	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0024 30099762 SAI	
NONE	04-06-2000	DTSC - SACRAMENTO, CA						
CORRESPONDENCE	5090.3.A.	YEE, R.						
NONE	NONE	NAVFAC - EFA WEST						
17								
AR_N60036_000594	01-27-1997	GLADSTONE, S.	REVIEW AND COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT, INLAND AREA SITES	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00027 SITE 00241	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0024 30099762 SAI	
NONE	04-06-2000	CRWQCB - OAKLAND, CA						
CORRESPONDENCE	5090.3.A.	YEE, R.						
NONE	NONE	NAVFAC - EFA WEST						
18								
AR_N60036_000611	05-20-1998	WONG, W.	TRANSMITTAL OF THE DRAFT RESULTS OF SOIL REMOVAL AT NAPALM TRENCH INLAND AREA (ENCLOSURE IS RECORD # 612)	ADMIN RECORD	SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0025 30099762 SAI	
EFAW SER	04-06-2000	NAVFAC - EFA WEST						
10122/8141	5090.3.A.							
CORRESPONDENCE	NONE	MULTIPLE AGENCIES						
NONE								
3								
SF_N60036_000612	05-29-1998	WICKE, A.	DRAFT RESULTS OF SOIL REMOVAL AT NAPALM TRENCH INLAND AREA [SEE RECORD # 611 - NAVFAC EFAW TRANSMITTAL LETTER]	SENSITIVE SITE FILE	SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0025 30099762 SAI	
NONE	04-06-2000	TETRA TECH EM, INC.						
REPORT	5090.3.C.	FISHER, C.						
N62474-94-D-7609	CTO 0035	NAVFAC - EFA WEST						
30								

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_000622</b> EFAW SER 10122/8208 CORRESPONDENCE NONE 10	<b>08-24-1998</b> 04-06-2000 5090.3.A. NONE	WONG, W. NAVFAC - EFA WEST  MULTIPLE AGENCIES	TRANSMITTAL OF THE 1) DRAFT PROPOSED PLAN FOR INLAND AREA SITES, AND 2) DRAFT RECORD OF DECISION, INLAND AREA SITES (W/ ENCLOSURE 1, AND ENCLOSURE 2 IS RECORD # 675)	ADMIN RECORD SENSITIVE	SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0025 30099762 SAI	
<b>SF_N60036_000623</b> NONE REPORT NONE 59	<b>08-24-1998</b> 04-06-2000 5090.3.C. NONE	NAVFAC - EFA WEST  MULTIPLE AGENCIES	DRAFT RECORD OF DECISION, INLAND AREA SITES	SENSITIVE SITE FILE	BLDG 0000007SH5 BLDG IA-20 BLDG IA-24 SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0025 30099762 SAI	
<b>AR_N60036_000624</b> NONE CORRESPONDENCE NONE 3	<b>09-22-1998</b> 04-06-2000 5090.3.A. NONE	MOUTOUX, N. U.S. EPA - SAN FRANCISCO, CA FISHER, C. NAVFAC - EFA WEST	REVIEW AND COMMENTS ON THE PROPOSED PLAN FOR NO FURTHER ACTION; AND RECORD OF DECISION AT INLAND SITES [SEE RECORD # 622 - PROPOSED PLAN, AND RECORD # 623 - RECORD OF DECISION]	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0025 30099762 SAI	
<b>AR_N60036_000625</b> EFAW SER 10122/8329 CORRESPONDENCE NONE 4	<b>11-25-1998</b> 04-06-2000 5090.3.A. NONE	WONG, W. NAVFAC - EFA WEST  MULTIPLE AGENCIES	TRANSMITTAL OF THE 1) DRAFT PROPOSED PLAN TO TAKE NO ACTION AT INLAND AREA SITES, AND 2) RESPONSES TO COMMENTS ON THE DRAFT RECORD OF DECISION, INLAND AREA SITES (W/ ENCLOSURE 2, AND ENCLOSURE 1 IS RECORD # 629)	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0025 30099762 SAI	
<b>SF_N60036_000629</b> NONE FACT SHEET NONE 8	<b>03-01-1999</b> 04-06-2000 5090.3.C. NONE	NAVFAC - EFA WEST  MULTIPLE AGENCIES	FACT SHEET: DRAFT PROPOSED PLAN TO TAKE NO ACTION AT INLAND AREA SITES [SEE RECORD # 625 - NAVFAC EFAW TRANSMITTAL LETTER]	SENSITIVE SITE FILE	SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0025 30099762 SAI	

UIC No. _ Rec. No.	Record Date	Author				Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	SWDIV Box No(s)	FRC Warehouse
Contract No.	CTO No.	Recipient Affil.				CD No.	FRC Box No(s)
Approx. # Pages							
<b>AR_N60036_000636</b> EFAW SER 10122/8057 CORRESPONDENCE NONE 2	<b>12-19-1997</b> 04-06-2000 5090.3.A. NONE	FISHER, C. NAVFAC - EFA WEST  MULTIPLE AGENCIES	FINALIZATION OF THE DRAFT FINAL REMEDIAL INVESTIGATION REPORT FOR INLAND AREA SITES IN ACCORDANCE WITH THE FEDERAL FACILITY SITE REMEDICATION AGREEMENT	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00027 SITE 00241	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0025 30099762 SAI
<b>AR_N60036_000672</b> NONE CORRESPONDENCE NONE 1	<b>06-16-1998</b> 04-06-2000 5090.3.A. NONE	MOUTOUX, N. U.S. EPA - SAN FRANCISCO, CA FISHER, C. NAVFAC - EFA WEST	REVIEW AND CONCURRENCE WITH THE DRAFT RESULTS OF SOIL REMOVAL AT NAPALM TRENCH, INLAND AREA (SEE RECORD # 612 - DRAFT RESULTS OF SOIL REMOVAL)	ADMIN RECORD	SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0027 30099762 SAI
<b>SF_N60036_000675</b> NONE REPORT N62474-94-D-7609 59	<b>07-20-1998</b> 04-06-2000 5090.3.C. CTO 0141	WICKE, A. TETRA TECH EM, INC. FISHER, C. NAVFAC - EFA WEST	DRAFT RECORD OF DECISION, INLAND AREA SITES	SENSITIVE SITE FILE	SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0027 30099762 SAI
<b>AR_N60036_000681</b> NONE FACT SHEET NONE 8	<b>03-01-1999</b> 04-06-2000 5090.3.A. NONE	FISHER, C. NAVFAC - EFA WEST  PUBLIC	FACT SHEET: PROPOSED PLAN TO TAKE NO ACTION AT INLAND AREA SITES	ADMIN RECORD SENSITIVE	SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0027 30099762 SAI
<b>AR_N60036_000685</b> EFAW SER 10122/6299 CORRESPONDENCE NONE 3	<b>06-29-1999</b> 04-06-2000 5090.3.A. NONE	WONG, W. NAVFAC - EFA WEST  MULTIPLE AGENCIES	TRANSMITTAL OF THE DRAFT FINAL RECORD OF DECISION, INLAND AREA SITES (ENCLOSURE IS RECORD # 687)	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0027 30099762 SAI
<b>AR_N60036_000686</b> NONE CORRESPONDENCE NONE 2	<b>09-22-1998</b> 04-06-2000 5090.3.A. NONE	NAVFAC - EFA WEST  U.S. EPA - SAN FRANCISCO, CA	RESPONSES TO COMMENTS ON THE DRAFT RECORD OF DECISION, FOR INLAND AREA SITES (SEE RECORD # 623 - DRAFT RECORD OF DECISION)	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0027 30099762 SAI

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>SF_N60036_000687</b>	<b>06-01-1999</b>	WONG, W.	DRAFT FINAL RECORD OF DECISION FOR INLAND AREA SITES (SEE RECORD # 745 - REVISED DRAFT FINAL RECORD OF DECISION AND RECORD # 685 - NAVFAC EFAW TRANSMITTAL LETTER]	SENSITIVE	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0027	
NONE	04-06-2000	NAVFAC - EFA WEST		SITE FILE	SITE 00017		30099762 SAI	
REPORT	5090.3.C.				SITE 00022	IMAGED		
NONE	NONE	NWS CONCORD - CONCORD, CA			SITE 00027	CONC_002		
68								
<b>AR_N60036_000695</b>	<b>08-27-1999</b>	ELLIS, S.	REVIEW AND COMMENTS ON THE DRAFT FINAL RECORD OF DECISION FOR INLAND AREA SITES (SEE RECORD # 687 - DRAFT FINAL RECORD OF DECISION)	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0027	
NONE	04-06-2000	CALIFORNIA DEPARTMENT OF FISH AND GAME - SACRAMENTO, CA			SITE 00017		30099762 SAI	
CORRESPONDENCE	5090.3.A.	FISHER, C.			SITE 00022	IMAGED		
NONE	NONE	NAVFAC - EFA WEST			SITE 00027	CONC_002		
2								
<b>SF_N60036_000702</b>	<b>07-22-2000</b>	RIVERA, G.	TRANSMITTAL OF THE 20 JUNE 2000 REMEDIAL PROJECT MANAGERS (RPM) MEETING MINUTES (W/ ENCLOSURE)	SITE FILE	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0027	
EFAW SER	11-02-2000	NAVFAC - EFA WEST			SITE 00027		30099762 SAI	
052GAR/5090	5090.3.C.				SITE 00029	IMAGED		
CORRESPONDENCE	NONE	MULTIPLE AGENCIES			SWMU 00001	CONC_002		
NONE					UST E-111			
6								
<b>SF_N60036_000703</b>	<b>10-05-2000</b>	RIVERA, G.	TRANSMITTAL OF THE 05 SEPTEMBER 2000 REMEDIAL PROJECT MANAGERS (RPM) MEETING MINUTES (W/ ENCLOSURE)	SITE FILE	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0027	
EFAW SER	11-02-2000	NAVFAC - EFA WEST			SITE 00017		30099762 SAI	
052GAR/5090	5090.3.C.				SITE 00022	IMAGED		
CORRESPONDENCE	NONE	MULTIPLE AGENCIES			SITE 00027	CONC_002		
NONE					SITE 00029			
5								
<b>SF_N60036_000707</b>	<b>04-09-2001</b>	RIVERA, G.	TRANSMITTAL OF THE 20 MARCH 2001 REMEDIAL PROJECT MANAGERS (RPM) MEETING MINUTES (W/ ENCLOSURE)	SITE FILE	AOC 000001	FRC - PERRIS	L181-09-0009 BX 0027	
EFAW SER	07-11-2001	NAVFAC - EFA WEST			SITE 00013		30099762 SAI	
052GAR/5090	5090.3.C.				SITE 00017	IMAGED		
CORRESPONDENCE	NONE	MULTIPLE AGENCIES			SITE 00022	CONC_002		
NONE					SITE 00027			
5					SITE 00029			

UIC No. _ Rec. No.	Record Date	Author				Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	SWDIV Box No(s)	FRC Warehouse
Contract No.	CTO No.	Recipient Affil.				CD No.	FRC Box No(s)
Approx. # Pages							
<b>SF_N60036_000745</b> DS-0141-17220 REPORT N62474-94-D-7609 69	<b>10-30-2001</b> 12-14-2001 5090.3.C. CTO 0141	TETRA TECH EM, INC.  NAVFAC - EFA WEST	REVISED DRAFT FINAL RECORD OF DECISION, INLAND AREA SITES (SEE RECORD # 763 - NAVFAC EFAW TRANSMITTAL LETTER, AND RECORD # 687 - DRAFT FINAL RECORD OF DECISION)	SENSITIVE SITE FILE	BLDG IA-24 SITE 00013 SITE 00017	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0028 30099762 SAI
<b>AR_N60036_000746</b> NONE CORRESPONDENCE NONE 3	<b>01-07-1998</b> 02-21-2002 5090.3.A. NONE	SUER, L. U.S. EPA - SAN FRANCISCO, CA FISHER, C. NAVFAC - EFA WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION REPORT, INLAND AREA SITES (SEE RECORD # 551 - DRAFT FINAL REMEDIAL INVESTIGATION REPORT)	ADMIN RECORD	SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0028 30099762 SAI
<b>AR_N60036_000755</b> NONE CORRESPONDENCE NONE 1	<b>12-19-2001</b> 02-21-2002 5090.3.A. NONE	RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA RIVERA, G. NAVFAC - EFA WEST	APPROVAL FOR EXTENSION TO RESPOND TO COMMENTS ON AREA OF CONCERN PRELIMINARY ASSESSMENT ADDENDUM, AND REQUEST FOR EXTENSION TO REVIEW AND COMMENT ON REVISED DRAFT FINAL RECORD OF DECISION	ADMIN RECORD INFO REPOSITORY	AOC 000001 SITE 00013 SITE 00017	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0029 30099762 SAI
<b>AR_N60036_000756</b> NONE CORRESPONDENCE NONE 5	<b>12-21-2001</b> 02-21-2002 5090.3.A. NONE	MEILLIER, L. CRWQCB - OAKLAND, CA RIVERA, G. NAVFAC - EFA WEST	REVIEW AND COMMENTS ON THE REVISED DRAFT FINAL RECORD OF DECISION INLAND AREA (SEE RECORD # 745 - REVISED DRAFT FINAL RECORD OF DECISION)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00013 SITE 00017	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0029 30099762 SAI
<b>AR_N60036_000760</b> NONE CORRESPONDENCE NONE 8	<b>01-10-2002</b> 02-21-2002 5090.3.A. NONE	RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA RIVERA, G. NAVFAC - EFA WEST	REVIEW AND COMMENTS ON THE REVISED DRAFT FINAL RECORD OF DECISION, INLAND AREA SITES (SEE RECORD # 745 - REVISED DRAFT FINAL RECORD OF DECISION)	ADMIN RECORD INFO REPOSITORY	BLDG IA-24 BLDG IA-55 SITE 00013 SITE 00017 WELL 00010	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0029 30099762 SAI
<b>AR_N60036_000763</b> EFAW SER 052GAR/5090 CORRESPONDENCE NONE 3	<b>10-30-2001</b> 02-21-2002 5090.3.A. NONE	RIVERA, G. NAVFAC - EFA WEST  MULTIPLE AGENCIES	TRANSMITTAL OF THE REVISED DRAFT FINAL RECORD OF DECISION, INLAND AREA SITES (ENCLOSURE IS RECORD # 745)	ADMIN RECORD	SITE 00013 SITE 00017	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0029 30099762 SAI

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>SF_N60036_000768</b>	<b>12-18-2001</b>	RIVERA, G.	TRANSMITTAL OF THE 29 NOVEMBER 2001	SITE FILE	AOC 000001	FRC - PERRIS	L181-09-0009 BX 0029	
EFAW SER	02-21-2002	NAVFAC - EFA	REMEDIAL PROJECT MANAGERS (RPM)		BLDG IA-25		30099762 SAI	
052GAR/5090	5090.3.C.	WEST	MEETING MINUTES (W/ ENCLOSURE)		SITE 00001	IMAGED		
CORRESPONDENCE	NONE				SITE 00013	CONC_002		
NONE		MULTIPLE			SITE 00017			
6		AGENCIES			SITE 00022			
					SITE 00027			
					SITE 00029			
<b>SF_N60036_000773</b>	<b>11-13-2001</b>	RIVERA, G.	TRANSMITTAL OF THE 23 OCTOBER 2001	SITE FILE	AOC 000001	FRC - PERRIS	L181-09-0009 BX 0029	
EFAW SER	02-21-2002	NAVFAC - EFA	REMEDIAL PROJECT MANAGERS (RPM)		SITE 00001		30099762 SAI	
052GAR/5090	5090.3.C.	WEST	MEETING MINUTES (W/ ENCLOSURE) [SEE		SITE 00013	IMAGED		
CORRESPONDENCE	NONE		RECORD # 774 - REVISED MEETING		SITE 00017	CONC_002		
NONE		MULTIPLE	MINUTES]		SITE 00029			
6		AGENCIES			SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
<b>SF_N60036_000774</b>	<b>11-30-2001</b>	RIVERA, G.	TRANSMITTAL OF THE REVISED 23	SITE FILE	AOC 000001	FRC - PERRIS	L181-09-0009 BX 0029	
EFAW SER	02-21-2002	NAVFAC - EFA	OCTOBER 2001 REMEDIAL PROJECT		BLDG IA-25		30099762 SAI	
052GAR/5090	5090.3.C.	WEST	MANAGER (RPM) MEETING MINUTES (W/		SITE 00001	IMAGED		
CORRESPONDENCE	NONE		ENCLOSURE) [SEE RECORD # 773 - 23		SITE 00013	CONC_002		
NONE		MULTIPLE	OCTOBER 2001 MEETING MINUTES]		SITE 00017			
6		AGENCIES			SITE 00029			
					SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
<b>AR_N60036_000782</b>	<b>06-22-1998</b>	LANDIS, A.	REVIEW AND COMMENTS ON THE DRAFT	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0029	
NONE	02-21-2002	DTSC -	RESULTS OF SOIL REMOVAL, NAPALM				30099762 SAI	
CORRESPONDENCE	5090.3.A.	SACRAMENTO, CA	TRENCH INLAND AREA (SEE RECORD #			IMAGED		
NONE	NONE	FISHER, C.	612 - DRAFT RESULTS)			CONC_002		
2		NAVFAC - EFA						
		WEST						

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
<b>AR_N60036_000784</b>	<b>06-20-2002</b>	RIVERA, G.	TRANSMITTAL OF THE RECORD OF	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0029		
EFAW SER	06-24-2002	NAVFAC - EFA	DECISION, INLAND AREA SITES	INFO REPOSITORY	SITE 00017		30099762 SAI		
052GAR/027	5090.3.A.	WEST	(ENCLOSURE IS RECORD # 803)			IMAGED			
CORRESPONDENCE	NONE					CONC_002			
NONE		MULTIPLE							
3		AGENCIES							
<b>AR_N60036_000785</b>	<b>06-20-2002</b>		RESPONSES TO COMMENTS ON THE	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0029		
TC-0141-11614	06-24-2002	TETRA TECH EM,	REVISED DRAFT FINAL RECORD OF	INFO REPOSITORY	SITE 00017		30099762 SAI		
CORRESPONDENCE	5090.3.A.	INC.	DECISION, INLAND AREA SITES (INCLUDES			IMAGED			
N62474-94-D-7609	CTO 0141		NAVFAC EFAW TRANSMITTAL LETTER)			CONC_002			
27		MULTIPLE	[SEE RECORDS # 756 AND # 760 -						
		AGENCIES	COMMENTS]						
<b>AR_N60036_000786</b>	<b>06-17-2002</b>	RIVERA, G.	TRANSMITTAL OF THE DRAFT	ADMIN RECORD	AOC 000001	FRC - PERRIS	L181-09-0009 BX 0029		
EFAW SER	06-24-2002	NAVFAC - EFA	AMENDMENT TO THE SITE MANAGEMENT		BLDG IA-25		30099762 SAI		
052GAR/025	5090.3.A.	WEST	PLAN (W/ ENCLOSURE)		SITE 00001	IMAGED			
CORRESPONDENCE	NONE				SITE 00002	CONC_002			
NONE		MULTIPLE			SITE 00003				
13		AGENCIES			SITE 00004				
					SITE 00005				
					SITE 00006				
					SITE 00009				
					SITE 00011				
					SITE 00013				
					SITE 00017				
					SITE 00022				
					SITE 00025				
					SITE 00026				
					SITE 00027				
					SITE 00028				
					SITE 00029				
					SITE 00030				
					SWMU 00002				
					SWMU 00005				
					SWMU 00007				
					SWMU 00018				

