



**COMPILATION OF SOLID WASTE  
MANAGEMENT UNIT EVALUATION  
REPORTS PREVIOUSLY SUBMITTED WITH  
CERCLA DOCUMENTS**

**Hazardous Waste Permit  
EPA ID Number CA 2170023236**

**Naval Air Station Alameda  
(Now Known as Alameda Point)  
Alameda, California**

**DECEMBER 23, 2005**

Prepared for:

**Base Realignment and Closure  
Program Management Office West  
San Diego, California**

Prepared by:

**SulTech, A Joint Venture of Sullivan Consulting Group  
and Tetra Tech EM Inc.  
1230 Columbia Street, Suite 1000  
San Diego, California 92101**

Prepared under:

**Naval Facilities Engineering Command  
Contract Number N687-1103-D-5104  
Contract Task Order 012**

**Compilation of Outstanding Solid Waste Management Unit Evaluation Reports  
Hazardous Waste Permit EPA ID Number CA 2170023236  
Alameda Point  
Alameda, California**

Contract Task Order 012  
TC.B012.12263

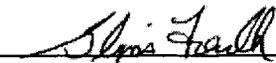
**PREPARED FOR:**

**DEPARTMENT OF THE NAVY**

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**REVIEW AND APPROVAL**

Project Manager:

  
\_\_\_\_\_  
Glynis Foulk, SulTech

Date: 12/23/05

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TC.B012.12263

# SulTech

A Joint Venture of Sullivan Consulting Group and Tetra Tech EM Inc.

## TRANSMITTAL/DELIVERABLE RECEIPT

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Document Control No. TC. B012 . 12263

TO: Contracting Officer  
Karen Rooney, Code 02RE  
Naval Facilities Engineering Command  
Southwest Division  
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San Diego, CA 92101-8517

DATE: 12/23/05  
CTO: 0012  
LOCATION:  
Alameda Point, Alameda, California

FROM:



**Steve Bradley, Contract Manager**

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Remedial Project Manager  
Base Realignment and Closure  
Program Management Office West  
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San Diego, California 92108-4310

**Subject:       Compilation of Solid Waste Management Unit Evaluation Reports Previously Submitted with CERCLA Documents, Alameda Point, Alameda, California**

Dear Mr. Ocampo:

Enclosed is your copy of the Compilation of Solid Waste Management Unit (SWMU) Evaluation Reports Previously Submitted with CERCLA Documents dated December 23, 2005. The compilation includes SWMU evaluation reports for seven (7) areas within Alameda Point that lie within the boundaries of areas covered by a remediation investigation (RI) report or a site investigation (SI) report.

This binder replaces the current binder titled "Combined Solid Waste Management Unit Evaluation Reports for Alameda Point;" please discard the older binder.

No comments are needed; these evaluation reports were officially submitted to the Navy and regulatory agencies as appendices or attachments to RI or SI reports.

If you have any questions, please call me at (916) 853-4561.

Sincerely,



Glynis Foulk  
Project Manager

Enclosure (1)

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## ***ACRONYMS AND ABBREVIATIONS***

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CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DTSC	California Environmental Protection Agency Department of Toxic Substances Control
EDC	Economic Development Conveyance
FED	Federal Transfer
NAS	Naval Air Station
OU	Operable unit
RCRA	Resource Conservation and Recovery Act
SulTech	A joint venture of Sullivan Consulting Group and Tetra Tech EM Inc.
SWMU	Solid waste management unit
TPH	Total petroleum hydrocarbon

## 1.0 INTRODUCTION

The U.S. Department of the Navy, Base Realignment and Closure Program Management Office West, requested that SulTech prepare solid waste management unit (SWMU) evaluation reports to summarize the results of past assessments and investigations for SWMUs within Economic Development Conveyance (EDC) Parcels, Public Benefit Conveyance Parcels, and Operable Units (OU) at Alameda Point (formerly Naval Air Station [NAS] Alameda) in Alameda County, California. SulTech is a joint venture of Sullivan Consulting Group and Tetra Tech EM Inc. This report was prepared in accordance with Contract Task Order 0012, issued under the Architectural-Engineering Services to Provide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA)/Underground Storage Tank Studies, Contract Number N68711-03-D-5104.

The compilation includes SWMU evaluation reports for seven (7) areas within Alameda Point that lie within the boundaries of areas covered by a remediation investigation (RI) report or a site investigation (SI) report for four OUs, two EDC parcels, and one public benefit conveyance (PBC). Table 1 list the seven areas and the source documents that contained the corresponding SWMU evaluation report officially submitted to the regulatory agencies. Appendices A through G present copies of the previously submitted SWMU evaluation reports.

All SWMU evaluation reports apply the Navy's SWMU integration approach, which ensures that the SWMUs receive appropriate response actions under the appropriate Navy program. The integration approach recommends the Navy's CERCLA program, the Navy's Total Petroleum Hydrocarbon (TPH) program, or the Navy's RCRA program for the management of each SWMU. The SWMUs recommended for management under the TPH program are not evaluated further in the SWMU evaluation reports; instead, the reports focus on describing the procedures for, methods used in, and results of facility assessments and investigations of the SWMUs recommended for management under the CERCLA or RCRA programs. The reports recommend no further action, further action, or closure in place for each SWMU, depending on the results of the evaluations. The Navy is requesting concurrence on these recommendations.

The procedures and methods that were used to prepare the SWMUs evaluation reports comply with all of the requirements stipulated in the final hazardous waste facility permit for former NAS Alameda (U.S. Environmental Protection Agency Identification Number CA 2170023236) to support further corrective action decisions at Alameda Point (California Environmental Protection Agency Department of Toxic Substances Control [DTSC] 1993).

The SWMU evaluation reports that comprise this compilation report represent the SWMUs that were addressed in previous CERCLA documents. All of the SWMUs in this compilation report are being managed under the CERCLA program.

## **2.0 REFERENCES**

DTSC. 1993. "California Environmental Protection Agency Department of Toxic Substances Control Hazardous Waste RCRA Part B Permit Issued to the United States of America and U.S. Department of Navy for NAS Alameda." June.

**TABLE 1: CERCLA DOCUMENTS THAT CONTAINED A SOLID WASTE MANAGEMENT UNIT EVALUATION REPORT ALAMEDA POINT**

Compilation of Solid Waste Management Unit Evaluation Reports Previously Submitted with a CERCLA Document

<b>Operable Unit or Conveyance Parcel</b>	<b>CERCLA Document Containing the SWMU Report</b>	<b>Status and Date of Latest of CERCLA Document</b>
OU-1 (Sites 6, 7, 8, & 16)	RI Report for OU-1	Final RI Dated November 2004
OU-2A (Sites 9, 13, 19, 22, & 23)	RI Report for OU-2A	Final RI Dated April 2005
OU-2B (Sites 3, 4, 11, & 21)	RI Report for OU-2B	Final RI Dated June 2005
OU-2C (Sites 5, 10, & 12)	RI Report for OU-2C	Draft RI Dated June 2005
EDC 3	SI Report for EDC 3	Draft SI Dated July 2005
EDC 5	SI Report for EDC 5	Final SI Dated March 2005
PBC 1A	SI Report for PBC 1A	Draft SI Dated August 2005

Notes:

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act  
 EDC Economic Development Conveyance  
 OU Operable unit  
 PBC Public Benefit Conveyance  
 RI Remedial Investigation  
 SI Site Investigation  
 SWMU Solid Waste Management Unit

N00236.002196  
ALAMEDA POINT  
SSIC NO. 5090.3

APPENDIX A – SOLID WASTE MANAGEMENT  
UNIT EVALUATION REPORT FOR  
OPERABLE UNIT 1

COMPILATION OF SOLID WASTE MANAGEMENT  
UNIT EVALUATION REPORTS PREVIOUSLY  
SUBMITTED WITH CERCLA DOCUMENTS  
HAZARDOUS WASTE PERMIT  
EPA ID NUMBER CA 2170023236

DATED 23 DECEMBER 2005

**Draft**

**APPENDIX I**

**SOLID WASTE MANAGEMENT UNIT  
EVALUATION REPORT FOR  
OPERABLE UNIT 1 (SITES 6, 7, 8,  
AND 16)**

**HAZARDOUS WASTE PERMIT EPA ID  
NUMBER CA 2170023236, NAVAL AIR  
STATION ALAMEDA**

Alameda Point, Alameda, California

**September 30, 2004**

Prepared for

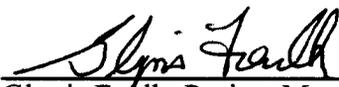


DEPARTMENT OF THE NAVY  
Lou Ocampo, Remedial Project Manager  
Naval Facilities Engineering Command  
Southwest Division  
San Diego, California

Prepared by

***SulTech***

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Glynis Foulk, Project Manager

July 5, 2005

Lou Ocampo  
Remedial Project Manager  
Naval Facilities Engineering Command Southwest Division  
1230 Columbia Street, Suite 1100  
San Diego, California 92101-8517

**Subject: Final Attachment I - Solid Waste Management Unit Summary Report For Operable Unit 1 (Sites 6, 7, 8, and 16) Alameda Point, Alameda, California**

Dear Mr. Ocampo:

The intent of this letter is to inform you that the Solid Waste Management Unit (SWMU) Summary Report for Operable Unit 1 (Sites 6, 7, 8, and 16) has been finalized. No changes were required by the agencies based on the draft version of the SWMU Summary Report.

The Draft version of Attachment I - SWMU Summary Report for Operable Unit 1 (Sites 6, 7, 8, and 16) was an attachment to the draft final remedial investigation (RI) report, which was submitted to the agencies September 30, 2004. The agencies had minimal comments on the Draft Final RI and no comments on Attachment I. The Final RI, with no changes to Attachment I, was submitted to the agencies on November 18, 2004.

If you have any questions, please call me at (916) 853-4561.

Sincerely,

Glynis Foulk  
Project Manager

Enclosure (1)

TC.B012.12178

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## **ACRONYMS AND ABBREVIATIONS**

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AST	Aboveground storage tank
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DTSC	California Environmental Protection Agency Department of Toxic Substances Control
EBS	Environmental baseline survey
EPA	U.S. Environmental Protection Agency
GAP	Generator accumulation point
ID	Identification
IT	International Technology Corporation
NADEP	Naval Aviation Depot
NAS	Naval Air Station
Navy	U.S. Department of the Navy
NFA	No further action
OU	Operable unit
OWS	Oil-water separator
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
Sul Tech	A joint venture of Sullivan Consulting Group and Tetra Tech EM Inc.
SWMU	Solid waste management unit
Tetra Tech	Tetra Tech EM Inc.
TPH	Total petroleum hydrocarbon
UST	Underground storage tank

## EXECUTIVE SUMMARY

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The U.S. Department of the Navy (Navy), Naval Facilities Engineering Command, Southwest Division, requested that SulTech, a joint venture of Sullivan Consulting Group and Tetra Tech EM Inc., prepare this solid waste management unit (SWMU) evaluation report to summarize the results of all past assessments and investigations of the SWMUs within the operable unit (OU) 1 (Sites 6, 7, 8, and 16) at Alameda Point (formerly Naval Air Station [NAS] Alameda), in Alameda County, California. This report was prepared in accordance with Contract Task Order 0012, issued under the Architectural-Engineering Services to Provide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA)/underground storage tank (UST) Studies, Contract Number N6871103-D-5104.

All of the SWMUs are inactive and being managed under the Navy's CERCLA program. This evaluation report includes a recommendation of no further action (NFA) or further action for each SWMU within CERCLA sites 6, 7, 8, and 16 in OU-1. Recommendations for NFA or further action are based on the analytical results present in Table 3-1. Any corrective action that is required will be conducted under the CERCLA program as part of the remedial actions to be evaluated in the feasibility studies. The Navy is requesting concurrence on the recommendations for each SWMU.

The SWMUs addressed in this report were evaluated using the requirements stipulated in the final hazardous waste facility permit for former NAS Alameda (U.S. Environmental Protection Agency [EPA] Identification Number CA 2170023236) to support further corrective action decisions at Alameda Point. The results of this evaluation showed that 11 of the SWMUs within OU-1 are recommended for NFA and that no additional corrective actions are needed. The remaining four SWMUs are recommended for further action, which will be conducted under the CERCLA program.

## 1.0 INTRODUCTION

The U.S. Department of the Navy (Navy), Naval Facilities Engineering Command, Southwest Division, requested that SulTech, a joint venture of Sullivan Consulting Group and Tetra Tech EM Inc. (Tetra Tech), prepare this solid waste management unit (SWMU) evaluation report to summarize the results of all past assessments and investigations of the SWMUs within operable unit (OU) 1 (Sites 6, 7, 8, and 16) at Alameda Point (formerly Naval Air Station [NAS] Alameda), in Alameda County, California. This report was prepared in accordance with Contract Task Order 0012, issued under the Architectural-Engineering Services to Provide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA)/underground storage tank (UST) Studies, Contract Number N68711-03-D-5104.

All of the SWMUs are inactive and being managed under the Navy's CERCLA program. This evaluation report includes a recommendation of no further action (NFA) or further action for each SWMU within sites 6, 7, 8, and 16 in OU-1. Recommendations for NFA or further action are based on the analytical results presented in Section 3.0. The Navy is requesting concurrence on the recommendations for each SWMU.

This evaluation report describes procedures, methods, and results of facility assessments and investigations of the SWMUs in OU-1 (Sites 6, 7, 8, and 16) and describes the general approach to investigating and evaluating potential remedies pertaining to SWMU corrective measures and closure at Alameda Point. This evaluation report is provided as an attachment to the remedial investigation (RI) report for OU-1 (Sites 6, 7, 8, and 16).

The SWMUs addressed in this report were evaluated using the requirements stipulated in the final hazardous waste facility permit for former NAS Alameda (U.S. Environmental Protection Agency [EPA] Identification [ID] Number CA 2170023236) to support further corrective action decisions at Alameda Point (California Environmental Protection Agency Department of Toxic Substances Control [DTSC] 1993).

The remainder of this attachment is divided into four sections. Section 2.0 provides background information and the Navy's approaches for evaluating the SWMUs at Alameda Point. Section 3.0 presents an evaluation for the SWMUs within OU-1 (Sites 6, 7, 8, and 16), and Section 4.0 summarizes recommendations for those SWMUs. Finally, Section 5.0 provides the references used to prepare this evaluation report.

## 2.0 BACKGROUND AND APPROACHES FOR EVALUATIONS OF SOLID WASTE MANAGEMENT UNITS

SWMU means any unit at a hazardous waste facility from which hazardous constituents might migrate, irrespective of whether the unit was intended for the management of wastes (Title 22

*California Code of Regulations* Section 66260.10). At Alameda Point, SWMUs include areas of concern, generator accumulation points (GAP), CERCLA sites, oil-water separators (OWS), aboveground storage tanks (AST), USTs, washdown areas, and miscellaneous sites.

The following subsections describe the history of SWMU assessments and investigations at Alameda Point (see Figure 2-1), and the Navy's approaches for ensuring that the results of those assessments and investigations are evaluated in a manner consistent with RCRA requirements.

## **2.1 HISTORY OF SOLID WASTE MANAGEMENT UNIT ASSESSMENTS AND INVESTIGATIONS**

Most of the SWMUs at Alameda Point were first identified in 1991 in an initial RCRA facility assessment (RFA) (DTSC 1992), which was required to obtain a permit for the management of hazardous wastes in a number of specific management units no longer in operation at Alameda Point. According to Sections V.F through V.J of the final hazardous waste facility permit for Alameda Point (EPA ID CA 2170023236), information to support corrective action decisions regarding each SWMU was to be collected and submitted to DTSC. The permit described a typical RCRA corrective action process, which involves an analysis of RFA data to determine which SWMUs require further evaluation in a RCRA facility investigation (RFI), and requires the Navy to identify additional SWMUs, as appropriate, and include them in the corrective action process.

The initial RFA identified 151 SWMUs and concluded that a number of the SWMUs would need further investigation under an RFI, which is usually conducted under a series of RCRA permit modifications. After the final RCRA permit was issued, however, the Navy and the regulatory agencies determined that the most efficient and effective approach for assessing any additional SWMUs and conducting RFIs would be to take advantage of functionally equivalent investigations that were and continue to be conducted under a number of other Navy environmental programs. Types of investigations include environmental baseline survey (EBS) investigations under the Base Realignment and Closure property transfer program; investigations of possible releases of total petroleum hydrocarbons (TPH) from sources such as pipelines, USTs, and ASTs under the TPH program; and site investigations and remedial investigations under the CERCLA program. Subsequent to the RFA and as a result of the investigations described previously, 215 additional SWMUs were identified and assessed at Alameda Point. These additional SWMUs were included in the final supplemental EBS (Tetra Tech 2003).

The Navy received a letter dated November 1999 from DTSC with comments on the SWMUs following their review of the draft EBS; the final EBS was submitted in 2001 (International Technology Corporation 2001). For some of the SWMUs, DTSC concurred with the recommendation in the EBS for NFA. For most of the SWMUs located within a CERCLA site, DTSC withheld concurrence with NFA, pending resolution of each site's remedial investigation report (DTSC 1999).

Recognizing that the investigation and management of SWMUs had been divided among a number of Navy programs, the Navy developed a SWMU evaluation approach coupled with a SWMU deferral approach to ensure that all the SWMUs at Alameda Point would be managed under the appropriate Navy program and would receive appropriate response actions. These two SWMU approaches are described in Sections 2.2 and 2.3 of this report.

## **2.2 SOLID WASTE MANAGEMENT UNIT EVALUATION APPROACH**

The SWMU evaluation approach is a three-step process that begins by listing the SWMUs identified and investigated under each Navy program. In the next step, a SWMU profile is compiled for each SWMU; these profiles consist of descriptive information on each SWMU, the name of the Navy program that provided the functional equivalent of an RFA (and in some cases, an RFI) for the SWMU, and the results of all investigations conducted on that SWMU, including figures and tables, as needed. In the final step, each SWMU profile is analyzed to determine whether the functional equivalents of the elements of a RCRA corrective action process have been conducted and whether any additional actions are needed.

## **2.3 SOLID WASTE MANAGEMENT UNIT DEFERRAL APPROACH**

The purpose of the SWMU deferral approach is to facilitate appropriate actions for all SWMUs under the appropriate Navy and regulatory programs. The approach allows final decisions to be made for basewide integration concerning each SWMU, such that petroleum-related SWMUs are addressed under the TPH program and most other SWMUs are addressed under the CERCLA program. Under the deferral approach, any RCRA corrective action requirements for the SWMUs will be complied with under CERCLA remedial actions or under TPH corrective actions. Figure 2-2 shows the SWMU deferral approach.

Based on an evaluation of each of the SWMU profiles according to the steps in the SWMU evaluation process (see Section 2.2), the Navy is recommending either NFA or further action for each SWMU. If further action is recommended, future RCRA corrective action requirements for the SWMUs will be complied with under the appropriate Navy program. On an ongoing basis, the SWMUs will be evaluated to determine whether a SWMU has been or is being investigated under the appropriate Navy program. If a SWMU is found to be in the wrong program, it will be moved to the appropriate program.

Before developing the deferral approach, the Navy and the regulators had decided that the “regulated” waste management units originally included in the interim status document and final permit for Alameda Point (EPA ID CA 2170023236) would continue to be investigated and closed under the Navy’s RCRA program, with oversight from DTSC. These regulated units are, therefore, not included in the deferral approach and are not described in this report.

As a result of the SWMU deferral approach, the SWMUs located within OU-1 (Sites 6, 7, 8, and 16) and deferred to the CERCLA program are evaluated in this attachment to the RI report for

OU-1 (Sites 6, 7, 8, and 16). Table 2-1 lists the SWMUs that are addressed in this report. In addition, several SWMUs located within OU-1 (Sites 6, 7, 8, and 16) are deferred to the TPH program and are not addressed in this report. The SWMUs deferred to the TPH program are listed in Table 2-2 for reference only.

### **3.0 SOLID WASTE MANAGEMENT UNIT EVALUATION**

Figure 3-1 shows the location of all of the SWMUs within OU-1 (Sites 6, 7, 8, and 16), including the SWMUs deferred to the CERCLA and TPH programs. Table 3-1 presents one-page SWMU profiles for each of the SWMUs deferred to the CERCLA program. Each profile provides descriptive information on a SWMU, identifies the Navy program under which the SWMU was investigated, and presents the investigation results. Each profile also recommends either NFA or further action. Many of the profiles reference a figure (see Figures 3-2 through 3-11) that provides analytical data from soil or groundwater samples collected near the SWMU to examine potential sources of contamination and migration pathways. The analytical results are compared to TPH preliminary remediation criteria listed in the closure strategy for petroleum-contaminated sites (Navy 2001), preliminary remediation goals for soil (EPA 1996, 2002), background concentrations for metals in soil (Tetra Tech 2001b), or maximum contaminant levels for groundwater (California Department of Health Services 2003), as appropriate.

### **4.0 RECOMMENDATIONS**

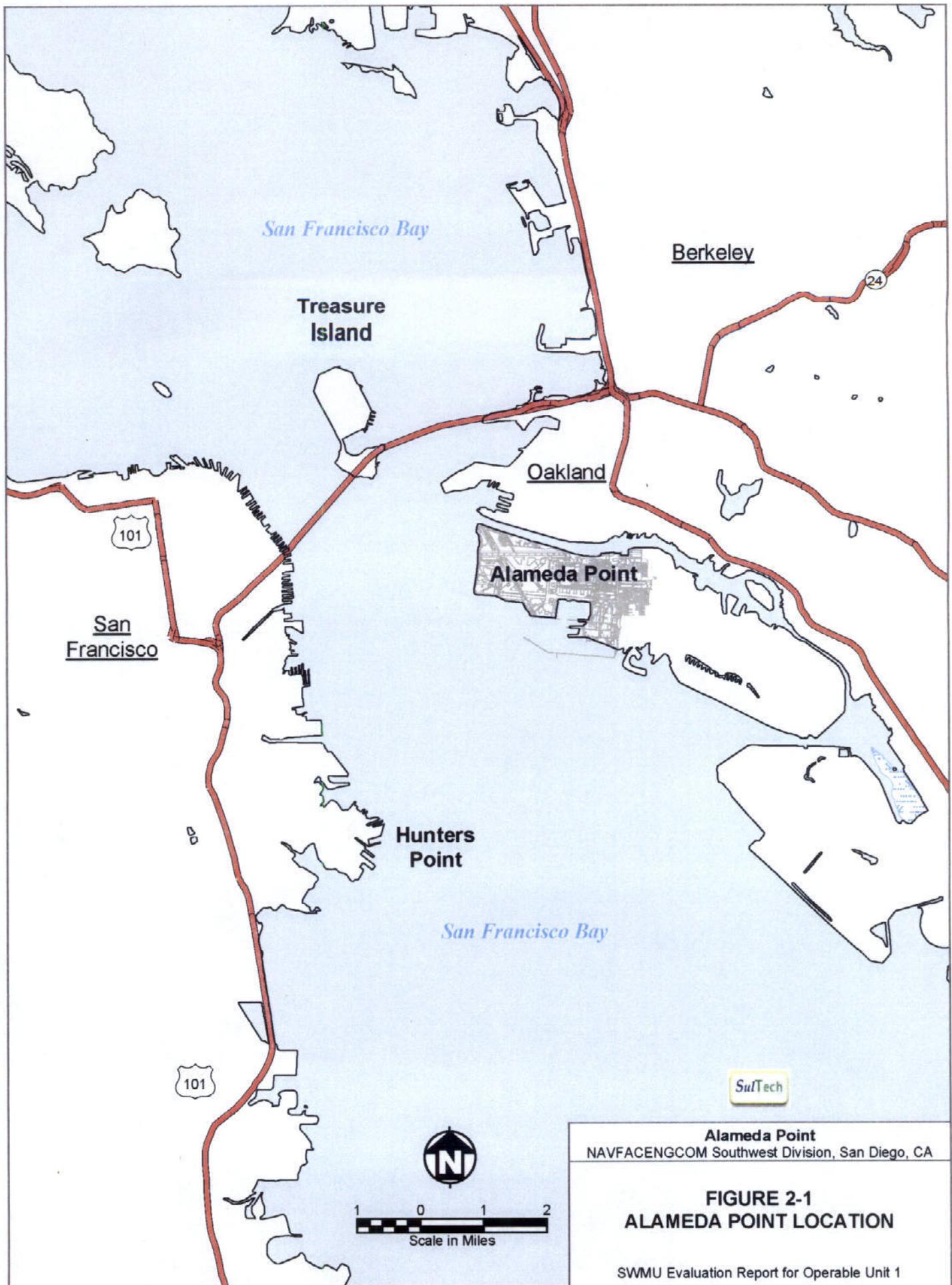
Based on the information presented in Section 3.0, 11 of the SWMUs within OU-1 are recommended for NFA and no additional corrective actions are needed. The remaining four SWMUs are recommended for further action. Any corrective action that is required will be conducted under the CERCLA program as part of the remedial actions to be evaluated in the feasibility studies. The Navy is requesting concurrence on the recommendations.

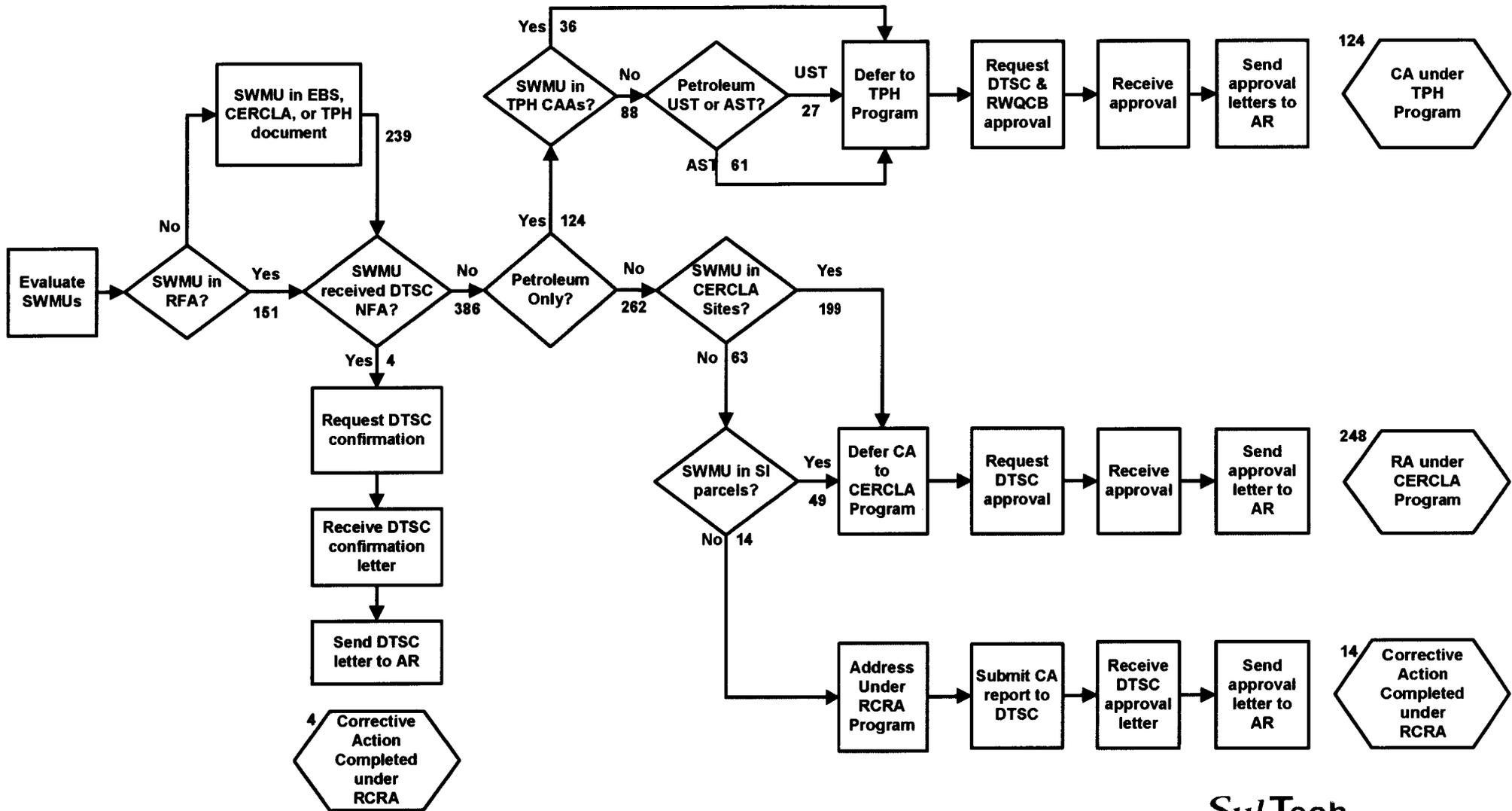
## 5.0 REFERENCES

- California Department of Health Services. 2003. "Maximum Contaminant Levels in Drinking Water" (extracted from Title 22 of the California Code of Regulations Sections 64431 – 64672.3). June 12.
- California Environmental Protection Agency Department of Toxic Substances Control, California Environmental Protection Agency (DTSC). 1992. "RCRA Facility Assessment, Naval Air Station, Alameda, California." April.
- DTSC. 1993. "California Environmental Protection Agency Department of Toxic Substances Control Hazardous Waste RCRA Part B Permit Issued to the United States of America and U.S. Department of Navy for NAS Alameda." June.
- DTSC. 1999. Letter from DTSC to Commanding Officer, Engineering Field Activity, West, Naval Facilities Command concerning Review of RCRA Status for Environmental Baseline Survey at Alameda Point, Alameda, California. November 4.
- International Technology Corporation. 2001. "EBS Data Evaluation Summaries - Final, Alameda Point, Alameda, California, Volumes 0 through XIV." January.
- Supervisor of Shipbuilding, Conversion, and Repair, Portsmouth, Virginia, 1997. "Oil-water Separators (OWS), One Time Compliance, NAS Alameda; OWS at Buildings 373, 372, 63, 40, 118, 166"
- Tetra Tech EM Inc (Tetra Tech). 2001a. "Evaluation of Total Petroleum Hydrocarbons at EBS Parcels at Alameda Point. October.
- Tetra Tech. 2001b. "Summary of Background Concentrations in Soil and Groundwater, Alameda Point, Alameda, California." November.
- Tetra Tech. 2003. "Final Supplemental Environmental Baseline Survey, Alameda Point, Alameda, California." March.
- U.S. Department of Navy. 2001. "Preliminary Remediation Criteria and Closure Strategy for Petroleum-Contaminated Sites at Alameda Point, Alameda, California." May 16.
- U.S. Environmental Protection Agency (EPA). 1996. "Region 9 Preliminary Remediation Goals."
- EPA. 2002. "Region 9 Preliminary Remediation Goals." October.

**FIGURES**

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**NOTES**

1. SWMUs include CERCLA sites, USTs, ASTs, oil-water separators, washdown areas and underground fuel pipelines but exclude RCRA regulated units
2. Numbers indicate number of SWMUs

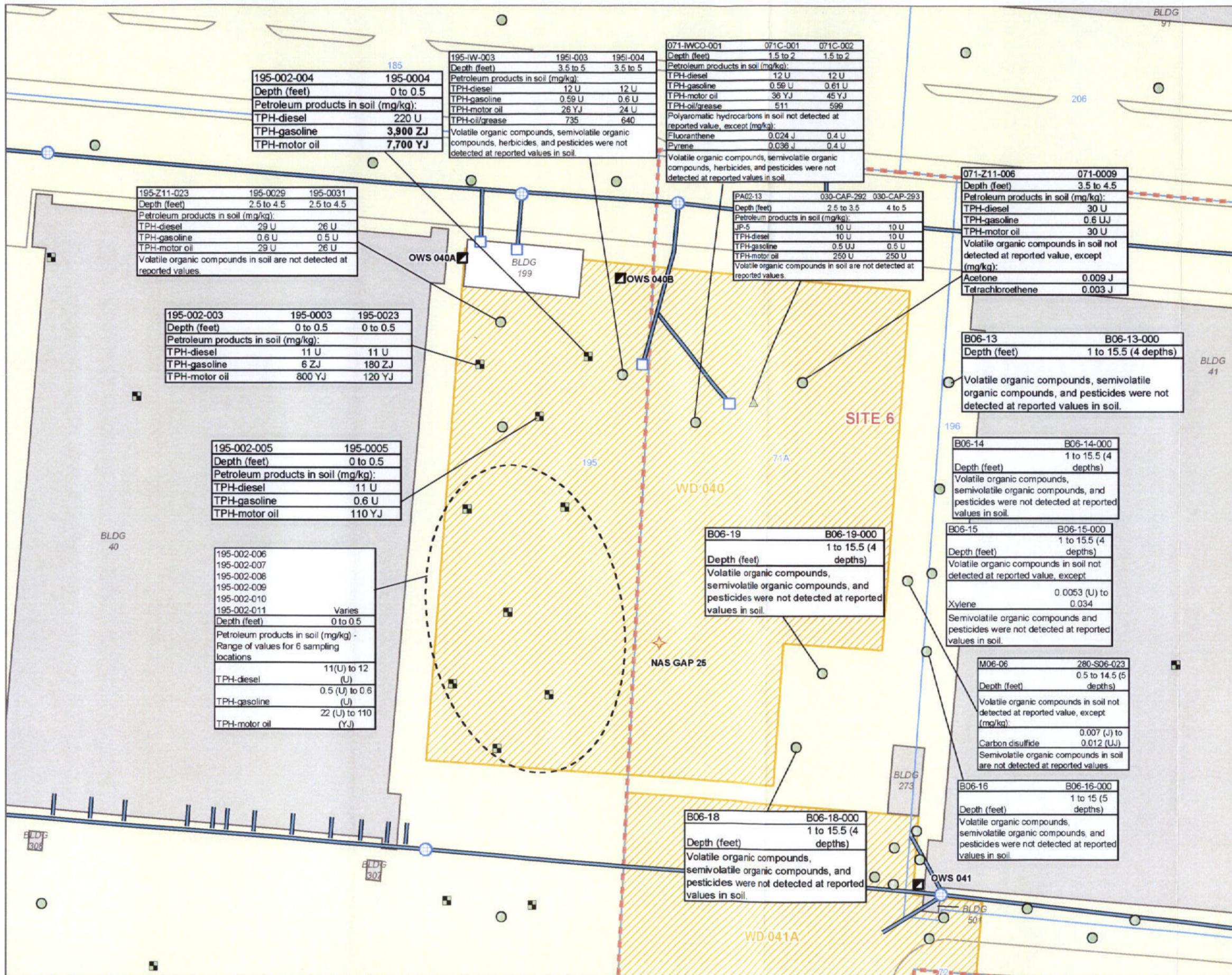
**ACRONYMS**

AR	Administrative Record	RA	Response Action
AST	Aboveground Storage Tank	RCRA	Resource Conservation and Recovery Act
CA	Corrective Action	RFA	RCRA Facility Assessment
CAA	Corrective Action Area	RWQCB	Regional Water Quality Control Board
CERCLA	Comp. Env. Resp., Compensation, and Liability Act	SI	Site Investigation
DTSC	CA EPA Department of Toxic Substances Control	SWMU	Solid Waste Management Unit
EBS	Environmental Baseline Survey	TPH	Total Petroleum Hydrocarbon
NFA	No Further Action	UST	Underground Storage Tank

*SulTech*

Alameda Point NAVFACENGCOM Southwest Division, San Diego, CA
<b>Figure 2-2</b> <b>SOLID WASTE MANAGEMENT UNIT</b> <b>DEFERRAL APPROACH</b> <b>RCRA Hazardous Waste Facility Permit</b> <b>EPA ID CA 2170023236</b> <b>NAS Alameda, Alameda, CA</b>
SWMU Evaluation Report for Operable Unit 1 (Sites 6, 7, 8, and 16)



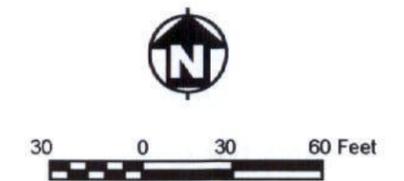


- SAMPLING LOCATIONS**
- ▲ Geoprobe
  - Soil Boring
  - Surface Location
  - ⊕ MANHOLE
  - CATCH BASIN
  - ★ GENERATION ACCUMULATION POINT (GAP)
  - ▣ OIL-WATER SEPARATOR (OWS)
  - STORM SEWER LINE
  - ▨ WASHDOWN (WD) AREA
  - ⋯ CERCLA SITE BOUNDARY
  - # ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
  - LAND COVER
- BUILDING**
- Present
  - Removed

**Notes:**

Bold values in hit boxes indicate "Exceeds residential PRC"  
 Metals and polyaromatic hydrocarbons were not evaluated.

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 mg/kg = Milligrams per kilogram  
 NAS = Naval Air Station  
 PRC = Preliminary Remediation Criteria  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)  
 Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard  
 Z = Chromatographic response did not resemble a typical fuel pattern

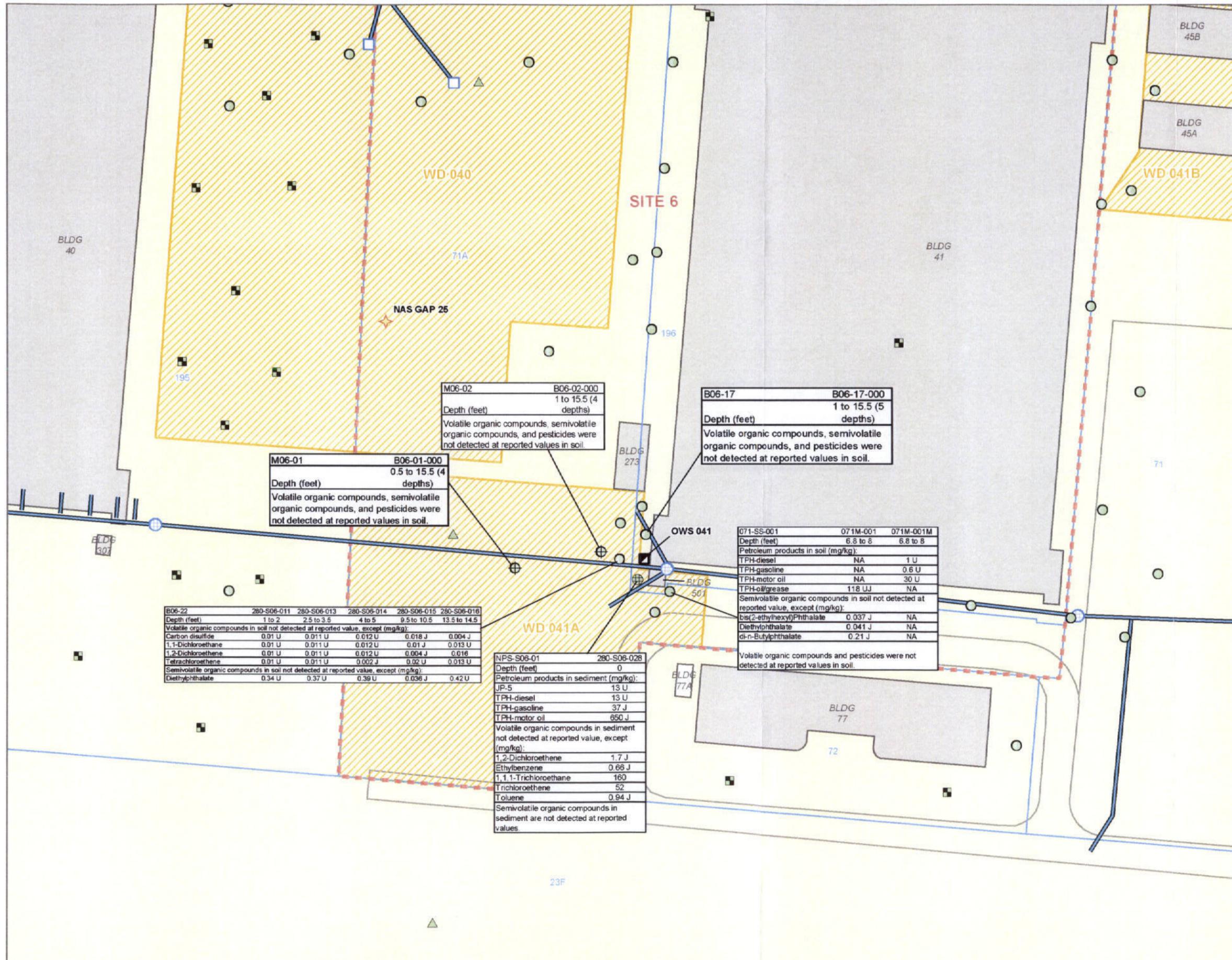


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 NAVFACENGCOM Southwest Division, San Diego, CA

**FIGURE 3-2**  
**CERCLA SITE 6, WD 040 AND NAS GAP 25**  
**SOIL SAMPLE RESULTS**

SWMU Evaluation Report for Operable Unit 1



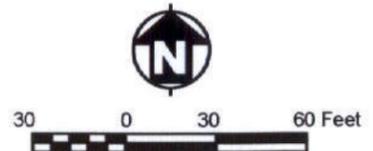


- SAMPLING LOCATIONS**
- ▲ Geoprobe
  - ⊕ Monitoring Well
  - Soil Boring
  - Surface Location
  - ⊗ Manhole/Storm Drain
  - ⊕ MANHOLE
  - CATCH BASIN
  - ★ GENERATION ACCUMULATION POINT (GAP)
  - OIL-WATER SEPARATOR (OWS)
  - STORM SEWER LINE
  - ▨ WASHDOWN (WD) AREA
  - ⋯ CERCLA SITE BOUNDARY
  - # ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
  - LAND COVER
- BUILDING**
- Present
  - Removed

**Notes:**

Metals and polyaromatic hydrocarbons were not evaluated.

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 GAP = Generation accumulation point  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 mg/kg = milligrams per kilogram  
 NA = Not analyzed  
 NAS = Naval Air Station  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)



**Alameda Point**  
 NAVFACENGCOM Southwest Division, San Diego, CA

**FIGURE 3-4**  
**CERCLA SITE 6**  
**OWS 041 AND WD 041A**  
**SOIL SAMPLE RESULTS**

SWMU Evaluation Report for Operable Unit 1

BLDG 307	280-S06-011	280-S06-013	280-S06-014	280-S06-015	280-S06-016
Depth (feet)	1 to 2	2.5 to 3.5	4 to 5	9.5 to 10.5	13.5 to 14.5
Volatile organic compounds in soil not detected at reported value, except (mg/kg):					
Carbon disulfide	0.01 U	0.011 U	0.012 U	0.018 J	0.004 J
1,1-Dichloroethane	0.01 U	0.011 U	0.012 U	0.01 J	0.013 U
1,2-Dichloroethane	0.01 U	0.011 U	0.012 U	0.004 J	0.016
Tetrachloroethene	0.01 U	0.011 U	0.002 J	0.02 U	0.013 U
Semivolatile organic compounds in soil not detected at reported value, except (mg/kg):					
Diethylphthalate	0.34 U	0.37 U	0.39 U	0.036 J	0.42 U

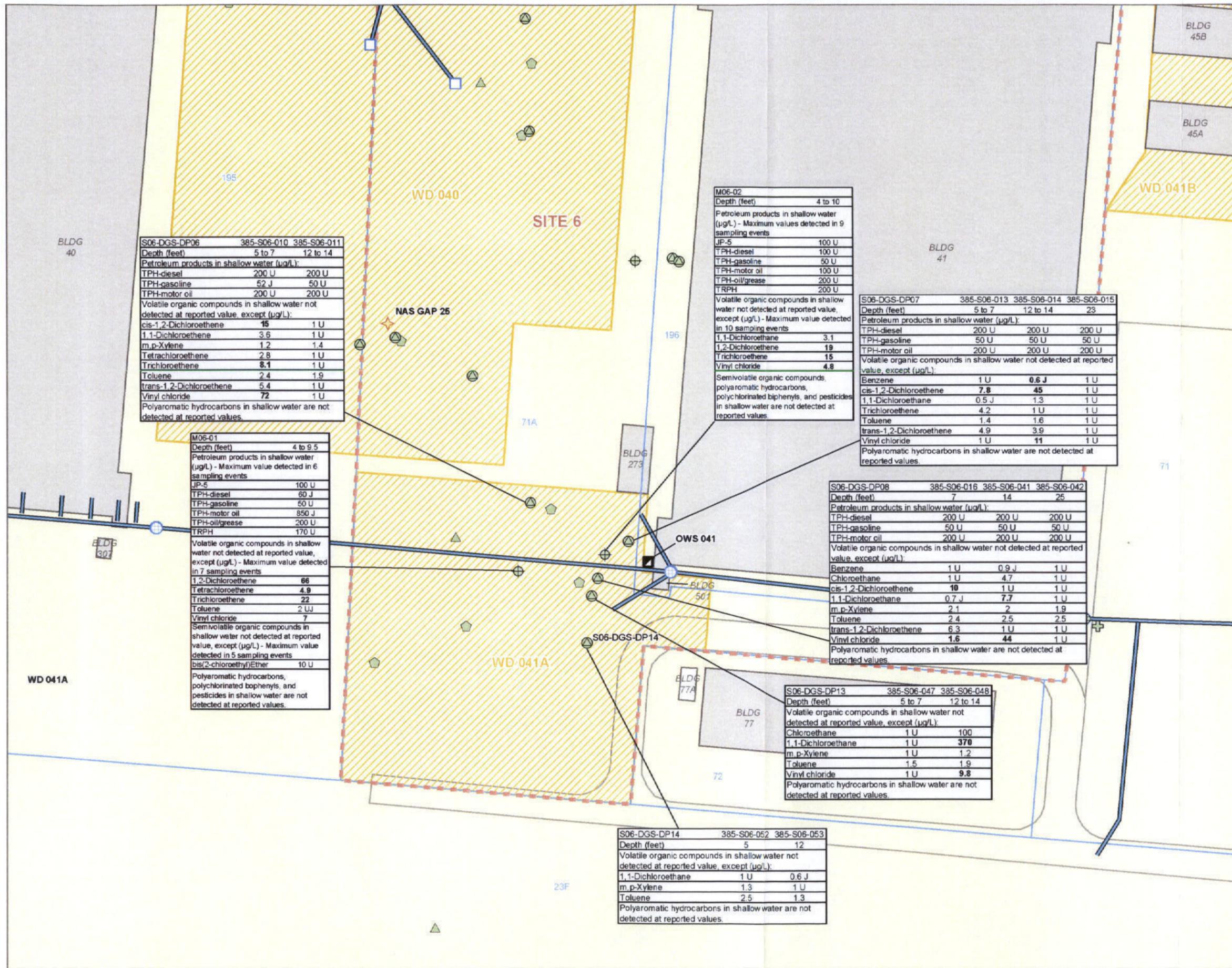
NPS-S06-01	280-S06-028
Depth (feet)	0
Petroleum products in sediment (mg/kg):	
JP-5	13 U
TPH-diesel	13 U
TPH-gasoline	37 J
TPH-motor oil	650 J
Volatile organic compounds in sediment not detected at reported value, except (mg/kg):	
1,2-Dichloroethane	1.7 J
Ethylbenzene	0.66 J
1,1,1-Trichloroethane	160
Trichloroethene	52
Toluene	0.94 J
Semivolatile organic compounds in sediment are not detected at reported values.	

071-SS-001	071M-001	071M-001M
Depth (feet)	6.8 to 8	6.8 to 8
Petroleum products in soil (mg/kg):		
TPH-diesel	NA	1 U
TPH-gasoline	NA	0.6 U
TPH-motor oil	NA	30 U
TPH-oil/grease	118 UJ	NA
Semivolatile organic compounds in soil not detected at reported value, except (mg/kg):		
bs-(2-ethylhexyl)Phthalate	0.037 J	NA
Diethylphthalate	0.041 J	NA
di-n-Butylphthalate	0.21 J	NA
Volatile organic compounds and pesticides were not detected at reported values in soil.		

M06-02	B06-02-000
Depth (feet)	1 to 15.5 (4 depths)
Volatile organic compounds, semivolatile organic compounds, and pesticides were not detected at reported values in soil.	

B06-17	B06-17-000
Depth (feet)	1 to 15.5 (5 depths)
Volatile organic compounds, semivolatile organic compounds, and pesticides were not detected at reported values in soil.	

M06-01	B06-01-000
Depth (feet)	0.5 to 15.5 (4 depths)
Volatile organic compounds, semivolatile organic compounds, and pesticides were not detected at reported values in soil.	



S06-DGS-DP06	385-S06-010	385-S06-011
Depth (feet)	5 to 7	12 to 14
Petroleum products in shallow water (µg/L):		
TPH-diesel	200 U	200 U
TPH-gasoline	52 J	50 U
TPH-motor oil	200 U	200 U
Volatile organic compounds in shallow water not detected at reported value, except (µg/L):		
cis-1,2-Dichloroethene	16	1 U
1,1-Dichloroethene	3.6	1 U
m,p-Xylene	1.2	1.4
Tetrachloroethene	2.8	1 U
Trichloroethene	8.1	1 U
Toluene	2.4	1.9
trans-1,2-Dichloroethene	5.4	1 U
Vinyl chloride	72	1 U
Polyaromatic hydrocarbons in shallow water are not detected at reported values.		

M06-01	
Depth (feet)	4 to 9.5
Petroleum products in shallow water (µg/L) - Maximum value detected in 6 sampling events	
JP-5	100 U
TPH-diesel	60 J
TPH-gasoline	50 U
TPH-motor oil	850 J
TPH-oil/grease	200 U
TRPH	170 U
Volatile organic compounds in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 7 sampling events	
1,2-Dichloroethene	66
Tetrachloroethene	4.9
Trichloroethene	22
Toluene	2 U
Vinyl chloride	7
Semivolatile organic compounds in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 5 sampling events	
bis(2-chloroethyl)Ether	10 U
Polyaromatic hydrocarbons, polychlorinated bophenyls, and pesticides in shallow water are not detected at reported values.	

M06-02	
Depth (feet)	4 to 10
Petroleum products in shallow water (µg/L) - Maximum values detected in 9 sampling events	
JP-5	100 U
TPH-diesel	100 U
TPH-gasoline	50 U
TPH-motor oil	100 U
TPH-oil/grease	200 U
TRPH	200 U
Volatile organic compounds in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 10 sampling events	
1,1-Dichloroethene	3.1
1,2-Dichloroethene	19
Trichloroethene	15
Vinyl chloride	4.8
Semivolatile organic compounds, polyaromatic hydrocarbons, polychlorinated biphenyls, and pesticides in shallow water are not detected at reported values.	

S06-DGS-DP07	385-S06-013	385-S06-014	385-S06-015
Depth (feet)	5 to 7	12 to 14	23
Petroleum products in shallow water (µg/L):			
TPH-diesel	200 U	200 U	200 U
TPH-gasoline	50 U	50 U	50 U
TPH-motor oil	200 U	200 U	200 U
Volatile organic compounds in shallow water not detected at reported value, except (µg/L):			
Benzene	1 U	0.6 J	1 U
cis-1,2-Dichloroethene	7.8	45	1 U
1,1-Dichloroethene	0.5 J	1.3	1 U
Trichloroethene	4.2	1 U	1 U
Toluene	1.4	1.6	1 U
trans-1,2-Dichloroethene	4.9	3.9	1 U
Vinyl chloride	1 U	11	1 U
Polyaromatic hydrocarbons in shallow water are not detected at reported values.			

S06-DGS-DP08	385-S06-016	385-S06-041	385-S06-042
Depth (feet)	7	14	25
Petroleum products in shallow water (µg/L):			
TPH-diesel	200 U	200 U	200 U
TPH-gasoline	50 U	50 U	50 U
TPH-motor oil	200 U	200 U	200 U
Volatile organic compounds in shallow water not detected at reported value, except (µg/L):			
Benzene	1 U	0.9 J	1 U
Chloroethane	1 U	4.7	1 U
cis-1,2-Dichloroethene	10	1 U	1 U
1,1-Dichloroethene	0.7 J	7.7	1 U
m,p-Xylene	2.1	2	1.9
Toluene	2.4	2.5	2.5
trans-1,2-Dichloroethene	6.3	1 U	1 U
Vinyl chloride	1.6	44	1 U
Polyaromatic hydrocarbons in shallow water are not detected at reported values.			

S06-DGS-DP13	385-S06-047	385-S06-048
Depth (feet)	5 to 7	12 to 14
Volatile organic compounds in shallow water not detected at reported value, except (µg/L):		
Chloroethane	1 U	100
1,1-Dichloroethene	1 U	370
m,p-Xylene	1 U	1.2
Toluene	1.5	1.9
Vinyl chloride	1 U	9.8
Polyaromatic hydrocarbons in shallow water are not detected at reported values.		

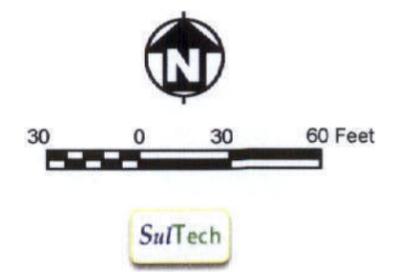
S06-DGS-DP14	385-S06-052	385-S06-053
Depth (feet)	5	12
Volatile organic compounds in shallow water not detected at reported value, except (µg/L):		
1,1-Dichloroethene	1 U	0.6 J
m,p-Xylene	1.3	1 U
Toluene	2.5	1.3
Polyaromatic hydrocarbons in shallow water are not detected at reported values.		

