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**DRAFT FINAL**

# **Finding of Suitability to Transfer Phase 2 Former Naval Air Station Alameda Alameda, California**

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Prepared for:



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- Attachment 2: Hazardous Substances Notification Table

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## ***Acronyms and Abbreviations***

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§	Section
ACM	asbestos-containing material
ASHERA	Asbestos Hazard Emergency Response Act
AOC	area of concern
ARIC	area requiring institutional controls
ARRA	Alameda Reuse and Redevelopment Authority
AST	aboveground storage tank
BCT	BRAC Cleanup Team
BRAC	Base Realignment and Closure
CAA	Petroleum Program Corrective Action Area
CANS	shipping container storage
CCR	California Code of Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
City	City of Alameda
COC	chemical of concern
COPC	chemical of potential concern
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DDx	the sum of DDD, DDE, and DDT
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
DTSC	California Department of Toxic Substances Control
EBS	environmental baseline survey
EDC	Economic Development Conveyance
ESD	Explanation of Significant Differences
FFA	Federal Facility Agreement
FFSRA	Federal Facility Site Remediation Agreement
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FISCA	Navy Fleet and Industrial Supply Center Oakland, Alameda Facility/Alameda Annex
FL	fuel line
FOST	finding of suitability to transfer
FS	feasibility study
GAP	generator accumulation point
G-RAM	general radioactive material

HHRA	human health risk assessment
HRA	historical radiological assessment
HSC	California Health and Safety Code
IC	institutional control
IR	Installation Restoration (Program)
ISCO	in situ chemical oxidation
LBP	lead-based paint
LIFOC	Lease in Furtherance of Conveyance
LPL	Large Parcel Lease
LUC	land-use control
mg/kg	milligrams per kilogram
MEC	munitions and explosives of concern
MNA	monitored natural attenuation
MOA	Memorandum of Agreement
NACIP	Navy Assessment and Control of Installation Pollutants
NADEP	Naval Aviation Depot
NAS	Naval Air Station
Navy	U.S. Department of the Navy
NFA	No Further Action
NTCRA	non-time-critical removal action
OU	operable unit
OWS	oil-water separator
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PDDGS	Pre-Design Data Gap Sampling
PRG	preliminary remediation goal
Ra-226	radium-226
RA	remedial action
RACR	Remedial Action Completion Report
RAP	remedial action plan
RAO	remedial action objective
RAWP	remedial action work plan
RCRA	Resource Conservation and Recovery Act
RD	remedial design
RFA	RCRA facility assessment
RG	remedial goal
RI	remedial investigation
ROD	Record of Decision



SI	site inspection
SedMP	Sediment Management Plan
SVE	soil vapor extraction
SWMU	solid waste management unit
TCE	trichloroethene
TCRA	time-critical removal action
TPH	total petroleum hydrocarbons
U.S. EPA	United States Environmental Protection Agency
U.S.C.	<i>United States Code</i>
UST	underground storage tank
VI	vapor intrusion
VOC	volatile organic compound
Water Board	Regional Water Quality Control Board (San Francisco Bay)
WD	washdown area

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## 1.0 Purpose

The purpose of this Finding of Suitability to Transfer (FOST) is to summarize how the requirements and notifications for hazardous substances, petroleum products, and other regulated materials have been satisfied for a portion of the former Naval Air Station (NAS) Alameda by the U.S. Department of the Navy (Navy) (see Figure 1). Property included in this FOST may be transferred by the Navy to multiple property recipients under separate conveyance authorities, including but not limited to No-Cost Economic Development Conveyance (EDC) and Public Benefit Conveyance. This FOST includes property west of Main Street on what is now referred to as Alameda Point, as well as east of Main Street on what is now referred to as the former North Housing Area and former Alameda Unified School District parcel.

For simplicity, the lands covered by this FOST are referred to hereinafter as the FOST Parcel. The FOST Parcel is composed of seven noncontiguous upland and submerged land areas. [Figure 2](#) shows the FOST Parcel. The lands identified for this FOST are described in [Section 2.0](#).

This FOST provides documentation that a portion of the real property made available through the closure of NAS Alameda is environmentally suitable for transfer by deed. Note that certain environmental program activities are ongoing, including the Alameda Point Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Program, as discussed in [Section 4.1](#) and Alameda Point Petroleum Program activities, as discussed in [Section 4.2](#). A summary of required restrictions is provided in [Section 5.0](#).

This FOST was prepared in accordance with the Department of Defense (DoD) Base Redevelopment and Realignment Manual ([DoD 2006](#)) and the Navy Base Realignment and Closure (BRAC) Program Management Office Policy for Processing Findings of Suitability to Transfer or Lease ([Navy 2008c](#)).

## 2.0 Property Description

Alameda Point is located in the San Francisco Bay Area (see [Figure 1](#)) on the western end of Alameda Island, which lies on the eastern side of the San Francisco Bay, adjacent to the City of Oakland. The upland portion of Alameda Point is roughly rectangular in shape, approximately 2 miles long east–west and 1 mile wide north–south, and occupies 1,734 acres of upland land. The FOST Parcel includes approximately 70 acres of upland land areas and 154 acres of submerged land areas, or a total of approximately 224 acres. Alameda Point buildings in the FOST Parcel are shown on [Figures 3A and B](#).

The FOST Parcel consists of nine environmental sites, including seven designated Installation Restoration (IR) sites: IR Sites 3, 16, 17, and 30; portions of IR Sites 24, 25, and 34; and two Areas of Concern (AOCs), AOC 1 and AOC 6 (investigated as part of the IR Program)

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(Figure 4). Six of the sites are located within the southeastern portion of Alameda Point (IR Sites 3, 16, 17, and 24, plus AOCs 1 and 6), a seventh (IR Site 34) is located in the northwest, and two (IR Sites 25 and 30) are located in the northeast (see Figure 4). Two sites are submerged: IR Site 17, the Seaplane Lagoon and IR Site 24, the Pier Area. These nine sites are described in more detail in Section 4.1.

All of the FOST Parcel areas west of Main Street (IR-3, IR-16, IR-24, IR-34, AOC-1, and AOC-6) with the exception of IR-17 and the first floor of Building 112 located in the IR-3 area (Figure 3A) are currently leased by the Navy to the City of Alameda (City) under a Lease in Furtherance of Conveyance (LIFO). IR-17 was previously part of the LIFO, but was removed in 2009 pending completion of the Navy's remedial action. The FOST Parcel areas east of Main Street (IR-25 and IR-30) have never been under the LIFO (Figure 3B).

Prior to the LIFO on March 24, 1997, the Navy entered into a Large Parcel Lease (LPL) with the Alameda Reuse and Redevelopment Authority (ARRA) to allow the ARRA to lease various property and buildings prior to transfer (Navy and ARRA 1997). In June 2000, the Navy entered into the aforementioned LIFO with the ARRA to replace the LPL and to allow the ARRA to continue to lease property and buildings prior to transfer (Navy and ARRA 2000a). Also in June 2000, the Navy and the ARRA entered into a No Cost EDC Memorandum of Agreement (MOA) for the conveyance by the Navy of portions of Alameda Point to the ARRA (Navy and ARRA 2000b). The ARRA was dissolved in 2012, and the City of Alameda, as the recognized Local Redevelopment Authority, assumed all of ARRA's rights, duties, assets, and obligations under the LIFO and the MOA. To date, the Navy has transferred approximately 83% of the Alameda Point to the City and other entities. A summary of these transactions is presented in Table 1.

Certain utility and other infrastructure including sanitary sewer, storm drain, fuel lines, and electric power lines are present within the FOST Parcel. The City is responsible for all operation, maintenance, repair, replacement, and administration of utilities and infrastructure located within property subject to the LIFO.

### 3.0 Regulatory Coordination

In September 1992, the Navy, the State of California Department of Health Services Toxic Substances Control Program (now referred to as the California Department of Toxic Substances Control [DTSC]), and the California Regional Water Quality Control Board - San Francisco Bay (Water Board) entered into a Federal Facility Site Remediation Agreement (FFSRA) (DTSC 1992a); the United States Environmental Protection Agency (U.S. EPA) was not a signatory to the FFSRA. The FFSRA defined the Navy's obligations for corrective action and response action under the Resource Conservation and Recovery Act (RCRA) and CERCLA for sites that had been identified in the Navy's IR Program at Alameda Point. Subsequent to the execution of the FFSRA and following designation of Alameda Point as a National Priorities List site in 1999, the

Navy and U.S. EPA executed a Federal Facility Agreement (FFA) in July 2001. Subsequently, DTSC signed the FFA in October 2005, and the Water Board signed it in November 2005. The FFA superseded the FFSRA and defines the Navy's corrective action and response obligations under CERCLA for the RCRA and CERCLA sites that have been identified at Alameda Point. The U.S. EPA, DTSC, and the Water Board were notified of the initiation of this FOST and were issued copies for review. Regulatory agency comments to this FOST are provided in [Attachment 1](#).

### **3.1 Resource Conservation and Recovery Act Part A or B Permits and Subtitle C Corrective Action**

This FOST reviews sites that were evaluated and addressed under the Navy's CERCLA and Defense Environmental Restoration Program (DERP) authority, as well as sites addressed under the corrective action requirements of RCRA Subtitle C (for solid waste management units [SWMUs]), RCRA Subtitle I (for underground storage tanks [USTs]), and associated state laws and regulations, administered by the U.S. EPA, the State of California, and Alameda County. These corrective action authorities are similar to CERCLA in that they require response/corrective action (i.e., cleanup) where necessary to ensure adequate protection of human health and the environment — see CERCLA Section (§) 121(d); California Health and Safety Code (HSC) § 25296.10(b); and *California Code of Regulations* (CCR) Title 23 § 2720 (definition of “corrective action”) and § 2725(c), and Title 22 CCR§ 66264.101(a).

The rationale for integrating CERCLA and RCRA corrective action requirements is straightforward. The cleanup standard for CERCLA is set forth in CERCLA § 121 (Cleanup Standards), which states in the relevant part of Section 121(b)(1): “...The President shall select a remedial action that is protective of human health and the environment...” (42 *United States Code* [U.S.C.] § 9621(b)(1)). The cleanup standard for RCRA Subtitle C corrective action in the State of California, as set forth in Title 22 CCR § 66264.101(a), provides: “The owner or operator of a facility seeking a permit for the transfer, treatment, storage, or disposal of hazardous waste shall institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid or hazardous waste management unit at the facility, regardless of the time at which waste was placed in such unit.” Also see California HSC §§ 25187 and 25200.10(b).

Alameda Point was previously subject to a RCRA permit (CA2170023236), which expired in July 2003. As part of the RCRA permit closeout activities, a RCRA Facility Assessment (RFA) was conducted in 1992 and identified numerous SWMUs (which were referred to as “non-permitted SWMUs” for a period of time) at former NAS Alameda, and which had not been previously identified in the RCRA permit ([DTSC 1992b](#)).

All RCRA-permitted units have been closed ([DTSC 2000a](#), [2000b](#), [2000c](#)), and all non-permitted units were delegated either to the CERCLA Program or the Petroleum Program as detailed in [Table 2](#). [Table 2](#) provides information regarding the closure status of the CERCLA and petroleum sites to which the RCRA units were assigned. Additional information about the open petroleum sites within the FOST Parcel is discussed in [Section 4.2](#).

### **3.2 Resource Conservation and Recovery Act Subtitle I Corrective Action**

The Water Board administers the UST corrective action program at Alameda Point pursuant to RCRA Subtitle I and California HSC §§ 25280-25299.8. The authority of the Water Board to require corrective action at UST sites is set forth at Title 23 CCR Division 3, Chapter 16.

Many of the Petroleum Program sites were originally evaluated as part of a remedial investigation (RI) completed under CERCLA (Title 42 U.S.C. § 9601[14]) at Alameda Point between 1992 and 1995. However, petroleum and petroleum-related constituents are not included in the definition of hazardous substances under CERCLA (Title 42 U.S.C. § 9601[14]). By 1997, sufficient data had been obtained and analyzed for the BRAC Cleanup Team (BCT) to determine that a number of IR sites only contained petroleum or petroleum-related constituents, and, therefore, a subset of these sites was moved into the Petroleum Program ([Navy 1997](#)). By letter dated June 20, 1997, DTSC concurred with this decision ([DTSC 1997](#)). Petroleum-only sites and their constituents are being remediated under the 1994 California UST regulation (Title 23 CCR § 2720), which addresses releases to soil and groundwater from former petroleum fuel-containing USTs, aboveground storage tanks (ASTs), and pipelines.

### **3.3 Comprehensive Environmental Response, Compensation, and Liability Act**

In 1993, the Defense Base Closure and Realignment Commission recommended the closure of NAS Alameda, which was operationally closed in 1997. In 1999, former NAS Alameda was added to the National Priorities List. Under Executive Order 12580, the Navy is the lead agency responsible for cleanup efforts at Navy properties.

CERCLA response actions are initiated at environmental sites where CERCLA hazardous substances have been or may have been released. There are seven areas known as IR Program sites and two AOCs within the FOST Parcel. As discussed in [Section 4.1](#), CERCLA investigations were conducted under the IR program for these sites.

## 4.0 Summary of Environmental Conditions and Notifications

This section summarizes the environmental conditions and notifications, as they relate to CERCLA, petroleum products and derivatives, asbestos-containing materials (ACM), lead-based paint (LBP), and other regulated materials.

The deed(s) for the CERCLA-impacted FOST Parcel will contain, to the extent such information is available on the basis of a complete search of agency files, a notification of hazardous substances stored for 1 year or more, or known to be released, or disposed of within the FOST Parcel, in the form and manner prescribed by CERCLA (42 U.S.C. Section 9620[h]) and Title 40 of the *Code of Federal Regulations* Part 373. This notice is provided as [Attachment 2](#), the Hazardous Substances Notification.

In addition to the hazardous substance notice, the Base Redevelopment and Realignment Manual outlines other environmental topics that must be addressed in a FOST ([DoD 2006](#)). These topics are further discussed below, including the environmental conditions and actions taken on the FOST Parcel; identification of notification requirements related to CERCLA, munitions response, and petroleum corrective action; and information regarding ACM, LBP, polychlorinated biphenyls (PCBs), radiological materials, and pesticides.

### 4.1 CERCLA Program

This section addresses the CERCLA sites within the FOST Parcel. The Navy initiated environmental investigations at NAS Alameda under the Navy Assessment and Control of Installation Pollutants (NACIP) Program. Under the NACIP Program, the Navy performed an initial assessment study in 1982 to assess NAS Alameda for areas posing a potential threat to human health or the environment due to contamination from historical uses involving hazardous materials ([Ecology and Environment 1983](#)).

On June 6, 1988, the Navy received a Remedial Action Order from the Department of Health Services (now DTSC) that identified NAS Alameda sites as needing a RI and feasibility study (FS) in accordance with the requirements of CERCLA. In response, the Navy converted its NACIP Program into the IR Program to be more consistent with CERCLA, and investigations were conducted in a phased approach.

A comprehensive base closure strategy was developed by the BCT as part of the 1997 BRAC Cleanup Plan at Alameda Point ([Navy 1997](#)). This strategy consolidated the initial 23 IR sites into four Operable Units (OUs) as a management tool to accelerate site investigation. OU-4 was later subdivided and OU-5 and OU-6 were added when IR Sites 24 through 31 were added to the CERCLA program. IR Site 18 (Storm Sewers) was reconfigured and eliminated as a separate IR site. Instead, the associated contamination in the storm sewers was investigated and remediated

within the footprint of individual sites. An additional four new sites, IR Sites 32, 33, 34, and 35, were added, but were not assigned to an OU.

Seven out of 34 Alameda Point IR sites are located within the FOST Parcel (Figure 4). These sites include IR Sites 3, 16, 17, and 30, and portions of IR Sites 24, 25, and 34. AOC 1 and AOC 6 are also within the FOST Parcel.

Environmental sites within the FOST Parcel have received regulatory agency concurrence for either No Further Action (NFA) or Response Complete. The status of environmental sites within the FOST Parcel is presented in Table 3. A No Further Action or Response Complete determination is based on the findings of evaluations or cleanup actions that the parcel is suitable for transfer as long as the applicable notifications and restrictions, outlined in Sections 4.0 and 5.0, have been implemented. No Further Action designations were given to sites either because no response action was required to provide adequate protection of human health and the environment, or the required remedial action has been completed.

Besides the IR sites, the Marsh Crust also was investigated under the CERCLA Program at Alameda Point. The Marsh Crust is a layer of sediment contaminated with polycyclic aromatic hydrocarbons (PAHs) that were deposited across the tidelands and the former subtidal areas from the late 1800s until the 1920s. The contamination is believed to have resulted from former industrial processes in the area that discharged petroleum products and wastes directly into San Francisco Bay. The Final Marsh Crust Remedial Action Plan (RAP)/Record of Decision (ROD) was signed in February 2001 (Navy 2001). The Marsh Crust RAP/ROD identifies restrictions on excavations that vary by location and that apply within all of the upland areas of the FOST Parcel. Figure 5, Footprint of Areas within FOST Parcel that Require Restrictions, includes depiction of the Marsh Crust restrictions.

A summary of the CERCLA investigations conducted within the FOST Parcel is presented below.

#### **4.1.1 IR Site 3 (OU-2B)**

IR Site 3, Abandoned Fuel Storage Area, is an approximately 12.8-acre site located near the eastern entrance to Alameda Point (Figure 2). IR Site 3 is known as the Abandoned Fuel Storage Area because between the 1940s and 1970s, aviation gasoline was stored there in USTs. Nearly 80 percent of the site is covered with asphalt and concrete in the form of buildings, roads, and parking lots (Figure 3A). IR Site 3 is grouped with IR Sites 4, 11, and 21 under OU-2B. Portions of the Petroleum Program Corrective Action Areas (CAAs) 3A, 3B, and 3C are located within IR Site 3 to the south of Buildings 112 and 527 (Figure 6 and Tables 4 and 5). There are several former SWMUs that are within the footprint of IR Site 3 (Figure 7 and Table 2). Only one of these former SWMUs, NAS Generator Accumulation Point (GAP) 10, is addressed under



CERCLA as part of IR Site 3 (Navy 2015a). The remaining SWMUs within the IR Site 3 portion of the FOST Parcel (Naval Aviation Depot [NADEP] GAPS 44 and 45, M-07, and AOC 398) are addressed as part of the Petroleum Program. The Petroleum Program sites located within the IR Site 3 portion of the FOST Parcel are discussed in Section 4.2.