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
<b>AR_N60036_000790</b>	<b>05-16-2002</b>	RIVERA, G.	TRANSMITTAL OF THE 13 FEBRUARY 2002 MEETING MINUTES FOR THE RECORD OF DECISION (ENCLOSURE IS RECORD # 804)	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0029		
EFAW SER	06-24-2002	NAVFAC - EFA WEST		INFO REPOSITORY	SITE 00017		30099762 SAI		
052GAR/019	5090.3.A.					IMAGED			
CORRESPONDENCE	NONE					CONC_002			
NONE		MULTIPLE AGENCIES							
3									
<b>SF_N60036_000801</b>	<b>03-18-2002</b>	RIVERA, G.	TRANSMITTAL OF THE 29 JANUARY 2002 REMEDIAL PROJECT MANAGERS (RPM) MEETING MINUTES (ENCLOSURE IS RECORD # 809)	SITE FILE	SITE 00001	FRC - PERRIS	L181-09-0009 BX 0029		
EFAW SER	06-24-2002	NAVFAC - EFA WEST			SITE 00013		30099762 SAI		
052GAR/004	5090.3.C.				SITE 00017	IMAGED			
CORRESPONDENCE	NONE				SITE 00022	CONC_002			
NONE		MULTIPLE AGENCIES			SITE 00027				
3					SITE 00029				
<b>AR_N60036_000803</b>	<b>06-24-2002</b>		RECORD OF DECISION, INLAND AREA SITES (SEE RECORD # 784 - NAVFAC EFAW TRANSMITTAL LETTER)	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0029		
DS-0141-17748	06-25-2002	TETRA TECH EM, INC.		INFO REPOSITORY	SITE 00017		30099762 SAI		
REPORT	5090.3.A.			SENSITIVE		IMAGED			
N62474-94-D-7609	CTO 0141	NAVFAC - EFA WEST				CONC_002			
89									
<b>AR_N60036_000804</b>	<b>02-13-2002</b>		13 FEBRUARY 2002 MEETING MINUTES ON THE RECORD OF DECISION [SEE RECORD # 790 - NAVFAC EFAW TRANSMITTAL LETTER]	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0029		
TC-0141-11570	06-25-2002	TETRA TECH EM, INC.		INFO REPOSITORY	SITE 00017		30099762 SAI		
MINUTES	5090.3.A.					IMAGED			
N62474-94-D-7609	CTO 0141	NAVFAC - EFA WEST				CONC_002			
11									
<b>SF_N60036_000809</b>	<b>01-29-2002</b>		29 JANUARY 2002 REMEDIAL PROJECT MANAGERS (RPM) MEETING MINUTES (SEE RECORD # 801 - NAVFAC EFAW TRANSMITTAL LETTER)	SITE FILE	SITE 00001	FRC - PERRIS	L181-09-0009 BX 0029		
NONE	06-25-2002	NAVFAC - EFA WEST			SITE 00013		30099762 SAI		
MINUTES	5090.3.C.				SITE 00017	IMAGED			
NONE	NONE				SITE 00022	CONC_002			
4		MULTIPLE AGENCIES			SITE 00027				
					SITE 00029				

UIC No. _ Rec. No.	Record Date	Author	Author Affil.	Location	FRC Accession No.		
Doc. Control No.	Prc. Date	Author	Author Affil.	SWDIV Box No(s)	FRC Warehouse		
Record Type	SSIC No.	Recipient	Recipient Affil.	CD No.	FRC Box No(s)		
Contract No.	CTO No.	Subject	Distribution	Sites			
Approx. # Pages							
<b>AR_N60036_000818</b>	<b>01-07-2002</b>						
TC-0032-11436	06-25-2002	TETRA TECH EM, INC.	07 JANUARY 2002 FINAL RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES [SEE RECORD # 797 - NAVFAC EFAW TRANSMITTAL LETTER]	ADMIN RECORD	AOC 000001	FRC - PERRIS	L181-09-0009 BX 0030
MINUTES	5090.3.A.				SITE 00002		30099762 SAI
N62474-94-D-7609	CTO 0032	RESTORATION ADVISORY BOARD			SITE 00009	IMAGED	
32					SITE 00011	CONC_002	
					SITE 00013		
					SITE 00017		
					SITE 00022		
					SITE 00027		
					SITE 00030		
					SWMU 00002		
					SWMU 00005		
					SWMU 00007		
					SWMU 00018		
<b>AR_N60036_000838</b>	<b>08-16-2002</b>	RIVERA, G.	TRANSMITTAL OF THE 1) DRAFT FINAL AMENDMENT TO SITE MANAGEMENT PLAN, AND 2) RESPONSES TO COMMENTS ON THE DRAFT AMENDMENT TO SITE MANAGEMENT PLAN (W/ ENCLOSURES)	ADMIN RECORD	AOC 000001	FRC - PERRIS	L181-09-0009 BX 0030
EFAW SER	10-15-2002	NAVFAC - EFA WEST			SITE 00001		30099762 SAI
052GAR/035	5090.3.A.				SITE 00002	IMAGED	
CORRESPONDENCE	NONE	MULTIPLE AGENCIES			SITE 00003	CONC_002	
NONE					SITE 00004		
13					SITE 00005		
					SITE 00006		
					SITE 00009		
					SITE 00011		
					SITE 00013		
					SITE 00017		
					SITE 00022		
					SITE 00025		
					SITE 00026		
					SITE 00027		
					SITE 00028		
					SITE 00029		
					SITE 00030		
					SWMU 00002		
					SWMU 00005		
					SWMU 00007		
					SWMU 00018		

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
AR_N60036_000860	09-26-2002	RAMSEY, P.	REVIEW AND FINAL COMMENTS ON THE RECORD OF DECISION, INLAND AREA SITES (SEE RECORD # 803 - RECORD OF DECISION)	ADMIN RECORD	SITE 00013 SITE 00017	FRC - PERRIS	L181-09-0009 BX 0030 30099762 SAI	
NONE	10-15-2002	U.S. EPA - SAN FRANCISCO, CA				IMAGED		
CORRESPONDENCE	5090.3.A.	RIVERA, G.				CONC_002		
NONE	NONE	NAVFAC - EFA WEST						
4								
AR_N60036_000880	09-24-2002	RAMSEY, P.	REVIEW AND FINAL COMMENTS ON THE RECORD OF DECISION, INLAND AREA SITES (SEE RECORD # 803 - RECORD OF DECISION)	ADMIN RECORD INFO REPOSITORY	SITE 00013 SITE 00017	FRC - PERRIS	L181-09-0009 BX 0031 30099762 SAI	
NONE	04-07-2003	U.S. EPA - SAN FRANCISCO, CA				IMAGED		
CORRESPONDENCE	5090.3.A.	RIVERA, G.				CONC_002		
NONE	NONE	NAVFAC - EFA WEST						
4								
AR_N60036_000890	11-21-2002	RAMSEY, P.	APPROVAL OF THE REVISED DRAFT FINAL AMENDMENT TO THE SITE MANAGEMENT PLAN (W/ ENCLOSURE) [SEE RECORD # 889 - NAVFAC EFAW TRANSMITTAL LETTER]	ADMIN RECORD INFO REPOSITORY	AOC 000001 SITE 00001 SITE 00002 SITE 00003 SITE 00004 SITE 00006 SITE 00009 SITE 00011 SITE 00013 SITE 00017 SITE 00022 SITE 00025 SITE 00026 SITE 00027 SITE 00028 SITE 00029 SITE 00030 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS	L181-09-0009 BX 0031 30099762 SAI	
NONE	04-07-2003	U.S. EPA - SAN FRANCISCO, CA				IMAGED		
CORRESPONDENCE	5090.3.A.	RIVERA, G.				CONC_002		
NONE	NONE	NAVFAC - EFA WEST						
12								

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_000896</b>	<b>12-19-2002</b>	RIVERA, G.	TRANSMITTAL OF THE RESPONSES TO COMMENTS ON THE REVISED DRAFT FINAL RECORD OF DECISION, INLAND AREA SITES (ENCLOSURE IS RECORD # 897)	ADMIN RECORD INFO REPOSITORY	SITE 00013 SITE 00017	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0031 30099762 SAI	
EFAW SER 052GAR/060 CORRESPONDENCE NONE 3	04-07-2003 5090.3.A. NONE	NAVFAC - EFA WEST  MULTIPLE AGENCIES						
<b>AR_N60036_000897</b>	<b>12-19-2002</b>	TETRA TECH EM, INC.	RESPONSES TO COMMENTS ON THE REVISED DRAFT FINAL RECORD OF DECISION, INLAND AREA SITES (SEE RECORD # 860 - FINAL COMMENTS, AND RECORD # 896 - NAVFAC EFAW TRANSMITTAL LETTER)	ADMIN RECORD INFO REPOSITORY	SITE 00013 SITE 00017	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0031 30099762 SAI	
TC-0324-11813 CORRESPONDENCE N62474-94-D-7609 6	04-08-2003 5090.3.A. CTO 0324	NAVFAC - EFA WEST						
<b>AR_N60036_000900</b>	<b>12-20-2002</b>	RIVERA, G.	TRANSMITTAL OF THE DRAFT FINAL RECORD OF DECISION, INLAND AREA SITES (ENCLOSURE IS RECORD # 803)	ADMIN RECORD INFO REPOSITORY	SITE 00013 SITE 00017	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0031 30099762 SAI	
EFAW SER 052GAR/062 CORRESPONDENCE NONE 2	04-08-2003 5090.3.A. NONE	NAVFAC - EFA WEST  MULTIPLE AGENCIES						
<b>AR_N60036_000902</b>	<b>12-20-2002</b>	RIVERA, G.	LETTER REQUESTING AN EXTENSION FOR THE SUBMITTAL OF REMOVAL ACTION SUMMARY REPORT, COMMUNITY RELATIONS PLAN, AND RECORDS OF DECISION	ADMIN RECORD INFO REPOSITORY	SITE 00013 SITE 00017	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0031 30099762 SAI	
EFAW SER 052GAR/064 CORRESPONDENCE NONE 2	04-08-2003 5090.3.A. NONE	NAVFAC - EFA WEST RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA						

UIC No. _ Rec. No.	Record Date	Author					Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	CD No.		FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								
<b>AR_N60036_000906</b>	<b>01-01-2003</b>	SMITH, G.	FACT SHEET: STATUS OF THE TIDAL AREA	ADMIN RECORD	SITE 00001		FRC - PERRIS	L181-09-0009 BX 0031
NONE	04-08-2003	NWS SEAL	LANDFILL, RESTORATION ADVISORY	INFO REPOSITORY	SITE 00002			30099762 SAI
FACT SHEET	5090.3.A.	BEACH - SEAL	BOARD (RAB), UPDATE OF THE	SENSITIVE	SITE 00003	IMAGED		
NONE	NONE	BEACH, CA	COMMUNITY RELATIONS PLAN AND		SITE 00004	CONC_002		
8		PUBLIC	ONGOING INVESTIGATIONS		SITE 00005			
					SITE 00006			
					SITE 00009			
					SITE 00011			
					SITE 00013			
					SITE 00017			
					SITE 00022			
					SITE 00025			
					SITE 00026			
					SITE 00028			
					SITE 00029			
					SITE 00030			
					SITE 00031			
					SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
<b>AR_N60036_000910</b>	<b>01-29-2003</b>	SCHUTZ, M.	REQUEST FOR INFORMATION REGARDING	ADMIN RECORD	"PERCHLORATE		FRC - PERRIS	L181-09-0009 BX 0031
NONE	04-08-2003	U.S. EPA - SAN	PERCHLORATE SAMPLING AT BURN AREA	INFO REPOSITORY	" SEARCH -			30099762 SAI
CORRESPONDENCE	5090.3.A.	FRANCISCO, CA	[SEE RECORD # 929 - RESPONSE TO		ROUND 1	IMAGED		
NONE	NONE	TACTAY, T.	REQUEST]		SITE 00013	CONC_002		
2		NAVFAC - EFA			SITE 00017			
		WEST						

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
<b>AR_N60036_000928</b> NAVY REGION SW SER N45JIB/0144 CORRESPONDENCE NONE 4	<b>04-24-2003</b> 08-05-2003 5090.3.A. NONE	GORDON, B. COMMANDER NAVY REGION SOUTHWEST - SAN DIEGO, CA TANASESCU, G. RESTORATION ADVISORY BOARD MEMBER	RESPONSE TO REQUEST FOR A 30-DAY EXTENSION FOR COMMENTS ON TIDAL AREA LANDFILL AND LITIGATION AREA DOCUMENTS	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00001 SITE 00002 SITE 00009 SITE 00011 SITE 00013 SITE 00030	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0031 30099762 SAI		
<b>AR_N60036_000929</b> NONE CORRESPONDENCE NONE 4	<b>04-30-2003</b> 08-05-2003 5090.3.A. NONE	TYAHLA, S. NAVFAC - EFA WEST SHUTZ, M. U.S. EPA - SAN FRANCISCO, CA	RESPONSE TO THE REQUEST REGARDING PERCHLORATE SAMPLING, AND TRANSMITTAL OF THE DRAFT ADDENDUM SAMPLING AND ANALYSIS PLAN, ADDITIONAL GROUNDWATER INVESTIGATION (ENCLOSURES ARE RECORD # 910 - REQUEST, AND RECORD # 934 - DRAFT ADDENDUM)	ADMIN RECORD BASE INFO REPOSITORY	"PERCHLORATE " SEARCH - ROUND 1 SITE 00013 SITE 00017 SWMU 00001 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0031 30099762 SAI		
<b>SF_N60036_000934</b> GSA-0121-00001 AND GS-10F-0076K CORRESPONDENCE N62474-03-F-4032 38	<b>04-30-2003</b> 08-05-2003 5090.3.C. CTO 0121	WILSON, P. TETRA TECH EM, INC. TYAHLA, S. NAVFAC - EFA WEST	DRAFT ADDENDUM SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN), ADDITIONAL GROUNDWATER INVESTIGATION	SENSITIVE SITE FILE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00013 SITE 00022 SWMU 00001 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0031 30099762 SAI		

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
<b>AR_N60036_000936</b>	<b>05-16-2003</b>	MEILLIER, L.	REVIEW AND COMMENTS ON THE DRAFT ADDENDUM SAMPLING AND ANALYSIS PLAN, ADDITIONAL GROUNDWATER INVESTIGATION (SEE RECORD # 934 - DRAFT ADDENDUM SAMPLING AND ANALYSIS PLAN)	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	"PERCHLORATE" SEARCH - ROUND 1 SITE 00013 SITE 00022 SWMU 00001 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0031 30099762 SAI		
NONE	08-05-2003	CRWQCB - OAKLAND, CA							
CORRESPONDENCE	5090.3.A.	TYAHLA, S.							
NONE	NONE	NAVFAC - EFA WEST							
6									
<b>AR_N60036_000938</b>	<b>05-21-2003</b>	RAMSEY, P.	CONDITIONAL APPROVAL OF THE DRAFT ADDENDUM SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) ADDITIONAL GROUNDWATER INVESTIGATION (SEE RECORD # 934 - DRAFT ADDENDUM)	ADMIN RECORD BASE INFO REPOSITORY	"PERCHLORATE" SEARCH - ROUND 1 SITE 00013 SITE 00022 SWMU 00001 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0031 30099762 SAI		
NONE	08-05-2003	U.S. EPA - SAN FRANCISCO, CA							
CORRESPONDENCE	5090.3.A.	TYAHLA, S.							
NONE	NONE	NAVFAC - EFA WEST							
2									
<b>AR_N60036_000946</b>	<b>06-16-2003</b>	TYAHLA, S.	TRANSMITTAL OF THE RESPONSES TO COMMENTS ON THE DRAFT ADDENDUM SAMPLING AND ANALYSIS PLAN, ADDITIONAL GROUNDWATER INVESTIGATION (ENCLOSURE IS RECORD # 947)	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013 SITE 00022 SWMU 00001 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0032 30099762 SAI		
NONE	08-06-2003	NAVFAC - EFA WEST							
CORRESPONDENCE	5090.3.A.								
NONE	NONE	MULTIPLE AGENCIES							
4									

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
<b>AR_N60036_000947</b> GSA-0121-00002 AND GS-10F-0076K CORRESPONDENCE N62474-03-F-4032 61	<b>06-16-2003</b> 08-06-2003 5090.3.A. CTO 0121	TETRA TECH EM, INC.  NAVFAC - EFA WEST	RESPONSE TO COMMENTS ON THE DRAFT ADDENDUM SAMPLING AND ANALYSIS PLAN, ADDITIONAL GROUNDWATER INVESTIGATION [SEE RECORD # 946 - NAVFAC EFAW TRANSMITTAL LETTER]	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00013 SITE 00022 SWMU 00001 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0032 30099762 SAI		
<b>AR_N60036_000982</b> NONE CORRESPONDENCE NONE 3	<b>09-03-2003</b> 11-18-2003 5090.3.A. NONE	TYAHLA, S. NAVFAC - EFA WEST  MULTIPLE AGENCIES	TRANSMITTAL OF THE DRAFT GROUNDWATER SAMPLING SUMMARY REPORT (ENCLOSURE IS RECORD # 49)	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013 SITE 00022	FRC - PERRIS  IMAGED CONC_001	L181-09-0009 BX 0033 30099762 SAI		
<b>SF_N60036_001001</b> NONE REPORT NONE 15	<b>09-01-2003</b> 11-18-2003 5090.3.C. NONE	STRAUSS, P. PM STRAUSS AND ASSOCIATES  NAVFAC - EFA WEST	DRAFT REPORT FOR BURN AREA	SITE FILE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0033 30099762 SAI		
<b>AR_N60036_001002</b> NONE CORRESPONDENCE NONE 4	<b>10-09-2003</b> 11-18-2003 5090.3.A. NONE	RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA TYAHLA, S. NAVFAC - EFA WEST	COMMENTS ON THE DRAFT GROUNDWATER SAMPLING SUMMARY REPORT [SEE RECORD # 49 - DRAFT GROUNDWATER SAMPLING SUMMARY REPORT]	ADMIN RECORD BASE INFO REPOSITORY	"PERCHLORATE " SEARCH - ROUND 1 SITE 00013 SITE 00022	FRC - PERRIS  IMAGED CONC_001	L181-09-0009 BX 0033 30099762 SAI		
<b>SF_N60036_001020</b> GSA-0121-00006 AND GS-10F-0076K REPORT N62474-03-F-4032 125	<b>11-04-2003</b> 02-17-2004 5090.3.C. CTO 0121	WILSON, P. TETRA TECH EM, INC.  NAVFAC - EFA WEST	DRAFT FINAL GROUNDWATER SAMPLING SUMMARY REPORT [SEE RECORD # 1021 - NAVFAC EFAW TRANSMITTAL LETTER]	SENSITIVE SITE FILE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00013 SITE 00022	FRC - PERRIS  IMAGED CONC_001	L181-09-0009 BX 0033 30099762 SAI		

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_001021</b>	<b>11-04-2003</b>	TYAHLA, S.	TRANSMITTAL OF THE DRAFT FINAL	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0033	
NONE	02-17-2004	NAVFAC - EFA	GROUNDWATER SAMPLING SUMMARY	BASE	SITE 00022		30099762 SAI	
CORRESPONDENCE	5090.3.A.	WEST	REPORT (ENCLOSURE IS RECORD # 1020)	INFO REPOSITORY		IMAGED		
NONE	NONE					CONC_001		
3		MULTIPLE AGENCIES						
<b>AR_N60036_001047</b>	<b>02-04-2002</b>	MCLEOD, D.	REQUEST FOR EXTENSION OF REVIEW	ADMIN RECORD	AOC 000001	NAVFAC -		
NONE	12-08-2008	RESTORATION	PERIODS FOR DOCUMENTS RELATED TO	BASE	RASS 00001	SOUTHWEST		
CORRESPONDENCE	5090.3.A.	ADVISORY	CLEANUP OF TOXICS	SENSITIVE	RASS 00002			
NONE	NONE	BOARD MEMBER			RASS 00003			
7		RIVERA, G.			SITE 00001			
		NAVFAC - EFA			SITE 00002			
		WEST			SITE 00009			
					SITE 00011			
					SITE 00013			
					SITE 00017			
					SITE 00022			
					SITE 00027			
					SITE 00030			
<b>AR_N60036_001049</b>	<b>03-05-2004</b>	TYAHLA, S.	TRANSMITTAL OF THE DRAFT SAMPLING	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0033	
NONE	05-11-2004	NAVFAC - EFA	AND ANALYSIS PLAN (FIELD SAMPLING	BASE			30099762 SAI	
CORRESPONDENCE	5090.3.A.	WEST	PLAN/QUALITY ASSURANCE PROJECT	INFO REPOSITORY		IMAGED		
NONE	NONE		PLAN) ADDITIONAL CHARACTERIZATION			CONC_002		
3		MULTIPLE AGENCIES	(ENCLOSURE IS RECORD # 1050)					
<b>SF_N60036_001050</b>	<b>03-05-2004</b>	WILSON, P.	DRAFT SAMPLING AND ANALYSIS PLAN	SENSITIVE	"PERCHLORATE	FRC - PERRIS	L181-09-0009 BX 0033	
GSA-0021-00010	05-11-2004	TETRA TECH EM,	(FIELD SAMPLING PLAN/QUALITY	SITE FILE	" SEARCH -		30099762 SAI	
AND GS-10F-0076K	5090.3.C.	INC.	ASSURANCE PROJECT PLAN) ADDITIONAL		ROUND 1	IMAGED		
REPORT	CTO 0021		CHARACTERIZATION [SEE RECORD #		SITE 00013	CONC_002		
N62474-03-F-4032		NAVFAC - EFA	1049 - NAVFAC EFAW TRANSMITTAL					
127		WEST	LETTER]					

UIC No. _ Rec. No.	Record Date	Author					Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	CD No.		FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								
<b>SF_N60036_001070</b>	<b>03-01-2004</b>							
GSA-0121-00007	05-13-2004	TETRA TECH EM, INC.	REVISED DRAFT FINAL RECORD OF DECISION, INLAND AREA [SEE RECORD # 1071 - NAVFAC EFAW TRANSMITTAL LETTER]	SENSITIVE SITE FILE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0034 30099762 SAI	
REPORT	5090.3.C.	U.S. EPA - SAN FRANCISCO, CA						
N62474-03-F-4032	CTO 0121							
60								
<b>AR_N60036_001078</b>	<b>03-11-2004</b>							
NONE	06-01-2004	RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA	APPROVAL OF THE EXTENSION REQUEST FOR THE SITE MANAGEMENT PLAN [SEE RECORD # 1064 - EXTENSION REQUEST]	ADMIN RECORD BASE INFO REPOSITORY	SITE 00001 SITE 00002 SITE 00009 SITE 00011 SITE 00013 SITE 00017 SITE 00022 SITE 00027 SITE 00029 SITE 00030	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0034 30099762 SAI	
CORRESPONDENCE	5090.3.A.	TYAHLA, S.						
NONE	NONE	NAVFAC - EFA WEST						
2								