- SAMPLING LOCATIONS**
- Direct-Push
  - Geoprobe
  - Hydropunch
  - Monitoring Well
  - MANHOLE
  - CATCH BASIN
  - GENERATION ACCUMULATION POINT (GAP)
  - OIL-WATER SEPARATOR (OWS)
  - STORM SEWER LINE
  - WASHDOWN (WD) AREA
  - CERCLA SITE BOUNDARY
  - ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
  - LAND COVER
- BUILDING**
- Present
  - Removed

Notes:

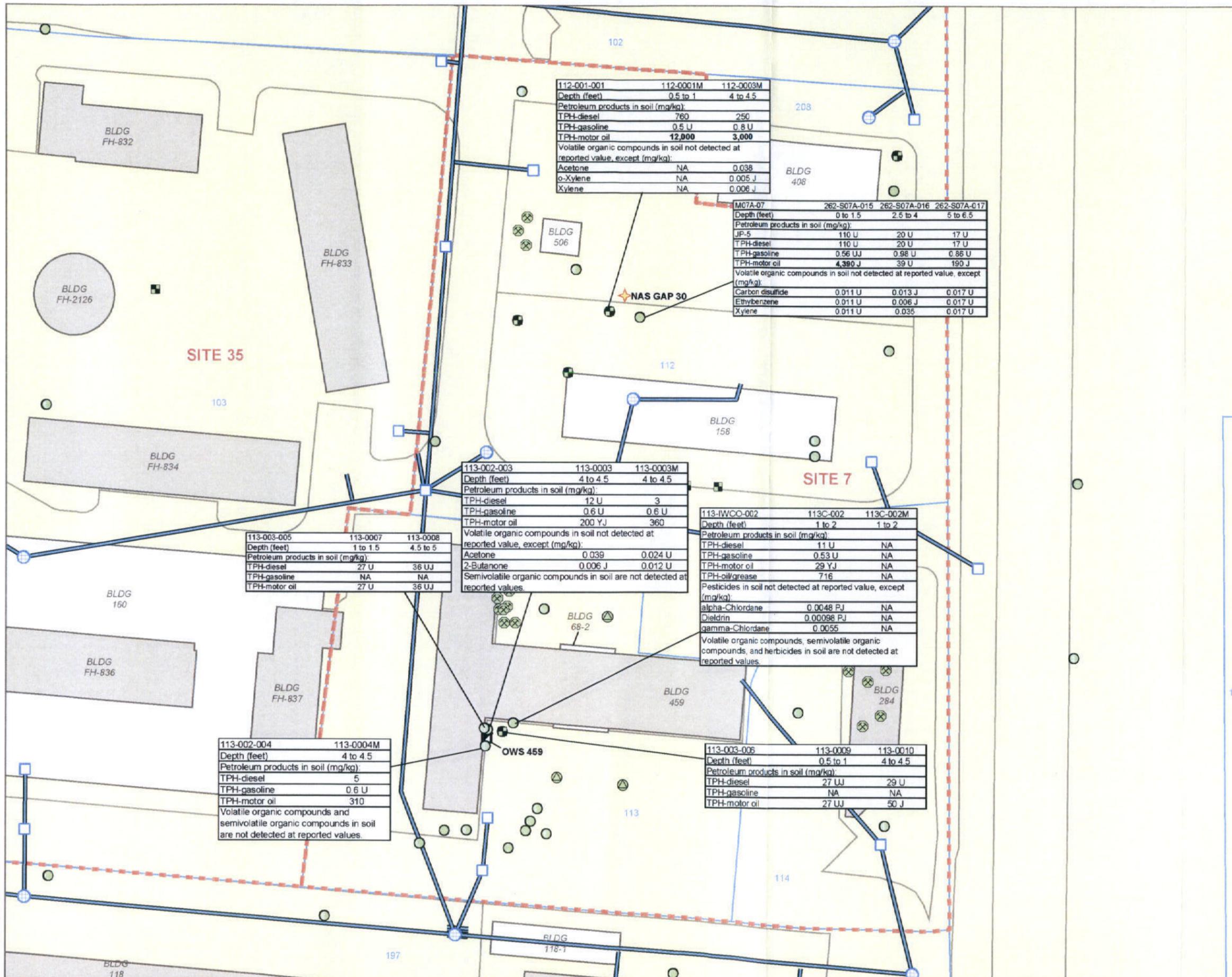
Bold values in hit boxes indicate "Exceeds MCL"

µg/L = micrograms per liter  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 MCL = Maximum Contaminant Level  
 NAS = Naval Air Station  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)



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**FIGURE 3-5**  
**CERCLA SITE 6**  
**OWS 041 AND WD 041A**  
**GROUNDWATER SAMPLE RESULTS**  
 SWMU Evaluation Report for Operable Unit 1



- SAMPLING LOCATIONS**
- ⊙ Direct-Push
  - ⊗ Excavation
  - Soil Boring
  - Surface Location
  - ⊕ MANHOLE
  - CATCH BASIN
  - ★ GENERATION ACCUMULATION POINT (GAP)
  - ▣ OIL-WATER SEPARATOR (OWS)
  - STORM SEWER LINE
  - - - CERCLA SITE BOUNDARY
  - # ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
  - LAND COVER
- BUILDING**
- Present
  - Removed

**Notes:**

Bold values in hit boxes indicate "Exceeds residential PRC"  
 Metals and polyaromatic hydrocarbons were not evaluated.

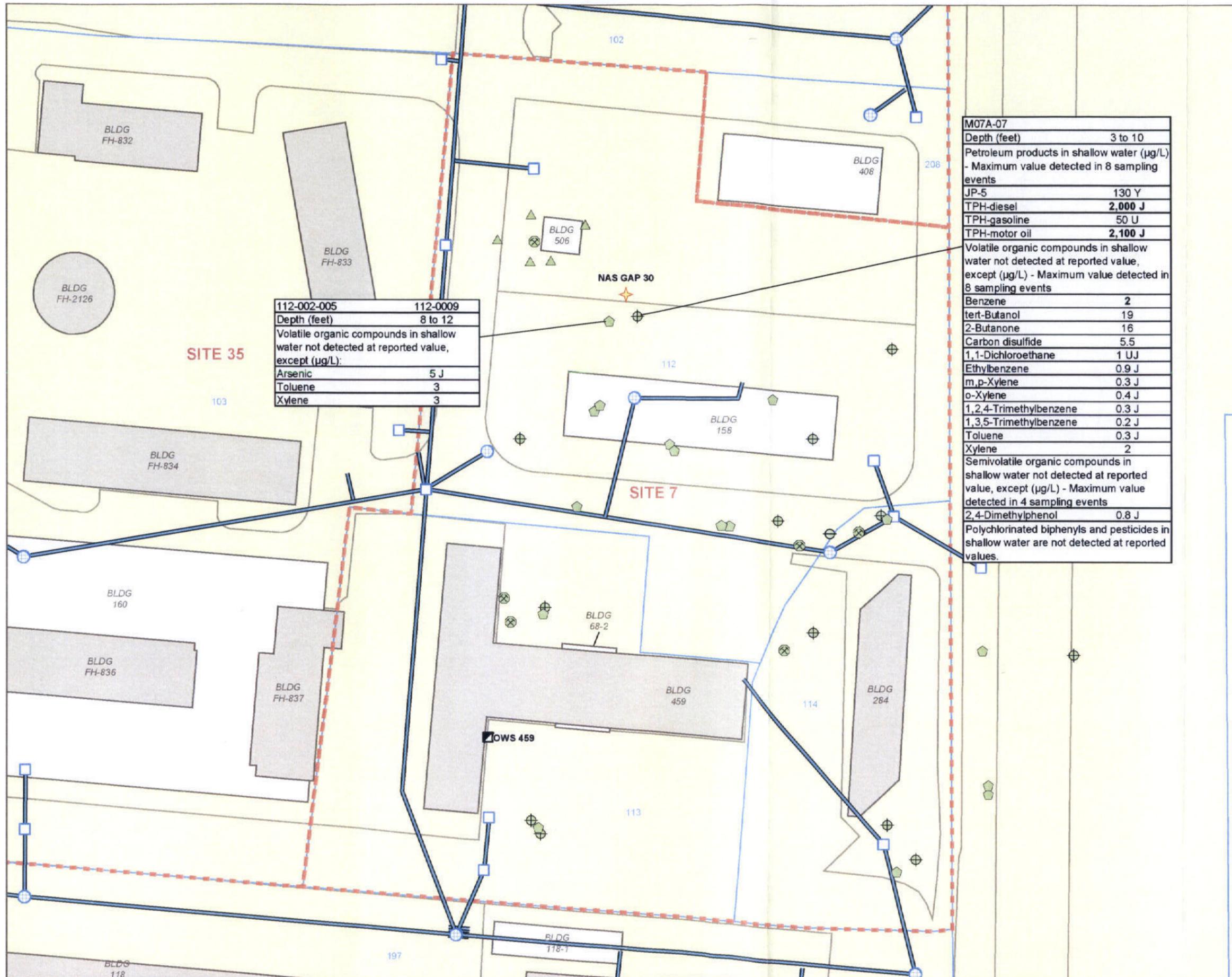
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 mg/kg = milligrams per kilogram  
 NA = Not analyzed  
 NAS = Naval Air Station  
 P = (For pesticides) Original and second column had high relative percent difference (RPD)  
 PRC = Preliminary Remediation Criteria  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)  
 Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard



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**FIGURE 3-6**  
**CERCLA SITE 7**  
**NAS GAP 30 AND OWS 459**  
**SOIL SAMPLE RESULTS**

SWMU Evaluation Report for Operable Unit 1



112-002-005	112-0009
Depth (feet)	8 to 12
Volatile organic compounds in shallow water not detected at reported value, except (µg/L):	
Arsenic	5 J
Toluene	3
Xylene	3

M07A-07	
Depth (feet)	3 to 10
Petroleum products in shallow water (µg/L) - Maximum value detected in 8 sampling events	
JP-5	130 Y
TPH-diesel	<b>2,000 J</b>
TPH-gasoline	50 U
TPH-motor oil	<b>2,100 J</b>
Volatile organic compounds in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 8 sampling events	
Benzene	2
tert-Butanol	19
2-Butanone	16
Carbon disulfide	5.5
1,1-Dichloroethane	1 UJ
Ethylbenzene	0.9 J
m,p-Xylene	0.3 J
o-Xylene	0.4 J
1,2,4-Trimethylbenzene	0.3 J
1,3,5-Trimethylbenzene	0.2 J
Toluene	0.3 J
Xylene	2
Semivolatile organic compounds in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 4 sampling events	
2,4-Dimethylphenol	0.8 J
Polychlorinated biphenyls and pesticides in shallow water are not detected at reported values.	

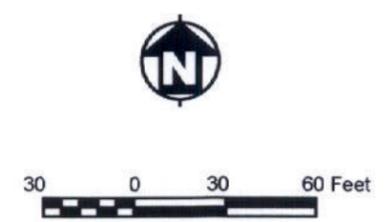
- SAMPLING LOCATIONS**
- ⊗ Excavation
  - ▲ Geoprobe
  - ⬢ Hydropunch
  - ⊕ Monitoring Well
  - ⊕ MANHOLE
  - CATCH BASIN
  - ★ GENERATION ACCUMULATION POINT (GAP)
  - ▣ OIL-WATER SEPARATOR (OWS)
  - STORM SEWER LINE
  - ⋯ CERCLA SITE BOUNDARY
  - # ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER

- LAND COVER**
- LAND COVER
- BUILDING**
- Present
  - Removed

**Notes:**

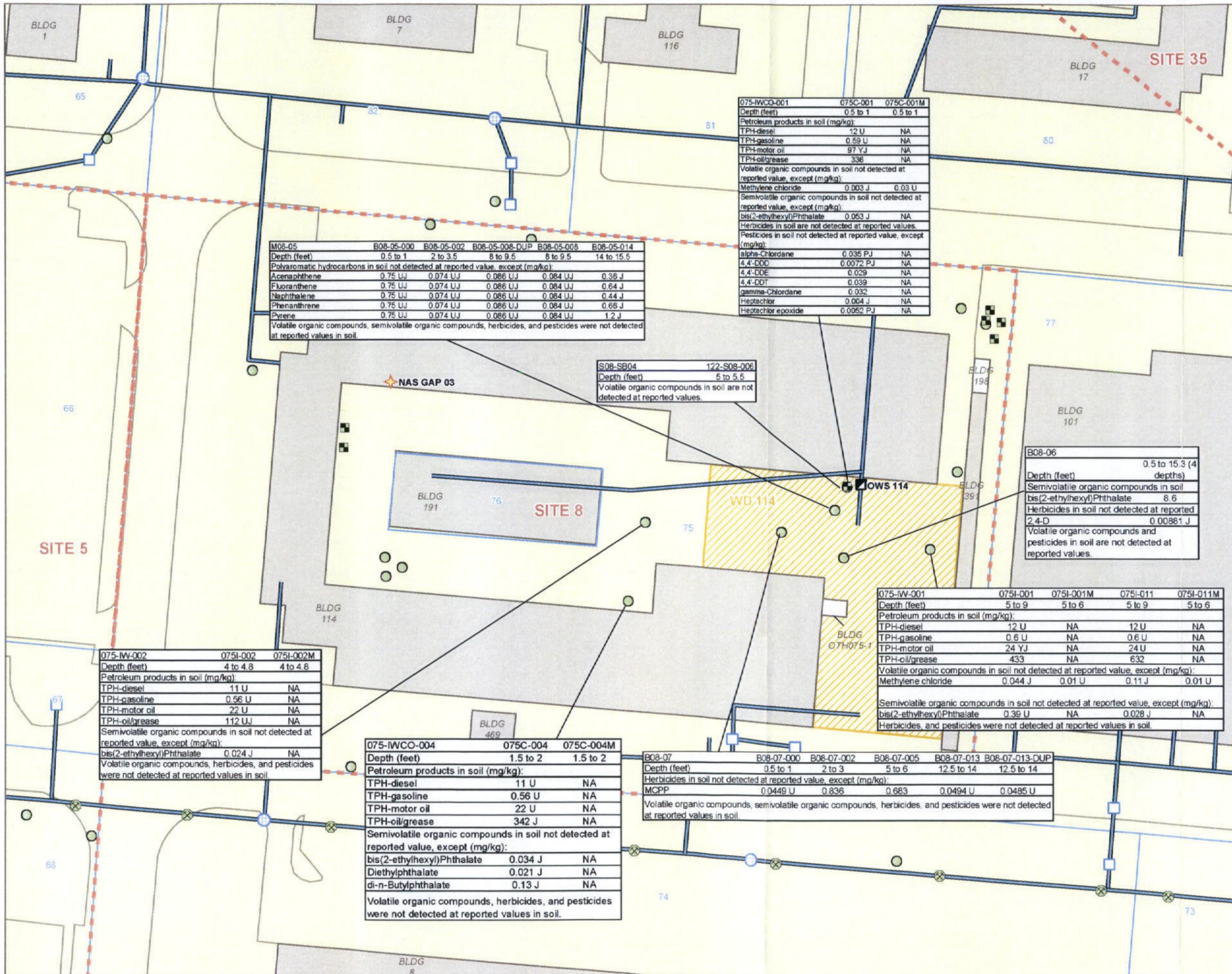
Bold values in hit boxes indicates "Exceeds residential PRC"  
Metals and polyaromatic hydrocarbons were not evaluated.

µg/L = micrograms per liter  
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
NAS = Naval Air Station  
PRC = Primary Remedial Criteria  
SWMU = Solid Waste Management Unit  
TPH = Total petroleum hydrocarbons  
U = Analyzed for, but not detected (at reported value)  
Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard



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**FIGURE 3-7**  
**CERCLA SITE 7**  
**NAS GAP 30 AND OWS 459**  
**GROUNDWATER SAMPLE RESULTS**  
SWMU Evaluation Report for Operable Unit 1



- SAMPLING LOCATIONS**
- ⊗ Excavation
  - Soil Boring
  - Surface Location
  - ⊕ MANHOLE
  - CATCH BASIN
  - ★ GENERATION ACCUMULATION POINT (GAP)
  - ▣ OIL-WATER SEPARATOR (OWS)
  - STORM SEWER LINE
  - ▨ WASHDOWN (WD) AREA
  - ⋯ CERCLA SITE BOUNDARY
  - # ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
  - LAND COVER
- BUILDING**
- Present
  - Removed

Notes:

Metals and polyaromatic hydrocarbons were not evaluated.

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980

J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample

mg/kg = Milligrams per kilogram

NA = Not analyzed

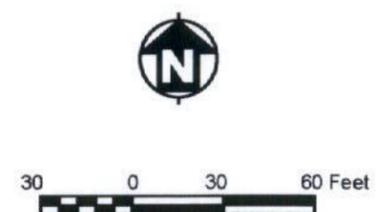
NAS = Naval Air Station

SWMU = Solid Waste Management Unit

TPH = Total petroleum hydrocarbons

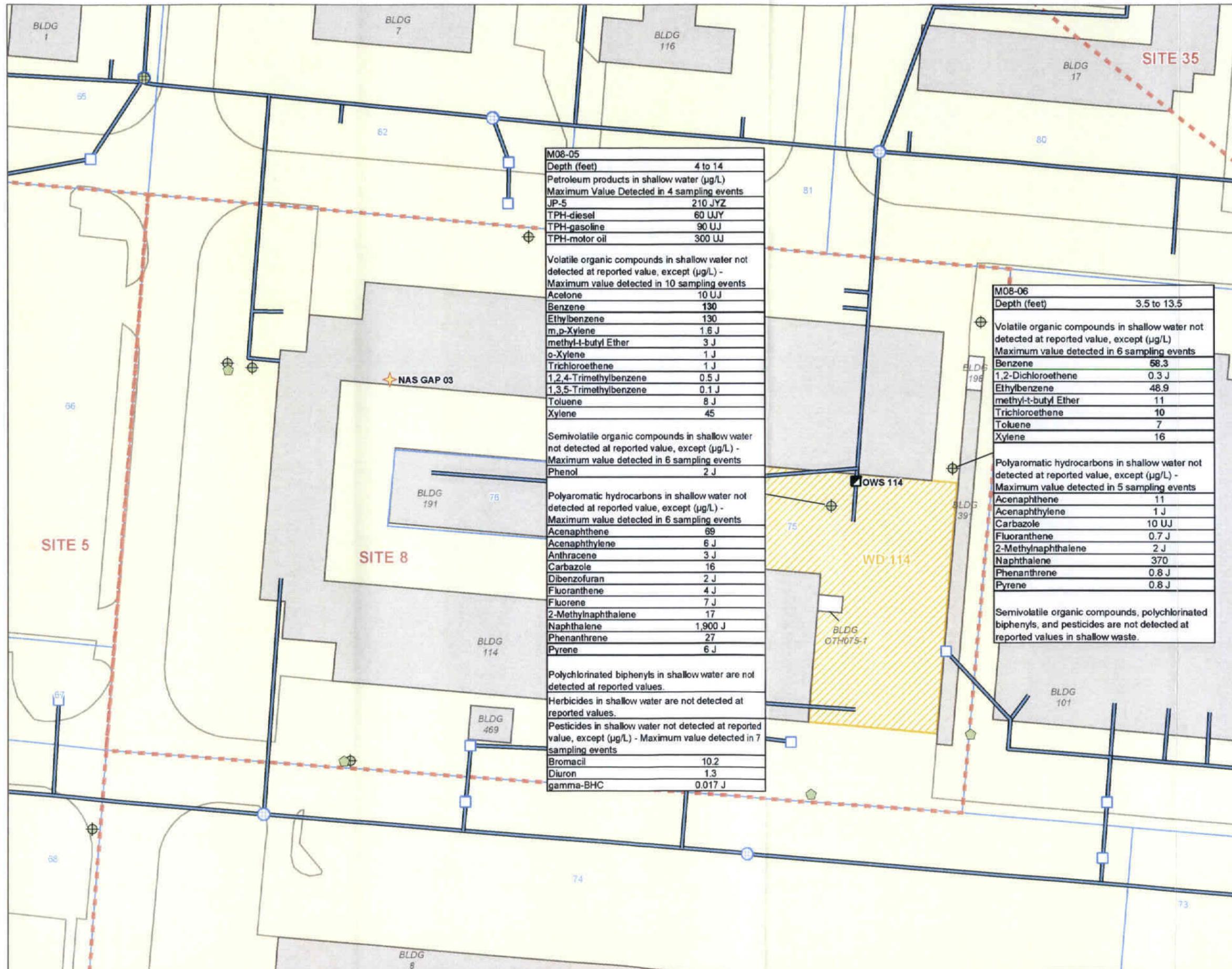
U = Analyzed for, but not detected (at reported value)

Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard



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**FIGURE 3-8**  
**CERCLA SITE 8**  
**NAS GAP 03, OWS 114 AND WD 114**  
**SOIL SAMPLE RESULTS**  
 SWMU Evaluation Report for Operable Unit 1



M08-05	
Depth (feet)	4 to 14
Petroleum products in shallow water (µg/L)	
Maximum Value Detected in 4 sampling events	
JP-5	210 JYZ
TPH-diesel	60 UJY
TPH-gasoline	90 UJ
TPH-motor oil	300 UJ
Volatile organic compounds in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 10 sampling events	
Acetone	10 UJ
Benzene	130
Ethylbenzene	130
m,p-Xylene	1.6 J
methyl-t-butyl Ether	3 J
o-Xylene	1 J
Trichloroethene	1 J
1,2,4-Trimethylbenzene	0.5 J
1,3,5-Trimethylbenzene	0.1 J
Toluene	8 J
Xylene	45
Semivolatile organic compounds in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 6 sampling events	
Phenol	2 J
Polyaromatic hydrocarbons in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 6 sampling events	
Acenaphthene	69
Acenaphthylene	6 J
Anthracene	3 J
Carbazole	16
Dibenzofuran	2 J
Fluoranthene	4 J
Fluorene	7 J
2-Methylnaphthalene	17
Naphthalene	1,900 J
Phenanthrene	27
Pyrene	6 J
Polychlorinated biphenyls in shallow water are not detected at reported values.	
Herbicides in shallow water are not detected at reported values.	
Pesticides in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 7 sampling events	
Bromacil	10.2
Diuron	1.3
gamma-BHC	0.017 J

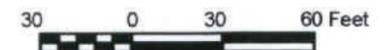
M08-06	
Depth (feet)	3.5 to 13.5
Volatile organic compounds in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 6 sampling events	
Benzene	58.3
1,2-Dichloroethene	0.3 J
Ethylbenzene	48.9
methyl-t-butyl Ether	11
Trichloroethene	10
Toluene	7
Xylene	16
Polyaromatic hydrocarbons in shallow water not detected at reported value, except (µg/L) - Maximum value detected in 5 sampling events	
Acenaphthene	11
Acenaphthylene	1 J
Carbazole	10 UJ
Fluoranthene	0.7 J
2-Methylnaphthalene	2 J
Naphthalene	370
Phenanthrene	0.8 J
Pyrene	0.8 J
Semivolatile organic compounds, polychlorinated biphenyls, and pesticides are not detected at reported values in shallow waste.	

- SAMPLING LOCATIONS**
- Hydropunch
  - Manhole/Storm Drain
  - Monitoring Well
  - MANHOLE
  - CATCH BASIN
  - GENERATION ACCUMULATION POINT (GAP)
  - OIL-WATER SEPARATOR (OWS)
  - STORM SEWER LINE
  - WASHDOWN (WD) AREA
  - CERCLA SITE BOUNDARY
  - ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
  - LAND COVER
- BUILDING**
- Present
  - Removed

**Notes:**

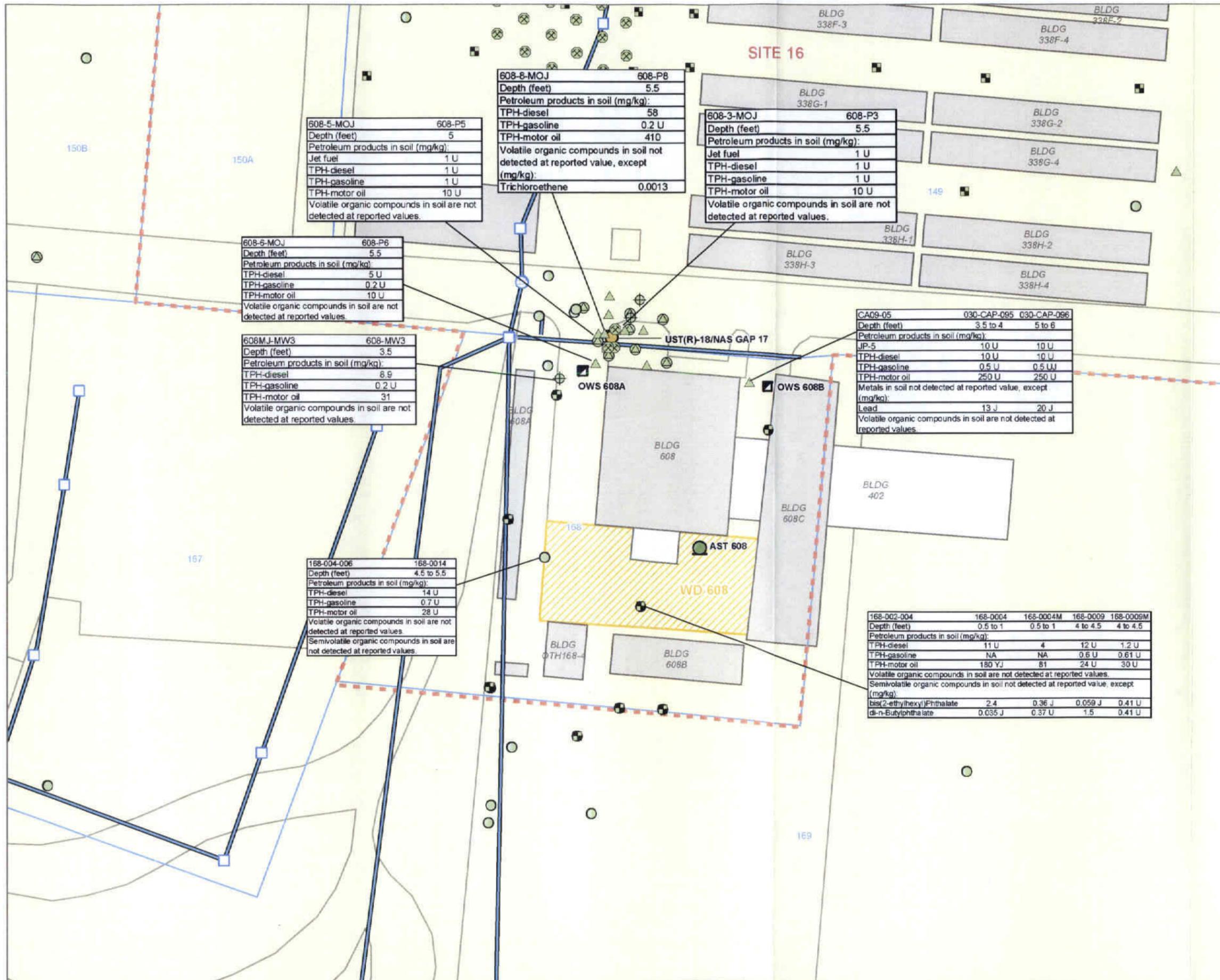
Bold values in hit boxes indicate "Exceeds MCL"

µg/L = micrograms per liter  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 MCL = Maximum contaminant level  
 NAS = Naval Air Station  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)  
 Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard  
 Z = Chromatographic response did not resemble a typical fuel pattern



Alameda Point  
 NAVFACENGCOM Southwest Division, San Diego, CA

**FIGURE 3-9**  
**CERCLA SITE 8**  
**NAS GAP 03, OWS 114 AND WD 114**  
**GROUNDWATER SAMPLE RESULTS**  
 SWMU Evaluation Report for Operable Unit 1

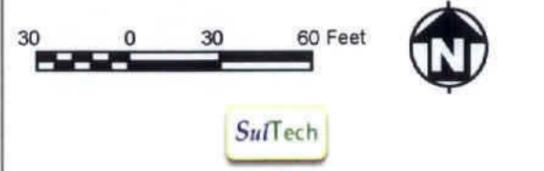


- SAMPLING LOCATIONS**
- ⊙ Direct-Push
  - ⊗ Excavation
  - ▲ Geoprobe
  - ⊕ Monitoring Well
  - Soil Boring
  - Surface Location
  - ABOVEGROUND STORAGE TANK (AST)
  - UNDERGROUND STORAGE TANK (UST)
  - ⊕ MANHOLE
  - CATCH BASIN
  - ★ GENERATION ACCUMULATION POINT (GAP)
  - ▣ OIL-WATER SEPARATOR (OWS)
  - STORM SEWER LINE
  - ▨ WASHDOWN (WD) AREA
  - ⋯ CERCLA SITE BOUNDARY
  - ⊕ ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
  - LAND COVER
- BUILDING**
- Present
  - Removed

**Notes:**

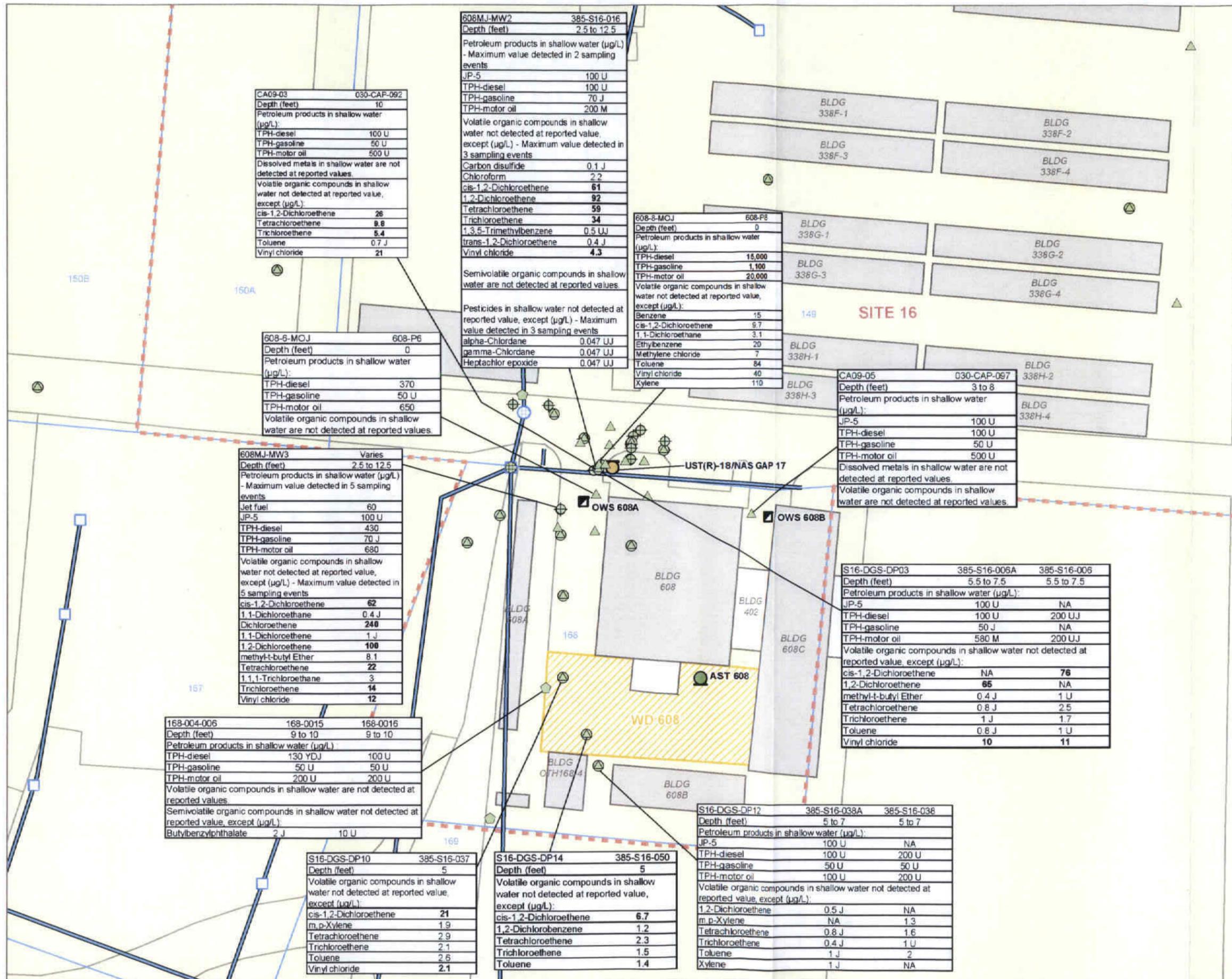
Metals and polycyclic aromatic hydrocarbons were not evaluated.

AST = Aboveground Storage Tank  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 mg/kg = Milligrams per kilogram  
 NA = Not analyzed  
 NAS = Naval Air Station  
 RCRA = Resource Conservation and Recovery Act  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)  
 UST(R) = RCRA-identified UST  
 Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard



**Alameda Point**  
 NAVFACENGCOM Southwest Division, San Diego, CA

**FIGURE 3-10**  
**CERCLA SITE 16**  
**AST 608, OWS 608A, OWS 608B,**  
**UST(R)-18/NAS GAP 17, AND WD 608**  
**SOIL SAMPLE RESULTS**  
 SWMU Evaluation Report for Operable Unit 1

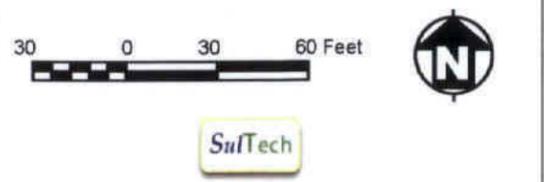


- SAMPLING LOCATIONS**
- Direct-Push
  - Geoprobe
  - Hydropunch
  - Manhole/Storm Drain
  - Monitoring Well
  - ABOVEGROUND STORAGE TANK (AST)
  - UNDERGROUND STORAGE TANK (UST)
  - MANHOLE
  - CATCH BASIN
  - GENERATION ACCUMULATION POINT (GAP)
  - OIL-WATER SEPARATOR (OWS)
  - STORM SEWER LINE
  - WASHDOWN (WD) AREA
  - CERCLA SITE BOUNDARY
  - ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
  - LAND COVER
- BUILDING**
- Present
  - Removed

Notes:

Bold values in hit boxes indicate "Exceeds MCL or PRC"  
 Metals and polyaromatic hydrocarbons were not evaluated.

µg/L = micrograms per liter  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 D = Compound identified in an analysis at a secondary dilution factor  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 MCL = Maximum Contaminant Level  
 NA = Not analyzed  
 NAS = Naval Air Station  
 PRC = Primary Remediation Criteria  
 RCRA = Resource Conservation and Recovery Act  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)  
 UST(R) = RCRA-identified UST  
 Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard



**Alameda Point**  
 NAVFACENGCOM Southwest Division, San Diego, CA

**FIGURE 3-11**  
**CERCLA SITE 16**  
**AST 608, OWS 608A, OWS 608B,**  
**UST(R)-18/NAS GAP 17, AND WD 608**  
**GROUNDWATER SAMPLE RESULTS**  
 SWMU Evaluation Report for Operable Unit 1

**TABLES**

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**TABLE 2-1: SOLID WASTE MANAGEMENT UNITS DEFERRED TO THE CERCLA PROGRAM IN OPERABLE UNIT 1 (SITES 6, 7, 8, AND 16) AT ALAMEDA POINT**

Solid Waste Management Unit Evaluation Report for Operable Unit 1

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CERCLA Site	Identification	Navy Recommendation/ Closure Status	Refer to Figure for Sample Results
6	NAS GAP 25	NFA Recommended	Figure 3-2 & 3-3
6	OWS 041	Further Action Recommended	Figure 3-4 & 3-5
6	WD 040	Further Action Recommended	Figure 3-2 & 3-3
6	WD 041A	Further Action Recommended	Figure 3-4 & 3-5
7	NAS GAP 30	NFA Recommended	Figure 3-6 & 3-7
7	OWS 459	NFA Recommended	Figure 3-6 & 3-7
8	NAS GAP 03	NFA Recommended	Figure 3-8 & 3-9
8	OWS 114	Further Action Recommended	Figure 3-8 & 3-9
8	WD 114	Further Action Recommended	Figure 3-8 & 3-9
16	AST 338-A1	NFA Recommended	NA
16	AST 608	NFA Recommended	Figure 3-10 & 3-11
16	OWS 608A	NFA Recommended	Figure 3-10 & 3-11
16	OWS 608B	NFA Recommended	Figure 3-10 & 3-11
16	UST(R)-18/NAS GAP 17	Further Action Recommended	Figure 3-10 & 3-11
16	WD 608	NFA Recommended	Figure 3-10 & 3-11

Notes:

AOC	Area of concern
AST	Aboveground storage tank
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
GAP	Generation accumulation point
NA	Not applicable
NADEP	Naval Aviation Depot
NAS	Naval Air Station
NFA	No further action
OWS	Oil-water separator
(R)	RCRA
RCRA	Resource Conservation and Recovery Act
SWMU	Solid waste management unit
UST	Underground Storage Tank
WD	Washdown

**TABLE 2-2: SOLID WASTE MANAGEMENT UNITS DEFERRED TO THE TOTAL PETROLEUM HYDROCARBON PROGRAM IN OPERABLE UNIT 1 (SITES 6, 7, 8, AND 16) AT ALAMEDA POINT**

Solid Waste Management Unit Evaluation Report for Operable Unit 1

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<b>CERCLA Site</b>	<b>Identification</b>	<b>Material Stored/Disposed</b>	<b>Navy Recommendation/ Closure Status</b>
7	UST(R)-15/NAS GAP 16	Gasoline, Unleaded Gasoline, Fuel Oil. & Waste Oil (459-7)	Further Action Recommended
7	UST(R)-16	Lubricating Oil	Closed by RWQCB
16	AST 338-D4	Diesel	NFA Recommended

Notes:

AOC Area of concern  
 AST Aboveground storage tank  
 GAP Generation accumulation point  
 NA Not applicable  
 NAS Naval Air Station  
 NFA No further action  
 OWS Oil-water separator  
 (R) RCRA  
 RCRA Resource Conservation and Recovery Act  
 RWQCB Regional Water Quality Control Board  
 SWMU Solid waste management unit  
 UST Underground Storage Tank

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>NAS GAP 25</b>	<b>Refer to Figure #</b>	<b>Figure 3-2 &amp; 3-3</b>
<b>Navy Recommendation/Closure Status</b>	<b>NFA Recommended</b>		
<b><u>Location Description</u></b>			
<b>Disposal Parcel</b>	EDC 08	<b>CERCLA Site</b>	6
<b>EBS Subparcel</b>	71A	<b>TPH CAA</b>	NA
<b>Associated Building</b>	041	<b>Building Status</b>	Present
<b>Leasing Status</b>	Not leased by ARRA		
<b>Building Name</b>	Aircraft Component Testing Operations		
<b>Additional Information</b>	Building 41; west of building		
<b><u>Operational Information for SWMU</u></b>			
<b>Type of Unit</b>	Generator Accumulation Point		
<b>Capacity (gallons)</b>	Bowser/drums, 55-gallon drums		
<b>Period of Operation</b>	GAPs were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.		
<b>Material Managed at SWMU</b>	Oil, solvent, thinner, hydraulic fluid, and paint waste		
<b><u>Source of Initial SWMU Identification</u></b>			
<b>SWMU # in RFA</b>	GII-21	<b>Other Sources</b>	NA
<b>Recommendation in RFA</b>	RFI Not Required		
<b><u>Tank-Related Information</u></b>			
<b>Status of Tank</b>	NA		
<b>Status of Associated Pipes</b>	NA		

#### **Data Analysis**

NAS GAP 25 consisted of various size containers, including 55-gallon storage drums, on concrete pavement in and around a fenced area. Containers were placed atop wooden pallets (to allow removal with a forklift) and in metal sheds. The site measured approximately 70 feet by 30 feet located outside of Building 041 within WD 040. According to the RFA, NAS GAP 25 exhibited a low potential for releases into the soil and groundwater because the site was on concrete pavement (DTSC 1992). A description of NAS GAP 25 was included in the Parcel 196 evaluation data summary report located in Zone 11 of the EBS. The EBS incorrectly described this site as being inside of Building 041 and as a NADEP GAP (IT 2001). Three groundwater sampling locations are near NAS GAP 25. Chlorinated VOCs were detected in excess of MCLs at two of the locations (S06-DGS-DP17 and S06-HP-07). The remedial investigation for Site 6 did not identify NAS GAP 25 as a likely source of contamination. The report identifies chlorinated solvent plumes that will be evaluated in a feasibility study; the likely sources are WD 041A and the portable avionics laboratory. No staining was observed near this SWMU in 2002; see below for observations during 2002 site visit. NFA is recommended for NAS GAP 25.

#### **2002 Site Visit**

Faded markings painted on the concrete outside of Building 041 are all that remains of NAS GAP 25. The surrounding areas are vacant. Expansion joints run through the concrete of the former site, but no stains are apparent within the joints. No staining, corrosion, or obvious pathway through the concrete (other than the expansion joints) is apparent in the vicinity of the former site.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>OWS 041</b>	<b>Refer to Figure #</b>	<b>Figure 3-4 &amp; 3-5</b>
<b>Navy Recommendation/Closure Status</b>		<b>Further Action Recommended</b>	
<b><u>Location Description</u></b>			
<b>Disposal Parcel</b>	EDC 08	<b>CERCLA Site</b>	6
<b>EBS Subparcel</b>	196	<b>TPH CAA</b>	NA
<b>Associated Building</b>	041	<b>Building Status</b>	Present
		<b>Leasing Status</b>	Not leased by ARRA
<b>Building Name</b>	Aircraft Component Testing Operations		
<b>Additional Information</b>	Southwestern corner of Building 41; associated with WD 041A		

#### **Operational Information for SWMU**

**Type of Unit** Oil-Water Separator

**Capacity (gallons)** Unknown

**Period of Operation** Unknown

**Material Managed at SWMU** Wastewater from cleaning aircraft or large machinery

#### **Source of Initial SWMU Identification**

**SWMU # in RFA** Not identified in RFA  
**Recommendation in RFA** NA

**Other Sources** Final FSP for Data Gap Sampling (Tetra Tech 2001)

#### **Tank-Related Information**

**Status of Tank** NA

**Status of Associated Pipes** NA

#### **Data Analysis**

OWS 041 is located within CERCLA Site 6 at the southwestern corner of Building 41. OWS 041 is associated with WD 041A as well as a wash pad and solvent dip tank. Soil sampling locations near OWS 041 were either nondetect or less than PRGs or PRCs for VOCs and TPH compounds. Groundwater sampling locations near OWS 041 showed concentrations of chlorinated VOCs in excess of the MCL. Further action is recommended for OWS 041; the response action for OWS 041 will be conducted under the CERCLA program. The Navy will evaluate the groundwater contamination in the FS.

#### **2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>WD 040</b>	<b>Refer to Figure #</b>	<b>Figure 3-2 &amp; 3-3</b>
<b>Navy Recommendation/Closure Status</b>		<b>Further Action Recommended</b>	
<u>Location Description</u>			
<b>Disposal Parcel</b>	EDC 08	<b>CERCLA Site</b>	6
<b>EBS Subparcel</b>	71A	<b>TPH CAA</b>	NA
<b>Associated Building</b>	040	<b>Building Status</b>	Present
		<b>Leasing Status</b>	Leased by ARRA
<b>Building Name</b>	Aircraft Maintenance and Painting Hangar		
<b>Additional Information</b>	Washdown in area east of Building 40; with OWS		

#### Operational Information for SWMU

**Type of Unit** Washdown Area

**Capacity (gallons)** NA

**Period of Operation** Unknown

**Material Managed at SWMU** Wastewater from cleaning aircraft or large machinery

#### Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA

**Other Sources** EBS (IT 2001)

**Recommendation in RFA** NA

#### Tank-Related Information

**Status of Tank** NA

**Status of Associated Pipes** NA

#### Data Analysis

WD 040 is located between buildings 40 and 41 and is associated with OWS-040A and OWS-040B. The portable avionics laboratory was also located at the northeastern portion of WD 040. WD 040 is partially within Site 6 and partially within transfer parcel EDC 05. The two OWSs are located within EDC 05. This area was historically used for aircraft maintenance purposes including cleaning and repairs. The highest levels of TPH were detected at soil sampling location 195-002-004, in the northwestern portion of WD-040 within Parcel 195 in EDC 05; data showed TPHg at a concentration of 3,900 mg/kg and TPHmo at 7,700 mg/kg, which are greater than residential PRCs but less than nonresidential PRCs. In all soil sampling locations within WD 040 where VOCs were analyzed, VOCs were either not detected or were detected at concentrations orders of magnitude less than residential PRGs. Chlorinated VOCs were detected at concentrations in excess of the MCLs at all groundwater sampling locations except 195-Z11-023 (west), PA02-13 (center), and S06-DGS-DP05 (south). The OWSs were evaluated in the SWMU report for EDC 05. Two soil sampling locations near OWS 040A did not detect VOCs (except TCE at 0.001 mg/kg). At one groundwater sampling location near OWS 040A, three VOCs were detected at concentrations less than MCLs. Three soil sampling locations near OWS 040B did not detect VOCs (except acetone at 0.006 mg/kg). NFA was recommended for the two OWSs. The remedial investigation for Site 6 did not identify WD 040 as a likely source of contamination but did identify the portable avionics laboratory. Further action is recommended for WD 040. The Navy will evaluate the groundwater contamination in the FS.

#### 2002 Site Visit

NA

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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<b>SWMU Identifier</b> WD 041A	<b>Refer to Figure #</b> Figure 3-4 & 3-5
<b>Navy Recommendation/Closure Status</b>	<b>Further Action Recommended</b>

Location Description

<b>Disposal Parcel</b> EDC 08	<b>CERCLA Site</b> 6	
<b>EBS Subparcel</b> 71A	<b>TPH CAA</b> NA	
<b>Associated Building</b> 041	<b>Building Status</b> Present	<b>Leasing Status</b> Not leased by ARRA
<b>Building Name</b> Aircraft Component Testing Operations		
<b>Additional Information</b> Washdown area outside southwest corner of Building 41; with OWS 041, solvent dip tank, and wash pad with depression in concrete		

Operational Information for SWMU

<b>Type of Unit</b> Washdown Area
<b>Capacity (gallons)</b> NA
<b>Period of Operation</b> Unknown
<b>Material Managed at SWMU</b> Wastewater from cleaning aircraft or large machinery

Source of Initial SWMU Identification

<b>SWMU # in RFA</b> Not identified in RFA	<b>Other Sources</b> EBS (IT 2001)
<b>Recommendation in RFA</b> NA	

Tank-Related Information

<b>Status of Tank</b> NA
<b>Status of Associated Pipes</b> NA

Data Analysis

WD 041A is a concrete area that covers a large portion of the southwestern corner of CERCLA Site 6, near Building 41. A concrete wash pad, solvent dip tank, and OWS 041 are associated with WD 041A. The wash pad is located near the southwestern corner of Building 041; it slopes towards a center drain connected to OWS 041 and the sewer system. Soil sampling locations near OWS 041 were either nondetect or less than PRGs or PRCs for VOCs and TPH compounds. Groundwater sampling locations near the wash pad showed concentrations of chlorinated VOCs in excess of the MCL. Further action is recommended for WD 041A; the response action for WD 041A will be conducted under the CERCLA program. The Navy will evaluate the groundwater contamination in the FS.

2002 Site Visit

Entire area is cement foundation with hole punches evenly spaced for transport tie-ups (i.e., planes). Major washdown area. OWS is in the middle of a sloped concrete drain; apparently to collect hose down water off the taxiway into OWS.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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**SWMU Identifier** NAS GAP 30 **Refer to Figure #** Figure 3-6 & 3-7

**Navy Recommendation/Closure Status** NFA Recommended

#### Location Description

**Disposal Parcel** EDC 06 **CERCLA Site** 7  
**EBS Subparcel** 112 **TPH CAA** TPH CAA-07  
**Associated Building** 408 **Building Status** Removed **Leasing Status** NA  
**Building Name** Offices, Storage Area, Carpenter Shop  
**Additional Information** Building 408; southwest of building; on asphalt slab

#### Operational Information for SWMU

**Type of Unit** Generator Accumulation Point  
**Capacity (gallons)** Asphalt slab, 20 feet by 30 feet. Drum capacity unknown  
**Period of Operation** GAPs were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.

**Material Managed at SWMU** Automotive body shop and dry cleaning waste

#### Source of Initial SWMU Identification

**SWMU # in RFA** GII-25 **Other Sources** NA  
**Recommendation in RFA** RFI Not Required

#### Tank-Related Information

**Status of Tank** NA  
**Status of Associated Pipes** NA

#### Data Analysis

NAS GAP 30 consisted of various size containers, mostly 55-gallon storage drums, on asphalt pavement. Containers were placed on wooden pallets to allow removal with a forklift. The site was approximately 20 feet by 30 feet (listed as 20 feet by 25 feet in the RFA) located southwest (listed as northwest in the RFA) of Building 408. According to the RFA, NAS GAP 30 appeared adequate, but secondary containment for liquid waste was recommended; exposed soil was noted near the drums (DTSC 1992). NAS GAP 30 was investigated as Target Area 1 for Parcel 112 of the EBS. During this investigation, four soil sampling locations were analyzed for VOCs, SVOCs, TPH, and metals. TPH motor oil was detected in surface soil samples ranging up to 12,000 mg/kg; TPH diesel was detected at 250 and 760 mg/kg (highest values at sampling location 112-001-001). In Phase 2B, four additional sampling locations were analyzed for TPH, VOCs, SVOCs, and metals; TPH motor oil was detected at 43 mg/kg (not shown on figure). One groundwater sample was collected in Phase 2B of the EBS (sampling location 112-002-005); the sample was analyzed for VOCs (toluene and xylene were both detected at 3 mg/L, less than MCLs). The maximum values detected at monitoring well M07A-07 showed elevated concentrations of TPH-d, TPH-mo, and benzene in groundwater in excess of residential PRCs. The likely source of the TPH contamination is USTs associated with the gas station. The remedial investigation for Site 7 concluded that NAS GAP 30 is not a likely source of contamination. Further action will be conducted for TPH contamination in CAA 7 under the TPH program. NFA is recommended for NAS GAP 30.

#### 2002 Site Visit

No definitive markings are left outside the foundation of Building 408 to denote the exact location of NAS GAP 30. The surrounding areas are vacant. All surrounding buildings have been demolished (including Building 408). No staining or corrosion is apparent in the vicinity of the former site.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>OWS 459</b>	<b>Refer to Figure #</b>	<b>Figure 3-6 &amp; 3-7</b>
<b>Navy Recommendation/Closure Status</b>	<b>NFA Recommended</b>		
<b><u>Location Description</u></b>			
<b>Disposal Parcel</b>	EDC 06	<b>CERCLA Site</b>	7
<b>EBS Subparcel</b>	113	<b>TPH CAA</b>	TPH CAA-07
<b>Associated Building</b>	459	<b>Building Status</b>	Present
<b>Leasing Status</b>	Leased by ARRA		
<b>Building Name</b>	Repair Shop, Auto Parts Store, Storage		
<b>Additional Information</b>	South of Building 459		
<b><u>Operational Information for SWMU</u></b>			
<b>Type of Unit</b>	Oil-Water Separator		
<b>Capacity (gallons)</b>	Unknown		
<b>Period of Operation</b>	Unknown		
<b>Material Managed at SWMU</b>	Unknown		
<b><u>Source of Initial SWMU Identification</u></b>			
<b>SWMU # in RFA</b>	Not identified in RFA	<b>Other Sources</b>	EBS (IT 2001)
<b>Recommendation in RFA</b>	NA		
<b><u>Tank-Related Information</u></b>			
<b>Status of Tank</b>	NA		
<b>Status of Associated Pipes</b>	NA		

#### **Data Analysis**

OWS-459 is located within CAA 7 and CERCLA Site 7 at the southeastern side of Building 459. Floor drains in the repair shop in Building 459 connect to OWS 459; OWS 459 also may have received wastewater runoff from the dip tank and steam clean area. Adjacent soil sampling locations, 113-002-003, 113-002-004, 113-003-005, and 113-003-006, showed motor oil concentrations from 29 mg/kg to 360 mg/kg, which do not exceed the residential PRCs (Navy 2001). These soil samples also contained diesel, with 113-002-004 containing the highest concentration at 5.0 mg/kg (less than residential PRC). In addition, sampling location 113-IWC0-002 showed an oil/grease concentration of 716 mg/kg. Out of the five soil sampling locations, two were analyzed for TPH only. Three soil locations were also analyzed for VOC and SVOCs, which were either not detected or were detected at low concentrations that were orders of magnitude less than the residential PRGs. The remedial investigation for Site 7 concluded that OWS 459 is not a likely source of contamination. Further action will be conducted for TPH contamination in CAA 7 under the TPH program. NFA is recommended for OWS 459.

#### **2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive.

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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**SWMU Identifier** NAS GAP 03 **Refer to Figure #** Figure 3-8 & 3-9

**Navy Recommendation/Closure Status** NFA Recommended

Location Description

**Disposal Parcel** EDC 07 **CERCLA Site** 8  
**EBS Subparcel** 75 **TPH CAA** TPH CAA-08  
**Associated Building** 114 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** PWC Maintenance/Storage Shop and Administrative Office  
**Additional Information** Building 114, inside of building off northwestern part of courtyard

Operational Information for SWMU

**Type of Unit** Generator Accumulation Point  
**Capacity (gallons)** 55-gallon drums, pallet  
**Period of Operation** GAPs were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.  
**Material Managed at SWMU** Paints, solvents, acids, freon, oil and grease, batteries, fluorescent lights, and PCB capacitors

Source of Initial SWMU Identification

**SWMU # in RFA** GII-02 **Other Sources** NA  
**Recommendation in RFA** RFI Not Required

Tank-Related Information

**Status of Tank** NA  
**Status of Associated Pipes** NA

Data Analysis

NAS GAP 03 consisted of various size containers, including 55-gallon storage drums, located in a small room on the first floor of Building 114. Containers were placed atop wooden pallets (to allow removal with a forklift) and in cardboard boxes. The room measured approximately 30 feet by 20 feet with one entrance from the courtyard of Building 114. According to the RFA, NAS GAP 03 exhibited a low potential for releases into the soil, groundwater, and surface water because the site was indoors on a concrete floor (DTSC 1992). A description of NAS GAP 03 was included in the Parcel 75 evaluation data summary report located in Zone 13 of the EBS. The EBS did not conduct further sampling because the exact location of the area could not be determined at the time of their investigations (IT 2001). An RFI was not requested by DTSC because the GAP was located indoors on a concrete floor; no sampling was conducted in or near NAS GAP 30. NFA is recommended for NAS GAP 03.