The 2015 ROD identifies contaminants of concern (COCs) for IR Site 3 soils as cobalt and lead. Cobalt is present in one localized area at concentrations that exceed residential cleanup goals (Navy 2015a). This area was originally in IR Site 21, (an IR site adjacent to IR Site 3); however, after the CERCLA FS the boundary of IR Site 3 was modified to include this area. The remedy for cobalt impacted soil at IR Site 3 is institutional controls (ICs) to restrict residential use (Navy 2015a) (Figure 5). The ROD identified two areas within IR Site 3 with lead concentrations in soil that required remedial action. The selected remedy for lead-impacted soil was excavation with off-site disposal of the contaminated soil. The soil removal from the two areas has been completed, and the excavated areas were backfilled with fill suitable for reuse and returned to original grade.

The OU-2B Soil Remedial Action Completion Report (RACR) documents the areas within IR Site 3 where lead-impacted soil was removed and documents completion of the remedial action for soil (Arcadis 2015). The U.S. EPA submitted a letter concurring with the RACR for OU-2B Soil (USEPA 2015b).

By letter dated August 6, 2012, the Navy provided information demonstrating that groundwater in the southeast portion of the base, including all of IR Site 3, meets State Water Board Resolution No. 88-63 and Regional Water Board Resolution No. 89-39, “Sources of Drinking Water,” exception criteria (a) and (c). Information presented included proximity to San Francisco Bay and potential for salt water intrusion, high salinity, current county restrictions on well installation in shallow groundwater, and potential for surface runoff to contaminate groundwater (Navy 2012a). The regulatory agencies concurred with the Navy’s assessment (Water Board 2012a, USEPA 2012c). Therefore, it is unlikely that shallow groundwater will be used as a municipal water supply.

The 2015 ROD selected an OU-2B groundwater remedy for a volatile organic compounds (VOCs) groundwater plume that underlies portions of IR Sites 4, 11, and 21. While the OU-2B shallow VOC groundwater plume does not extend into IR Site 3, the remedy includes ICs with a buffer zone that extends beyond the perimeter boundary of the plume and onto a portion of IR Site 3 (Figure 5).

The ROD for OU-2B identifies the Area Requiring Institutional Controls (ARICs) and documents the ICs necessary to protect human health and attain the Remedial Action Objectives (RAOs) for soil and groundwater (Navy 2015a). The Land Use Control (LUC) Remedial Design (RD) for OU-2B documents the restrictions related to the ICs for soil at IR Site 3 and ICs for

OU-2B groundwater (Figure 5). The LUC RD refines the IC boundaries presented in the ROD for groundwater based on evaluation of recent data (Navy 2015c).

Soil remediation is complete, and ICs will be implemented to protect human health from residual contamination in soil and adjacent groundwater; therefore, IR Site 3 is suitable for transfer.

#### 4.1.2 IR Site 16 (OU-1)

IR Site 16, the C-2 Shipping Container Storage (CANS) Area consists of 11.4 acres located 390 feet east of San Francisco Bay. Eighty percent of IR Site 16 is covered by asphalt, concrete, buildings, roads, and parking lots (Figure 3A). Historically, the site was used for industrial-type activities including aircraft parking, aircraft maintenance, material and equipment staging, discarded items storage, automobile servicing and maintenance, and hazardous materials storage. IR Site 16 contains Building 608, former Building 402 and shipping containers known as “CANS” (338A through 338H) in the eastern portion of IR Site 16 (see Figure 3A). The CANS were used to store avionics parts and test equipment, chemicals, and aircraft fabrication equipment. Three sheds associated with Building 608 were used as vehicle service bays. IR Site 16 also includes oil–water separators (OWSs) 608A and 608B, washdown area (WD) 608 (Figure 7), UST(R)-18/NAS GAP 17 (also known as UST 608-1), and AST 338-D4 and AST 608 (Figures 8 and 9). Due to possible petroleum contamination, a portion of IR Site 16 is also designated as CAA 9B (Figure 6), which is discussed in Section 4.2.1 (Navy 2007b).

No COCs were identified in the RI report for soil under any of the IR Site 16 scenarios based on the human health risk assessment (HHRA). VOCs were identified as COCs in groundwater under the residential scenario with domestic/municipal beneficial use. The modified ecological risk assessment results did not identify any COCs for ecological receptors at IR Site 16. The lack of habitat, including nesting and foraging range, makes for minimal likelihood of exposure and hazards to the ecological receptors (Tetra Tech 2004).

In 1997, a non-time-critical removal action (NTCRA) was conducted at IR Site 16 for PCBs and lead in soil (Tetra Tech 1998). At the time the ROD was finalized in September 2007, the potential for soil contamination beneath and adjacent to OWS 608A and OWS 608B and the related potential human health and ecological risk in these locations had not been fully defined. The ROD specified that additional soil sampling, a Pre-Design Data Gap Sampling (PDDGS) should be performed in these areas (Navy 2007b). The ROD specified that the remedial goals (RGs) for any additional contaminants identified during the PDDGS would be based on the U.S. EPA’s 2004 residential Preliminary Remedial Goals (PRGs). COCs identified in the ROD were PCBs for soil, and cis-1,2-dichloroethene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride for groundwater. Lead, chlordane, dieldrin, heptachlor, and heptachlor epoxide were not identified as soil COCs in the ROD, but they were added as soil COCs as a result of the PDDGS and were included in the RD

and remedial action (RA). The purpose of the soil RA was to remove soil that exceeded the RGs for lead, chlordane, dieldrin, heptachlor, and heptachlor epoxide.

The RA for soil beneath and adjacent to OWSs 608A and 608B was completed in April 2011. An Explanation of Significant Differences (ESD) for soil was submitted in May 2012. The ESD describes further sampling and subsequent risk evaluation of a small section of soil with residual COCs remaining beneath a functional building (Building 608). The risk evaluation determined that the remaining site soils meet the RAOs and that the soil remediation was complete (Navy 2012b). The Final RACR for the soil remedial action was submitted in July 2012, and U.S. EPA and DTSC indicated their concurrence by signing the RACR on June 25, 2012 and June 30, 2012, respectively (URS 2012).

For IR Site 16 groundwater, the selected RA in the OU-1 ROD called for using in situ chemical oxidation (ISCO), accelerated bioremediation, monitored natural attenuation, and short-term ICs (Navy 2007b). As reported in the ESD, IR Site 16 groundwater had two treatment areas referred to as IR Site 16 North and IR Site 16 South. ISCO was implemented in May 2010 and groundwater was monitored quarterly for a year. Analytical results indicated significant decreases in COC concentrations from the baseline; however, 2013 monitoring data indicated that some COCs remained above RGs in five wells on IR Site 16 North and four wells on IR Site 16 South (Navy 2015d Pending). While monitoring was ongoing, the regulatory agencies concurred with the Navy's groundwater assessment, which found that groundwater under this portion of Alameda Point met the criteria for exception to California's sources of drinking water policy; this finding is discussed in more detail in Section 4.1.1 (Water Board 2012a, USEPA 2012c). As a result, drinking water standards do not apply to groundwater in the area covered under this exception, which includes IR Site 16.

The updated human health risk assessment using post-RA groundwater monitoring data determined that as a result of the full-scale ISCO RA, the remaining COC concentrations in groundwater do not present unacceptable risk to current receptors (i.e., commercial/industrial). However, there are two areas where COCs in groundwater may potentially present unacceptable risk (i.e., greater than U.S. EPA point of departure of  $10^{-6}$ ) for residential site use, primarily due to potential vapor intrusion (VI) risk. An ESD for groundwater was prepared in 2015 to document the change in the nature of the ICs remedy from the short-term ICs implemented concurrent with the active groundwater treatment identified in the ROD, to permanent ICs to be implemented indefinitely as the final remedy to mitigate potential VI risk (Navy 2015d Pending). The LUC RD identified the IC implementation areas, IC termination criteria, and groundwater monitoring requirements (Navy 2015g Pending). The portions of IR Site 16 subject to ICs are shown on Figure 5. All remedial action is complete, and ICs have been implemented to protect human health from residual groundwater contamination that could pose a risk to future residents, U.S. EPA and DTSC concurred that remedial action is complete at IR Site 16 [UPDATE WITH

**METHOD OF CONCURRENCE AND DATES WHEN AVAILABLE**]. Therefore, IR Site 16 is suitable for transfer.

#### **4.1.3 IR Site 17 (OU-4B)**

IR Site 17, Seaplane Lagoon, consists of approximately 110 submerged acres in the southeastern corner of Alameda Point. The Seaplane Lagoon was constructed in the 1930s by dredging a former tidal flat. During construction, seawalls were built along the eastern, western, and southern boundaries, and a bulkhead wall was constructed on the northern side. Four water access ramps are roughly evenly spaced along the northern perimeter; these seaplane ramps are cantilevered structures associated with and appurtenant to the adjacent apron and are not part of the FOST Parcel. Sediment beneath the ramps is part of Seaplane Lagoon and is included in the FOST Parcel. IR Site 17 is grouped with IR Site 24, another submerged site, under OU-4B (Navy 2006).

From the 1940s until 1975, untreated industrial wastewater and stormwater were discharged into a network of storm drains and delivered to the Seaplane Lagoon through storm sewer outfalls in the northwestern and northeastern corners of the lagoon. Outfall F discharged into the northwestern corner of Seaplane Lagoon. Outfall FF discharged into Seaplane Lagoon on the northern boundary, adjacent to the Seaplane Parking Apron. Outfall G discharged into the northeastern corner of Seaplane Lagoon. The storm drain lines leading to the outfalls are not within the FOST Parcel. The storm drain lines associated with Outfalls F, FF, and G were either replaced or cleaned prior to the IR Site 17 remediation.

The Final ROD for IR Site 17 was issued in November 2006. The selected remedy for contaminated sediment at IR Site 17 was dredging of sediment in the northeast and northwest corners of the Seaplane Lagoon, dewatering, and disposal at a permitted off-site waste disposal facility (Navy 2006). Total PCBs, pesticides (DDx, the sum of DDD [dichlorodiphenyldichloroethane], DDE [dichlorodiphenyldichloroethylene], and DDT [dichlorodiphenyltrichloroethane]), and metals (cadmium, chromium, and lead) were identified as risk drivers (Battelle, BBL, and Neptune & Company 2004). Although radium-226 (Ra-226) was not identified as a risk driver in the ecological or human health risk assessment, the ROD noted elevated Ra-226 concentrations within the remediation areas and stated that any potential risks would be addressed through the remedial activity of sediment removal and proper disposal (Navy 2006).

Between October 2008 and December 2009, a Time-Critical Removal Action (TCRA) was conducted to remove submerged and intertidal construction debris piles located along the northern shoreline of Site 17 (TtECI 2010). After evaluation of the post-TCRA analytical data, additional sediment was removed prior to the IR Site 17 remedial action for the northwest corner of the lagoon (TtECI 2012).

The Remedial Action Work Plan (RAWP) for IR Site 17 specified criteria for successful completion of the remedial action for both contaminants with RGs and those without RGs (including Ra-226) (Battelle and TtECI 2011). Remedial action for the sediments in the northeast and northwest corners of Seaplane Lagoon began in January 2011 and was completed in 2013.

The RACR documents that the RAOs in the 2006 ROD and completion criteria in the RAWP were achieved and that IR Site 17 does not pose a risk to human health or the environment under current or proposed future use (TtECI 2014). A total of 61,767 cubic yards of sediment was dredged from the northeast remediation area and 34,231 cubic yards of sediment was dredged from the northwest area. The RACR also documents the removal of small items with radioactivity, believed to have Ra-226 paint on them, from the remedial action area dredged sediment. During the processing of the sediment removed from both remediation areas of Seaplane Lagoon, 51 items with Ra-226 activity were removed from the sediment and disposed of at a licensed facility. An ESD and LUC RD were completed to add ICs as a component of the remedy. To ensure proper disposal and prevent potential exposure to Ra-226 in the sediment (including items with Ra-226 activity that may be present in the sediment), the ICs prohibit dredging unless performed subject to an approved Sediment Management Plan (SedMP) (Navy 2015e Pending, Navy 2015f Pending).

The Final RACR was submitted September 2014 (TtECI 2014). U.S. EPA concurred with the Final RACR by letter dated [WHEN AVAILABLE INSERT DATE AND REFERENCE]. The ESD was signed by EPA on DATE and by DTSC on DATE. The LUC RD was concurred on by EPA on DATE and by DTSC on DATE. Therefore, IR Site 17 is suitable for transfer.

#### **4.1.4 IR Site 24 (OU-4B)**

IR Site 24, the Pier Area, is a submerged site of approximately 50 acres in size located southeast of and adjacent to Seaplane Lagoon (IR Site 17). It is grouped with IR Site 17 under OU-4B (Navy 2010b). Control of approximately 7 acres of IR Site 24 previously transferred back to the City of Alameda as part of the lease termination noted in Table 1. Approximately 43 acres of IR Site 24 that were retained by the Navy are included in the FOST Parcel. IR Site 24 consists of offshore areas in the vicinity of three existing piers; the site receives stormwater from three storm sewer outfalls (Figure 4). The piers and other infrastructure within the footprint of the submerged lands associated with IR Site 24 are appurtenant to the adjacent property and thus are not part of IR Site 24. The Navy historically used the piers to berth a variety of vessels, including destroyers, service ships, nuclear-powered ships, and occasionally submarines. The USS Hornet is currently docked at Pier 3 as a naval museum. A portion of Pier 3 was identified as a general radioactive material location and is discussed as adjacent property in Section 6.2.8.

The RI Report identified cadmium, lead, total DDx (the sum of DDD, DDE, and DDT), and total PCBs as COCs (Battelle, Arcadis [BBL], and Neptune & Company 2007). Because of the

limited habitat for shellfish at the site, as well as the limited and difficult access to the water and shoreline, no complete exposure pathways for human receptors were identified at IR Site 24. The ecological risk assessment concluded that risks were acceptable over the majority of IR Site 24 and that the only area having a potential for adverse impacts was in a small area in the northeastern corner in the sediment shelf near shore and under Wharf Road between Piers 1 and 2 (Navy 2010b). An FS was completed for the portion of IR Site 24 with COCs in the northeastern corner. The remedy selected in the ROD for the northeastern corner of IR Site 24 was sediment removal and dredging of an approximately 0.5-acre area adjacent to the quay wall and beneath the roadway; the remainder of IR Site 24 required no action (Navy 2010b).

The sediment removal and dredging began in January 2012 and was completed in May 2012. The Final RACR (TtECI 2013) was submitted in March 2013. U.S. EPA concurred that the remedial action was complete by letter dated March 21, 2013 (USEPA 2013), and DTSC concurred via letter on July 23, 2013 (DTSC 2013). IR Site 24 is suitable for transfer.

#### **4.1.5 IR Site 25 (OU-5)**

IR Site 25, former North Housing, is approximately 42 acres in size and located east of Main Street in the northeast portion of Alameda Point. It is part of OU-5. The portion of IR Site 25 included in this FOST is approximately 34 acres in size and is bounded by Estuary Park and the former Navy Fleet and Industrial Supply Center Oakland, Alameda Facility/Alameda Annex (FISCA) to the north, former FISCA to the east and southeast, IR Site 30 to the south, and United States Coast Guard property to the west and southwest.

IR Site 25 is relatively flat. The area was originally mostly tidal wetlands, but dredging, construction, and development have altered the area. The historical land use for IR Site 25 was residential. Between 1947 and 1966, prior to acquisition of the property by the Navy, the area was used for residential purposes. The Navy acquired the IR Site 25 property in two transactions between 1966 and 1968 and constructed housing there in 1969; the housing units are shown on Figure 3B and are currently unoccupied. It has not been included in any of the past Alameda Point lease agreements; however, the site is currently licensed to the City of Alameda for law enforcement activities.

Previous investigations conducted at IR Site 25 revealed the presence of PAHs in soil. Between 2001 and 2002 a TCRA was performed to address PAHs in the top 2 feet of soil (FWC 2002). The TCRA encompassed a total area of approximately 26 acres, but buildings and hardscape limited access in some portions of the site, so the excavated area totaled approximately 22.2 acres. A ROD to address the remaining contaminated soil was signed and issued in 2007 (Navy 2007c). ICs were selected as the final remedy for IR Site 25 soil. The ICs require future landowners to obtain written approval from the Navy, U.S. EPA, and DTSC for excavation of soil from depths greater than 4 feet below ground surface or for the removal of hardscape. For

this work, future landowners also must develop a Soil Management Plan, obtain approval of the plan from the Navy, DTSC, and U.S. EPA (unless U.S. EPA determines its review and approval of a specific Soil Management Plan is not necessary) and comply with the Soil Management Plan. Land use controls are detailed in the IR Site 25 LUC RD (Navy 2009a).

The groundwater beneath IR Site 25 was addressed in a 2007 ROD for OU-5 groundwater where the selected remedy consisted of biosparging with soil vapor extraction (SVE) in the plume centers, nutrient/microorganism enhancement as required, monitored natural attenuation (MNA), and ICs (Navy 2007a). Operation of the treatment system began in 2009 and ended in 2013. Based on additional evaluations of historical (pre-ROD) and post-ROD data that included post-ROD indoor air sampling by U.S. EPA in 2015, a ROD Amendment documenting that no further action is necessary for the groundwater was issued (Navy 2015b). U.S. EPA signed the ROD Amendment on June 17, 2015, DTSC signed on July 7, 2015, and the Water Board signed on July 9, 2015.

The ICs for soil have been implemented in accordance with the LUC RD, and no further action is required for OU-5 groundwater. This portion of IR Site 25 is suitable for transfer.

#### **4.1.6 IR Site 30 (OU-5)**

IR Site 30 is a 6.6-acre site located at the eastern end of Alameda Point and is part of OU-5. IR Site 30 is bounded by IR Site 25 (former North Housing) to the north and east, and IR Site 31 (Marina Village Housing owned by the United States Coast Guard) to the south and west. The Navy formerly leased the site to the Alameda Unified School District which operated the Woodstock Child Development Center, built in 1985 and Island High School (formerly the George P. Miller Elementary School), built between 1975 and 1977. Approximately 84 percent of the site is open space; however, most of this open space is paved, and approximately 74 percent of the site is covered with hardscape (Figure 3B).

The Navy conducted a TCRA in November 2004 at the Woodstock Child Development Center and Island High School (Shaw E&I 2005). The TCRA was based on results from the 2003 PAH assessment that indicated the presence of PAHs in soil at unpaved play areas of the site at concentrations above the Alameda Point screening criterion for residential use. The TCRA included installation of soil cover materials in four areas in the southwestern portion of the yard of the Woodstock Child Development Center and two areas east of Island High School.

A RI for IR Site 30 soil was conducted and an RI report was issued in October 2005. A background evaluation was subsequently conducted and documented in the RI Addendum, which presented the results and recommended no further action for soil (Bechtel 2008). The ROD for IR Site 30 soil was issued in September 2009 documenting no further action for IR Site 30 soil (Navy 2009b).