UIC No. _ Rec. No.	Record Date	Author				Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.				SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.					
Approx. # Pages							
<b>AR_N60036_001079</b>	<b>12-01-2003</b>	STRAUSS, P.	FINAL REPORT: SOLD WASTE	ADMIN RECORD	"PERCHLORATE	FRC - PERRIS	L181-09-0009 BX 0034
NONE	06-01-2004	PM STRAUSS	MANAGEMENT UNITS, INLAND AREA	BASE	" SEARCH -		30099762 SAI
REPORT	5090.3.A.	AND ASSOCIATES		INFO REPOSITORY	ROUND 1	IMAGED	
NONE	NONE	TYAHLA, S.			BLDG IA-12	CONC_002	
46		NAVFAC - EFA			BLDG IA-15		
		WEST			BLDG IA-16		
					BLDG IA-24		
					BLDG IA-24A		
					BLDG IA-24B		
					BLDG IA-43		
					BLDG IA-51		
					BLDG IA-55		
					BLDG IA-7		
					SITE 00013		
					SITE 00017		
					SITE 00022		
					SWMU 00002		
					SWMU 00005		
					SWMU 00007		
					SWMU 00018		
					UST IA-24A		
					UST IA-55		
<b>AR_N60036_001081</b>	<b>03-23-2004</b>	MEILLIER, L.	COMMENTS ON THE DRAFT SAMPLING	ADMIN RECORD	"PERCHLORATE	FRC - PERRIS	L181-09-0009 BX 0034
NONE	06-08-2004	CRWQCB -	AND ANALYSIS PLAN (FIELD SAMPLING	BASE	" SEARCH -		30099762 SAI
CORRESPONDENCE	5090.3.A.	OAKLAND, CA	PLAN/QUALITY ASSURANCE PROJECT	INFO REPOSITORY	ROUND 1	IMAGED	
NONE	NONE	TYAHLA, S.	PLAN) ADDITIONAL CHARACTERIZATION		SITE 00013	CONC_002	
5		NAVFAC - EFA	[SEE RECORD # 1050 - DRAFT SAMPLING				
		WEST	AND ANALYSIS PLAN]				
<b>AR_N60036_001082</b>	<b>04-01-2004</b>	RAMSEY, P.	COMMENTS ON THE DRAFT SAMPLING	ADMIN RECORD	"PERCHLORATE	FRC - PERRIS	L181-09-0009 BX 0034
NONE	06-08-2004	U.S. EPA - SAN	AND ANALYSIS PLAN (FIELD SAMPLING	BASE	" SEARCH -		30099762 SAI
CORRESPONDENCE	5090.3.A.	FRANCISCO, CA	PLAN/QUALITY ASSURANCE PROJECT	INFO REPOSITORY	ROUND 1	IMAGED	
NONE	NONE	TYAHLA, S.	PLAN) ADDITIONAL CHARACTERIZATION		SITE 00013	CONC_002	
4		NAVFAC - EFA	[SEE RECORD # 1050 - DRAFT SAMPLING				
		WEST	AND ANALYSIS PLAN]				

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient							
Contract No.	CTO No.	Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)		
<b>SF_N60036_001087</b>	<b>07-02-2004</b>	WILSON, P.	DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) ADDITIONAL CHARACTERIZATION (INCLUDES REVISED FIGURES 2 & 2A) [SEE RECORDS # 1094, # 1252 AND # 1297 - NAVFAC EFAW TRANSMITTAL LETTERS]	SENSITIVE SITE FILE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0034 30099762 SAI		
GSA-0121-00011 AND GS-10F-0076K REPORT N62474-03-F-4032 139	07-08-2004 5090.3.C. CTO 0121	TETRA TECH EM, INC.  NAVFAC - EFA WEST							
<b>AR_N60036_001094</b>	<b>07-02-2004</b>	TYAHLA, S.	TRANSMITTAL OF THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL CHARACTERIZATION (ENCLOSURE IS RECORD # 1087)	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0034 30099762 SAI		
NONE CORRESPONDENCE NONE 3	07-21-2004 5090.3.A. NONE	NAVFAC - EFA WEST  MULTIPLE AGENCIES							

UIC No. _ Rec. No.	Record Date	Author	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)
Doc. Control No.	Prc. Date	Author Affil.					
Record Type	SSIC No.	Recipient					
Contract No.	CTO No.	Recipient Affil.					
Approx. # Pages							
<b>AR_N60036_001097</b>	<b>09-01-2003</b>						
TC-A010-10147	10-07-2004	TETRA TECH EM, INC.	SEPTEMBER 2003 RESTORATION ADVISORY BOARD (RAB) ORIENTATION PACKET (SEE RECORD #1098 - NAVFAC EFAW TRANSMITTAL LETTER) [DOCUMENT ALSO CONTAINS SENSITIVE STREET LEVEL MAPS]	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	"PERCHLORATE " SEARCH - ROUND 1 AOC 000001 BLDG IA-24 BLDG IA-25 SITE 00001 SITE 00002 SITE 00003 SITE 00004 SITE 00005 SITE 00006 SITE 00009 SITE 00011 SITE 00013 SITE 00017 SITE 00022 SITE 00025 SITE 00026 SITE 00027 SITE 00028 SITE 00029 SITE 00030 SITE 00031 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0034 30099762 SAI
REPORT	5090.3.A.	TYAHLA, S.					
N68711-00-D-0005	DO 0010	NAVFAC - EFA WEST					
215							
<b>AR_N60036_001145</b>	<b>09-10-2004</b>						
NONE	11-02-2004	RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA	NOTICE OF DENIAL FOR DRAFT FINAL AMENDMENT TO THE SITE MANAGEMENT PLAN (SEE RECORD # 1120 - DRAFT FINAL AMENDMENT)	ADMIN RECORD BASE INFO REPOSITORY	"PERCHLORATE " SEARCH - ROUND 1 SITE 00002 SITE 00009 SITE 00011 SITE 00013 SITE 00031	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0035 30099762 SAI
CORRESPONDENCE	5090.3.A.	TYAHLA, S.					
NONE	NONE	NAVFAC - EFA WEST					
2							

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_001194</b>	<b>03-09-2005</b>	GRAY, F.	APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) FOR NON-TIDAL AREA SITES	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0036	
NONE	04-14-2005	CALIFORNIA DEPARTMENT OF FISH AND GAME - SACRAMENTO, CA		BASE	SITE 00017		30099762 SAI	
CORRESPONDENCE	5090.3.A.	PINASCO, J.		INFO REPOSITORY	SITE 00022	IMAGED		
NONE	NONE	DTSC - SACRAMENTO, CA			SITE 00027	CONC_002		
13					SITE 00029			
					SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
<b>AR_N60036_001207</b>	<b>02-10-2005</b>	RAMSEY, P.	RESPONSE TO LETTER REGARDING RESULTS OF THE PERCHLORATE SAMPLING AT WILLOW PASS PARK - RUNWAY AREA MARSH RECOMMENDATIONS (W/ ENCLOSURES)	ADMIN RECORD	"PERCHLORATE	FRC - PERRIS	L181-09-0009 BX 0036	
NONE	04-13-2005	U.S. EPA - SAN FRANCISCO, CA		BASE	" SEARCH - ROUND 1		30099762 SAI	
CORRESPONDENCE	5090.3.A.	TYAHLA, S.		INFO REPOSITORY	SITE 00013	IMAGED		
NONE	NONE	NAVFAC - EFA WEST				CONC_002		
12								
<b>AR_N60036_001220</b>	<b>04-18-2005</b>	TYAHLA, S.	REQUEST FOR AN EXTENSION AND CHANGES IN THE SITE MANAGEMENT PLAN (SEE RECORD # 1253 - REQUESTED REVISIONS AND EXTENSIONS FOR THE SITE MANAGEMENT PLAN SCHEDULE)	ADMIN RECORD	SITE 00001	FRC - PERRIS	L181-09-0009 BX 0036	
IPTW SER 05/483	05-02-2005	NAVFAC - IPT WEST		BASE	SITE 00002		30099762 SAI	
CORRESPONDENCE	5090.3.A.	RAMSEY, P.		INFO REPOSITORY	SITE 00009	IMAGED		
NONE	NONE	U.S. EPA - SAN FRANCISCO, CA			SITE 00011	CONC_002		
7					SITE 00013			
					SITE 00017			
					SITE 00022			
					SITE 00027			
					SITE 00029			
					SITE 00030			
					SITE 00031			
<b>AR_N60036_001234</b>	<b>04-29-2003</b>	TYAHLA, S.	TRANSMITTAL OF THE 20 MARCH 2003 INFORMAL DISPUTE RESOLUTION MEETING MINUTES REGARDING THE RECORD OF DECISION AND DRAFT FINAL FIVE-YEAR PERIODIC REVIEW ASSESSMENT, LITIGATION AREA (ENCLOSURE IS RECORD # 1243)	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0037	
EFAW SER 052SFT	11-20-2003	NAVFAC - EFA WEST		INFO REPOSITORY	SITE 00017		30099762 SAI	
CORRESPONDENCE	5090.3.A.	RAMSEY, P.				IMAGED		
NONE	NONE	U.S. EPA - SAN FRANCISCO, CA				CONC_001		
3								

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient							
Contract No.	CTO No.	Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)		
<b>PF_N60036_001243</b> GSA-0105-00004 MINUTES N62474-03-F-4023 14	<b>03-20-2003</b> 11-20-2003 5090.3.B. CTO 0105	TETRA TECH EM, INC.  MULTIPLE AGENCIES	20 MARCH 2003 INFORMAL DISPUTE RESOLUTION MEETING MINUTES ON THE RECORD OF DECISION AND DRAFT FINAL FIVE-YEAR PERIODIC REVIEW ASSESSMENT, LITIGATION AREA [SEE RECORD # 1234 - NAVFAC EFA WEST TRANSMITTAL LETTER] (INCLUDES AGENDA AND LIST OF ATTENDEES)	POST DECISION FILE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00013 SITE 00017	FRC - PERRIS  IMAGED CONC_001	L181-09-0009 BX 0037 30099762 SAI		
<b>AR_N60036_001252</b> IPTW SER 05/474 CORRESPONDENCE NONE 3	<b>04-07-2005</b> 07-13-2005 5090.3.A. NONE	TYAHLA, S. NAVFAC - IPT WEST RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA	TRANSMITTAL OF THE REVISED FIGURES FOR THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING AND ANALYSIS PLAN/ QUALITY ASSURANCE PROJECT PLAN) ADDITIONAL CHARACTERIZATION AT SITE (ENCLOSURE IS RECORD # 1087)	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0037 30099762 SAI		
<b>SF_N60036_001253</b> NONE REPORT NONE 24	<b>04-15-2005</b> 07-15-2005 5090.3.C. NONE	NAVFAC - IPT WEST  U.S. EPA - SAN FRANCISCO, CA	DRAFT FINAL ANNUAL AMENDMENT REVISIONS AND EXTENSIONS TO THE SITE MANAGEMENT PLAN SCHEDULE [SEE RECORD # 1220 - IPT WEST TRANSMITTAL LETTER]	SITE FILE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00001 SITE 00002 SITE 00009 SITE 00011 SITE 00013 SITE 00017 SITE 00022 SITE 00027 SITE 00029 SITE 00030 SITE 00031	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0037 30099762 SAI		
<b>AR_N60036_001268</b> NONE CORRESPONDENCE NONE 2	<b>07-25-2005</b> 08-23-2005 5090.3.A. NONE	PINASCO, J. DTSC - SACRAMENTO, CA TYAHLA, S. NAVFAC - EFA WEST	CONCURRENCE WITH THE FINAL SAMPLING AND ANALYSIS PLAN [SEE RECORD # 1087 - FINAL SAMPLING AND ANALYSIS PLAN]	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0037 30099762 SAI		

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_001275</b>	<b>04-13-2005</b>	RAMSEY, P.	APPROVAL OF FINAL SAMPLING AND ANALYSIS PLAN, FORMER OPEN BURN/FIRE TRAINING AREA [SEE RECORD # 1087 - FINAL SAMPLING AND ANALYSIS PLAN]	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0037 30099762 SAI	
NONE	08-23-2005	U.S. EPA - SAN FRANCISCO, CA				IMAGED		
CORRESPONDENCE	5090.3.A.	TYAHLA, S.				CONC_002		
NONE	NONE	NAVFAC - EFA WEST						
2								
<b>AR_N60036_001276</b>	<b>04-25-2005</b>	RAMSEY, P.	REVIEW AND NONCONCURRENCE WITH THE 18 APRIL 2005 SITE MANAGEMENT PLAN EXTENSION REQUEST [SEE RECORD # 1220 - 18 APRIL 2005 SITE MANAGEMENT PLAN EXTENSION REQUEST]	ADMIN RECORD BASE INFO REPOSITORY	SITE 00001 SITE 00002 SITE 00009 SITE 00011 SITE 00013 SITE 00017 SITE 00022 SITE 00029 SITE 00031	FRC - PERRIS	L181-09-0009 BX 0037 30099762 SAI	
NONE	08-23-2005	U.S. EPA - SAN FRANCISCO, CA				IMAGED		
CORRESPONDENCE	5090.3.A.	TYAHLA, S.				CONC_002		
NONE	NONE	NAVFAC - IPT WEST						
7								
<b>AR_N60036_001297</b>	<b>05-06-2005</b>	TYAHLA, S.	TRANSMITTAL OF THE REVISED FIGURES FOR FINAL SAMPLING AND ANALYSIS PLAN, ADDITIONAL CHARACTERIZATION (ENCLOSURE IS RECORD # 1087)	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0038 30099762 SAI	
IPTW SER 05/506	10-24-2005	NAVFAC - IPT WEST				IMAGED		
CORRESPONDENCE	5090.3.A.	RAMSEY, P.				CONC_002		
NONE	NONE	U.S. EPA - SAN FRANCISCO, CA						
3								
<b>SF_N60036_001320</b>	<b>09-28-2005</b>	TETRA TECH EM, INC.	28 SEPTEMBER 2005 FINAL REMEDIAL PROJECT MANAGERS (RPM) MEETING MINUTES (INCLUDES CD COPY, ATTENDANCE LIST, AGENDA AND VARIOUS HANDOUTS) [SEE RECORD # 1319 - NAVFAC IPT WEST TRANSMITTAL LETTER]	SITE FILE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00001 SITE 00013 SITE 00017 SITE 00022 SITE 00027 SITE 00029	FRC - PERRIS	L181-09-0009 BX 0038 30099762 SAI	
GSA-0113-00032	12-28-2005					IMAGED		
MINUTES	5090.3.C.					CONC_002		
N62474-03-F-4032	CTO 0113	MULTIPLE AGENCIES						
27								

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
<b>SF_N60036_001416</b> DS-B121-20425 MINUTES N68711-03-D-5104 20	<b>06-01-2006</b> 06-20-2006 5090.3.C. CTO 0121	HUNTER, C. TETRA TECH EM, INC.  MULTIPLE AGENCIES	04 APRIL 2006 FINAL REMEDIAL PROJECT MANAGER (RPM) MEETING MINUTES (INCLUDES LIST OF ATTENDEES, AGENDA, DOCUMENT TRACKING SHEETS, FIELD WORK SCHEDULE, AND TETRA TECH EM, INC. TRANSMITTAL LETTER)	SITE FILE	SITE 00001 SITE 00013 SITE 00022 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0040 30099762 SAI		
<b>AR_N60036_001418</b> BRAC SER BPMOW.RCW/0529 CORRESPONDENCE NONE 17	<b>06-15-2006</b> 06-20-2006 5090.3.A. NONE	WEISSENBORN, R. BRAC PMO WEST RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA	TRANSMITTAL OF THE SITE MANAGEMENT PLAN FOR INLAND AREA (W/ ENCLOSURE)	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013 SITE 00027 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0040 30099762 SAI		
<b>AR_N60036_001428</b> DS-B111-20132 MINUTES N68711-03-D-5104 35	<b>06-29-2006</b> 07-31-2006 5090.3.A. CTO 0111	HUNTER, C. TETRA TECH EM, INC.  RESTORATION ADVISORY BOARD	03 MAY 2006 FINAL RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES (INCLUDES LIST OF ATTENDEES, AGENDA AND VARIOUS HANDOUTS) [DOCUMENT ALSO CONTAINS SENSITIVE STREET LEVEL MAPS]	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00001 SITE 00013 SITE 00022 SITE 00023A SITE 00027	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0041 30099762 SAI		
<b>AR_N60036_001438</b> BRAC SER BPMOW.EMC/0729 CORRESPONDENCE NONE 2	<b>08-25-2006</b> 08-30-2006 5090.3.A. NONE	WEISSENBORN, R. BRAC PMO WEST RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA	TRANSMITTAL OF THE FINAL GROUNDWATER SAMPLING SUMMARY REPORT (ENCLOSURE IS RECORD # 1439)	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0041 30099762 SAI		
<b>AR_N60036_001439</b> GSA-0121-00015 REPORT N62474-03-F-4023 199	<b>08-25-2006</b> 08-30-2006 5090.3.A. CTO 0121	WILSON, P. TETRA TECH EM, INC.  BRAC PMO WEST	FINAL GROUNDWATER SAMPLING SUMMARY REPORT [SEE RECORD # 1438 - BRAC PMO WEST TRANSMITTAL LETTER]	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	"PERCHLORATE " SEARCH - ROUND 1 SITE 00013	FRC - PERRIS  IMAGED CONC_002	L181-09-0009 BX 0041 30099762 SAI		

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
<b>SF_N60036_001444</b>	<b>08-02-2006</b>		02 AUGUST 2006 FINAL REMEDIAL PROJECT MANAGER (RPM) MEETING MINUTES (INCLUDES ATTENDANCE LIST, AGENDA AND VARIOUS HANDOUTS)	SITE FILE	BLDG 0000081	FRC - PERRIS	L181-09-0009 BX 0041		
NONE	09-20-2006	BRAC PMO WEST			BLDG 0000093		30099762 SAI		
MINUTES	5090.3.C.				BLDG 0000097	IMAGED			
NONE	NONE	MULTIPLE AGENCIES			BLDG IA-1	CONC_002			
22					SITE 00001				
					SITE 00002				
					SITE 00009				
					SITE 00011				
					SITE 00013				
					SITE 00022				
					SITE 00023A				
					SITE 00027				
					SITE 00029				
					SITE 00030				
					SITE 00031				
					SWMU 00002				
					SWMU 00005				
					SWMU 00007				
					SWMU 00018				
<b>AR_N60036_001448</b>	<b>07-14-2006</b>	RAMSEY, P.	REVIEW AND COMMENTS ON THE DRAFT ANNUAL AMENDMENT TO THE SITE MANAGEMENT PLAN [SEE RECORD # 1417 - DRAFT ANNUAL SITE MANAGEMENT PLAN AMENDMENT]	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0041		
NONE	09-28-2006	U.S. EPA - SAN FRANCISCO, CA		BASE	SITE 00022		30099762 SAI		
CORRESPONDENCE	5090.3.A.			INFO REPOSITORY	SITE 00027	IMAGED			
NONE	NONE	MULTIPLE AGENCIES				CONC_002			
6									
<b>AR_N60036_001450</b>	<b>08-14-2006</b>	WEISSENBORN, R.	FEDERAL FACILITY AGREEMENT SCHEDULE EXTENSION REQUEST FOR THE SITE MANAGEMENT PLAN AMENDMENT	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0041		
BRAC SER	09-28-2006	BRAC PMO WEST		BASE	SITE 00027		30099762 SAI		
BPMOW.WED/0711	5090.3.A.	RAMSEY, P.		INFO REPOSITORY		IMAGED			
CORRESPONDENCE	NONE	U.S. EPA - SAN FRANCISCO, CA		SENSITIVE		CONC_002			
NONE									
3									