2002 Site Visit

No definitive markings are left in Building 114 to denote the exact location of NAS GAP 03. According to one of the tenants, the area appeared clean prior to his lease.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>OWS 114</b>	<b>Refer to Figure #</b>	<b>Figure 3-8 &amp; 3-9</b>		
<b>Navy Recommendation/Closure Status</b>		<b>Further Action Recommended</b>			
<b><u>Location Description</u></b>					
<b>Disposal Parcel</b>	EDC 07	<b>CERCLA Site</b>	8		
<b>EBS Subparcel</b>	75	<b>TPH CAA</b>	TPH CAA-08		
<b>Associated Building</b>	114	<b>Building Status</b>	Present	<b>Leasing Status</b>	Leased by ARRA
<b>Building Name</b>	PWC Maintenance/Storage Shop and Administrative Office				
<b>Additional Information</b>	Associated with Building 114; located at north-central portion of WD 114				
<b><u>Operational Information for SWMU</u></b>					
<b>Type of Unit</b>	Oil-Water Separator				
<b>Capacity (gallons)</b>	Unknown				
<b>Period of Operation</b>	Unknown				
<b>Material Managed at SWMU</b>	Wastewater from cleaning aircraft or large machinery				
<b><u>Source of Initial SWMU Identification</u></b>					
<b>SWMU # in RFA</b>	Not identified in RFA	<b>Other Sources</b>	EBS (IT 2001)		
<b>Recommendation in RFA</b>	NA				
<b><u>Tank-Related Information</u></b>					
<b>Status of Tank</b>	NA				
<b>Status of Associated Pipes</b>	NA				

#### **Data Analysis**

OWS-114 is located within CERCLA Site 8 and CAA 8 at the north-central portion of WD 114. Three soil sampling locations are near OWS 114 (075-IWCO-001 [analyzed for TPH, VOCs, SVOCs, herbicides, and pesticides]; S08-SB04 [analyzed for VOCs]; and M08-05 [analyzed for PAHs, VOCs, SVOCs, herbicides, and pesticides]) All detected compounds in soil were either less than residential PRC (TPH) or residential PRG. One groundwater monitoring well (M08-05) is located just south of OWS 114; the maximum value detected in several sampling events is shown on Figure 3-9. The maximum value detected for benzene exceeds the MCL. The remedial investigation for Site 8 identifies WD 114 and OWS 114 as likely sources of contamination. Further action is recommended for OWS 114. Response actions will be evaluated in the FS.

#### **2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>WD 114</b>	<b>Refer to Figure #</b>	<b>Figure 3-8 &amp; 3-9</b>
<b>Navy Recommendation/Closure Status</b>		<b>Further Action Recommended</b>	
<b><u>Location Description</u></b>			
<b>Disposal Parcel</b>	EDC 07	<b>CERCLA Site</b>	8
<b>EBS Subparcel</b>	75	<b>TPH CAA</b>	TPH CAA-08
<b>Associated Building</b>	114	<b>Building Status</b>	Present
		<b>Leasing Status</b>	Leased by ARRA
<b>Building Name</b>	PWC Maintenance/Storage Shop and Administrative Office		
<b>Additional Information</b>	Washdown area in the courtyard of Building 114; with winch used to lift motors out of vehicles for repairs; with OWS 114		
<b><u>Operational Information for SWMU</u></b>			
<b>Type of Unit</b>	Washdown Area		
<b>Capacity (gallons)</b>	NA		
<b>Period of Operation</b>	Unknown		
<b>Material Managed at SWMU</b>	Wastewater from cleaning aircraft or large machinery		
<b><u>Source of Initial SWMU Identification</u></b>			
<b>SWMU # in RFA</b>	Not identified in RFA	<b>Other Sources</b>	EBS (IT 2001)
<b>Recommendation in RFA</b>	NA		
<b><u>Tank-Related Information</u></b>			
<b>Status of Tank</b>	NA		
<b>Status of Associated Pipes</b>	NA		

#### **Data Analysis**

WD 114 is associated with OWS 114 and is within CERCLA Site 8 and CAA 8. The washdown area is located at the eastern portion of Building 114 in the eastern portion of the courtyard. This building and surrounding area was historically used as a public works, maintenance, and storage area. Building 114 also housed several machine and carpentry shops, which stored various chemicals and fuels. Chemicals in the area included herbicides, pesticides, paints, adhesives, fuels, oils, solvents and various cleaners (IT 2001). Four soil sampling locations (075-IWCO-001 [north], 075-IW-001 [east], 075-IWCO-004 [west], and 075-IW-002 [west]) were analyzed for TPH, VOCs, SVOCs, herbicides, and pesticides. All detected compounds in soil were either less than residential PRC (TPH) or residential PRG. Four other soil sampling locations were not analyzed for TPH; all detected compounds were less than residential PRG. One groundwater monitoring well (M08-05) is located at the north-central portion of WD114; the maximum value detected in several sampling events is shown on Figure 3-9. The maximum value detected for benzene exceeds the MCL. A second groundwater monitoring well (M08-06) is located at the northeastern edge of WD 114; the maximum values detected in several sampling events is shown on Figure 3-9. The maximum values detected for benzene and trichloroethene exceed the MCL. The remedial investigation for Site 8 identifies WD 114 and OWS 114 as likely sources of contamination. Further Action is recommended for WD 114. Response actions will be evaluated in the FS.

#### **2002 Site Visit**

NA

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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**SWMU Identifier** AST 338-A1

**Refer to Figure #** NA

**Navy Recommendation/Closure Status**

**NFA Recommended**

**Location Description**

**Disposal Parcel** EDC 11

**CERCLA Site** 16

**EBS Subparcel** 149

**TPH CAA** NA

**Associated Building** 338 **Building Status** Present

**Leasing Status** Leased by ARRA

**Building Name** Storage Facilities and Office Space

**Additional Information** Building 338 - north of CANS A1

**Operational Information for SWMU**

**Type of Unit** Aboveground Storage Tank(s)

**Capacity (gallons)** 500

**Period of Operation** Unknown

**Material Managed at SWMU** Propane

**Source of Initial SWMU Identification**

**SWMU # in RFA** Not identified in RFA

**Other Sources** CERFA EBS (ERM-West 1994)

**Recommendation in RFA** NA

**Tank-Related Information**

**Status of Tank** Removed

**Status of Associated Pipes** Removed

**Data Analysis**

Propane is a flammable hydrocarbon gas at standard temperatures and atmospheric pressure. Any releases from this tank would have immediately volatilized. There is no reason to suspect subsurface contamination from this tank. NFA is recommended for AST 338-D1.

**2002 Site Visit**

AST removed prior to 2002 site visit.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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**SWMU Identifier** AST 608 **Refer to Figure #** Figure 3-10 & 3-11  
**Navy Recommendation/Closure Status** **NFA Recommended**

Location Description

**Disposal Parcel** EDC 11 **CERCLA Site** 16  
**EBS Subparcel** 168 **TPH CAA** TPH CAA-09B  
**Associated Building** 608 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Automotive Hobby Shop  
**Additional Information** Southeastern corner of Building 608

Operational Information for SWMU

**Type of Unit** Aboveground Storage Tank(s)  
**Capacity (gallons)** 1,000  
**Period of Operation** Unknown  
**Material Managed at SWMU** Waste Oil

Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA **Other Sources** EBS (IT 2001)  
**Recommendation in RFA** NA

Tank-Related Information

**Status of Tank** Present; good condition; concrete AST on pad with 6-inch berm  
**Status of Associated Pipes** Present; appears intact

Data Analysis

Waste oil was stored in AST 608, which was mounted on a concrete pad within a secondary containment (6-inch concrete berm). The AST collected waste oil from Building 608; the AST appears to be in use by the tenants. The staining adjacent to AST 608 was investigated as Target Area 2 for Parcel 168 in the EBS; surface and subsurface samples were collected from sampling location 168-002-004. Soil data showed detected concentrations of TPHmo from 81 to 180 mg/kg, which are less than residential PRC (Navy 2001). TPHg, TPHd, and VOCs were not detected. The EBS stated that impacts to Target Area 2 from waste oil storage in AST 608 are minimal. NFA is recommended for AST 608.

2002 Site Visit

No site visit was conducted in 2002. The July 2004 site visit observed that the AST is empty with a dark-colored residue at the bottom. AST requires cleaning before it is closed in place.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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**SWMU Identifier** OWS 608A **Refer to Figure #** Figure 3-10 & 3-11

**Navy Recommendation/Closure Status** **NFA Recommended**

#### Location Description

**Disposal Parcel** EDC 11 **CERCLA Site** 16  
**EBS Subparcel** 168 **TPH CAA** TPH CAA-09B  
**Associated Building** 608 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Automotive Hobby Shop  
**Additional Information** West of Building 608 (1 of 2)

#### Operational Information for SWMU

**Type of Unit** Oil-Water Separator  
**Capacity (gallons)** Unknown  
**Period of Operation** Unknown  
**Material Managed at SWMU** Wastewater from cleaning automobiles with commercial soaps or drive train degreasers

#### Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA **Other Sources** Final FSP for Data Gap Sampling (Tetra Tech 2001)  
**Recommendation in RFA** NA

#### Tank-Related Information

**Status of Tank** NA  
**Status of Associated Pipes** NA

#### Data Analysis

OWS 608A is located within CAA 9B and CERCLA Site 16. OWS-608A receives drainage from Building 608, which includes an Auto Hobby Shop, and from WD 608. Two soil sampling locations are adjacent to OWS-608A (608MJ-MW3 and 608-6-MOJ); data show that TPHd was detected at 8.9 mg/kg and TPHmo was detected at 31 mg/kg; these values are less than residential PRCs (Navy 2001). VOCs were not detected in soil. Groundwater was collected from the same two sampling locations. At sampling location 608-6-MOJ, VOCs were not detected; TPH compounds were detected and the total TPH is less than PRC (Navy 2001). At sampling location 608MJ-MW3, TPH compounds were detected and the total TPH is less than PRC; VOCs were detected in groundwater at concentrations that exceed MCL for six chlorinated compounds. This area is at the southern end of the plumes for chlorinated solvents in Site 16 as shown in the remedial investigation report. The remedial investigation for Site 16 does not identify OWS 608A as a likely source of contamination. The chlorinated solvent plumes in Site 16 will be evaluated in a feasibility study. NFA is recommended for OWS 608A.

#### 2002 Site Visit

OWS was observed during the 2002 site visit; it was inactive.

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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**SWMU Identifier OWS 608B**

**Refer to Figure # Figure 3-10 & 3-11**

**Navy Recommendation/Closure Status**

**NFA Recommended**

**Location Description**

**Disposal Parcel** EDC 11

**CERCLA Site** 16

**EBS Subparcel** 168

**TPH CAA** TPH CAA-09B

**Associated Building** 608 **Building Status** Present **Leasing Status** Leased by ARRA

**Building Name** Automotive Hobby Shop

**Additional Information** East of Building 608 (2 of 2)

**Operational Information for SWMU**

**Type of Unit** Oil-Water Separator

**Capacity (gallons)** Unknown

**Period of Operation** Unknown

**Material Managed at SWMU** Wastewater from cleaning automobiles with commercial soaps or drive train degreasers

**Source of Initial SWMU Identification**

**SWMU # in RFA** Not identified in RFA  
**Recommendation in RFA** NA

**Other Sources** Final FSP for Data Gap Sampling (Tetra Tech 2001)

**Tank-Related Information**

**Status of Tank** NA

**Status of Associated Pipes** NA

**Data Analysis**

OWS 608B is located within CAA 9B and CERCLA Site 16. Uses of the area from 1979 to present are automobile maintenance and washdown using commercial soaps and drive-train degreasers. OWS 608B receives drainage from Building 608, which includes an Auto Hobby Shop, and from WD 608. One soil sampling location is adjacent to OWS 608B (CA09-05); data show that TPH compounds and VOCs were not detected in soil. Groundwater was collected from the same sampling location; TPH compounds and VOCs were not detected in groundwater. The remedial investigation for Site 16 does not identify OWS 608B as a likely source of contamination. NFA is recommended for OWS 608B.

**2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive.

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order  
Page 14 of 16

**SWMU Identifier** UST(R)-18/NAS GAP 17      **Refer to Figure #** Figure 3-10 & 3-11  
**Navy Recommendation/Closure Status**      **Further Action Recommended**

**Location Description**

**Disposal Parcel** EDC 11      **CERCLA Site** 16  
**EBS Subparcel** 168      **TPH CAA** TPH CAA-09B  
**Associated Building** 608 **Building Status** Present      **Leasing Status** Leased by ARRA  
**Building Name** Automotive Hobby Shop  
**Additional Information** UST 608-1

**Operational Information for SWMU**

**Type of Unit** Underground Storage Tank(s)  
**Capacity (gallons)** 600  
**Period of Operation** Unknown  
**Material Managed at SWMU** Waste Oil

**Source of Initial SWMU Identification**

**SWMU # in RFA** GII-13      **Other Sources** NA  
**Recommendation in RFA** RFI Not Required

**Tank-Related Information**

**Status of Tank** Removed (Overexcavated)  
**Status of Associated Pipes** Underground piping outside Building 608 was removed with the UST; piping was capped at the building outer wall.

**Data Analysis**

UST(R)-18 and NAS GAP 17 refer to UST 608-1. Former UST 608-1 is located within CAA 9B and CERCLA Site 16. This UST received waste from floor drains inside the Building 608 Auto Hobby Shop. The UST was removed in 1995 and overexcavated at a later date to remove TPH-contaminated soil. Confirmation samples following overexcavation showed that contaminated soil had not been fully removed on the south side due to proximity of UST to Building 608. Groundwater samples collected near UST 608-1 showed high levels of TPH in groundwater that indicate floating product (608-8-MOJ). In addition, groundwater samples showed concentrations of chlorinated compounds that exceed MCLs; therefore, this is a commingled plume with both TPH and chlorinated solvents. UST 608-1 [also known as UST(R)-18 and NAS GAP 17] was identified as a likely source of contaminants in groundwater in the remedial investigation report for Site 16. Further action is recommended for UST(R)-18/NAS GAP 17; the response action for this SWMU will be conducted under the CERCLA program. The Navy will evaluate the commingled groundwater contamination in a feasibility study.

**2002 Site Visit**

NA

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

Page 15 of 16

**SWMU Identifier** WD 608

**Refer to Figure #** Figure 3-10 & 3-11

**Navy Recommendation/Closure Status**

**NFA Recommended**

Location Description

**Disposal Parcel** EDC 11

**CERCLA Site** 16

**EBS Subparcel** 168

**TPH CAA** TPH CAA-09B

**Associated Building** 608 **Building Status** Present **Leasing Status** Leased by ARRA

**Building Name** Automotive Hobby Shop

**Additional Information** Vehicle washdown area south of Building 608; with OWS

Operational Information for SWMU

**Type of Unit** Washdown Area

**Capacity (gallons)** NA

**Period of Operation** Unknown

**Material Managed at SWMU** Wastewater from cleaning automobiles with commercial soaps or drive train degreasers

Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA

**Other Sources** Final FSP for Data Gap Sampling (Tetra Tech 2001)

**Recommendation in RFA** NA

Tank-Related Information

**Status of Tank** NA

**Status of Associated Pipes** NA

Data Analysis

WD 608 is located south of Building 608 within CERCLA Site 16 and CAA 9B; runoff from WD 608 was channeled into OWSs 608A and 608B. WD 608 encompassed the open space south of Building 608 and north of the sheds. Since 1979, the area was used for automobile washdown activities, which involved use of commercial soaps and/or drive train degreasers. Two soil sampling locations are located in the center and western edge of WD 608. Data from soil sampling location 168-002-004 showed detected concentrations of TPH-mo from 81 to 180 mg/kg, which are less than residential PRC (Navy 2001). TPHg, TPHd, and VOCs were not detected. TPH compounds were not detected in the two groundwater samples that analyzed for TPH, except for one detection of TPHd at 130 ug/L (168-004-006), which is less than PRC (Navy 2001). VOCs were detected at concentrations that exceed the MCL for cis-1,2-dichloroethene (DCE) and vinyl chloride at locations S16-DGS-DP10 and S16-DGS-DP14. This area is at the southern end of the plumes for 1,2-DCE and vinyl chloride in Site 16 as shown in the remedial investigation report. The remedial investigation for Site 16 does not identify WD 608 as a likely source of contamination. The chlorinated solvent plumes in Site 16 will be evaluated in a feasibility study. NFA is recommended for WD 608.

2002 Site Visit

NA

## Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 6, 7, 8, and 16 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 1; Listed in CERCLA Site Order

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### Notes:

% = Percentage  
ug/kg = Micrograms per kilogram  
ug/L = Micrograms per liter  
AOC = Area of concern  
AST = Aboveground storage tank  
bgs = Below ground surface  
BTEX = Benzene, toluene, ethylbenzene, and xylenes  
CAA = Corrective action area  
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act  
CERFA = Community Environmental Response Facilitation Act  
CRS = Coolant Recovery System  
DTSC = California Environmental Protection Agency Department of Toxic Substances Control  
EBS = Environmental baseline survey  
EDC = Economic development conveyance  
EPA = U.S. Environmental Protection Agency  
ERM-West = Environmental Resource Management - West  
FED = Federal agency-to-agency transfer  
FS = Feasibility study  
FSP = Field sampling plan  
ft = Foot  
Gal = gallon  
GAP = Generator accumulation point  
GW = Groundwater  
ID = Identification  
IT = International Technology Corporation  
IWTP = Industrial wastewater treatment plant  
JP = Jet propellant  
M = Miscellaneous area identified in the RFA  
MCL = Maximum contaminant level  
MEK = Methyl ethyl ketone  
mg/kg = Milligrams per kilogram  
mg/L = milligrams per liter  
mL = milliliter  
NA = Not applicable  
NADEP = Naval Aviation Depot Alameda  
NARF = Naval Air Rework Facility Alameda  
NAS = Naval Air Station  
Navy = U.S. Department of the Navy  
ND = Not detected  
NE = Northeast  
NFA = No further action  
NW = Northwest  
OU = Operable Unit  
OWS = Oil-water separator  
PAH = Polynuclear aromatic hydrocarbons  
PCB = Polychlorinated biphenyl  
PMB = Plastic material blasting  
PPM = Parts per million  
PRC = Preliminary remediation criteria  
PRG = Preliminary remediation goal  
PWC = Navy Public Works Center  
(R) = RCRA-related UST  
RCRA = Resource Conservation and Recovery Act  
RFA = RCRA facility assessment  
RFI = RCRA facility investigation  
RI = Remedial investigation  
RI/FS = Remedial investigation and feasibility study  
RWQCB = Regional Water Quality Control Board  
SE = Southeast  
SEBS = Supplemental environmental baseline survey  
SSPORTS = Supervisor of Shipbuilding, Conversion, and Repair, Portsmouth, Virginia  
SVOC = Semivolatile organic compound  
SW = Southwest  
SWARF = Refers to machine and grinding coolant  
SWMU = Solid waste management unit  
TCA = Trichloroethane  
Tetra Tech = Tetra Tech EM Inc.  
TPH = Total petroleum hydrocarbons  
TPHd = Total petroleum hydrocarbons as diesel  
TPHg = Total petroleum hydrocarbons as gasoline  
TPHmo = Total petroleum hydrocarbons as motor oil  
USFWS = U.S. Fish and Wildlife Service  
UST = Underground storage tank  
VOC = Volatile organic compounds  
WD = Washdown area

N00236.002196  
ALAMEDA POINT  
SSIC NO. 5090.3

APPENDIX B – SOLID WASTE MANAGEMENT  
UNIT EVALUATION REPORT FOR  
OPERABLE UNIT 2A

COMPILATION OF SOLID WASTE MANAGEMENT  
UNIT EVALUATION REPORTS PREVIOUSLY  
SUBMITTED WITH CERCLA DOCUMENTS  
HAZARDOUS WASTE PERMIT  
EPA ID NUMBER CA 2170023236

DATED 23 DECEMBER 2005

A-E CERCLA/RCRA/UST Contract Number N68711-03-D-5104  
Contract Task Order 0012

Draft Final

## APPENDIX G

# SOLID WASTE MANAGEMENT UNIT EVALUATION REPORT FOR OPERABLE UNIT 2A (SITES 9, 13, 19, 22, AND 23) HAZARDOUS WASTE PERMIT EPA ID NUMBER CA 2170023236, NAVAL AIR STATION ALAMEDA Alameda Point, Alameda, California

**February 18, 2005**

Prepared for

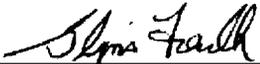


DEPARTMENT OF THE NAVY  
Lou Ocampo, Remedial Project Manager  
Base Realignment and Closure  
Program Management Office West  
San Diego, California

Prepared by

*SulTech*

A JOINT VENTURE OF SULLIVAN CONSULTING GROUP  
AND TETRA TECH EM INC.  
1230 Columbia Street, Suite 1000  
San Diego, California 92101  
(619) 525-7188

  
\_\_\_\_\_  
Glynis Faulk, Project Manager

TC.B012.12090

July 5, 2005

Lou Ocampo  
Remedial Project Manager  
Naval Facilities Engineering Command Southwest Division  
1230 Columbia Street, Suite 1100  
San Diego, California 92101-8517

**Subject: Final Attachment G - Solid Waste Management Unit Summary Report For Operable Unit (OU) 2A  
Alameda Point, Alameda, California**

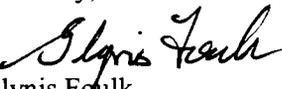
Dear Mr. Ocampo:

The intent of this letter is to inform you that the Solid Waste Management Unit (SWMU) Summary Report for Operable Unit 2A has been finalized. No changes were required by the agencies based on the draft final version of the SWMU Summary Report.

The Draft final version of Attachment G - SWMU Summary Report for Operable Unit 2A was an attachment to the draft final remedial investigation (RI) report, which was submitted to the agencies February 23, 2005. The agencies had minimal comments on the Draft Final RI and no comments on Attachment G. The Final RI, with no changes to Attachment I, was submitted to the agencies on April 1, 2005.

If you have any questions, please call me at (916) 853-4561.

Sincerely,

  
Glynis Foulk  
Project Manager

Enclosure (1)

July 5, 2005

Lou Ocampo  
Remedial Project Manager  
Naval Facilities Engineering Command Southwest Division  
1230 Columbia Street, Suite 1100  
San Diego, California 92101-8517

**Subject: Draft Final  
Attachment G - Solid Waste Management Unit Evaluation Report For  
Operable Unit 2A  
Alameda Point, Alameda, California**

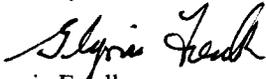
Dear Mr. Ocampo:

Enclosed is your copy of the Draft Final of Attachment G - Solid Waste Management Unit Evaluation Report for Operable Unit (OU) 2A dated February 18, 2005. This SWMU evaluation report is an attachment to the remedial investigation (RI) report for OU 2A being produced by Tetra Tech. A copy of the Draft Final Attachment was included in the "over-the-shoulder" copy of the RI Report for OU 2A sent to Claudia Domingo.

Please insert the hard copy of Attachment G into your binder for SWMU Evaluation Reports.

If you have any questions, please call me at (916) 853-4561.

Sincerely,

  
Glynis Foulk  
Project Manager

Enclosure (1)

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## **ACRONYMS AND ABBREVIATIONS**

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AOC	Area of concern
AST	Aboveground storage tank
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DTSC	California Environmental Protection Agency Department of Toxic Substances Control
EBS	Environmental baseline survey
EPA	U.S. Environmental Protection Agency
GAP	Generator accumulation point
ID	Identification
NAS	Naval Air Station
Navy	U.S. Department of the Navy
NFA	No further action
OU	Operable unit
OWS	Oil-water separator
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
SulTech	A joint venture of Sullivan Consulting Group and Tetra Tech EM Inc.
SWMU	Solid waste management unit
Tetra Tech	Tetra Tech EM Inc.
TPH	Total petroleum hydrocarbon
UST	Underground storage tank

## **EXECUTIVE SUMMARY**

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The U.S. Department of the Navy (Navy), Base Realignment and Closure Program Management Office West, requested that SulTech, a joint venture of Sullivan Consulting Group and Tetra Tech EM Inc., prepare this solid waste management unit (SWMU) evaluation report to summarize the results of all past assessments and investigations of the SWMUs within the operable unit (OU) 2A (Sites 9, 13, 19, 22, and 23) at Alameda Point (formerly Naval Air Station [NAS] Alameda), in Alameda County, California. This report was prepared in accordance with Contract Task Order 0012, issued under the Architectural-Engineering Services to Provide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA)/Underground Storage Tank (UST) Studies, Contract Number N68711-03-D-5104.

There are 24 SWMUs within CERCLA Sites 9, 13, 19, 22, and 23 in OU-2A; all are inactive and are being addressed under the Navy's CERCLA program. This evaluation report includes a recommendation of either no further action (NFA) or further action for each of these SWMUs, and it recommends that 11 of these SWMUs be integrated with the Navy's Total Petroleum Hydrocarbon (TPH) program due to the absence of CERCLA contaminants at these SWMUs. All recommendations in this report are based on the analysis and analytical results presented in Section G.3.0. Any corrective action that is required will be conducted under the CERCLA program or under the TPH program. The Navy is requesting concurrence on the recommendations for each of these SWMUs.

The SWMUs addressed in this report were evaluated using the requirements stipulated in the final hazardous waste facility permit for former NAS Alameda (U.S. Environmental Protection Agency [EPA] Identification Number CA 2170023236) to support further corrective action decisions at Alameda Point. The results of this evaluation showed that 8 of the 24 SWMUs within OU-2A are recommended for NFA. Four other SWMUs are recommended for further action under the CERCLA program, 11 are recommended for integration with the TPH program, and one already was closed with concurrence from the California Environmental Protection Agency Department of Toxic Substances Control. The Navy is requesting concurrence on these recommendations.

## G.1.0 INTRODUCTION

The U.S. Department of the Navy (Navy), Base Realignment and Closure Program Management Office West, requested that SulTech, a joint venture of Sullivan Consulting Group and Tetra Tech EM Inc. (Tetra Tech), prepare this solid waste management unit (SWMU) evaluation report to summarize the results of all past assessments and investigations of the SWMUs within operable unit (OU) 2A (Sites 9, 13, 19, 22, and 23) at Alameda Point (formerly Naval Air Station [NAS] Alameda), in Alameda County, California. This report was prepared in accordance with Contract Task Order 0012, issued under the Architectural-Engineering Services to Provide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA)/Underground Storage Tank (UST) Studies, Contract Number N68711-03-D-5104.

All of the SWMUs within OU-2A are inactive and being addressed under the Navy's CERCLA program. For each of these SWMUs, this evaluation report includes a recommendation of either continued management under the CERCLA program or integration with the TPH program; also, each SWMU is recommended for either no further action (NFA) or further action. All recommendations are based on the analytical results presented in Section G.3.0. The Navy is requesting concurrence on the recommendations for each SWMU.

This evaluation report describes procedures, methods, and results of facility assessments and investigations of the SWMUs in OU-2A (Sites 9, 13, 19, 22, and 23) and describes the general approach to investigating and evaluating potential remedies pertaining to SWMU corrective measures and closure at Alameda Point. This evaluation report is provided as an appendix to the remedial investigation (RI) report for OU-2A (Sites 9, 13, 19, 22, and 23).

The SWMUs addressed in this report were evaluated using the requirements stipulated in the final hazardous waste facility permit for former NAS Alameda (U.S. Environmental Protection Agency [EPA] Identification [ID] Number CA 2170023236) to support further corrective action decisions at Alameda Point (California Environmental Protection Agency Department of Toxic Substances Control [DTSC] 1993).

The remainder of this report is divided into four sections. Section G.2.0 provides background information and the Navy's approaches for evaluating the SWMUs at Alameda Point. Section G.3.0 presents an evaluation for the SWMUs within OU-2A (Sites 9, 13, 19, 22, and 23), and Section G.4.0 summarizes recommendations for those SWMUs. Finally, Section G.5.0 provides the references used to prepare this evaluation report.

## **G.2.0 BACKGROUND AND APPROACHES FOR EVALUATIONS OF SOLID WASTE MANAGEMENT UNITS**

SWMU means any unit at a hazardous waste facility from which hazardous constituents might migrate, irrespective of whether the unit was intended for the management of wastes (Title 22 *California Code of Regulations* Section 66260.10). At Alameda Point, SWMUs include areas of concern (AOC), generator accumulation points (GAP), CERCLA sites, oil-water separators (OWS), aboveground storage tanks (AST), USTs, washdown areas, and miscellaneous sites.

The following sections describe the history of SWMU assessments and investigations at Alameda Point (see Figure G2-1), and the Navy's approaches for ensuring that the results of those assessments and investigations are evaluated in a manner consistent with RCRA requirements.

### **G.2.1 HISTORY OF SOLID WASTE MANAGEMENT UNIT ASSESSMENTS AND INVESTIGATIONS**

Most of the SWMUs at Alameda Point were first identified in 1991 in an initial RCRA facility assessment (RFA) (DTSC 1992), which was required to obtain a permit for the management of hazardous wastes in a number of specific management units no longer in operation at Alameda Point. According to Sections V.F through V.J of the final hazardous waste facility permit for Alameda Point (EPA ID CA 2170023236), information to support corrective action decisions regarding each SWMU was to be collected and submitted to DTSC. The permit described a typical RCRA corrective action process, which involves an analysis of RFA data to determine which SWMUs require further evaluation in a RCRA facility investigation (RFI), and requires the Navy to identify additional SWMUs, as appropriate, and include them in the corrective action process.

The initial RFA identified 151 SWMUs and concluded that a number of the SWMUs would need further investigation under an RFI, which is usually conducted under a series of RCRA permit modifications. After the final RCRA permit was issued, however, the Navy and the regulatory agencies determined that the most efficient and effective approach for assessing any additional SWMUs and conducting RFIs would be to take advantage of functionally equivalent investigations that were and continue to be conducted under a number of other Navy environmental programs. Types of investigations include environmental baseline survey (EBS) investigations under the Base Realignment and Closure property transfer program; investigations of possible releases of total petroleum hydrocarbons (TPH) from sources such as pipelines, USTs, and ASTs under the TPH program; and site investigations and RIs under the CERCLA program. Subsequent to the RFA and as a result of the investigations described previously, 215 additional SWMUs were identified and assessed at Alameda Point. These additional SWMUs were included in the final supplemental EBS (Tetra Tech 2003).

The Navy received a letter dated November 1999 from DTSC with comments on the SWMUs following their review of the draft EBS; the final EBS was submitted in 2001 (International Technology Corporation 2001). For some of the SWMUs, DTSC concurred with the recommendation in the EBS for NFA. For most of the SWMUs located within a CERCLA site, DTSC withheld concurrence with NFA, pending resolution of each site's RI report (DTSC 1999).

Recognizing that the investigation and management of SWMUs had been divided among a number of Navy programs, the Navy developed a SWMU evaluation approach coupled with a SWMU integration approach to ensure that all the SWMUs at Alameda Point would be managed under the appropriate Navy program and would receive appropriate response actions. These two SWMU approaches are described in Sections G.2.2 and G.2.3 of this report.

### **G.2.2 SOLID WASTE MANAGEMENT UNIT EVALUATION APPROACH**

The SWMU evaluation approach is a three-step process that begins by listing the SWMUs identified and investigated under each Navy program. In the next step, a SWMU profile is compiled for each SWMU; these profiles consist of descriptive information on each SWMU, the name of the Navy program that provided the functional equivalent of an RFA (and in some cases, an RFI) for the SWMU, and the results of all investigations conducted on that SWMU, including figures and tables, as needed. In the final step, each SWMU profile is analyzed to determine whether the functional equivalents of the elements of a RCRA corrective action process have been conducted and whether any additional actions are needed.

### **G.2.3 SOLID WASTE MANAGEMENT UNIT INTEGRATION APPROACH**

The purpose of the SWMU integration approach is to facilitate appropriate actions for all SWMUs under the appropriate Navy and regulatory programs. The approach allows final decisions to be made for basewide integration concerning each SWMU, such that petroleum-related SWMUs are addressed under the TPH program and most other SWMUs are addressed under the CERCLA program. Under the integration approach, any RCRA corrective action requirements for the SWMUs will be complied with under CERCLA remedial actions or under TPH corrective actions. Figure G2-2 shows the SWMU integration approach.

Based on an evaluation of each of the SWMU profiles according to the steps in the SWMU evaluation process (see Section G.2.2), the Navy is recommending either NFA or further action for each SWMU. If further action is recommended, future RCRA corrective action requirements for the SWMUs will be complied with under the appropriate Navy program. On an ongoing basis, the SWMUs will be evaluated to determine whether a SWMU has been or is being investigated under the appropriate Navy program. If a SWMU is found to be in the wrong program, it will be moved to the appropriate program.

Before developing the integration approach, the Navy and the regulators had decided that the “regulated” waste management units originally included in the interim status document and final permit for Alameda Point (EPA ID CA 2170023236) would continue to be investigated and closed under the Navy’s RCRA program, with oversight from DTSC. These regulated units are, therefore, not included in the integration approach and are not described in this report.

As a result of the SWMU integration approach, the SWMUs located within OU-2A (Sites 9, 13, 19, 22, and 23) and integrated with the CERCLA program are evaluated in this appendix to the RI report. Table G2-1 lists the SWMUs that are addressed in this report, including OWS 588, associated with Industrial Waste Treatment Plant 410 which received closure from the DTSC on November 9, 1998. In addition, several SWMUs located within OU-2A (Sites 9, 13, 19, 22, and 23) are recommended for integration with the TPH program. The SWMUs recommended for integration with the TPH program are listed in Table G2-2 and are evaluated in Table G3-1.

The SWMU integration approach was submitted to DTSC in May 2004 for review; DTSC has not yet made a decision to accept the integration approach.

### **G.3.0 SOLID WASTE MANAGEMENT UNIT EVALUATION**

Figure G3-1 shows the location of all of the SWMUs within OU-2A (Sites 9, 13, 19, 22, and 23). Table G3-1 presents SWMU profiles for each of the SWMUs in OU-2A integrated with the CERCLA program. Each profile provides descriptive information on a SWMU, identifies the Navy program under which the SWMU was investigated, and presents the investigation results. Each profile also recommends either NFA or further action. Many of the profiles reference a figure for CERCLA Sites 9, 13, 19, 22, or 23 (see Figures G3-2 through G3-5) that provides analytical data from soil or groundwater samples collected near the SWMU to examine potential sources of contamination and migration pathways. The analytical results are compared to appropriate screening levels for each chemical, which include TPH preliminary remediation criteria listed in the closure strategy for petroleum-contaminated sites (Navy 2001), residential preliminary remediation goals for soil (EPA 1996, 2002, 2004), background concentrations for metals in soil (Tetra Tech 2001b), or maximum contaminant levels for groundwater (California Department of Health Services 2003). A comprehensive set of data tables with soil and groundwater analytical results is provided in Appendix E of the RI report for OU-2A (Sites 9, 13, 19, 22, and 23).

### **G.4.0 RECOMMENDATIONS**

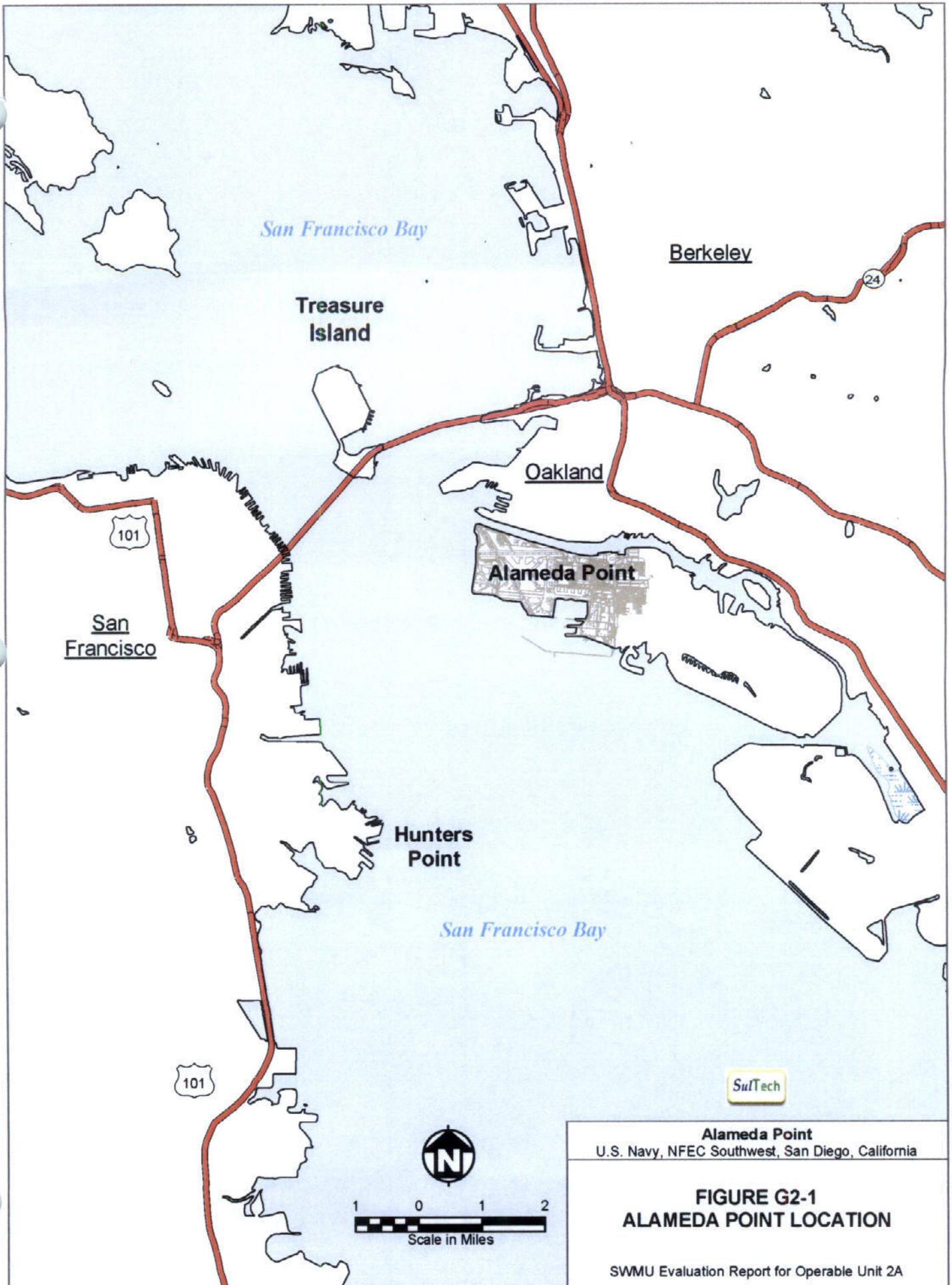
Based on the information presented in Section G.3.0, 13 SWMUs are recommended for integration with the CERCLA program, including 8 SWMUs recommended for NFA, 1 SWMU (OWS 588) closed by DTSC on November 9, 1998, and 4 SWMUs recommended for further action under CERCLA. Eleven SWMUs are recommended for integration with the TPH program. The Navy is requesting concurrence on these recommendations.

## G.5.0 REFERENCES

- California Department of Health Services. 2003. "Maximum Contaminant Levels in Drinking Water" (extracted from Title 22 of the California Code of Regulations Sections 64431 – 64672.3). June 12.
- California Environmental Protection Agency Department of Toxic Substances Control (DTSC). 1992. "RCRA Facility Assessment, Naval Air Station, Alameda, California." April.
- DTSC. 1993. "California Environmental Protection Agency Department of Toxic Substances Control Hazardous Waste RCRA Part B Permit Issued to the United States of America and U.S. Department of Navy for NAS Alameda." June.
- DTSC. 1999. Letter from DTSC to Commanding Officer, Engineering Field Activity, West, Naval Facilities Command concerning Review of RCRA Status for Environmental Baseline Survey at Alameda Point, Alameda, California. November 4.
- ERM-West, Inc. 1994. "Final Environmental Baseline Survey (EBS)/Community Environmental Response Facilitation Act Report for NAS/NADEP Alameda." October.
- International Technology Corporation. 2001. "EBS Data Evaluation Summaries - Final, Alameda Point, Alameda, California, Volumes 0 through XIV." January.
- Tetra Tech EM Inc (Tetra Tech). 2001a. "Evaluation of Total Petroleum Hydrocarbons at EBS Parcels at Alameda Point. October.
- Tetra Tech. 2001b. "Summary of Background Concentrations in Soil and Groundwater, Alameda Point, Alameda, California." November.
- Tetra Tech. 2003. "Final Supplemental Environmental Baseline Survey, Alameda Point, Alameda, California." March.
- Tetra Tech. 2005. "Draft Final Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Operable Unit 2A (OU-2A), Alameda Point, Alameda, California." February.
- U.S. Department of Navy. 2001. "Preliminary Remediation Criteria and Closure Strategy for Petroleum-Contaminated Sites at Alameda Point, Alameda, California." May 16.
- U.S. Environmental Protection Agency (EPA). 1996. "Region 9 Preliminary Remediation Goals."
- EPA. 2002. "Region 9 Preliminary Remediation Goals." October.
- EPA. 2004. "Region 9 Preliminary Remediation Goals." October.

**FIGURES**

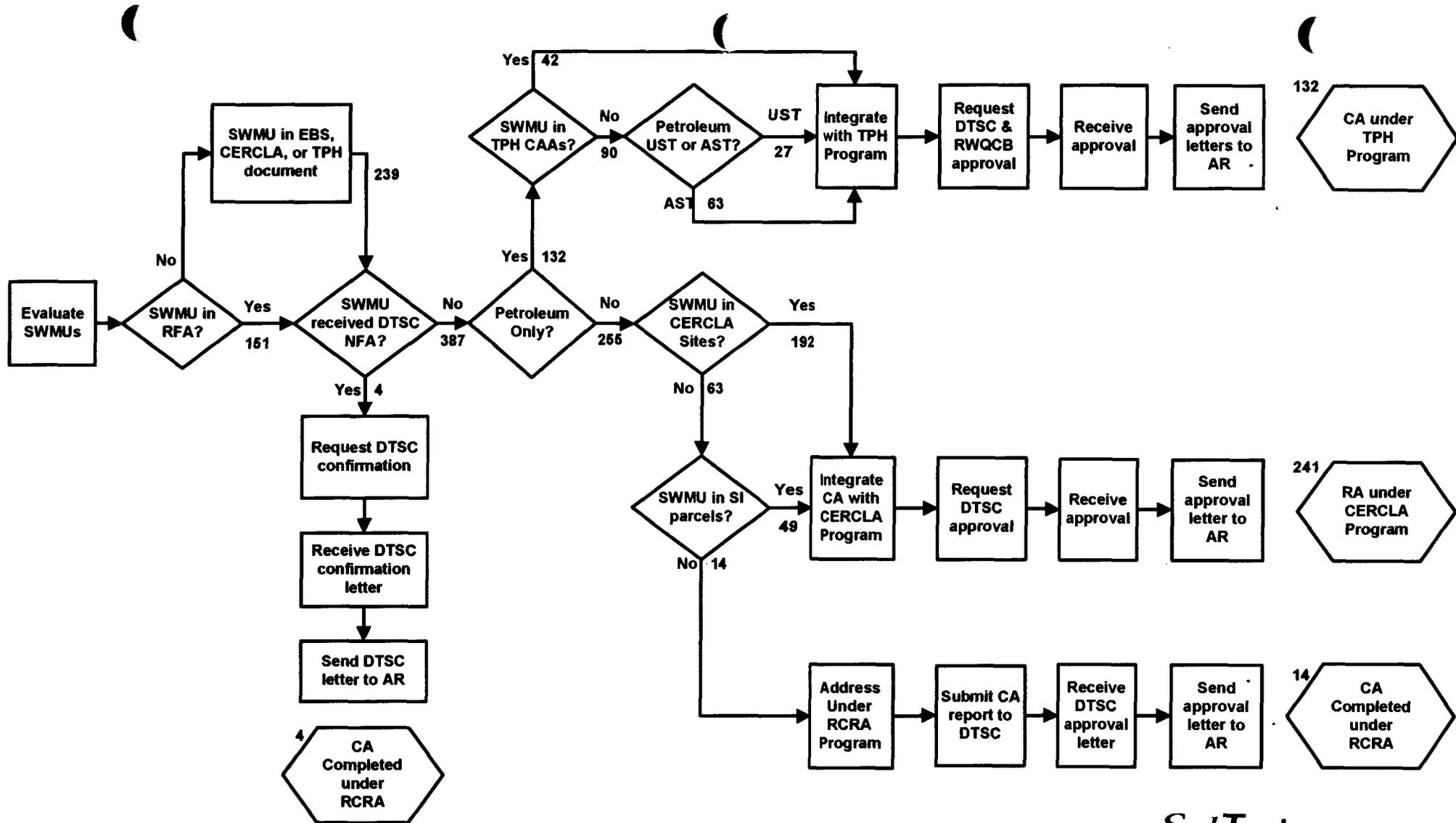
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 U.S. Navy, NFEC Southwest, San Diego, California

**FIGURE G2-1**  
**ALAMEDA POINT LOCATION**

SWMU Evaluation Report for Operable Unit 2A



**NOTES**

1. SWMUs include CERCLA sites, USTs, ASTs, oil-water separators, washdown areas and underground fuel pipelines but exclude RCRA regulated units
2. Numbers indicate number of SWMUs

**ACRONYMS**

AR	Administrative Record	RA	Response Action
AST	Aboveground Storage Tank	RCRA	Resource Conservation and Recovery Act
CA	Corrective Action	RFA	RCRA Facility Assessment
CAA	Corrective Action Area	RWQCB	Regional Water Quality Control Board
CERCLA	Comp. Env. Resp., Compensation, and Liability Act	SI	Site Investigation
DTSC	CA EPA Department of Toxic Substances Control	SWMU	Solid Waste Management Unit
EBS	Environmental Baseline Survey	TPH	Total Petroleum Hydrocarbon
NFA	No Further Action	UST	Underground Storage Tank

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**Figure G2-2**  
**SOLID WASTE MANAGEMENT UNIT**  
**INTEGRATION APPROACH**  
**RCRA Hazardous Waste Facility Permit**  
**EPA ID CA 2170023236**  
**NAS Alameda, Alameda, CA**

SWMU Evaluation Report for Operable Unit 2A  
 (Sites 9, 13, 19, 22, and 23)



- CERCLA SITE BOUNDARY
- CERCLA SITE IN OPERABLE UNIT 2A
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- GENERATOR ACCUMULATION POINT (GAP)
- OIL-WATER SEPARATOR (OWS)
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- UNDERGROUND STORAGE TANK (UST), PRESENT
- SWMUs INTEGRATED WITH THE TPH PROGRAM
- SWMUs CLOSED BY DTSC
- LAND COVER
- BUILDING**
- Present
- Removed

Notes:

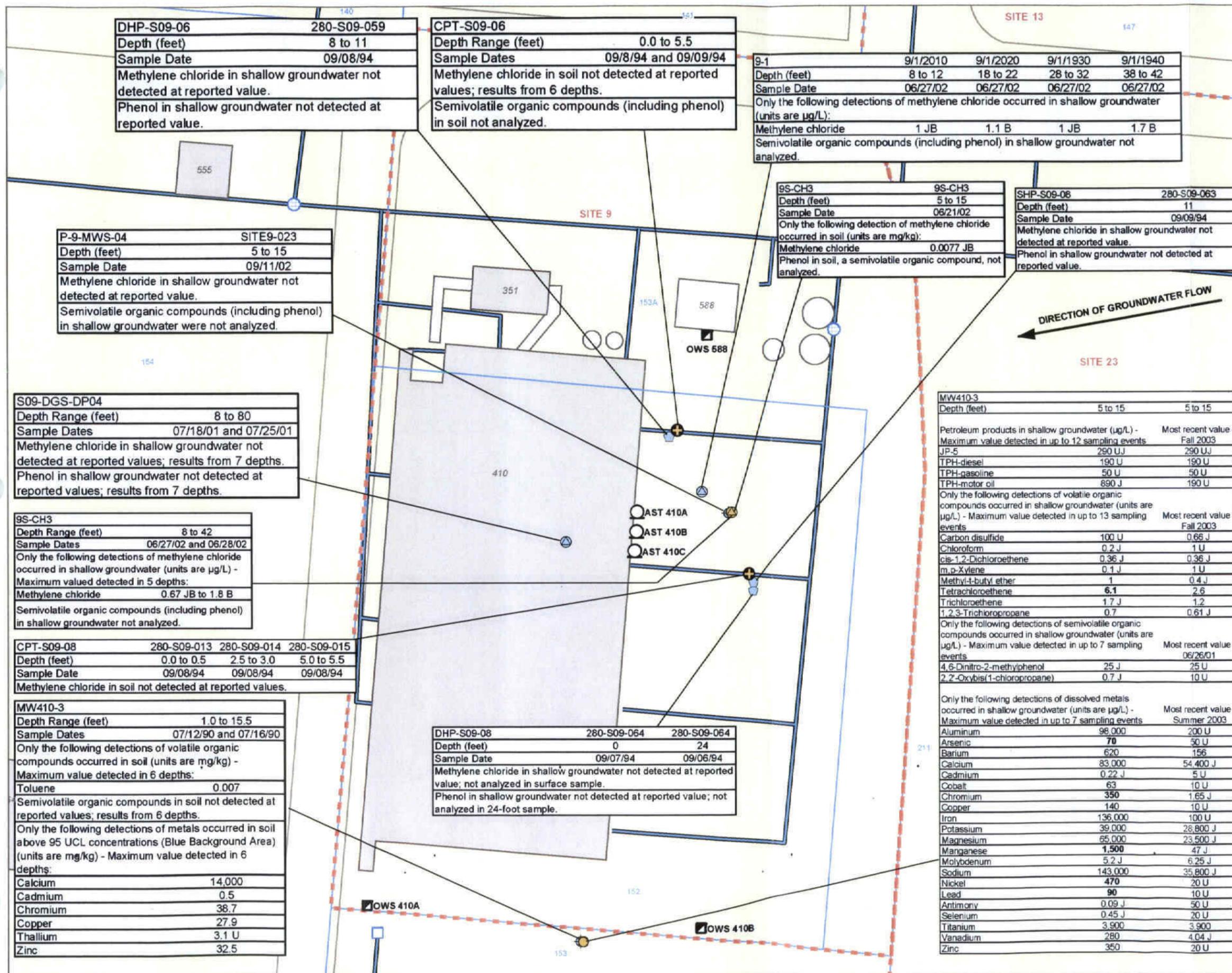
AOC = Area of concern  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 DTSC = Department of Toxic Substances Control  
 NADEP = Naval Aviation Depot  
 RV = Recreational Vehicle  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbon



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**FIGURE G3-1**  
**SWMUs Located Within Operable Unit 2A**  
**(Sites 9, 13, 19, 22 and 23)**

SWMU Evaluation Report for Operable Unit 2A



**GROUNDWATER SAMPLING LOCATION**

- Direct-Push
- Hydropunch
- Monitoring Well

**SOIL SAMPLING LOCATION**

- Direct-Push
- Soil Boring
- Soil Punch
- MANHOLE
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- STORM SEWER LINE
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER
- BUILDING
- Present
- Removed

**Notes:**

- B = Compound detected in an associated blank as well as the sample
- CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample
- MCL = Maximum contaminant level
- mg/kg = Milligrams per kilogram
- SWMU = Solid Waste Management Unit
- TPH = Total petroleum hydrocarbon
- U = Analyzed for, but not detected (at reported value)
- UCL = Upper confidence limit
- µg/L = Micrograms per liter

Bold values indicate "Exceeds primary or secondary MCL"  
 Only methylene chloride and phenol results are presented for ASTs 410A, 410B, and 410C.