The groundwater beneath IR Site 30 was addressed in the 2007 ROD for OU-5 groundwater ([Navy 2007a](#)) and the 2015 ROD Amendment for OU-5 groundwater, which are discussed in [Section 4.1.5](#). The ROD Amendment selected no further action for the groundwater beneath IR Site 30; the Navy, U.S. EPA, DTSC, and the Water Board signed the ROD Amendment in April 2015 ([Navy 2015b](#)). IR Site 30 is suitable for transfer.

#### **4.1.7 IR Site 34**

IR Site 34, Naval Air Rework Facility, is a 4.18-acre area that is a partially paved, relatively flat open space and is not part of an OU. IR Site 34 was used to maintain base equipment, such as scaffolding and other apparatus. The site was used primarily for painting services, storage, wood and metal shops, and sandblasting. IR Site 34 formerly contained several structures: 12 former buildings and intervening open areas; seven ASTs; NADEP GAPS 78 and 79; UST 473-1, a portion of fuel line (FL) -018, and 15 transformers. Two former SWMUs, UST 473-1 (also known as AOC 473), and AST 331 (also known as SWMU 331), were addressed under the Petroleum Program along with FL-018 and all of the ASTs. CAA-14 is also located within the footprint of IR Site 34. The Petroleum Program is discussed in [Section 4.2](#).

The remaining two former SWMUs (NADEP GAPS 78 and 79) were investigated as part of IR Site 34. All buildings, ASTs, GAPS, and transformers were removed between 1996 and 2000, except for their concrete pads. [Figures 6, 7, 8, 9, and 10](#) show the locations of the CAA, the former SWMUs, the ASTs, the UST, and the fuel line, respectively. As shown on [Figure 4](#), the southwestern 0.22-acre corner of IR Site 34 was transferred by the Navy to the Department of Veterans Affairs who will retain it in perpetuity, and it is not part of this FOST Parcel.

Arsenic, lead, 1,4 dichlorobenzene, dieldrin, heptachlor epoxide, total PCBs and total petroleum hydrocarbons (TPH) were identified as COCs in soil. The ROD for Site 34 was issued in April 2011 ([Navy 2011a](#)). The remedial action selected was excavation and off-site disposal of chemically impacted soil. Groundwater at Site 34 is not considered a potential source of drinking water, accordingly drinking water standards do not apply. Chemicals in groundwater were evaluated for potential VI and impacts to surface water in the Oakland Inner Harbor. Groundwater was determined not to pose a potential risk to human health or the environment, so no further action was necessary for groundwater. The no further action decision for groundwater was documented in the 2011 ROD.

The remedial action for soil was conducted between May and June 2013, and the Final RACR was completed in February 2014 ([ERS 2014](#)). U.S. EPA concurred with the Final RACR by letter dated March 4, 2014 ([USEPA 2014](#)). DTSC concurred with the Final RACR by letter dated March 19, 2014 ([DTSC 2014](#)). There are no CERCLA restrictions with respect to IR Site 34 soil and groundwater. IR Site 34 is suitable for transfer.



#### **4.1.8 AOC 1**

This site is a former storage yard, approximately 0.5 acre in size, where arsenic and cobalt in soil were reported above background levels and residential screening levels (Bechtel 2007). AOC 1 contains M-10, a spent solvent tank for which DTSC concurred with NFA in 2000 (DTSC 2000c). In December 2013, additional soil samples were collected and analyzed for arsenic and cobalt. The arsenic and cobalt concentrations detected in the soil samples were within U.S. EPA's risk management range, and an evaluation of the area was included in the Amended Site Inspection (SI) for EDC 12 (please note EDC terminology is no longer used) which concluded no action is required (CH2MHill 2014). The Amended SI was reviewed by U.S. EPA and DTSC and finalized without dispute in accordance with FFA document review procedures. AOC 1 is suitable for transfer. U.S. EPA concurred with the recommendation for AOC 1 in the EDC 12 SI Addendum by letter dated November 23, 2015 (USEPA 2015a).

#### **4.1.9 AOC 6**

AOC 6 is a small site, approximately 0.014 acre in size. SWMU AST 584 was recommended for further investigation under CERCLA as AOC 6 to assess whether the use of corrosion-inhibiting chemicals had resulted in a release. Hexavalent chromium was detected in soil samples above background levels and residential screening levels (Bechtel 2007). In December 2013, additional soil and groundwater samples were collected and analyzed for hexavalent chromium. As discussed in Section 4.1.1 the groundwater in this portion of Alameda Point meets the criteria for exception to sources of drinking water policy, thus drinking water standards do not apply. The hexavalent chromium concentrations detected in the soil samples were within U.S. EPA's target risk range. Groundwater sample results were nondetect for hexavalent chromium. As discussed in Section 4.1.8, AOC 6 was investigated in conjunction with EDC 12. The EDC terminology is no longer used, but the Amended SI for EDC 12 concluded with a no action recommendation for AOC 6 (CH2MHill 2014). The Amended SI was reviewed by EPA and DTSC and finalized without dispute in accordance with FFA document review procedures. AOC 6 is suitable for transfer. U.S. EPA concurred with the recommendation for AOC 6 in the EDC 12 SI Addendum by letter dated November 23, 2015 (USEPA 2015a).

## **4.2 Petroleum Products and Derivatives**

The history and status of the Alameda Point Petroleum Program is documented in the Petroleum Management Plan (Battelle 2010b) and a subsequent update (Battelle 2012a). Unless otherwise noted, these two documents are the primary sources for the descriptions in the following two sections and the associated tables (Tables 4, 5, and 6).

The Petroleum Program was created to address potential and actual soil and groundwater contamination related to petroleum products, which are excluded from CERCLA. The Navy

developed a fuel site closure plan in 2001 in cooperation with the Water Board and DTSC. The Water Board issued a letter in 2001 providing concurrence on the approach ([Water Board 2001](#)).

The Navy identified a variety of CAAs as part of the Petroleum Program ([Figure 6](#)). CAAs that are wholly or partially within the FOST Parcel are listed in [Table 4](#). Some of the sites included in the Petroleum Program were originally identified as part of the RFA prepared by the Navy and DTSC in 1992 ([DTSC 1992b](#)); the purpose of the RFA was to identify sites potentially requiring closure under RCRA regulations. As discussed in [Section 3.1](#), all former RCRA SWMUs that had not previously been closed under RCRA, were transferred to either the CERCLA or Petroleum Programs ([SulTech 2007](#)). RCRA SWMUs transferred to the Petroleum Program included individual or collections of USTs, ASTs, OWSs, and GAPs ([Table 2](#)). USTs and ASTs within the FOST Parcel are listed in [Table 5](#) and shown on [Figure 8](#) and [Figure 9](#). Some of the USTs and ASTs within the FOST Parcel are being addressed via CERCLA, so [Table 5](#) also identifies the program under which closure is being addressed. Underground fuel lines are identified in [Table 6](#) and shown on [Figure 10](#).

#### **4.2.1 Open Petroleum Program Sites**

The Petroleum Program sites within the FOST Parcel discussed in this section are open and will be transferred prior to obtaining regulatory closure subject to the restrictions discussed in [Section 5.2](#). The open sites include: sites with outstanding site closure requests that are awaiting written regulatory concurrence; sites pending submission of site closure requests; and sites requiring further investigation, remediation, and/or monitoring activities. These sites are shown on [Figure 4](#).

**CAA-03:** This 9-acre site overlaps IR Site 3. The site was subdivided into CAA-03A, CAA-03B, and CAA-03C. Historic activities at CAA-03A, CAA-03B and CAA-03C resulted in the release of aviation fuel to soil and groundwater. The Navy has performed investigations and completed substantial corrective-action at CAAs-03A, -03B, and -03C; these efforts have cleaned up the vast majority of the petroleum contamination ([Shaw E&I 2013](#)). USTs 398-1 and 398-2, which are included in CAA-03A, were closed with a NFA letter from the Water Board dated October 13, 2014 ([Water Board 2014e](#)); other components of CAA-03A are being investigated or are under review for closure ([Table 4 and Table 5](#)). UST 97-C, which is part of CAA-03C, was closed with a NFA letter from the Water Board dated April 21, 2015 ([Water Board 2015d](#)). Residual contamination at CAA-03B and -03C requires further investigation and possibly corrective action prior to requesting closure.

**CAA-09A.** This site consists of the area around Building 584, which was used for storage of corrosives, lubricating oils, and water-treatment chemicals. It includes USTs 584-1 and 584-2, both removed in 1994. The USTs were located adjacent to AOC 6, but a portion of CAA-09A overlaps AOC 6 (see detail 2 of [Figure 4](#)). AOC 6 is discussed in [Section 4.1.9](#).

**CAA-14.** This site consists of the area around Building 331 that was used as a woodworking facility and offices; it is located within IR Site 34. CAA-14 includes AST 331, also referred to as former SWMU 331. The Water Board concurred with NFA for AST 331 by letter dated March 20, 2013 ([Water Board 2013a](#)). All remediation work has been completed. CAA-14 is pending closure by the Water Board.

#### **4.2.2 Open Aboveground Storage Tanks, Oil and Water Separators, Washdown Areas, Underground Storage Tanks, and Fuel Line Sites**

AST 330 B is the only open Petroleum Program site present in the FOST Parcel that is not associated with a CAA or CERCLA site. The Navy will continue to work with the Water Board to request closure for AST 330 B after transfer.

#### **4.2.3 Closed Petroleum Program Corrective Action Area Sites**

The following Petroleum Program CAA sites are closed with written regulatory concurrence. [Figure 6](#) shows all CAAs.

**CAA-A.** This site (both within and adjacent to IR Site 34) consists of the area around parallel 10-inch FLs used to transport jet fuel. The site was closed with concurrence in 2007 ([Water Board 2007](#)) without restrictions. A portion of CAA-A was included in the 2013 FOST.

**CAA-09B.** This site consists of the area around Building 608 that was used as an automobile service and repair facility. A waste oil UST (UST 608-1) and two OWSs (OWS 608A and 608B) within the site footprint were assigned to IR Site 16, which overlaps the CAA (see [Section 4.1.2](#), Site 16, above). The OWSs were removed in 2010 under the CERCLA action for OU-1 Site 16 ([URS 2012](#)). No tanks or other RCRA Units are associated with CAA-09B. The CAA was closed along with IR Site 16 through the OU-1 ROD ESD ([Navy 2015d Pending](#))

#### **4.2.4 Closed Underground Storage Tanks**

Five USTs located within the FOST Parcel (UST 97-C, UST 398-1, UST 398-2, UST 473-1, and UST 608-1) have been closed individually without restrictions by the Water Board ([Table 5](#)). UST 97-C, within CAA-3C, was closed with an NFA letter from the Water Board ([Water Board 2015d](#)). Collectively UST 398-1 and UST 398-2 comprise the former SWMU AOC 398 within CAA-3A; with the closure of these two USTs ([Water Board 2014e](#)), AOC 398 has also been closed. UST 473-1, the former SWMU AOC 473, is not associated with an open CAA; it was closed by the Water Board without restrictions ([Water Board 2014f](#)). UST 608-1 was closed concurrently with CAA-09B and IR Site 16 ([Navy 2015d Pending](#)).

#### **4.2.5 Closed Aboveground Storage Tanks, Oil and Water Separators, Washdown Areas, and Fuel Line Sites**

Closed Petroleum Program ASTs, OWSs, WDs, and FLs present in the FOST Parcel not associated with a CAA or CERCLA site are listed below. Additional information can be found in [Tables 5](#) and [6](#). Sites listed below were closed without land use restrictions:

- AST 330A
- AST 331
- AST 338-D4
- AST 344A
- AST 344B
- AST 344C
- AST 344D
- FL 155
- FL 158

#### **4.3 Asbestos-Containing Material**

DoD policy is to manage ACM in a manner protective of human health and the environment, and to comply with all applicable federal, state, and local laws and regulations governing ACM hazards ([DoD 1994](#)).

##### **4.3.1 FOST Property West of Main Street (IR Sites 3, 16, 17, 24, and 34; AOCs 1 and 6)**

As noted in [Section 2](#), a significant portion of the FOST property was subject to the LPL and is currently subject to the existing EDC MOA and LIFOc with the City. All available information regarding the existence, extent, and condition of known ACM was fully identified in Exhibit "B" to the LPL and again in Exhibit "I" to the EDC MOA. As a result, the City has been responsible for monitoring the condition of existing ACM in compliance with all applicable federal, state, and local laws relating to ACM, including prohibiting occupancy of any buildings or structures containing known ACM prior to abatement of the ACM or demolition of the structure. The Navy is not responsible for any damages relating to ACM arising out of any activities occurring after the date of the LIFOc.

For the FOST property located west of Main Street, a notification regarding the potential presence of ACM within the FOST property will be included in the deed. A restriction is required, as discussed in [Section 5.3](#), to ensure ACM is properly handled after transfer.

##### **4.3.2 FOST Property East of Main Street (IR Sites 25 and 30)**

The areas of the FOST Parcel east of Main Street (IR Sites 25 and 30) were not subject to the LPL, EDC MOA or the LIFOc. Portions of the IR Site 30 property associated with the Miller High School and the Woodstock Child Development Center were leased to the Alameda Unified

School District from 1976 to 2011, respectively. The IR Site 25 property (former North Housing Area) has been under continuous Navy custody and control.

Given their use as educational facilities, the IR Site 30 Woodstock Child Development Center and Miller High School were subject to the Asbestos-Containing Materials in Schools Rule under the Asbestos Hazard Emergency Response Act (AHERA) (Toxic Substances Control Act Title II). AHERA requires local educational agencies to inspect their school buildings for asbestos-containing building material, prepare asbestos management plans and perform asbestos response actions to prevent or reduce asbestos hazards.

In 1995, the Navy conducted a comprehensive ACM survey of the IR Site 25 former North Housing units and the Woodstock Child Development Center. The survey found only non-friable ACM at the Woodside Child Development Center. Friable ACM was noted within all the North Housing units surveyed. The North Housing units are not occupied, and there is no record of friable ACM abatement occurring. There is no record of the Island High School being included in the 1995 ACM survey conducted by the Navy. It is unknown whether the Alameda Unified School District found and abated any friable ACM at Island High School.

For the FOST property located east of Main Street, a notification regarding the potential presence of ACM within the FOST property will be included in the deed. A restriction is required, as discussed in [Section 5.3](#), to ensure ACM is properly handled after transfer.

#### **4.4 Lead-Based Paint**

LBP hazards are defined in the Federal Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X of Public Law 102550), as codified in 42 U.S.C. § 4822 (the Act) as “any condition that causes exposure to lead that would result in adverse health effects.” The Act provides for regulation of the lead hazard from LBP. Hazards include lead-contaminated dust and soil for target housing only. The Act defines target housing as any housing constructed before 1978, except any housing for the elderly or persons with disabilities (unless any child who is less than 6 years of age resides or is expected to reside in such housing for the elderly or persons with disabilities) or any zero-bedroom dwelling. Under the Act, the Navy is required to disclose the presence of known LBP and/or LBP hazards prior to the sale or transfer of property to a non-federal entity.

In 1998, the Navy conducted a LBP risk assessment for Alameda Point. The Navy found LBP hazards throughout the interior and exterior of all former housing units surveyed. Notice of the existence of LBP in the buildings subject to the LIFOC at Alameda Point was provided to the City in 2000 when the LIFOC was executed. The LIFOC transferred responsibility for LBP within the lease boundaries from the Navy to the City and required the City to comply with all applicable federal, state, and local laws.

The LIFOC also notified the City that (1) buildings and other painted structures in the leased premises potentially contained LBP, and (2) such buildings and structures were not suitable for occupancy for residential purposes until any inspections and abatement required by applicable law had been completed.

As noted previously, the property east of Main Street, including the former North Housing units located within the IR Site 25 area were not included in the LIFOC to the City. In 2010, the Navy conducted a LBP Evaluation of this housing area to support future transfer of the property ([ITSI 2010](#)). Based on X-ray fluorescence testing, approximately 74 percent of the units tested had at least one LBP component above U.S. EPA and/or California Department of Public Health (CDPH) lead based paint criteria. Dust wipe samples collected in six of the units had lead dust levels in quantities greater than U.S. EPA and/or California regulatory criteria. None of the soil samples were above either U.S. EPA or California Regulatory criteria. As no LBP soil hazard was identified, no further action with respect to soil was required based on LBP releases.

As noted in the previous section, the IR Site 30 property was formerly leased to the Alameda Unified School District. As educational facilities, the Woodside Child Development Center and Island High School were subject to LBP regulations.

As a condition of property transfer, the transferee(s) will be required to acknowledge receipt of the U.S. EPA-approved pamphlet, “Protect Your Family From Lead in Your Home,” (EPA 747-K-94-001) and to agree that for any improvements on the property defined as target housing by Title X and constructed before 1978, LBP hazards will be abated or disclosed to future occupants before use of such improvements as a residential dwelling.

A notification will be provided by the Navy that all buildings at Alameda Point that were constructed prior to 1978 may contain LBP, and demolition of nonresidential buildings constructed before 1978 poses the possibility that lead will be found in the soil as a result of these activities. As a condition of redevelopment, transferees may be required under applicable law or regulation to evaluate the soil adjacent to the nonresidential buildings for the hazards of lead in soil.

A restriction is required as discussed in [Section 5.4](#) to carry forward the appropriate LBP restrictions from the LIFOC and to implement restrictions for the FOST property east of Main Street.

## **4.5 Polychlorinated Biphenyls**

DoD policy guidance for PCBs is based on the Toxic Substances Control Act regulations found in Title 40 of the *Code of Federal Regulations* Part 761. All Navy equipment at Alameda Point with oil or other dielectric fluids that contained PCBs had a PCB concentration of less than 40

parts per million; this equipment was transferred to the Alameda Bureau of Power and Light, currently known as the Alameda Municipal Power, in 2001.

## 4.6 Munitions and Explosives of Concern

Under the Munitions Response Program, the Navy conducted a search to address munitions and explosives of concern (MEC) and munitions constituents used or released at sites from past on-site activities.

In 1994, an Environmental Baseline Survey (EBS) was prepared and included a fence-to-fence inspection, a comprehensive document review, and personnel interviews to establish and document the history of MEC use, storage, and disposal at Alameda Point. The EBS did not identify any MEC use, storage, or disposal within the FOST Parcel ([ERM-West 1994](#)).