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
AR_N60036_001455	09-18-2006	RAMSEY, P.	REVIEW AND COMMENTS ON THE DRAFT FINAL SITE MANAGEMENT PLAN AMENDMENT [SEE RECORD # 1442 - DRAFT FINAL ANNUAL AMENDMENT]	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0041	
NONE	09-28-2006	U.S. EPA - SAN FRANCISCO, CA		BASE	SITE 00022		30099762 SAI	
CORRESPONDENCE	5090.3.A.			INFO REPOSITORY	SITE 00027	IMAGED		
NONE	NONE				SITE 00031	CONC_002		
4		MULTIPLE AGENCIES						
AR_N60036_001459	03-04-2002		4 MARCH 2002 DRAFT RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES (INCLUDES AGENDA, ATTENDEES LIST, AND VARIOUS HANDOUTS)	ADMIN RECORD	SITE 00013	NAVFAC - SOUTHWEST		
NONE	12-08-2008	NWS CONCORD - CONCORD, CA		BASE	SITE 00017			
MINUTES	5090.3.A.							
NONE	NONE							
40		RESTORATION ADVISORY BOARD						
AR_N60036_001472	11-21-2006	WEISSENBORN, R.	RESPONSES TO COMMENTS ON THE DRAFT FINAL SITE MANAGEMENT PLAN, INLAND AREA [SEE RECORD # 1455 - COMMENTS BY U.S. EPA]	ADMIN RECORD	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0041	
BRAC SER	12-07-2006	BRAC PMO WEST		BASE	SITE 00022		30099762 SAI	
BPMOW.RW/0148	5090.3.A.	RAMSEY, P.		INFO REPOSITORY	SITE 00027	IMAGED		
CORRESPONDENCE	NONE	U.S. EPA - SAN FRANCISCO, CA		SENSITIVE		CONC_002		
NONE								
4								
AR_N60036_001597	10-09-2007	NEWTON, D.	TRANSMITTAL OF FINAL INLAND AREA AMENDED SITE MANAGEMENT PLAN FISCAL YEAR 2008 UPDATE (W/ENCLOSURE) [CD COPY ENCLOSED] (SEE RECORD # 1418 - SITE MANAGEMENT PLAN FOR INLAND AREA)	ADMIN RECORD	"PERCHLORATE	FRC - PERRIS	L181-09-0009 BX 0046	
BRAC SER	03-06-2008	BRAC PMO WEST		BASE	" SEARCH - ROUND 1		30099762 SAI	
BPMOW.DN/0021	5090.3.A.	RAMSEY, P.		INFO REPOSITORY	SITE 00013	IMAGED		
CORRESPONDENCE	NONE	U.S. EPA - SAN FRANCISCO, CA		SENSITIVE	SITE 00022	CONC_003		
NONE					SITE 00027			
18					SITE 00029			
					SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>SF_N60036_001626</b>	<b>09-01-1988</b>	CULLINANE, M.	DRAFT FINAL FEASIBILITY STUDY REPORT OF CONTAMINATION REMEDIATION, VOLUMES I AND III OF III (SEE COMMENTS)	SITE FILE	SITE 00003	FRC - PERRIS	L181-09-0009 BX 0048	
MISCELLANEOUS PAPER EL-86-3 REPORT NONE 939	04-21-2008 5090.3.C. NONE	DEPARTMENT OF THE ARMY, WATERWAYS EXPERIMENT STATION, CORPS OF ENGINEERS  NAVFAC - EFA WEST			SITE 00004 SITE 00005 SITE 00006 SITE 00013 SITE 00014 SITE 00016 SITE 00025 SITE 00026	IMAGED CONC_003	30099762 SAI	
<b>SF_N60036_001639</b>	<b>02-06-2008</b>	SULTECH	06 FEBRUARY 2008 FINAL MEETING MINUTES, INLAND AREA REMEDIAL PROJECT MANAGER (RPM) MEETING (CD COPY ENCLOSED) (INCLUDES LIST OF ATTENDEES, FINAL AGENDA, AND VARIOUS HANDOUTS)	SITE FILE	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0049	
SULT-5104-0147-0010 MINUTES N68711-03-D-5104 22	05-08-2008 5090.3.C. CTO 0147	NAVFAC - SOUTHWEST			SITE 00022 SITE 00022A SITE 00023A SITE 00024A SITE 00027 SITE 00029	IMAGED CONC_003	30099762 SAI	
<b>SF_N60036_001640</b>	<b>07-11-2007</b>	SULTECH	11 JULY 2007 FINAL MEETING MINUTES, INLAND AREA REMEDIAL PROJECT MANAGER (RPM) (INCLUDES LIST OF ATTENDEES, FINAL AGENDA, VARIOUS HANDOUTS, AND CD COPY)	SITE FILE	SITE 00013	FRC - PERRIS	L181-09-0009 BX 0049	
SULT-5104-0147-0003 MINUTES N68711-03-D-5104 16	05-15-2008 5090.3.C. CTO 0147	NAVFAC - SOUTHWEST			SITE 00022A SITE 00023A SITE 00024A SITE 00027 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	IMAGED CONC_003	30099762 SAI	



UIC No. _ Rec. No.	Record Date	Author	Author Affil.	Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author	Author Affil.	SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Recipient Affil.	CD No.	FRC Box No(s)
Contract No.	CTO No.	Subject	Distribution	Sites	
Approx. # Pages					
<b>SF_N60036_001699</b>	<b>02-27-1995</b>				
NONE	07-21-2008	NAVFAC - EFA	27 FEBRUARY 1995 REMEDIAL PROJECT	SITE FILE	BLDG 0000005AT58
MINUTES	5090.3.C.	WEST	MANAGERS (RPM) MEETING MINUTES		BLDG 0000007SH5
NONE	NONE		(INCLUDES AGENDA, ATTENDEE LIST, AND		BLDG 0000097
69		MULTIPLE	VARIOUS HANDOUT MATERIALS) [SEE		BLDG 0000178
		AGENCIES	RECORD # 1698 - EFAW TRANSMITTAL		BLDG A-3A
			LETTER]		BLDG IA-20
					BLDG IA-24
					BLDG IA-25
					BLDG IA-36
					BLDG IA-55
					BLDG IA-57
					RASS 00001
					RASS 00002
					RASS 00003
					RASS 00004
					SITE 00001
					SITE 00002
					SITE 00003
					SITE 00004
					SITE 00005
					SITE 00006
					SITE 00007
					SITE 00008
					SITE 00009
					SITE 00010
					SITE 00011
					SITE 00012
					SITE 00013
					SITE 00014
					SITE 00015
					SITE 00016
					SITE 00017
					SITE 00018
					SITE 00019

UIC No. _ Rec. No.	Record Date	Author						Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.						SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient		Subject		Distribution	Sites	CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.							
Approx. # Pages									
							SITE 00020		
							SITE 00021		
							SITE 00022		
							SITE 00023A		
							SITE 00023B		
							SITE 00024A		
							SITE 00024B		
							SITE 00025		
							SITE 00026		
							SITE 00027		
							SWMU 00008		
							SWMU 00012		
							SWMU 00025		
							SWMU 00026		
							SWMU 00033		
							SWMU 00037		
							SWMU 00046		
							SWMU 00052		
							UST A-3A		
							UST E-111		
							WELL FTW-3		
							WELL RDW-2		
							WELL TLW-3		
							WELL WHW-4		

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient							
Contract No.	CTO No.	Recipient Affil.	Subject	Distribution	Sites	Location	FRC Accession No.		
Approx. # Pages						SWDIV Box No(s)	FRC Warehouse		
						CD No.	FRC Box No(s)		
SF_N60036_001705	09-08-1995		08 SEPTEMBER 1995 REMEDIAL PROJECT	SITE FILE	BLDG	FRC - PERRIS	L181-09-0009 BX 0051		
NONE	07-21-2008	NAVFAC - EFA	MANAGERS (RPM) MEETING MINUTES		0000007SH5		30099762 SAI		
MINUTES	5090.3.C.	WEST	(INCLUDES AGENDA, ATTENDEE LIST,		BLDG 0000040	IMAGED			
NONE	NONE		VARIOUS HANDOUT MATERIALS, AND		BLDG 0000108	CONC_003			
56		MULTIPLE	REPLACEMENT PAGES: 3 AND 9) [SEE		BLDG 0000174				
		AGENCIES	RECORDS # 1704 AND # 1708 - NAVFAC		BLDG E-108				
			EFAW TRANSMITTAL LETTERS]		BLDG E-111				
					BLDG IA-16				
					BLDG IA-20				
					BLDG IA-24				
					BLDG IA-24A				
					BLDG IA-36				
					BLDG IA-55				
					BLDG IA-57				
					RASS 00001				
					RASS 00002				
					RASS 00003				
					RASS 00004				
					SITE 00013				
					SITE 00016				
					SITE 00017				
					SITE 00018				
					SITE 00022				
					SITE 00024A				
					SITE 00027				
					SWMU 00001				
					SWMU 00002				
					SWMU 00007				
					SWMU 00012				
					SWMU 00016				
					SWMU 00018				
					SWMU 00037				
					SWMU 00050				
					SWMU 00052				
					WELL MW-1				

UIC No. _ Rec. No.	Record Date	Author					Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites		CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								
						WELL MW-10 WELL MW-12 WELL MW-2		
<b>SF_N60036_001707</b>	<b>05-09-1995</b>		09 MAY 1995 REMEDIAL PROJECT MANAGERS (RPM) MEETING MINUTES (INCLUDES AGENDA, REVISED AGENDA, ATTENDEE LIST, VARIOUS HANDOUTS, AND TECHNICAL MEMORANDUM OF BACKGROUND METALS SAMPLE LOCATIONS IN INLAND AREA SITES DATED 03 MAY 1995)	SITE FILE	BLDG 0000007SH5 BLDG IA-20 BLDG IA-24 RASS 00001 RASS 00002 RASS 00003 RASS 00004 SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027 UST A-3A UST E-111	FRC - PERRIS  IMAGED CONC_003	L181-09-0009 BX 0051 30099762 SAI	
NONE	07-21-2008	NAVFAC - EFA WEST						
MINUTES	5090.3.C.							
NONE	NONE	MULTIPLE AGENCIES						
41								

UIC No. _ Rec. No.	Record Date	Author	Author Affil.	Location	FRC Accession No.		
Doc. Control No.	Prc. Date	Author	Author Affil.	SWDIV Box No(s)	FRC Warehouse		
Record Type	SSIC No.	Recipient	Recipient Affil.	CD No.	FRC Box No(s)		
Contract No.	CTO No.	Subject	Distribution	Sites			
Approx. # Pages							
<b>SF_N60036_001710</b>	<b>12-12-1995</b>						
NONE	07-21-2008	NAVFAC - EFA	12 DECEMBER 1995 REMEDIAL PROJECT	SENSITIVE	BLDG A-29	FRC - PERRIS	L181-09-0009 BX 0051
MINUTES	5090.3.C.	WEST	MANAGERS (RPM) MEETING MINUTES	SITE FILE	BLDG IA-16		30099762 SAI
NONE	NONE		(INCLUDES AGENDA, ATTENDEE LIST, AND		RASS 00001	IMAGED	
55		MULTIPLE	VARIOUS HANDOUTS) [SEE RECORD #		RASS 00003	CONC_003	
		AGENCIES	1709 - NAVFAC EFAW TRANSMITTAL		RASS 00004		
			LETTER]		SITE 00001		
					SITE 00002		
					SITE 00009		
					SITE 00011		
					SITE 00013		
					SITE 00016		
					SITE 00024A		
					SWMU 00001		
					SWMU 00002		
					SWMU 00005		
					SWMU 00007		
					SWMU 00016		
					SWMU 00018		
					SWMU 00037		
					SWMU 00040		
					SWMU 00050		
					UST A-3A		
					UST E-111		

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
SF_N60036_001712	03-12-1996	SOOTKOOS, B.	20 FEBRUARY 1996 REMEDIAL PROJECT MANAGERS (RPM) MEETING MINUTES (INCLUDES AGENDA, ATTENDEES LIST, AND VARIOUS HANDOUTS)	SITE FILE	RASS 00001	FRC - PERRIS	L181-09-0009 BX 0051		
NONE	07-21-2008	PRC			RASS 00002		30099762 SAI		
MINUTES	5090.3.C.	ENVIRONMENTAL MANAGEMENT, INC.			RASS 00003	IMAGED			
NONE	NONE	SMITH, B.			RASS 00004	CONC_003			
44		U.S. EPA - SAN FRANCISCO, CA			SITE 00001				
					SITE 00002				
					SITE 00011				
					SITE 00013				
					SITE 00016				
					SITE 00022				
					SITE 00024A				
					UST A-3A				
					UST E-111				
					WELL				
					00001AG02				
					WELL				
					00001AG04				
					WELL				
					00001PG18				
					WELL				
					00002AG08				
					WELL				
					00002AG09				
					WELL				
					00002MG20				
					WELL				
					00002MG21				
					WELL				
					00002MG22				
					WELL				
					00003AG10				
					WELL				
					00003AG11				
					WELL				
					00003MG06				
					WELL				
					00003MG19				
					WELL				
					00004MG15				

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)	
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								
					WELL 00004MG16 WELL 00004MG17			
<b>AR_N60036_001730</b>	<b>01-21-1997</b>	ROSENGARD, J.	COMMENTS ON THE INLAND AREA	ADMIN RECORD	BLDG IA-24	FRC - PERRIS	L181-09-0009 BX 0051	
NONE	07-21-2008	RESTORATION	REMEDIAL INVESTIGATION REPORT		IA 0000020		30099762 SAI	
CORRESPONDENCE	5090.3.A.	ADVISORY BOARD	(DRAFT REMEDIAL INVESTIGATION		IA 0000024	IMAGED		
NONE	NONE	YEE, R.	REPORT, INLAND AREA WAS NOT		IA 0000055	CONC_003		
17		NAVFAC - EFA	SUBMITTED TO ADMINISTRATIVE		SITE 00013			
		WEST	RECORDS)		SITE 00017			
					SITE 00022			
					SITE 00027			
<b>AR_N60036_001750</b>	<b>06-12-1997</b>	SANTANA, R.	TRANSMITTAL OF THE DRAFT REMEDIAL	ADMIN RECORD	SITE 00012	FRC - PERRIS	L181-09-0009 BX 0052	
EFAW SER	07-22-2008	NAVFAC - EFA	INVESTIGATION REPORT, INLAND AREA,	BASE	SITE 00013		30099762 SAI	
1841.1/7266	5090.3.A.	WEST	VOLUMES I AND II (W/OUT ENCLOSURE)		SITE 00017	IMAGED		
CORRESPONDENCE	NONE	MASON, A.	[**SEE COMMENTS]		SITE 00022	CONC_003		
NONE		IT CORPORATION			SITE 00022A			
2					SITE 00024A			
					SITE 00027			
<b>AR_N60036_001766</b>	<b>01-17-1997</b>	ELLIS, S.	REVIEW AND COMMENTS ON THE DRAFT	ADMIN RECORD	BLDG IA-24	FRC - PERRIS	L181-09-0009 BX 0052	
NONE	07-22-2008	CALIFORNIA	REMEDIAL INVESTIGATION REPORT,	BASE	SITE 00013		30099762 SAI	
CORRESPONDENCE	5090.3.A.	DEPARTMENT OF	INLAND AREA SITES		SITE 00017	IMAGED		
NONE	NONE	FISH AND GAME -			SITE 00022	CONC_003		
4		SACRAMENTO, CA			SITE 00024A			
		PINASCO, J.			SITE 00027			
		DTSC -						
		SACRAMENTO, CA						
<b>AR_N60036_001767</b>	<b>01-01-1997</b>	VEST, M.	COMMENTS ON THE DRAFT REMEDIAL	ADMIN RECORD	BLDG	FRC - PERRIS	L181-09-0009 BX 0052	
NONE	07-22-2008	DTSC -	INVESTIGATION REPORT, INLAND AREA	BASE	0000007SH5		30099762 SAI	
CORRESPONDENCE	5090.3.A.	BERKELEY, CA	SITES (DRAFT RI REPORT DATED		BLDG IA-20	IMAGED		
NONE	NONE	PINASCO, J.	OCTOBER 1996 WAS NOT SUBMITTED TO		BLDG IA-24	CONC_003		
5		DTSC - SAN	THE ADMINISTRATIVE RECORD)		SITE 00013			
		FRANCISCO, CA			SITE 00017			
					SITE 00022			
					SITE 00024A			
					SITE 00027			

UIC No. _ Rec. No.	Record Date	Author							
Doc. Control No.	Prc. Date	Author Affil.							
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.		
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse		
Approx. # Pages						CD No.	FRC Box No(s)		
<b>SF_N60036_001787</b>	<b>12-18-1997</b>	BOSCHE, J.	18 DECEMBER 1997 REMEDIAL PROJECT MANAGERS (RPM) MEETING MINUTES (INCLUDES VARIOUS HANDOUTS)	SITE FILE	SITE 00013 SITE 00017 SITE 00022 SITE 00027	FRC - PERRIS  IMAGED CONC_003	L181-09-0009 BX 0052 30099762 SAI		
NONE	07-22-2008	TETRA TECH EM, INC.							
MINUTES	5090.3.C.								
NONE	NONE	MULTIPLE AGENCIES							
9									
<b>SF_N60036_001792</b>	<b>04-20-1998</b>		20 APRIL 1998 REMEDIAL PROJECT MANAGERS MEETING (RPM) MINUTES (INCLUDES AGENDA AND VARIOUS HANDOUTS) [SEE RECORD # 1790 - NAVFAC EFAW TRANSMITTAL LETTER]	SITE FILE	SITE 00013 SITE 00017 SITE 00022 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_003	L181-09-0009 BX 0052 30099762 SAI		
NONE	07-22-2008	NAVFAC - EFA WEST							
MINUTES	5090.3.C.								
NONE	NONE	MULTIPLE AGENCIES							
28									
<b>SF_N60036_001821</b>	<b>06-04-2008</b>		04 JUNE 2008 FINAL MEETING MINUTES, INLAND AREA REMEDIAL PROJECT MANAGER (RPM) MEETING (INCLUDES LIST OF ATTENDEES, 04 JUNE 2008 FINAL AGENDA, AND VARIOUS HANDOUTS) [CD COPY ENCLOSED]	SITE FILE	BLDG IA-100 SITE 00013 SITE 00022 SITE 00022A SITE 00023A SITE 00024A SITE 00027 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	FRC - PERRIS  IMAGED CONC_003	L181-09-0009 BX 0053 30099762 SAI		
SULT-5104-0147-0061	08-22-2008	SULTECH							
MINUTES	5090.3.C.								
N68711-03-D-5104	CTO 0147	NAVFAC - SOUTHWEST							
19									
<b>AR_N60036_001826</b>	<b>03-04-2002</b>		04 MARCH 2002 FINAL RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES (INCLUDES AGENDA, ATTENDEES LIST, AND VARIOUS HANDOUTS)	ADMIN RECORD BASE	SITE 00013 SITE 00017	NAVFAC - SOUTHWEST			
NONE	12-08-2008	NWS CONCORD - CONCORD, CA							
MINUTES	5090.3.A.								
NONE	NONE	RESTORATION ADVISORY BOARD							
40									

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.		Subject	Distribution	Sites	Location	FRC Accession No.
Record Type	SSIC No.	Recipient					SWDIV Box No(s)	FRC Warehouse
Contract No.	CTO No.	Recipient Affil.					CD No.	FRC Box No(s)
Approx. # Pages								
<b>SF_N60036_001827</b>	<b>04-01-2002</b>			01 APRIL 2002 DRAFT RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES (INCLUDES AGENDA, ATTENDEES LIST, AND VARIOUS HANDOUTS)	SITE FILE	SITE 00002 SITE 00009 SITE 00011 SITE 00013 SITE 00017	NAVFAC - SOUTHWEST	
NONE	12-08-2008	NWS CONCORD - CONCORD, CA						
MINUTES	5090.3.C.							
NONE	NONE	RESTORATION ADVISORY BOARD						
50								
<b>AR_N60036_001837</b>	<b>05-17-2000</b>	RIVERA, G.		TRANSMITTAL OF 10 APRIL 2000 INLAND AREA RECORD OF DECISION (ROD) MEETING MINUTES [W/ ENCLOSURE]	ADMIN RECORD BASE	SITE 00013 SITE 00017 SITE 00022 SITE 00027	NAVFAC - SOUTHWEST	
EFAW SER	12-11-2008	NAVFAC - EFA WEST						
052GAR/5080	5090.3.A.							
CORRESPONDENCE	NONE	MULTIPLE AGENCIES						
NONE								
4								
<b>SF_N60036_001838</b>	<b>03-20-2001</b>			20 MARCH 2001 REMEDIAL PROJECT MANAGERS (RPM) MEETING AGENDA	SITE FILE	SITE 00013 SITE 00017 SITE 00022 SITE 00027 SITE 00029	NAVFAC - SOUTHWEST	
NONE	12-11-2008	NWS CONCORD - CONCORD, CA						
MINUTES	5090.3.C.							
NONE	NONE	NAVFAC - SOUTHWEST						
2								
<b>SF_N60036_001839</b>	<b>02-13-2001</b>			13 FEBRUARY 2001 REMEDIAL PROJECT MANAGERS (RPM) MEETING AGENDA (INCLUDES VARIOUS HANDOUTS)	SITE FILE	SITE 00013 SITE 00017 SITE 00022 SITE 00027 SITE 00029	NAVFAC - SOUTHWEST	
NONE	12-11-2008	NWS CONCORD - CONCORD, CA						
MINUTES	5090.3.C.							
NONE	NONE	NAVFAC - SOUTHWEST						
40								
<b>SF_N60036_001840</b>	<b>01-09-2001</b>			09 JANUARY 2001 REMEDIAL PROJECT MANAGERS (RPM) MEETING AGENDA	SITE FILE	SITE 00013 SITE 00017 SITE 00022 SITE 00029	NAVFAC - SOUTHWEST	
NONE	12-11-2008	NWS CONCORD - CONCORD, CA						
MINUTES	5090.3.C.							
NONE	NONE	NAVFAC - SOUTHWEST						
2								
<b>AR_N60036_001853</b>	<b>07-17-2007</b>	RAMSEY, P.		REVIEW AND COMMENTS ON THE DRAFT INLAND AREA AMENDED SITE MANAGEMENT PLAN FISCAL YEAR 2008 UPDATE	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013 SITE 00022 SITE 00022A SITE 00027 SITE 00029	NAVFAC - SOUTHWEST	
NONE	02-05-2009	U.S. EPA - SAN FRANCISCO, CA						
CORRESPONDENCE	5090.3.A.	NEWTON, D.						
NONE	NONE	BRAC PMO WEST						
6								