25 0 25 50 Feet

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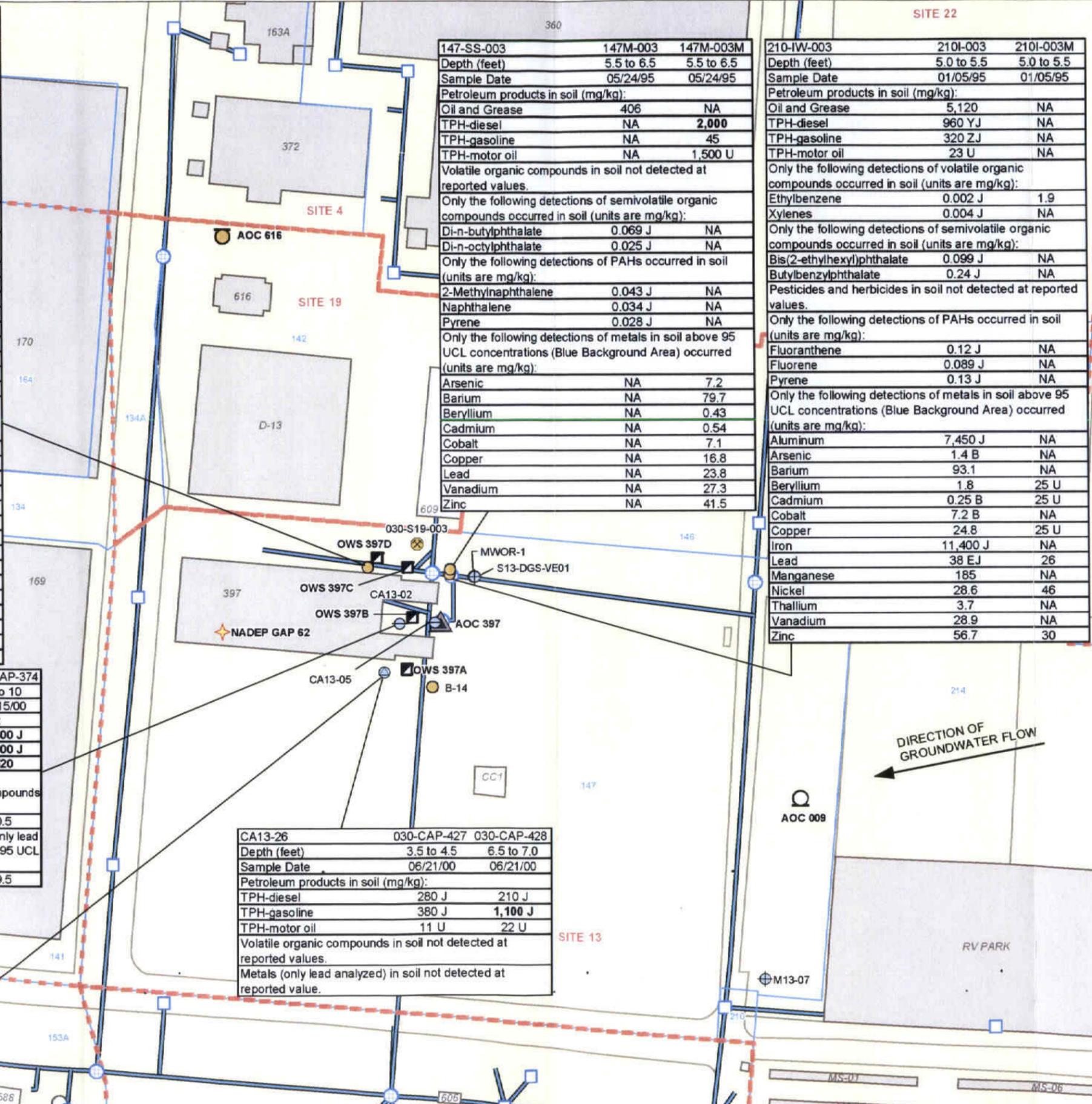
**FIGURE G3-2**  
**CERCLA Site 9**  
**SWMU Soil and Groundwater Sample Results**

SWMU Evaluation Report for Operable Unit 2A

210-IW-001	210I-001	210I-011
Depth (feet)	3.0 to 3.5	3.0 to 3.5
Sample Date	01/05/95	01/05/95
Petroleum products in soil (mg/kg):		
Oil and Grease	1,010	1,060
TPH-diesel	11 U	450 YJ
TPH-gasoline	0.56 U	11 ZJ
TPH-motor oil	200 YJ	22 U
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg):		
Ethylbenzene	0.011 U	0.008 J
Semivolatile organic compounds in soil not detected at reported values.		
Pesticides and herbicides in soil not detected at reported values.		
Only the following detections of PAHs occurred in soil (units are mg/kg):		
Benzo(a)anthracene	0.032 J	1.5 U
Benzo(a)pyrene	0.032 J	1.5 U
Benzo(b)fluoranthene	0.038 J	1.5 U
Chrysene	0.041 J	1.5 U
Fluoranthene	0.060 J	1.5 U
Indeno(1,2,3-cd)pyrene	0.020 J	1.5 U
2-Methylnaphthalene	0.37 U	1 J
Phenanthrene	0.037 J	1.5 U
Pyrene	0.064 J	1.5 U
Only the following detections of metals in soil above 95 UCL concentrations (Blue Background Area) occurred (units are mg/kg):		
Aluminum	7,390 J	9,510 J
Barium	113 J	64.6 J
Beryllium	1.5	2.4
Cadmium	0.11 B	0.11 B
Cobalt	6 B	8.4 B
Copper	20.5	28.1
Iron	10,400 J	17,500 J
Potassium	1,030 B	976 B
Lead	17.5 EJ	15.7 EJ
Magnesium	2,570	3,570
Manganese	158	189
Nickel	27.2	32.8
Thallium	3.1	4.2
Vanadium	26.4	38
Zinc	50.4	61.1

CA13-04	030-CAP-189	030-CAP-374
Depth (feet)	0 to 10	0 to 10
Sample Date	06/15/00	06/15/00
Petroleum products in shallow groundwater (µg/L):		
TPH-diesel	5,600 J	5,800 J
TPH-gasoline	760 J	6,000 J
TPH-motor oil	520	520
Only the following detection of volatile organic compounds occurred in shallow groundwater (units are µg/L):		
Benzene	0.5	0.5
Only the following detection of dissolved metals (only lead analyzed) in shallow groundwater occurred above 95 UCL background concentrations (units are µg/L):		
Lead	3 U	9.5

CA13-26	030-CAP-429
Depth (feet)	3 to 8
Sample Date	06/21/00
Petroleum products in shallow groundwater (µg/L):	
TPH-diesel	8,900 J
TPH-gasoline	8,600 J
TPH-motor oil	500 U
Volatile organic compounds in shallow groundwater not detected at reported values.	
Metals (only lead analyzed) in shallow groundwater not detected at reported value.	



147-SS-003	147M-003	147M-003M
Depth (feet)	5.5 to 6.5	5.5 to 6.5
Sample Date	05/24/95	05/24/95
Petroleum products in soil (mg/kg):		
Oil and Grease	406	NA
TPH-diesel	NA	2,000
TPH-gasoline	NA	45
TPH-motor oil	NA	1,500 U
Volatile organic compounds in soil not detected at reported values.		
Only the following detections of semivolatile organic compounds occurred in soil (units are mg/kg):		
Di-n-butylphthalate	0.069 J	NA
Di-n-octylphthalate	0.025 J	NA
Only the following detections of PAHs occurred in soil (units are mg/kg):		
2-Methylnaphthalene	0.043 J	NA
Naphthalene	0.034 J	NA
Pyrene	0.028 J	NA
Only the following detections of metals in soil above 95 UCL concentrations (Blue Background Area) occurred (units are mg/kg):		
Arsenic	NA	7.2
Barium	NA	79.7
Beryllium	NA	0.43
Cadmium	NA	0.54
Cobalt	NA	7.1
Copper	NA	16.8
Lead	NA	23.8
Vanadium	NA	27.3
Zinc	NA	41.5

210-IW-003	210I-003	210I-003M
Depth (feet)	5.0 to 5.5	5.0 to 5.5
Sample Date	01/05/95	01/05/95
Petroleum products in soil (mg/kg):		
Oil and Grease	5,120	NA
TPH-diesel	960 YJ	NA
TPH-gasoline	320 ZJ	NA
TPH-motor oil	23 U	NA
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg):		
Ethylbenzene	0.002 J	1.9
Xylenes	0.004 J	NA
Only the following detections of semivolatile organic compounds occurred in soil (units are mg/kg):		
Bis(2-ethylhexyl)phthalate	0.099 J	NA
Butylbenzylphthalate	0.24 J	NA
Pesticides and herbicides in soil not detected at reported values.		
Only the following detections of PAHs occurred in soil (units are mg/kg):		
Fluoranthene	0.12 J	NA
Fluorene	0.089 J	NA
Pyrene	0.13 J	NA
Only the following detections of metals in soil above 95 UCL concentrations (Blue Background Area) occurred (units are mg/kg):		
Aluminum	7,450 J	NA
Arsenic	1.4 B	NA
Barium	93.1	NA
Beryllium	1.8	25 U
Cadmium	0.25 B	25 U
Cobalt	7.2 B	NA
Copper	24.8	25 U
Iron	11,400 J	NA
Lead	38 EJ	26
Manganese	185	NA
Nickel	28.6	46
Thallium	3.7	NA
Vanadium	28.9	NA
Zinc	56.7	30

CA13-26	030-CAP-427	030-CAP-428
Depth (feet)	3.5 to 4.5	6.5 to 7.0
Sample Date	06/21/00	06/21/00
Petroleum products in soil (mg/kg):		
TPH-diesel	280 J	210 J
TPH-gasoline	380 J	1,100 J
TPH-motor oil	11 U	22 U
Volatile organic compounds in soil not detected at reported values.		
Metals (only lead analyzed) in soil not detected at reported value.		

**SOIL SAMPLING LOCATION**

- ⊗ Excavation
- Soil Boring
- ⊕ Vacuum Excavation

**GROUNDWATER SAMPLING LOCATION**

- ⊕ Direct-Push
- ⊕ Monitoring Well
- ⊕ Piezometer
- ▲ SWMUs INTEGRATED WITH THE TPH PROGRAM
- ⊕ MANHOLE
- CATCH BASIN
- ★ GENERATOR ACCUMULATION POINT (GAP)
- ⊕ OIL-WATER SEPARATOR (OWS)
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- UNDERGROUND STORAGE TANK (UST), PRESENT
- STORM SEWER LINE
- ⋯ CERCLA SITE BOUNDARY
- # ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

**BUILDING**

- Present
- Removed

**Notes:**

- AOC = Area of Concern
- B = Value was less than the contract required detection limit (CRDL), but greater than the instrument detection limit (IDL).
- CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- E = Compound concentration exceeds the gas chromatograph/mass spectrometer (GC/MS) calibration range
- J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample
- M = Mobile laboratory
- mg/kg = Milligrams per kilogram
- NA = Not Analyzed
- NADEP = Naval Aviation Depot
- PAH = Polynuclear aromatic hydrocarbon
- PRC = Preliminary Remediation Criteria
- RV = Recreational Vehicle
- SWMU = Solid Waste Management Unit
- TPH = Total petroleum hydrocarbon
- U = Analyzed for, but not detected (at reported value)
- UCL = Upper confidence limit
- µg/L = Micrograms per liter
- Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard
- Z = Chromatographic response did not resemble a typical fuel pattern
- Bold values indicate "Exceeds soil residential PRC or groundwater PRC"

60 0 60 120 Feet

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**FIGURE G3-3**  
**CERCLA Site 13**  
**SWMU Soil and Groundwater Sample Results**

SWMU Evaluation Report for Operable Unit 2A

372-MW2	372-MW2	372-MW2	372-MW2	372-MW2	372-MW2	372-MW2
Depth (feet)	3.5	2.6 to 12.6	2.6 to 12.6	2.6 to 12.6	2.6 to 12.6	2.6 to 12.6
Sample Date	01/20/95	02/07/95	12/17/97	03/17/98	09/28/98	04/02/99
Petroleum products in soil (mg/kg):		Petroleum products in shallow groundwater (µg/L):				
JP-5	NA	Jet Fuel	NA	50 U	80	50 U
TPH-diesel	17	TPH-diesel	150	64	110	67
TPH-gasoline	1 U	TPH-gasoline	50 U	50 U	50 U	50 U
TPH-motor oil	NA	TPH-motor oil	NA	250 U	250 U	250 U
Volatile organic compounds (BTEX only) in soil not detected at reported values.		Only the following detection of volatile organic compounds occurred in shallow groundwater (units are µg/L):				
		1,2-Dichloroethene	NA	NA	NA	0.5

CA04-02	030-CAP-037
Depth (feet)	10
Sample Date	04/27/00
Petroleum products in shallow groundwater (µg/L):	
TPH-diesel	110 J
TPH-gasoline	220 UJ
TPH-motor oil	500 U
Volatile organic compounds in shallow groundwater not detected at reported values.	

030-S19-007	030-S19-007
Depth (feet)	0.0 to 2.5
Sample Date	10/22/98
Petroleum products in soil (mg/kg):	
JP-5	11 U
TPH-diesel	11 U
TPH-gasoline	0.05 J
TPH-motor oil	11 U
Volatile organic compounds in soil not detected at reported values.	
Semivolatile organic compounds in soil not detected at reported values.	
Pesticides in soil not detected at reported values.	

372-12-ERM	372-W12
Depth (feet)	0
Sample Date	01/10/95
Petroleum products in shallow groundwater (µg/L):	
TPH-diesel	500 U
TPH-gasoline	500 U
TPH-motor oil	NA
Only the following detections of volatile organic compounds (BTEX only) occurred in shallow groundwater (units are µg/L):	
Benzene	1.1
Ethylbenzene	0.6
Xylene	2.5

BD13-5	BD13-5 [0.5-1.0]	BD13-5 [1.0-1.5]	BD13-5 [2.0-2.5]	BD13-5 [2.5-3.0]	BD13-5 [5.0-5.5]	BD13-5 [5.5-6.0]	BD13-5 [9.5-10.0]	BD13-5 [10.0-10.5]	BD13-5 [11.0-11.5]	BD13-5 [11.5-12.0]	BD13-5 [14.0-14.5]
Depth (feet)	0.5 to 1.0	1.0 to 1.5	2.0 to 3.0	2.5 to 3.0	5.0 to 6.0	5.5 to 6.0	9.5 to 10	10 to 10.5	11 to 11.5	11.5 to 12	14 to 14.5
Sample Date	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90
Petroleum products in soil (mg/kg):											
TRPH	NA	1.7 U	NA	102	NA	8.9	NA	1.9 U	NA	1.9 U	NA
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg):											
Ethylbenzene	NA	NA	0.0054 U	NA	0.006 U	NA	0.008	NA	0.0059 U	NA	0.0059 U
Toluene	NA	NA	0.022	NA	0.074	NA	0.056	NA	0.011	NA	0.013
Xylene	NA	NA	0.021	NA	0.006 U	NA	0.051	NA	0.0059 U	NA	0.0059 U
Semivolatile organic compounds in soil not detected at reported values at the following depths: 0.5 to 1.0, 2.0 to 2.5, 5.5 to 6.0 and 10 to 10.5.											
Pesticides in soil not detected at reported values at the following depths: 0.5 to 1.0, 2.5 to 3.0, 5.5 to 6.0 and 10 to 10.5.											

**GROUNDWATER SAMPLING LOCATION**

- Direct-Push
- Monitoring Well
- Piezometer

**SOIL SAMPLING LOCATION**

- Excavation
- Monitoring Well
- Soil Boring

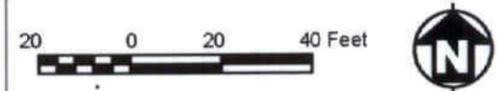
**UNDERGROUND STORAGE TANK (UST), PRESENT**

- CATCH BASIN
- STORM SEWER LINE
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER
- BUILDING
- Present
- Removed

Notes:

AOC = Area of concern  
 BTEX = Benzene, toluene, ethylbenzene, and xylene  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 MCL = Maximum contaminant level  
 mg/kg = Milligrams per kilogram  
 NA = Not Analyzed  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbon  
 TRPH = Total recoverable petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)  
 µg/L = Micrograms per liter

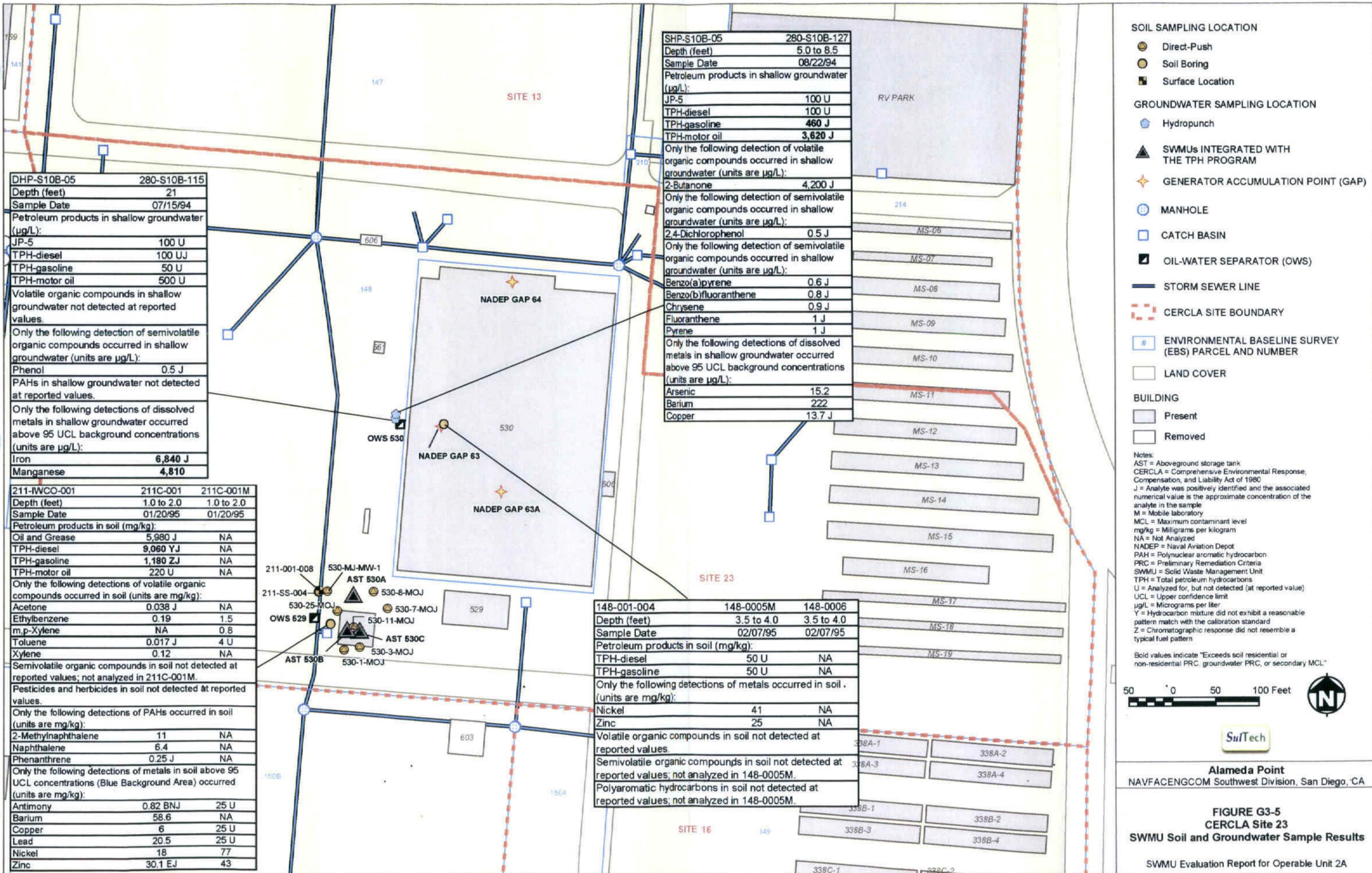
Bold value indicates "Exceeds MCL"



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**FIGURE G3-4**  
**CERCLA Site 19**  
**AOC 616 Soil and Groundwater Sample Results**

SWMU Evaluation Report for Operable Unit 2A



DHP-S10B-05	280-S10B-115
Depth (feet)	21
Sample Date	07/15/94
Petroleum products in shallow groundwater (µg/L):	
JP-5	100 U
TPH-diesel	100 UJ
TPH-gasoline	50 U
TPH-motor oil	500 U
Volatile organic compounds in shallow groundwater not detected at reported values.	
Only the following detection of semivolatile organic compounds occurred in shallow groundwater (units are µg/L):	
Phenol	0.5 J
PAHs in shallow groundwater not detected at reported values.	
Only the following detections of dissolved metals in shallow groundwater occurred above 95 UCL background concentrations (units are µg/L):	
Iron	6,840 J
Manganese	4,810

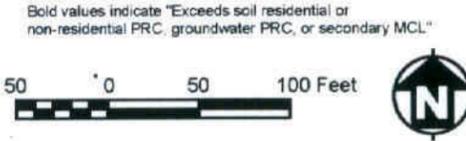
211-IWCO-001	211C-001	211C-001M
Depth (feet)	1.0 to 2.0	1.0 to 2.0
Sample Date	01/20/95	01/20/95
Petroleum products in soil (mg/kg):		
Oil and Grease	5,980 J	NA
TPH-diesel	9,060 YJ	NA
TPH-gasoline	1,180 ZJ	NA
TPH-motor oil	220 U	NA
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg):		
Acetone	0.038 J	NA
Ethylbenzene	0.19	1.5
m,p-Xylene	NA	0.8
Toluene	0.017 J	4 U
Xylene	0.12	NA
Semivolatile organic compounds in soil not detected at reported values; not analyzed in 211C-001M.		
Pesticides and herbicides in soil not detected at reported values.		
Only the following detections of PAHs occurred in soil (units are mg/kg):		
2-Methylnaphthalene	11	NA
Naphthalene	6.4	NA
Phenanthrene	0.25 J	NA
Only the following detections of metals in soil above 95 UCL concentrations (Blue Background Area) occurred (units are mg/kg):		
Antimony	0.82 BNJ	25 U
Barium	58.6	NA
Copper	6	25 U
Lead	20.5	25 U
Nickel	18	77
Zinc	30.1 EJ	43

SHP-S10B-05	280-S10B-127
Depth (feet)	5.0 to 8.5
Sample Date	08/22/94
Petroleum products in shallow groundwater (µg/L):	
JP-5	100 U
TPH-diesel	100 U
TPH-gasoline	460 J
TPH-motor oil	3,620 J
Only the following detection of volatile organic compounds occurred in shallow groundwater (units are µg/L):	
2-Butanone	4,200 J
Only the following detection of semivolatile organic compounds occurred in shallow groundwater (units are µg/L):	
2,4-Dichlorophenol	0.5 J
Only the following detection of semivolatile organic compounds occurred in shallow groundwater (units are µg/L):	
Benzo(a)pyrene	0.6 J
Benzo(b)fluoranthene	0.8 J
Chrysene	0.9 J
Fluoranthene	1 J
Pyrene	1 J
Only the following detections of dissolved metals in shallow groundwater occurred above 95 UCL background concentrations (units are µg/L):	
Arsenic	15.2
Barium	222
Copper	13.7 J

148-001-004	148-0005M	148-0006
Depth (feet)	3.5 to 4.0	3.5 to 4.0
Sample Date	02/07/95	02/07/95
Petroleum products in soil (mg/kg):		
TPH-diesel	50 U	NA
TPH-gasoline	50 U	NA
Only the following detections of metals occurred in soil (units are mg/kg):		
Nickel	41	NA
Zinc	25	NA
Volatile organic compounds in soil not detected at reported values.		
Semivolatile organic compounds in soil not detected at reported values; not analyzed in 148-0005M.		
Polyaromatic hydrocarbons in soil not detected at reported values; not analyzed in 148-0005M.		

- SOIL SAMPLING LOCATION**
- Direct-Push
  - Soil Boring
  - Surface Location
- GROUNDWATER SAMPLING LOCATION**
- Hydropunch
  - SWMUs INTEGRATED WITH THE TPH PROGRAM
  - GENERATOR ACCUMULATION POINT (GAP)
  - MANHOLE
  - CATCH BASIN
  - OIL-WATER SEPARATOR (OWS)
  - STORM SEWER LINE
  - CERCLA SITE BOUNDARY
  - ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
  - LAND COVER
- BUILDING**
- Present
  - Removed

Notes:  
 AST = Aboveground storage tank  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 M = Mobile laboratory  
 MCL = Maximum contaminant level  
 mg/kg = Milligrams per kilogram  
 NA = Not Analyzed  
 NADEP = Naval Aviation Depot  
 PAH = Polynuclear aromatic hydrocarbon  
 PRC = Preliminary Remediation Criteria  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)  
 UCL = Upper confidence limit  
 µg/L = Micrograms per liter  
 Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard  
 Z = Chromatographic response did not resemble a typical fuel pattern



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**FIGURE G3-5**  
**CERCLA Site 23**  
**SWMU Soil and Groundwater Sample Results**

SWMU Evaluation Report for Operable Unit 2A

**TABLES**

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**TABLE G2-1: SOLID WASTE MANAGEMENT UNITS INTEGRATED WITH THE CERCLA PROGRAM IN OPERABLE UNIT 2A (SITES 9, 13, 19, 22, AND 23) AT ALAMEDA POINT**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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CERCLA Site	Identification	Navy Recommendation/ Closure Status	Refer to Figure for Sample Results
9	AST 410A	NFA Recommended	Figure G3-2
9	AST 410B	NFA Recommended	Figure G3-2
9	AST 410C	NFA Recommended	NA
9	OWS 410A	Further Action Recommended	Figure G3-2
9	OWS 410B	Further Action Recommended	Figure G3-2
9	OWS 588	Closed by DTSC	NA
13	AOC 009	Further Action Recommended	Figure G3-3
13	NADEP GAP 62	NFA Recommended	NA
19	AOC 616	NFA Recommended	Figure G3-4
22	OWS 547	Further Action Recommended	NA
23	NADEP GAP 63	NFA Recommended	Figure G3-5
23	NADEP GAP 63A	NFA Recommended	NA
23	NADEP GAP 64	NFA Recommended	NA

Notes:

AOC	Area of concern
AST	Aboveground storage tank
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
GAP	Generation accumulation point
NA	Not applicable
NADEP	Naval Aviation Depot
NAS	Naval Air Station
NFA	No further action
OWS	Oil-water separator
(R)	RCRA
RCRA	Resource Conservation and Recovery Act
SWMU	Solid waste management unit
UST	Underground Storage Tank
WD	Washdown

**TABLE G2-2: SOLID WASTE MANAGEMENT UNITS RECOMMENDED FOR INTEGRATION WITH THE TOTAL PETROLEUM HYDROCARBON PROGRAM IN OPERABLE UNIT 2A (SITES 9, 13, 19, 22, AND 23) AT ALAMEDA POINT**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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CERCLA Site	Identification	Material Stored/Disposed	Navy Recommendation/ Closure Status	Refer to Figure for Sample Results
13	AOC 397	Jet fuel from spill	Further Action Recommended	Figure G3-3
13	OWS 397A	Dirty water sump	Further Action Recommended	Figure G3-3
13	OWS 397B	Dirty water sump	Further Action Recommended	Figure G3-3
13	OWS 397C	Dirty water sump	Further Action Recommended	Figure G3-3
13	OWS 397D	Dirty water sump	Further Action Recommended	Figure G3-3
22	UST(R)-17	Gasoline	NFA Recommended	NA
23	AST 530A	1010 oil	Further Action Recommended	Figure G3-5
23	AST 530B	Fuel or oil	Further Action Recommended	Figure G3-5
23	AST 530C	Jet fuel	Further Action Recommended	Figure G3-5
23	OWS 529	Unknown	Further Action Recommended	Figure G3-5
23	OWS 530	Unknown	Further Action Recommended	Figure G3-5

Notes:

- AOC Area of concern
- AST Aboveground storage tank
- CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
- GAP Generation accumulation point
- NA Not applicable
- NAS Naval Air Station
- NFA No further action
- OWS Oil-water separator
- (R) RCRA
- RCRA Resource Conservation and Recovery Act
- RWQCB Regional Water Quality Control Board
- SWMU Solid waste management unit
- UST Underground Storage Tank

## Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

Listed in CERCLA Site Order

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SWMU Identifier **AST 410A** Refer to Figure # **Figure G3-2**

Navy Recommendation/Closure Status **NFA Recommended**

### Location Description

Disposal Parcel **EDC 10** CERCLA Site **9**

EBS Subparcel **152** TPH CAA **NA**

Associated Building **410** Building Status **Present** Leasing Status **Leased by ARRA**

Building Name **Aircraft Stripping Facility/Corrosion Control**

Additional Information **East of Building 410; approximate location shown on figure**

### Operational Information for SWMU

Type of Unit **Aboveground Storage Tank(s)**

Capacity (gallons) **10,000**

Period of Operation **Unknown**

Material Managed **Methylene chloride**  
at SWMU

### Source of Initial SWMU Identification

SWMU # in RFA **Not identified in RFA** Recommendation in RFA **NA**

Recommended for NFA from DTSC in 1999 **NA**

SWMU Identified in Other Sources **EBS (IT 2001)**

### Tank-Related Information

Status of Tank **Removed**

Status of Associated Pipes **Removed**

### Data Analysis

AST 410A is one of three ASTs located on the eastern side of Building 410. The 10,000-gallon AST held methylene chloride, which was used inside Building 410, an aircraft stripping facility. The EBS stated that open space around the building was covered by concrete. Stains on the concrete suggested that undocumented spills (believed to be aircraft fuel) might have occurred in the open space; no documented incidents exist (IT 2001). As depicted on the figure for Site 9, multiple groundwater samples were collected in the vicinity (50 foot radius) at depths ranging from 8 to 80 feet bgs; methylene chloride was not detected or detected at concentrations below 2 ug/L, which is below the MCL (California Department of Health Services 2003). All detected concentrations were qualified with a "B" indicating that methylene chloride was also detected in an associated laboratory blank. Multiple soil samples were also collected at depths ranging from the surface to 15 feet bgs. Methylene chloride was only detected in one soil sample at 0.0077 mg/kg. Like the detected groundwater results, this result was qualified with a "B". Methylene chloride is a common laboratory contaminant. Given these facts, it does not appear that the AST 410A was a source of release(s) to soil or groundwater. NFA is recommended for AST 410A.

### Nondetect Review

Nondetect values were compared to 2004 Region 9 residential PRGs and Cal-modified PRGs, when available; groundwater nondetect values were also compared to California MCLs. All nondetect values for methylene chloride in soil less than PRG. All nondetect values for methylene chloride in groundwater less than PRG; MCL not available. Nondetect values were found to not be a problem as the AST contained methylene chloride.

### 2002 Site Visit

AST removed prior to 2002 site visit.

## Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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**SWMU Identifier**      **AST 410B**      **Refer to Figure #**    **Figure G3-2**

**Navy Recommendation/Closure Status**    **NFA Recommended**

### Location Description

**Disposal Parcel**    EDC 10      **CERCLA Site**    9  
**EBS Subparcel**    152      **TPH CAA**      NA  
**Associated Building**    410    **Building Status**    Present    **Leasing Status**    Leased by ARRA  
**Building Name**    Aircraft Stripping Facility/Corrosion Control  
**Additional Information**    East of Building 410; approximate location shown on figure

### Operational Information for SWMU

**Type of Unit**      Aboveground Storage Tank(s)  
**Capacity (gallons)**    10,000  
**Period of Operation**    Unknown  
**Material Managed at SWMU**      Phenol

### Source of Initial SWMU Identification

**SWMU # in RFA**    Not identified in RFA    **Recommendation in RFA**    NA  
**Recommended for NFA from DTSC in 1999**    NA  
**SWMU Identified in Other Sources**    EBS (IT 2001)

### Tank-Related Information

**Status of Tank**    Removed      **Status of Associated Pipes**    Removed

### Data Analysis

AST 410B is one of three ASTs located on the eastern side of Building 410. The 10,000-gallon AST held phenol, which was used inside Building 410, an aircraft stripping facility. The EBS stated that open space around the building was covered by concrete. Stains on the concrete suggested that undocumented spills (believed to be aircraft fuel) might have occurred in the open space; no documented incidents exist (IT 2001). As depicted of the figure for Site 9, no nearby soil samples were analyzed for phenol; however, multiple groundwater samples were collected in the vicinity (65 foot radius) at depths ranging from the surface to 80 feet bgs. Phenol was not detected in groundwater. Given these facts, it does not appear that the AST 410B was a source of release(s) to soil or groundwater. NFA is recommended for AST 410B.

### Nondetect Review

Nondetect values were compared to 2004 Region 9 residential PRGs and Cal-modified PRGs, when available; groundwater nondetect values were also compared to California MCLs. Analyses for phenol, a semivolatile organic compound, were not conducted on available soil samples. All nondetect values for phenol in groundwater less than PRG; MCL not available. Nondetect values were found to not be a problem as the AST contained phenol.

### 2002 Site Visit

AST removed prior to 2002 site visit.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A  
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**SWMU Identifier**      **AST 410C**      **Refer to Figure #**      **NA**

**Navy Recommendation/Closure Status**      **NFA Recommended**

**Location Description**

**Disposal Parcel**      EDC 10      **CERCLA Site 9**  
**EBS Subparcel**      152      **TPH CAA NA**  
**Associated Building**      410      **Building Status**      Present      **Leasing Status**      Leased by ARRA  
**Building Name**      Aircraft Stripping Facility/Corrosion Control  
**Additional Information**      East of Building 410; approximate location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Aboveground Storage Tank(s)  
**Capacity (gallons)**      1,500  
**Period of Operation**      Unknown  
**Material Managed at SWMU**      Surfactant

**Source of Initial SWMU Identification**

**SWMU # in RFA**      Not identified in RFA      **Recommendation in RFA**      NA  
**Recommended for NFA from DTSC in 1999**      NA  
**SWMU Identified in Other Sources**      EBS (IT 2001)

**Tank-Related Information**

**Status of Tank**      Removed      **Status of Associated Pipes**      Removed

**Data Analysis**

AST 410C is one of three former ASTs located on the eastern side of Building 410. The 1,500-gallon AST held surfactant, which was used inside Building 410, an aircraft stripping facility. The EBS indicated that open space around the building was covered by concrete. Stains on the concrete suggested that undocumented spills (believed to be aircraft fuel) may have occurred in the open space; no documented incidents exist (IT 2001). The former tank content (surfactant) does not meet the definition of a hazardous material, hazardous waste, or petroleum product. Based on these facts NFA is recommended for AST 410C.

**Nondetect Review**

NA

**2002 Site Visit**

AST removed prior to 2002 site visit.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A  
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**SWMU Identifier**      **OWS 410A**      **Refer to Figure #**    Figure G3-2

**Navy Recommendation/Closure Status**    **Further Action Recommended**

**Location Description**

**Disposal Parcel**    EDC 10      **CERCLA Site 9**  
**EBS Subparcel**    152      **TPH CAA**    NA  
**Associated Building**    410    **Building Status**    Present    **Leasing Status**    Leased by ARRA  
**Building Name**    Aircraft Stripping Facility/Corrosion Control  
**Additional Information**    Southwestern corner of Building 410; west of washrack area along southern edge of building; best-known location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Oil-Water Separator  
**Capacity (gallons)**    4.5 ft x 7 ft (depth unknown)  
**Period of Operation**    Unknown  
**Material Managed at SWMU**      Rinsewater from washrack

**Source of Initial SWMU Identification**

**SWMU # in RFA**    Not identified in RFA    **Recommendation in RFA**    NA  
**Recommended for NFA from DTSC in 1999**    NA  
**SWMU Identified in Other Sources**    Final FSP for Data Gap Sampling (Tetra Tech 2001)

**Tank-Related Information**

**Status of Tank**    NA      **Status of Associated Pipes**    NA

**Data Analysis**

OWS-410A is located within CERCLA Site 9, south of Building 410. The inactive OWS is located adjacent to an inactive, partially enclosed wash rack. During a July 2004 site visit, a drain was observed in the wash rack; it appeared at one time, to have been connected to the subject OWS. The general groundwater flow for this area is southwest. No sampling has been conducted near the OWS. Further action is recommended for OWS-410A. Soil and groundwater at Site 9 are recommended for further evaluation in an FS, as defined under CERCLA, to address risks to residential receptors under the unrestricted reuse scenario.

**Nondetect Review**

NA

**2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive; July 2004 visit: OWS contained water.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A  
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**SWMU Identifier**      **OWS 410B**      **Refer to Figure #**    Figure G3-2

**Navy Recommendation/Closure Status**    **Further Action Recommended**

**Location Description**

**Disposal Parcel**    EDC 10      **CERCLA Site**    9  
**EBS Subparcel**    152      **TPH CAA**    NA  
**Associated Building**    410    **Building Status**    Present    **Leasing Status**    Leased by ARRA  
**Building Name**    Aircraft Stripping Facility/Corrosion Control  
**Additional Information**    Southeastern corner of Building 410; collects water from drains in concrete around building; best-known location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Oil-Water Separator  
**Capacity (gallons)**    6 ft x 10 ft (depth unknown)  
**Period of Operation**    Unknown  
**Material Managed at SWMU**      Stormwater runoff

**Source of Initial SWMU Identification**

**SWMU # in RFA**    Not identified in RFA    **Recommendation in RFA**    NA  
**Recommended for NFA from DTSC in 1999**    NA  
**SWMU Identified in Other Sources**    Final FSP for Data Gap Sampling (Tetra Tech 2001)

**Tank-Related Information**

**Status of Tank**    NA      **Status of Associated Pipes**    NA

## **Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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### **Data Analysis**

OWS-410B is located within CERCLA Site 9, southeast of Building 410. The inactive OWS collected storm water runoff from the concrete open space on the east side of Building 410. The EBS stated that open space around the building was covered by concrete. Stains on the concrete suggested that undocumented spills (believed to be aircraft fuel) might have occurred in the open space; no documented incidents exist (IT 2001). The general groundwater flow for this area is southwest. Monitoring well MW410-3 is the nearest downgradient well, approximately 60 feet away. Well boring soil samples were analyzed for metals, VOCs, SVOCs, and PAHs. Although analyzed, PAHs in soil were not evaluated in this assessment. As depicted on the figure for Site 9, no analytes exceeded residential PRGs (EPA 2002). Only those metals that exceeded the 95 UCL concentration (Blue Background Area) are shown. Up to 13 sampling events have occurred since the well was constructed; results for TPH, metals (total and dissolved), VOCs, SVOCs, and PAH are available. Although analyzed, PAHs in shallow groundwater were not evaluated in this assessment. Historically, tetrachloroethene was detected in groundwater above the MCL (California Department of Health 2003); however, it was below the MCL in the most recent event. Selected metals (arsenic, chromium, manganese, nickel, and lead) were also historically detected in groundwater at concentrations above primary and secondary MCLs; however, no exceedances occurred in the most recent sampling event. Storm and sanitary sewers around Building 410 are believed to be the source of a chlorinated hydrocarbon groundwater plume in the area. The highest concentrations of VOCs in groundwater were detected adjacent to the sewer systems east of Building 410. Groundwater contamination has migrated towards the west from these sewers. No soil sampling has been conducted immediately adjacent to the OWS; therefore, further action is recommended for OWS 410B. Soil and groundwater at Site 9 are recommended for further evaluation in an FS, as defined under CERCLA, to address risks to residential receptors under the unrestricted reuse scenario.

### **Nondetect Review**

NA

### **2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive; July 2004 visit: OWS contained water.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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**SWMU Identifier**      **OWS 588**      **Refer to Figure #**    **NA**

**Navy Recommendation/Closure Status**    **Closed by DTSC**

**Location Description**

**Disposal Parcel**    **EDC 10**      **CERCLA Site 9**  
**EBS Subparcel**    **153A**      **TPH CAA NA**  
**Associated Building**    **588**    **Building Status**    **Removed**    **Leasing Status**    **NA**  
**Building Name**    **Industrial Waste Treatment Plant (IWTP 410)**  
**Additional Information**    **South of Building 588; associated with IWTP 410**

**Operational Information for SWMU**

**Type of Unit**      **Oil-Water Separator**  
**Capacity (gallons)**    **Unknown**  
**Period of Operation**    **Unknown**  
**Material Managed at SWMU**      **Unknown**

**Source of Initial SWMU Identification**

**SWMU # in RFA**    **Not identified in RFA**      **Recommendation in RFA**    **NA**  
**Recommended for NFA from DTSC in 1999**    **NA**  
**SWMU Identified in Other Sources**    **CERFA EBS (ERM-West 1994)**

**Tank-Related Information**

**Status of Tank**    **NA**      **Status of Associated Pipes**    **NA**

**Data Analysis**

OWS-588 is associated with IWTP 410, a regulated RCRA unit. IWTP 410 received closure from DTSC on November 9, 1998.

**Nondetect Review**

NA

**2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A  
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**SWMU Identifier**      **AOC 009**      **Refer to Figure #**    Figure G3-3  
**Navy Recommendation/Closure Status**    **Further Action Recommended**

**Location Description**

**Disposal Parcel**    EDC 10      **CERCLA Site**    13  
**EBS Subparcel**    147      **TPH CAA**    TPH CAA-13  
**Associated Building**    NA    **Building Status**    NA      **Leasing Status**    NA  
**Building Name**    NA  
**Additional Information**    ASTs - 324, 325, 326, 327, 328 on concrete foundations; ASTs removed; coincident with former location of Pacific Coast Oil Works Company Refinery; general location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Aboveground Storage Tanks(s)  
**Capacity (gallons)**    Unknown  
**Period of Operation**    Unknown  
**Material Managed at SWMU**      Petroleum Hydrocarbon (Fuel)

**Source of Initial SWMU Identification**

**SWMU # in RFA**    Not identified in RFA      **Recommendation in RFA**    NA  
**Recommended for NFA from DTSC in 1999**    NA  
**SWMU Identified in Other Sources**    EBS (IT 2001)

**Tank-Related Information**

**Status of Tank**    Removed      **Status of Associated Pipes**    Aboveground piping removed.

**Data Analysis**

AOC 009 consists of former ASTs 324 through 328 installed in 1947 on the eastern portion of Site 13. ASTs 324 through 328 were steel fuel storage tanks atop concrete foundations. The tanks were demolished before May 1990 (IT 2001). The specific capacities and contents of the tanks are unknown. During the late 1940s and 1950s, open space in this area was used for aircraft storage, and these tanks likely contained fuels to support aircraft operation and maintenance. No documented release(s) is known to have occurred from these tanks. Between 1879 and 1903, the former Pacific Coast Oil Works Company Refinery operated at the current location of Site 13 and possible portions of adjoining CERCLA Sites 19, 22, and 23. Historically, groundwater from Monitoring Well M13-07, located southeast of AST 328, contained the maximum concentrations of naphthalene (a component of petroleum-based fuels) and 2-methylnaphthalene (a component of crude oil). BTEX compounds and trimethylbenzenes are associated with areas of known refinery waste contamination. Further action is recommended for AOC 009. Petroleum-related compounds are commingled with CERCLA compounds associated with tarry refinery waste. Soil and groundwater at Site 13 are recommended to be evaluated further in an FS, as defined under CERCLA.

**Nondetect Review**

NA

**2002 Site Visit**

AST removed prior to 2002 site visit.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

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SWMU Identifier      **AOC 397**      Refer to Figure #      Figure G3-3

Navy Recommendation/Closure Status      **Further Action Recommended**

**Location Description**

Disposal Parcel      EDC 10

CERCLA Site      13

EBS Subparcel      147

TPH CAA      TPH CAA-13

Associated Building      397      Building Status      Present      Leasing Status      Leased by ARRA

Building Name      Engine Testing Cells and Aircraft Overhaul Plant Services Facility

Additional Information      Building 397; 4,000- to 17,000-gallon spill to soil of fuel/oil/water mixture (part of CAA 13); general location shown on figure

**Operational Information for SWMU**

Type of Unit      Fuel Spill

Capacity (gallons)      RCRA corrective action site

Period of Operation      Unknown

Material Managed at SWMU      Jet fuel from spill

**Source of Initial SWMU Identification**

SWMU # in RFA      AOC

Recommendation in RFA      RFI Required

Recommended for NFA from DTSC in 1999      NA

SWMU Identified in Other Sources      NA

**Tank-Related Information**

Status of Tank      NA

Status of Associated Pipes      NA

## **Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

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### **Data Analysis**

The goal of this evaluation is to verify that no CERCLA contaminants were detected and that integration with the TPH Program is appropriate. According to the EBS, Zone 22, Parcel 147, evaluation data summary report (IT 2001), AOC 397 consisted of a 4,000 to 17,000 gallon jet fuel/oil/water spill which occurred along the eastern side of Building 397. AOC 397 encompasses the spill area. Immediate cleanup involved pumping floating free product from the groundwater. Further cleanup involved skimming the fuel/oil/water mixture from the sewer and transferring the material to an oil/water separator. Finally, soil removal has been performed, a dual phase soil vapor and groundwater extraction system was installed in 2002, and remediation of soil and groundwater is underway. TPH contamination at this site is currently being addressed as part of the base-wide TPH Corrective Action Plan under CAA 13. Multiple sampling locations are shown on the figure for CERCLA Site 13; however, hit boxes are only provided for those locations in close proximity to an OWS. Sampling results from all locations were assessed in this evaluation. VOCs in soil and groundwater are consistent with fuel-related, petroleum-based contamination and primarily include BTEX compounds. Other VOCs sporadically detected in soil and groundwater include potential laboratory contaminants (i.e., acetone, 2-butanone, tert-butanol, and carbon disulfide). No SVOCs or PCBs were detected in groundwater; various laboratory-related phthalates (i.e., bis(2-ethylhexyl)phthalate, butylbenzylphthalate, di-n-butylphthalate, and di-n-octylphthalate) and NDMA (in one 1990 sample; compound detected in associated blank) were detected in soil at low concentrations. Low concentrations of pesticides were detected in soil (DDE and DDT less than 0.017 mg/kg at 7.5 feet bgs) and groundwater (DDT at 0.08 ug/l in the first event) at one location (MWOR-1). The pesticide data are from 1990; pesticides have not been detected in more recent sampling in the vicinity. Several PAHs, some fuel related (2-methylnaphthalene and naphthalene), were also detected in soil and groundwater at low estimated concentrations; soil concentrations were well below residential PRGs (EPA 2002). Detected metals concentrations exceeding 95 UCL concentrations (Blue Background Area) were also less than residential PRGs. Selected dissolved metals concentrations in groundwater exceeded 95 UCL concentrations; with the exception of a 1990 sample, none of the metals exceeded MCLs (California Department of Health 2003). Considering the past activities, the significant spill, and the type of contamination present, integration with the TPH Program is recommended.

### **Nondetect Review**

NA

### **2002 Site Visit**

NA

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

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**SWMU Identifier**      **NADEP GAP 62**      **Refer to Figure #**    **NA**

**Navy Recommendation/Closure Status**    **NFA Recommended**

**Location Description**

**Disposal Parcel**    EDC 10      **CERCLA Site**    13  
**EBS Subparcel**    147      **TPH CAA**    NA  
**Associated Building**    397    **Building Status**    Present    **Leasing Status**    Leased by ARRA  
**Building Name**    Engine Testing Cells and Aircraft Overhaul Plant Services Facility  
**Additional Information**    Building 397 (inside), Shop 96231; approximate location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Generator Accumulation Point  
**Capacity (gallons)**    55-gallon & 30-gallon drums  
**Period of Operation**    GAPS were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.  
**Material Managed at SWMU**      Mil-L-23699 lubrication and engine oil

**Source of Initial SWMU Identification**

**SWMU # in RFA**    GI-45      **Recommendation in RFA**    RFI Not Required  
**Recommended for NFA from DTSC in 1999**    Yes  
**SWMU Identified in Other Sources**    CERFA EBS (ERM-West 1994)

**Tank-Related Information**

**Status of Tank**    NA      **Status of Associated Pipes**    NA

**Data Analysis**

NADEP GAP 62 consisted of 30- and 55-gallon storage drums resting on wooden pallets (to allow a forklift to move the drums), some atop a poly spill pallet, which acted as a secondary containment system. The area measured approximately 4 feet by 8 feet and was located inside Building 397 in Shop 96231. According to the RFA, NADEP GAP 62 exhibited a low potential for releases into soil and groundwater because the site was located indoors on a concrete floor (DTSC 1992). An RFI was not required (DTSC 1992). The Phase I EBS concluded that NADEP GAP 62 did not require further investigation because the site was paved and site inspectors did not observe staining (ERM-West 1994). A letter from DTSC dated November 4, 1999, recommended NFA for this SWMU (DTSC 1999). A description of NADEP GAP 62 was included in the EBS, Zone 22, Parcel 147 evaluation data summary report (IT 2001). NADEP GAP 62 was not considered a likely source of soil and groundwater contamination at Site 13 in the OU-2A RI report (Tetra Tech 2005). NFA is recommended for NADEP GAP 62.

**Nondetect Review**

NA

**2002 Site Visit**

NA

## Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM

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SWMU Identifier **OWS 397A** Refer to Figure # **Figure G3-3**  
Navy Recommendation/Closure Status **Further Action Recommended**

### Location Description

**Disposal Parcel** EDC 10 **CERCLA Site** 13  
**EBS Subparcel** 147 **TPH CAA** TPH CAA-13  
**Associated Building** 397 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Engine Testing Cells and Aircraft Overhaul Plant Services Facility  
**Additional Information** Eastern end of Building 397 (1 of 2 aboveground OWSs); approximate location shown on figure

### Operational Information for SWMU

**Type of Unit** Oil-Water Separator  
**Capacity (gallons)** 6,000  
**Period of Operation** Unknown  
**Material Managed at SWMU** Dirty water sump

### Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA **Recommendation in RFA** NA  
**Recommended for NFA from DTSC in 1999** NA  
**SWMU Identified in Other Sources** TPH Data Gap Sampling Report (Tetra Tech 2001)

### Tank-Related Information

**Status of Tank** NA **Status of Associated Pipes** NA

### Data Analysis

The goal of this evaluation is to verify that no CERCLA contaminants were detected and that integration with the TPH Program is appropriate. OWS-397A is located within CAA 13 and is approximately 60 feet south of several former fuel lines. The OWS, 1 of 4, was installed near the eastern end of Building 397 to serve as a means of recycling oil from the waste stream before process water or stormwater was discharged to the storm drains. In 1991, a large spill (4,000 to 17,000 gallons of JP-5) was released from Building 397. Floor drains in the building were connected to OWSs. The spill caused associated OWSs to overflow. Refer to AOC 397 for cleanup activities. OWS 397A was filled with a cement slurry and closed in place in 1993 (Navy 1993) and is not a continuing potential source. Soil sample CA13-26, located approximately 25 feet west of the OWS, contains concentrations of gasoline above the residential PRC (Navy 2001). A grab groundwater sample from the location indicated concentrations of total TPH above the PRC for aquatic receptors. VOCs were not detected in soil or groundwater. Metals (only lead analyzed) in soil and groundwater were not detected above 95 UCL concentrations. This site is being evaluated under CAA 13 as part of the TPH program. Considering the past activities, the significant spill, and the type of contamination present, integration with the TPH Program is recommended.

### Nondetect Review

NA

### 2002 Site Visit

OWS was observed during the 2002 site visit; it was inactive.

## Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM

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**SWMU Identifier**      **OWS 397B**      **Refer to Figure #**    **Figure G3-3**

**Navy Recommendation/Closure Status**    **Further Action Recommended**

### Location Description

**Disposal Parcel**    EDC 10

**CERCLA Site**    13

**EBS Subparcel**    147

**TPH CAA**    TPH CAA-13

**Associated Building**    397    **Building Status**    Present    **Leasing Status**    Leased by ARRA

**Building Name**    Engine Testing Cells and Aircraft Overhaul Plant Services Facility

**Additional Information**    Eastern end of Building 397 (2 of 2 aboveground OWSs); approximate location shown on figure

### Operational Information for SWMU

**Type of Unit**      Oil-Water Separator

**Capacity (gallons)**    6,000

**Period of Operation**    Unknown

**Material Managed at SWMU**      Dirty water sump

### Source of Initial SWMU Identification

**SWMU # in RFA**    Not identified in RFA    **Recommendation in RFA**    NA

**Recommended for NFA from DTSC in 1999**    NA

**SWMU Identified in Other Sources**    TPH Data Gap Sampling Report (Tetra Tech 2001)

### Tank-Related Information

**Status of Tank**    NA

**Status of Associated Pipes**    NA

### Data Analysis

The goal of this evaluation is to verify that no CERCLA contaminants were detected and that integration with the TPH Program is appropriate. OWS-397B is located within CAA 13 and is directly above a fuel line. The OWS, 1 of 4, was installed near the eastern end of Building 397 to serve as a means of recycling oil from the waste stream before process water or stormwater was discharged to the storm drains. In 1991, a large spill (4,000 to 17,000 gallons of JP-5) was released from Building 397. Floor drains in the building were connected to OWSs. The spill caused associated OWSs to overflow. Refer to AOC 397 for cleanup activities. OWS 397B was filled with a cement slurry and closed in place in 1993 (Navy 1993) and is not a continuing potential source. Groundwater sample CA13-04, located approximately 15 feet southwest of the OWS, contains TPH concentrations that exceed the total TPH PRC for aquatic receptors (Navy 2001). VOCs (Benzene) in groundwater are consistent with fuel-related, petroleum-based contamination. Metals (lead) in groundwater were detected above the 95 UCL concentration but below the MCL (California Department of Health Services 2003). This site is being evaluated under CAA 13 as part of the TPH program. Considering the past activities, the significant spill, and the type of contamination present, integration with the TPH Program is recommended.