Ordnance was stored and used at Alameda Point throughout its history as a military installation. Ordnance storage included ship and aircraft weapons systems, combat force weapons, and small arms and ammunition used by base security personnel. The Navy has removed all stored ordnance from Alameda Point ([EFA-West 1999](#)). A Close-Out Explosives Safety Inspection was conducted March 4 to March 8, 2013 at Alameda Point, with research and off-site auditing conducted through September 2013. Based on inspection results, Alameda Point is in compliance with Termination of Potential Explosion Sites requirements of Naval Sea Systems Command Ordnance Pamphlet 05 ([NOSSA 2013](#)). Explosives safety quantity distance arcs for all potential explosion sites, not previously cancelled, at Alameda Point, are officially removed ([NOSSA 2014](#)). Department of Defense Explosives Safety Board approval for transfer is not required for the specific property within the FOST Parcel.

No further MEC investigation is required for this FOST Parcel, and no additional notices are required with respect to MEC.

## 4.7 Radiological Program

During the basewide EBS, the Navy reviewed on-site records and searched for additional information on known and potential uses of radiological materials at Alameda Point ([ERM-West 1994](#)). Radioactive materials are any materials that are radioactive, except for excluded radioactive materials as defined in Section 101(22) of CERCLA. Following this, a 1995 radiological survey and a subsequent Historical Radiological Assessment (HRA) were conducted by the Navy ([Tetra Tech 2013](#)).

The results of the HRA were presented as a two-volume set. Volume I addressed radioactivity associated with the Naval Nuclear Propulsion Program ([PHNSY 2000](#)). Volume II addressed radioactivity associated with general radioactive material (G-RAM), which, for the purposes of the HRA, is defined as any radioactive material used by the Navy or Navy contractors not

associated with the Naval Nuclear Propulsion Program ([Weston 2007](#)). The two volumes were written by different organizations and published separately because G-RAM and the Naval Nuclear Propulsion Program are managed by different Naval Sea Systems Command offices.

#### **4.7.1 Naval Nuclear Propulsion Program**

Historically, nuclear-powered ships used NAS Alameda port facilities. Volume I of the HRA presents the Navy's investigation of radioactivity associated with the Naval Nuclear Propulsion Program at former NAS Alameda ([PHNSY 2000](#)). The HRA assessed the impact on the environment from nuclear-powered ship maintenance, overhaul, and refueling. The HRA concluded that the berthing and maintenance of nuclear-powered ships at NAS Alameda from 1956 to 1997 resulted in no adverse effects on human health or the environment. As noted in the submittal letter for the Final HRA Volume I; U.S. EPA was satisfied with the HRA draft and no further response was required, and DTSC had no comments ([Navy 2000](#)). Volume I of the HRA also concluded that an independent review conducted by U.S. EPA was consistent with findings presented in the Navy report ([EFA-West 1999](#)).

No notices or restrictions are required regarding the Naval Nuclear Propulsion Program.

#### **4.7.2 General Radioactive Material**

Alameda Point used and stored G-RAM during past base operations. The Volume II HRA designated historical use sites as either radiologically "impacted" or "non-impacted." The HRA defined a site as "impacted" when the site "has or historically had a potential for G-RAM contamination based on the site operating history or known contamination detected during previous radiation surveys." Therefore, an "impacted" site designation identified a site as having a possibility for contamination based on historical records. Impacted sites include those where: radioactive materials were used or stored; known spills, discharges, or other instances involving radioactive materials have occurred; or where radioactive materials might have been disposed of or buried ([Weston 2007](#)).

Of 685 potential G-RAM sites at Alameda Point, the HRA historical review of records indicated that 23 of the 685 sites are designated as potentially radiologically "impacted." Of these impacted sites, two – IR Site 17 and a small portion of the former Smelter Area located in IR Site 3 – are located within the FOST Parcel ([Table 7](#)). The radiological site locations and status of each site within the FOST Parcel are shown on [Figure 11](#).

At IR Site 17, remedial action for the sediments in the northeast and northwest corners began in January 2011 and was completed in 2013. The final RACR documents that the CERCLA remedial action objectives have been achieved and that IR Site 17 does not pose a risk to human health or the environment under current or proposed future use ([TtECI 2014](#)). Due to potential residual Ra-226 activity associated with the sediment and any items within it, an ESD and LUC



RD were prepared to add ICs to the IR Site 17 remedy. The IR Site 17 ESD ([Navy 2015e Pending](#)) and LUC RD ([Navy 2015f Pending](#)) present ICs prohibiting future dredging in Seaplane Lagoon without a SedMP.

The Former Smelter Area is a 40,000-square-foot area east of Building 66. Much of the area is occupied by Buildings 398 and 399 and support equipment. A small portion (approximately 16 percent) of the 26,200-square-foot Former Smelter Area east of Building 66 is located in the FOST Parcel in the western portion of IR Site 3. The remaining 84 percent of the Former Smelter Area is adjacent to the FOST Parcel. The HRA ([Weston 2007](#)) identified the possibility that radium components were melted down at the smelter, along with other metal components when the previous smelter was in operation. A radiological survey was conducted and no radioactive activity above background was detected (Chadux/TT, 2012b). The Former Smelter Area is suitable for unrestricted reuse and is discussed in detail in [Section 6.2.8](#).

Outfalls F and FF, which discharge into Seaplane Lagoon, were associated with radiologically impacted storm drain lines. Prior to remedial action in Seaplane Lagoon, Storm Drain Lines F and FF were removed and replaced. Outfalls F and FF were removed and replaced between January 2011 and August 2011 prior to remediation of the northwestern area of IR Site 17.

Two potentially radiologically impacted areas, the Seaplane Ramp and Parking Apron area and Pier 3, are adjacent to the FOST Parcel. The seaplane ramps are cantilevered structures appurtenant to the adjacent land, but sediment beneath the ramps is part of Seaplane Lagoon and part of the FOST Parcel. Pier 3 is appurtenant to the adjacent land, but sediment beneath the Pier is part of Site 24 which is part of the FOST Parcel. The Seaplane Ramp and Parking Apron area and Pier 3 are discussed in [Section 6.2.9](#). Radiologically impacted sites adjacent to the FOST Parcel are shown on [Figure 11](#) and are described in [Section 6.2.9](#).

## **4.8 Pesticides**

The FOST Parcel may contain residue from pesticides that have been applied in the management of the property. The Navy knows of no use of any registered pesticide in a manner inconsistent with its labeling and believes that all applications were made in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Title 7 U.S.C. § 136, et seq., its implementing regulations, and according to the labeling provided with such substances. It is the Navy's position that it shall have no obligation under the covenants provided pursuant to Section 120(h)(3)(A)(ii) of CERCLA, Title 42 U.S.C. §§ 9620(h)(3)(A)(ii), for the remediation of legally applied pesticides.

## **4.9 Other Areas Investigated/Issues**

No other locations of concern were identified in areas not within IR Site boundaries.

## 5.0 Summary of Restrictions

This section summarizes the restrictions associated with the FOST Parcel proposed for transfer related to CERCLA/RCRA sites, petroleum products and derivatives, ACM, and LBP. These restrictions on certain activities ensure that post-transfer use of the FOST Parcel is consistent with protection of human health and the environment.

### 5.1 CERCLA

As detailed in the following subsections, ICs will be implemented to prevent exposures to COCs in soil and groundwater on the FOST Parcel. ICs will be included in the deed between the Navy and the property recipient and in Covenants(s) to Restrict Use of Property between the DTSC and the Navy to limit exposure to contaminated soil and groundwater. The CERCLA ICs will be implemented in accordance with remedial design documents for CERCLA sites where the remedy includes land use restrictions.

#### 5.1.1 CERCLA Sites with Remedial Action Complete

The sites with Response Complete, NFA include: IR Sites 24, 30, and 34; these sites are unrestricted. AOCs 1 and 6 were designated NFA and are also unrestricted. ICs are required in one or more areas within IR Sites 3, 16, 17, and 25. The ICs include legal controls that minimize the potential for human exposure. ICs associated with the IR Sites are described below. [Figure 5](#) shows the approximate boundaries of these restrictions. Final IC boundaries will be applied from the Final LUC RDs, as appropriate.

##### 5.1.1.1 IR Site 3 (OU-2B)

ICs will be implemented for the cobalt-impacted soil area at IR Site 3. The LUC performance objective is to minimize the potential for exposure to cobalt-impacted soil at IR Site 3 that may result in risks to human health if no controls are implemented. Additional detail regarding implementation of the ICs is presented in the OU-2B LUC RD ([Navy 2015c](#)). ICs would be maintained until COC concentrations in the soil are at levels that allow unrestricted use and unlimited exposure.

The ROD for OU-2B documents the groundwater ICs to be implemented for the adjacent OU-2B groundwater plume. A portion of the IC buffer zone extends into IR Site 3 (see [Figure 5](#)). The groundwater underlying IR Site 3 is not within the OU-2B plume (i.e., groundwater concentrations at IR Site 3 do not exceed OU-2B RGs), but the ROD specifies the same ICs in the buffer area as within the plume ([Navy 2015a](#)). The specific ICs for the OU-2B groundwater ARIC, which includes the portion of IR Site 3 within the buffer area are detailed in the LUC RD ([Navy 2015c](#)).

### **5.1.1.2 IR Site 16 (OU-1)**

The IR Site 16 ESD for groundwater identified two areas that require ICs to be protective of human health (Navy 2015d Pending). The LUC RD (Navy 2015g Pending) will implement restrictions within the areas requiring ICs identified for IR Site 16 on Figure 5.

### **5.1.1.3 IR Site 17 (OU-4B)**

The area requiring IC restrictions is the entire Seaplane Lagoon and these will be maintained indefinitely. The LUC performance objective is to minimize exposure to post-remediation residual Ra-226 activity in sediment should a future property owner dredge Seaplane Lagoon. Ra-226 residual activity is related to the post-remediation Ra-226 activity in the sediment itself (maximum of 4.18 picocuries per gram in confirmation sampling) and the potential for residual Ra-226 activity due to discrete items with radiological activity in the sediment (currently no known items). Additional detail regarding implementation of the ICs is presented in the LUC RD (Navy 2015f Pending).

### **5.1.1.4 IR Site 25 (OU-5)**

The ICs and land use restrictions apply throughout IR Site 25 and will be maintained indefinitely unless PAH concentrations in soil are reduced or subsequently determined to not exceed levels that allow for unrestricted site use and exposure. Specific ICs will be implemented in the LUC RD (Navy 2007c).

## **5.1.2 Marsh Crust**

The Final Marsh Crust RAP/ROD (Navy 2001) was signed in February 2001. The Marsh Crust RAP/ROD identifies restrictions on excavations within all of the upland FOST Parcel (see Figure 5).

For the areas shown on Figure 5, excavation within the Marsh Crust and former subtidal area is prohibited, unless proper precautions are taken to protect worker health and safety and to ensure that excavated material is disposed of properly. This prohibition will be implemented with a three-tiered approach following transfer of the land from the Navy to the transferee(s): 1) a land use covenant will be executed between DTSC and the transferee(s); 2) an environmental restriction will be included in the deed; and 3) enforcement of the existing City of Alameda Excavation Ordinance Number 2824 (Navy 2001). The Navy, City of Alameda, and DTSC will all have enforcement authority for the Marsh Crust restrictions.

## **5.2 Petroleum Products and Derivatives**

Although the Navy intends to obtain regulatory closure for all sites under the Petroleum Program, the FOST Parcel will likely be transferred before the Navy obtains regulatory closure

for some petroleum sites. The Navy shall retain responsibility for obtaining regulatory closure, including required investigation, remediation, and reporting, for these open sites after the transfer. Transfer while petroleum remediation is ongoing is allowable under CERCLA because Section 101(14) excludes crude oil and fractions of crude oil from the definition of hazardous substance, including the hazardous substances such as benzene that are constituents of those petroleum substances. The Navy will fulfill its petroleum remediation obligation either by completing regulatory closure under Navy direction or by negotiating an agreement with the transferee to complete these actions on behalf of the Navy.

Based on current environmental conditions, some petroleum-impacted areas of the FOST Parcel cannot support unrestricted use due to potentially unacceptable human health risk from residual petroleum contamination in soil and/or groundwater. In addition, after property transfer the presence of residual petroleum in some areas of the FOST Parcel west of Main Street will require implementation of procedures for proper handling and disposal of any potentially contaminated soil or groundwater encountered during construction or removal from the site. Accordingly, land use or activity restrictions relating to the presence of residual petroleum contamination will be necessary. There are no petroleum restrictions related to the portions of FOST Parcel east of Main Street.

Federal quitclaim deed(s) for transfer of property that include petroleum sites closed subject to restrictions will contain a notice stating that the property has been investigated and remediated, but contains residual petroleum contamination, and the property will be the subject of a recorded covenant between the City of Alameda and the Water Board that identifies the conditions and requirements necessary to protect human health, safety and the environment (“Covenant”). The Covenant will be executed and recorded immediately following conveyance of the property by the Navy to the City of Alameda. A footprint of sites to which the Covenant shall apply shall be identified on a map to be approved by the Water Board and attached to the Covenant. Property that includes such restricted closed petroleum sites will be enrolled in the City of Alameda Land-Use Restriction Tracking and Site Management Plan Program (“City Program”). Any work conducted on the property that involves soil excavation, trenching, or groundwater contact shall be conducted in accordance with the Covenant and the City Program.

Federal quitclaim deed(s) for transfer of property that include open petroleum sites will contain a notice saying that the property has not been remediated to the satisfaction of the Water Board, or has not been investigated to the satisfaction of the Water Board to determine whether corrective action is appropriate. The property will be enrolled in the City Program discussed above, and any work conducted on the property that involves soil excavation, trenching, or groundwater contact shall be conducted pursuant to a Site Management Plan that is acceptable to the Water Board, and in accordance with the City Program. However, such regulatory closure remains the Navy’s

responsibility and will be obtained at Navy direction or by negotiating an agreement with the transferee to complete these actions on behalf of the Navy.

### **5.3 Asbestos-Containing Material**

The deed will contain a restriction that the transferee covenants, on behalf of itself, its successors and assigns, as a covenant running with the land, that it will prohibit occupancy and use of buildings and structures, or portions thereof, containing known asbestos hazards before abatement of such hazards. In connection with its use and occupancy of the FOST Parcel, including, but not limited to, demolition of buildings and structures containing asbestos or ACM, it will comply with all applicable federal, state, and local laws relating to asbestos and ACM.

In the event that friable, accessible, or damaged asbestos is discovered by the transferee, access, use, or occupancy is prohibited until either: 1) any necessary ACM abatement has been completed; or 2) the building is demolished by the transferee in accordance with all applicable federal, state, and local laws and other requirements relating to asbestos or ACM. Until abatement or demolition is complete, the transferee must manage the ACM in accordance with all applicable federal, state, and local laws and requirements.

### **5.4 Lead-Based Paint**

The deed will contain a restriction that the transferee covenants, on behalf of itself, its successors and assigns, as a covenant running with the land, in its use and occupancy of the property, including, but not limited to, demolition of buildings, structures, and facilities, and identification and evaluation of any LBP hazards, the transferee shall be responsible for managing LBP and LBP hazards in accordance with applicable federal, state, and local laws, and other requirements relating to LBP and LBP hazards. Further, the transferee, its successors and assigns will prohibit residential occupancy and use of buildings and structures, or portions thereof, prior to identification and/or evaluation of any LBP hazards, and abatement of any hazards identified as required.

## **6.0 Adjacent Properties**

CERCLA and Petroleum Program sites located immediately adjacent to the FOST Parcel that could affect the FOST Parcel are discussed in [Sections 6.1](#) and [6.2](#). Environmental programs at Alameda Point have progressed to the point where characterization of the extent of contamination is generally complete and the CERCLA and petroleum site boundaries have been established to conservatively encompass all known contamination as well as any anticipated migration. As a result, these boundaries may be generally relied upon to determine if the FOST Parcel is impacted by adjacent sites simply by determining if the site boundaries overlap into the FOST Parcel. A review of CERCLA and Petroleum Program sites adjacent to the FOST Parcel

shows that none of the adjacent sites is a potential source of contamination to the FOST Parcel, as further discussed below.

## **6.1 EnviroStor and GeoTracker Listed Sites**

The DTSC EnviroStor and Water Board GeoTracker databases were reviewed to determine if any sites exist beyond the Alameda Point property boundary that could affect the FOST Parcel. Sites within approximately a 1 mile radius of the FOST Parcel boundaries were identified from the EnviroStor and GeoTracker databases. This section summarizes the evaluation of such sites.

Because of the size of Alameda Point, the majority of environmental sites adjacent to the FOST Parcel are associated with past Navy releases, and thus the Navy has the necessary information available to assess potential risks posed by these sites ([Section 6.2](#)). To identify adjacent environmental sites outside of Navy control, the DTSC EnviroStor and Water Board GeoTracker databases were reviewed to determine if any of these types of sites could affect the FOST Parcel. Sites within approximately a 1 mile radius of the FOST Parcel boundaries were identified from the EnviroStor and GeoTracker databases. Several properties to the north of former NAS Alameda fell within this radius, but these properties were located on the other side of the Oakland Inner Harbor and are not discussed in this section because of the limited potential for soil or groundwater contamination from these sites to impact the FOST Parcel.

One non-Navy site, Trident Management, was identified based on EnviroStor records. Trident Management is adjacent to IR Site 17 on the east, and within 500 feet of IR Sites 16 and 3 to the west of the FOST Parcel on former Navy property that transferred to the City in 2013. Trident Management is listed as an inactive Tiered Permit holder. EnviroStor does not list any leaks, spills, or permit violations for the Trident Management site, so the potential for it to impact the FOST Parcel is low.

The GeoTracker database lists a total of 52 non-Navy, environmental sites on the Alameda Peninsula that are within approximately 1 mile of either IR Sites 3, 16, 25, or 30. Four of those sites are currently operating, permitted USTs associated with an either an ongoing UST investigation or a closed UST site. There are 11 release sites under current regulatory oversight; the rest have received regulatory closure and are not likely to impact the FOST Parcel, so they are not discussed below.

Four of the open sites are not related to petroleum releases; these include: Cross Alameda Trail, Searway Property, Stewart Court Property and Marina Village Cleaners.

The Cross Alameda Trail property is a recently identified former railroad corridor along the south side of the Ralph Appezato Memorial Parkway that terminates at Main Street, adjacent to IR Site 3. The chemicals of potential concern (COPCs) include arsenic, lead, PAHs, and TPH.

Investigations are ongoing; however, the site is not likely to impact the FOST Parcel because COPCs are in soil and not likely to migrate.

The Searway Property is located east of the FOST Parcel approximately 3,000 to 4,000 feet from IR Sites 3, 16, 25, and 30. A dry cleaner operated at the facility from the 1940s until 1979. According to the GeoTracker database, “Subsurface investigations detected elevated concentrations of total petroleum hydrocarbons as Stoddard Solvent in soil and groundwater. Sub-slab vapor sampling detected elevated concentrations of VOCs. A sub-slab depressurization system currently operates beneath the building slab to mitigate potential risks from VOCs beneath the building. VOC concentrations appear to be decreasing over time.” Remediation activities are ongoing. The Searway Property site is located over a half-mile from the FOST Parcel in a cross gradient direction, so it is not likely to impact the FOST Parcel.