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_001859</b> NONE CORRESPONDENCE NONE 3	<b>07-15-2008</b> 02-05-2009 5090.3.A. NONE	RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA NEWTON, D. BRAC PMO WEST	REVIEW AND COMMENTS ON THE INTERNAL WORKING DRAFT AMENDMENT TO THE SITE MANAGEMENT PLAN (SMP) SCHEDULE, INLAND AREA SITES	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013 SITE 00027 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	NAVFAC - SOUTHWEST		
<b>AR_N60036_001912</b> NONE CORRESPONDENCE NONE 2	<b>03-15-2007</b> 06-29-2009 5090.3.A. NONE	RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA LIND, A. NAVFAC - SOUTHWEST	REVIEW AND COMMENTS ON THE DRAFT FINAL PRELIMINARY ASSESSMENT, MILITARY MUNITIONS RESPONSE PROGRAM (MMRP) [LETTER RECEIVED IN THE RESTORATION RECORD W/OUT ENCLOSURES]	ADMIN RECORD BASE INFO REPOSITORY	SITE 00007 SITE 00008 SITE 00013 SITE 00015 SITE 00016 SITE 00019 SITE 00023A SITE 00023B SITE 00024B	NAVFAC - SOUTHWEST		
<b>AR_N60036_001917</b> TTEM-0055-FZN3-0064 MINUTES N62467-04-D-0055 33	<b>02-04-2009</b> 07-08-2009 5090.3.A. CTO FZN3	TETRA TECH EM, INC.  RESTORATION ADVISORY BOARD	04 FEBRUARY 2009 FINAL MEETING MINUTES RESTORATION ADVISORY BOARD (RAB) INLAND AREA ENVIRONMENTAL RESTORATION PROGRAM (INCLUDES LIST OF ATTENDEES, AGENDA, VARIOUS HANDOUTS, AND CD COPY)	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	SITE 00013 SITE 00022 SITE 00022A SITE 00023A SITE 00027 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	NAVFAC - SOUTHWEST		
<b>AR_N60036_001920</b> TTEM-0055-FZN3-0088 MINUTES N62467-04-D-0055 66	<b>04-01-2009</b> 07-08-2009 5090.3.A. CTO FZN3	TETRA TECH EM, INC.  RESTORATION ADVISORY BOARD	01 APRIL 2009 FINAL MEETING MINUTES RESTORATION ADVISORY BOARD (RAB) INLAND AREA ENVIRONMENTAL RESTORATION PROGRAM (INCLUDES LIST OF ATTENDEES, AGENDA, VARIOUS HANDOUTS, AND CD COPY) [DOCUMENT ALSO CONTAINS SENSITIVE STREET LEVEL MAPS]	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	SITE 00013 SITE 00022 SITE 00022A SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	NAVFAC - SOUTHWEST		

UIC No. _ Rec. No.	Record Date	Author					Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.		Subject	Distribution	Sites	SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient					CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								
<b>SF_N60036_001922</b>	<b>06-15-2009</b>							
TTEM-0055-FZN3-0084	07-08-2009	TETRA TECH EM, INC.		DRAFT AMENDMENT TO THE SITE MANAGEMENT PLAN SCHEDULE - INLAND AREA SITES (CD COPY ENCLOSED) [SEE RECORD # 1921 - BRAC PMO WEST TRANSMITTAL LETTER]	SITE FILE	SITE 00013 SITE 00022 SITE 00022A SITE 00027 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	NAVFAC - SOUTHWEST	
REPORT	5090.3.C.							
N62467-04-D-0055	CTO FZN3	BRAC PMO WEST						
15								
<b>AR_N60036_001955</b>	<b>08-14-2009</b>							
BRAC SER	09-08-2009	STEWART, K. BRAC PMO WEST		TRANSMITTAL OF THE DRAFT FINAL INLAND AREA AMENDED SITE MANAGEMENT PLAN (SMP) FISCAL YEAR 2010 UPDATE (W/ENCLOSURE)	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013 SITE 00022 SITE 00027 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	NAVFAC - SOUTHWEST	
BPMOW.CLP/0566	5090.3.A.	RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA						
CORRESPONDENCE	NONE							
NONE								
17								
<b>SF_N60036_001974</b>	<b>10-01-2009</b>							
CHAD-3213-0050-0006	12-21-2009	CHADUX TT, JOINT VENTURE		DRAFT REMEDIAL INVESTIGATION WORK PLAN FOR THE EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE AND THE FORMER INLAND BURN / RAILROAD SIDINGS EXCAVATIONS SITE (CD COPY ENCLOSED) [SEE RECORD # 1973 - BRAC PMO WEST TRANSMITTAL LETTER]	SENSITIVE SITE FILE	UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST	
REPORT	5090.3.C.							
N62473-07-D-3213	CTO 0050	BRAC PMO WEST						
806								
<b>AR_N60036_001983</b>	<b>09-30-2009</b>							
BRAC SER	03-02-2010	STEWART, K. BRAC PMO WEST		TRANSMITTAL OF THE DRAFT FINAL WORK PLAN BASEWIDE GROUNDWATER MONITORING, INLAND AREA (W/OUT ENCLOSURE)	ADMIN RECORD BASE INFO REPOSITORY	IA 0000017 SITE 00013 SITE 00017 SITE 00022 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	NAVFAC - SOUTHWEST	
BPMOW.JAC/0687	5090.3.A.	RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA						
CORRESPONDENCE	NONE							
NONE								
2								

UIC No. _ Rec. No.	Record Date	Author					Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	CD No.	FRC Box No(s)	
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								
<b>SF_N60036_001984</b>	<b>09-01-2009</b>	LAWRENCE, A.	DRAFT FINAL WORK PLAN BASEWIDE	SENSITIVE	IA 0000017		NAVFAC -	
RORE-3214-0005-0002	03-02-2010	RORE, INC.	GROUNDWATER MONITORING, INLAND	SITE FILE	SITE 00013		SOUTHWEST	
REPORT	5090.3.C.		AREA (CD COPY ENCLOSED) [SEE		SITE 00017			
N62473-07-D-3214	DO 0005	BRAC PMO WEST	RECORD # 1983 - BRAC PMO WEST		SITE 00019			
554			TRANSMITTAL LETTER]		SITE 00022			
					SITE 00029			
					SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
					WELL			
					00007SHMW001			
					WELL			
					00007SHMW002			
					WELL			
					00007SHMW003			
					WELL			
					00007SHMW004			
					WELL 25718-			
					MW02			
					WELL 25718-			
					MW03			
					WELL 25718-			
					MW04			
					WELL 25718-			
					MW05			
					WELL 25718-			
					MW06			
					WELL 25718-			
					MW07			
					WELL 25718-			
					MW08			
					WELL 25718-			
					MW09			
					WELL 25718-			
					MW10			
					WELL 25718-			
					MW11			
					WELL 25718-			
					MW12			

UIC No. _ Rec. No.	Record Date	Author						Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.						SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient		Subject		Distribution	Sites	CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.							
Approx. # Pages									
							WELL 25718- MW13		
							WELL 25718- MW14		
							WELL 25718- MW15		
							WELL ACSMW010		
							WELL ACSMW011		
							WELL ACSMW012		
							WELL ACSMW013		
							WELL ACSMW014		
							WELL BUAMW002		
							WELL BUAMW010		
							WELL BUAMW011		
							WELL BUAMW012		
							WELL BUAMW013		
							WELL BUAMW014		
							WELL BUAMW015		
							WELL BUAMW016		
							WELL IA-17- MW08		
							WELL IA-17- MW09		
							WELL IA-17- MW10		
							WELL MW178-5		
							WELL MW-IA17		
							WELL S29MW01		

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
						WELL S29MW02 WELL S29MW03 WELL S29MW04 WELL S29MW05 WELL S29MW06		
<b>AR_N60036_001987</b> BRAC SER BPMOW.DRP/0517 CORRESPONDENCE NONE 2	<b>08-04-2009</b> 03-22-2010 5090.3.A. NONE	STEWART, K. BRAC PMO WEST RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA	TRANSMITTAL OF THE DRAFT RISK ASSESSMENT TECHNICAL MEMORANDUM EAGLE'S NEST EXPLOSIVES ORDNANCE DISPOSAL AREA AND THE FORMER INLAND BURN / RAILROAD SIDINGS EXCAVATIONS AREA, MILITARY MUNITIONS RESPONSE PROGRAM (W/OUT ENCLOSURE)	ADMIN RECORD BASE INFO REPOSITORY	SITE 00013 UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST		
<b>SF_N60036_001988</b> TTEM-0055-0305- 0029 REPORT N62467-04-D-0055 2005	<b>08-04-2009</b> 03-22-2010 5090.3.C. CTO 0305	DELHOMME, S. TETRA TECH EM, INC  BRAC PMO WEST	DRAFT RISK ASSESSMENT TECHNICAL MEMORANDUM EAGLE'S NEST EXPLOSIVES ORDNANCE DISPOSAL AREA AND THE FORMER INLAND BURN / RAILROAD SIDINGS EXCAVATIONS AREA, MILITARY MUNITIONS RESPONSE PROGRAM (CD COPY ENCLOSED)	SENSITIVE SITE FILE	SITE 00013 UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST		
<b>AR_N60036_001993</b> BRAC SER BPMOW.JAC/0359 CORRESPONDENCE NONE 2	<b>03-09-2010</b> 03-25-2010 5090.3.A. NONE	STEWART, K. BRAC PMO WEST  U.S. EPA - SAN FRANCISCO, CA	TRANSMITTAL OF THE FINAL WORK PLAN BASEWIDE GROUNDWATER MONITORING (W/OUT ENCLOSURE)	ADMIN RECORD BASE INFO REPOSITORY	BASEWIDE SITE 00013 SITE 00022 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018 UST 0000001A- 17	NAVFAC - SOUTHWEST		

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.					Location	FRC Accession No.
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	SWDIV Box No(s)	FRC Warehouse	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.				CD No.		
Approx. # Pages								
<b>AR_N60036_001994</b> RORE-3214-0005-0003 REPORT N62473-07-D-3214 571	<b>03-01-2010</b> 03-25-2010 5090.3.A. DO 0005	LOHR, D. RORE, INC.  NAVFAC - SOUTHWEST	FINAL WORK PLAN BASEWIDE GROUNDWATER MONITORING (INCLUDES RESPONSE TO COMMENTS ON THE DRAFT, AND CD COPY)	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	BASEWIDE SITE 00013 SITE 00022 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018 UST 0000001A- 17	NAVFAC - SOUTHWEST		
<b>AR_N60036_002021</b> BRAC SER BPMOW.DRP/0457 CORRESPONDENCE NONE 3	<b>04-19-2010</b> 06-16-2010 5090.3.A. NONE	STEWART, K. BRAC PMO WEST GARVEY, M. U.S. EPA - SAN FRANCISCO, CA	TRANSMITTAL OF THE DRAFT FINAL REMEDIAL INVESTIGATION WORK PLAN FOR THE EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE AND THE FORMER INLAND BURN/RAILROAD SIDINGS EXCAVATIONS SITE, MILITARY MUNITIONS RESPONSE PROGRAM (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY	UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST		
<b>SF_N60036_002022</b> CHAD-3213-0050-0007 REPORT N62473-07-D-3213 829	<b>04-19-2010</b> 06-16-2010 5090.3.C. CTO 0050	CHADUX TT, JOINT VENTURE  BRAC PMO WEST	DRAFT FINAL REMEDIAL INVESTIGATION WORK PLAN FOR THE EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE AND THE FORMER INLAND BURN/RAILROAD SIDINGS EXCAVATIONS SITE, MILITARY MUNITIONS RESPONSE PROGRAM (CD COPY ENCLOSED)	SENSITIVE SITE FILE	UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST		
<b>AR_N60036_002025</b> BRAC SER BPMOW.SAM/0570 CORRESPONDENCE NONE 20	<b>06-15-2010</b> 06-16-2010 5090.3.A. NONE	STEWART, K. BRAC PMO WEST GARVEY, M. U.S. EPA - SAN FRANCISCO, CA	TRANSMITTAL OF THE DRAFT INLAND AREA AMENDED SITE MANAGEMENT PLAN FISCAL YEAR 2011 UPDATE (W/ENCLOSURE)	ADMIN RECORD INFO REPOSITORY	SITE 00013 SITE 00027 SITE 00029	NAVFAC - SOUTHWEST		
<b>AR_N60036_002028</b> NONE CORRESPONDENCE NONE 4	<b>06-07-2010</b> 06-22-2010 5090.3.A. NONE	GARVEY, M. U.S. EPA - SAN FRANCISCO, CA STEWART, K. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION WORK PLAN FOR THE EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE AND THE FORMER INLAND BURN / RAILROAD SIDINGS EXCAVATIONS SITE, MILITARY MUNITIONS RESPONSE PROGRAM	ADMIN RECORD INFO REPOSITORY	UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST		

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_002032</b>	<b>06-09-2010</b>	STEWART, K.	TRANSMITTAL OF THE FINAL SITE	ADMIN RECORD	SITE 00003	CHOICE IMAGING		
BRAC SER	07-21-2010	BRAC PMO WEST	INSPECTION REPORT EAGLE'S NEST	INFO REPOSITORY	SITE 00009	SOLUTIONS		
BPMOW.DRP/0565	5090.3.A.	GARVEY, M.	EXPLOSIVE ORDNANCE DISPOSAL AREA,		SITE 00013	SW-20120326-3/11		
CORRESPONDENCE	NONE	U.S. EPA - SAN	AND THE FORMER INLAND		UXO 000010			
NONE		FRANCISCO, CA	BURN/RAILROAD SIDINGS EXCAVATIONS					
2			AREA (W/OUT ENCLOSURE)					
<b>AR_N60036_002033</b>	<b>06-09-2010</b>	DELHOMME, S.	FINAL SITE INSPECTION REPORT EAGLE'S	ADMIN RECORD	SITE 00003	CHOICE IMAGING		
TTEM-0055-0305-	07-21-2010	TETRA TECH EM,	NEST EXPLOSIVE ORDNANCE DISPOSAL	INFO REPOSITORY	SITE 00009	SOLUTIONS		
0027	5090.3.A.	INC. - VERIFY	AREA, AND THE FORMER INLAND	SENSITIVE	SITE 00013	SW-20120326-3/11		
REPORT	CTO 0305	AFFILIATION	BURN/RAILROADS SIDINGS EXCAVATIONS		SITE 00017			
N62467-04-D-0055			AREA (CD COPY ENCLOSED)		SITE 00024A			
8845		BRAC PMO WEST			UXO 000010			
<b>AR_N60036_002035</b>	<b>06-30-2010</b>		FINAL SITE INSPECTION REPORT BLACK	ADMIN RECORD	SITE 00013	NAVFAC -		
TTEM-0055-0305-	08-04-2010	TETRA TECH EM,	PIT AT RED ROCK AND BURN AREA NEAR	INFO REPOSITORY	SITE 00016	SOUTHWEST		
0010	5090.3.A.	INC.	HE5 (5AT) NO FURTHER ACTION SITES	SENSITIVE	SITE 00022			
REPORT	CTO 0305				UXO 000005			
N62467-04-D-0055		BRAC PMO WEST						
678								
<b>AR_N60036_002037</b>	<b>06-09-2010</b>		RESPONSES TO REGULATORY AGENCY	ADMIN RECORD	SITE 00013	NAVFAC -		
TTEM-0055-0305-	08-10-2010	TETRA TECH EM,	COMMENTS ON THE DRAFT SITE	INFO REPOSITORY	SITE 00017	SOUTHWEST		
0026	5090.3.A.	INC.	INSPECTION REPORT FOR EAGLE'S NEST		SITE 00022			
CORRESPONDENCE	CTO 0305		EXPLOSIVE ORDNANCE DISPOSAL AREA		SITE 00024A			
N62467-04-D-0055		NAVFAC -	AND THE FORMER INLAND		UXO 000003			
8		SOUTHWEST	BURN/RAILROAD SIDINGS EXCAVATIONS		UXO 000009			
			AREA, INLAND AREA, MILITARY MUNITIONS		UXO 000010			
			RESPONSE PROGRAM (CD COPY					
			ENCLOSED)					
<b>SF_N60036_002038</b>	<b>06-01-2010</b>	BRADLEY, S.	DRAFT SITE SAFETY AND HEALTH PLAN	SENSITIVE	UXO 000003	NAVFAC -		
CHAD-3213-0050-	08-10-2010	CHADUX TT,	REMEDIAL INVESTIGATION FOR THE	SITE FILE	UXO 000009	SOUTHWEST		
0011	5090.3.C.	JOINT VENTURE	EAGLE'S NEST EXPLOSIVE ORDNANCE		UXO 000010			
REPORT	DO 0050		DISPOSAL SITE AND FORMER INLAND					
N62473-07-D-3213		NAVFAC -	BURN AREA/RAILROAD SIDINGS					
90		SOUTHWEST	EXCAVATIONS SITE, MILITARY MUNITIONS					
			RESPONSE PROGRAM (CD COPY					
			ENCLOSED)					

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>SF_N60036_002039</b>	<b>06-01-2010</b>	BRADLEY, S.	DRAFT ACCIDENT PREVENTION PLAN	SENSITIVE	UXO 000003	NAVFAC -		
CHAD-3213-0050-0010	08-10-2010	CHADUX TT, JOINT VENTURE	REMEDIAL INVESTIGATION FOR THE EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE AND FORMER INLAND BURN AREA/RAILROAD SIDINGS EXCAVATIONS SITE, MILITARY MUNITIONS RESPONSE PROGRAM (CD COPY ENCLOSED)	SITE FILE	UXO 000009 UXO 000010	SOUTHWEST		
REPORT N62473-07-D-3213 221	5090.3.C. DO 0050	NAVFAC - SOUTHWEST						
<b>AR_N60036_002046</b>	<b>08-13-2010</b>	STEWART, K.	TRANSMITTAL OF THE DRAFT FINAL	ADMIN RECORD	SITE 00013	NAVFAC -		
BRAC SER	09-01-2010	BRAC PMO WEST	AMENDMENT TO THE SITE MANAGEMENT PLAN SCHEDULE, INLAND AREA SITES (W/ ENCLOSURE)	INFO REPOSITORY	SITE 00022 SITE 00022A SITE 00024A SITE 00027 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018	SOUTHWEST		
BPMOW.JAC/0701 CORRESPONDENCE NONE 24	5090.3.A. NONE	GARVEY, M. U.S. EPA - SAN FRANCISCO, CA						
<b>AR_N60036_002047</b>	<b>08-03-2010</b>	STEWART, K.	TRANSMITTAL OF THE DRAFT SEMI- ANNUAL BASEWIDE GROUNDWATER MONITORING REPORT - FIRST EVENT 2010	ADMIN RECORD	BASEWIDE	NAVFAC -		
BRAC SER	09-03-2010	BRAC PMO WEST		INFO REPOSITORY	SITE 00013 SITE 00017 SITE 00022 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018 UST IA-17	SOUTHWEST		
BPMOW.BBC/0681 CORRESPONDENCE NONE 2	5090.3.A. NONE	GARVEY, M. U.S. EPA - SAN FRANCISCO, CA						