### Nondetect Review

NA

### 2002 Site Visit

OWS was observed during the 2002 site visit; it was inactive.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

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**SWMU Identifier**      **OWS 397C**      **Refer to Figure #**    **Figure G3-3**

**Navy Recommendation/Closure Status**    **Further Action Recommended**

**Location Description**

**Disposal Parcel**    EDC 10

**CERCLA Site**    13

**EBS Subparcel**    147

**TPH CAA**    TPH CAA-13

**Associated Building**    397    **Building Status**    Present    **Leasing Status**    Leased by ARRA

**Building Name**    Engine Testing Cells and Aircraft Overhaul Plant Services Facility

**Additional Information**    Northeastern corner of Building 397; approximate location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Oil-Water Separator

**Capacity (gallons)**    Unknown

**Period of Operation**    Unknown

**Material Managed at SWMU**      Dirty water sump

**Source of Initial SWMU Identification**

**SWMU # in RFA**    Not identified in RFA    **Recommendation in RFA**    NA

**Recommended for NFA from DTSC in 1999**    NA

**SWMU Identified in Other Sources**    Removal Action at Bldg 397 JP-5 Release (IT 1993)

**Tank-Related Information**

**Status of Tank**    NA

**Status of Associated Pipes**    NA

## **Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

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### **Data Analysis**

The goal of this evaluation is to verify that no CERCLA contaminants were detected and that integration with the TPH Program is appropriate. OWS-397C is located within CAA 13 and is surrounded by fuel lines on three sides. The OWS, 1 of 4, was installed near the eastern end of Building 397 to serve as a means of recycling oil from the waste stream before process water or stormwater was discharged to the storm drains. In 1991, a large spill (4,000 to 17,000 gallons of JP-5) was released from Building 397. Floor drains in the building were connected to OWSs. The spill caused associated OWSs to overflow. Refer to AOC 397 for cleanup activities. OWS 397C was filled with a cement slurry and closed in place in 1993 (Navy 1993) and is not a continuing potential source. Soil sample 147-SS-003, located approximately 45 feet east of the OWS, contains TPH-diesel at a concentration above the residential PRC (Navy 2001); however, TPH-diesel is below the residential PRC in the adjacent soil sample 210-IW-003. Soil sample 210-IW-001, located approximately 45 feet west of the OWS, contains oil/grease at concentrations up to 1,060 mg/kg. VOCs detected in soil are consistent with fuel-related, petroleum-based contamination (i.e., BTEX). SVOCs are common laboratory contaminants (bis(2-ethylhexyl)phthalate, butylbenzylphthalate, di-n-butylphthalate, and di-n-octylphthalate). Pesticides and herbicides were not detected in soil. Several PAHs, some fuel related (2-methylnaphthalene and naphthalene), were also detected in soil at low estimated concentrations, well below residential PRGs (EPA 2002). Detected metals concentrations exceeding 95 UCL concentrations (Blue Background Area) were also less than residential PRGs. This site is being evaluated under CAA 13 as part of the TPH program. Considering the past activities, the significant spill, and the type of contamination present, integration with the TPH Program is recommended.

### **Nondetect Review**

NA

### **2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive.

## Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM

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SWMU Identifier **OWS 397D** Refer to Figure # **Figure G3-3**

Navy Recommendation/Closure Status **Further Action Recommended**

### Location Description

**Disposal Parcel** EDC 10 **CERCLA Site** 13  
**EBS Subparcel** 147 **TPH CAA** TPH CAA-13  
**Associated Building** 397 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Engine Testing Cells and Aircraft Overhaul Plant Services Facility  
**Additional Information** Northern corner of Building 397; approximate location shown on figure

### Operational Information for SWMU

**Type of Unit** Oil-Water Separator  
**Capacity (gallons)** Unknown  
**Period of Operation** Unknown  
**Material Managed at SWMU** Dirty water sump

### Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA **Recommendation in RFA** NA  
**Recommended for NFA from DTSC in 1999** NA  
**SWMU Identified in Other Sources** Removal Action at Bldg 397 JP-5 Release (IT 1993)

### Tank-Related Information

**Status of Tank** NA **Status of Associated Pipes** NA

### Data Analysis

The goal of this evaluation is to verify that no CERCLA contaminants were detected and that integration with the TPH Program is appropriate. OWS-397D is located within CAA 13 and is surrounded by fuel lines on three sides. The OWS, 1 of 4, was installed near the eastern end of Building 397 to serve as a means of recycling oil from the waste stream before process water or stormwater was discharged to the storm drains. In 1991, a large spill (4,000 to 17,000 gallons of JP-5) was released from Building 397. Floor drains in the building were connected to OWSs. The spill caused associated OWSs to overflow. Refer to AOC 397 for cleanup activities. OWS 397D was removed in 1993 (Navy 1993) and is not a continuing potential source. Soil sample 210-IW-001, located approximately 15 feet southwest of the OWS, contains oil and grease at a concentration of 1,060 mg/kg. VOCs (ethylbenzene) in soil are consistent with fuel-related, petroleum-based contamination. No SVOCs, pesticides, or herbicides were detected in soil samples. Several PAHs, some fuel related (2-methylnaphthalene), were also detected in soil at low estimated concentrations, well below residential PRGs (EPA 2002). Detected metals concentrations exceeding 95 UCL concentrations (Blue Background Area) were also less than residential PRGs. This site is being evaluated under CAA 13 as part of the TPH program. Considering the past activities, the significant spill, and the type of contamination present, integration with the TPH Program is recommended.

### Nondetect Review

NA

### 2002 Site Visit

Removed

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

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**SWMU Identifier**      **AOC 616**      **Refer to Figure #**      **Figure G3-4**

**Navy Recommendation/Closure Status**      **NFA Recommended**

**Location Description**

**Disposal Parcel**    EDC 10      **CERCLA Site**    19  
**EBS Subparcel**    142      **TPH CAA**    TPH CAA-04B  
**Associated Building**    616    **Building Status**    Present      **Leasing Status**    Leased by ARRA  
**Building Name**      Hazardous Material Storehouse  
**Additional Information**    Spill control for Building 616; USTs 616-1 and 616-2; Steel tanks; best-known location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Underground Storage Tank(s)  
**Capacity (gallons)**    5,000 and 10,000 gallons  
**Period of Operation**    Unknown  
**Material Managed at SWMU**      Spill Control; held water

**Source of Initial SWMU Identification**

**SWMU # in RFA**    AOC      **Recommendation in RFA**    NA  
**Recommended for NFA from DTSC in 1999**    NA  
**SWMU Identified in Other Sources**    NA

**Tank-Related Information**

**Status of Tank**    Exempt (in place)      **Status of Associated Pipes**    NA

## **Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

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### **Data Analysis**

AOC 616 refers to two closed-in-place, steel, spill-containment USTs (UST 616-1 and UST 616-2) installed north of Building 616 in CAA 4B at Site 19. The tanks had capacities of 5,000 and 10,000 gallons respectively. The USTs functioned as emergency overflow tanks for fire control and are not believed to have ever contained hazardous waste materials (IT 2001). Various soil and groundwater samples were collected in the vicinity as part of the TPH Program and analyzed for TPH, metals, VOCs, SVOCs (soil only), pesticides (soil only), and PAHs (soil only). Although analyzed, PAHs in soil and metals in soil and groundwater were not evaluated. As depicted on the figure for Site 19, TPH, VOCs, SVOCs, and pesticides were either not detected or detected at concentrations below PRCs (Navy 2001) and residential EPA PRGs (EPA 2002). Only benzene in one 1995 sample (372-12-ERM) at 1.1 ug/L slightly exceeded the MCL of 1 ug/L (California Department of Health Services 2003). April 2000 results for VOCs (including benzene, <0.5 ug/L) from a nearby location (CA04-02) were nondetect. The USTs were not considered likely sources of contamination (Tetra Tech 2005). Based on the absence of CERCLA contaminants in soil and groundwater, no further action is recommended for AOC 616.

### **Nondetect Review**

Nondetect values were compared to 2004 Region 9 residential PRGs and Cal-modified PRGs, when available; groundwater nondetect values were also compared to California MCLs. All nondetect values for VOCs in soil less than PRGs except benzene in one sample. All nondetect values for SVOC in soil less than PRGs except: bis(2-chloroethyl)ether (four samples), 3,3'-dichlorobenzidine (one sample), 4,6-dinitro-2-methylphenol (one sample), hexachlorobenzene (4 samples), N-nitroso-di-N-propylamine (four samples), and pentachlorophenol (one sample). All nondetect values for pesticides in soil less than PRGs.

All nondetect values for VOCs in groundwater less than PRGs and MCLs (when available) except: benzene (one sample), carbon tetrachloride (one sample), chloroethane (one sample), chloroform (one sample), cis-1,3-dichloropropene (one sample), 1,2-dichloroethane (one sample), dibromochloromethane (one sample), bromodichloromethane (one sample), and trans-1,3-dichloropropene (one sample); the nondetect values were greater than PRGs but less than or equal to MCLs for benzene (five samples), 1,2-dichloropropane (one sample), tetrachloroethene (one sample), 1,1,2-trichloroethane (one sample), and 1,1,2,2-tetrachloroethane (one sample). Nondetect values were found to not be a problem as the SMWU contained water.

### **2002 Site Visit**

NA

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

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**SWMU Identifier**      **OWS 547**      **Refer to Figure #**    **NA**  
**Navy Recommendation/Closure Status**    **Further Action Recommended**

**Location Description**

**Disposal Parcel**    EDC 10      **CERCLA Site**    22  
**EBS Subparcel**    145      **TPH CAA**    TPH CAA-04C  
**Associated Building**    547    **Building Status**    Removed    **Leasing Status**    NA  
**Building Name**    Service Station and Car wash (partially demolished)  
**Additional Information**    South of pad for former car wash; best-known location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Oil-Water Separator  
**Capacity (gallons)**    5 ft x 9 ft x 5 ft (deep)  
**Period of Operation**    Unknown  
**Material Managed at SWMU**      Unknown (associated with car wash)

**Source of Initial SWMU Identification**

**SWMU # in RFA**    Not identified in RFA    **Recommendation in RFA**    NA  
**Recommended for NFA from DTSC in 1999**    NA  
**SWMU Identified in Other Sources**    TPH Data Gap Sampling Report (Tetra Tech 2001)

**Tank-Related Information**

**Status of Tank**    NA      **Status of Associated Pipes**    NA

**Data Analysis**

OWS-547 is located within CAA 4C. The OWS was associated with a former car wash (Building 547-1) located at a former Navy gasoline service station, which operated from 1971 through 1980. No sampling has been conducted near the OWS. A data gap exists. Its function was to remove road grime and residues from the water used in the car wash process. The EBS documented no incidents within the building (IT 2001). The OU-2A RI report (Tetra Tech 2005) described the OWS as a likely source of contaminants in soil and groundwater at Site 22. Further action is recommended for OWS-547. A petroleum removal action is on going at Site 22. Recommendations for further action under CERCLA will be based only on CERCLA contaminants; TPH-related chemicals are being addressed under a corrective action plan.

**Nondetect Review**

NA

**2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

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**SWMU Identifier**      **UST(R)-17**      **Refer to Figure #**    **NA**

**Navy Recommendation/Closure Status**    **NFA Recommended**

**Location Description**

**Disposal Parcel**    **EDC 10**      **CERCLA Site 22**  
**EBS Subparcel**    **145**      **TPH CAA TPH CAA-04C**  
**Associated Building**    **547**    **Building Status**    **Removed**    **Leasing Status**    **NA**  
**Building Name**    **Service Station and Car wash (partially demolished)**  
**Additional Information**    **USTs 547-1, 547-2, and 547-3; Former, steel-clad, fiberglass-reinforced, plastic tanks; best-known location shown on figure**

**Operational Information for SWMU**

**Type of Unit**      **Underground Storage Tank(s)**  
**Capacity (gallons)**    **12,000 gallons each**  
**Period of Operation**    **Unknown**  
**Material Managed at SWMU**      **Gasoline**

**Source of Initial SWMU Identification**

**SWMU # in RFA**    **UST-17**      **Recommendation in RFA**    **RFI Not Required**  
**Recommended for NFA from DTSC in 1999**    **NA**  
**SWMU Identified in Other Sources**    **NA**

**Tank-Related Information**

**Status of Tank**    **Removed**      **Status of Associated Pipes**    **NA**

**Data Analysis**

USTs 547-1 through 547-3 were 12,000-gallon tanks installed in 1971, and used to store leaded gasoline. These tanks were removed in 1994; they never contained waste. Two additional tanks, USTs 547-4 and 547-5, were listed in the RFA as waste oil tanks with capacities of 5,000 and 10,000 gallons, respectively; these were never confirmed as present and may have been the OWS for the car wash. USTs 547-1 through 547-3 are being addressed under the TPH Program based on the type of materials stored and associated sampling results. The USTs are within CAA 4C and CERCLA Site 22. Soil contamination (BTEX compounds) has been confirmed, exceeding the residential and nonresidential PRCs. Groundwater contamination has also been confirmed. Benzene and toluene in groundwater exceed MCLs (California Department of Health Services 2003). Total TPH exceeds the groundwater PRC for aquatic receptors (Navy 2001). Given the type of material stored (leaded gasoline) and the resulting contamination, this site is recommended for continued closure under the TPH Program.

**Nondetect Review**

NA

**2002 Site Visit**

NA

## Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

Listed in CERCLA Site Order

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SWMU Identifier **AST 530A** Refer to Figure # Figure G3-5

Navy Recommendation/Closure Status **Further Action Recommended**

### Location Description

Disposal Parcel EDC 10

CERCLA Site 23

EBS Subparcel 211

TPH CAA TPH CAA-13

Associated Building 530 Building Status Present Leasing Status Leased by ARRA

Building Name Missile Rework Facility (NARF)

Additional Information Southeast of Building 530; DeGas Area; 1 of 3 tanks; approximate location shown on figure

### Operational Information for SWMU

Type of Unit Aboveground Storage Tank(s)

Capacity (gallons) 10,000

Period of Operation Unknown

Material Managed 1010 oil at SWMU

### Source of Initial SWMU Identification

SWMU # in RFA Not identified in RFA Recommendation in RFA NA

Recommended for NFA from DTSC in 1999 NA

SWMU Identified in Other Sources BRAC Cleanup Plan (1998)

### Tank-Related Information

Status of Tank Removed

Status of Associated Pipes Partially removed; piping coming out of the ground surrounded by a traffic barricade is all that remains

### Data Analysis

Multiple sampling locations are shown without hit boxes in the vicinity of ASTs 530A, 530B, and 530C on the figure for CERCLA Site 23. These ASTs contained 1010 oil, fuel or oil, and jet fuel respectively. Sampling results from all of these locations were assessed in this evaluation. Significant TPH contamination exceeding PRCs (Navy 2001) for soil and groundwater was detected in samples near the former AST locations. Detected concentrations suggest the potential for free product. VOC concentrations (BTEX and potential laboratory contaminants, acetone and 2-butanone) in soil did not exceed residential PRCs and PRGs (EPA 2002). Benzene concentrations in groundwater exceeded the MCL (California Department of Health Services 2003). No SVOCs were detected in soil (with the exception of a potential laboratory contaminant, bis(2-ethylhexyl)phthalate) and groundwater. No pesticides were detected in soil. Fuel-related PAHs (2-methylnaphthalene and naphthalene) were detected in soil and groundwater. The former AST locations are within CAA 13. Considering the past activities, the types of materials stored in the ASTs (1010 oil, fuel or oil, and jet fuel), and the type of contamination present, closure under the TPH Program is recommended.

### Nondetect Review

NA

### 2002 Site Visit

AST removed prior to 2002 site visit.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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**SWMU Identifier**      **AST 530B**      **Refer to Figure #**    Figure G3-5

**Navy Recommendation/Closure Status**    **Further Action Recommended**

**Location Description**

**Disposal Parcel**    EDC 10

**CERCLA Site**    23

**EBS Subparcel**    211

**TPH CAA**    TPH CAA-13

**Associated Building**    530    **Building Status**    Present    **Leasing Status**    Leased by ARRA

**Building Name**    Missile Rework Facility (NARF)

**Additional Information**    Southeast of Building 530; DeGas Area; 2 of 3 tanks; approximate location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Aboveground Storage Tank(s)

**Capacity (gallons)**    10,000

**Period of Operation**    Unknown

**Material Managed at SWMU**      Fuel or oil

**Source of Initial SWMU Identification**

**SWMU # in RFA**    Not identified in RFA    **Recommendation in RFA**    NA

**Recommended for NFA from DTSC in 1999**    NA

**SWMU Identified in Other Sources**    BRAC Cleanup Plan (1998)

**Tank-Related Information**

<b>Status of Tank</b>	Removed; damaged by 1989 earthquake, remained empty from that date	<b>Status of Associated Pipes</b>	Partially removed; piping coming out of the ground surrounded by a traffic barricade is all that remains
-----------------------	--	-----------------------------------	--

**Data Analysis**

Refer to AST 530A

**Nondetect Review**

NA

**2002 Site Visit**

AST removed prior to 2002 site visit.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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**SWMU Identifier**      **AST 530C**      **Refer to Figure #**    **Figure G3-5**

**Navy Recommendation/Closure Status**    **Further Action Recommended**

**Location Description**

**Disposal Parcel**    EDC 10      **CERCLA Site**    23  
**EBS Subparcel**    211      **TPH CAA**    TPH CAA-13  
**Associated Building**    530    **Building Status**    Present    **Leasing Status**    Leased by ARRA  
**Building Name**    Missile Rework Facility (NARF)  
**Additional Information**    Southeast of Building 530; DeGas Area; 3 of 3 tanks; approximate location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Aboveground Storage Tank(s)  
**Capacity (gallons)**    15,000  
**Period of Operation**    Unknown  
**Material Managed at SWMU**      Jet fuel

**Source of Initial SWMU Identification**

**SWMU # in RFA**    Not identified in RFA    **Recommendation in RFA**    NA  
**Recommended for NFA from DTSC in 1999**    NA  
**SWMU Identified in Other Sources**    BRAC Cleanup Plan (1998)

**Tank-Related Information**

**Status of Tank**    Removed      **Status of Associated Pipes**    Partially removed; piping coming out of the ground surrounded by a traffic barricade is all that remains

**Data Analysis**

Refer to AST 530A

**Nondetect Review**

NA

**2002 Site Visit**

AST removed prior to 2002 site visit.

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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**SWMU Identifier**      **NADEP GAP 63**      **Refer to Figure #**    **Figure G3-5**

**Navy Recommendation/Closure Status**    **NFA Recommended**

**Location Description**

**Disposal Parcel**    EDC 10      **CERCLA Site**    23

**EBS Subparcel**    148      **TPH CAA**    NA

**Associated Building**    530    **Building Status**    Present    **Leasing Status**    Leased by ARRA

**Building Name**    Missile Rework Facility (NARF)

**Additional Information**    Building 530 (inside), Shop 94224; approximate location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Generator Accumulation Point

**Capacity (gallons)**    5-gallon containers, 30-gallon drums, 55-gallon drums

**Period of Operation**    GAPs were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.

**Material Managed at SWMU**      Acetone, naphtha with solvents (MEK), poly paint and thinner, 1,1,1-TCA, and MX-4M solvent

**Source of Initial SWMU Identification**

**SWMU # in RFA**    GI-46      **Recommendation in RFA**    RFI Not Required

**Recommended for NFA from DTSC in 1999**    Yes

**SWMU Identified in Other Sources**    NA

**Tank-Related Information**

**Status of Tank**    NA      **Status of Associated Pipes**    NA

## **Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

Listed in CERCLA Site Order

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### **Data Analysis**

NADEP GAP 63 consisted of various size storage drums atop a wooden pallet (to allow a forklift to move the drums) or atop a poly spill pallet, which acted as a secondary containment system. The area measured approximately 6 feet by 6 feet and was located inside Building 530 in Shop 94224, near the western wall. According to the RFA, NADEP GAP 63 exhibited a low potential for releases into soil and groundwater because the site was located indoors on a concrete floor (DTSC 1992). An RFI was not required (DTSC 1992). The Phase I EBS concluded that NADEP GAP 63 did not require further investigation because the site was paved and site inspectors did not observe staining (ERM-West 1994). A letter from DTSC dated November 4, 1999, recommended NFA for this SWMU (DTSC 1999). A description of NADEP GAP 63 was included in the EBS, Zone 22, Parcel 148 evaluation data summary report (IT 2001). The GAP was indirectly investigated as Target Area 1 (Building 530) during EBS Phase 2A soil sampling. Soil was sampled from beneath the building floor (3.5 to 4 feet bgs) near the GAP. Samples were analyzed for TPH, metals, VOCs, SVOCs, and PAHs. As depicted on the figure for Site 23, all soil analytes were either not detected or detected at concentrations below residential EPA PRGs (EPA 2002). The reporting limit for mercury slightly exceeded the residential PRG. The detections of nickel and zinc are below the 95 UCL for the Blue Background Area (Tetra Tech 2001b). NADEP GAP 63 was not listed as a potential source of soil and groundwater contamination at Site 23 in the OU-2A RI report (Tetra Tech 2005). NFA is recommended for NADEP GAP 63.

### **Nondetect Review**

NA

### **2002 Site Visit**

NA

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

Listed in CERCLA Site Order

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**SWMU Identifier**      **NADEP GAP 63A**      **Refer to Figure #**    **NA**

**Navy Recommendation/Closure Status**    **NFA Recommended**

**Location Description**

**Disposal Parcel**    **EDC 10**      **CERCLA Site**    **23**  
**EBS Subparcel**    **148**      **TPH CAA**      **NA**  
**Associated Building**    **530**    **Building Status**    **Present**    **Leasing Status**    **Leased by ARRA**  
**Building Name**    **Missile Rework Facility (NARF)**  
**Additional Information**    **Building 530 (inside), Shop 94223; approximate location shown on figure**

**Operational Information for SWMU**

**Type of Unit**      **Generator Accumulation Point**  
**Capacity (gallons)**    **55-gallon drums & Bowser**  
**Period of Operation**    **GAPs were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.**  
**Material Managed at SWMU**      **Hydraulic oil (Bowser)**

**Source of Initial SWMU Identification**

**SWMU # in RFA**    **GI-47**      **Recommendation in RFA**    **RFI Not Required**  
**Recommended for NFA from DTSC in 1999**    **Yes**  
**SWMU Identified in Other Sources**    **NA**

**Tank-Related Information**

**Status of Tank**    **NA**      **Status of Associated Pipes**    **NA**

**Data Analysis**

NADEP GAP 63A was a Bowser of hydraulic oil. A modified, 55-gallon-drum, wet/dry vacuum used to vacuum up spills sat adjacent to the Bowser. The area measured approximately 4 feet by 12 feet and was located inside Building 530 in Shop 94223. According to the RFA, NADEP GAP 63A exhibited a low potential for releases into soil and groundwater because the site was located indoors on a flat, tile-covered, concrete floor (DTSC 1992). An RFI was not required (DTSC 1992). The Phase I EBS concluded that NADEP GAP 63A did not require further investigation because the site was paved and site inspectors did not observe staining (ERM-West 1994). A letter from DTSC dated November 4, 1999, recommended NFA for this SWMU (DTSC 1999). A description of NADEP GAP 63A was included in the EBS, Zone 22, Parcel 148 evaluation data summary report (IT 2001). NADEP GAP 63A was not listed as a potential source of soil and groundwater contamination at Site 23 in the OU-2A RI report (Tetra Tech 2005). NFA is recommended for NADEP GAP 63A.

**Nondetect Review**

NA

**2002 Site Visit**

NA

**Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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**SWMU Identifier**      **NADEP GAP 64**      **Refer to Figure #**    **NA**

**Navy Recommendation/Closure Status**    **NFA Recommended**

**Location Description**

**Disposal Parcel**    EDC 10      **CERCLA Site**    23  
**EBS Subparcel**    148      **TPH CAA**    NA  
**Associated Building**    530    **Building Status**    Present    **Leasing Status**    Leased by ARRA  
**Building Name**    Missile Rework Facility (NARF)  
**Additional Information**    Building 530 (inside), Shop 94224; approximate location shown on figure

**Operational Information for SWMU**

**Type of Unit**      Generator Accumulation Point  
**Capacity (gallons)**    30-gallon drums, 55-gallon drums, aerosol cans  
**Period of Operation**    GAPS were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.  
**Material Managed at SWMU**    Aerosol paint, lubrication, solvents, rust remover, WD-40; MX-4M solvent, silicate ester, and 1,1,1-TCA

**Source of Initial SWMU Identification**

**SWMU # in RFA**    GI-48      **Recommendation in RFA**    RFI Not Required  
**Recommended for NFA from DTSC in 1999**    Yes  
**SWMU Identified in Other Sources**    NA

**Tank-Related Information**

**Status of Tank**    NA      **Status of Associated Pipes**    NA

**Data Analysis**

NADEP GAP 64 consisted of 30- and 55-gallon drums on two pallets, each atop poly spill pallets, all within a metal tray. The area measured approximately 8 feet by 18 feet and was located inside Building 530 in Shop 94224. According to the RFA, NADEP GAP 64 exhibited a low potential for releases into soil and groundwater because the site was located indoors on a flat concrete floor (DTSC 1992). An RFI was not required (DTSC 1992). The Phase I EBS concluded that NADEP GAP 64 did not require further investigation because the site was paved and site inspectors did not observe staining (ERM-West 1994). A letter from DTSC dated November 4, 1999, recommended NFA for this SWMU (DTSC 1999). A description of NADEP GAP 64 was included in the EBS, Zone 22, Parcel 148 evaluation data summary report (IT 2001). NADEP GAP 64 was not listed as a potential source of soil and groundwater contamination at Site 23 in the OU-2A RI report (Tetra Tech 2005). NFA is recommended for NADEP GAP 64.

**Nondetect Review**

NA

**2002 Site Visit**

NA

## Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

Listed in CERCLA Site Order

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SWMU Identifier **OWS 529** Refer to Figure # **Figure G3-5**

Navy Recommendation/Closure Status **Further Action Recommended**

### Location Description

**Disposal Parcel** EDC 10 **CERCLA Site** 23  
**EBS Subparcel** 211 **TPH CAA** TPH CAA-13  
**Associated Building** 529 **Building Status** Present **Leasing Status** Not leased by ARRA  
**Building Name** Switching/Substation Building/Shelter  
**Additional Information** West of former ASTs that were located west of Building 529; OWS is located at eastern end of Avenue M; approximate location shown on figure

### Operational Information for SWMU

**Type of Unit** Oil-Water Separator  
**Capacity (gallons)** 5 ft x 5 ft x 4 ft (deep)  
**Period of Operation** Unknown  
**Material Managed at SWMU** Unknown

### Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA **Recommendation in RFA** NA  
**Recommended for NFA from DTSC in 1999** NA  
**SWMU Identified in Other Sources** CERFA EBS (ERM-West 1994)

### Tank-Related Information

**Status of Tank** NA **Status of Associated Pipes** NA

### Data Analysis

OWS-529 is located within CAA 13 and CERCLA Site 23. According to the EBS, this area was used for defueling (IT 2001). The OWS is located west of three former ASTs. The closest soil sampling location, 211-IWC0-001 located approximately 18 feet southeast of OWS-529, contains TPH-gasoline and TPH-diesel above the residential PRCs (Navy 2001). The TPH-diesel result also exceeded the nonresidential criteria. Oil and grease was detected at 5,980 mg/kg. In general, significant TPH contamination exceeding PRCs for soil and groundwater was detected in samples collected within 100 feet of the OWS location. Detected concentrations suggest the potential for free product. VOC concentrations (BTEX and potential laboratory contaminants) in soil did not exceed residential PRCs or PRGs (EPA 2002). Benzene concentrations in groundwater exceeded the MCL (California Department of Health Services 2003). No SVOCs were detected in soil (with the exception of a potential laboratory contaminant, bis(2-ethylhexyl)phthalate) and groundwater. No pesticides were detected in soil. Fuel-related PAHs (2-methylnaphthalene and naphthalene) were detected in soil and groundwater. Detected metals concentrations in soil exceeding 95 UCL concentrations (Blue Background Area) were less than residential PRGs. The Navy is conducting groundwater remediation for petroleum contamination in this area. This site is also being evaluated under CAA 13 as part of the TPH program. The OWS is a likely source of petroleum contaminants in soil and groundwater (Tetra Tech 2005). Considering the nearby petroleum ASTs and the type of contamination present, integration with the TPH Program is recommended.

### Nondetect Review

NA

### 2002 Site Visit

OWS was observed during the 2002 site visit; it was inactive.

## Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

Listed in CERCLA Site Order

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SWMU Identifier **OWS 530** Refer to Figure # **Figure G3-5**

Navy Recommendation/Closure Status **Further Action Recommended**

### Location Description

Disposal Parcel **EDC 10** CERCLA Site **23**  
EBS Subparcel **148** TPH CAA **TPH CAA-13**  
Associated Building **530** Building Status **Present** Leasing Status **Leased by ARRA**  
Building Name **Missile Rework Facility (NARF)**  
Additional Information **Nothwestern corner of fenced area; west of Building 530; associated with DeGas Area; best-known location shown on figure**

### Operational Information for SWMU

Type of Unit **Oil-Water Separator**  
Capacity (gallons) **6.5 ft x 13 ft (depth unknown)**  
Period of Operation **Unknown**  
Material Managed at SWMU **Unknown**

### Source of Initial SWMU Identification

SWMU # in RFA **Not identified in RFA** Recommendation in RFA **NA**  
Recommended for NFA from DTSC in 1999 **NA**  
SWMU Identified in Other Sources **TPH Data Gap Sampling Report (Tetra Tech 2001)**

### Tank-Related Information

Status of Tank **NA** Status of Associated Pipes **NA**

### Data Analysis

OWS-530 is located within CAA 13 and CERCLA Site 23. Groundwater sample SHP-S10B-05, located to the north of the OWS 530, shows TPH concentrations exceeding the total TPH PRC for aquatic receptors (Navy 2001). VOCs (2-butanone) detected in groundwater are most likely laboratory contaminants. At the deeper DHP-S10B-05 location, TPH concentrations in groundwater were nondetect. Low-level, estimated concentrations of SVOCs (phenol and 2,4-dichlorophenol) and PAHs were detected in groundwater. Selected dissolved metals (iron and manganese) in groundwater were detected above the 95 UCL and also exceeded secondary MCLs (California Department of Health Services 2003). The Navy is conducting groundwater remediation for petroleum contamination in this area. This site is also being evaluated under CAA 13 as part of the TPH program. The OWS is a likely source of petroleum contaminants in soil and groundwater (Tetra Tech 2005). Considering the type of contamination present, integration with the TPH Program is recommended.

### Nondetect Review

**NA**

### 2002 Site Visit

OWS was observed during the 2002 site visit; it was inactive.

# Table G3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, AND 23 INTEGRATED WITH CERCLA PROGRAM

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

Listed in CERCLA Site Order

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## Notes:

% = Percentage

ug/kg = Micrograms per kilogram

ug/L = Micrograms per liter

AOC = Area of concern

ARRA = Alameda Reuse and Redevelopment Authority

AST = Aboveground storage tank

bgs = Below ground surface

BTEX = Benzene, toluene, ethylbenzene, and xylene

CAA = Corrective action area

CERCLA = Comprehensive Environmental Response,

Compensation, and Liability Act

CERFA = Community Environmental Response Facilitation Act

CRS = Coolant Recovery System

DTSC = California Environmental Protection Agency Department

of Toxic Substances Control

EBS = Environmental baseline survey

EDC = Economic development conveyance

EPA = U.S. Environmental Protection Agency

ERM-West = Environmental Resource Management - West

FED = Federal agency-to-agency transfer

FS = Feasibility Study

FSP = Field sampling plan

ft = Foot

Gal = gallon

GAP = Generator accumulation point

GW = Groundwater

ID = Identification

IT = International Technology Corporation

IWTP = Industrial wastewater treatment plant

JP = Jet propellant

M = Miscellaneous area identified in the RFA

MCL = Maximum contaminant level

MEK = Methyl ethyl ketone

mg/kg = Milligrams per kilogram

mg/L = milligrams per liter

mL = milliliter

NA = Not applicable

NADEP = Naval Aviation Depot Alameda

NARF = Naval Air Rework Facility Alameda

NAS = Naval Air Station

Navy = U.S. Department of the Navy

ND = Not detected

NE = Northeast

NFA = No further action

NW = Northwest

OU = Operable Unit

OWS = Oil-water separator

PAH = Polynuclear aromatic hydrocarbon

PCB = Polychlorinated biphenyl

PMB = Plastic material blasting

PPM = Parts per million

PRC = Preliminary remediation criteria

PRG = Preliminary remediation goal

PWC = Navy Public Works Center

(R) = RCRA-related UST

RCRA = Resource Conservation and Recovery Act

RFA = RCRA facility assessment

RFI = RCRA facility investigation

RI = Remedial investigation

RI/FS = Remedial investigation and feasibility study

RWQCB = Regional Water Quality Control Board

SE = Southeast

SEBS = Supplemental environmental baseline survey

SSPORTS = Supervisor of Shipbuilding, Conversion, and Repair, Portsmouth, Virginia

SVOC = Semivolatile organic compound

SW = Southwest

SWARF = Refers to machine and grinding coolant

SWMU = Solid waste management unit

TCA = Trichloroethane

Tetra Tech = Tetra Tech EM Inc.

TPH = Total petroleum hydrocarbon

TPHd = Total petroleum hydrocarbons as diesel

TPHg = Total petroleum hydrocarbons as gasoline

TPHmo = Total petroleum hydrocarbons as motor oil

USFWS = U.S. Fish and Wildlife Service

UST = Underground storage tank

VOC = Volatile organic compound

WD = Washdown area

A-E CERCLA/RCRA/UST Contract Number N68711-03-D-5104  
Contract Task Order 0012

Draft

**APPENDIX J**  
**SOLID WASTE MANAGEMENT UNIT**  
**EVALUATION REPORT FOR OPERABLE**  
**UNIT 2A (SITES 9, 13, 19, 22, AND 23)**  
**HAZARDOUS WASTE PERMIT EPA ID**  
**NUMBER CA 2170023236, NAVAL AIR**  
**STATION ALAMEDA**

Alameda Point, Alameda, California

November 15, 2004

Prepared for

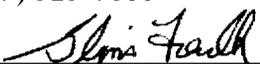


DEPARTMENT OF THE NAVY  
Lou Ocampo, Remedial Project Manager  
Base Realignment and Closure  
Program Management Office West  
San Diego, California

Prepared by



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\_\_\_\_\_  
Glynis Ford, Project Manager

TC.B012.12089

July 5, 2005

Lou Ocampo  
Remedial Project Manager  
Naval Facilities Engineering Command Southwest Division  
1230 Columbia Street, Suite 1100  
San Diego, California 92101-8517

**Subject: Draft Attachment J - Solid Waste Management Unit Summary Report For  
Operable Unit 2A (Sites 9, 13, 19, 22, and 23)  
Alameda Point, Alameda, California**

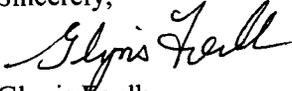
Dear Mr. Ocampo:

Enclosed is a CD of the Draft of Attachment J - Solid Waste Management Unit Summary Report for Operable Unit 2A (Sites (9, 13, 19, 22, and 23) dated November 15, 2004.

Claudia Domingo forwarded a pdf file with the Draft Solid Waste Management Unit (SWMU) Evaluation Report for OU-2A to Marcia Liao with the Department of Toxic Substances Control (DTSC) on November 16, 2004 for review. DTSC sent comments by e-mail on November 18, 2004.

If you have any questions, please call me at (916) 853-4561.

Sincerely,



Glynis Foulk  
Project Manager

Enclosure (1)

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## **ACRONYMS AND ABBREVIATIONS**

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AOC	Area of concern
AST	Aboveground storage tank
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DTSC	California Environmental Protection Agency Department of Toxic Substances Control
EBS	Environmental baseline survey
EPA	U.S. Environmental Protection Agency
GAP	Generator accumulation point
ID	Identification
NAS	Naval Air Station
Navy	U.S. Department of the Navy
NFA	No further action
OU	Operable unit
OWS	Oil-water separator
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
Sul Tech	A joint venture of Sullivan Consulting Group and Tetra Tech EM Inc.
SWMU	Solid waste management unit
Tetra Tech	Tetra Tech EM Inc.
TPH	Total petroleum hydrocarbon
UST	Underground storage tank

## **EXECUTIVE SUMMARY**

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The U.S. Department of the Navy (Navy), Base Realignment and Closure Program Management Office West, requested that SulTech, a joint venture of Sullivan Consulting Group and Tetra Tech EM Inc., prepare this solid waste management unit (SWMU) evaluation report to summarize the results of all past assessments and investigations of the SWMUs within the operable unit (OU) 2A (Sites 9, 13, 19, 22, and 23) at Alameda Point (formerly Naval Air Station [NAS] Alameda), in Alameda County, California. This report was prepared in accordance with Contract Task Order 0012, issued under the Architectural-Engineering Services to Provide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA)/underground storage tank (UST) Studies, Contract Number N68711-03-D-5104.

There are 24 SWMUs within CERCLA Sites 9, 13, 19, 22, and 23 in OU-2A; all are inactive and are being addressed under the Navy's CERCLA program. This evaluation report includes a recommendation of either no further action (NFA) or further action for each of these SWMUs, and it recommends that 11 of these SWMUs be deferred to the Navy's Total Petroleum Hydrocarbon (TPH) program due to the absence of CERCLA contaminants at these SWMUs. All recommendations in this report are based on the analysis and analytical results presented in Section 3.0. Any corrective action that is required will be conducted under the CERCLA program or under the TPH program. The Navy is requesting concurrence on the recommendations for each of these SWMUs.

The SWMUs addressed in this report were evaluated using the requirements stipulated in the final hazardous waste facility permit for former NAS Alameda (U.S. Environmental Protection Agency [EPA] Identification Number CA 2170023236) to support further corrective action decisions at Alameda Point. The results of this evaluation showed that 9 of the 24 SWMUs within OU-2A are recommended for NFA. Three other SWMUs are recommended for further action under the CERCLA program, 11 are recommended for deferral to the TPH program, and one already was closed with concurrence from the California Environmental Protection Agency Department of Toxic Substances Control. The Navy is requesting concurrence on these recommendations.

## 1.0 INTRODUCTION

The U.S. Department of the Navy (Navy), Base Realignment and Closure Program Management Office West, requested that SulTech, a joint venture of Sullivan Consulting Group and Tetra Tech EM Inc. (Tetra Tech), prepare this solid waste management unit (SWMU) evaluation report to summarize the results of all past assessments and investigations of the SWMUs within operable unit (OU) 2A (Sites 9, 13, 19, 22, and 23) at Alameda Point (formerly Naval Air Station [NAS] Alameda), in Alameda County, California. This report was prepared in accordance with Contract Task Order 0012, issued under the Architectural-Engineering Services to Provide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA)/underground storage tank (UST) Studies, Contract Number N68711-03-D-5104.

All of the SWMUs within OU-2A are inactive and being addressed under the Navy's CERCLA program. For each of these SWMUs, this evaluation report includes a recommendation of either continued management under the CERCLA program or deferral to the TPH program; also, each SWMU is recommended for either no further action (NFA) or further action. All recommendations are based on the analytical results presented in Section 3.0. The Navy is requesting concurrence on the recommendations for each SWMU.

This evaluation report describes procedures, methods, and results of facility assessments and investigations of the SWMUs in OU-2A (Sites 9, 13, 19, 22, and 23) and describes the general approach to investigating and evaluating potential remedies pertaining to SWMU corrective measures and closure at Alameda Point. This evaluation report is provided as an appendix to the remedial investigation (RI) report for OU-2A (Sites 9, 13, 19, 22, and 23).

The SWMUs addressed in this report were evaluated using the requirements stipulated in the final hazardous waste facility permit for former NAS Alameda (U.S. Environmental Protection Agency [EPA] Identification [ID] Number CA 2170023236) to support further corrective action decisions at Alameda Point (California Environmental Protection Agency Department of Toxic Substances Control [DTSC] 1993).

The remainder of this report is divided into four sections. Section 2.0 provides background information and the Navy's approaches for evaluating the SWMUs at Alameda Point. Section 3.0 presents an evaluation for the SWMUs within OU-2A (Sites 9, 13, 19, 22, and 23), and Section 4.0 summarizes recommendations for those SWMUs. Finally, Section 5.0 provides the references used to prepare this evaluation report.

## **2.0 BACKGROUND AND APPROACHES FOR EVALUATIONS OF SOLID WASTE MANAGEMENT UNITS**

SWMU means any unit at a hazardous waste facility from which hazardous constituents might migrate, irrespective of whether the unit was intended for the management of wastes (Title 22 *California Code of Regulations* Section 66260.10). At Alameda Point, SWMUs include areas of concern (AOC), generator accumulation points (GAP), CERCLA sites, oil-water separators (OWS), aboveground storage tanks (AST), USTs, washdown areas, and miscellaneous sites.

The following subsections describe the history of SWMU assessments and investigations at Alameda Point (see Figure 2-1), and the Navy's approaches for ensuring that the results of those assessments and investigations are evaluated in a manner consistent with RCRA requirements.

### **2.1 HISTORY OF SOLID WASTE MANAGEMENT UNIT ASSESSMENTS AND INVESTIGATIONS**

Most of the SWMUs at Alameda Point were first identified in 1991 in an initial RCRA facility assessment (RFA) (DTSC 1992), which was required to obtain a permit for the management of hazardous wastes in a number of specific management units no longer in operation at Alameda Point. According to Sections V.F through V.J of the final hazardous waste facility permit for Alameda Point (EPA ID CA 2170023236), information to support corrective action decisions regarding each SWMU was to be collected and submitted to DTSC. The permit described a typical RCRA corrective action process, which involves an analysis of RFA data to determine which SWMUs require further evaluation in a RCRA facility investigation (RFI), and requires the Navy to identify additional SWMUs, as appropriate, and include them in the corrective action process.

The initial RFA identified 151 SWMUs and concluded that a number of the SWMUs would need further investigation under an RFI, which is usually conducted under a series of RCRA permit modifications. After the final RCRA permit was issued, however, the Navy and the regulatory agencies determined that the most efficient and effective approach for assessing any additional SWMUs and conducting RFIs would be to take advantage of functionally equivalent investigations that were and continue to be conducted under a number of other Navy environmental programs. Types of investigations include environmental baseline survey (EBS) investigations under the Base Realignment and Closure property transfer program; investigations of possible releases of total petroleum hydrocarbons (TPH) from sources such as pipelines, USTs, and ASTs under the TPH program; and site investigations and remedial investigations under the CERCLA program. Subsequent to the RFA and as a result of the investigations described previously, 215 additional SWMUs were identified and assessed at Alameda Point. These additional SWMUs were included in the final supplemental EBS (Tetra Tech 2003).

The Navy received a letter dated November 1999 from DTSC with comments on the SWMUs following their review of the draft EBS; the final EBS was submitted in 2001 (International

Technology Corporation 2001). For some of the SWMUs, DTSC concurred with the recommendation in the EBS for NFA. For most of the SWMUs located within a CERCLA site, DTSC withheld concurrence with NFA, pending resolution of each site's remedial investigation report (DTSC 1999).

Recognizing that the investigation and management of SWMUs had been divided among a number of Navy programs, the Navy developed a SWMU evaluation approach coupled with a SWMU deferral approach to ensure that all the SWMUs at Alameda Point would be managed under the appropriate Navy program and would receive appropriate response actions. These two SWMU approaches are described in Sections 2.2 and 2.3 of this report.

## **2.2 SOLID WASTE MANAGEMENT UNIT EVALUATION APPROACH**

The SWMU evaluation approach is a three-step process that begins by listing the SWMUs identified and investigated under each Navy program. In the next step, a SWMU profile is compiled for each SWMU; these profiles consist of descriptive information on each SWMU, the name of the Navy program that provided the functional equivalent of an RFA (and in some cases, an RFI) for the SWMU, and the results of all investigations conducted on that SWMU, including figures and tables, as needed. In the final step, each SWMU profile is analyzed to determine whether the functional equivalents of the elements of a RCRA corrective action process have been conducted and whether any additional actions are needed.

## **2.3 SOLID WASTE MANAGEMENT UNIT DEFERRAL APPROACH**

The purpose of the SWMU deferral approach is to facilitate appropriate actions for all SWMUs under the appropriate Navy and regulatory programs. The approach allows final decisions to be made for basewide integration concerning each SWMU, such that petroleum-related SWMUs are addressed under the TPH program and most other SWMUs are addressed under the CERCLA program. Under the deferral approach, any RCRA corrective action requirements for the SWMUs will be complied with under CERCLA remedial actions or under TPH corrective actions. Figure 2-2 shows the SWMU deferral approach.

Based on an evaluation of each of the SWMU profiles according to the steps in the SWMU evaluation process (see Section 2.2), the Navy is recommending either NFA or further action for each SWMU. If further action is recommended, future RCRA corrective action requirements for the SWMUs will be complied with under the appropriate Navy program. On an ongoing basis, the SWMUs will be evaluated to determine whether a SWMU has been or is being investigated under the appropriate Navy program. If a SWMU is found to be in the wrong program, it will be moved to the appropriate program.

Before developing the deferral approach, the Navy and the regulators had decided that the "regulated" waste management units originally included in the interim status document and final permit for Alameda Point (EPA ID CA 2170023236) would continue to be investigated and

closed under the Navy's RCRA program, with oversight from DTSC. These regulated units are, therefore, not included in the deferral approach and are not described in this report.

As a result of the SWMU deferral approach, the SWMUs located within OU-2A (Sites 9, 13, 19, 22, and 23) and deferred to the CERCLA program are evaluated in this appendix to the RI report for OU-2A (Sites 9, 13, 19, 22, and 23). Table 2-1 lists the SWMUs that are addressed in this report, including OWS 588, associated with Industrial Waste Treatment Plant 410 which received closure from the DTSC on November 9, 1998. In addition, several SWMUs located within OU-2A (Sites 9, 13, 19, 22, and 23) are recommended for deferral to the TPH program. The SWMUs recommended for deferral to the TPH program are listed in Table 2-2 and are evaluated in Table 3-1.

### **3.0 SOLID WASTE MANAGEMENT UNIT EVALUATION**

Figure 3-1 shows the location of all of the SWMUs within OU-2A (Sites 9, 13, 19, 22, and 23). Table 3-1 presents one-page SWMU profiles for each of the SWMUs in OU-2A. Each profile provides descriptive information on a SWMU, identifies the Navy program under which the SWMU was investigated, and presents the investigation results. Each profile also recommends either NFA or further action. Many of the profiles reference a figure for CERCLA Sites 9, 13, 19, 22, or 23 (see Figures 3-2 through 3-5) that provides analytical data from soil or groundwater samples collected near the SWMU to examine potential sources of contamination and migration pathways. The analytical results are compared to appropriate screening levels for each chemical, which include TPH preliminary remediation criteria listed in the closure strategy for petroleum-contaminated sites (Navy 2001), preliminary remediation goals for soil (EPA 1996, 2002), background concentrations for metals in soil (Tetra Tech 2001b), or maximum contaminant levels for groundwater (California Department of Health Services 2003).

### **4.0 RECOMMENDATIONS**

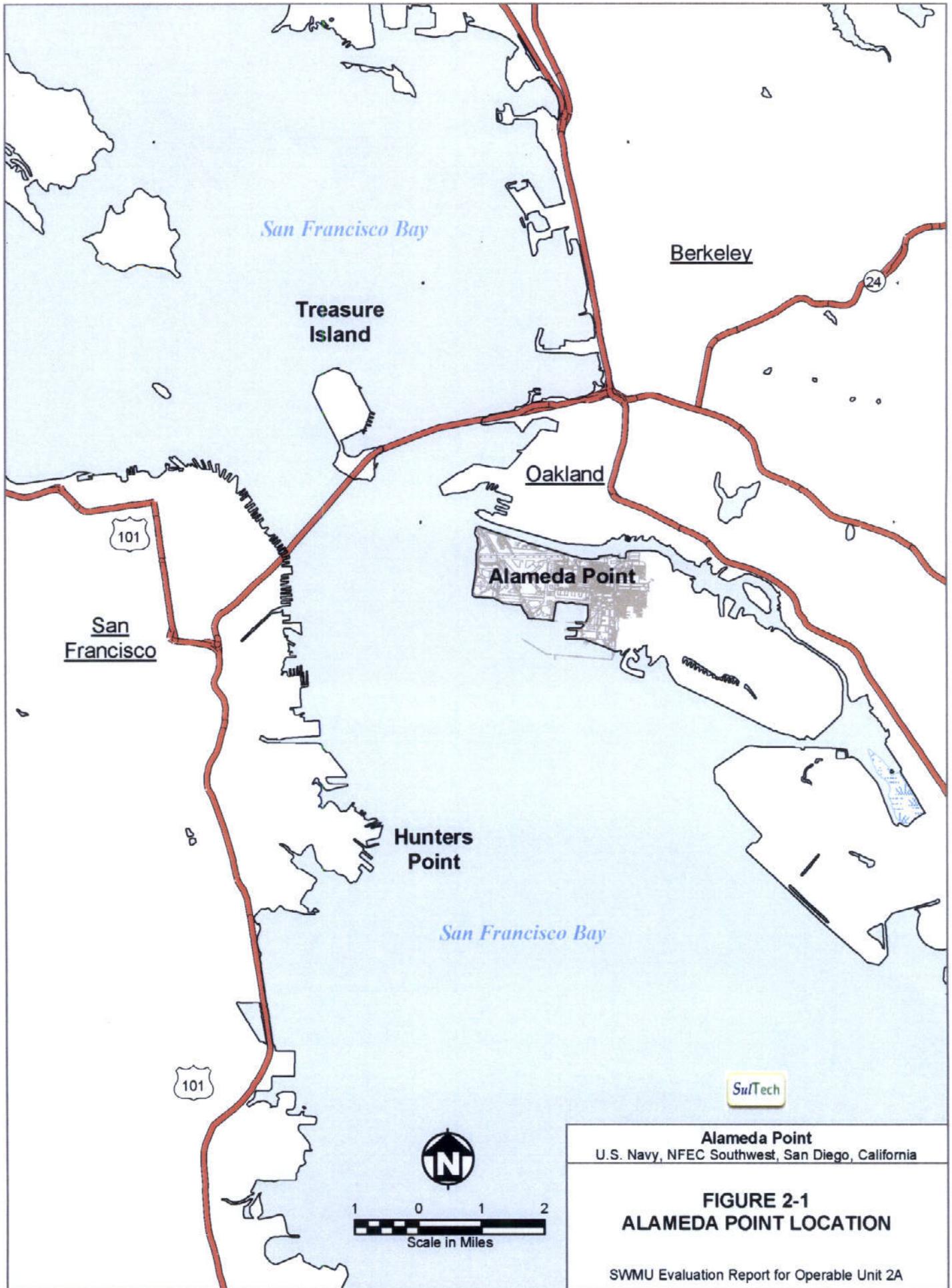
Based on the information presented in Section 3.0, 13 SWMUs are recommended for deferral to the CERCLA program, including 9 SWMUs recommended for NFA, one SWMU (OWS 588) closed by DTSC on November 9, 1998, and three SWMUs recommended for further action under CERCLA. Eleven SWMUs are recommended for deferral to the TPH program, including UST(R)-17 recommended for NFA and ten SWMUs recommended for further action. The Navy is requesting concurrence on these recommendations.

## 5.0 REFERENCES

- California Department of Health Services. 2003. "Maximum Contaminant Levels in Drinking Water" (extracted from Title 22 of the California Code of Regulations Sections 64431 – 64672.3). June 12.
- California Environmental Protection Agency Department of Toxic Substances Control (DTSC). 1992. "RCRA Facility Assessment, Naval Air Station, Alameda, California." April.
- DTSC. 1993. "California Environmental Protection Agency Department of Toxic Substances Control Hazardous Waste RCRA Part B Permit Issued to the United States of America and U.S. Department of Navy for NAS Alameda." June.
- DTSC. 1999. Letter from DTSC to Commanding Officer, Engineering Field Activity, West, Naval Facilities Command concerning Review of RCRA Status for Environmental Baseline Survey at Alameda Point, Alameda, California. November 4.
- International Technology Corporation. 2001. "EBS Data Evaluation Summaries - Final, Alameda Point, Alameda, California, Volumes 0 through XIV." January.
- Tetra Tech EM Inc (Tetra Tech). 2001a. "Evaluation of Total Petroleum Hydrocarbons at EBS Parcels at Alameda Point. October.
- Tetra Tech. 2001b. "Summary of Background Concentrations in Soil and Groundwater, Alameda Point, Alameda, California." November.
- Tetra Tech. 2003. "Final Supplemental Environmental Baseline Survey, Alameda Point, Alameda, California." March.
- U.S. Department of Navy. 2001. "Preliminary Remediation Criteria and Closure Strategy for Petroleum-Contaminated Sites at Alameda Point, Alameda, California." May 16.
- U.S. Environmental Protection Agency (EPA). 1996. "Region 9 Preliminary Remediation Goals."
- EPA. 2002. "Region 9 Preliminary Remediation Goals." October.