The Stewart Court Property is approximately 3,000 to 5,000 feet from IR Sites 3, 16, 25, and 30. According to the GeoTracker database, “A machine shop was operated on the property starting in 1927, and elevated petroleum hydrocarbons were found in soil.” Groundwater flow direction in the vicinity is not defined; however, it likely flows toward Oakland Inner Harbor, and away from the FOST Parcel. Based on its distance from the FOST Parcel and the likely direction of groundwater flow, the site is not likely to impact the FOST Parcel.

The Marina Village Cleaners Property is approximately 3,000 feet east from IR Sites 25 and 30. A dry cleaner has operated at the facility since 1990, using PCE. Low levels of PCE and breakdown products (TCE, DCE, and vinyl chloride) were detected during a 1998 investigation. The groundwater flow direction is identified as north-northwest, and based on its distance from the FOST Parcel and the direction of groundwater flow, the site is unlikely to impact the FOST Parcel.

The seven remaining sites are open petroleum sites: Alameda Gateway Limited; Chevron #21-1663/Mariner Boat Yard; Delong Oil; Unocal #0843; Shell #13-5032; Olympian #112; and a private residence. Alameda Gateway Limited UST, is approximately 300 feet to the west of IR Sites 25 and 30. The groundwater flow direction is likely to the north, away from the IR Sites, so it is not likely to impact the FOST Parcel. Chevron #21-1663/Mariner Boat Yard; Delong Oil; Unocal #0843; Shell #13-5032 are within approximately 3,000 to 5,000 feet of IR Sites 3, 16, 25, and 30; these sites are not likely to impact the FOST Parcel as groundwater flow direction is identified as North-Northwest, which is not in the direction of the FOST Parcel. The Olympian #112 and the private residence are also not likely to impact the FOST Parcel as groundwater likely flows towards San Francisco Bay and away from IR Sites 3, 16, 25, and 30.

The GeoTracker database lists four closed UST sites east of Main Street, approximately 300 feet to the west of IR Sites 25 and 30. The Encinal High School leaking UST site was closed in 1994. It is not expected to impact the FOST Parcel based on the likely direction of groundwater flow.

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The two City of Alameda sites are not expected to impact the FOST Parcel due to their distance from the FOST Parcel, the likely direction of groundwater flow, and their closed status.

Two sites including eight USTs, USTs 13-1 through 13-5 and USTs 173-1 through 173-3, are part of Former NAS Alameda. Site closure letters were issued by the Water Board for USTs 13-1 through 13-5 in 2001, and USTs 173-1, -2, and -3 in 2014. The USTs are located west of Main Street, but outside of the FOST Parcel. These two sites with eight USTs are not expected to impact the FOST Parcel.

## **6.2 Former NAS Alameda and FISCA Adjacent Property**

Sites located on Alameda Point or FISCA situated adjacent to the FOST Parcel that are undergoing evaluation or remedial action are discussed below. No impact is anticipated to the FOST Parcel from these adjacent sites. Storm drain corridors in adjacent property have been investigated under the CERCLA program. The storm drain corridors have been determined to not impact the FOST Parcel.

### **6.2.1 IR Site 4 (OU-2B)**

IR Site 4 is located south of IR Site 3 and covers approximately 22.7 acres within OU-2B. About 65 percent of the site is covered with asphalt and concrete in the form of buildings, roads, and parking lots. IR Site 4 includes Building 360, which was used for aircraft engine and airframe overhaul. Multiple process shops performed sandblasting, cleaning, painting, welding, plating, repairs to various aircraft components, and non-destructive testing. The ROD identified hexavalent chromium, pesticides, and PCBs as COCs in soil (Navy 2015a). COCs identified in groundwater at OU-2B were TCE and vinyl chloride. ICs will be implemented at OU-2B to restrict groundwater use and land use without VI mitigation measures. As discussed in Sections 4.1.1 and 5.1.1.1, the 100-foot IC buffer for the OU-2B groundwater plume beneath IR Site 4 impinges on the FOST Parcel (Figure 5) (Navy 2015a), but it does not impact the suitability to transfer.

### **6.2.2 IR Site 11 (OU-2B)**

IR Site 11 covers approximately 5.4 acres within OU-2B. The site and its surrounding area are heavily developed with asphalt, concrete, buildings, roads, and parking lots covering approximately 95 percent of the site. IR Site 11 includes Building 14, an engine test cell, constructed in 1940 and operated as an aircraft testing and repair facility. Based on more recent data, the OU-2B ROD revised the FS and Proposed Plan findings for IR Site 11 documenting no actions for soil at IR Site 11 (Navy 2015a). COCs identified in groundwater at OU-2B were TCE and vinyl chloride. ICs will be implemented at OU-2B to restrict groundwater use and land use without VI mitigation measures. The site is not expected to impact the FOST Parcel.



### **6.2.3 IR Site 21 (OU-2B)**

IR Site 21 is located south of IR Site 3 and east of IR Site 17. It is about 5.1 acres in size and located within OU-2B. The site and its surrounding area are heavily developed. About half of IR Site 21 is covered with asphalt and concrete, and includes buildings, roads, and parking lots. IR Site 21 includes Building 162, which was constructed in 1945 as a ship and aircraft maintenance shop. No COCs were identified in IR Site 21 soil in the RI ([Navy 2015a](#)). The COCs in groundwater at OU-2B were TCE and vinyl chloride. ICs will be implemented at OU-2B to restrict groundwater use and land use without VI mitigation measures. This site is not expected to impact the FOST Parcel.

### **6.2.4 IR Site 23 (OU-2A)**

IR Site 23 is located north of IR Site 16 and covers approximately 14 acres in the southern half of OU-2A. Between 1953 and the early 1970s, portions of the site were used for airplane defueling activities. The main structure at IR Site 23 is Building 530, constructed in 1973 for missile rework operations. Operational support functions were provided at Buildings 529 and 600, two smaller adjacent buildings. The site is currently used for vehicle storage and parking. Historically, the Pacific Coast Oil Works Company petroleum refinery operated within the site from 1879 until 1903. No refinery structures remain within IR Site 23. It is assumed that refinery wastes and asphaltic residues, known as tarry refinery wastes, were disposed at IR Site 23 and the surrounding tidal lands. A portion of IR Site 23 includes areas where the Marsh Crust is known to exist, and these areas are subject to the excavation restrictions known as the Marsh Crust Ordinance, which limits the extent of excavations to designated threshold depths ([Navy 2012c](#)) (see [Section 5.1.2](#) for a discussion of the Marsh Crust).

Three ASTs (ASTs 530A through 530C) have been removed from the site. There are no USTs associated with the site. The three former ASTs, along with two OWSs (529 and 530), were formerly associated with defueling activities that were performed at Building 530. Navy Public Works pressure-washed the OWSs and sealed the surface access ways prior to base closure. AST 530A and OWS 530 were closed to further investigation by the Water Board in March 2015 ([Water Board 2015b](#), [2015c](#)). A May 2015 memorandum removed OWS 529 from the Petroleum Program ([Water Board 2015e](#)). The greater area associated with defueling activities will be investigated under the Alameda Point Petroleum Program, including ASTs 530B and 530C. There were no CERCLA COCs identified in IR Site 23 soil or groundwater ([Navy 2012c](#)). The site has progressed through the CERCLA process and no actions were required ([Navy 2012c](#)). The site was transferred in 2013 to the City of Alameda. The site is not expected to impact the FOST Parcel.

The Water Board retains its authority, independent of CERCLA, to regulate tarry refinery waste and/or co-located petroleum at IR Site 23.

### **6.2.5 IR Site 27 (OU-6)**

IR Site 27, the Dock Zone, is located southeast of IR Site 17 and northeast of IR Site 24; it is 15.8 acres in size. IR Site 27 is mostly paved or covered by buildings. The site includes Buildings 68, 168, 555, and 601; Ferry Point Road and West Oriskany Avenue; inactive railroad tracks and sidings; and fenced open space between Building 168 and Ferry Point Road.

The ROD documented that NFA was necessary for soil with ISCO, MNA, and ICs as components of the selected remedy for groundwater in the central and eastern portion of IR Site 27 (Navy 2008a). A Technology Transfer Technical Memorandum (Battelle 2010c) documents the Remedy-In-Place for IR Site 27. Based on the documented remedial action progress, the U.S. EPA has determined that the remedy is operating properly and successfully (USEPA 2012a). The site has progressed through the CERCLA process. The site was transferred in 2013 to the City of Alameda. This site is not expected to impact the FOST Parcel.

### **6.2.6 IR Site 31 (OU-5)**

IR Site 31, Marina Village Housing, was designated as an IR site because groundwater beneath the site was impacted by the OU-5/IR-02 groundwater plume. A series of environmental investigations were conducted at IR Site 31 between 1987 and 2005 to assess potential sources of contamination. No enforcement activities have occurred in association with IR Site 31, and there are no former RCRA units at the site. A NFA determination for the OU-5/IR-02 groundwater plume was documented in the OU-5/IR-02 ROD Amendment (Navy 2015b). The OU-5/IR-02 groundwater plume and subsequent decision documents and risk assessments are discussed in more detail in Section 4.1.5. The IR Site 31 Soil RI evaluated soil data collected during the RI and data from previous investigations (CDM 2007). The RI recommended NFA for IR Site 31 soil, and the NFA decision was documented in a ROD in 2008 (Navy 2008b). The site transferred to the United States Coast Guard in 2008 and is currently used as military housing. The site has progressed through the CERCLA process and remedial actions have been completed. This site is not expected to impact the FOST Parcel.

### **6.2.7 IR Site 35**

IR Site 35 is composed of 23 study areas, known as AOCs that are located throughout Alameda Point. Between 1995 and 1997, a TCRA for storm sewer sediment removal was completed by the Navy (IT 1997). A portion of this work occurred within IR Site 35. In 2001, a NTCRA was conducted in AOC 12 to remove lead-containing soil (Shaw E&I 2003). In 2002, a TCRA was conducted for soil with reported benzo(a)pyrene equivalent concentrations that exceeded 1.0 milligram per kilogram (mg/kg) in the top 2 feet of soil in the West Housing Area (IR Site 35, AOCs 4, 5, 7, 9, 13, and 14) (FWC 2004). In 2002, a TCRA was conducted at Building 195 to remove a pesticide/fertilizer shed in AOC 8 (Shaw E&I 2004). These interim actions were documented in the ROD (Navy 2010a) as being protective of unrestricted site use. The ROD

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selected excavation and disposal remedies for AOCs 3, 10, and 12, and documented that the other 20 AOCs required no further action for unrestricted use.

The RACR documents the remedial actions completed to remove heptachlor from AOC 3 and lead-impacted soil from AOCs 10 and 12 in IR Site 35 between March and June 2011 ([OTIE 2012](#)). U.S. EPA concurred with the Final RACR on August 27, 2012 ([USEPA 2012b](#)) and DTSC also concurred on September 6, 2012 ([DTSC 2012b](#)). The site has progressed through the CERCLA process and remedial actions have been completed. Portions of the site were transferred in 2013 to the City of Alameda. This site is not expected to impact the FOST Parcel.

### **6.2.8 FISCA IR Site 02**

FISCA IR Site 2 is located adjacent to IR Sites 25 and 30 to the southeast of the FOST Parcel. The site was used as a screening lot and scrap yard operated by the Defense Reutilization and Marketing Office (DRMO). The DRMO sorted excess property from the DoD for resale or proper disposal. The site was designated as SWMU 1 under the FISCA RCRA permit because of hazardous waste storage associated with DRMO activities. Former SWMU 1 was transferred to the FISCA IR Program for investigation and closure under CERCLA. Groundwater underlying the site was investigated as the OU-5/IR-02 groundwater plume because the groundwater contamination impacted both Alameda Point and FISCA. A NFA determination for the OU-5/IR-02 groundwater plume was documented in the OU-5/IR-02 ROD Amendment ([Navy 2015b](#)). The OU-5/IR-02 groundwater plume and subsequent decision documents and risk assessments are discussed in more detail in [Section 4.1.5](#).

Shallow soil within FISCA IR Site 2 had been impacted by the DRMO activities ([PRCEMI & Versar 1996](#)). The shallow soil contaminants related to DRMO activities included PCBs, TPH, cadmium, and lead. The site is also underlain by the Marsh Crust contamination discussed in [Sections 4.1](#) and [5.1.2](#).

The DRMO-related soil contamination at FISCA IR Site 2 was addressed by two removal actions and one remedial action. The first removal action was conducted to excavate PCB- and lead-contaminated soil located near former Buildings 365 and 366. A second removal action occurred in 1998 in the south central portion of FISCA IR Site 2 to remove additional PCB-contaminated soil. In 2001, a remedial action was conducted to remove PCB- and cadmium-contaminated soil from both the planned residential area (western one-third of the property) and the planned industrial area (eastern two-thirds of the property). Soil contaminated with PCBs and cadmium in excess of residential levels (1 mg/kg and 12 mg/kg, respectively), and industrial levels (10 mg/kg and 450 mg/kg, respectively) were removed from the future residential and industrial areas. The excavated soils were disposed of at an off-site disposal facility. The work was performed pursuant to a RAP/ROD, which included ICs to restrict future residential development of the planned industrial portion of FISCA IR Site 2 ([Navy 2001](#)).

Although groundwater contamination originating from this site may have impacted the FOST Parcel in the past, the site has progressed through the CERCLA process and remedial actions have been completed. The potential for this site to impact the FOST Parcel is considered low.

### **6.2.9 Radiological Sites**

Several radiological sites are located adjacent to the FOST Parcel (see [Figure 11](#)). As discussed below, no adjacent radiological sites will impact the FOST Parcel.

**Seaplane Ramp and Parking Apron.** The Seaplane Ramp and Parking Apron are included in the HRA ([Weston 2007](#)). HRA Section 6.2.15 states: “It was suspected that workers in Building 400 might have spilled radium paint waste that was being carried from the building to Seaplane Lagoon. The 1998 100 percent gamma survey of the ramp and parking area yielded no radioactive anomalies.” The Parking Apron area is adjacent to the FOST Parcel. The seaplane ramps are cantilevered structures associated with the adjacent apron. Sediment beneath the ramps is part of Seaplane Lagoon and part of the FOST Parcel and this is further described in [Section 4.7.2](#).

The Seaplane Parking Apron, which is a paved area, has been used as a processing area for various Navy radiological projects since 2008. In accordance with the work plans for those projects, the apron has been radiologically surveyed before and after each project prior to down posting of the area at the end of the project. To date, the last project that used the apron was the IR Site 17 Seaplane Lagoon remediation. The area has since been down posted for unrestricted use.

In January 2011, the entire Seaplane Parking Apron was incorporated into the Radiological Controlled Area in support of the IR Site 17 (Seaplane Lagoon) remedial action. As part of the Navy’s work plan, drying pads were built over the eastern and western portions of the Parking Apron. The eastern Parking Apron was used for the adjacent remediation area in the northeastern corner of Seaplane Lagoon. While discreet sources of radioactive materials were found in the sediment from the northeast remediation area, no loose sediment contamination was found. After the northeast remediation area dredging, sediment drying and radiological processing of the sediment were completed. The Navy removed the drying pad on the east side of the Parking Apron and conducted radiological surveys in accordance with the remedial action work plan. No evidence of residual radioactivity from Navy activities was found on the eastern Parking Apron and no further action was required. The eastern portion of the Parking Apron was transferred in 2013.

The western Parking Apron was used for the adjacent remediation area in the northwestern corner of Seaplane Lagoon. Following completion of the remediation in the northwest remediation area of Seaplane Lagoon, the western portion of the apron was used as a radiological

processing area for Operable Unit 2C soil and sediment. Following completion of this project, the Navy removed the drying pad and associated processing pads on the west side of the Parking Apron and conducted radiological surveys between 2014 and 2015 in accordance with the Seaplane Lagoon remedial action work plan. No evidence of residual radioactivity from Navy activities was found on the western Parking Apron and the area was down posted for unrestricted use.

**Seaplane Lagoon Shoreline.** A scoping survey was conducted along the entire western Seaplane Lagoon shoreline. An overall shoreline distance of approximately 1,575 feet was surveyed. A scoping survey was also conducted along the eastern shoreline to the north and south of Outfall G, approximately 100 feet in either direction. The surveyed areas were selected based on the Naval Air Rework Facility historical activities, potential radiological sources, and data collected to date. No elevated readings were identified as a result of the surveys on the eastern shoreline (TtECI 2011).

On the western shoreline, three discrete items were discovered and removed. The first item was a wire found in two pieces. The second item was a radioluminescent compass, which was found on the surface broken into three pieces with each piece spaced approximately 15 feet apart from the other pieces. The third item discovered was a radioluminescent toggle switch. After removing each of the items, 1 cubic foot of soil was removed from each of the locations where the items were found and confirmation samples were collected. None of the confirmation sample results were above the release criterion for any radionuclides of concern (TtECI 2011). No other elevated readings were identified as a result of the surveys on the western shoreline.

**Pier 3.** Pier 3 was the largest pier at Alameda Point for general purpose berthing of Navy vessels. At Pier 3, an area of radiological contamination was detected, possibly due to a strontium-90 deck marker that was crushed by the pier crane. The Navy removed and replaced the 9 feet of contaminated tracks, asphalt, and concrete. A Navy contractor surveyed the area and recommended release for unrestricted use (Gutierrez-Palmenberg 1996). A subsequent survey was conducted in 2011. The Pier 3 Final Status Survey Report (Tetra Tech 2013) determined that only background levels of radioactivity are present and recommended that no action is warranted at the radiologically impacted area on Pier 3. This confirms the free-release determination done in 1996, but the more recent survey used lower release criteria (Tetra Tech 2013). The Final Status Survey Report recommended no further action for the area and was finalized in accordance with FFA document review procedures.

**Building 66.** Building 66 is a 31,000-square-foot single-story structure that was used for aircraft engine work and engine accessory testing. Activities included work on spark gap irradiators that contained radioactive materials and possible decontamination and overhaul of contaminated aircraft engines (ChaduxTt 2012a). Based on the recommendation of the HRA (Weston 2007), a

survey was performed to confirm that the building is free of radioactive materials associated with historical Navy activities and Building 66 is suitable for unrestricted use (ChaduxTt 2012a).