UIC No. _ Rec. No.	Record Date	Author					Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	CD No.		FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								
<b>AR_N60036_002048</b>	<b>10-01-2010</b>	LOHR, D.	FINAL SEMI-ANNUAL BASEWIDE	ADMIN RECORD	BASEWIDE		NAVFAC -	
RORE-3214-0005-	09-03-2010	RORE, INC.	GROUNDWATER MONITORING REPORT -	INFO REPOSITORY	SITE 00013		SOUTHWEST	
0005 AND RORE-	5090.3.A.		FIRST EVENT 2010 (CD COPY ENCLOSED)	SENSITIVE	SITE 00017			
3214-0005-0005.R1	DO 0005	BRAC PMO WEST	[INCLUDES REPLACEMENT PAGES		SITE 00022			
REPORT			CONVERTING DRAFT DATED 01 AUGUST		SITE 00029			
N62473-07-D-3214			2010 TO FINAL]		SWMU 00002			
2826					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
					UST IA-17			
					WELL 00007-SH-			
					MW-01			
					WELL 00007-SH-			
					MW-02			
					WELL 00007-SH-			
					MW-03			
					WELL 00007-SH-			
					MW-04			
					WELL 25718-			
					MW02			
					WELL 25718-			
					MW03			
					WELL 25718-			
					MW04			
					WELL 25718-			
					MW05			
					WELL 25718-			
					MW06			
					WELL 25718-			
					MW07			
					WELL 25718-			
					MW08			
					WELL 25718-			
					MW09			
					WELL 25718-			
					MW10			
					WELL 25718-			
					MW11			
					WELL 25718-			
					MW12			

UIC No. _ Rec. No.	Record Date	Author						Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.						SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient		Subject		Distribution	Sites	CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.							
Approx. # Pages									
							WELL 25718- MW13		
							WELL 25718- MW14		
							WELL 25718- MW15		
							WELL ACSMW010		
							WELL ACSMW011		
							WELL ACSMW012		
							WELL ACSMW013		
							WELL ACSMW014		
							WELL BUAMW002		
							WELL BUAMW010		
							WELL BUAMW011		
							WELL BUAMW012		
							WELL BUAMW013		
							WELL BUAMW014		
							WELL BUAMW015		
							WELL BUAMW016		
							WELL IA-17- MW08		
							WELL IA-17- MW09		
							WELL IA-17- MW10		
							WELL MW178-5		
							WELL MW-IA17		
							WELL S29MW01		

UIC No. _ Rec. No.	Record Date	Author					Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites		CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								
							WELL S29MW02 WELL S29MW03 WELL S29MW04 WELL S29MW05 WELL S29MW06 WELL S29MW07 WELL S29MW08 WELL S29MW09D WELL S29MW09S	
<b>AR_N60036_002055</b> BRAC SER BPMOW.DRP/0670 CORRESPONDENCE NONE 2	<b>07-29-2010</b> 09-17-2010 5090.3.A. NONE	STEWART, K. BRAC PMO WEST GARVEY, M. U.S. EPA - SAN FRANCISCO, CA	TRANSMITTAL OF THE FINAL RISK ASSESSMENT TECHNICAL MEMORANDUM EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL AREA AND THE FORMER INLAND BURN/RAILROAD SIDINGS EXCAVATIONS AREA, MILITARY MUNITIONS RESPONSE PROGRAM	ADMIN RECORD INFO REPOSITORY	SITE 00013 UXO 000003 UXO 000009 UXO 000010		NAVFAC - SOUTHWEST	
<b>AR_N60036_002056</b> TTEM-0055-0305- 0032 REPORT N62467-04-D-0055 2001	<b>07-29-2010</b> 09-17-2010 5090.3.A. CTO 0305	DELHOMME, S. TETRA TECH EM, INC.  BRAC PMO WEST	FINAL RISK ASSESSMENT TECHNICAL MEMORANDUM EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL AREA AND THE FORMER INLAND BURN/RAILROAD SIDINGS EXCAVATIONS AREA, MILITARY MUNITIONS RESPONSE PROGRAM (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00013 SITE 00017 SITE 00022 SITE 00024A UXO 000003 UXO 000009 UXO 000010		NAVFAC - SOUTHWEST	
<b>AR_N60036_002057</b> NONE CORRESPONDENCE NONE 3	<b>07-08-2010</b> 09-22-2010 5090.3.A. NONE	MCCONAUGHY, D. NAVY AND MARINE CORPS PUBLIC HEALTH CENTER - PORTSMOUTH, VA  NAVFAC - SOUTHWEST	REVIEW AND COMMENTS ON THE DRAFT SITE SAFETY AND HEALTH PLAN REMEDIAL INVESTIGATION FOR THE EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE AND FORMER INLAND BURN AREA/RAILROAD SIDINGS EXCAVATIONS SITE, MILITARY MUNITIONS RESPONSE PROGRAM (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	UXO 000003 UXO 000009 UXO 000010		NAVFAC - SOUTHWEST	

UIC No. _ Rec. No.	Record Date	Author	Author Affil.	Location	FRC Accession No.	
Doc. Control No.	Prc. Date	Author	Author Affil.	SWDIV Box No(s)	FRC Warehouse	
Record Type	SSIC No.	Author	Author Affil.	CD No.	FRC Box No(s)	
Contract No.	CTO No.	Recipient	Recipient Affil.	Subject	Distribution	Sites
Approx. # Pages		Recipient Affil.	Recipient Affil.	Subject	Distribution	Sites
<b>AR_N60036_002067</b>	<b>08-01-2010</b>					
CHAD-3213-0050-0012	10-08-2010	CHADUX TT, JOINT VENTURE	BRAC PMO WEST	FINAL SITE SAFETY AND HEALTH PLAN REMEDIAL INVESTIGATION FOR THE EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE AND FORMER INLAND BURN AREA/RAILROAD SIDINGS EXCAVATIONS SITE (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	UXO 000003 UXO 000009 UXO 000010
REPORT N62473-07-D-3213 90	5090.3.A. DO 0050					NAVFAC - SOUTHWEST
<b>SF_N60036_002068</b>	<b>08-01-2010</b>					
CHAD-3213-0050-0016	10-08-2010	CHADUX TT, JOINT VENTURE	BRAC PMO WEST	FINAL ACCIDENT PREVENTION PLAN REMEDIAL INVESTIGATION FOR THE EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE AND FORMER INLAND BURN AREA/RAILROAD SIDINGS EXCAVATIONS SITE (CD COPY ENCLOSED)	SENSITIVE SITE FILE	UXO 000003 UXO 000009 UXO 000010
REPORT N62473-07-D-3213 226	5090.3.C. DO 0050					NAVFAC - SOUTHWEST
<b>AR_N60036_002072</b>	<b>10-13-2010</b>					
BRAC SER BPMOW.BBC/0022	10-27-2010	HILL, J. BRAC PMO WEST GARVEY, M. U.S. EPA - SAN FRANCISCO, CA		TRANSMITTAL OF THE REPLACEMENT PAGES CONVERTING THE DRAFT DATED 01 AUGUST 2010 TO FINAL SEMI-ANNUAL BASEWIDE GROUNDWATER MONITORING REPORT - FIRST EVENT 2010	ADMIN RECORD INFO REPOSITORY	IA 000017 SITE 00013 SITE 00017 SITE 00022 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018
CORRESPONDENCE NONE 2	NONE					NAVFAC - SOUTHWEST

UIC No. _ Rec. No.	Record Date	Author					Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	CD No.	FRC Warehouse	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.						
Approx. # Pages								
<b>AR_N60036_002078</b>	<b>11-01-2010</b>	LOHR, D.	FINAL ADDENDUM 01 TO THE FINAL	ADMIN RECORD	BASEWIDE		NAVFAC -	
RORE-4410-0001-	12-02-2010	RORE, INC.	SAMPLING AND ANALYSIS PLAN (FIELD	INFO REPOSITORY	SITE 00013		SOUTHWEST	
0001.A1/F	5090.3.A.		SAMPLING PLAN/QUALITY ASSURANCE	SENSITIVE	SITE 00017			
REPORT	DO 0001	NAVFAC -	PROJECT PLAN) BASEWIDE		SITE 00022			
N62473-10-C-4410		SOUTHWEST	GROUNDWATER MONITORING, INLAND		SITE 00029			
48			AREA AND UNDERGROUND STORAGE		SWMU 00002			
			TANK (CD COPY ENCLOSED)		SWMU 00005			
					SWMU 00007			
					SWMU 00018			
					UST IA-17			
					WELL 25718-			
					MW07			
					WELL 25718-			
					MW08			
					WELL 25718-			
					MW09			
					WELL 25718-			
					MW10			
					WELL 25718-			
					MW12			
<b>PF_N60036_002081</b>	<b>11-09-2010</b>	ANDERSON, S.	TRANSMITTAL OF THE DRAFT SEMI-	POST DECISION	BASEWIDE		NAVFAC -	
BRAC SER	12-13-2010	BRAC PMO WEST	ANNUAL BASEWIDE GROUNDWATER	FILE	SITE 00013		SOUTHWEST	
BPMOW.BBC/0084	5090.3.B.	GARVEY, M.	MONITORING REPORT SECOND EVENT		SITE 00017			
CORRESPONDENCE	NONE	U.S. EPA - SAN	2010		SITE 00022			
NONE		FRANCISCO, CA			SITE 00029			
2					SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
					UST IA-17			

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_002082</b>	<b>12-15-2010</b>	LOHR, D.	FINAL SEMI-ANNUAL BASEWIDE	ADMIN RECORD	BASEWIDE	NAVFAC -		
RORE-3214-0005-0006 AND RORE-3214-0005-0006.R1	12-13-2010	RORE, INC.	GROUNDWATER MONITORING REPORT	INFO REPOSITORY	SITE 00013	SOUTHWEST		
REPORT	5090.3.A.	BRAC PMO WEST	SECOND EVENT 2010 (INCLUDES	SENSITIVE	SITE 00017			
N62473-07-D-3214	DO 0005		REPLACEMENT PAGES CONVERTING THE		SITE 00022			
28			DRAFT DATED 09 NOVEMBER 2010 TO		SITE 00029			
			FINAL; AND CD COPY) [SEE RECORDS #		SWMU 00002			
			2081 AND # 2085 - BRAC PMO WEST		SWMU 00005			
			TRANSMITTAL LETTERS]		SWMU 00007			
					SWMU 00018			
					UST IA-17			
<b>AR_N60036_002085</b>	<b>12-15-2010</b>	ANDERSON, S.	TRANSMITTAL OF THE REPLACEMENT	ADMIN RECORD	BASEWIDE	NAVFAC -		
BRAC SER	12-27-2010	BRAC PMO WEST	PAGES CONVERTING THE DRAFT SEMI-	INFO REPOSITORY	SITE 00013	SOUTHWEST		
BPMOW.BBC/0161	5090.3.A.	GARVEY, M.	ANNUAL BASEWIDE GROUNDWATER		SITE 00017			
CORRESPONDENCE	NONE	U.S. EPA - SAN	MONITORING REPORT SECOND EVENT		SITE 00022			
NONE		FRANCISCO, CA	2010 DATED 09 NOVEMBER 2010 TO FINAL		SITE 00029			
2					SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
					UST IA-17			
<b>AR_N60036_002116</b>	<b>07-01-2009</b>	STANTON, B.	REVIEW AND COMMENTS ON THE DRAFT	ADMIN RECORD	SITE 00013	NAVFAC -		
NONE	03-10-2011	CALIFORNIA	SITE INSPECTION REPORT EAGLE'S NEST	INFO REPOSITORY	SITE 00017	SOUTHWEST		
CORRESPONDENCE	5090.3.A.	DEPARTMENT OF	EXPLOSIVE ORDNANCE DISPOSAL AREA		SITE 00024A			
NONE	NONE	FISH AND GAME -	AND FORMER INLAND BURN / RAILROAD					
4		SACRAMENTO, CA	SIDINGS EXCAVATIONS AREA, MUNITIONS					
		PINASCO, J.	RESPONSE PROGRAM					
		DTSC -						
		SACRAMENTO, CA						
<b>AR_N60036_002117</b>	<b>04-06-2010</b>		RESPONSES TO COMMENTS ON THE	ADMIN RECORD	SITE 00013	NAVFAC -		
NONE	03-10-2011		DRAFT SITE INSPECTION REPORT	INFO REPOSITORY	SITE 00017	SOUTHWEST		
CORRESPONDENCE	5090.3.A.		EAGLE'S NEST EXPLOSIVE ORDNANCE	SENSITIVE	SITE 00022			
NONE	NONE	BRAC PMO WEST	DISPOSAL AREA AND FORMER INLAND		SITE 00024A			
10			BURN/RAILROAD SIDINGS EXCAVATIONS		UXO 000003			
			AREA, MUNITIONS RESPONSE PROGRAM		UXO 000009			
					UXO 000010			

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.					Location	FRC Accession No.
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	SWDIV Box No(s)	FRC Warehouse	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.				CD No.		
Approx. # Pages								
<b>PF_N60036_002121</b>	<b>09-29-2010</b>	GARVEY, M.	REVIEW AND NO COMMENTS ON THE	POST DECISION	BASEWIDE	NAVFAC -		
NONE	03-16-2011	U.S. EPA - SAN FRANCISCO, CA	DRAFT SEMI-ANNUAL BASEWIDE	FILE	SITE 00013	SOUTHWEST		
CORRESPONDENCE	5090.3.B.	CLAMOR, B.	GROUNDWATER MONITORING REPORT -		SITE 00017			
NONE	NONE	NAVAFAC -	FIRST EVENT 2010		SITE 00022			
2		SOUTHWEST			SITE 00029			
					SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
					UST IA-17			
<b>PF_N60036_002122</b>	<b>09-28-2010</b>	FRIEDMAN, A.	REVIEW AND NO COMMENTS ON THE	POST DECISION	BASEWIDE	NAVFAC -		
NONE	03-16-2011	CRWQCB -	DRAFT SEMI-ANNUAL BASEWIDE	FILE	SITE 00013	SOUTHWEST		
CORRESPONDENCE	5090.3.B.	OAKLAND, CA	GROUNDWATER MONITORING REPORT -		SITE 00017			
NONE	NONE	CLAMOR, B.	FIRST EVENT 2010		SITE 00022			
1		NAVAFAC -			SITE 00029			
		SOUTHWEST			SWMU 00002			
					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
					UST IA-17			
<b>PF_N60036_002160</b>	<b>07-12-2011</b>	ANDERSON, S.	TRANSMITTAL OF THE DRAFT SEMI-	POST DECISION	SITE 00013	NAVFAC -		
BRAC SER	07-20-2011	BRAC PMO WEST	ANNUAL BASEWIDE GROUNDWATER	FILE	SITE 00017	SOUTHWEST		
BPMOW.BBC/0709	5090.3.B.	GARVEY, M.	MONITORING REPORT - FIRST EVENT 2011		SITE 00022			
CORRESPONDENCE	NONE	U.S. EPA - SAN			SITE 00029			
NONE		FRANCISCO, CA			SWMU 00002			
2					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
					UST IA-17			

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>UF_N60036_002161</b> RORE-3214-0005-0007 AND RORE-3214-0005-0007.R1 REPORT N62473-07-D-3214 2248	<b>10-01-2011</b> 07-20-2011 5090.3.B. DO 0005	LOHR, D. RORE, INC.  BRAC PMO WEST	FINAL SEMI-ANNUAL BASEWIDE GROUNDWATER MONITORING REPORT - FIRST EVENT 2011 (INCLUDES REPLACEMENT PAGES CONVERTING THE DRAFT SEMI-ANNUAL BASEWIDE GROUNDWATER MONITORING REPORT - FIRST EVENT 2011, DATED 01 JULY 2011 TO FINAL, AND CD COPY)	POST DECISION FILE SENSITIVE	SITE 00013 SITE 00017 SITE 00022 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018 UST IA-17 WELL 00007-SH-MW-01 WELL 00007-SH-MW-02 WELL 00007-SH-MW-03 WELL 00007-SH-MW-04	NAVFAC - SOUTHWEST		
<b>AR_N60036_002164</b> NONE CORRESPONDENCE NONE 52	<b>08-01-2011</b> 08-01-2011 5090.3.A. NONE	   NAVFAC - SOUTHWEST	RESPONSES TO COMMENTS ON THE DRAFT ENGINEERING EVALUATION AND COST ANALYSIS MUNITIONS AND EXPLOSIVES OF CONCERN	ADMIN RECORD INFO REPOSITORY	SITE 00013 SITE 00017 SITE 00022 SITE 00024A UXO 000001A	NAVFAC - SOUTHWEST		
<b>AR_N60036_002168</b> NONE CORRESPONDENCE NONE 3	<b>07-16-2009</b> 08-17-2011 5090.3.A. NONE	RAMSEY, P. U.S. EPA - SAN FRANCISCO, CA STEWART, K. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT AMENDMENT TO THE SITE MANAGEMENT PLAN SCHEDULE - INLAND AREA SITES	ADMIN RECORD	SITE 00013 SITE 00022 SITE 00022A SITE 00027 SITE 00029	NAVFAC - SOUTHWEST		
<b>AR_N60036_002191</b> CHAD-3213-0050-0009 REPORT N62473-07-D-3213 43	<b>05-01-2010</b> 09-06-2011 5090.3.A. DO 0050	CHADUX TT, JOINT VENTURE  BRAC PMO WEST	FINAL EXPLOSIVE SAFETY SUBMISSION FOR EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE, FORMER INLAND BURN/RAILROAD SIDINGS EXCAVATIONS SITE, AND THE BERMED AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST		

UIC No. _ Rec. No.	Record Date	Author				Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.					
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	SWDIV Box No(s)	FRC Warehouse
Contract No.	CTO No.	Recipient Affil.				CD No.	FRC Box No(s)
Approx. # Pages							
<b>SF_N60036_002199</b> CHAD-3213-0047-0008 REPORT N62473-07-D-3213 21	<b>10-01-2011</b> 10-28-2011 5090.3.C. CTO 0047	CHADUX TT, JOINT VENTURE  BRAC PMO WEST	DRAFT PROPOSED PLAN FOR INLAND AREA (CD COPY ENCLOSED) [SEE RECORD # 2198 - BRAC PMO WEST TRANSMITTAL LETTER]	SENSITIVE SITE FILE	BLDG IA-20 BLDG IA-36 SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027	NAVFAC - SOUTHWEST	
<b>AR_N60036_002202</b> NONE CORRESPONDENCE NONE 4	<b>12-18-2009</b> 10-31-2011 5090.3.A. NONE	GARVEY, M. U.S. EPA - SAN FRANCISCO, CA STEWART, K. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION WORK PLAN FOR THE EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE AND THE FORMER INLAND BURN/RAILROAD SIDINGS EXCAVATIONS SITE (SEE RECORD # 1974 - DRAFT REMEDIAL INVESTIGATION WORK PLAN)	ADMIN RECORD	IA 0000053 SITE 00013 SITE 00017 SITE 00022 SITE 00024A UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST	
<b>AR_N60036_002203</b> NONE CORRESPONDENCE NONE 10	<b>02-11-2010</b> 10-31-2011 5090.3.A. NONE	PARKER, D. BRAC PMO WEST GARVEY, M. U.S. EPA - SAN FRANCISCO, CA	RESPONSES TO COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION WORK PLAN FOR THE EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE AND THE FORMER INLAND BURN/RAILROAD SIDINGS EXCAVATIONS SITE (SEE RECORD # 2202 - U.S. EPA REVIEW AND COMMENTS)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00013 SITE 00017 SITE 00022 SITE 00024A UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST	
<b>AR_N60036_002206</b> BRAC SER BPMOW.DP/0973 CORRESPONDENCE NONE 2	<b>08-15-2011</b> 11-03-2011 5090.3.A. NONE	ANDERSON, S. BRAC PMO WEST  NAVAL ORDNANCE SAFETY AND SECURITY ACTIVITY (NOSSA) - INDIAN HEAD, MD	TRANSMITTAL OF THE AMENDMENT 1 TO THE FINAL EXPLOSIVE SAFETY SUBMISSION FOR EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE, FORMER INLAND BURN/RAILROAD SIDINGS EXCAVATIONS SITE, NORTHERN RAILROAD REVETMENT B, GUAM WAY, AND THE BERMED AREA	ADMIN RECORD INFO REPOSITORY	UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST	

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>AR_N60036_002207</b>	<b>08-15-2011</b>							
CHAD-3213-0050-0009.A1 REPORT N62473-07-D-3213 50	11-03-2011 5090.3.A. DO 0050	CHADUX TT, JOINT VENTURE  BRAC PMO WEST	AMENDMENT 1 TO THE FINAL EXPLOSIVE SAFETY SUBMISSION FOR EAGLE'S NEST EXPLOSIVE ORDNANCE DISPOSAL SITE, FORMER INLAND BURN/RAILROAD SIDINGS EXCAVATIONS SITE, NORTHERN RAILROAD REVETMENT B, GUAM WAY, AND THE BERMED AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	UXO 000003 UXO 000009 UXO 000010	NAVFAC - SOUTHWEST		
<b>PF_N60036_002213</b>	<b>10-13-2011</b>							
BRAC SER BPMOW.BBC/0016 CORRESPONDENCE NONE 2	11-23-2011 5090.3.B. NONE	ANDERSON, S. BRAC PMO WEST DRAGONE, M. U.S. EPA - SAN FRANCISCO, CA	TRANSMITTAL OF THE REPLACEMENT PAGES CONVERTING THE DRAFT SEMI-ANNUAL BASEWIDE GROUNDWATER MONITORING REPORT - FIRST EVENT 2011, DATED 01 JULY 2011 TO FINAL (ENCLOSURE IS RECORD # 2161)	POST DECISION FILE	SITE 00013 SITE 00017 SITE 00022 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018 UST IA-17	NAVFAC - SOUTHWEST		
<b>PF_N60036_002216</b>	<b>09-09-2011</b>							
NONE CORRESPONDENCE NONE 2	12-20-2011 5090.3.B. NONE	DRAGONE, M. U.S. EPA - SAN FRANCISCO, CA ANDERSON, S. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT SEMI-ANNUAL BASEWIDE GROUNDWATER MONITORING REPORT - FIRST EVENT 2011 (CD COPY ENCLOSED) [SEE RECORD # 2161 - DRAFT SEMI-ANNUAL BASEWIDE GROUNDWATER MONITORING REPORT - FIRST EVENT 2011]	POST DECISION FILE	SITE 00013 SITE 00017 SITE 00022 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018 UST IA-17	NAVFAC - SOUTHWEST		