**FIGURES**

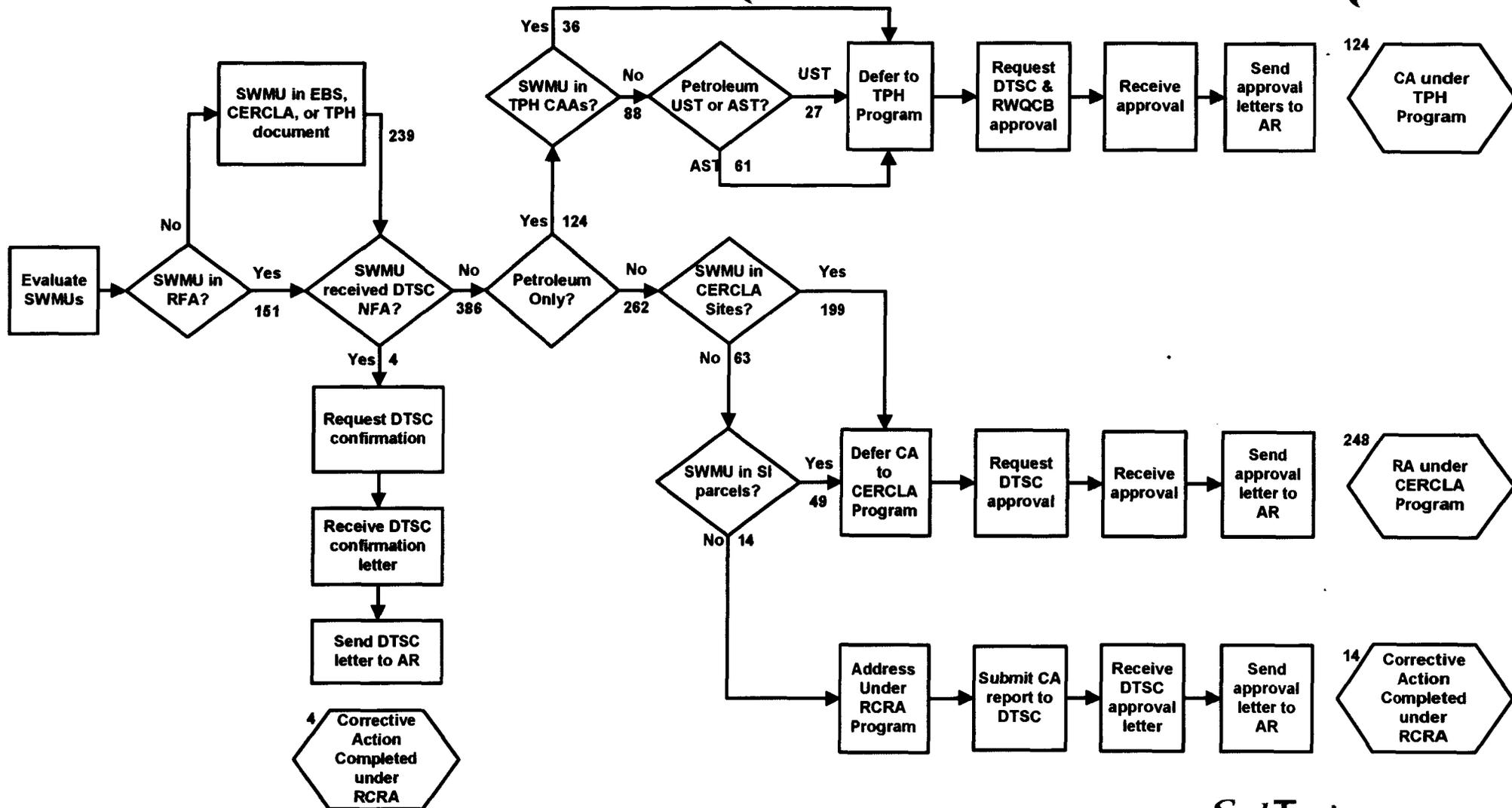
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**Alameda Point**  
 U.S. Navy, NFEC Southwest, San Diego, California

**FIGURE 2-1**  
**ALAMEDA POINT LOCATION**

SWMU Evaluation Report for Operable Unit 2A



**NOTES**

1. SWMUs include CERCLA sites, USTs, ASTs, oil-water separators, washdown areas and underground fuel pipelines but exclude RCRA regulated units
2. Numbers indicate number of SWMUs

**ACRONYMS**

AR	Administrative Record	RA	Response Action
AST	Aboveground Storage Tank	RCRA	Resource Conservation and Recovery Act
CA	Corrective Action	RFA	RCRA Facility Assessment
CAA	Corrective Action Area	RWQCB	Regional Water Quality Control Board
CERCLA	Comp. Env. Resp., Compensation, and Liability Act	SI	Site Investigation
DTSC	CA EPA Department of Toxic Substances Control	SWMU	Solid Waste Management Unit
EBS	Environmental Baseline Survey	TPH	Total Petroleum Hydrocarbon
NFA	No Further Action	UST	Underground Storage Tank

*SulTech*

Alameda Point  
NAVFAENGCOM Southwest Division, San Diego, CA

Figure 2-2  
**SOLID WASTE MANAGEMENT UNIT  
DEFERRAL APPROACH  
RCRA Hazardous Waste Facility Permit  
EPA ID CA 2170023236  
NAS Alameda, Alameda, CA**

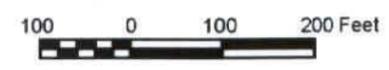
SWMU Evaluation Report for Operable Unit 2A  
(Sites 9, 13, 19, 22, and 23)



- CERCLA SITE BOUNDARY
- CERCLA SITE IN OPERABLE UNIT 2A
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- GENERATOR ACCUMULATION POINT (GAP)
- OIL-WATER SEPARATOR (OWS)
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- UNDERGROUND STORAGE TANK (UST), PRESENT
- SWMUs DEFERRED TO THE TPH PROGRAM
- SWMUs CLOSED BY DTSC
- LAND COVER
- BUILDING**
- Present
- Removed

Notes:

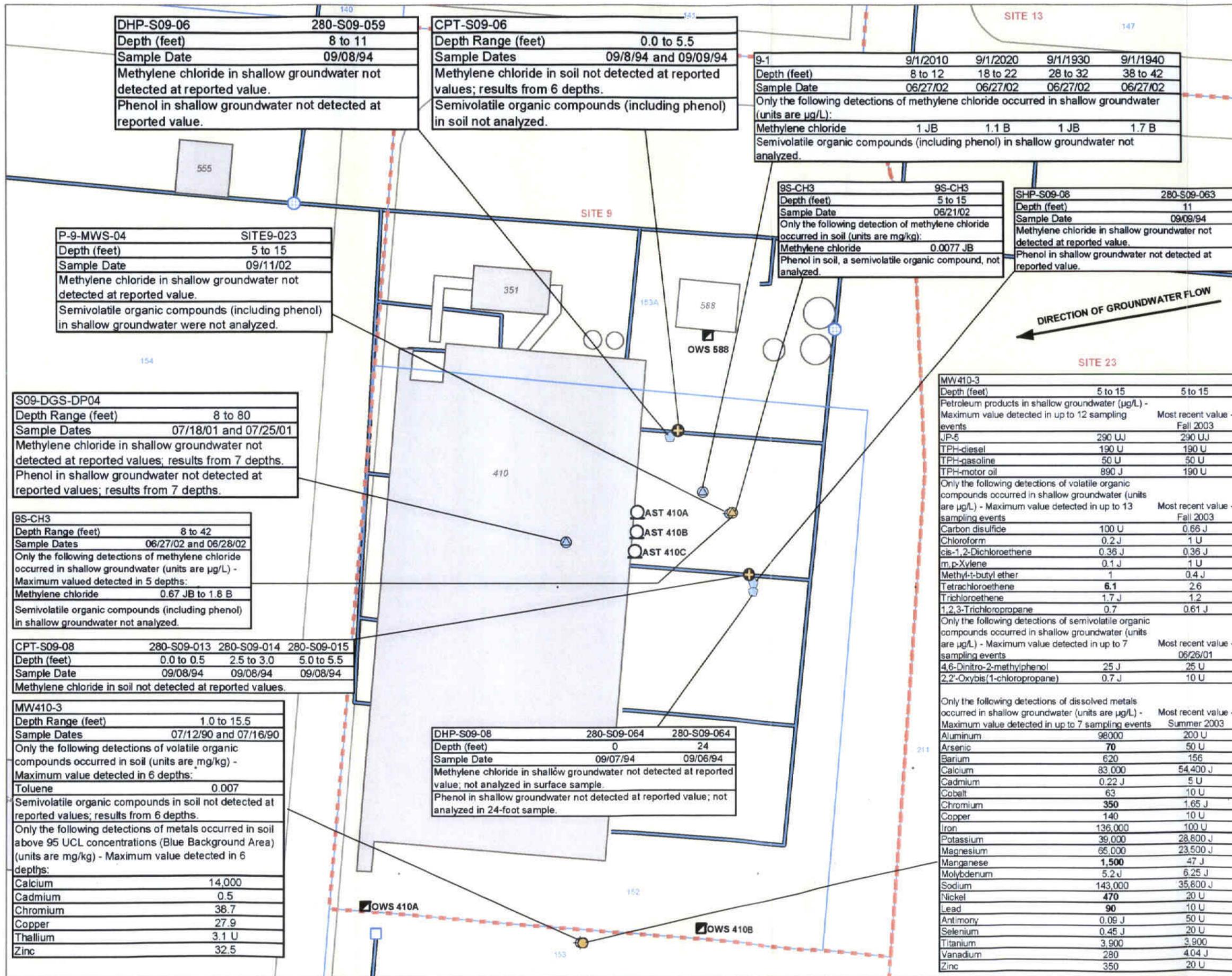
AOC = Area of concern  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 DTSC = Department of Toxic Substances Control  
 NADEP = Naval Aviation Depot  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons



**Alameda Point**  
 NAVFACENGCOM Southwest Division, San Diego, CA

**FIGURE 3-1**  
**SWMUs Located Within Operable Unit 2A**  
**(Sites 9, 13, 19, 22 and 23)**

SWMU Evaluation Report for Operable Unit 2A



**GROUNDWATER SAMPLING LOCATION**

- Direct-Push
- Hydropunch
- Monitoring Well

**SOIL SAMPLING LOCATION**

- Direct-Push
- Soil Boring
- Soil Punch
- MANHOLE
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- STORM SEWER LINE
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER
- BUILDING
  - Present
  - Removed

**Notes:**

B = Compound detected in an associated blank as well as the sample  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 MCL = Maximum contaminant level  
 mg/kg = milligrams per kilogram  
 NA = Not Analyzed  
 NADEP = Naval Aviation Depot  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)  
 UCL = Upper confidence limit  
 µg/L = micrograms per liter

Bold values indicate "Exceeds primary or secondary MCL"  
 Only methylene chloride and phenol results are presented for ASTs 410A, 410B, and 410C.

25 0 25 50 Feet

**Alameda Point**  
 NAVFACENGCOM Southwest Division, San Diego, CA

**FIGURE 3-2**  
**CERCLA Site 9**  
**SWMU Soil and Groundwater Sample Results**

SWMU Evaluation Report for Operable Unit 2A

210-IW-001	210I-001	210I-011
Depth (feet)	3.0 to 3.5	3.0 to 3.5
Sample Date	01/05/95	01/05/95
Petroleum products in soil (mg/kg):		
Oil and Grease	1,010	1,060
TPH-diesel	11 U	450 YJ
TPH-gasoline	0.56 U	11 ZJ
TPH-motor oil	200 YJ	22 U
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg):		
Ethylbenzene	0.011 U	0.008 J
Semivolatile organic compounds in soil not detected at reported values.		
Pesticides and herbicides in soil not detected at reported values.		
Only the following detections of PAHs occurred in soil (units are mg/kg):		
Benzo(a)anthracene	0.032 J	1.5 U
Benzo(a)pyrene	0.032 J	1.5 U
Benzo(b)fluoranthene	0.038 J	1.5 U
Chrysene	0.041 J	1.5 U
Fluoranthene	0.060 J	1.5 U
Indeno(1,2,3-cd)pyrene	0.020 J	1.5 U
2-Methylnaphthalene	0.37 U	1 J
Phenanthrene	0.037 J	1.5 U
Pyrene	0.064 J	1.5 U
Only the following detections of metals in soil above 95 UCL concentrations (Blue Background Area) occurred (units are mg/kg):		
Aluminum	7,390 J	9,510 J
Barium	113 J	64.6 J
Beryllium	1.5	2.4
Cadmium	0.11 B	0.11 B
Cobalt	6 B	8.4 B
Copper	20.5	28.1
Iron	10,400 J	17,500 J
Potassium	1,030 B	976 B
Lead	17.5 EJ	15.7 EJ
Magnesium	2,570	3,570
Manganese	158	189
Nickel	27.2	32.8
Thallium	3.1	4.2
Vanadium	26.4	38
Zinc	50.4	61.1

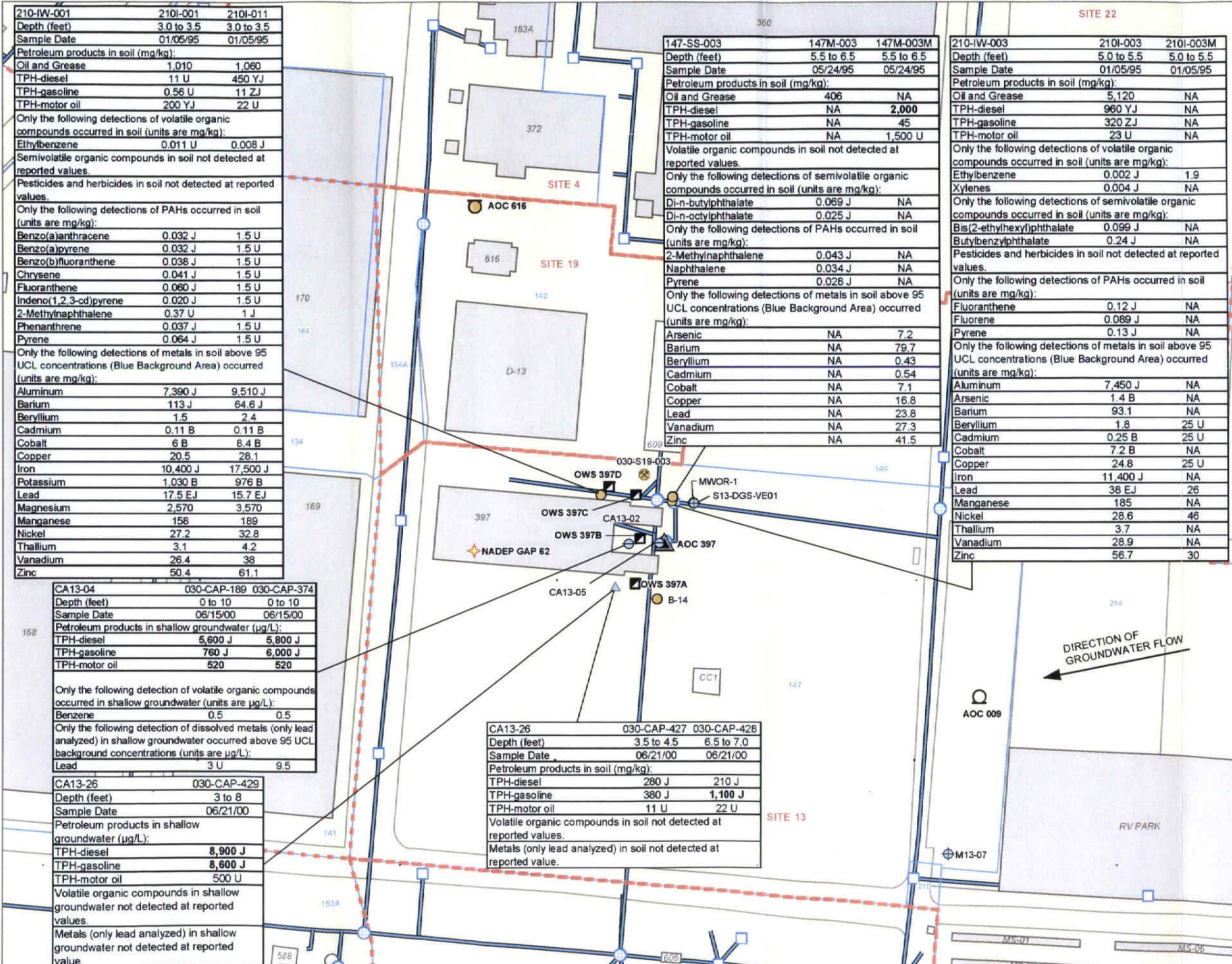
CA13-04	030-CAP-189	030-CAP-374
Depth (feet)	0 to 10	0 to 10
Sample Date	06/15/00	06/15/00
Petroleum products in shallow groundwater (µg/L):		
TPH-diesel	5,600 J	5,800 J
TPH-gasoline	760 J	6,000 J
TPH-motor oil	520	520
Only the following detection of volatile organic compounds occurred in shallow groundwater (units are µg/L):		
Benzene	0.5	0.5
Only the following detection of dissolved metals (only lead analyzed) in shallow groundwater occurred above 95 UCL background concentrations (units are µg/L):		
Lead	3 U	9.5

CA13-26	030-CAP-429
Depth (feet)	3 to 8
Sample Date	06/21/00
Petroleum products in shallow groundwater (µg/L):	
TPH-diesel	8,900 J
TPH-gasoline	8,600 J
TPH-motor oil	500 U
Volatile organic compounds in shallow groundwater not detected at reported values.	
Metals (only lead analyzed) in shallow groundwater not detected at reported value.	

CA13-26	030-CAP-427	030-CAP-428
Depth (feet)	3.5 to 4.5	6.5 to 7.0
Sample Date	06/21/00	06/21/00
Petroleum products in soil (mg/kg):		
TPH-diesel	280 J	210 J
TPH-gasoline	380 J	1,100 J
TPH-motor oil	11 U	22 U
Volatile organic compounds in soil not detected at reported values.		
Metals (only lead analyzed) in soil not detected at reported value.		

147-SS-003	147M-003	147M-003M
Depth (feet)	5.5 to 6.5	5.5 to 6.5
Sample Date	05/24/95	05/24/95
Petroleum products in soil (mg/kg):		
Oil and Grease	406	NA
TPH-diesel	NA	2,000
TPH-gasoline	NA	45
TPH-motor oil	NA	1,500 U
Volatile organic compounds in soil not detected at reported values.		
Only the following detections of semivolatile organic compounds occurred in soil (units are mg/kg):		
Di-n-butylphthalate	0.069 J	NA
Di-n-octylphthalate	0.025 J	NA
Only the following detections of PAHs occurred in soil (units are mg/kg):		
2-Methylnaphthalene	0.043 J	NA
Naphthalene	0.034 J	NA
Pyrene	0.028 J	NA
Only the following detections of metals in soil above 95 UCL concentrations (Blue Background Area) occurred (units are mg/kg):		
Arsenic	NA	7.2
Barium	NA	79.7
Beryllium	NA	0.43
Cadmium	NA	0.54
Cobalt	NA	7.1
Copper	NA	16.8
Lead	NA	23.8
Vanadium	NA	27.3
Zinc	NA	41.5

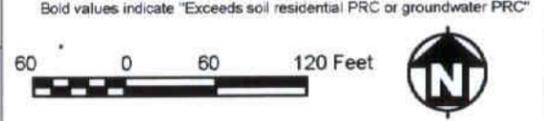
210-IW-003	210I-003	210I-003M
Depth (feet)	5.0 to 5.5	5.0 to 5.5
Sample Date	01/05/95	01/05/95
Petroleum products in soil (mg/kg):		
Oil and Grease	5,120	NA
TPH-diesel	960 YJ	NA
TPH-gasoline	320 ZJ	NA
TPH-motor oil	23 U	NA
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg):		
Ethylbenzene	0.002 J	1.9
Xylenes	0.004 J	NA
Only the following detections of semivolatile organic compounds occurred in soil (units are mg/kg):		
Bis(2-ethylhexyl)phthalate	0.099 J	NA
Butylbenzylphthalate	0.24 J	NA
Pesticides and herbicides in soil not detected at reported values.		
Only the following detections of PAHs occurred in soil (units are mg/kg):		
Fluoranthene	0.12 J	NA
Fluorene	0.089 J	NA
Pyrene	0.13 J	NA
Only the following detections of metals in soil above 95 UCL concentrations (Blue Background Area) occurred (units are mg/kg):		
Aluminum	7,450 J	NA
Arsenic	1.4 B	NA
Barium	93.1	NA
Beryllium	1.8	25 U
Cadmium	0.25 B	25 U
Cobalt	7.2 B	NA
Copper	24.8	25 U
Iron	11,400 J	NA
Lead	38 EJ	26
Manganese	185	NA
Nickel	28.6	46
Thallium	3.7	NA
Vanadium	28.9	NA
Zinc	56.7	30



- SOIL SAMPLING LOCATION**
- Excavation
  - Soil Boring
  - Vacuum Excavation
- GROUNDWATER SAMPLING LOCATION**
- Geoprobe
  - Monitoring Well
  - Piezometer
  - SWMUs DEFERRED TO THE TPH PROGRAM
  - MANHOLE
  - CATCH BASIN
  - GENERATOR ACCUMULATION POINT (GAP)
  - OIL-WATER SEPARATOR (OWS)
  - ABOVEGROUND STORAGE TANK (AST), REMOVED
  - UNDERGROUND STORAGE TANK (UST), PRESENT
  - STORM SEWER LINE
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER**
- LAND COVER
- BUILDING**
- Present
  - Removed

Notes:  
AOC = Area of Concern  
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
E = Compound concentration exceeds the gas chromatograph/mass spectrometer (GC/MS) calibration range  
J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
M = Mobile laboratory  
mg/kg = milligrams per kilogram  
NA = Not Analyzed  
NADEP = Naval Aviation Depot  
PAH = Polynuclear aromatic hydrocarbon  
PRC = Preliminary Remediation Criteria  
SWMU = Solid Waste Management Unit  
TPH = Total petroleum hydrocarbons  
U = Analyzed for, but not detected (at reported value)  
UCL = Upper confidence limit  
µg/L = micrograms per liter  
Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard  
Z = Chromatographic response did not resemble a typical fuel pattern

Bold values indicate "Exceeds soil residential PRC or groundwater PRC"



**SuTech**

**Alameda Point**  
NAVFAECNGCOM Southwest Division, San Diego, CA

**FIGURE 3-3**  
**CERCLA Site 13**  
**SWMU Soil and Groundwater Sample Results**

SWMU Evaluation Report for Operable Unit 2A

372-MW2	372-MW2	372-MW2	372-MW2	372-MW2	372-MW2	372-MW2
Depth (feet)	3.5	2.6 to 12.6	2.6 to 12.6	2.6 to 12.6	2.6 to 12.6	2.6 to 12.6
Sample Date	01/20/95	02/07/95	12/17/97	03/17/98	09/28/98	04/02/99
Petroleum products in soil (mg/kg):		Petroleum products in shallow groundwater (µg/L):				
JP-5	NA	Jet Fuel	NA	50 U	80	50 U
TPH-diesel	17	TPH-diesel	150	64	110	67
TPH-gasoline	1 U	TPH-gasoline	50 U	50 U	50 U	50 U
TPH-motor oil	NA	TPH-motor oil	NA	250 U	250 U	250 U
Volatile organic compounds (BTEX only) in soil not detected at reported values.		Only the following detection of volatile organic compounds occurred in shallow groundwater (units are µg/L):				
		1,2-Dichloroethene	NA	NA	0.5	NA

CA04-02	030-CAP-037
Depth (feet)	10
Sample Date	04/27/00
Petroleum products in shallow groundwater (µg/L):	
TPH-diesel	110 J
TPH-gasoline	220 UJ
TPH-motor oil	500 U
Volatile organic compounds in shallow groundwater not detected at reported values.	

372-12-ERM	372-W12
Depth (feet)	0
Sample Date	01/10/95
Petroleum products in shallow groundwater (µg/L):	
TPH-diesel	500 U
TPH-gasoline	500 U
TPH-motor oil	NA
Only the following detections of volatile organic compounds (BTEX only) occurred in shallow groundwater (units are µg/L):	
Benzene	1.1
Ethylbenzene	0.6
Xylene	2.5

030-S19-007	030-S19-007
Depth (feet)	0.0 to 2.5
Sample Date	10/22/98
Petroleum products in soil (mg/kg):	
JP-5	11 U
TPH-diesel	11 U
TPH-gasoline	0.05 J
TPH-motor oil	11 U
Volatile organic compounds in soil not detected at reported values.	
Semivolatile organic compounds in soil not detected at reported values.	
Pesticides in soil not detected at reported values.	

BD13-5	BD13-5 [0.5-1.0]	BD13-5 [1.0-1.5]	BD13-5 [2.0-2.5]	BD13-5 [2.5-3.0]	BD13-5 [5.0-5.5]	BD13-5 [5.5-6.0]	BD13-5 [9.5-10.0]	BD13-5 [10.0-10.5]	BD13-5 [11.0-11.5]	BD13-5 [11.5-12.0]	BD13-5 [14.0-14.5]
Depth (feet)	0.5 to 1.0	1.0 to 1.5	2.0 to 3.0	2.5 to 3.0	5.0 to 6.0	5.5 to 6.0	9.5 to 10	10 to 10.5	11 to 11.5	11.5 to 12	14 to 14.5
Sample Date	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90	07/03/90
Petroleum products in soil (mg/kg):											
TRPH	NA	1.7 U	NA	102	NA	8.9	NA	1.9 U	NA	1.9 U	NA
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg):											
Ethylbenzene	NA	NA	0.0054 U	NA	0.006 U	NA	0.008	NA	0.0059 U	NA	0.0059 U
Toluene	NA	NA	0.022	NA	0.074	NA	0.056	NA	0.011	NA	0.013
Xylene	NA	NA	0.021	NA	0.006 U	NA	0.051	NA	0.0059 U	NA	0.0059 U
Semivolatile organic compounds in soil not detected at reported values at the following depths: 0.5 to 1.0, 2.0 to 2.5, 5.5 to 6.0 and 10 to 10.5.											
Pesticides in soil not detected at reported values at the following depths: 0.5 to 1.0, 2.5 to 3.0, 5.5 to 6.0 and 10 to 10.5.											

**GROUNDWATER SAMPLING LOCATION**

- ▲ Geoprobe
- ⊕ Monitoring Well
- ⊖ Piezometer

**SOIL SAMPLING LOCATION**

- ⊗ Excavation
- ⊕ Monitoring Well
- Soil Boring

**UNDERGROUND STORAGE TANK (UST), PRESENT**

- ⊙

**CATCH BASIN**

- 

**STORM SEWER LINE**

- 

**CERCLA SITE BOUNDARY**

- - -

**ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER**

- #

**LAND COVER**

- Present
- Removed

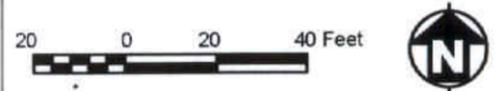
**BUILDING**

- Present
- Removed

Notes:

AOC = Area of concern  
 BTEX = Benzene, toluene, ethylbenzene, and xylenes  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 MCL = Maximum contaminant level  
 mg/kg = milligrams per kilogram  
 NA = Not Analyzed  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 U = Analyzed for, but not detected (at reported value)  
 µg/L = micrograms per liter

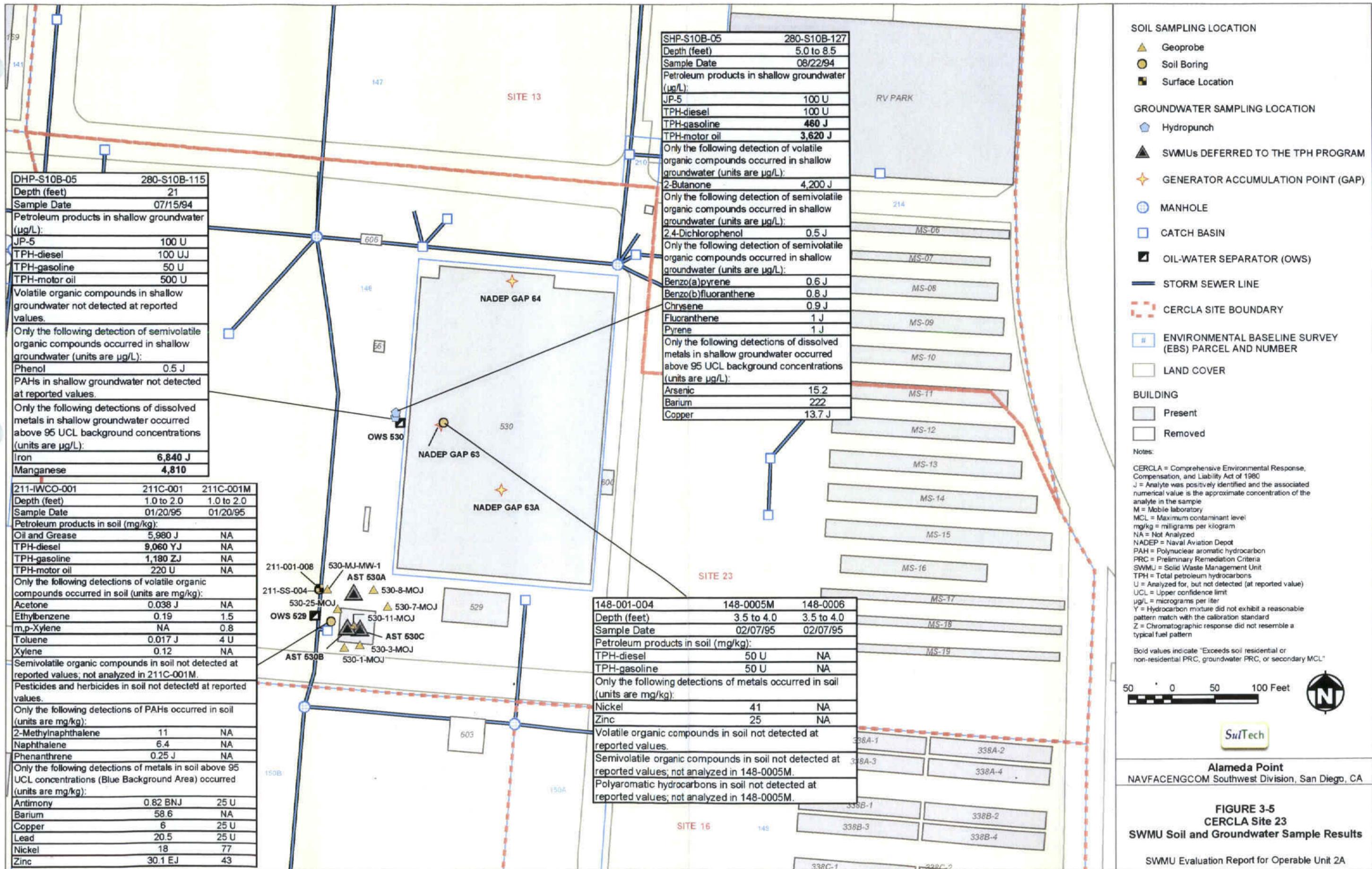
Bold value indicates "Exceeds MCL"



**Alameda Point**  
 NAVFACENGCOM Southwest Division, San Diego, CA

**FIGURE 3-4**  
**CERCLA Site 19**  
**AOC 616 Soil and Groundwater Sample Results**

SWMU Evaluation Report for Operable Unit 2A



  
**Alameda Point**  
 NAVFACENGCOM Southwest Division, San Diego, CA  
**FIGURE 3-5**  
**CERCLA Site 23**  
**SWMU Soil and Groundwater Sample Results**  
 SWMU Evaluation Report for Operable Unit 2A

**TABLES**

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**TABLE 2-1: SOLID WASTE MANAGEMENT UNITS DEFERRED TO THE CERCLA PROGRAM IN OPERABLE UNIT 2A (SITES 9, 13, 19, 22, AND 23) AT ALAMEDA POINT**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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CERCLA Site	Identification	Navy Recommendation/ Closure Status	Refer to Figure for Sample Results
9	AST 410A	NFA Recommended	Figure 3-2
9	AST 410B	NFA Recommended	Figure 3-2
9	AST 410C	NFA Recommended	NA
9	OWS 410A	Further Action Recommended	Figure 3-2
9	OWS 410B	NFA Recommended	Figure 3-2
9	OWS 588	Closed by DTSC	NA
13	AOC 009	Further Action Recommended	Figure 3-3
13	NADEP GAP 62	NFA Recommended	NA
19	AOC 616	NFA Recommended	Figure 3-4
22	OWS 547	Further Action Recommended	NA
23	NADEP GAP 63	NFA Recommended	Figure 3-5
23	NADEP GAP 63A	NFA Recommended	NA
23	NADEP GAP 64	NFA Recommended	NA

Notes:

AOC	Area of concern
AST	Aboveground storage tank
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
GAP	Generation accumulation point
NA	Not applicable
NADEP	Naval Aviation Depot
NAS	Naval Air Station
NFA	No further action
OWS	Oil-water separator
(R)	RCRA
RCRA	Resource Conservation and Recovery Act
SWMU	Solid waste management unit
UST	Underground Storage Tank
WD	Washdown

**TABLE 2-2: SOLID WASTE MANAGEMENT UNITS RECOMMENDED FOR DEFERRAL TO THE TOTAL PETROLEUM HYDROCARBON PROGRAM IN OPERABLE UNIT 2A (SITES 9, 13, 19, 22, AND 23) AT ALAMEDA POINT**

Solid Waste Management Unit Evaluation Report for Operable Unit 2A

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CERCLA Site	Identification	Material Stored/Disposed	Navy Recommendation/ Closure Status
13	AOC 397	Jet fuel from spill	Further Action Recommended
13	OWS 397A	Dirty water sump	Further Action Recommended
13	OWS 397B	Dirty water sump	Further Action Recommended
13	OWS 397C	Dirty water sump	Further Action Recommended
13	OWS 397D	Dirty water sump	Further Action Recommended
22	UST(R)-17	Gasoline	NFA Recommended
23	AST 530A	1010 oil	Further Action Recommended
23	AST 530B	Fuel or oil	Further Action Recommended
23	AST 530C	Jet fuel	Further Action Recommended
23	OWS 529	Unknown	Further Action Recommended
23	OWS 530	Unknown	Further Action Recommended

Notes:

AOC Area of concern  
 AST Aboveground storage tank  
 GAP Generation accumulation point  
 NA Not applicable  
 NAS Naval Air Station  
 NFA No further action  
 OWS Oil-water separator  
 (R) RCRA  
 RCRA Resource Conservation and Recovery Act  
 RWQCB Regional Water Quality Control Board  
 SWMU Solid waste management unit  
 UST Underground Storage Tank

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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**SWMU Identifier** AST 410A **Refer to Figure #** Figure 3-2

**Navy Recommendation/Closure Status** **NFA Recommended**

**Location Description**

**Disposal Parcel** EDC 10 **CERCLA Site** 9  
**EBS Subparcel** 152 **TPH CAA** NA  
**Associated Building** 410 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Aircraft Stripping Facility/Corrosion Control  
**Additional Information** East of Building 410

**Operational Information for SWMU**

**Type of Unit** Aboveground Storage Tank(s)  
**Capacity (gallons)** 10,000  
**Period of Operation** Unknown  
**Material Managed at SWMU** Methylene chloride

**Source of Initial SWMU Identification**

**SWMU # in RFA** Not identified in RFA **Other Sources** EBS (IT 2001)  
**Recommendation in RFA** NA

**Tank-Related Information**

**Status of Tank** Removed  
**Status of Associated Pipes** Removed

**Data Analysis**

AST 410A is one of three ASTs located on the eastern side of Building 410. The 10,000-gallon AST held methylene chloride, which was used inside Building 410, an aircraft stripping facility. The EBS stated that open space around the building was covered by concrete. Stains on the concrete suggested that undocumented spills (believed to be aircraft fuel) might have occurred in the open space; no documented incidents exist (IT 2001). As depicted on the figure for Site 9, multiple groundwater samples were collected in the vicinity (50 foot radius) at depths ranging from 8 to 80 feet bgs; methylene chloride was not detected or detected at concentrations below 2 ug/L, which is below the MCL (California Department of Health Services 2004). All detected concentrations were qualified with a "B" indicating that methylene chloride was also detected in an associated laboratory blank. Multiple soil samples were also collected at depths ranging from the surface to 15 feet bgs. Methylene chloride was only detected in one soil sample at 0.0077 mg/kg. Like the detected groundwater results, this result was qualified with a "B". Methylene chloride is a common laboratory contaminant. Given these facts, it does not appear that the AST 410A was a source of release(s) to soil or groundwater. NFA is recommended for AST 410A.

**2002 Site Visit**

AST removed prior to 2002 site visit.

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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**SWMU Identifier** AST 410B **Refer to Figure #** Figure 3-2  
**Navy Recommendation/Closure Status** NFA Recommended  
**Location Description**  
**Disposal Parcel** EDC 10 **CERCLA Site** 9  
**EBS Subparcel** 152 **TPH CAA** NA  
**Associated Building** 410 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Aircraft Stripping Facility/Corrosion Control  
**Additional Information** East of Building 410

**Operational Information for SWMU**

**Type of Unit** Aboveground Storage Tank(s)  
**Capacity (gallons)** 10,000  
**Period of Operation** Unknown

**Material Managed at SWMU** Phenol

**Source of Initial SWMU Identification**

**SWMU # in RFA** Not identified in RFA **Other Sources** EBS (IT 2001)  
**Recommendation in RFA** NA

**Tank-Related Information**

**Status of Tank** Removed  
**Status of Associated Pipes** Removed

**Data Analysis**

AST 410B is one of three ASTs located on the eastern side of Building 410. The 10,000-gallon AST held phenol, which was used inside Building 410, an aircraft stripping facility. The EBS stated that open space around the building was covered by concrete. Stains on the concrete suggested that undocumented spills (believed to be aircraft fuel) might have occurred in the open space; no documented incidents exist (IT 2001). As depicted of the figure for Site 9, no nearby soil samples were analyzed for phenol; however, multiple groundwater samples were collected in the vicinity (65 foot radius) at depths ranging from the surface to 80 feet bgs. Phenol was not detected in groundwater. Given these facts, it does not appear that the AST 410B was a source of release(s) to soil or groundwater. NFA is recommended for AST 410B.

**2002 Site Visit**

AST removed prior to 2002 site visit.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>AST 410C</b>	<b>Refer to Figure #</b>	<b>NA</b>
<b>Navy Recommendation/Closure Status</b>		<b>NFA Recommended</b>	
<b><u>Location Description</u></b>			
<b>Disposal Parcel</b>	<b>EDC 10</b>	<b>CERCLA Site</b>	<b>9</b>
<b>EBS Subparcel</b>	<b>152</b>	<b>TPH CAA</b>	<b>NA</b>
<b>Associated Building</b>	<b>410</b>	<b>Building Status</b>	<b>Present</b>
		<b>Leasing Status</b>	<b>Leased by ARRA</b>
<b>Building Name</b>	<b>Aircraft Stripping Facility/Corrosion Control</b>		
<b>Additional Information</b>	<b>East of Building 410</b>		
<b><u>Operational Information for SWMU</u></b>			
<b>Type of Unit</b>	<b>Aboveground Storage Tank(s)</b>		
<b>Capacity (gallons)</b>	<b>1,500</b>		
<b>Period of Operation</b>	<b>Unknown</b>		
<b>Material Managed at SWMU</b>	<b>Surfactant</b>		
<b><u>Source of Initial SWMU Identification</u></b>			
<b>SWMU # in RFA</b>	<b>Not identified in RFA</b>	<b>Other Sources</b>	<b>EBS (IT 2001)</b>
<b>Recommendation in RFA</b>	<b>NA</b>		
<b><u>Tank-Related Information</u></b>			
<b>Status of Tank</b>	<b>Removed</b>		
<b>Status of Associated Pipes</b>	<b>Removed</b>		

#### **Data Analysis**

AST 410C is one of three former ASTs located on the eastern side of Building 410. The 1,500-gallon AST held surfactant, which was used inside Building 410, an aircraft stripping facility. The EBS indicated that open space around the building was covered by concrete. Stains on the concrete suggested that undocumented spills (believed to be aircraft fuel) may have occurred in the open space; no documented incidents exist (IT 2001). The former tank content (surfactant) does not meet the definition of a hazardous material, hazardous waste, or petroleum product. Based on these facts NFA is recommended for AST 410C.

#### **2002 Site Visit**

AST removed prior to 2002 site visit.

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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**SWMU Identifier** OWS 410A **Refer to Figure #** Figure 3-2  
**Navy Recommendation/Closure Status** **Further Action Recommended**

**Location Description**

**Disposal Parcel** EDC 10 **CERCLA Site** 9  
**EBS Subparcel** 152 **TPH CAA** NA  
**Associated Building** 410 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Aircraft Stripping Facility/Corrosion Control  
**Additional Information** Southwestern corner of Building 410; west of washrack area along southern edge of building

**Operational Information for SWMU**

**Type of Unit** Oil-Water Separator  
**Capacity (gallons)** Unknown  
**Period of Operation** Unknown  
**Material Managed at SWMU** Rinsewater from washrack

**Source of Initial SWMU Identification**

**SWMU # in RFA** Not identified in RFA **Other Sources** Final FSP for Data Gap Sampling (Tetra Tech 2001)  
**Recommendation in RFA** NA

**Tank-Related Information**

**Status of Tank** NA  
**Status of Associated Pipes** NA

**Data Analysis**

OWS-410A is located within CERCLA Site 9, south of Building 410. The inactive OWS is located adjacent to an inactive, partially enclosed wash rack. During a July 2004 site visit, a drain was observed in the wash rack; it appeared at one time, to have been connected to the subject OWS. The OWS was not considered a potential source of soil and groundwater contamination at Site 9 in the OU-2A RI report; however, no sampling has been conducted near the OWS. The OU-2A RI report acknowledges this data gap. The general groundwater flow for this area is southwest. Further action is recommended for OWS-410A. The Site 9 area is recommended for remediation under the CERCLA program as commingled contamination. An FS is recommended for groundwater and will consider the proposed reuse of Site 9 in the evaluation of possible remedial alternatives.

**2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive; July 2004 visit: OWS contained water

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>OWS 410B</b>	<b>Refer to Figure #</b>	<b>Figure 3-2</b>
<b>Navy Recommendation/Closure Status</b>		<b>NFA Recommended</b>	
<b><u>Location Description</u></b>			
<b>Disposal Parcel</b>	EDC 10	<b>CERCLA Site</b>	9
<b>EBS Subparcel</b>	152	<b>TPH CAA</b>	NA
<b>Associated Building</b>	410	<b>Building Status</b>	Present
		<b>Leasing Status</b>	Leased by ARRA
<b>Building Name</b>	Aircraft Stripping Facility/Corrosion Control		
<b>Additional Information</b>	Southeastern corner of Building 410; collects water from drains in concrete around building		
<b><u>Operational Information for SWMU</u></b>			
<b>Type of Unit</b>	Oil-Water Separator		
<b>Capacity (gallons)</b>	Unknown		
<b>Period of Operation</b>	Unknown		
<b>Material Managed at SWMU</b>	Stormwater runoff		
<b><u>Source of Initial SWMU Identification</u></b>			
<b>SWMU # in RFA</b>	Not identified in RFA	<b>Other Sources</b>	Final FSP for Data Gap Sampling (Tetra Tech 2001)
<b>Recommendation in RFA</b>	NA		
<b><u>Tank-Related Information</u></b>			
<b>Status of Tank</b>	NA		
<b>Status of Associated Pipes</b>	NA		

#### **Data Analysis**

OWS-410B is located within CERCLA Site 9, southeast of Building 410. The inactive OWS collected storm water runoff from the concrete open space on the east side of Building 410. The EBS stated that open space around the building was covered by concrete. Stains on the concrete suggested that undocumented spills (believed to be aircraft fuel) might have occurred in the open space; no documented incidents exist (IT 2001). The general groundwater flow for this area is southwest. Monitoring well MW410-3 is the nearest downgradient well, approximately 60 feet away. Well boring soil samples were analyzed for metals, VOCs, SVOCs, and PAHs. Although analyzed, PAHs in soil were not evaluated in this assessment. As depicted on the figure for Site 9, no analytes exceeded residential PRGs (EPA 2002). Only those metals that exceeded the 95 UCL concentration (Blue Background Area) are shown. Up to 13 sampling events have occurred since the well was constructed; results for TPH, metals (total and dissolved), VOCs, SVOCs, and PAH are available. Although analyzed, PAHs in shallow groundwater were not evaluated in this assessment. Historically, Tetrachloroethene was detected in groundwater above the MCL (California Department of Health 2003); however, it was below the MCL in the most recent event. Selected metals (arsenic, chromium, manganese, nickel, and lead) were also historically detected in groundwater at concentrations above primary and secondary MCLs; however, no exceedances occurred in the most recent sampling event. Storm and sanitary sewers around Building 410 are believed to be the source of a chlorinated hydrocarbon groundwater plume in the area. The highest concentrations of VOCs in groundwater were detected adjacent to the sewer systems east of Building 410. Groundwater contamination has migrated towards the west from these sewers. OWS 410B is not a likely source (Tetra Tech 2004). NFA is recommended for OWS 410B.

#### **2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive; July 2004 visit: OWS contained water

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order  
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**SWMU Identifier** OWS 588 **Refer to Figure #** NA  
**Navy Recommendation/Closure Status** Closed by DTSC

Location Description

**Disposal Parcel** EDC 10 **CERCLA Site** 9  
**EBS Subparcel** 153A **TPH CAA** NA  
**Associated Building** 588 **Building Status** Removed **Leasing Status** NA  
**Building Name** Industrial Waste Treatment Plant (IWTP 410)  
**Additional Information** South of Building 588; associated with IWTP 410

Operational Information for SWMU

**Type of Unit** Oil-Water Separator  
**Capacity (gallons)** Unknown  
**Period of Operation** Unknown  
**Material Managed at SWMU** Unknown

Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA **Other Sources** CERFA EBS (ERM-West 1994)  
**Recommendation in RFA** NA

Tank-Related Information

**Status of Tank** NA  
**Status of Associated Pipes** NA

Data Analysis

OWS-588 is associated with IWTP 410, a regulated RCRA unit. IWTP 410 received closure from DTSC on November 9, 1998.

2002 Site Visit

OWS was observed during the 2002 site visit; it was inactive.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>AOC 009</b>	<b>Refer to Figure #</b>	<b>Figure 3-3</b>
<b>Navy Recommendation/Closure Status</b>		<b>Further Action Recommended</b>	
<b><u>Location Description</u></b>			
<b>Disposal Parcel</b>	<b>EDC 10</b>	<b>CERCLA Site</b>	<b>13</b>
<b>EBS Subparcel</b>	<b>147</b>	<b>TPH CAA</b>	<b>TPH CAA-13</b>
<b>Associated Building</b>	<b>NA</b>	<b>Building Status</b>	<b>NA</b>
		<b>Leasing Status</b>	<b>NA</b>
<b>Building Name</b>	<b>NA</b>		
<b>Additional Information</b>	<b>ASTs - 324, 325, 326, 327, 328; ASTs removed; coincident with former location of Pacific Coast Oil Works Company Refinery</b>		
<b><u>Operational Information for SWMU</u></b>			
<b>Type of Unit</b>	<b>Aboveground Storage Tanks(s)</b>		
<b>Capacity (gallons)</b>	<b>Unknown</b>		
<b>Period of Operation</b>	<b>Unknown</b>		
<b>Material Managed at SWMU</b>	<b>Petroleum Hydrocarbon (Fuel)</b>		
<b><u>Source of Initial SWMU Identification</u></b>			
<b>SWMU # in RFA</b>	<b>Not identified in RFA</b>	<b>Other Sources</b>	<b>EBS (IT 2001)</b>
<b>Recommendation in RFA</b>	<b>NA</b>		
<b><u>Tank-Related Information</u></b>			
<b>Status of Tank</b>	<b>Removed</b>		
<b>Status of Associated Pipes</b>	<b>Aboveground piping removed.</b>		

#### **Data Analysis**

AOC 009 consists of former ASTs 324 through 328 installed in 1947 on the eastern portion of Site 13. ASTs 324 through 328 were steel fuel storage tanks atop concrete foundations. The tanks were demolished before May 1990 (IT 2001). The specific capacities and contents of the tanks are unknown. During the late 1940s and 1950s, open space in this area was used for aircraft storage, and these tanks likely contained fuels to support aircraft operation and maintenance. No documented release(s) is known to have occurred from these tanks. Between 1879 and 1903, the former Pacific Coast Oil Works Company Refinery operated at the current location of Site 13 and possible portions of adjoining CERCLA Sites 19, 22, and 23. Historically, groundwater from Monitoring Well M13-07, located southeast of AST 328, contained the maximum concentrations of naphthalene (a component of petroleum-based fuels) and 2-methylnaphthalene (a component of crude oil). BTEX compounds and trimethylbenzenes are associated with areas of known refinery waste contamination. Further action is recommended for AOC 009. Petroleum-related compounds are commingled with CERCLA compounds associated with tarry refinery waste (TRW). The TRW and surrounding soil at Site 13 are recommended to be evaluated further in an FS. Groundwater impacted with benzene and TRW-associated compounds is recommended for further evaluation in an FS, as defined under CERCLA.

#### **2002 Site Visit**

AST removed prior to 2002 site visit.

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>AOC 397</b>	<b>Refer to Figure #</b>	<b>Figure 3-3</b>		
<b>Navy Recommendation/Closure Status</b>		<b>Further Action Recommended</b>			
<b><u>Location Description</u></b>					
<b>Disposal Parcel</b>	EDC 10	<b>CERCLA Site</b>	13		
<b>EBS Subparcel</b>	147	<b>TPH CAA</b>	TPH CAA-13		
<b>Associated Building</b>	397	<b>Building Status</b>	Present	<b>Leasing Status</b>	Leased by ARRA
<b>Building Name</b>	Engine Testing Cells and Aircraft Overhaul Plant Services Facility				
<b>Additional Information</b>	Building 397; 4,000- to 17,000-gallon spill of fuel/oil/water mixture (part of CAA 13)				
<b><u>Operational Information for SWMU</u></b>					
<b>Type of Unit</b>	Fuel Spill				
<b>Capacity (gallons)</b>	RCRA corrective action site				
<b>Period of Operation</b>	Unknown				
<b>Material Managed at SWMU</b>	Jet fuel from spill				
<b><u>Source of Initial SWMU Identification</u></b>					
<b>SWMU # in RFA</b>	AOC	<b>Other Sources</b>	NA		
<b>Recommendation in RFA</b>	RFI Required				
<b><u>Tank-Related Information</u></b>					
<b>Status of Tank</b>	NA				
<b>Status of Associated Pipes</b>	NA				

## **Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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### **Data Analysis**

The goal of this evaluation is to verify that no CERCLA contaminants were detected and that deferral to the TPH Program is appropriate. According to the EBS, Zone 22, Parcel 147, evaluation data summary report (IT 2001), AOC 397 consisted of a 4,000 to 17,000 gallon jet fuel/oil/water spill which occurred along the eastern side of Building 397. AOC 397 encompasses the spill area. Immediate cleanup involved pumping floating free product from the groundwater. Further cleanup involved skimming the fuel/oil/water mixture from the sewer and transferring the material to an oil/water separator. Finally, soil removal has been performed, a dual phase soil vapor and groundwater extraction system was installed in 2002, and remediation of soil and groundwater is underway. TPH contamination at this site is currently being addressed as part of the base-wide TPH Corrective Action Plan under CAA 13. Multiple sampling locations are shown on the figure for CERCLA Site 13; however, hit boxes are only provided for those locations in close proximity to an OWS. Sampling results from all locations were assessed in this evaluation. VOCs in soil and groundwater are consistent with fuel-related, petroleum-based contamination and primarily include BTEX compounds. Other VOCs sporadically detected in soil and groundwater include potential laboratory contaminants (i.e., acetone, 2-butanone, tert-butanol, and carbon disulfide). No SVOCs or PCBs were detected in groundwater; various laboratory-related phthalates (i.e., bis(2-ethylhexyl)phthalate, butylbenzylphthalate, di-n-butylphthalate, and di-n-octylphthalate) and NDMA (in one 1990 sample; compound detected in associated blank) were detected in soil at low concentrations. Low concentrations of pesticides were detected in soil (DDE and DDT less than 0.017 mg/kg at 7.5 feet bgs) and groundwater (DDT at 0.08 ug/l in the first event) at one location (MWOR-1). The pesticide data are from 1990; pesticides have not been detected in more recent sampling in the vicinity. Several PAHs, some fuel related (2-methylnaphthalene and naphthalene), were also detected in soil and groundwater at low estimated concentrations; soil concentrations were well below residential PRGs (EPA 2002). Detected metals concentrations exceeding 95 UCL concentrations (Blue Background Area) were also less than residential PRGs. Selected dissolved metals concentrations in groundwater exceeded 95 UCL concentrations; with the exception of a 1990 sample, none of the metals exceeded MCLs (California Department of Health 2003). Considering the past activities, the significant spill, and the type of contamination present, deferral to the TPH Program is recommended.

### **2002 Site Visit**

NA

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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**SWMU Identifier** NADEP GAP 62 **Refer to Figure #** NA  
**Navy Recommendation/Closure Status** NFA Recommended

#### Location Description

**Disposal Parcel** EDC 10 **CERCLA Site** 13  
**EBS Subparcel** 147 **TPH CAA** NA  
**Associated Building** 397 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Engine Testing Cells and Aircraft Overhaul Plant Services Facility  
**Additional Information** Building 397, Shop 96231

#### Operational Information for SWMU

**Type of Unit** Generator Accumulation Point  
**Capacity (gallons)** 55-gallon & 30-gallon drums  
**Period of Operation** GAPs were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.  
**Material Managed at SWMU** Mil-L-23699 lubrication and engine oil

#### Source of Initial SWMU Identification

**SWMU # in RFA** GI-45 **Other Sources** CERFA EBS (ERM-West 1994)  
**Recommendation in RFA** RFI Not Required

#### Tank-Related Information

**Status of Tank** NA  
**Status of Associated Pipes** NA

#### Data Analysis

NADEP GAP 62 consisted of 30- and 55-gallon storage drums resting on wooden pallets (to allow a forklift to move the drums), some atop a poly spill pallet, which acted as a secondary containment system. The area measured approximately 4 feet by 8 feet and was located inside Building 397 in Shop 96231. According to the RFA, NADEP GAP 62 exhibited a low potential for releases into soil and groundwater because the site was located indoors on a concrete floor. An RFI was not required (DTSC 1992). The Phase I EBS concluded that NADEP GAP 62 did not require further investigation because the site was paved and site inspectors did not observe staining (ERM-West 1994). A letter from DTSC dated November 4, 1999 recommended no further action for this SWMU (DTSC 1999). A description of NADEP GAP 62 was included in the EBS, Zone 22, Parcel 147 evaluation data summary report (IT 2001). NADEP GAP 62 was not considered a potential source of soil and groundwater contamination at Site 13 in the OU-2A RI report (Tetra Tech 2004). NFA is recommended for NADEP GAP 62.