**Former Smelter Area.** The Former Smelter Area (FSA) is a 40,000-square-foot area east of Building 66. Much of the area identified as the smelter is occupied by new Buildings 398 and 399 and support equipment. The Former Smelter Area is a 26,200-square-foot area east of Building 66 where a former smelter building previously existed. The Former Smelter Area is now occupied by Buildings 398 and 399 and associated support equipment. A small portion (approximately 16 percent, or 4,200 square feet) of the Former Smelter Area is located in IR Site 3 within the FOST Parcel (see Section 4.7.2.) while the remaining 84 percent (22,000 square feet) is adjacent to the FOST Parcel. The HRA (Weston 2007) identified the possibility that radium components were melted down at the smelter, along with other metal components when the previous smelter was in operation.

A scoping survey was performed to evaluate whether radionuclides of concern were present in accessible areas and to provide information to assist in assessing whether the site was impacted or non-impacted and to identify future actions, if necessary (ChaduxTt 2012b). The results of the scoping survey did not identify any radioactivity in soil or the concrete pad above background levels or that can be associated with the Navy's former smelter operations. Therefore, the site is suitable for unrestricted use (ChaduxTt 2012b) and will not impact the FOST Parcel.

**Building 113.** Building 113 is a 12,260-square-foot sheet metal and steel structure initially built in 1943 and moved to its current location in 1948. The HRA (Weston 2007) identified the possibility that Building 113 was one of three possible areas for disassembly and decontamination of aircraft that supported nuclear weapons testing in 1951. A final status survey was performed to confirm the building was free of radioactive materials associated with historical Navy activities (ChaduxTt 2012c). The results of the final status survey did not identify any radioactivity in the building above background levels or that can be associated with the Navy's former operations; therefore, the site is suitable for unrestricted use (ChaduxTt 2012c).

**IR Sites 5 and 10.** A TCRA was conducted for IR Sites 5 and 10. The TCRA involved the removal of storm drain lines F and FF that originate in Buildings 5 and 400 and discharged to Seaplane Lagoon (TtECI 2011). The removal action was based on an operational history described in the HRA that determined discharge from these storm drain lines contained radioactive contamination and required a response action. The removal action occurred between 2008 and 2011.

### **6.2.10 Petroleum Sites**

Several petroleum sites are located adjacent to the FOST Parcel and are further discussed below.

**AOC 23.** This site is located west of IR Site 3 and consists of petroleum site AOC 23 and a 1,2-dichloroethane plume. The Water Board concurred site investigations and corrective actions were complete, and NFA was granted for AOC 23 by letter dated November 30, 2012 ([Water Board 2012c](#)). The FOST Parcel is not expected to be impacted by any releases from the site. This site is in an area that transferred to the City in 2013.

**CAA-A.** This site (both within and adjacent to IR Site 34) consists of the area around parallel 10-inch FLs used to transport jet fuel. The site was closed with concurrence from the Water Board in 2007 ([Water Board 2007](#)) and without restrictions. The FOST Parcel is not expected to be impacted by any releases from the site. A portion of CAA-A is in an area that transferred to the City in 2013.

**CAA-B.** This site consists of the area around three east–west, parallel FLs used to transport jet fuel, with multiple crossing FLs (about 22,500 feet) that link a series of fueling pits within portions of IR Site 35. The FLs were abandoned in place in 1998 ([Battelle 2010b](#)). The site is adjacent to the FOST Parcel to the north of Seaplane Lagoon. The residual TPH is not expected to impact the FOST Parcel.

**CAA-04B.** This site consists of the area around Building 372 that was used as an engine test facility. It includes USTs 372-1 and 372-2 and an associated fuel spill called AOC 372 or SWMU 372. Both tanks were removed in 1995. It also includes former fuel oil AST 372, removed some time prior to 2002 ([Battelle 2010b](#)). These tanks and SWMU 372 are open petroleum sites. The tanks, SWMU, and the majority of the site are not immediately adjacent to the FOST Parcel; CAA-04B is located northwest of IR Site 16.

The site also includes USTs 616-1 and 616-2 (also collectively called AOC 616). These tanks were for emergency spill control but reportedly were never used and never held anything but water. They are closed-in-place. The Water Board concurred with the recommendation that no further action was required by letter dated August 28, 2013 ([Water Board 2013c](#)).

The Petroleum Management Plan indicates a recommendation of NFA for the USTs and for CAA-04B ([Battelle 2010b](#)). The FOST Parcel is not expected to be impacted by any releases from this site.

**CAA-04C.** This site consists of the area around former Building 547 that was used as a gasoline service station and car wash between 1971 and 1980. It includes USTs 547-1 through 547-3 (also collectively called UST(R)-17) and all of these USTs were removed in 1994. Suspected USTs 547-4 and 547-5 (identified in the RFA) could not be located by geophysical survey and do not appear on base records. Based on research into the existence of these USTs, it was concluded that the USTs 547-4 and 547-5 never existed and were incorrectly identified by prior contractors. USTs 547-4 and 547-5 have been removed from the Alameda Point Petroleum Program. CAA-

04C also includes former OWS 547 ([Battelle 2010b](#)). The FOST Parcel is not expected to be impacted by any releases from this site. Portions of CAA-04C were included in the 2013 FOST.

**CAA-11A.** This site consists of the area around Building 14 that was used as an aircraft engine test and repair facility. The site includes USTs 14-1 through 14-6, sometimes referred to as UST(R)-06 and which were removed in 1994, and former OWS 162. Only a small portion of the site, and none of the above-listed associated features, is within the FOST Parcel. A biosparging system operated between 2003 and 2004 for releases attributed to USTs 14-1, 14-2, 14-3, and 14-6 ([Battelle 2010b](#)). The Water Board issued a NFA letter for the USTs dated February 19, 2015 ([Water Board 2015a](#)). Based on cleanup activities conducted between 2003 and 2004, the FOST Parcel is not expected to be impacted by any releases from this site.

**CAA-11B.** This site consists of the area designated as Area 37, a fuel storage area. Area 37 includes Structure 598 (sometimes called HW-04) that was a secondary containment area for ASTs 598A through 598C. These ASTs were removed in 2004 and received NFA concurrence from the Water Board in 2013 ([Water Board 2013d](#)). Area 37 also includes USTs 37-1 through 37-24, also collectively referred to as UST(R)-07, which were removed between 1995 and 1998. Area 37 also includes former ASTs 037A through 037D ([Battelle 2012a](#)). Portions of CAA-11B are within an area that transferred to the City in 2013. The FOST Parcel is not expected to be impacted by any releases from this site.

**CAA-12.** This site was divided into CAA-12N and CAA-12S. The site consists of the area around Building 29 that was an aircraft weapons overhaul and testing facility; Building 38, which served as an acoustical enclosure for aircraft engines; and Facilities 461A, B, and C, which served as aircraft run-up areas. The site includes former ASTs 029 and 038 and former OWS 038. OWS 038 received closure by the Water Board in May 2012 ([Water Board 2012b](#)), and AST 029 received closure by the Water Board in June 2014 ([Water Board 2014b](#)). The FOST Parcel is not expected to be impacted by any releases from this site. Portions of CAA-12 were included within the 2013 FOST Parcel.

**CAA-13.** This site consists of the area around Building 397 that was a jet engine testing facility; Building 406A, which contained control equipment for a defueling facility; Building 529, which supplied auxiliary power for Building 530; and Building 606, which was used as an administration building. The site includes former ASTs 530A through 530C, and closed-in-place OWSs 529 and 530. Free product was noted during sampling activities around the defueling facilities, sometimes referred to as Defueling Area 530. The site also includes former OWSs 397A through 397D, and a 3,500 to 17,000-gallon jet fuel spill circa 1991 (from an AST) ([Shaw E&I 2011](#)). Dual-vacuum extraction and biosparging systems were operated from 2003 until 2006. AST 530A and OWS 530 were closed to further investigation by the Water Board in March 2015 ([Water Board 2015b](#), [2015c](#)). A May 2015 memorandum removed OWS 529 from the Petroleum Program ([Water Board 2015e](#)). Based on cleanup activities conducted between



2003 and 2006, the FOST Parcel is not expected to be impacted by any releases from this site. Portions of CAA-13 were included within the 2013 FOST Parcel.

**AOC 3 (EDC 12).** This is a former aircraft scrap yard, parts storage, and treated lumber storage area where TPH-motor oil in soil has been reported ([Bechtel 2007](#)). The FOST Parcel is not expected to be impacted by any releases from this site. The Final SI Addendum for EDC 12 concluded that no further action is required under CERCLA ([CH2MHill 2014](#)). Because of petroleum compounds in soil exceeded residential screening values, AOC 3 was transferred to the Alameda Point Petroleum Program for evaluation. The entire site was within the 2013 FOST Parcel. U.S. EPA concurred with the recommendation for AOC 3 in the EDC 12 SI Addendum by letter dated November 23, 2015 ([USEPA 2015a](#)).

**AOC 5 (EDC 12).** This is a former aircraft washdown area where TPH-diesel and TPH-motor oil in soil have been reported ([Bechtel 2007](#)). The FOST Parcel is not expected to be impacted by any releases from this site. The Final SI Addendum for EDC 12 concluded that no further action is required under CERCLA ([CH2MHill 2014](#)). Because petroleum compounds in soil exceeded residential screening values, AOC 5 was transferred to the Alameda Point Petroleum Program for evaluation. The entire site was within the 2013 FOST Parcel. U.S. EPA concurred with the recommendation for AOC 5 in the EDC 12 SI Addendum by letter dated November 23, 2015 ([USEPA 2015a](#)).

## 7.0 Access Clause

The deed(s) will reserve and the transferee shall grant to the United States (Navy and U.S. EPA) access to the FOST Parcel pursuant to CERCLA Section 120(h)(3)(A)(iii). DTSC, the Water Board, and U.S. EPA and their successors and assigns shall also be granted access to the property to enter the FOST Parcel in any case in which response action or corrective action is found necessary on the FOST Parcel after the date of transfer. In addition, the deed(s) will provide for a right of access for the U.S. to traverse property owned by the transferee to gain access to property still owned by the U.S.

## 8.0 Covenants

The deed for transfer of any property on which “any hazardous substance was stored for one year or more, [or] known to have been released, or disposed...” as a result of former activities conducted by the United States, will include a covenant made pursuant to CERCLA Section 120(h)(3)(A)(ii) and (B). The covenant will warrant that “all remedial action necessary to protect human health and the environment with respect to any hazardous substance identified pursuant to Section 120(h)(3)(A)(i)(I) of the CERCLA of 1980 remaining on the property has been taken before the date of this deed(s)” and that “any additional remedial action found to be necessary after the date of such transfer shall be conducted by the United States.” This covenant will not

apply to any remedial action required on the FOST Parcel that is the result of an act or omission of the transferee that causes a new release of hazardous substances.

## 9.0 Finding of Suitability to Transfer Statement

Based on the information contained in this FOST and the notices, restrictions, and covenants that will be contained in the deed, the FOST Parcel at the Alameda Point is suitable for transfer.

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

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

Lawrence Lansdale  
BRAC Environmental Director  
By Direction

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## 11.0 Table References

*Tables 3 through 8 were generated directly from an Alameda Point database maintained to support property transfers. Because the database includes closure references for the entire installation, it was not possible to match reference citations from the database with the smaller subset of references relevant to this FOST. Below are all references that are cited in the tables. References appear exactly as they appear on the tables. Many of these references also appear in the text, in which case they are listed in the Section 10 References. Text and table reference citations may differ on the letter designation used to distinguish documents issued by an entity in the same year.*

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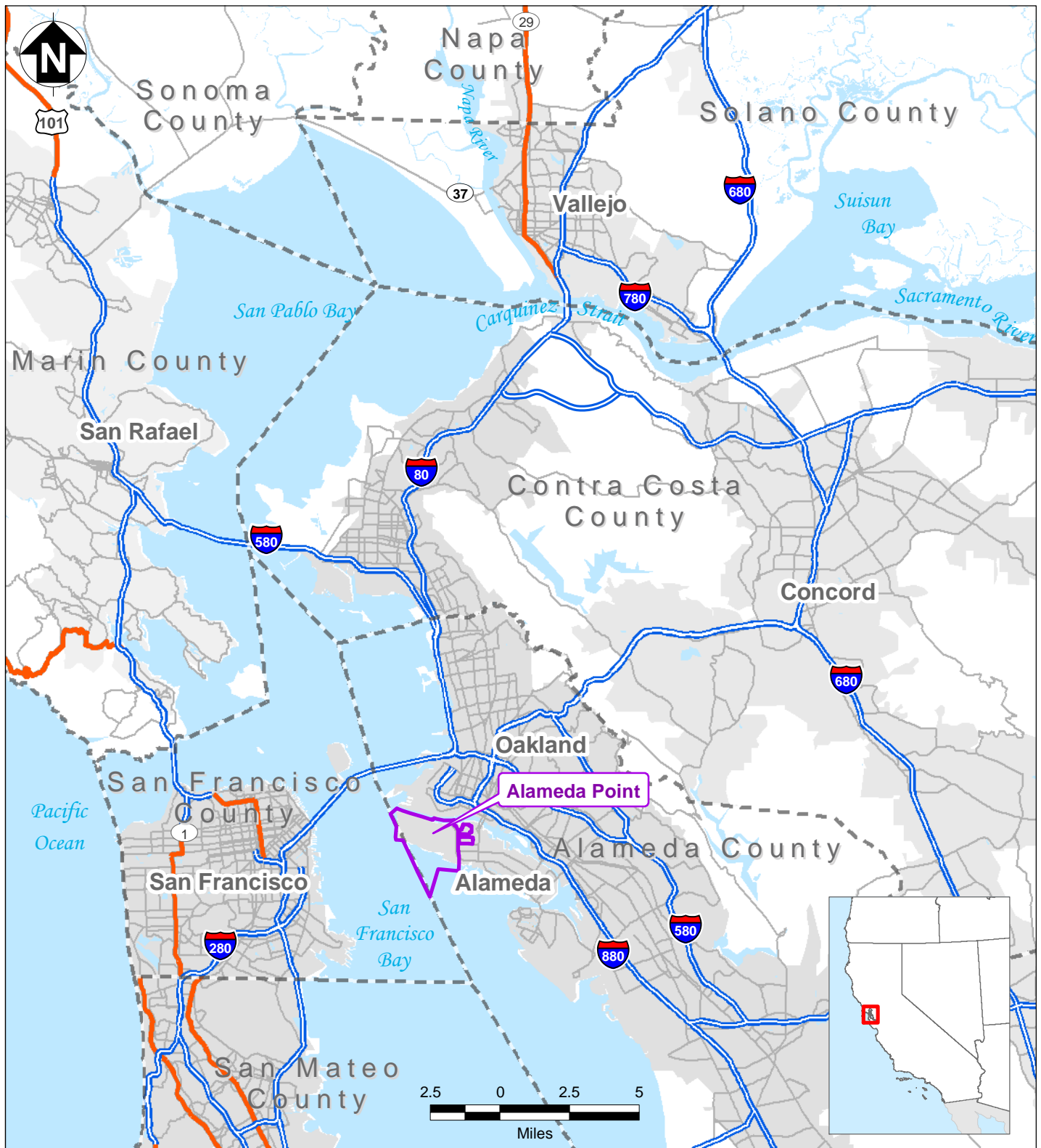
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## Figures

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- Former Naval Air Station Alameda
- County Boundary
- Urban Area\*
- Interstate
- Highway
- Major Road

Note:  
 \* Darker shading indicates greater population density



**Former NAS Alameda, Alameda, California**  
 Department of the Navy, BRAC PMO West, San Diego, California

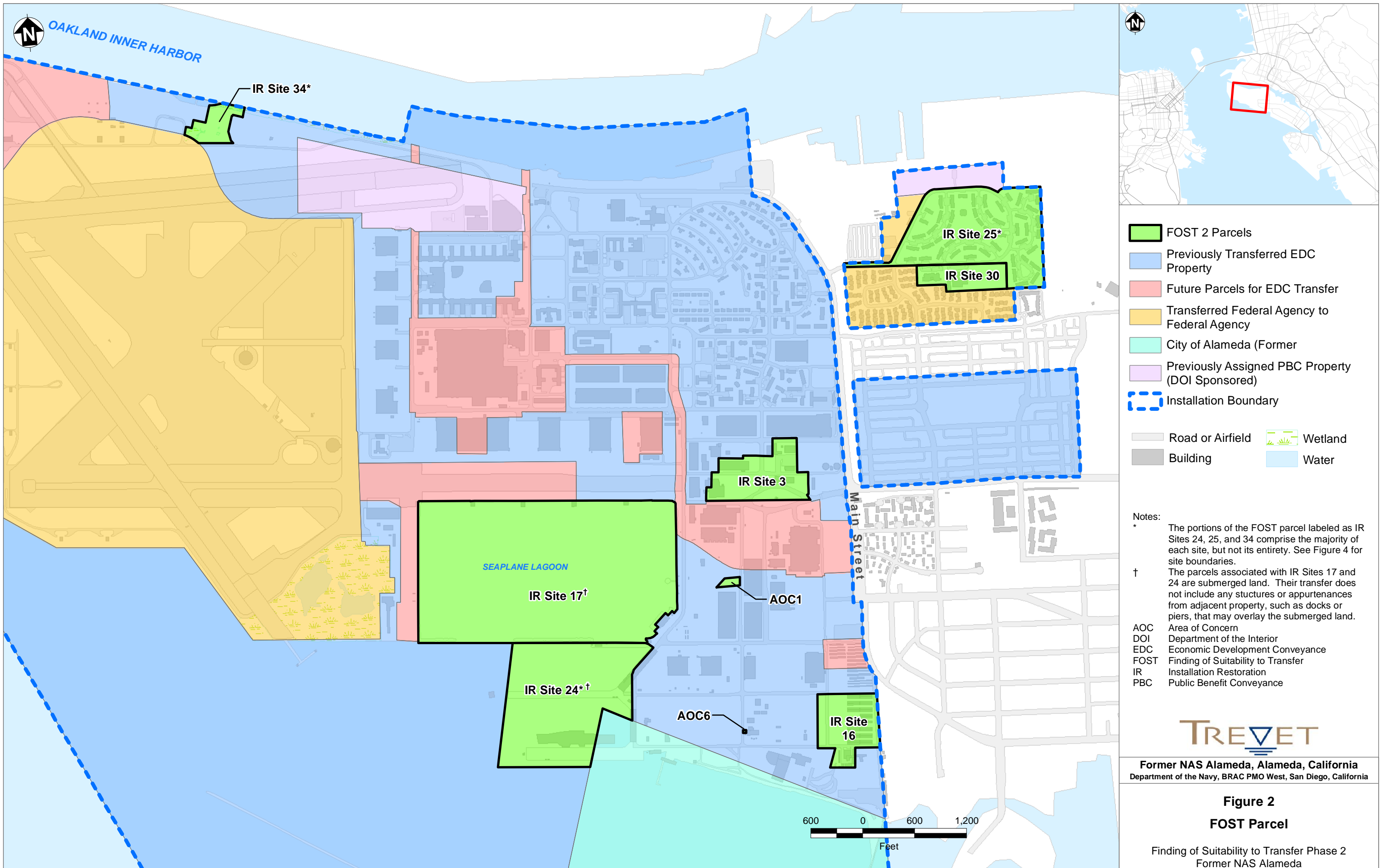
**Figure 1**

**Site Location Map**

Finding of Suitability to Transfer Phase 2  
 Former NAS Alameda

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- FOST 2 Parcels
- Previously Transferred EDC Property
- Future Parcels for EDC Transfer
- Transferred Federal Agency to Federal Agency
- City of Alameda (Former)
- Previously Assigned PBC Property (DOI Sponsored)
- Installation Boundary
- Road or Airfield
- Building
- Wetland
- Water

Notes:

- \* The portions of the FOST parcel labeled as IR Sites 24, 25, and 34 comprise the majority of each site, but not its entirety. See Figure 4 for site boundaries.
- † The parcels associated with IR Sites 17 and 24 are submerged land. Their transfer does not include any structures or appurtenances from adjacent property, such as docks or piers, that may overlay the submerged land.