UIC No. _ Rec. No.	Record Date	Author						
Doc. Control No.	Prc. Date	Author Affil.						
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites	Location	FRC Accession No.	
Contract No.	CTO No.	Recipient Affil.				SWDIV Box No(s)	FRC Warehouse	
Approx. # Pages						CD No.	FRC Box No(s)	
<b>PF_N60036_002217</b>	<b>11-08-2011</b>	ANDERSON, S.	TRANSMITTAL OF THE RATIONAL FOR	POST DECISION	SITE 00013	NAVFAC -		
BRAC SER	12-20-2011	BRAC PMO WEST	CEASING GROUNDWATER MONITORING IN	FILE	SITE 00017	SOUTHWEST		
BPMOW.BBC/0050	5090.3.B.	DRAGONE, M.	RESPONSE TO EPA REQUEST TO		SITE 00022			
CORRESPONDENCE	NONE	U.S. EPA - SAN	CONTINUE GROUNDWATER MONITORING		SITE 00029			
NONE		FRANCISCO, CA	(CD COPY ENCLOSED) [W/ENCLOSURE]		SWMU 00002			
9					SWMU 00005			
					SWMU 00007			
					SWMU 00018			
					UST IA-17			
					WELL			
					BUAMW002			
					WELL			
					BUAMW010			
					WELL			
					BUAMW011			
					WELL			
					BUAMW012			
					WELL			
					BUAMW013			
					WELL			
					BUAMW014			
					WELL			
					BUAMW015			
					WELL			
					BUAMW016			
<b>PF_N60036_002218</b>	<b>12-08-2011</b>	LOW, T.	REVIEW AND COMMENTS ON THE	POST DECISION	SITE 00013	NAVFAC -		
NONE	12-20-2011	CRWQCB -	RATIONALE FOR CEASING	FILE		SOUTHWEST		
CORRESPONDENCE	5090.3.B.	OAKLAND, CA	GROUNDWATER MONITORING (CD COPY					
NONE	NONE	CLAMOR, B.	ENCLOSED) [SEE RECORD # 2217 -					
2		NAVFAC -	RATIONALE FOR CEASING					
		SOUTHWEST	GROUNDWATER MONITORING]					
<b>PF_N60036_002219</b>	<b>12-09-2011</b>	DRAGONE, M.	REVIEW AND COMMENTS ON THE	POST DECISION	SITE 00013	NAVFAC -		
NONE	12-20-2011	U.S. EPA - SAN	RATIONAL FOR CEASING GROUNDWATER	FILE		SOUTHWEST		
CORRESPONDENCE	5090.3.B.	FRANCISCO, CA	MONITORING (CD COPY ENCLOSED) [SEE					
NONE	NONE	CLAMOR, B.	RECORD # 2217 - RATIONALE FOR					
3		NAVFAC -	CEASING GROUNDWATER MONITORING]					
		SOUTHWEST						

UIC No. _ Rec. No.	Record Date	Author						Location	FRC Accession No.
Doc. Control No.	Prc. Date	Author Affil.						SWDIV Box No(s)	FRC Warehouse
Record Type	SSIC No.	Recipient	Subject	Distribution	Sites			CD No.	FRC Box No(s)
Contract No.	CTO No.	Recipient Affil.							
Approx. # Pages									
<b>AR_N60036_002235</b>	<b>01-01-2012</b>								
CHAD-3213-0047-0011	01-27-2012	CHADUX TT, JOINT VENTURE	FINAL PROPOSED PLAN FOR NO FURTHER ACTION FOR THE INLAND AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG IA-20 BLDG IA-36 SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027			NAVFAC - SOUTHWEST	
REPORT N62473-07-D-3213 15	5090.3.A. CTO 0047	NAVFAC - SOUTHWEST							
<b>AR_N60036_002248</b>	<b>02-21-2012</b>								
BRAC SER BPMOW.BBC/0080 CORRESPONDENCE NONE 8	04-12-2012	ANDERSON, S. BRAC PMO WEST DRAGONE, M. U.S. EPA - SAN FRANCISCO, CA	REQUEST FOR WELL DECOMMISSIONING AT INSTALLATION RESTORATION SITES AND UNDERGROUND STORAGE TANK (UST) [W/ ENCLOSURES]	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00013 SITE 00017 SITE 00022 SITE 00029 SWMU 00002 SWMU 00005 SWMU 00007 SWMU 00018 UST IA-17			NAVFAC - SOUTHWEST	
<b>AR_N60036_002253</b>	<b>02-29-2012</b>								
TRVT-4406-0000-0008 REPORT N62473-10-C-4406 176	05-22-2012	TREVET  BRAC PMO WEST	FINAL ACTION MEMORANDUM FOR NON-TIME-CRITICAL REMOVAL ACTION, FORMER PISTOL RANGE (CD COPY ENCLOSED) [SEE RECORDS # 2251 AND # 2252 - BRAC PMO WEST TRANSMITTAL LETTERS]	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00013 SITE 00017 SITE 00022 SITE 00024A SITE 00027 UXO 000001A			NAVFAC - SOUTHWEST	

**Total Estimated Record Page Count: 37,151**

**Total Records: 203**

[UIC NUMBER]='N60036'

No Keywords

Sites=SITE 00013;UXO 000003;UXO 000009

No Classification

**APPENDIX D  
RESPONSES TO REGULATORY AGENCY COMMENTS ON THE DRAFT ACTION  
MEMORANDUM**

---

**RESPONSE TO REGULATORY AGENCY COMMENTS ON THE  
DRAFT ACTION MEMORANDUM FOR TIME-CRITICAL REMOVAL ACTION  
(TCRA) AT THE FORMER INLAND BURN AREA/RAILROAD SIDINGS  
EXCAVATION AREA (UNEXPLODED ORDNANCE [UXO] SITES 9 AND 3) AT  
FORMER NAVAL WEAPONS STATION SEAL BEACH DETACHMENT CONCORD,  
CONCORD, CALIFORNIA**

---

This document presents the Department of the Navy (Navy) responses to comments from staff from the U.S. Environmental Protection Agency (EPA) and the Regional Water Quality Control Board (Water Board) on the Draft Action Memorandum for Time-Critical Removal Action (TCRA) at the Former Inland Burn Area/Railroad Sidings (FIB/RSE) Excavation Area (Unexploded Ordnance [UXO] Sites 9 and 3) at former Naval Weapons Station Concord Seal Beach Detachment Concord, Concord, California, dated July 9, 2012. The comments addressed below were received from Ms. Yvonne Fong, EPA, on August 20, 2012; and Ms. Tina Low, Water Board, on August 8, 2012.

**RESPONSES TO EPA COMMENTS (YVONNE FONG)**

**GENERAL COMMENTS**

1. **Comment:** **Purpose:** The Action Memo describes the size of the metals (including MPPEH) to be removed from the site as “larger than 20 mm.” This size statement is presented in Table 2, MPPEH Action Goals, Section III.D, Selection of Final Removal Goals and Attainment Criteria, and Section IX, Recommendation. As presented there, this goal would likely not result in the removal of any 20 mm projectiles that are present.

20 mm high explosive (HE) projectiles can be very dangerous and are cited as the “smallest munition of interest” in the Quality Assurance Project Plan Worksheet #9 of the associated Draft Removal Action Work Plan, Time Critical Removal Action, at Former Inland Burn/Railroad Siding Excavation Area. This inconsistency requires review and revision as necessary.

Please review this issue and correct it in all sections of the Action Memo. If it is determined that items of the 20 mm size are not included in the metals and MPPEH to be removed, please provide a detailed justification for this decision.

Response: The intent is to remove all items the size of 20 millimeter projectiles and larger. The text has been clarified to state this information.

2. **Comment:** **Purpose:** The scope of the proposed removal action is somewhat confusing. While munitions potentially presenting an explosives hazard (MPPEH) above 20 mm will be removed, it is not clear from the Action Memo what the action will be relative to soils contaminated with metals. The Action Memo also includes inconsistent language

**about whether the TCRA, by itself, will be protective or whether residual risk will remain, requiring further action and/or institutional controls (ICs). It is our understanding that a follow-on remedial investigation and action for FIB/RSE will address additional soil contamination at the site; however, language in the Action Memo suggests that the TCRA may or may not be the final action. Examples of conflicting language include:**

- a. Section I (page 2, first paragraph, next-to-last sentence): “This TCRA is not anticipated to be the final response action ... because institutional controls may be needed because it may not be possible to guarantee that all MPPEH is removed.”**
- b. Section I (page 2, last bullet point): “Section V.A.2 discusses how the proposed action will result in acceptable residual risk from MPPEH at the site and that no remedial controls are necessary to manage any residual risk.”**
- c. Section IV.A.2 states that “No further action for lead, barium, cadmium, or copper is anticipated to be required at the FIB/RSE site after the TCRA has been completed. No additional removal of MPPEH is expected to be required... however; it may not be the final remedy for the site.”**
- d. Section V.B (page 24, 2nd sentence): “Post-removal site control costs (from ICs?) are not anticipated for this TCRA.”**

**Please revise Section I to more clearly explain the scope and role of the TCRA in relation to the ongoing Remedial Investigation/Feasibility Study (RI/FS) at FIB/RSE. Also, clarify language throughout the document so that the Action Memo no longer suggests that all other soil and specifically all metal contamination at the site will be addressed by the TCRA. Please also clarify the discussion regarding the need for ICs.**

Response: The purpose of the TCRA is to remove potential explosive hazards posed by MPPEH at FIB/RSE. Removing the MPPEH requires excavation of (all) soil currently known to have concentrations of metals (lead, barium, cadmium and copper) exceeding action levels. Since this soil cannot be used as backfill and will need to be disposed off-site it is addressed in the Action Memo; although it is not the purpose of the TCRA.

The Action Memo indicates that there are not expected to be any additional concerns related to metals because all the areas currently known to have concentrations exceeding action levels will be removed during the TCRA. This will be further evaluated in the RI report which will also include analytical data from samples collected during the TCRA.

The need for ICs at FIB/RSE is based on the fact that future land owners will need to be notified of the past site usage and the potential, although it may be remote, of encountering munitions-related material. It is not anticipated that ICs will be needed to account for potential MPPEH or contaminated soil that was not able to be removed.

The final two sentences of the fourth paragraph in Section I (previously the third paragraph) have been revised as follows: “The TCRA is anticipated to remove unacceptable risks from MPPEH and barium, cadmium, copper, and lead. If any soils with elevated levels of metals are left on site after the TCRA has been completed, these soils will be evaluated and documented in the remedial investigation (RI) report. Institutional controls (IC) may be ultimately needed to inform future land owners of potential risk from undiscovered MPPEH. The need for ICs will be addressed during the subsequent RI and feasibility study (FS) for FIB/RSE.”

The fourth bullet of Section I (Long-term effectiveness and permanence) has been modified based on the Navy’s response to EPA specific comment 5 below.

The 2<sup>nd</sup> Sentence in Section V.B has been revised as follows: “Post-removal site control costs are not needed for this TCRA. The need for post-removal controls will be evaluated as part of the RI and FS for FIB/RSE.”

No other text changes are needed as a result of this comment.

3. **Comment:** **Action Levels:** Text on page 2 states that action levels were calculated for lead, barium, cadmium and copper and indicates that soil above these action levels will be removed and that soil below these levels may be used as backfill. While soils that exceed these levels within the proposed excavation areas shown in Figure 3 will be disposed of, it seems that soils that exceed these levels outside of the proposed excavation areas will likely remain on-site. It appears as though the action levels actually define “disposal/backfill criteria” for the site since it is the presence of MPPEH larger than 20 mm (not soil above these levels) that determines whether or not an action will be taken. Please revise the discussion and selection of these thresholds to better describe their use in the TCRA. Also, please include a discussion of what course of action will be taken if an area cleared of MPPEH still contains soil with metals concentrations above the action levels.

Response: Soils with concentrations of metals above the action levels are located within the footprint of the TCRA excavation areas. If any soils with elevated levels of metals are left on site after the TCRA has been completed, these soils will be evaluated and documented in the RI report. Section I has been revised to clarify the objectives of the TCRA and rationale for why action levels were developed for metals in soil.

4. **Comment:** **Munitions Constituents: The Action Memo discusses actions relative to MPPEH and four metals that were shown in previous investigations to present risks to human health or the environment; however, it is not clear if or how other munitions constituents will be addressed by the TCRA. It is common for munitions constituents to be present at open burn/open detonation sites like FIB/RSE. Please describe how munitions constituents will be addressed.**

Response: To date, lead, barium, cadmium, and copper are the only munitions constituents detected at concentrations that would cause unacceptable risk. Most soil samples collected at FIB/RSE have been analyzed for both metals and explosives as will all soil samples collected during the TCRA. These data will be included and evaluated in the upcoming RI report.

#### **SPECIFIC COMMENTS**

1. **Comment:** **Section I, Purpose, page 1: Please explain the basis for setting a size threshold of munitions greater than 20 mm. Fuses and other munitions-related components are often equal to or smaller than 20 mm. Also, explain how items equal to and smaller than 20 mm will be handled if encountered during the TCRA.**

Response: Text in the Action Memo incorrectly states a size threshold “greater” than 20 mm; it has been revised to state “munitions 20 mm or larger.” The basis for 20-mm threshold is that it is the smallest size munition that would typically contain high explosives and present a significant explosive hazard. The 20-millimeter size is the minimum standard size that can be captured using screening equipment. Smaller munitions-related items discovered will also be removed and handled in the same manner as all other MPPEH.

2. **Comment:** **Section I, Purpose, page 2: The seventh sentence states that excavation areas will be “backfilled with clean soil from the site excavations or, if necessary, clean imported fill.” Please briefly explain whether imported fill will be from other on-site or off-site locations, if fill material will be sampled before use and what criteria will be used for determining appropriate fill material (are these criteria the same as the action levels?).**

Response: Imported fill is not expected to be needed at FIB/RSE, so specific sources have not been identified. Should it be required, imported fill would meet the substantive requirements of applicable federal and state regulations.

3. **Comment:** **Section I, Purpose, page 2: The second to last sentence of the first paragraph on page 2, states that “This TCRA is not anticipated to be the final response action at the FIB/RSE site because, although no known MPPEH or elevated concentrations of barium, cadmium, copper and lead would remain on site, institutional controls may be**

**needed because it may not be possible to guarantee that all MPPEH is removed.” Revise this sentence to clarify that metals may remain on-site outside of the proposed excavation areas and that ICs may be needed because, in addition to undiscovered MPPEH, other soil and groundwater contamination are not addressed by this action and may also remain on-site.**

Response: It is anticipated the TCRA will remove all detectable MPPEH and soil with concentrations of contaminants that pose unacceptable risks. Even in this case, ICs may still be necessary to alert future land owners and others of the former munitions-related activities at the site and potential for encountering munitions-related material at the site. Evaluation of the need for ICs and whether all MPPEH and impacted soil has been removed will be included in the RI and FS for FIB/RSE. The last two sentences of the third paragraph in Section I have been revised as stated in the response to EPA general comment 2.

4. **Comment:** Section I, Purpose, page 2: **The second bullet on the page states that the protectiveness evaluation focuses on how site risks are “reduced or eliminated by the proposed action.” Please delete the phrase “or eliminated” since as stated earlier in this section, undiscovered MPPEH may remain at the site.**

Response: The sentence has been modified as requested.

5. **Comment:** Section I, Purpose, page 2: **The fourth bullet on the page relating to long-term effectiveness and permanence states that Section V.A.2 discusses residual risk at the site. Section V.A.2 does not appear to include a discussion of residual risk at the site beyond a statement that ICs may be needed. Revise this bullet and Section V.A.2 accordingly. Also, clarify whether the residual risk referenced in this bullet is related to MPPEH risk or other risks at the site.**

Response: The fourth bullet in Section I (Long-term effectiveness and permanence) has been revised as follows: “Section V.A.2 discusses how the proposed action is anticipated to result in the removal of all MPPEH and soil presenting unacceptable risks from elevated concentrations of barium, cadmium, copper, and lead from FIB/RSE. This would provide long term effectiveness and permanent protection to human health and the environment.” The text after the semi-colon in the second to last sentence in Section V.A.2 has been deleted and the final sentence has been revised as follows: “Evaluation of site conditions during the RI and FS may indicate an additional response action and/or ICs may be needed to ensure long term effectiveness.”

6. **Comment:** Sections II.A and II.A.2, Site Description and Physical Location, pages 3 and 5: The site description and physical location indicate that Contra Costa Canal defines the northwest extent of the site. According to Figures 2 and 3, Guadalcanal Way appears to define the northwestern boundary of the site. Contra Costa Canal defines the same boundary, the southwestern boundary, as Wake Way. Please clarify the features that define the site.

Response: Figures 2 and 3 show that the Contra Costa Canal (in blue) is between Guadalcanal Way and the site. The site does not extend across Contra Costa Canal on the northwest. On the southwest, the current site boundary extends only to Wake Way and does not extend to Contra Costa Canal.

7. **Comment:** Sections II.A.1 and III.C, Removal Site Evaluation and Secondary Threats to Public Health or Welfare and the Environment, pages 4, 5 and 16: Statements in these sections appear to be inconsistent with regard to risk. On page 4, the first paragraph after the bulleted list states that “Human health risk assessments performed in 1997 and 2010 concluded there were no unacceptable risks to human health” while the next-to-last paragraph before Section II.A.2 states that “A 2010 RATM . . . , indicated that soil . . . that pose potentially unacceptable risks to human health or the environment will need to be excavated . . .” The first sentence of the first full paragraph on page 19 states, “The HHRA in the RATM did not identify any chemicals in soil that posed an unacceptable risk to human health.” Please clarify these statements. It may be helpful to revise the language on page 4 to distinguish human health risks from environmental risks.

Response: The statement in the next to last paragraph of Section II.A.1 is incorrect. The RATM only identified unacceptable risks to the environment from barium, cadmium, copper, and lead. No unacceptable human health risks were identified in the RATM. Since that time, the toxicity criteria have been updated. Updated human-health and ecological risk assessments done for this Action Memo identified unacceptable risks to both. The first sentence in the next to last paragraph of Section II.A.1 has been revised as follows: “A 2012 update to human health and ecological risk assessments indicated that soil containing barium, cadmium, copper, and lead at concentrations that pose unacceptable risks to human health and the environment will need to be excavated to do a removal of MPPEH.”

8. **Comment:** Section II.A, Site Description, page 4: The 5-inch rocket motor is described as being found 4 feet below ground surface (bgs); however, no indication is given as to the actual location of the motor. Please describe or indicate in a figure, the location where the rocket motor was discovered.

Response: The rocket motor was located in the heavy anomaly area designated as A-4 on Figure 2. This information has been added to the text.

9. **Comment:** **Sections II.A.1, II.A.3 and II.B.1.1, Removal Site Evaluation, Site Characteristics and Other Actions to Date, pages 5, 6 and 8 and Figure 2: The description of the burn pit area IA-53 is inconsistent. Clarify if the dimensions are 25 feet by 24 or 25 feet or 12 feet by 12 feet and if the pit is “open-bottomed”/“unlined” or “lined on the inside with a 3/8-inch steel plate.”**

Response: IA-53 refers to a subsurface concrete structure that is approximately 25 feet by 25 feet and was approximately 11 to 12 feet deep to the soil bottom during use. The concrete side walls, according to drawings, were 12-inches thick and lined with 3/8-inch plate; the bottom was open and unlined. The structure is currently filled in and buried on site, but concrete walls were discovered during trenching done as part of the site inspection (SI), indicating that the structure is apparently still in place. The text and Figure 2 have been modified for consistency.

10. **Comment:** **Section II.A.1, Removal Site Evaluation, page 5: The fifth paragraph states that “the handling and disposal of the soil contaminated by these metals is addressed in this Action Memorandum.” Please clarify that this is not the final soil action for the site. See General Comments 1 and 2 above.**

Response: Text in the Action Memo has been modified in other locations to indicate this may not be the final soil action for the site (see responses to EPA general comment 2 and EPA specific comments 3 and 5). No text modifications are needed in Section II.A.1.