#### 2002 Site Visit

NA

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order  
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**SWMU Identifier** OWS 397A **Refer to Figure #** Figure 3-3  
**Navy Recommendation/Closure Status** **Further Action Recommended**

Location Description

**Disposal Parcel** EDC 10 **CERCLA Site** 13  
**EBS Subparcel** 147 **TPH CAA** TPH CAA-13  
**Associated Building** 397 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Engine Testing Cells and Aircraft Overhaul Plant Services Facility  
**Additional Information** Eastern end of Building 397 (1 of 2 aboveground OWSs)

Operational Information for SWMU

**Type of Unit** Oil-Water Separator  
**Capacity (gallons)** 6,000  
**Period of Operation** Unknown  
**Material Managed at SWMU** Dirty water sump

Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA **Other Sources** TPH Data Gap Sampling Report (Tetra Tech 2001)  
**Recommendation in RFA** NA

Tank-Related Information

**Status of Tank** NA  
**Status of Associated Pipes** NA

Data Analysis

The goal of this evaluation is to verify that no CERCLA contaminants were detected and that deferral to the TPH Program is appropriate. OWS-397A is located within CAA 13 and is approximately 60 feet south of several former fuel lines. The OWS, 1 of 4, was installed near the eastern end of Building 397 to serve as a means of recycling oil from the waste stream before process water or stormwater was discharged to the storm drains. In 1991, a large spill (4,000 to 17,000 gallons of JP-5) was released from Building 397. Floor drains in the building were connected to OWSs. The spill caused associated OWSs to overflow. Refer to AOC 397 for cleanup activities. OWS 397A was filled with a cement slurry and closed in place in 1993 (Navy 1993) and is not a continuing potential source. Soil sample CA13-26, located approximately 25 feet west of the OWS, contains concentrations of gasoline above the residential PRC (Navy 2001). A grab groundwater sample from the location indicated concentrations of total TPH above the PRC for aquatic receptors. VOCs were not detected in soil or groundwater. Metals (only lead analyzed) in soil and groundwater were not detected above 95 UCL concentrations. This site is being evaluated under CAA 13 as part of the TPH program. Considering the past activities, the significant spill, and the type of contamination present, deferral to the TPH Program is recommended.

2002 Site Visit

OWS was observed during the 2002 site visit; it was inactive.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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**SWMU Identifier** OWS 397B **Refer to Figure #** Figure 3-3  
**Navy Recommendation/Closure Status** **Further Action Recommended**

Location Description

**Disposal Parcel** EDC 10 **CERCLA Site** 13  
**EBS Subparcel** 147 **TPH CAA** TPH CAA-13  
**Associated Building** 397 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Engine Testing Cells and Aircraft Overhaul Plant Services Facility  
**Additional Information** Eastern end of Building 397 (2 of 2 aboveground OWSs)

Operational Information for SWMU

**Type of Unit** Oil-Water Separator  
**Capacity (gallons)** 6,000  
**Period of Operation** Unknown  
**Material Managed at SWMU** Dirty water sump

Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA **Other Sources** TPH Data Gap Sampling Report (Tetra Tech 2001)  
**Recommendation in RFA** NA

Tank-Related Information

**Status of Tank** NA  
**Status of Associated Pipes** NA

Data Analysis

The goal of this evaluation is to verify that no CERCLA contaminants were detected and that deferral to the TPH Program is appropriate. OWS-397B is located within CAA 13 and is directly above a fuel line. The OWS, 1 of 4, was installed near the eastern end of Building 397 to serve as a means of recycling oil from the waste stream before process water or stormwater was discharged to the storm drains. In 1991, a large spill (4,000 to 17,000 gallons of JP-5) was released from Building 397. Floor drains in the building were connected to OWSs. The spill caused associated OWSs to overflow. Refer to AOC 397 for cleanup activities. OWS 397B was filled with a cement slurry and closed in place in 1993 (Navy 1993) and is not a continuing potential source. Groundwater sample CA13-04, located approximately 15 feet southwest of the OWS, contains TPH concentrations that exceed the total TPH PRC for aquatic receptors (Navy 2001). VOCs (Benzene) in groundwater are consistent with fuel-related, petroleum-based contamination. Metals (lead) in groundwater were detected above the 95 UCL concentration but below the MCL (California Department of Health Services 2003). This site is being evaluated under CAA 13 as part of the TPH program. Considering the past activities, the significant spill, and the type of contamination present, deferral to the TPH Program is recommended.

2002 Site Visit

OWS was observed during the 2002 site visit; it was inactive.

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>OWS 397C</b>	<b>Refer to Figure #</b>	<b>Figure 3-3</b>
<b>Navy Recommendation/Closure Status</b>		<b>Further Action Recommended</b>	
<u>Location Description</u>			
<b>Disposal Parcel</b>	EDC 10	<b>CERCLA Site</b>	13
<b>EBS Subparcel</b>	147	<b>TPH CAA</b>	TPH CAA-13
<b>Associated Building</b>	397	<b>Building Status</b>	Present
		<b>Leasing Status</b>	Leased by ARRA
<b>Building Name</b>	Engine Testing Cells and Aircraft Overhaul Plant Services Facility		
<b>Additional Information</b>	Northeastern corner of Building 397		
<u>Operational Information for SWMU</u>			
<b>Type of Unit</b>	Oil-Water Separator		
<b>Capacity (gallons)</b>	Unknown		
<b>Period of Operation</b>	Unknown		
<b>Material Managed at SWMU</b>	Dirty water sump		
<u>Source of Initial SWMU Identification</u>			
<b>SWMU # in RFA</b>	Not identified in RFA	<b>Other Sources</b>	Removal Action at Bldg 397 JP-5 Release (IT 1993)
<b>Recommendation in RFA</b>	NA		
<u>Tank-Related Information</u>			
<b>Status of Tank</b>	NA		
<b>Status of Associated Pipes</b>	NA		

**Data Analysis**

The goal of this evaluation is to verify that no CERCLA contaminants were detected and that deferral to the TPH Program is appropriate. OWS-397C is located within CAA 13 and is surrounded by fuel lines on three sides. The OWS, 1 of 4, was installed near the eastern end of Building 397 to serve as a means of recycling oil from the waste stream before process water or stormwater was discharged to the storm drains. In 1991, a large spill (4,000 to 17,000 gallons of JP-5) was released from Building 397. Floor drains in the building were connected to OWSs. The spill caused associated OWSs to overflow. Refer to AOC 397 for cleanup activities. OWS 397C was filled with a cement slurry and closed in place in 1993 (Navy 1993) and is not a continuing potential source. Soil sample 147-SS-003, located approximately 45 feet east of the OWS, contains TPH-diesel at a concentration above the residential PRC (Navy 2001); however, TPH-diesel is below the residential PRC in the adjacent soil sample 210-IW-003. Soil sample 210-IW-001, located approximately 45 feet west of the OWS, contains oil/grease at concentrations up to 1,060 mg/kg. VOCs detected in soil are consistent with fuel-related, petroleum-based contamination (i.e., BTEX). SVOCs are common laboratory contaminants (bis(2-ethylhexyl)phthalate, butylbenzylphthalate, di-n-butylphthalate, and di-n-octylphthalate). Pesticides and herbicides were not detected in soil. Several PAHs, some fuel related (2-methylnaphthalene and naphthalene), were also detected in soil at low estimated concentrations, well below residential PRGs (EPA 2002). Detected metals concentrations exceeding 95 UCL concentrations (Blue Background Area) were also less than residential PRGs. This site is being evaluated under CAA 13 as part of the TPH program. Considering the past activities, the significant spill, and the type of contamination present, deferral to the TPH Program is recommended.

**2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order  
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<b>SWMU Identifier</b>	<b>OWS 397D</b>	<b>Refer to Figure #</b>	<b>Figure 3-3</b>		
<b>Navy Recommendation/Closure Status</b>		<b>Further Action Recommended</b>			
<b><u>Location Description</u></b>					
<b>Disposal Parcel</b>	EDC 10	<b>CERCLA Site</b>	13		
<b>EBS Subparcel</b>	147	<b>TPH CAA</b>	TPH CAA-13		
<b>Associated Building</b>	397	<b>Building Status</b>	Present	<b>Leasing Status</b>	Leased by ARRA
<b>Building Name</b>	Engine Testing Cells and Aircraft Overhaul Plant Services Facility				
<b>Additional Information</b>	Northern corner of Building 397				
<b><u>Operational Information for SWMU</u></b>					
<b>Type of Unit</b>	Oil-Water Separator				
<b>Capacity (gallons)</b>	Unknown				
<b>Period of Operation</b>	Unknown				
<b>Material Managed at SWMU</b>	Dirty water sump				
<b><u>Source of Initial SWMU Identification</u></b>					
<b>SWMU # in RFA</b>	Not identified in RFA	<b>Other Sources</b>	Removal Action at Bldg 397 JP-5 Release (IT 1993)		
<b>Recommendation in RFA</b>	NA				
<b><u>Tank-Related Information</u></b>					
<b>Status of Tank</b>	NA				
<b>Status of Associated Pipes</b>	NA				

#### **Data Analysis**

The goal of this evaluation is to verify that no CERCLA contaminants were detected and that deferral to the TPH Program is appropriate. OWS-397D is located within CAA 13 and is surrounded by fuel lines on three sides. The OWS, 1 of 4, was installed near the eastern end of Building 397 to serve as a means of recycling oil from the waste stream before process water or stormwater was discharged to the storm drains. In 1991, a large spill (4,000 to 17,000 gallons of JP-5) was released from Building 397. Floor drains in the building were connected to OWSs. The spill caused associated OWSs to overflow. Refer to AOC 397 for cleanup activities. OWS 397D was removed in 1993 (Navy 1993) and is not a continuing potential source. Soil sample 210-IW-001, located approximately 15 feet southwest of the OWS, contains oil and grease at a concentration of 1,060 mg/kg. VOCs (ethylbenzene) in soil are consistent with fuel-related, petroleum-based contamination. No SVOCs, pesticides, or herbicides were detected in soil samples. Several PAHs, some fuel related (2-methylnaphthalene), were also detected in soil at low estimated concentrations, well below residential PRGs (EPA 2002). Detected metals concentrations exceeding 95 UCL concentrations (Blue Background Area) were also less than residential PRGs. This site is being evaluated under CAA 13 as part of the TPH program. Considering the past activities, the significant spill, and the type of contamination present, deferral to the TPH Program is recommended.

#### **2002 Site Visit**

Removed

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>AOC 616</b>	<b>Refer to Figure #</b>	<b>Figure 3-4</b>		
<b>Navy Recommendation/Closure Status</b>		<b>NFA Recommended</b>			
<b><u>Location Description</u></b>					
<b>Disposal Parcel</b>	EDC 10	<b>CERCLA Site</b>	19		
<b>EBS Subparcel</b>	142	<b>TPH CAA</b>	TPH CAA-04B		
<b>Associated Building</b>	616	<b>Building Status</b>	Present	<b>Leasing Status</b>	Leased by ARRA
<b>Building Name</b>	Hazardous Material Storehouse				
<b>Additional Information</b>	Spill control for Building 616; UST 616-1 & 616-2				

#### **Operational Information for SWMU**

<b>Type of Unit</b>	Underground Storage Tank(s)
<b>Capacity (gallons)</b>	5,000 and 10,000 gallons
<b>Period of Operation</b>	Unknown
<b>Material Managed at SWMU</b>	Spill Control; held water

#### **Source of Initial SWMU Identification**

<b>SWMU # in RFA</b>	AOC	<b>Other Sources</b>	NA
<b>Recommendation in RFA</b>	NA		

#### **Tank-Related Information**

<b>Status of Tank</b>	Exempt (in place)
<b>Status of Associated Pipes</b>	NA

#### **Data Analysis**

AOC 616 refers to two closed-in-place, steel, spill-containment USTs (UST 616-1 and UST 616-2) installed north of Building 616 in CAA 4B at Site 19. The tanks had capacities of 5,000 and 10,000 gallons respectively. The USTs functioned as emergency overflow tanks for fire control and are not believed to have ever contained hazardous waste materials (IT 2001). Thus, the USTs were classified as exempt from regulatory closure. Various soil and groundwater samples were collected in the vicinity as part of the TPH Program and analyzed for TPH, metals, VOCs, SVOCs (soil only), pesticides (soil only), and PAHs (soil only). Although analyzed, PAHs in soil and metals in soil and groundwater were not evaluated. TPH, VOCs, SVOCs, and pesticides were either not detected or detected at concentrations below PRCs (Navy 2001) and residential EPA PRGs (EPA 2002). Only benzene in one 1995 sample (372-12-ERM) at 1.1 ug/L slightly exceeded the MCL of 1 ug/L (California Department of Health Services 2003). April 2000 results for VOCs (including benzene) from a nearby location (CA04-02) were nondetect. Based on the absence of CERCLA contaminants in soil and groundwater, no further action is recommended for AOC 616.

#### **2002 Site Visit**

NA

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>OWS 547</b>	<b>Refer to Figure #</b>	<b>NA</b>
<b>Navy Recommendation/Closure Status</b>		<b>Further Action Recommended</b>	

#### Location Description

<b>Disposal Parcel</b>	EDC 10	<b>CERCLA Site</b>	22		
<b>EBS Subparcel</b>	145	<b>TPH CAA</b>	TPH CAA-04C		
<b>Associated Building</b>	547	<b>Building Status</b>	Removed	<b>Leasing Status</b>	NA
<b>Building Name</b>	Service Station and Car wash (partially demolished)				
<b>Additional Information</b>	South of pad for former car wash				

#### Operational Information for SWMU

<b>Type of Unit</b>	Oil-Water Separator
<b>Capacity (gallons)</b>	Unknown
<b>Period of Operation</b>	Unknown
<b>Material Managed at SWMU</b>	Unknown (associated with car wash)

#### Source of Initial SWMU Identification

<b>SWMU # in RFA</b>	Not identified in RFA	<b>Other Sources</b>	TPH Data Gap Sampling Report (Tetra Tech 2001)
<b>Recommendation in RFA</b>	NA		

#### Tank-Related Information

<b>Status of Tank</b>	NA
<b>Status of Associated Pipes</b>	NA

#### Data Analysis

OWS-547 is located within CAA 4C. The OWS was associated with a former car wash (Building 547-1) located at a former Navy gasoline service station, which operated from 1971 through 1980. No sampling has been conducted near the OWS. A data gap exists. Its function was to remove road grime and residues from the water used in the car wash process. The EBS documented no incidents within the building (IT 2001). It is unlikely that the OWS is a source of groundwater contamination. The OU-2A RI report (Tetra Tech 2004) described the OWS as a potential secondary source of releases on Site 22. Releases from the OWS may have entered the soil and groundwater in the northern portion of Site 22. Further action is recommended for OWS-547. A petroleum removal action is on going at Site 22. Under CERCLA, groundwater at Site 22 is recommended for NFA. Remediation of lead in soil will be addressed in an FS.

#### 2002 Site Visit

OWS was observed during the 2002 site visit; it was inactive.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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**SWMU Identifier** UST(R)-17 **Refer to Figure #** NA  
**Navy Recommendation/Closure Status** NFA Recommended

**Location Description**

**Disposal Parcel** EDC 10 **CERCLA Site** 22  
**EBS Subparcel** 145 **TPH CAA** TPH CAA-04C  
**Associated Building** 547 **Building Status** Removed **Leasing Status** NA  
**Building Name** Service Station and Car wash (partially demolished)  
**Additional Information** USTs 547-1, 547-2, and 547-3

**Operational Information for SWMU**

**Type of Unit** Underground Storage Tank(s)  
**Capacity (gallons)** 12,000 gallons each  
**Period of Operation** Unknown

**Material Managed at SWMU** Gasoline

**Source of Initial SWMU Identification**

**SWMU # in RFA** UST-17 **Other Sources** NA  
**Recommendation in RFA** RFI Not Required

**Tank-Related Information**

**Status of Tank** Removed  
**Status of Associated Pipes** NA

**Data Analysis**

USTs 547-1 through 547-3 were 12,000-gallon tanks installed in 1971 and used to store leaded gasoline. These tanks were removed in 1994; they never contained waste. Two additional tanks, USTs 547-4 and 547-5, were listed in the RFA as waste oil tanks with capacities of 5,000 and 10,000 gallons, respectively; these were never confirmed as present and may have been the oil water separator for the car wash. USTs 547-1 through 547-3 have been deferred to the TPH Program based on the type of materials stored and associated sampling results. The USTs are within CAA 4C and CERCLA Site 22. Soil contamination (BTEX compounds) has been confirmed, exceeding the residential and nonresidential PRCs. Groundwater contamination has also been confirmed. Benzene and toluene in groundwater exceed MCLs (California Department of Health Services 2003). Total TPH exceeds the groundwater PRC for aquatic receptors (Navy 2001). Given the type of material stored (leaded gasoline) and the resulting contamination, this site is recommended for closure under the TPH Program. This information will be reported in a corrective action plan for CAA 4C.

**2002 Site Visit**

NA

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order  
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**SWMU Identifier** AST 530A **Refer to Figure #** Figure 3-5  
**Navy Recommendation/Closure Status** **Further Action Recommended**  
Location Description  
**Disposal Parcel** EDC 10 **CERCLA Site** 23  
**EBS Subparcel** 211 **TPH CAA** TPH CAA-13  
**Associated Building** 530 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Missile Rework Facility (NARF)  
**Additional Information** Southeast of Building 530; DeGas Area; 1 of 3 tanks

Operational Information for SWMU

**Type of Unit** Aboveground Storage Tank(s)  
**Capacity (gallons)** 10,000  
**Period of Operation** Unknown  
**Material Managed at SWMU** 1010 oil

Source of Initial SWMU Identification

**SWMU # in RFA** Not identified in RFA **Other Sources** BRAC Cleanup Plan (1998)  
**Recommendation in RFA** NA

Tank-Related Information

**Status of Tank** Removed  
**Status of Associated Pipes** Partially removed; piping coming out of the ground surrounded by a traffic barricade is all that remains

Data Analysis

Multiple sampling locations are shown without hit boxes in the vicinity of ASTs 530A, 530B, and 530C on the figure for CERCLA Site 23. These ASTs contained 1010 oil, fuel oil, and jet fuel respectively. Sampling results from all of these locations were assessed in this evaluation. Significant TPH contamination exceeding PRCs (Navy 2001) for soil and groundwater was detected in samples near the former AST locations. Detected concentrations suggest the potential for free product. VOC concentrations (BTEX and potential laboratory contaminants, acetone and 2-butanone) in soil did not exceed residential PRCs and PRGs (EPA 2002). Benzene concentrations in groundwater exceeded the MCL (California Department of Health Services 2003). No SVOCs were detected in soil (with the exception of a potential laboratory contaminant, bis(2-ethylhexyl)phthalate) and groundwater. No pesticides were detected in soil. Fuel-related PAHs (2-methylnaphthalene and naphthalene) were detected in soil and groundwater. The former AST locations are within CAA 13. Considering the past activities, the types of materials stored in the ASTs (1010 oil, jet fuel, and diesel), and the type of contamination present, closure under the TPH Program is recommended.

2002 Site Visit

AST removed prior to 2002 site visit.

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order  
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**SWMU Identifier** AST 530B **Refer to Figure #** Figure 3-5  
**Navy Recommendation/Closure Status** **Further Action Recommended**  
**Location Description**  
**Disposal Parcel** EDC 10 **CERCLA Site** 23  
**EBS Subparcel** 211 **TPH CAA** TPH CAA-13  
**Associated Building** 530 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Missile Rework Facility (NARF)  
**Additional Information** Southeast of Building 530; DeGas Area; 2 of 3 tanks

**Operational Information for SWMU**

**Type of Unit** Aboveground Storage Tank(s)  
**Capacity (gallons)** 10,000  
**Period of Operation** Unknown  
**Material Managed at SWMU** Fuel or oil

**Source of Initial SWMU Identification**

**SWMU # in RFA** Not identified in RFA **Other Sources** BRAC Cleanup Plan (1998)  
**Recommendation in RFA** NA

**Tank-Related Information**

**Status of Tank** Removed; damaged by 1989 earthquake, remained empty from that date  
**Status of Associated Pipes** Partially removed; piping coming out of the ground surrounded by a traffic barricade is all that remains

**Data Analysis**

Refer to AST 530A

**2002 Site Visit**

AST removed prior to 2002 site visit.

**Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM**

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order  
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**SWMU Identifier** AST 530C **Refer to Figure #** Figure 3-5  
**Navy Recommendation/Closure Status** **Further Action Recommended**  
**Location Description**  
**Disposal Parcel** EDC 10 **CERCLA Site** 23  
**EBS Subparcel** 211 **TPH CAA** TPH CAA-13  
**Associated Building** 530 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Missile Rework Facility (NARF)  
**Additional Information** Southeast of Building 530; DeGas Area; 3 of 3 tanks

**Operational Information for SWMU**

**Type of Unit** Aboveground Storage Tank(s)  
**Capacity (gallons)** 15,000  
**Period of Operation** Unknown  
**Material Managed at SWMU** Jet fuel

**Source of Initial SWMU Identification**

**SWMU # in RFA** Not identified in RFA **Other Sources** BRAC Cleanup Plan (1998)  
**Recommendation in RFA** NA

**Tank-Related Information**

**Status of Tank** Removed  
**Status of Associated Pipes** Partially removed; piping coming out of the ground surrounded by a traffic barricade is all that remains

**Data Analysis**

Refer to AST 530A

**2002 Site Visit**

AST removed prior to 2002 site visit.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>NADEP GAP 63</b>	<b>Refer to Figure #</b>	<b>Figure 3-5</b>
<b>Navy Recommendation/Closure Status</b>		<b>NFA Recommended</b>	
<b><u>Location Description</u></b>			
<b>Disposal Parcel</b>	EDC 10	<b>CERCLA Site</b>	23
<b>EBS Subparcel</b>	148	<b>TPH CAA</b>	NA
<b>Associated Building</b>	530	<b>Building Status</b>	Present
		<b>Leasing Status</b>	Leased by ARRA
<b>Building Name</b>	Missile Rework Facility (NARF)		
<b>Additional Information</b>	Building 530, Shop 94224		

#### **Operational Information for SWMU**

<b>Type of Unit</b>	Generator Accumulation Point
<b>Capacity (gallons)</b>	5-gallon containers, 30-gallon drums, 55-gallon drums
<b>Period of Operation</b>	GAPs were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.
<b>Material Managed at SWMU</b>	Acetone, naphtha with solvents (MEK), poly paint and thinner, 1,1,1-TCA, and MX-4M solvent

#### **Source of Initial SWMU Identification**

<b>SWMU # in RFA</b>	GI-46	<b>Other Sources</b>	NA
<b>Recommendation in RFA</b>	RFI Not Required		

#### **Tank-Related Information**

<b>Status of Tank</b>	NA
<b>Status of Associated Pipes</b>	NA

#### **Data Analysis**

NADEP GAP 63 consisted of various size storage drums atop a wooden pallet (to allow a forklift to move the drums) or atop a poly spill pallet, which acted as a secondary containment system. The area measured approximately 6 feet by 6 feet and was located inside Building 530 in Shop 94224, near the western wall. According to the RFA, NADEP GAP 63 exhibited a low potential for releases into soil and groundwater because the site was located indoors on a concrete floor. An RFI was not required (DTSC 1992). The Phase I EBS concluded that NADEP GAP 63 did not require further investigation because the site was paved and site inspectors did not observe staining (ERM-West 1994). A letter from DTSC dated November 4, 1999 recommended no further action for this SWMU (DTSC 1999). A description of NADEP GAP 63 was included in the EBS, Zone 22, Parcel 148 evaluation data summary report (IT 2001). The GAP was indirectly investigated as Target Area 1 (Building 530) during EBS Phase 2A soil sampling. Soil was sampled from beneath the building floor (3.5 to 4 feet bgs) near the GAP. Samples were analyzed for TPH, metals, VOCs, SVOCs, and PAHs. As depicted on the figure for Site 23, all soil analytes were either not detected or detected at concentrations below residential EPA PRGs (EPA 2002). The reporting limit for mercury slightly exceeded the residential PRG. The detections of nickel and zinc are below the 95 UCL for the Blue Background Area. NADEP GAP 63 was not listed as a potential source of soil and groundwater contamination at Site 23 in the OU-2A RI report (Tetra Tech 2004). NFA is recommended for NADEP GAP 63.

#### **2002 Site Visit**

NA

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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**SWMU Identifier** NADEP GAP 63A **Refer to Figure #** NA  
**Navy Recommendation/Closure Status** **NFA Recommended**  
**Location Description**  
**Disposal Parcel** EDC 10 **CERCLA Site** 23  
**EBS Subparcel** 148 **TPH CAA** NA  
**Associated Building** 530 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Missile Rework Facility (NARF)  
**Additional Information** Building 530, Shop 94223

#### Operational Information for SWMU

**Type of Unit** Generator Accumulation Point  
**Capacity (gallons)** 55-gallon drums & Bowser  
**Period of Operation** GAPS were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.  
**Material Managed at SWMU** Hydraulic oil (Bowser)

#### Source of Initial SWMU Identification

**SWMU # in RFA** GI-47 **Other Sources** NA  
**Recommendation in RFA** RFI Not Required

#### Tank-Related Information

**Status of Tank** NA  
**Status of Associated Pipes** NA

#### Data Analysis

NADEP GAP 63A was a Bowser of a hydraulic oil. A modified, 55-gallon-drum, wet/dry vacuum used to vacuum up spills sat adjacent to the Bowser. The area measured approximately 4 feet by 12 feet and was located inside Building 530 in Shop 94223. According to the RFA, NADEP GAP 63A exhibited a low potential for releases into soil and groundwater because the site was located indoors on a flat, tile-covered, concrete floor. An RFI was not required (DTSC 1992). The Phase I EBS concluded that NADEP GAP 63A did not require further investigation because the site was paved and site inspectors did not observe staining (ERM-West 1994). A letter from DTSC dated November 4, 1999 recommended no further action for this SWMU (DTSC 1999). A description of NADEP GAP 63A was included in the EBS, Zone 22, Parcel 148 evaluation data summary report (IT 2001). NADEP GAP 63A was not listed as a potential source of soil and groundwater contamination at Site 23 in the OU-2A RI report (Tetra Tech 2004). NFA is recommended for NADEP GAP 63A.

#### 2002 Site Visit

NA

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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**SWMU Identifier** NADEP GAP 64 **Refer to Figure #** NA  
**Navy Recommendation/Closure Status** NFA Recommended

#### Location Description

**Disposal Parcel** EDC 10 **CERCLA Site** 23  
**EBS Subparcel** 148 **TPH CAA** NA  
**Associated Building** 530 **Building Status** Present **Leasing Status** Leased by ARRA  
**Building Name** Missile Rework Facility (NARF)  
**Additional Information** Building 530, Shop 94224

#### Operational Information for SWMU

**Type of Unit** Generator Accumulation Point  
**Capacity (gallons)** 30-gallon drums, 55-gallon drums, aerosol cans  
**Period of Operation** GAPS were formally identified in 1987 and continued to operate until base closure and building cleanup was initiated in 1997. Actual startup dates are unknown.  
**Material Managed at SWMU** Aerosol paint, lubrication, solvents, rust remover, WD-40; MX-4M solvent, silicate ester, and 1,1,1-TCA

#### Source of Initial SWMU Identification

**SWMU # in RFA** GI-48 **Other Sources** NA  
**Recommendation in RFA** RFI Not Required

#### Tank-Related Information

**Status of Tank** NA  
**Status of Associated Pipes** NA

#### Data Analysis

NADEP GAP 64 consisted of 30- and 55-gallon drums on two pallets, each atop poly spill pallets, all within a metal tray. The area measured approximately 8 feet by 18 feet and was located inside Building 530 in Shop 94224. According to the RFA, NADEP GAP 64 exhibited a low potential for releases into soil and groundwater because the site was located indoors on a flat concrete floor. An RFI was not required (DTSC 1992). The Phase I EBS concluded that NADEP GAP 64 did not require further investigation because the site was paved and site inspectors did not observe staining (ERM-West 1994). A letter from DTSC dated November 4, 1999 recommended no further action for this SWMU (DTSC 1999). A description of NADEP GAP 64 was included in the EBS, Zone 22, Parcel 148 evaluation data summary report (IT 2001). NADEP GAP 64 was not listed as a potential source of soil and groundwater contamination at Site 23 in the OU-2A RI report (Tetra Tech 2004). NFA is recommended for NADEP GAP 64.

#### 2002 Site Visit

NA

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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<b>SWMU Identifier</b> OWS 529	<b>Refer to Figure #</b> Figure 3-5
<b>Navy Recommendation/Closure Status</b>	<b>Further Action Recommended</b>

#### Location Description

<b>Disposal Parcel</b> EDC 10	<b>CERCLA Site</b> 23	
<b>EBS Subparcel</b> 211	<b>TPH CAA</b> TPH CAA-13	
<b>Associated Building</b> 529	<b>Building Status</b> Present	<b>Leasing Status</b> Not leased by ARRA
<b>Building Name</b> Switching/Substation Building/Shelter		
<b>Additional Information</b> West of former ASTs that were located west of Building 529; OWS is located at eastern end of Avenue M		

#### Operational Information for SWMU

<b>Type of Unit</b> Oil-Water Separator
<b>Capacity (gallons)</b> Unknown
<b>Period of Operation</b> Unknown
<b>Material Managed at SWMU</b> Unknown

#### Source of Initial SWMU Identification

<b>SWMU # in RFA</b> Not identified in RFA	<b>Other Sources</b> CERFA EBS (ERM-West 1994)
<b>Recommendation in RFA</b> NA	

#### Tank-Related Information

<b>Status of Tank</b>	NA
<b>Status of Associated Pipes</b>	NA

#### Data Analysis

OWS-529 is located within CAA 13 and CERCLA Site 23. According to the EBS, this area was used for defueling (IT 2001). The OWS is located west of three former ASTs. The closest soil sampling location, 211-IWC0-001 located approximately 18 feet southeast of OWS-529, contains TPH-gasoline and TPH-diesel above the residential PRCs (Navy 2001). The TPH-diesel result also exceeded the nonresidential criteria. Oil and grease was detected at 5,980 mg/kg. In general, significant TPH contamination exceeding PRCs for soil and groundwater was detected in samples collected within 100 feet of the OWS location. Detected concentrations suggest the potential for free product. VOC concentrations (BTEX and potential laboratory contaminants) in soil did not exceed residential PRCs or PRGs (EPA 2002). Benzene concentrations in groundwater exceeded the MCL (California Department of Health Services 2003). No SVOCs were detected in soil (with the exception of a potential laboratory contaminant, bis(2-ethylhexyl)phthalate) and groundwater. No pesticides were detected in soil. Fuel-related PAHs (2-methylnaphthalene and naphthalene) were detected in soil and groundwater. Detected metals concentrations in soil exceeding 95 UCL concentrations (Blue Background Area) were less than residential PRGs. The Navy is conducting groundwater remediation for petroleum contamination in this area. This site is also being evaluated under CAA 13 as part of the TPH program. The OWS is a likely source of TPH compounds, which do not meet the definition of a CERCLA hazardous substance. Therefore, OWS-529 was not considered a potential source of soil and groundwater contamination at CERCLA Site 23 in the OU-2A RI report (Tetra Tech 2004). Considering the nearby petroleum ASTs and the type of contamination present, deferral to the TPH Program is recommended.

#### 2002 Site Visit

OWS was observed during the 2002 site visit; it was inactive.

### Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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<b>SWMU Identifier</b>	<b>OWS 530</b>	<b>Refer to Figure #</b>	<b>Figure 3-5</b>		
<b>Navy Recommendation/Closure Status</b>		<b>Further Action Recommended</b>			
<b><u>Location Description</u></b>					
<b>Disposal Parcel</b>	EDC 10	<b>CERCLA Site</b>	23		
<b>EBS Subparcel</b>	148	<b>TPH CAA</b>	TPH CAA-13		
<b>Associated Building</b>	530	<b>Building Status</b>	Present	<b>Leasing Status</b>	Leased by ARRA
<b>Building Name</b>	Missile Rework Facility (NARF)				
<b>Additional Information</b>	Northwestern corner of fenced area; west of Building 530; associated with DeGas Area				
<b><u>Operational Information for SWMU</u></b>					
<b>Type of Unit</b>	Oil-Water Separator				
<b>Capacity (gallons)</b>	Unknown				
<b>Period of Operation</b>	Unknown				
<b>Material Managed at SWMU</b>	Unknown				
<b><u>Source of Initial SWMU Identification</u></b>					
<b>SWMU # in RFA</b>	Not identified in RFA	<b>Other Sources</b>	TPH Data Gap Sampling Report (Tetra Tech 2001)		
<b>Recommendation in RFA</b>	NA				
<b><u>Tank-Related Information</u></b>					
<b>Status of Tank</b>	NA				
<b>Status of Associated Pipes</b>	NA				

#### **Data Analysis**

OWS-530 is located within CAA 13 and CERCLA Site 23. Groundwater sample SHP-S10B-05, located to the north of the OWS 530, shows TPH concentrations exceeding the total TPH PRC for aquatic receptors (Navy 2001). VOCs (2-butanone) detected in groundwater are most likely laboratory contaminants. At the deeper DHP-S10B-05 location, TPH concentrations in groundwater were nondetect. Low-level, estimated concentrations of SVOCs (phenol and 2,4-dichlorophenol) and PAHs were detected in groundwater. Selected dissolved metals (iron and manganese) in groundwater were detected above the 95 UCL and also exceeded secondary MCLs (California Department of Health Services 2003). The Navy is conducting groundwater remediation for petroleum contamination in this area. This site is also being evaluated under CAA 13 as part of the TPH program. The OWS is a likely source of TPH compounds, which do not meet the definition of a CERCLA hazardous substance. Therefore, OWS-530 was not considered a potential source of soil and groundwater contamination at CERCLA Site 23 in the OU-2A RI report (Tetra Tech 2004). Considering the type of contamination present, deferral to the TPH Program is recommended.

#### **2002 Site Visit**

OWS was observed during the 2002 site visit; it was inactive.

## Table 3-1: PROFILES FOR SOLID WASTE MANAGEMENT UNITS IN SITES 9, 13, 19, 22, and 23 DEFERRED TO CERCLA PROGRAM

Solid Waste Management Unit Summary Report for Operable Unit 2A; Listed in CERCLA Site Order

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### Notes:

% = Percentage

ug/kg = Micrograms per kilogram

ug/L = Micrograms per liter

AOC = Area of concern

AST = Aboveground storage tank

bgs = Below ground surface

BTEX = Benzene, toluene, ethylbenzene, and xylenes

CAA = Corrective action area

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

CERFA = Community Environmental Response Facilitation Act

CRS = Coolant Recovery System

DTSC = California Environmental Protection Agency Department of Toxic Substances Control

EBS = Environmental baseline survey

EDC = Economic development conveyance

EPA = U.S. Environmental Protection Agency

ERM-West = Environmental Resource Management - West

FED = Federal agency-to-agency transfer

FS = Feasibility study

FSP = Field sampling plan

ft = Foot

Gal = gallon

GAP = Generator accumulation point

GW = Groundwater

ID = Identification

IT = International Technology Corporation

IWTP = Industrial wastewater treatment plant

JP = Jet propellant

M = Miscellaneous area identified in the RFA

MCL = Maximum contaminant level

MEK = Methyl ethyl ketone

mg/kg = Milligrams per kilogram

mg/L = milligrams per liter

mL = milliliter

NA = Not applicable

NADEP = Naval Aviation Depot Alameda

NARF = Naval Air Rework Facility Alameda

NAS = Naval Air Station

Navy = U.S. Department of the Navy

ND = Not detected

NE = Northeast

NFA = No further action

NW = Northwest

OU = Operable Unit

OWS = Oil-water separator

PAH = Polynuclear aromatic hydrocarbons

PCB = Polychlorinated biphenyl

PMB = Plastic material blasting

PPM = Parts per million

PRC = Preliminary remediation criteria

PRG = Preliminary remediation goal

PWC = Navy Public Works Center

(R) = RCRA-related UST

RCRA = Resource Conservation and Recovery Act

RFA = RCRA facility assessment

RFI = RCRA facility investigation

RI = Remedial investigation

RI/FS = Remedial investigation and feasibility study

RWQCB = Regional Water Quality Control Board

SE = Southeast

SEBS = Supplemental environmental baseline survey

SSPORTS = Supervisor of Shipbuilding, Conversion, and

Repair, Portsmouth, Virginia

SVOC = Semivolatile organic compound

SW = Southwest

SWARF = Refers to machine and grinding coolant

SWMU = Solid waste management unit

TCA = Trichloroethane

Tetra Tech = Tetra Tech EM Inc.

TPH = Total petroleum hydrocarbons

TPHd = Total petroleum hydrocarbons as diesel

TPHg = Total petroleum hydrocarbons as gasoline

TPHmo = Total petroleum hydrocarbons as motor oil

USFWS = U.S. Fish and Wildlife Service

UST = Underground storage tank

VOC = Volatile organic compounds

WD = Washdown area

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ALAMEDA POINT  
SSIC NO. 5090.3

APPENDIX C – SOLID WASTE MANAGEMENT  
UNIT EVALUATION REPORT FOR  
OPERABLE UNIT 2B

COMPILATION OF SOLID WASTE MANAGEMENT  
UNIT EVALUATION REPORTS PREVIOUSLY  
SUBMITTED WITH CERCLA DOCUMENTS  
HAZARDOUS WASTE PERMIT  
EPA ID NUMBER CA 2170023236

DATED 23 DECEMBER 2005

A-E CERCLA/RCRA/UST Contract Number N68711-03-D-5104  
Contract Task Order 0012

Draft

**APPENDIX I**  
**SOLID WASTE MANAGEMENT UNIT**  
**EVALUATION REPORT FOR OPERABLE**  
**UNIT 2B (SITES 3, 4, 11, AND 21)**

Hazardous Waste Permit EPA ID Number CA 2170023236,  
Naval Air Station Alameda (Now Known as Alameda  
Point), Alameda Point, Alameda, California

May 2, 2005

Prepared for



DEPARTMENT OF THE NAVY  
Lou Ocampo, Remedial Project Manager  
Base Realignment and Closure  
Program Management Office West  
San Diego, California

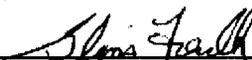
Prepared by



AND

*SulTech*

A JOINT VENTURE OF SULLIVAN CONSULTING GROUP  
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\_\_\_\_\_  
Glynis Foulk, Project Manager

TC.B012.12167

July 5, 2005

Lou Ocampo  
Remedial Project Manager  
Naval Facilities Engineering Command Southwest Division  
1230 Columbia Street, Suite 1100  
San Diego, California 92101-8517

**Subject: Draft Attachment I - Solid Waste Management Unit Summary Report For  
Operable Unit 2B  
Alameda Point, Alameda, California**

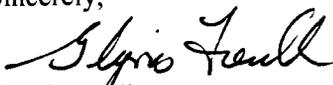
Dear Mr. Ocampo:

Enclosed is a hard copy of the Draft of Attachment I - Solid Waste Management Unit Summary Report for Operable Unit 2B dated May 2, 2005. This report will be Attachment I to the draft final remedial investigation (RI) report for OU 2B being produced by Tetra Tech. Your copy is unbound with 3-hole punch to go into your SWMU evaluation binder.

The draft final RI will be submitted to the agencies May 15, 2005.

If you have any questions, please call me at (916) 853-4561.

Sincerely,

  
Glynis Fouk  
Project Manager

Enclosure (1)

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- I3-1 Profiles for Solid Waste Management Units in Sites 3, 4, 11, and 21 Integrated with the CERCLA Program

## **ACRONYMS AND ABBREVIATIONS**

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AST	Aboveground storage tank
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DTSC	California Environmental Protection Agency Department of Toxic Substances Control
EBS	Environmental baseline survey
EPA	U.S. Environmental Protection Agency
GAP	Generator accumulation point
ID	Identification
NADEP	Naval Aviation Depot
NAS	Naval Air Station
Navy	U.S. Department of the Navy
NFA	No further action
OU	Operable unit
OWS	Oil-water separator
RCRA	Resource Conservation and Recovery Act
RFA	RCRA facility assessment
RFI	RCRA facility investigation
RI	Remedial Investigation
SulTech	A joint venture of Sullivan Consulting Group and Tetra Tech EM Inc.
SWMU	Solid waste management unit
Tetra Tech	Tetra Tech EM Inc.
TPH	Total petroleum hydrocarbon
UST	Underground storage tank

## EXECUTIVE SUMMARY

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The U.S. Department of the Navy (Navy), Base Realignment and Closure Program Management Office West, requested that SulTech, a joint venture of Sullivan Consulting Group and Tetra Tech EM Inc., prepare this solid waste management unit (SWMU) evaluation report to summarize the results of all past assessments and investigations of the SWMUs within the operable unit (OU) 2B (Sites 3, 4, 11, and 21) at Alameda Point (formerly Naval Air Station [NAS] Alameda), in Alameda County, California. This report was prepared in accordance with Contract Task Order 0012, issued under the Architectural-Engineering Services to Provide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act/Underground Storage Tank Studies, Contract Number N68711-03-D-5104.

This report applied the Navy SWMU integration approach to all 59 of the SWMUs within OU-2B (CERCLA Sites 3, 4, 11, and 21); all of these SWMUs are inactive. The integration approach resulted in a recommendation that 52 SWMUs be integrated with the Navy CERCLA program and that the remaining 7 be integrated with the Navy's Total Petroleum Hydrocarbon (TPH) program. The 52 SWMUs recommended for the CERCLA program were evaluated further using the requirements stipulated in the final hazardous waste facility permit for former NAS Alameda (U.S. Environmental Protection Agency Identification Number CA 2170023236) to support further corrective action decisions at Alameda Point. (No evaluations were conducted on the SWMUs recommended for the TPH program). Based on those evaluations, this report recommends no further action for 32 of these SWMUs and further actions for the other 20 SWMUs. In addition, this report recommends the use of feasibility studies, conducted under the CERCLA program, to address any corrective actions that might be indicated at the 20 SWMUs recommended for further action under CERCLA. The Navy is requesting concurrence on these recommendations.

## **I.1.0 INTRODUCTION**

The U.S. Department of the Navy (Navy), Base Realignment and Closure Program Management Office West, requested that SulTech, a joint venture of Sullivan Consulting Group and Tetra Tech EM Inc. (Tetra Tech), prepare this solid waste management unit (SWMU) evaluation report to summarize the results of all past assessments and investigations of the SWMUs within operable unit (OU) 2B (Sites 3, 4, 11, and 21) at Alameda Point (formerly Naval Air Station [NAS] Alameda), in Alameda County, California. This report was prepared in accordance with Contract Task Order 0012, issued under the Architectural-Engineering Services to Provide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA)/Underground Storage Tank (UST) Studies, Contract Number N68711-03-D-5104.

All of the SWMUs are inactive and most have been physically removed. This evaluation report includes a recommendation of no further action (NFA) or further action for each SWMU within Sites 3, 4, 11, and 21 in OU-2B. Recommendations for NFA or further action are based on the analytical results presented in Section I.3.0. The Navy is requesting concurrence on the recommendations for each SWMU.

This evaluation report describes procedures, methods, and results of facility assessments and investigations of the SWMUs in OU-2B (Sites 3, 4, 11, and 21) and describes the general approach to investigating and evaluating potential remedies pertaining to SWMU corrective measures and closure at Alameda Point. This evaluation report is provided as an attachment to the remedial investigation (RI) report for OU-2B (Sites 3, 4, 11, and 21).

The SWMUs addressed in this report were evaluated using the requirements stipulated in the final hazardous waste facility permit for former NAS Alameda (U.S. Environmental Protection Agency [EPA] Identification [ID] Number CA 2170023236) to support further corrective action decisions at Alameda Point (California Environmental Protection Agency Department of Toxic Substances Control [DTSC] 1993).

The remainder of this attachment is divided into four sections. Section I.2.0 provides background information and the Navy's approaches for evaluating the SWMUs at Alameda Point. Section I.3.0 presents an evaluation for the SWMUs within OU-2B (Sites 3, 4, 11, and 21), and Section I.4.0 summarizes recommendations for those SWMUs. Finally, Section I.5.0 provides the references used to prepare this evaluation report.

## **I.2.0 BACKGROUND AND APPROACHES FOR EVALUATIONS OF SOLID WASTE MANAGEMENT UNITS**

A "SWMU" is any unit at a hazardous waste facility from which hazardous constituents might migrate, irrespective of whether the unit was intended for the management of wastes (Title 22

*California Code of Regulations* Section 66260.10). At Alameda Point, SWMUs include areas of concern, generator accumulation points (GAP), CERCLA sites, oil-water separators (OWS), aboveground storage tanks (AST), USTs, washdown areas, and miscellaneous sites.

The following sections describe the history of SWMU assessments and investigations at Alameda Point (see Figure I2-1) and the Navy's approaches for ensuring that the results of those assessments and investigations are evaluated in a manner consistent with RCRA requirements.

### **I.2.1 HISTORY OF SOLID WASTE MANAGEMENT UNIT ASSESSMENTS AND INVESTIGATIONS**

Most of the SWMUs at Alameda Point were first identified in 1991 in an initial RCRA facility assessment (RFA) (DTSC 1992), which was required to obtain a permit for the management of hazardous wastes in a number of specific management units no longer in operation at Alameda Point. According to Sections V.F through V.J of the final hazardous waste facility permit for Alameda Point (EPA ID CA 2170023236), information to support corrective action decisions regarding each SWMU was to be collected and submitted to DTSC. The permit described a typical RCRA corrective action process, which involves an analysis of RFA data to determine which SWMUs require further evaluation in a RCRA facility investigation (RFI) and requires the Navy to identify additional SWMUs, as appropriate, and include them in the corrective action process.

The initial RFA identified 151 SWMUs and concluded that a number of the SWMUs would need further investigation under an RFI, which is usually conducted under a series of RCRA permit modifications. After the final RCRA permit was issued, however, the Navy and the regulatory agencies determined that the most efficient and effective approach for assessing any additional SWMUs and conducting RFIs would be to take advantage of functionally equivalent investigations that have been and continue to be conducted under a number of other Navy environmental programs. Types of investigations include environmental baseline survey (EBS) investigations under the Base Realignment and Closure property transfer program; investigations of possible releases of total petroleum hydrocarbons (TPH) from sources such as pipelines, USTs, and ASTs under the TPH program; and site investigations and RIs under the CERCLA program. Subsequent to the RFA and as a result of the investigations described previously, 215 additional SWMUs were identified and assessed at Alameda Point. These additional SWMUs were included in the final supplemental EBS (Tetra Tech 2003).

The Navy received a letter dated November 1999 from DTSC with comments on the SWMUs following their review of the draft EBS; the final EBS was submitted in 2001 (International Technology Corporation 2001). For some of the SWMUs, DTSC concurred with the recommendation in the EBS for NFA. For most of the SWMUs located within a CERCLA site, DTSC withheld concurrence with NFA, pending resolution of each site's RI report (DTSC 1999).

Recognizing that the investigation and management of SWMUs had been divided among a number of Navy programs, the Navy developed a SWMU evaluation approach coupled with a SWMU integration approach to ensure that all the SWMUs at Alameda Point would be managed under the appropriate Navy program and would receive appropriate response actions. These two SWMU approaches are described in Sections I.2.2 and I.2.3 of this report.

### **I.2.2 SOLID WASTE MANAGEMENT UNIT EVALUATION APPROACH**

The SWMU evaluation approach is a three-step process that begins by listing the SWMUs identified and investigated under each Navy program. In the next step, a SWMU profile is compiled for each SWMU; these profiles consist of descriptive information on each SWMU, the name of the Navy program that provided the functional equivalent of an RFA (and in some cases, an RFI) for the SWMU, and the results of all investigations conducted on that SWMU, including figures and tables, as needed. In the final step, each SWMU profile is analyzed to determine whether the functional equivalents of the elements of a RCRA corrective action process have been conducted and whether any additional actions are needed.

### **I.2.3 SOLID WASTE MANAGEMENT UNIT INTEGRATION APPROACH**

The purpose of the SWMU integration approach is to facilitate appropriate actions for all SWMUs under the appropriate Navy and regulatory programs. The approach allows final decisions to be made for basewide integration concerning each SWMU, such that petroleum-related SWMUs are addressed under the TPH program, and most other SWMUs are addressed under the CERCLA program. Under the integration approach, any RCRA corrective action requirements for the SWMUs will be complied with under CERCLA remedial actions or under TPH corrective actions. Figure I2-2 shows the SWMU integration approach.

Based on an evaluation of each of the SWMU profiles according to the steps in the SWMU evaluation process (see Section I.2.2), the Navy is recommending either NFA or further action for each SWMU. If further action is recommended, future RCRA corrective action requirements for the SWMUs will be complied with under the appropriate Navy program. On an ongoing basis, the SWMUs will be evaluated to determine whether a SWMU has been or is being investigated under the appropriate Navy program. If a SWMU is found to be in the wrong program, it will be moved to the appropriate program.

Before developing the integration approach, the Navy and the regulators had decided that the "regulated" waste management units originally included in the interim status document and final permit for Alameda Point (EPA ID CA 2170023236) would continue to be investigated and closed under the Navy's RCRA program, with oversight from DTSC. These regulated units are, therefore, not included in the integration approach and are not described in this report.

As a result of the SWMU integration approach, most of the SWMUs located within OU-2B (Sites 3, 4, 11, and 21) were integrated with the CERCLA program and are evaluated in this

report (see Table I2-1). The remaining SWMUs located within OU-2B (Sites 3, 4, 11, and 21) were integrated with the TPH program and are not evaluated in this report (see Table I2-2).

The SWMU integration approach was submitted to DTSC in May 2004 for review; DTSC has not yet decided to accept the integration approach.

### **I.3.0 SOLID WASTE MANAGEMENT UNIT EVALUATION**

Figure I3-1 shows the location of all of the SWMUs within OU-2B (Sites 3, 4, 11, and 21), including the SWMUs integrated with the CERCLA and TPH programs. Table I3-1 presents SWMU profiles for each of the SWMUs integrated with the CERCLA program. Each profile provides descriptive information on a SWMU, identifies the Navy program under which the SWMU was investigated, and presents the investigation results. Each profile also recommends either NFA or further action. Many of the profiles reference a figure for CERCLA Sites 3, 4, 11, or 21 (see Figures I3-2 through I3-7) that provides analytical data from soil or groundwater samples collected near the SWMU to examine potential sources of contamination and migration pathways. The analytical results are compared to TPH preliminary remediation criteria listed in the closure strategy for petroleum-contaminated sites (Navy 2001), residential preliminary remediation goals for soil (EPA 1996, 2002, 2004), background concentrations for metals in soil (Tetra Tech 2001b), or maximum contaminant levels for groundwater (California Department of Health Services 2003), as appropriate. A comprehensive set of data tables with soil and groundwater analytical results is provided in Appendix D of the RI report for OU-2B (Sites 3, 4, 11, and 21).

### **I.4.0 RECOMMENDATIONS**

Of the 59 SWMUs within OU-2B, this report recommends integrating 52 of them with the CERCLA program, and the remaining 7 with the TPH program. Evaluations of the 52 SWMUs recommended for the CERCLA program resulted in recommendations of NFA for 32 of them, and further actions for the other 20 (No evaluations were conducted on the SWMUs recommended for the TPH program). In addition, this report recommends the use of feasibility studies, conducted under the CERCLA program, to address any corrective actions that might be indicated at the 20 SWMUs that are recommended for further action under CERCLA. The Navy is requesting concurrence on these recommendations.

## 1.5.0 REFERENCES

- California Department of Health Services. 2003. "Maximum Contaminant Levels in Drinking Water" (extracted from Title 22 of the California Code of Regulations Sections 64431 – 64672.3). June 12.
- California Environmental Protection Agency Department of Toxic Substances Control (DTSC). 1992. "RCRA Facility Assessment, Naval Air Station, Alameda, California." April.
- DTSC. 1993. "California Environmental Protection Agency Department of Toxic Substances Control Hazardous Waste RCRA Part B Permit Issued to the United States of America and U.S. Department of Navy for NAS Alameda." June.
- DTSC. 1999. Letter from DTSC to Commanding Officer, Engineering Field Activity, West, Naval Facilities Command concerning Review of RCRA Status for Environmental Baseline Survey at Alameda Point, Alameda, California. November 4.
- ERM-West, Inc. 1994. "Final Environmental Baseline Survey (EBS)/Community Environmental Response Facilitation Act Report for NAS/NADEP Alameda." October.
- International Technology Corporation. 2001. "EBS Data Evaluation Summaries - Final, Alameda Point, Alameda, California, Volumes 0 through XIV." January.
- Supervisor of Shipbuilding, Conversion, and Repair, Portsmouth, Virginia, 1997. "Oil-water Separators (OWS), One Time Compliance, NAS Alameda; OWS at Buildings 373, 372, 63, 40, 118, 166"
- Tetra Tech EM Inc (Tetra Tech). 2001a. "Evaluation of Total Petroleum Hydrocarbons at EBS Parcels at Alameda Point. October.
- Tetra Tech. 2001b. "Summary of Background Concentrations in Soil and Groundwater, Alameda Point, Alameda, California." November.
- Tetra Tech. 2003a. "Final Supplemental Environmental Baseline Survey, Alameda Point, Alameda, California." March.
- Tetra Tech. 2003b. "Underground Storage Tank Summary Report, Alameda Point, Alameda, California." April.
- Tetra Tech. 2005. "Draft Final Remedial Investigation Report for Sites 3, 4, 11, and 21, Operable Unit 2B (OU-2B), Alameda Point, Alameda, California." May.
- U.S. Department of Navy. 2001. "Preliminary Remediation Criteria and Closure Strategy for Petroleum-Contaminated Sites at Alameda Point, Alameda, California." May 16.