AOC Area of Concern  
 DOI Department of the Interior  
 EDC Economic Development Conveyance  
 FOST Finding of Suitability to Transfer  
 IR Installation Restoration  
 PBC Public Benefit Conveyance

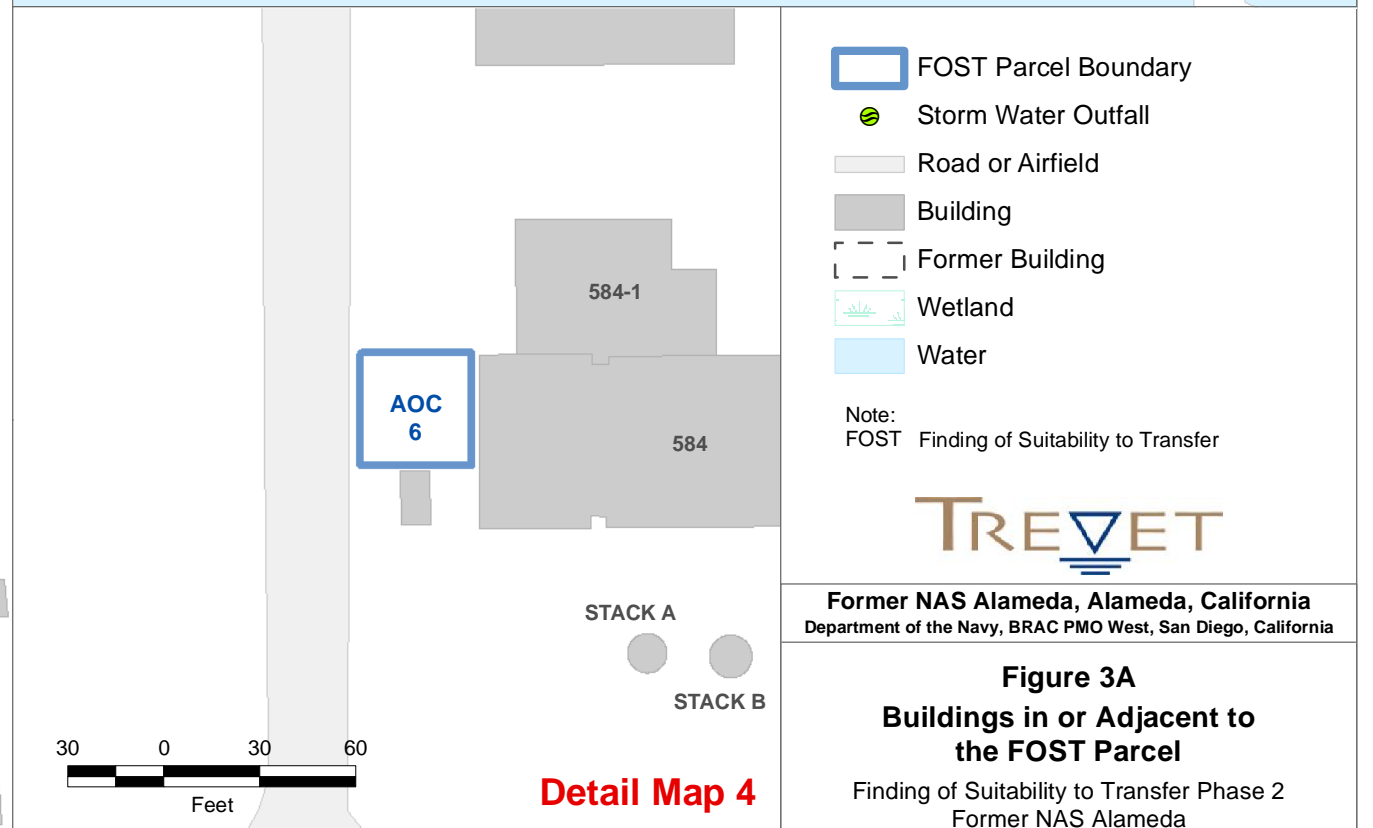
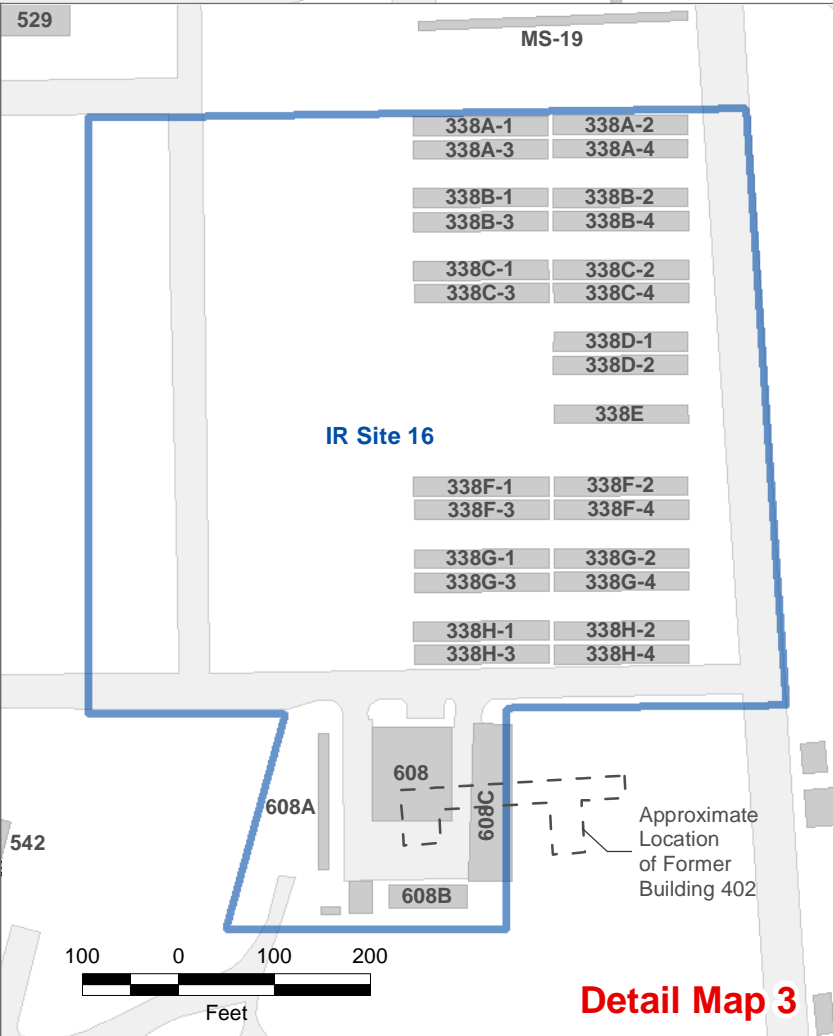
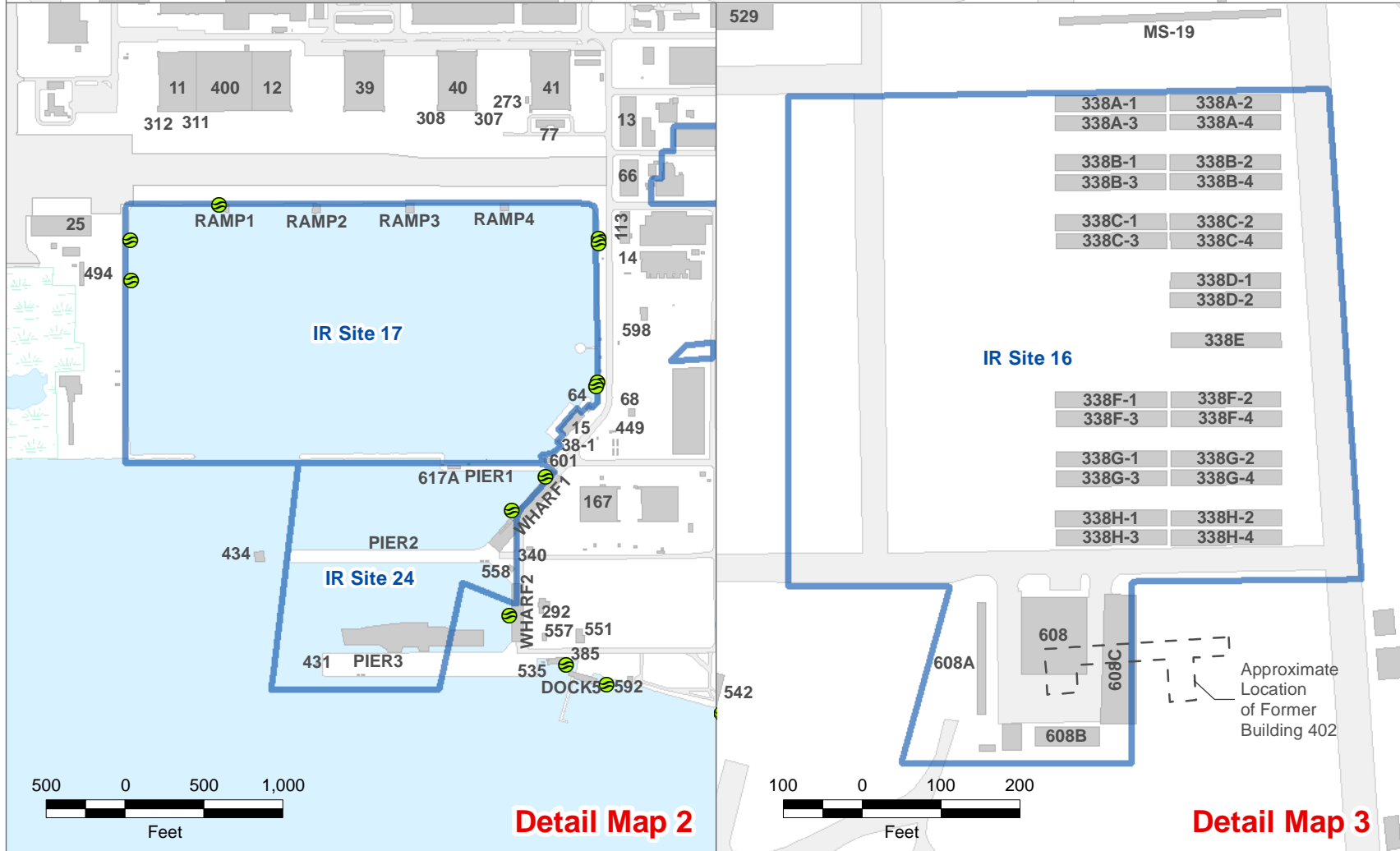
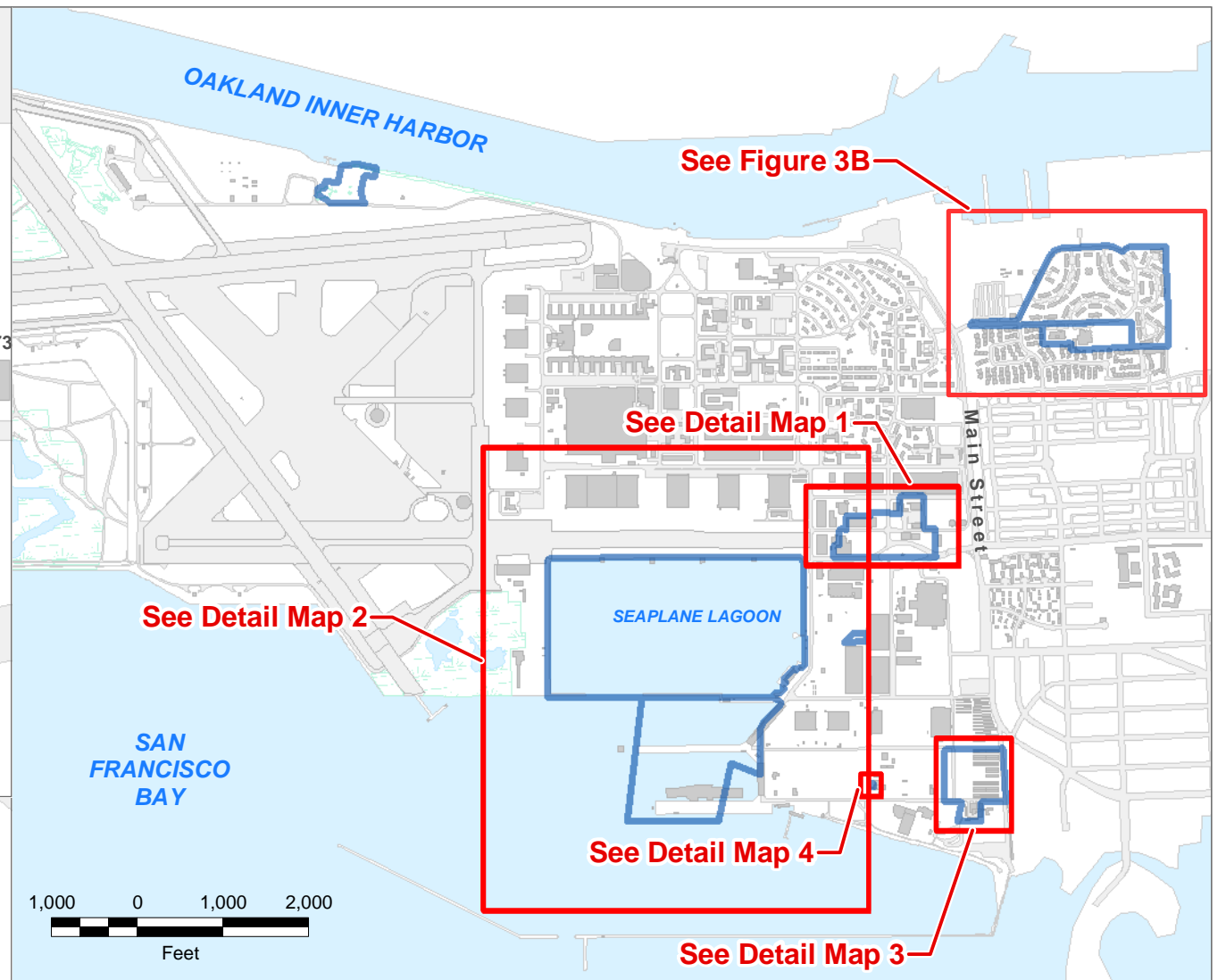
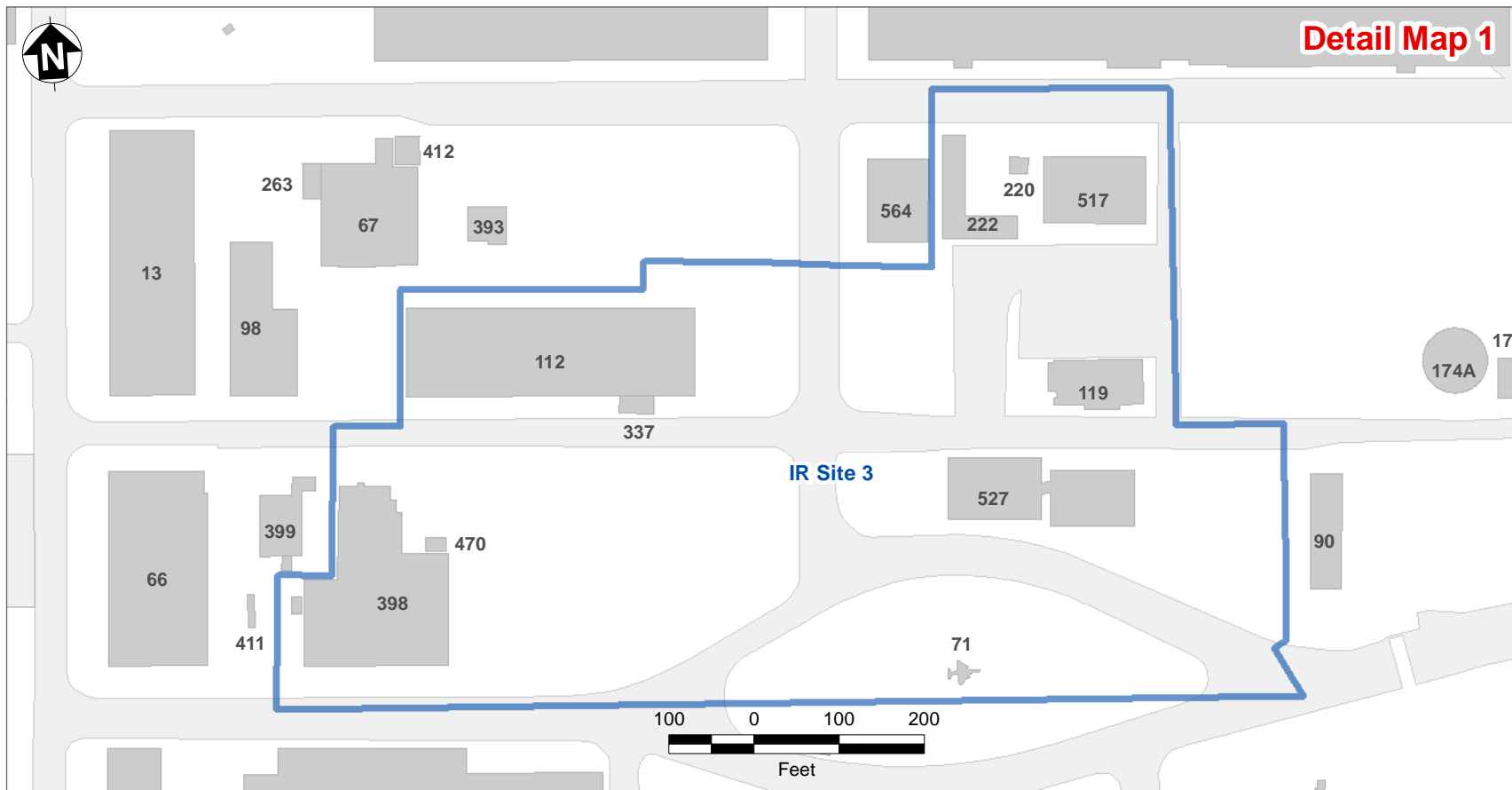