11. **Comment:** **Section II.A.4, Release or Threatened Release into the Environment of a Hazardous Substance or Pollutant or Contaminant, page 7: Please clarify the apparent inconsistency between the statement “MPPEH in subsurface soil and at scattered locations on the surface is the only medium of concern . . . because of the threat posed to human health and safety” with other statements in the Action Memo that indicate that metals concentrations at FIB/RSE present a risk to human health and the environment.**

Response: MPPEH in subsurface soil and scattered surface locations is the reason a TCRA is needed at FIB/RSE. Removal of soils with elevated metals is incidental to the MPPEH removal. The first sentence in Section II.A.4 has been revised as follows: “The threat posed to human health and safety from MPPEH in subsurface soil and at scattered surface locations is the reason for doing a TCRA at FIB/RSE.”

12. **Comment:** Section II.B.1.4, Remedial Investigation (1995-1997), page 9: The third paragraph states that monitoring wells are shown on Figure 2; however, only 5 of the 8 monitoring wells are depicted. Please revise the figure to include all wells.

Response: Two of the three monitoring wells that are noted in the comment as missing are off-site wells that are not shown in the frame of the figure. The second sentence of the second paragraph of Section II.B.1.4 was modified as follows: "Monitoring well locations are shown on Figure 2, except for two off-site wells that are not shown in the area depicted in the figure."

13. **Comment:** Section II.B.1.4, Remedial Investigation (1995-1997) and Table 1, page 10: The first paragraph on the page states that EPCs were compared with the industrial (1,000 mg/kg) and residential (130 mg/kg) screening levels "used at that time." Please state that some screening levels have been updated since the 1997 RI and that risk was recently re-evaluated using newer screening levels or refer to the discussion in Section II.B.1.8. Please also include the earlier screening levels used in the information in Table 1.

Response: The following note has been added at the end of the first paragraph following Table 1 in Section II.B.1.4: "See Section II.B.1.8 for the results of the subsequent HHRA and ERA conducted in 2010." Table 1 in Section II.B.1.4 is a summary table of risk that was developed in the 1997 RI report using forward-risk calculations and was not calculated using screening levels as with the lead evaluation. No changes to Table 1 will be made as a result of this comment. This information will be further documented in the upcoming RI Report.

14. **Comment:** Section II.B.1.5, Groundwater Investigations (2003- 2006), page 10: The first paragraph describes the joint no further action Record of Decision (ROD) for IR Sites 13 and 17. Please include the name and a brief description of Site 17.

Response: Site 17 refers to Building IA-24, which is not near or relevant to the FIB site. The following sentence has been added to the first paragraph of Section II.B.1.5: "Site 17 (Building IA-24) has no relation to FIB/RSE."

15. **Comment:** Section III.C, Secondary Threats to Public Health or Welfare and the Environment and table 3, page 13: This section describes the updated human health risk assessment (HHRA) done in 2012. It is not clear whether or not the updated HHRA was included in a primary document that received regulatory agency concurrence; however, the health based action levels in Table 3 do not comply with EPA guidance. As described in the footnote in Table 3, background levels were added to the DTSC CHHSLs to derive the respective residential and industrial cleanup goals of 113 mg/kg and 353 mg/kg.

**According to EPA guidance relating to the role of background, when background levels are below action levels, the action levels, not the sum of action levels plus background, should be used. In the case of FIB/RSE, the residential and industrial action levels for soil lead should be the DTSC CHHSLs of 80 mg/kg and 320 mg/kg, respectively. Please revise the cleanup goals and re-evaluate the extent of excavations for lead and any other COCs that used this approach to levels of background contamination.**

Response: An updated HHRA was not done in 2012, so the second and third sentences of the second paragraph in Section III.C will be revised to the following: “Additional data were collected at the FIB site in 2010 and 2011 after the RATM was finalized. Based on the new data, and with consideration of screening levels for lead that were updated since the issuance of the final RATM, the Navy concluded that lead was present in soil at concentrations greater than the DTSC’s Office of Environmental Health Hazard Assessment (OEHHA) residential and industrial California Human Health Screening Levels (CHHSL) (DTSC 2009). OEHHA established a goal of an estimated blood lead level of 1 microgram per deciliter ( $\mu\text{g}/\text{dL}$ ) for its CHHSLs for residential and industrial exposures (DTSC 2009). The Navy established a modified CHHSL for Concord so that exposure to soils does not result in increased lead levels in blood to more than 1  $\mu\text{g}/\text{dL}$  above background for the residential or industrial receptors. Accordingly, the Navy used the residential action level of 113 milligrams per kilogram ( $\text{mg}/\text{kg}$ ), which is the sum of the background value for lead (33  $\text{mg}/\text{kg}$ ) and the residential OEHHA CHHSL (80  $\text{mg}/\text{kg}$ ). Likewise, the industrial action level for lead of 353  $\text{mg}/\text{kg}$  reflects the CHHSL (320  $\text{mg}/\text{kg}$ ) combined with the background value.”

This represents a potential disagreement in how this TCRA is performed as well as future assessment of risks at FIB/RSE. Based on this, the Navy will confer with the regulatory agencies when a decision (backfilling or stopping excavations) must be made that involves a lead concentration between the CHHSL (80  $\text{mg}/\text{kg}$ ) and the action level (113  $\text{mg}/\text{kg}$ ).

- 16. Comment: Tables 3 and 4, Health-Based Action Levels and Ecological-Based Action Levels, page 17: The action memo does not clearly state if the action levels will be used as concentrations that are not to be exceeded on a point-by-point basis or if the 95% upper confidence limit (UCL) of the contaminant concentrations left in place (i.e., including confirmation samples) is not to exceed the action level. Please revise the action memo to clarify if 95% UCLs will be calculated to determine if action levels have been met.**

Response: These action levels are intended to be used on a point-by-point basis during the removal action. The actual risk remaining at the site will be evaluated in the upcoming RI report. This has been clarified in Section III.C.

17. **Comment:** Table 4, Ecological-Based Action Levels, page 17: The basis for the risk-based ecological action levels is not presented in the Action Memo; the action levels for lead and copper appear to exceed EPA’s ecological soil screening levels. Please provide additional supporting documentation and or references to support the risk-based ecological action levels.

Response: Risk-based action levels for the FIB/RSE Area were back-calculated for chemicals of ecological concern (Tetra Tech EM Inc. 2010). The risk-based action level was calculated by setting the hazard quotient equal to 1.0 and then solving for the soil concentration. This process is known as back-calculating. Back-calculations were done using the low and high toxicity reference value (TRV), but the high TRV was used to identify the risk-based action levels because actual toxicological effects are associated with the high TRV and not with the low TRV. The ecological receptor with the lowest risk-based action level is the most sensitive receptor. Risk-based action levels developed for the most sensitive receptor are expected to be protective of all ecological receptors in the FIB/RSE area.

The basis for the ecological risk-based action levels is presented in Appendix A of the report, as noted in Section III.C. The EPA ecological soil screening levels are not intended for use as cleanup levels.

18. **Comment:** Section V.A.5, Applicable or Relevant and Appropriate Requirements, page 21: The citation “NCP § 300.415” should be revised to “NCP § 300.415(j).” Also, revise any text in this section that is taken verbatim from the NCP to be noted in quotations.

Response: The text has been revised in accordance with this comment.

19. **Comment:** Section IV.B, Estimated Costs, page 25: As described in the first bullet, the cost estimate is based on a total of nine excavations for metals. It is not clear how these nine excavations relate to what appears to be a total of 12 excavations (Areas A through I plus three additional Unit 3 areas) shown in Figures 3 through 8 since the approximate dimensions of the excavations described in this bullet do not correspond to the dimensions shown in the figures. Please clarify how these cost estimate assumptions relate to the proposed excavation areas and clarify the dimensions and volumes associated with each of the proposed excavation areas.

Response: The first bullet refers specifically to excavations related to the areas with unacceptable risk related to elevated concentrations of barium, cadmium, copper and lead (Areas A through I). Soil from those areas will be excavated and disposed of off-site. The four Unit 3 areas are being excavated for removal of MPPEH and are related to the 14.67 acres referenced in the second bullet. Soil from those areas will be excavated,

screened for MPPEH, and then backfilled with the screened soil. The bullets have been revised for clarity.

20. **Comment:** Section IV.B, Estimated Costs, page 25: **Please clarify the location of the screening plant, as its location is relevant to the ARARs determination.**

Response: The following sentence has been added to the third bullet in Section V.B: “The location of the screening plant would be west of Unit 1 approximately 100 feet from Wake Way.”

21. **Comment:** Section IV.B, Estimated Costs, page 25: **The cost estimate assumes that eight burn pits will be discovered. The site history and description do not suggest that additional burn pits will be encountered at the site. Please include a discussion that describes the likelihood of other burn pits (in addition to IA-53) and explain the basis for assuming that eight such pits will be discovered at the site.**

Response: To date, only one burn pit has been discovered approximately 4 feet below grade (along with the 5-inch rocket motor). There are no specific data to suggest any other pits. The discovery, during the SI, of magnetic rock in the top 2 feet of soil means that any underlying pits would be masked from the geophysical survey. Typically, EOD pits are used for some time until they become degraded by detonations and then they are filled in and another pit is excavated at a new location. Given the time FIB/RSE was used for OB/OD operations, assuming eight burn pits are present is a reasonable, yet conservative, assumption. No changes will be made to this section as a result of this comment.

22. **Comment:** Appendix B, Section B1.0, page B-1: **Please clarify the apparent inconsistency between the last sentence of the second paragraph about the appendix being the Navy’s “final determination” and the sentence on page 22 about some ARARs possibly being eliminated.**

Response: Because the action memorandum is a decision document, the applicable or relevant and appropriate requirement (ARAR) identified are the Navy’s final determination. The sentence on page 22 was intended to address the possibility that some ARARs may not ultimately apply if the site circumstances are different than anticipated. If that outcome were to arise, it may lead to the situation where the requirement is no longer applicable or relevant and appropriate.

23. **Comment:** Appendix B, Section B2.1, page B-10: **The first full sentence on the page indicates the possibility of recycling some of the materials found during the removal. Please cite the relevant statutory and regulatory provisions as ARARs.**

Response: Appendix B has been revised to cite California Code of Regulations Title (tit.) 22, §§ 66260.10 and 66261.6(a)(3) as ARARs for this Action Memo. Section 66260.10 defines scrap metal and Section 66261.6(a)(3) provides that scrap metal is exempted from regulation under state hazardous waste laws when recycled.

24. **Comment:** **Appendix B, Section 2.2.1.1, page B-11:** Text in the third paragraph refers to the possibility of off-site disposal, and compliance with applicable requirements, but does not identify any of the generally referenced requirements as ARARs. The text should be revised to reference EPA's "Off-site Rule" (CERCLA Section 121(d)(3) and 40 CFR 300.440).

Response: The Navy has added a reference to the off-site rule and will include Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121(d)(3) and 40 CFR 300.440 in the referenced discussion.

25. **Comment:** **Appendix B, Section B.2.1.1, page B-11:** Text in the fourth paragraph references the "area of contamination," but nowhere does the text or table refer to EPA's "Area of Contamination Policy." This policy should be identified if the Action Memo relies on it.

Response: The discussion of the area of contamination was included only to explain the applicability of land disposal restrictions. The Navy does not intend to specifically rely on the policy for this action memorandum. The Navy considers that the policy applies in concept to all remediation activities, but does not generally identify it as an ARAR or to-be-considered criteria.

26. **Comment:** **Appendix B:** Given the apparent uncertainty as to whether the TCRA will achieve a cleanup protective of unlimited and unrestricted use, the ARARs analysis should cite the State's SLUC provisions.

Response: Because ICs will not be implemented as part of this removal action, the Navy is not identifying the California Health & Safety Code institutional control requirements; California Civil Code §1471; or California Code of Regulations tit. 22, § 67391 as ARARs for ICs in this Action Memorandum. If ICs are ultimately required, the Navy will identify these requirements as ARARs in the future.

27. **Comment:** **Ensure that Section V.A.5, Appendix B, including tables, are consistent in their respective treatment/discussion of ARARs. For example, RCRA Military Munitions Rule sections are cited as ARAR in Table B-4 but not mentioned in Section V.A.5.3 as Action-Specific ARARs.**

Response: The Navy has reviewed the ARARs in Section V.A.5 and Appendix B to ensure they are consistent. The Navy made the following changes to Section V.A.5 to make it consistent with Appendix B:

- Added the Military Munitions Rule requirements at 40 CFR §§ 266.203, 266.205 and 266.206 to the action specific summary
- Added the implementing regulations to Clean Water Act § 402 to the action specific summary
- Added Cal. Code Regs. tit. 27 §§ 20200(c), 20210 and 20220(b), (c) and (d) to the action specific summary.

The Navy added Cal. Code Regs. tit. 22 § 66260.10 and 66261(a)(3) defining and regulating scrap metal as chemical specific ARARs to both Section V.A.5 and Appendix B in accordance with EPA comment 23. The Navy added a state action-specific table (Table B-5) and added Cal. Code Regs. tit. 27 § 20230 defining inert waste in Appendix B where it was left out previously.

#### MINOR COMMENTS

1. **Comment:** **Terminology: It is customary to when using “site” as a stand-alone word to refer to a specific portion of a Superfund site to define and capitalize it as “Site.”**

Response: Noted; the comment reflects the reviewer's preference and not generally accepted style. The rules of capitalization have changed over time, generally to capitalize fewer terms. The term “site” is capitalized only when it is part of the full name of the site. When the word “site” is used as a stand-alone term, it is lower case.

2. **Comment:** **Section II.A.1, Removal Site Evaluation, fourth bullet, page 4: The investigation conducted in 1997 is referred to as the ReRI. This appears to be a typographical error as this abbreviation is not used anywhere else in the document. Please correct the acronym.**

Response: Noted; the document has been revised to “RI.”

3. **Comment:** **Section II.A.1, Removal Site Evaluation, seventh bullet, page 4: Add the abbreviation “MMRP” before “Site Inspection” to indicate that this site inspection was conducted according to guidelines for the MMRP.**

Response: Noted; the document has been revised as requested.

4. **Comment:** Section II.B.1.7, MMRP Site Inspection, page 11: The second to last sentence of the second paragraph is a fragment. Revise the sentence to add “were identified” before “as chemicals of potential concern.”
- Response: Noted; the document has been revised as requested.
5. **Comment:** Section II.B.1.7, MMRP Site Inspection, page 12: The word “chemical” in the last line of this section should be “chemicals.”
- Response: Noted; the document has been revised as requested.
6. **Comment:** Section II.B.1.8, Risk Assessment Technical Memorandum (2010), page 12: The last paragraph of this section states that barium, cadmium, copper and lead were all elevated in the second area; however, the cadmium exceedance in Figure 8 does not reflect this statement. Revise Figure 8 so the cadmium exceedance is shown in bold text also delete the last occurrence of the word “at” in this section.
- Response: Noted; the document has been revised as requested.
7. **Comment:** Section II.B.1.9, MMRP Remedial Investigation Field Work (2010, 2011), page 13: The last two bullets under activities conducted in 2010 are actually actions conducted in 2011. Please move these activities to the bulleted list for activities conducted in 2011.
- Response: Noted; the document has been revised as requested.
8. **Comment:** Section IV.A, Proposed Action, page 18: This section states the removal action will be completed in July 2012. Please update the text with a current date that is consistent with the timing references in Section V.A.6.
- Response: The July 2012 refers to the date for issuing the work plan. To prevent confusion the reference to the date has been deleted from Section V.A.
9. **Comment:** Section IV.A.1, Proposed Action Description, page 18: Cite Tables 3 and 4 in the third bullet in this section to reference the human health and environmental action levels.
- Response: Noted; the document has been revised as requested.
10. **Comment:** Section IX, Recommendation, page 27: Delete first occurrence of the word “the” in the sixth bullet on this page.
- Response: Noted; the document has been revised as requested.

11. **Comment:** Appendix B, Section B1.0, page B-1: Please correct the second clause of the last sentence of the first paragraph. It should state “material documented as safe.”

Response: Noted; the document has been revised as requested.

## RESPONSES TO WATER BOARD COMMENTS (TINA LOW)

### GENERAL COMMENTS

1. **Comment:** Purpose: The first paragraph states that “during the removal of munitions-related material, soil containing metals that pose potentially unacceptable risk to human health or the environment will also be removed.” Please clarify whether soil containing metals above calculated action levels outside the footprint of excavation for munitions-related material will be removed. Excavation Areas A and B, as shown on Figure 3 appear to be outside the munitions-related excavation boundary. Please describe the purpose of the removal action with regards to metals (barium, cadmium, copper, and lead). If this TCRA only removes soil containing metals above action levels in areas that will be excavated to remove munitions-related material, and in sampled locations, what future actions will address remaining metals in soil? What work has been done, or is planned, to characterize metals in soil and their potential to leach into groundwater at this site?

Response: The purpose of the TCRA is to remove all MPPEH from the areas designated as Units 1, 2, and 3 on Figure 3. Figure 3 will be revised so it is clear that all of Unit 1 and 2 (which includes “Excavation Areas” A and B) will be excavated to remove MPPEH. Soil with concentrations of barium, cadmium, copper, and lead exceeding action levels will need to be excavated to remove the MPPEH. This soil is not acceptable to use as backfill so it will need to be disposed off-site. Because of this necessity, soil disposal is addressed in the Action Memo even though it is not the reason for performing a TCRA. The Action memo states that no additional actions will be necessary to address elevated metals in soil because all of the areas that have been identified with concentrations of barium, cadmium, copper, and lead exceeding action levels are in the areas that need to be excavated to remove MPPEH.

Additional analysis of risks presented by contaminants in soil will be done as part of the RI report for FIB/RSE.

2. **Comment:** **Section 1- p.5, Section 3-p.6, Section 1.1-p.8, Figure 2: Please revise these sections and/or Figure 2 as needed to provide a consistent description of IA-53, the burn pit. What is the size of the pit? Figure 2 states the dimensions as 12-ft. by 12-ft. and 11-ft. deep, while Section 1 refers to a “25 by 25-foot subsurface concrete pit (IA-53).” Is the pit unlined or is it lined with a 3/8 in. steel plate (Section 3)? Section 3 also states that materials were burned in “Building IA-53 and the unlined burn pit at the site”. Is Building IA-53 a feature separate from IA-53, the burn pit?**

Response: IA-53 refers to a subsurface concrete structure that is approximately 25 feet by 25 feet and was approximately 11 to 12 feet deep to the soil bottom during use. The concrete side walls, according to drawings, were lined with 3/8-inch plate and the bottom was unlined. The structure is currently filled in and buried on site, but concrete walls were discovered during trenching conducted as part of the SI, indicating that the structure is apparently still present. The text has been modified to consistently report these dimensions.

3. **Comment:** **Figure 3: This figure should be revised to more clearly depict the excavation areas. For example, the text states that the heavy anomaly areas and Unit 3 will be excavated for munitions-related material. However the heavy anomaly areas on Figure 3 are not enclosed within the red-outlined “Proposed TCRA Excavation Area”. Also the filled-in coloring of the TCRA Units 1-3, together with footnote c lead the reviewer to think that all of Units 1 and 2 are included in the excavation boundary.**

Response: Figure 3 has been modified to more clearly indicate where the excavations will be done. All of the areas shown as Units 1, 2, and 3 will be excavated to remove MPPEH. The areas designated as Excavation Areas A-I on Figure 3 are the areas with soils known to have elevated barium, cadmium, copper, or lead concentrations and will need to be disposed off-site.

4. **Comment:** **Proposed Action Description and Figures 4 through 8: Please provide a more complete description of the actions to remove soil containing metals. For example, how were the boundaries of Excavation Areas A through I determined? Excavation Areas B through G are depicted as small circles of unspecified diameter. What are their true sizes and how were they determined? Also, in Figures 4 through 8 it would be helpful to underline (or somehow emphasize) concentrations exceeding Action Levels. The “bolded and enlarged text” is difficult to distinguish in the printed figures.**

Response: Excavation areas are based on soil samples collected at the site where concentrations of barium, cadmium, copper, or lead exceeded unacceptable risk to human health and/or the environment. For the two areas where there were more than one exceedance in the same area the (Excavation A and I), the excavation area boundary was extended out to where samples with concentrations less than the action levels were collected. At two areas (Excavation E and H) where there was an isolated exceedance of an action level, the excavation area was delineated to an approximately 5-foot diameter. Based on this, the other five areas with isolated exceedances were also assumed to be a 5-foot diameter. Given the nature of the site, it is logical that exceedances would be in pockets and not have an extensive areal extent.

Analytical results shown on Figures 4 through 8 have been revised to make it more clear where there are exceedances of action levels.

## REFERENCES

- California Department of Toxic Substances Control (DTSC). 2009. "Revised California Human Health Screening Levels for Lead." Integrated Risk Assessment Branch, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. September.
- Tetra Tech EM Inc. 2010. "Final Risk Assessment Technical Memorandum, Eagle's Nest Explosive Ordnance Disposal Area (UXO Site 10) and the Former Inland Burn/Railroad Sidings Excavations Area (IR Site 13, UXO Sites 9 and 3), Military Munitions Response Program Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California." July 29.