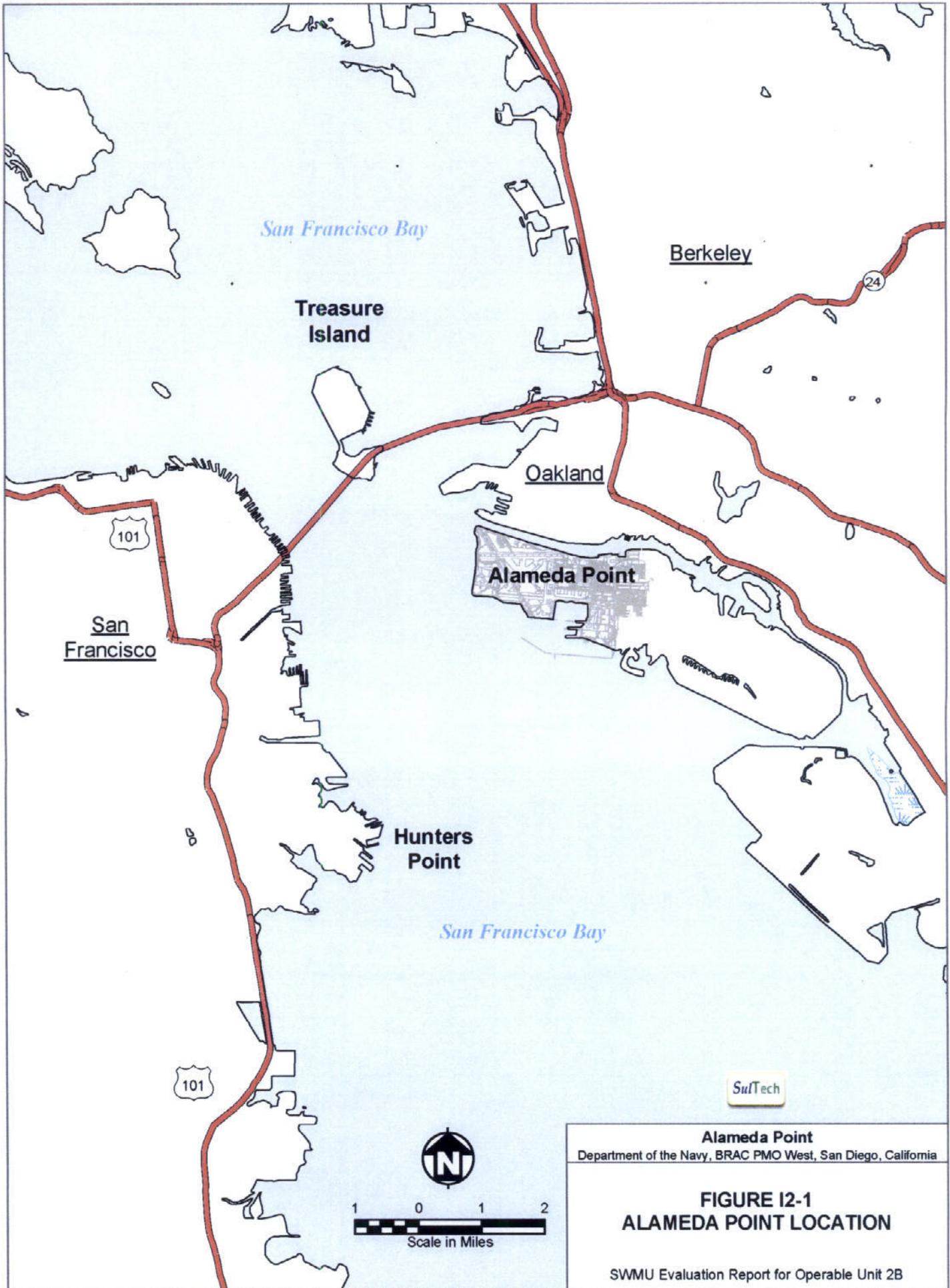
U.S. Environmental Protection Agency (EPA). 1996. "Region 9 Preliminary Remediation Goals."

EPA. 2002. "Region 9 Preliminary Remediation Goals." October.

EPA. 2004. "Region 9 Preliminary Remediation Goals." October.

**FIGURES**

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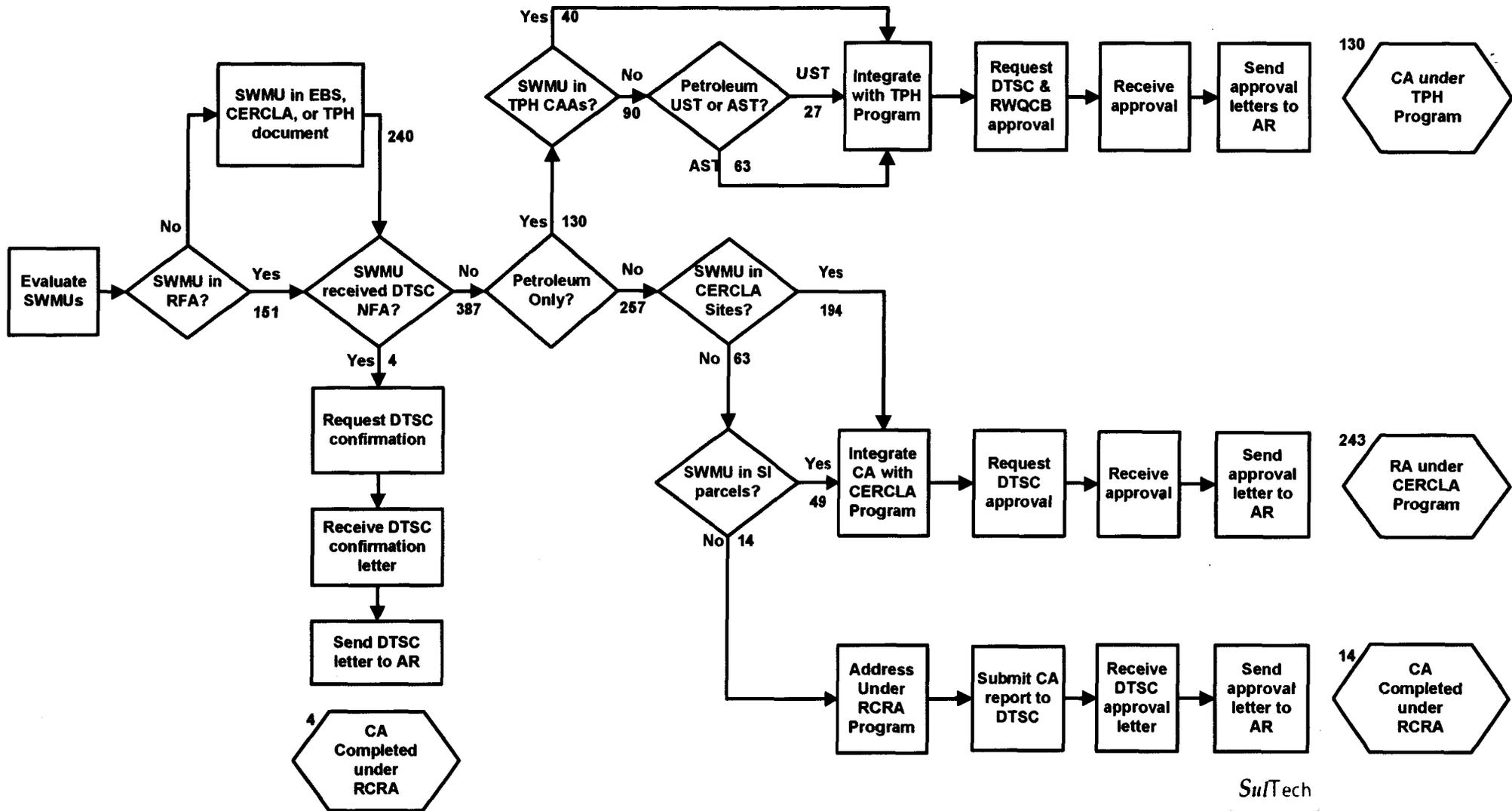
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**FIGURE I2-1  
ALAMEDA POINT LOCATION**

SWMU Evaluation Report for Operable Unit 2B



**NOTES**

1. SWMUs include CERCLA sites, USTs, ASTs, oil-water separators, washdown areas, and underground fuel pipelines but exclude RCRA-regulated units
2. Numbers indicate number of SWMUs

**ACRONYMS**

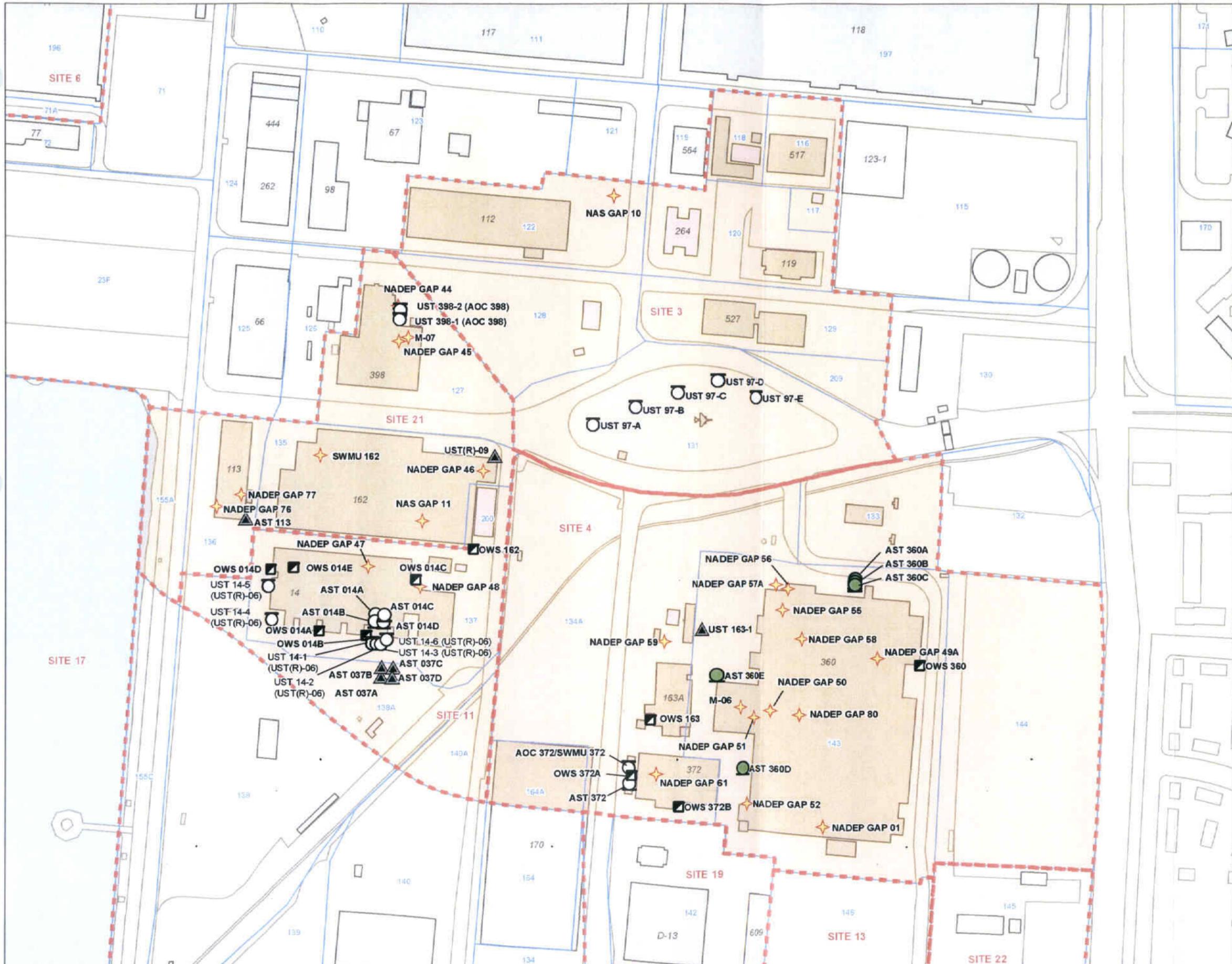
AR	Administrative Record	RA	Response Action
AST	Aboveground Storage Tank	RCRA	Resource Conservation and Recovery Act
CA	Corrective Action	RFA	RCRA Facility Assessment
CAA	Corrective Action Area	RWQCB	Regional Water Quality Control Board
CERCLA	Comp. Env. Resp., Compensation, and Liability Act	SI	Site Investigation
DTSC	Cal EPA Department of Toxic Substances Control	SWMU	Solid Waste Management Unit
EBS	Environmental Baseline Survey	TPH	Total Petroleum Hydrocarbon
NFA	No Further Action	UST	Underground Storage Tank

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**Figure I2-2**  
**SOLID WASTE MANAGEMENT UNIT**  
**INTEGRATION APPROACH**  
**RCRA Hazardous Waste Facility Permit**  
**EPA ID CA 2170023236**  
**NAS Alameda, Alameda, CA**

SWMU Evaluation Report for Operable Unit 2B  
(Sites 3, 4, 11, and 21)

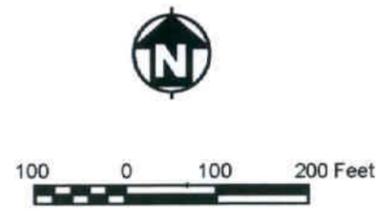


- GENERATOR ACCUMULATION POINT (GAP)
- OIL-WATER SEPARATOR (OWS)
- ABOVEGROUND STORAGE TANK (AST)
  - Present
  - Removed
- UNDERGROUND STORAGE TANK (UST), REMOVED
  -
- SWMUs INTEGRATED WITH THE TPH PROGRAM
- BUILDING
  - Present
  - Removed
- CERCLA SITE BOUNDARY
- CERCLA SITE IN OPERABLE UNIT 2B
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

Notes:

AOC 398 consists of USTs 398-1 and 398-2.  
 UST(R)-06 consists of USTs 14-1 through 14-6.

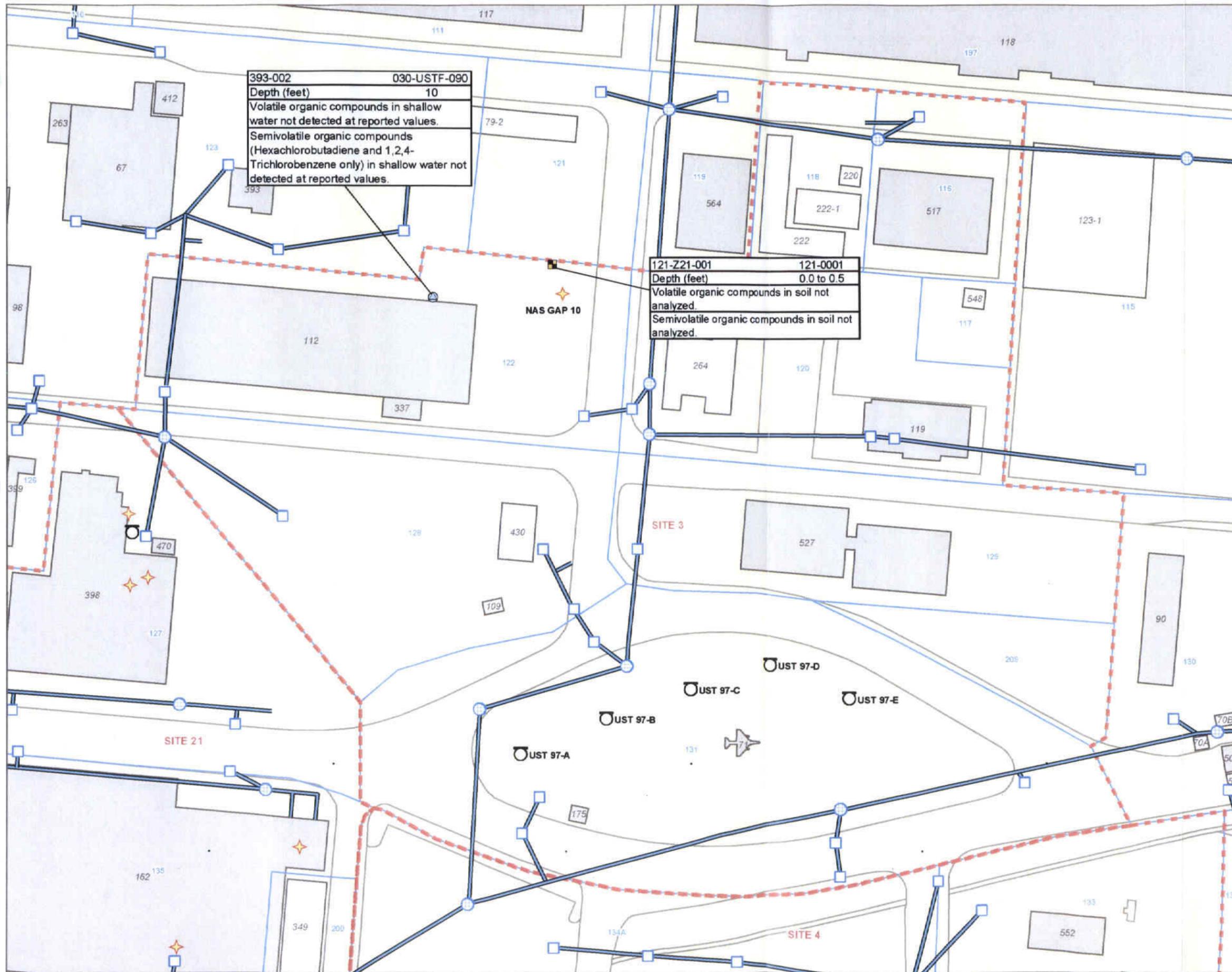
AOC = Area of concern  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 NADEP = Naval Aviation Depot  
 NAS = Naval Air Station  
 RCRA = Resource Conservation and Recovery Act  
 SWMU = Solid Waste Management Unit  
 TPH = Total petroleum hydrocarbons  
 UST(R) = RCRA-identified UST



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**FIGURE I3-1**  
**SWMUs Located Within**  
**Operable Unit 2B (Sites 3, 4, 11 and 21)**

SWMU Evaluation Report for Operable Unit 2B



- GROUNDWATER SAMPLING LOCATION**
- Direct-Push
- SOIL SAMPLING LOCATION**
- Surface Location
  - MANHOLE
  - CATCH BASIN
  - GENERATOR ACCUMULATION POINT (GAP)
  - OIL-WATER SEPARATOR (OWS)
  - UNDERGROUND STORAGE TANK (UST), REMOVED
  - STORM SEWER LINE
- BUILDING**
- Present
  - Removed
- CERCLA SITE BOUNDARY**
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER**
- LAND COVER**

**Notes:**

PAHs in shallow water not evaluated at 393-002.  
 Pesticides and herbicides in soil not evaluated at 121-Z21-001.

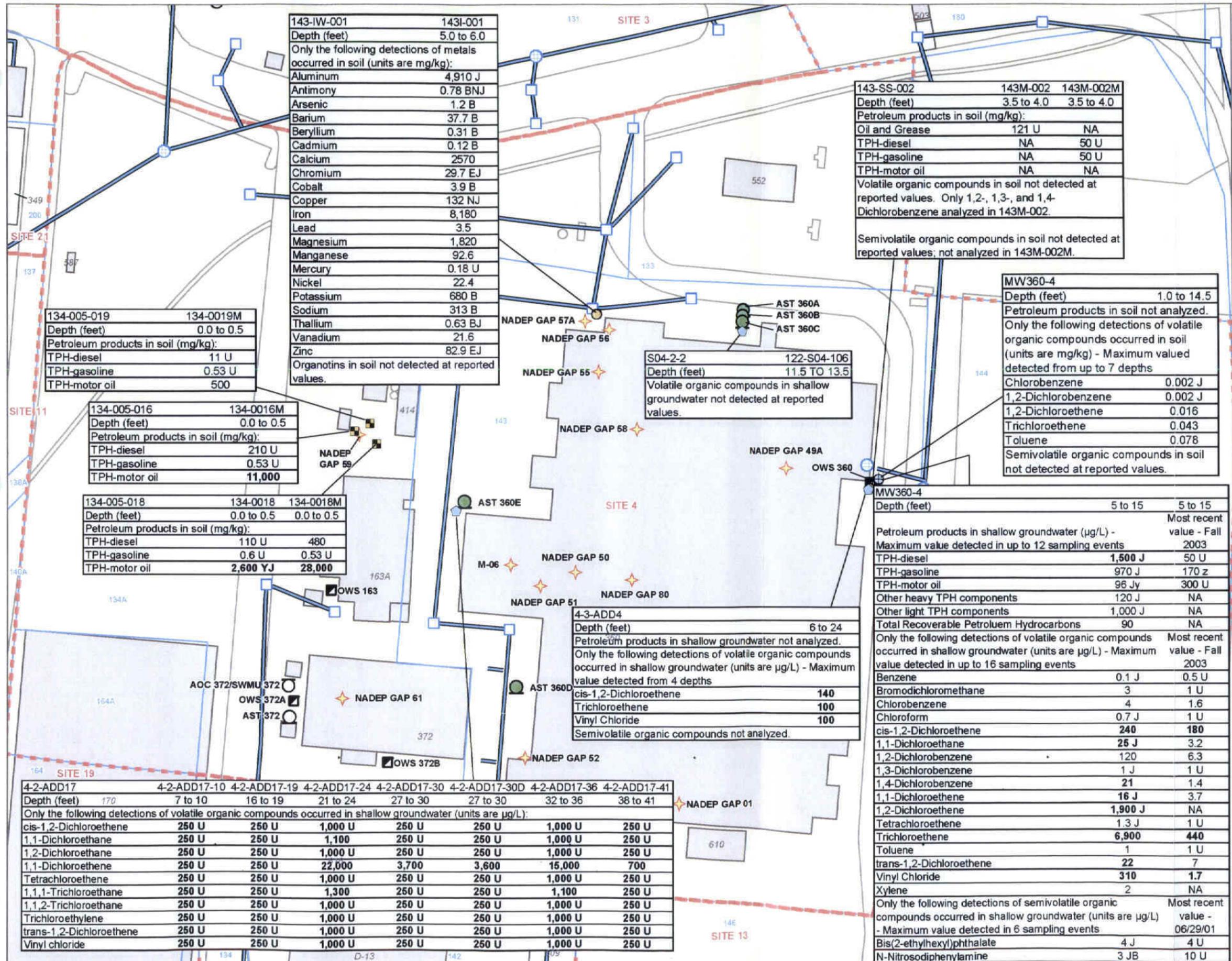
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 NAS = Naval Air Station  
 PAH = Polynuclear aromatic hydrocarbon  
 SWMU = Solid Waste Management Unit



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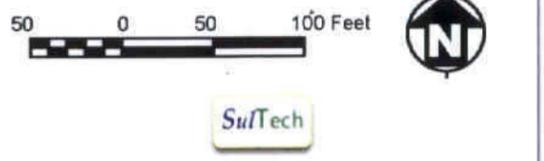
**FIGURE I3-2**  
**Site 3 SWMU**  
**Soil and Groundwater Sample Results**

SWMU Evaluation Report for Operable Unit 2B



- GROUNDWATER SAMPLING LOCATION**
- Hydropunch
  - Monitoring Well
- SOIL SAMPLING LOCATION**
- Soil Boring
  - Surface Location
- MANHOLE**
- MANHOLE
- CATCH BASIN**
- CATCH BASIN
- GENERATOR ACCUMULATION POINT (GAP)**
- GENERATOR ACCUMULATION POINT (GAP)
- OIL-WATER SEPARATOR (OWS)**
- OIL-WATER SEPARATOR (OWS)
- ABOVEGROUND STORAGE TANK (AST)**
- Present
  - Removed
- UNDERGROUND STORAGE TANK (UST), REMOVED**
- UNDERGROUND STORAGE TANK (UST), REMOVED
- STORM SEWER LINE**
- STORM SEWER LINE
- BUILDING**
- Present
  - Removed
- CERCLA SITE BOUNDARY**
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER**
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER**
- LAND COVER

Notes:  
 Bold values indicate "exceeds residential PRC, nonresidential PRC, and/or PRG, value exceeds MCL."  
 ug/L = Micrograms per liter  
 AOC = Area of Concern  
 B = Compound detected in an associated blank as well as the sample  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 E = Compound concentration exceeds the gas chromatograph/mass spectrometer (GC/MS) calibration range  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 M = Mobile laboratory  
 MCL = Maximum Contaminant Level  
 mg/kg = Milligrams per kilogram  
 N = Value was estimated due to lack of calibration for the compound; however, there was presumptive evidence of the presence of the compound  
 NA = Not Analyzed  
 NADEP = Naval Aviation Depot  
 PRC = Preliminary Remediation Criteria  
 PRG = Preliminary Remediation Goal  
 SWMU = Solid Waste Management Unit  
 TPH = Total Petroleum Hydrocarbon  
 U = Analyzed for, but not detected (at reported value)  
 Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard



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**FIGURE I3-3**  
**Site 4 (North) SWMU**  
**Soil and Groundwater Sample Results**

SWMU Evaluation Report for Operable Unit 2B

143-IW-001	143I-001
Depth (feet)	5.0 to 6.0
Only the following detections of metals occurred in soil (units are mg/kg):	
Aluminum	4,910 J
Antimony	0.78 BNJ
Arsenic	1.2 B
Barium	37.7 B
Beryllium	0.31 B
Cadmium	0.12 B
Calcium	2570
Chromium	29.7 EJ
Cobalt	3.9 B
Copper	132 NJ
Iron	8,180
Lead	3.5
Magnesium	1,820
Manganese	92.6
Mercury	0.18 U
Nickel	22.4
Potassium	680 B
Sodium	313 B
Thallium	0.63 BJ
Vanadium	21.6
Zinc	82.9 EJ
Organotins in soil not detected at reported values.	

143-SS-002	143M-002	143M-002M
Depth (feet)	3.5 to 4.0	3.5 to 4.0
Petroleum products in soil (mg/kg):		
Oil and Grease	121 U	NA
TPH-diesel	NA	50 U
TPH-gasoline	NA	50 U
TPH-motor oil	NA	NA
Volatile organic compounds in soil not detected at reported values. Only 1,2-, 1,3-, and 1,4-Dichlorobenzene analyzed in 143M-002.		
Semivolatile organic compounds in soil not detected at reported values; not analyzed in 143M-002M.		

MW360-4	Depth (feet)	1.0 to 14.5
Petroleum products in soil not analyzed.		
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg) - Maximum value detected from up to 7 depths		
Chlorobenzene		0.002 J
1,2-Dichlorobenzene		0.002 J
1,2-Dichloroethene		0.016
Trichloroethene		0.043
Toluene		0.078
Semivolatile organic compounds in soil not detected at reported values.		

134-005-019	134-0019M
Depth (feet)	0.0 to 0.5
Petroleum products in soil (mg/kg):	
TPH-diesel	11 U
TPH-gasoline	0.53 U
TPH-motor oil	500

134-005-016	134-0016M
Depth (feet)	0.0 to 0.5
Petroleum products in soil (mg/kg):	
TPH-diesel	210 U
TPH-gasoline	0.53 U
TPH-motor oil	11,000

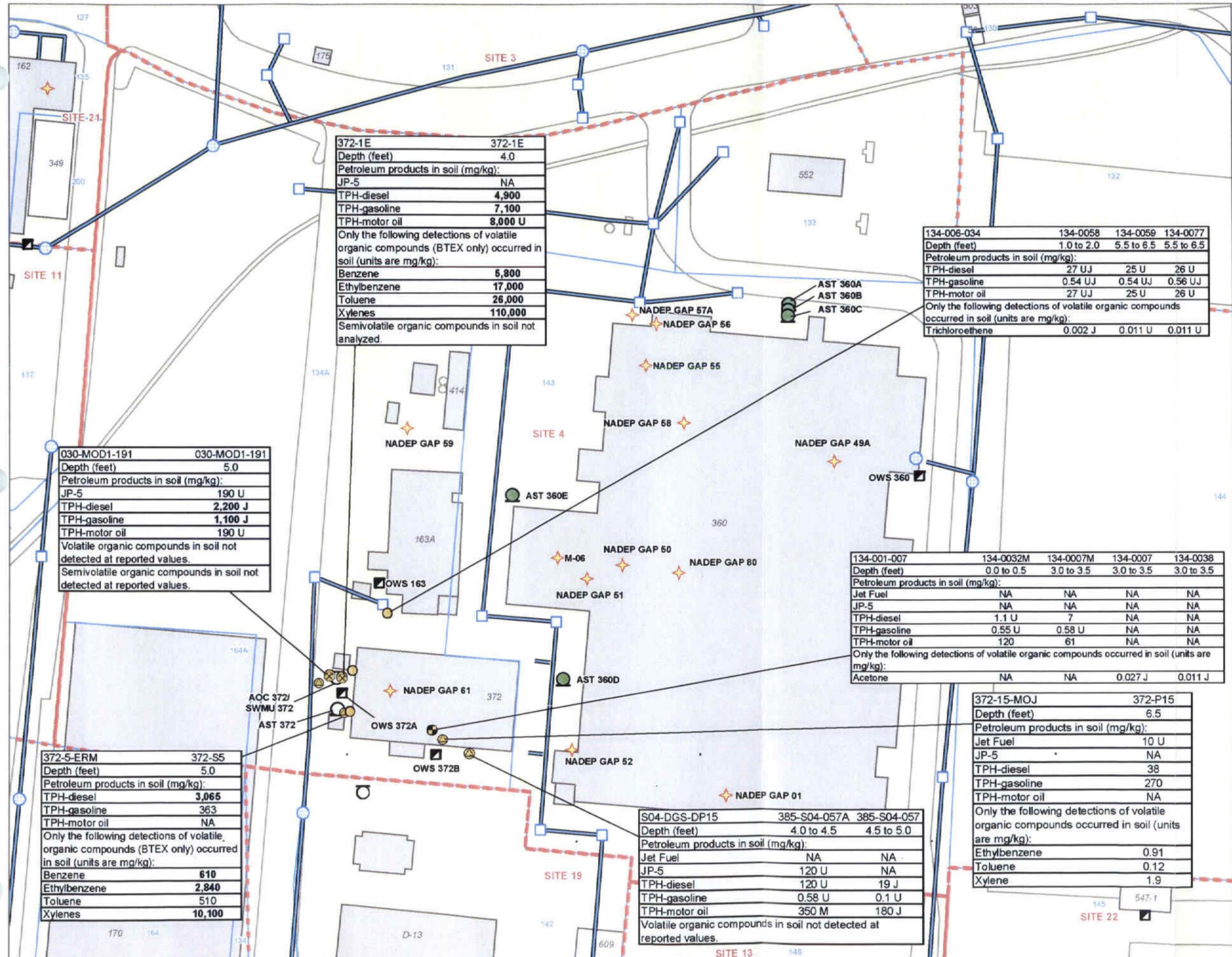
134-005-018	134-0018	134-0018M
Depth (feet)	0.0 to 0.5	0.0 to 0.5
Petroleum products in soil (mg/kg):		
TPH-diesel	110 U	480
TPH-gasoline	0.6 U	0.53 U
TPH-motor oil	2,600 YJ	28,000

S04-2-2	122-S04-106
Depth (feet)	11.5 TO 13.5
Volatile organic compounds in shallow groundwater not detected at reported values.	

MW360-4	Depth (feet)	5 to 15	5 to 15
Petroleum products in shallow groundwater (ug/L) - Most recent value - Fall			
Maximum value detected in up to 12 sampling events			
TPH-diesel		1,500 J	50 U
TPH-gasoline		970 J	170 z
TPH-motor oil		96 Jy	300 U
Other heavy TPH components		120 J	NA
Other light TPH components		1,000 J	NA
Total Recoverable Petroleum Hydrocarbons		90	NA
Only the following detections of volatile organic compounds occurred in shallow groundwater (units are ug/L) - Maximum value - Fall value detected in up to 16 sampling events			
Benzene		0.1 J	0.5 U
Bromodichloromethane		3	1 U
Chlorobenzene		4	1.6
Chloroform		0.7 J	1 U
cis-1,2-Dichloroethene		240	180
1,1-Dichloroethane		25 J	3.2
1,2-Dichlorobenzene		120	6.3
1,3-Dichlorobenzene		1 J	1 U
1,4-Dichlorobenzene		21	1.4
1,1-Dichloroethene		16 J	3.7
1,2-Dichloroethene		1,900 J	NA
Tetrachloroethene		1.3 J	1 U
Trichloroethene		6,900	440
Toluene		1	1 U
trans-1,2-Dichloroethene		22	7
Vinyl Chloride		310	1.7
Xylene		2	NA
Only the following detections of semivolatile organic compounds occurred in shallow groundwater (units are ug/L) - Maximum value detected in 6 sampling events			
Bis(2-ethylhexyl)phthalate		4 J	4 U
N-Nitrosodiphenylamine		3 JB	10 U

4-3-ADD4	Depth (feet)	6 to 24
Petroleum products in shallow groundwater not analyzed.		
Only the following detections of volatile organic compounds occurred in shallow groundwater (units are ug/L) - Maximum value detected from 4 depths		
cis-1,2-Dichloroethene		140
Trichloroethene		100
Vinyl Chloride		100
Semivolatile organic compounds not analyzed.		

4-2-ADD17	4-2-ADD17-10	4-2-ADD17-19	4-2-ADD17-24	4-2-ADD17-30	4-2-ADD17-30D	4-2-ADD17-36	4-2-ADD17-41	
Depth (feet)	170	7 to 10	16 to 19	21 to 24	27 to 30	27 to 30	32 to 36	38 to 41
Only the following detections of volatile organic compounds occurred in shallow groundwater (units are ug/L):								
cis-1,2-Dichloroethene	250 U	250 U	1,000 U	250 U	250 U	1,000 U	250 U	250 U
1,1-Dichloroethane	250 U	250 U	1,100	250 U	250 U	1,000 U	250 U	250 U
1,2-Dichloroethane	250 U	250 U	1,000 U	250 U	250 U	1,000 U	250 U	250 U
1,1-Dichloroethene	250 U	250 U	22,000	3,700	3,600	15,000	700	
Tetrachloroethene	250 U	250 U	1,000 U	250 U	250 U	1,000 U	250 U	
1,1,1-Trichloroethane	250 U	250 U	1,300	250 U	250 U	1,100	250 U	
1,1,2-Trichloroethane	250 U	250 U	1,000 U	250 U	250 U	1,000 U	250 U	
Trichloroethylene	250 U	250 U	1,000 U	250 U	250 U	1,000 U	250 U	
trans-1,2-Dichloroethene	250 U	250 U	1,000 U	250 U	250 U	1,000 U	250 U	
Vinyl chloride	250 U	250 U	1,000 U	250 U	250 U	1,000 U	250 U	



372-1E	372-1E
Depth (feet)	4.0
Petroleum products in soil (mg/kg):	
JP-5	NA
TPH-diesel	<b>4,900</b>
TPH-gasoline	<b>7,100</b>
TPH-motor oil	<b>8,000 U</b>
Only the following detections of volatile organic compounds (BTEX only) occurred in soil (units are mg/kg):	
Benzene	<b>5,800</b>
Ethylbenzene	<b>17,000</b>
Toluene	<b>26,000</b>
Xylenes	<b>110,000</b>
Semivolatile organic compounds in soil not analyzed.	

030-MOD1-191	030-MOD1-191
Depth (feet)	5.0
Petroleum products in soil (mg/kg):	
JP-5	190 U
TPH-diesel	<b>2,200 J</b>
TPH-gasoline	<b>1,100 J</b>
TPH-motor oil	190 U
Volatile organic compounds in soil not detected at reported values.	
Semivolatile organic compounds in soil not detected at reported values.	

372-5-ERM	372-S5
Depth (feet)	5.0
Petroleum products in soil (mg/kg):	
TPH-diesel	<b>3,065</b>
TPH-gasoline	363
TPH-motor oil	NA
Only the following detections of volatile organic compounds (BTEX only) occurred in soil (units are mg/kg):	
Benzene	<b>610</b>
Ethylbenzene	<b>2,840</b>
Toluene	510
Xylenes	<b>10,100</b>

134-006-034	134-0058	134-0059	134-0077
Depth (feet)	1.0 to 2.0	5.5 to 6.5	5.5 to 6.5
Petroleum products in soil (mg/kg):			
TPH-diesel	27 UJ	25 U	26 U
TPH-gasoline	0.54 UJ	0.54 UJ	0.56 UJ
TPH-motor oil	27 UJ	25 U	26 U
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg):			
Trichloroethene	0.002 J	0.011 U	0.011 U

134-001-007	134-0032M	134-0007M	134-0007	134-0038
Depth (feet)	0.0 to 0.5	3.0 to 3.5	3.0 to 3.5	3.0 to 3.5
Petroleum products in soil (mg/kg):				
Jet Fuel	NA	NA	NA	NA
JP-5	NA	NA	NA	NA
TPH-diesel	1.1 U	7	NA	NA
TPH-gasoline	0.55 U	0.58 U	NA	NA
TPH-motor oil	120	61	NA	NA
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg):				
Acetone	NA	NA	0.027 J	0.011 J

372-15-MOJ	372-P15
Depth (feet)	6.5
Petroleum products in soil (mg/kg):	
Jet Fuel	10 U
JP-5	NA
TPH-diesel	38
TPH-gasoline	270
TPH-motor oil	NA
Only the following detections of volatile organic compounds occurred in soil (units are mg/kg):	
Ethylbenzene	0.91
Toluene	0.12
Xylene	1.9

S04-DGS-DP15	385-S04-057A	385-S04-057
Depth (feet)	4.0 to 4.5	4.5 to 5.0
Petroleum products in soil (mg/kg):		
Jet Fuel	NA	NA
JP-5	120 U	NA
TPH-diesel	120 U	19 J
TPH-gasoline	0.58 U	0.1 U
TPH-motor oil	350 M	180 J
Volatile organic compounds in soil not detected at reported values.		

- SOIL SAMPLING LOCATION**
- Direct-Push
  - Excavation
  - Direct-Push
  - Soil Boring
  - Surface Location
  - MANHOLE
  - CATCH BASIN
  - GENERATOR ACCUMULATION POINT (GAP)
  - OIL-WATER SEPARATOR (OWS)
- ABOVEGROUND STORAGE TANK (AST)**
- Present
  - Removed
  - UNDERGROUND STORAGE TANK (UST), REMOVED
- STORM SEWER LINE**
- BUILDING**
- Present
  - Removed
- CERCLA SITE BOUNDARY**
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER**
- LAND COVER**

Notes:

Bold values indicate "Value exceeds residential PRC, nonresidential PRC, and/or PRG"

AOC = Area of Concern

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980

J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample

JP-5 = Jet propellant-5

M = Mobile laboratory

mg/kg = Milligrams per kilogram

NA = Not Analyzed

NADEP = Naval Aviation Depot

PRC = Preliminary Remediation Criteria

PRG = Preliminary Remediation Goal

SWMU = Solid Waste Management Unit

TPH = Total Petroleum Hydrocarbon

U = Analyzed for, but not detected (at reported value)

Y = Hydrocarbon mixture did not exhibit a reasonable pattern match with the calibration standard

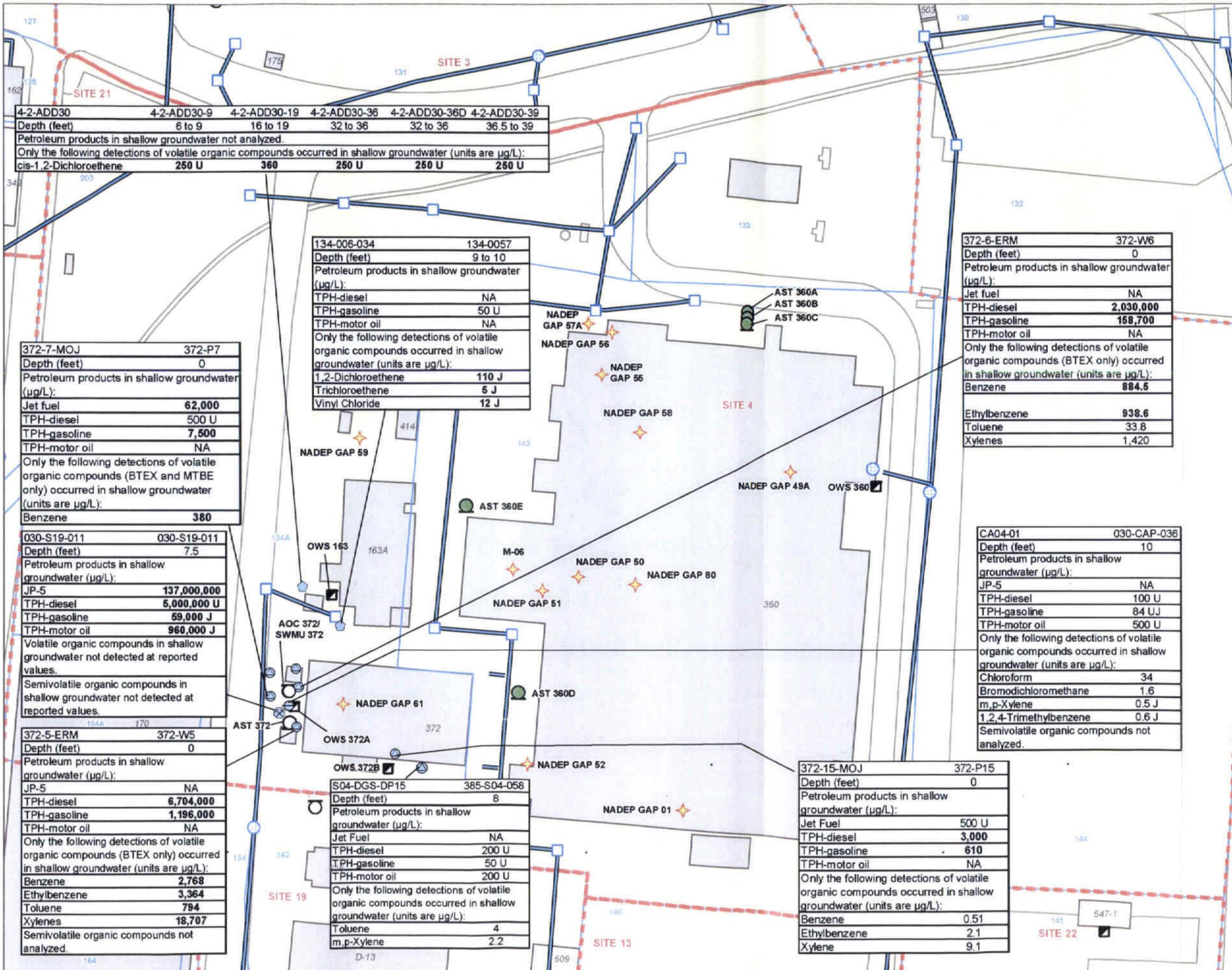
Z = Chromatographic response did not resemble a typical fuel pattern

50 0 50 100 Feet

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**FIGURE I3-4**  
**Site 4 (South) SWMU**  
**Soil Sample Results**

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- SAMPLING LOCATION**
- ⊗ Direct-Push
  - ⊗ Excavation
  - ⊗ Direct-Push
  - ⊗ Hydropunch
  - ⊗ Piezometer
  - ⊗ MANHOLE
  - CATCH BASIN
  - ★ GENERATOR ACCUMULATION POINT (GAP)
  - OIL-WATER SEPARATOR (OWS)

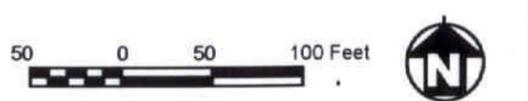
- ABOVEGROUND STORAGE TANK (AST)**
- Present
  - Removed
- UNDERGROUND STORAGE TANK (UST), REMOVED**
- 

- STORM SEWER LINE**
- BUILDING**
- Present
  - Removed
- CERCLA SITE BOUNDARY**
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER**
- LAND COVER**

**Notes:**

Bold values indicate "Value exceeds residential PRC or MCL."

µg/L = Micrograms per liter  
 AOC = Area of Concern  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 MCL = Maximum Contaminant Level  
 NADEP = Naval Aviation Depot  
 PRC = Preliminary Remediation Criteria  
 SWMU = Solid Waste Management Unit

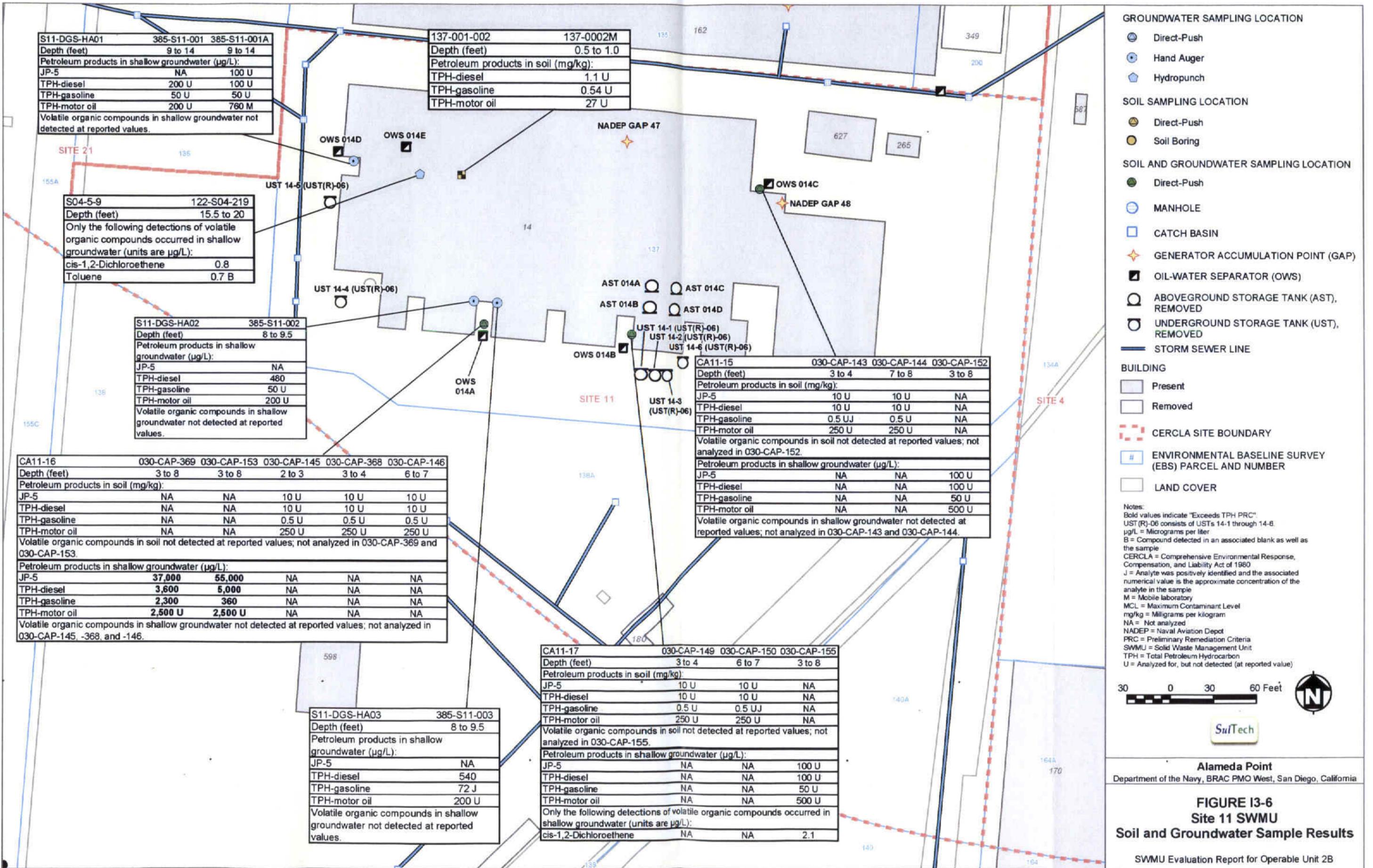


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**FIGURE I3-5**  
**Site 4 (South) SWMU**  
**Groundwater Sample Results**

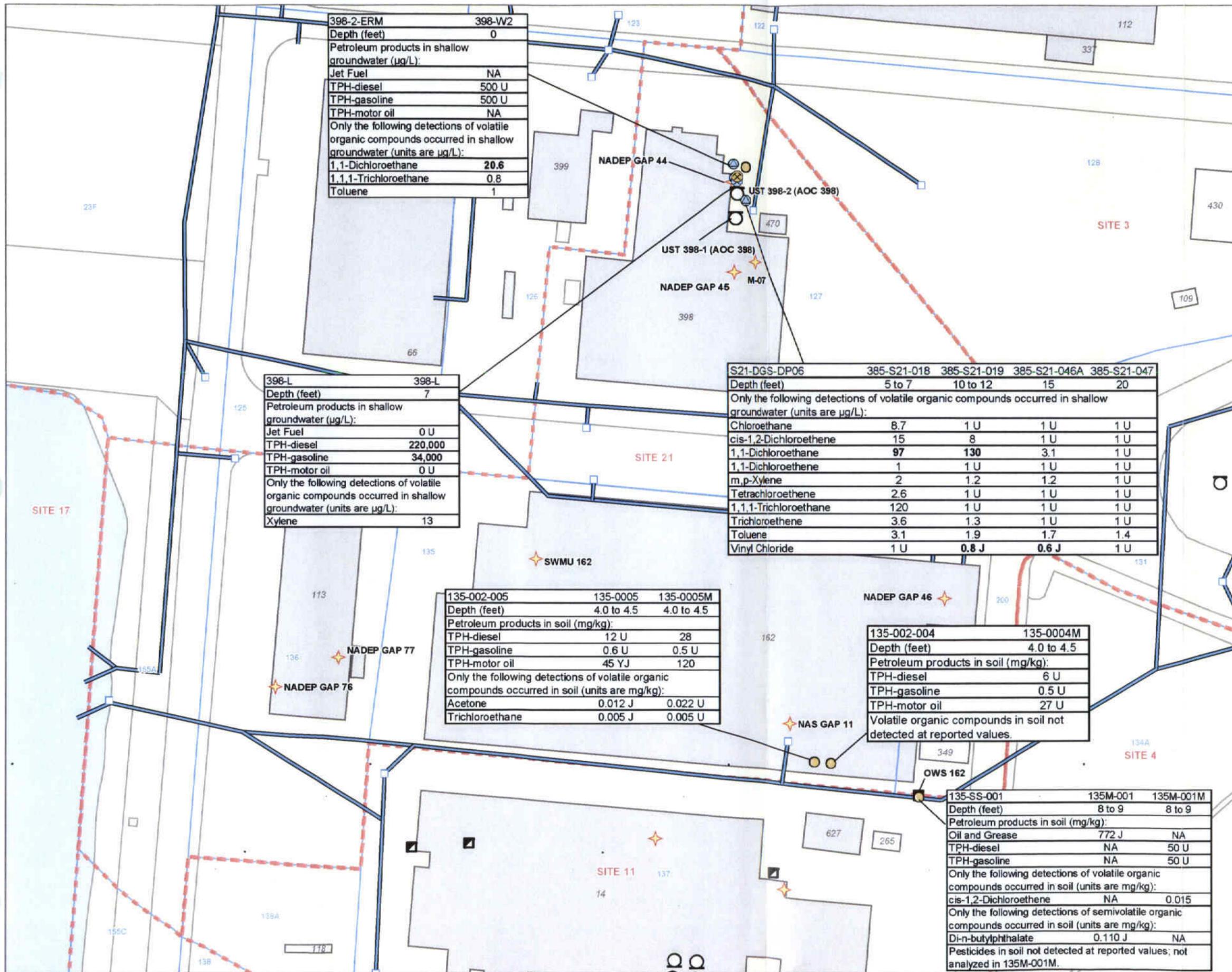
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**FIGURE I3-6**  
**Site 11 SWMU**  
**Soil and Groundwater Sample Results**

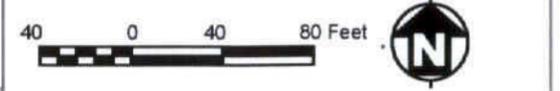
SWMU Evaluation Report for Operable Unit 2B



- GROUNDWATER SAMPLING LOCATION**
- ⊕ Direct-Push
  - ⊙ Geoprobe
  - ⊗ Excavation
- SOIL SAMPLING LOCATION**
- ⊗ Excavation
  - ⊙ Soil Boring
  - ⊕ MANHOLE
  - CATCH BASIN
  - ★ GENERATOR ACCUMULATION POINT (GAP)
  - OIL-WATER SEPARATOR (OWS)
  - ABOVEGROUND STORAGE TANK (AST), REMOVED
  - UNDERGROUND STORAGE TANK (UST), REMOVED
  - STORM SEWER LINE
- BUILDING**
- Present
  - Removed
- ⊗ CERCLA SITE BOUNDARY
- ⊕ ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

**Notes:**  
 Bold values indicate "Exceeds PRG, MCL, or TPH PRC."  
 AOC 398 consists of USTs 398-1 and 398-2.

µg/L = Micrograms per liter  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 J = Analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample  
 M = Mobile laboratory  
 MCL = Maximum Contaminant Level  
 mg/kg = Milligrams per kilogram  
 NA = Not analyzed  
 NADEP = Naval Aviation Depot  
 PRC = Preliminary Remediation Criteria  
 PRG = Preliminary Remediation Goal  
 SWMU = Solid Waste Management Unit  
 TPH = Total Petroleum Hydrocarbon  
 U = Analyzed for, but not detected (at reported value)



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**FIGURE I3-7**  
**Site 21 SWMU**  
**Soil and Groundwater Sample Results**

SWMU Evaluation Report for Operable Unit 2B