Former NAS Alameda, Alameda, California  
 Department of the Navy, BRAC PMO West, San Diego, California

**Figure 2**  
**FOST Parcel**

Finding of Suitability to Transfer Phase 2  
 Former NAS Alameda

*""Vj ku'rci g'kpvkqpcn' hgh'drcpn0*



- FOST Parcel Boundary
- Storm Water Outfall
- Road or Airfield
- Building
- Former Building
- Wetland
- Water

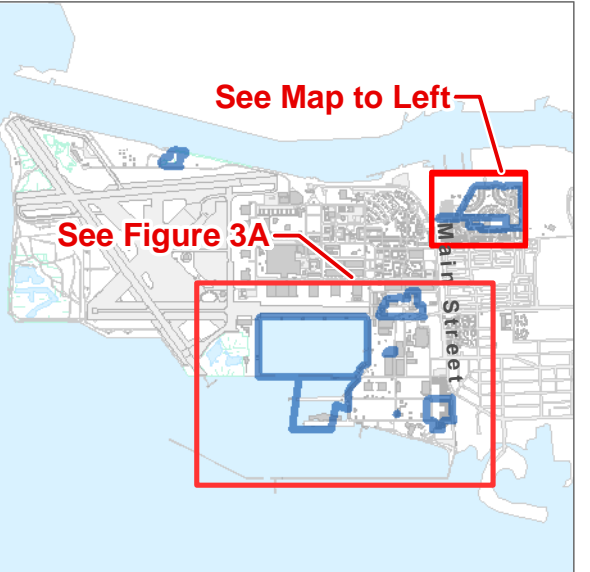
Note:  
FOST Finding of Suitability to Transfer



**Former NAS Alameda, Alameda, California**  
Department of the Navy, BRAC PMO West, San Diego, California

**Figure 3A**  
**Buildings in or Adjacent to the FOST Parcel**  
Finding of Suitability to Transfer Phase 2  
Former NAS Alameda

*""Vj ku'rci g'kpvkqpcn' hgh'drcpn0*



-  FOST Parcel Boundary
-  Road or Airfield
-  Building
-  Wetland
-  Water

Note:  
FOST Finding of Suitability to Transfer

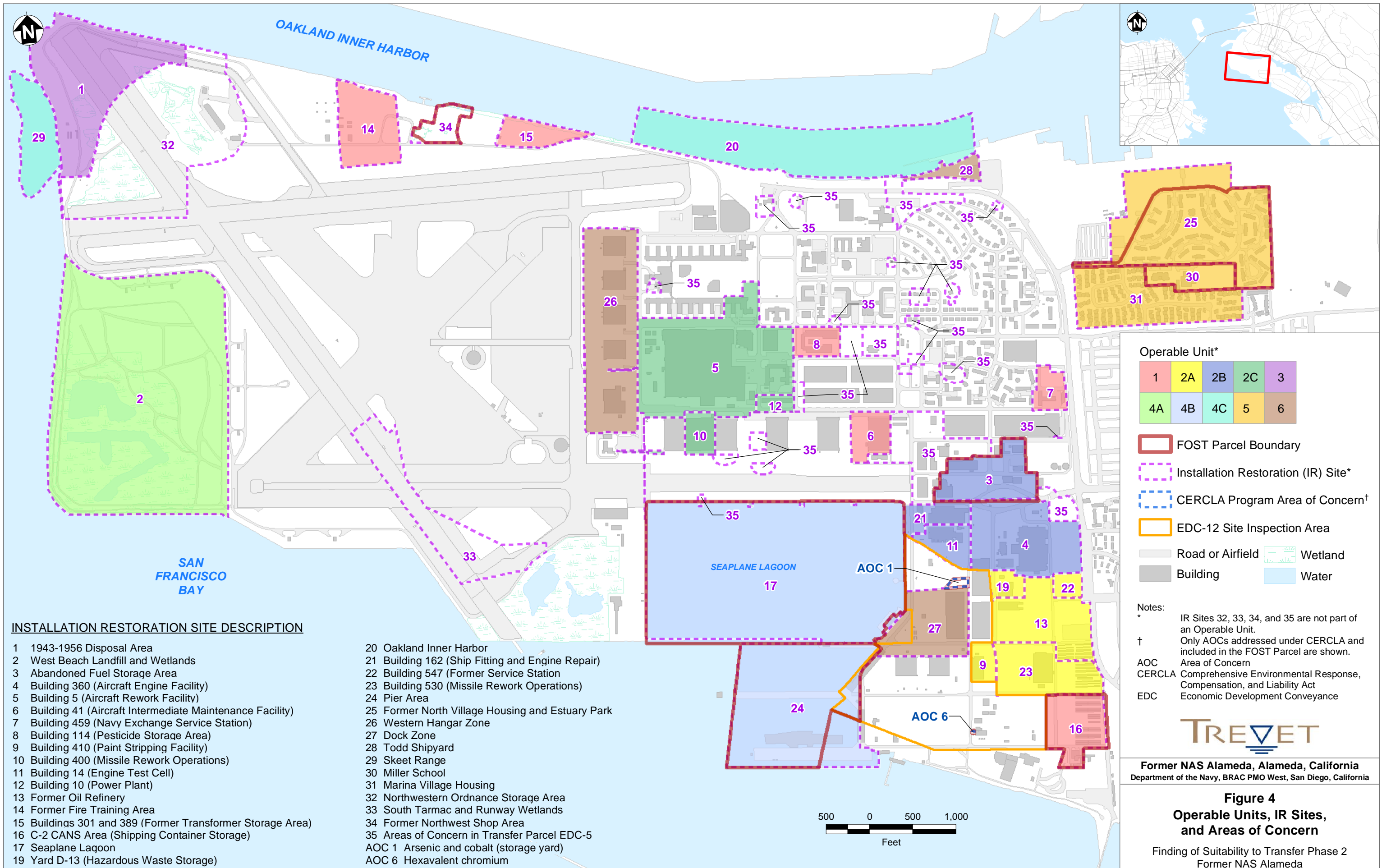


Former NAS Alameda, Alameda, California  
Department of the Navy, BRAC PMO West, San Diego, California

**Figure 3B**  
**Buildings in or Adjacent to**  
**the FOST Parcel**

Finding of Suitability to Transfer Phase 2  
Former NAS Alameda

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**INSTALLATION RESTORATION SITE DESCRIPTION**

- 1 1943-1956 Disposal Area
- 2 West Beach Landfill and Wetlands
- 3 Abandoned Fuel Storage Area
- 4 Building 360 (Aircraft Engine Facility)
- 5 Building 5 (Aircraft Rework Facility)
- 6 Building 41 (Aircraft Intermediate Maintenance Facility)
- 7 Building 459 (Navy Exchange Service Station)
- 8 Building 114 (Pesticide Storage Area)
- 9 Building 410 (Paint Stripping Facility)
- 10 Building 400 (Missile Rework Operations)
- 11 Building 14 (Engine Test Cell)
- 12 Building 10 (Power Plant)
- 13 Former Oil Refinery
- 14 Former Fire Training Area
- 15 Buildings 301 and 389 (Former Transformer Storage Area)
- 16 C-2 CANS Area (Shipping Container Storage)
- 17 Seaplane Lagoon
- 19 Yard D-13 (Hazardous Waste Storage)

- 20 Oakland Inner Harbor
- 21 Building 162 (Ship Fitting and Engine Repair)
- 22 Building 547 (Former Service Station)
- 23 Building 530 (Missile Rework Operations)
- 24 Pier Area
- 25 Former North Village Housing and Estuary Park
- 26 Western Hangar Zone
- 27 Dock Zone
- 28 Todd Shipyard
- 29 Skeet Range
- 30 Miller School
- 31 Marina Village Housing
- 32 Northwestern Ordnance Storage Area
- 33 South Tarmac and Runway Wetlands
- 34 Former Northwest Shop Area
- 35 Areas of Concern in Transfer Parcel EDC-5
- AOC 1 Arsenic and cobalt (storage yard)
- AOC 6 Hexavalent chromium

**Operable Unit\***

1	2A	2B	2C	3
4A	4B	4C	5	6

FOST Parcel Boundary  
 Installation Restoration (IR) Site\*  
 CERCLA Program Area of Concern†  
 EDC-12 Site Inspection Area  
 Road or Airfield  Wetland  
 Building  Water

Notes:  
 \* IR Sites 32, 33, 34, and 35 are not part of an Operable Unit.  
 † Only AOCs addressed under CERCLA and included in the FOST Parcel are shown.  
 AOC Area of Concern  
 CERCLA Comprehensive Environmental Response, Compensation, and Liability Act  
 EDC Economic Development Conveyance



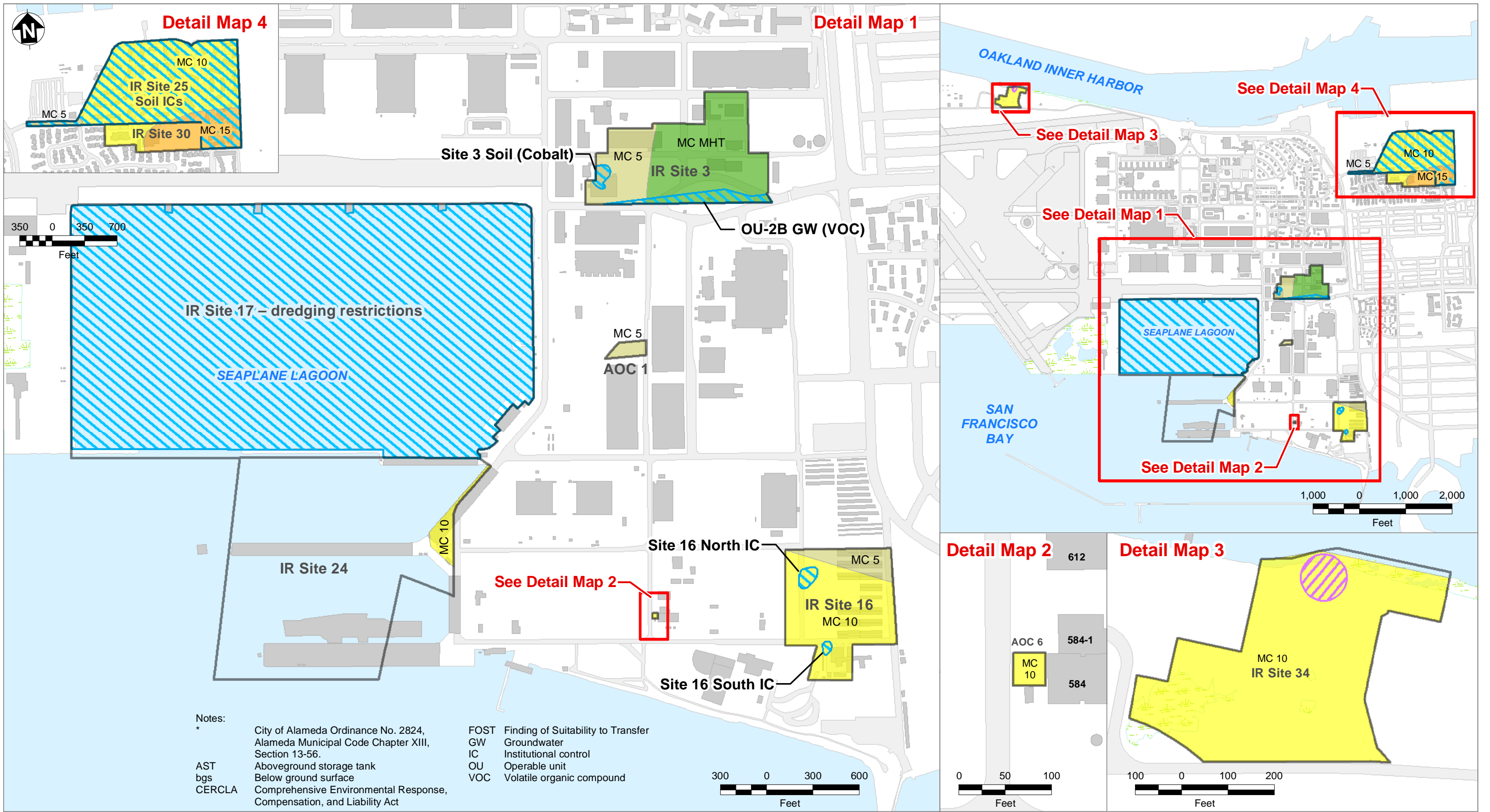
**Former NAS Alameda, Alameda, California**  
 Department of the Navy, BRAC PMO West, San Diego, California

**Figure 4**  
**Operable Units, IR Sites,**  
**and Areas of Concern**

Finding of Suitability to Transfer Phase 2  
 Former NAS Alameda

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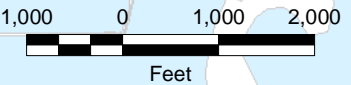
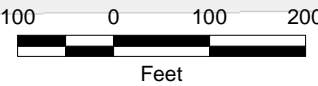
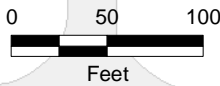
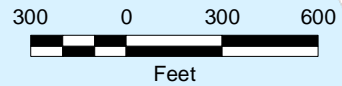




Notes:

\* City of Alameda Ordinance No. 2824, Alameda Municipal Code Chapter XIII, Section 13-56.  
 AST Aboveground storage tank  
 bgs Below ground surface  
 CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

FOST Finding of Suitability to Transfer  
 GW Groundwater  
 IC Institutional control  
 OU Operable unit  
 VOC Volatile organic compound



Existing Marsh Crust-Related Restriction\*

- Excavation permit required for excavations below Mean Higher High Tide. (MC MHT)
- Excavation permit required for excavations below 5 feet bgs (MC 5)
- Excavation permit required for excavations below 10 feet bgs. (MC 10)
- Excavation permit required for excavations below 15 feet bgs. (MC 15)

- CERCLA Site Restrictions Required per Record of Decision (ROD), Explanation of Significant Difference for ROD, or Remedial Design
- Petroleum Restriction - 50-foot buffer around AST 330A per Water Board concurrence letter
- FOST Parcel Boundary

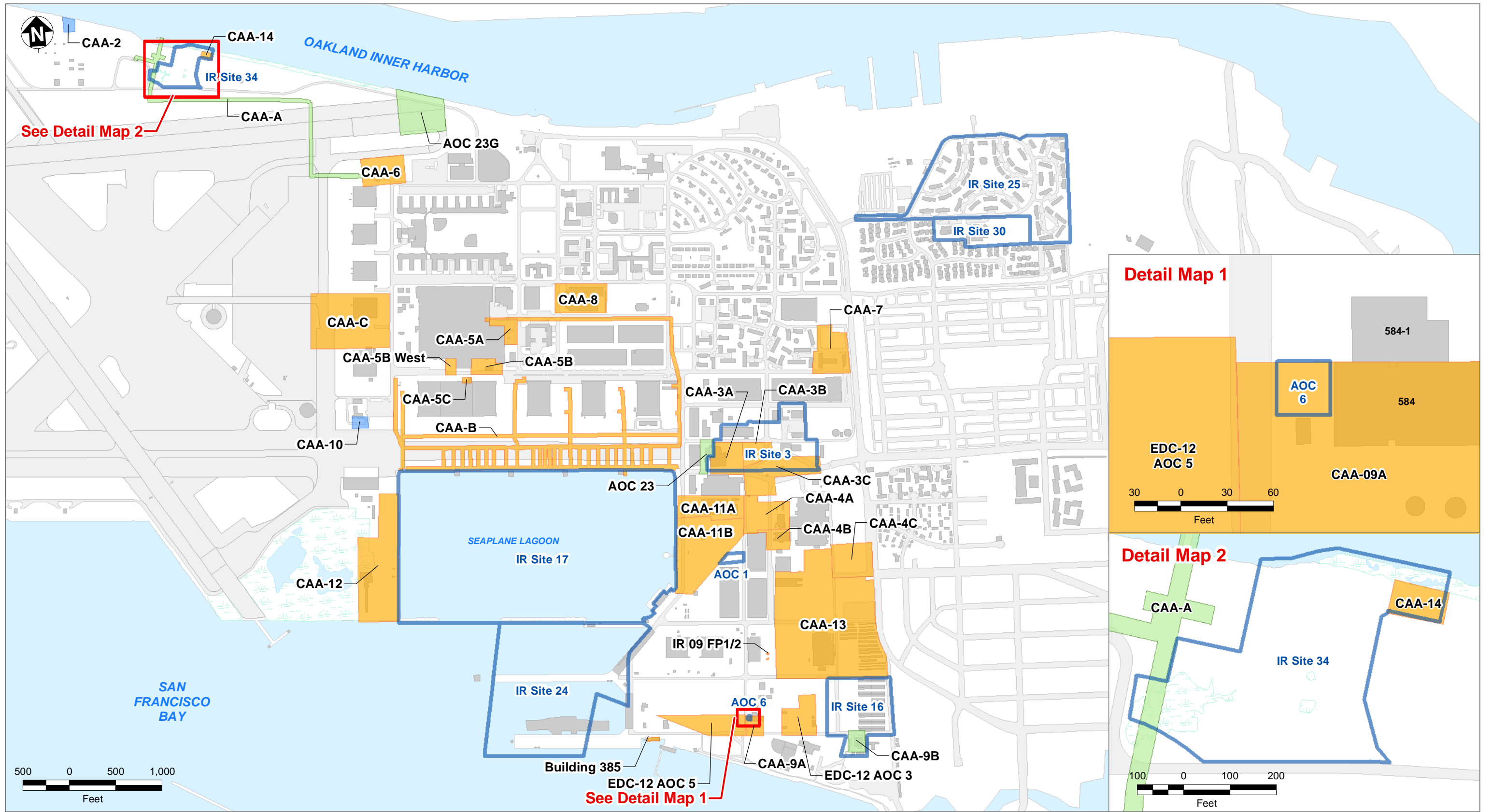
- Road or Airfield
- Building
- Wetland
- Water

Former NAS Alameda, Alameda, California  
 Department of the Navy, BRAC PMO West, San Diego, California

**Figure 5**  
**Footprint of Areas within FOST Parcel that Require Restrictions**  
 Finding of Suitability to Transfer Phase 2  
 Former NAS Alameda



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Corrective Action Area\*

- Open
- NFA with Restrictions
- NFA without Restrictions

- FOST Parcel Boundary
- Road or Airfield
- Building
- Wetland
- Water

Notes:

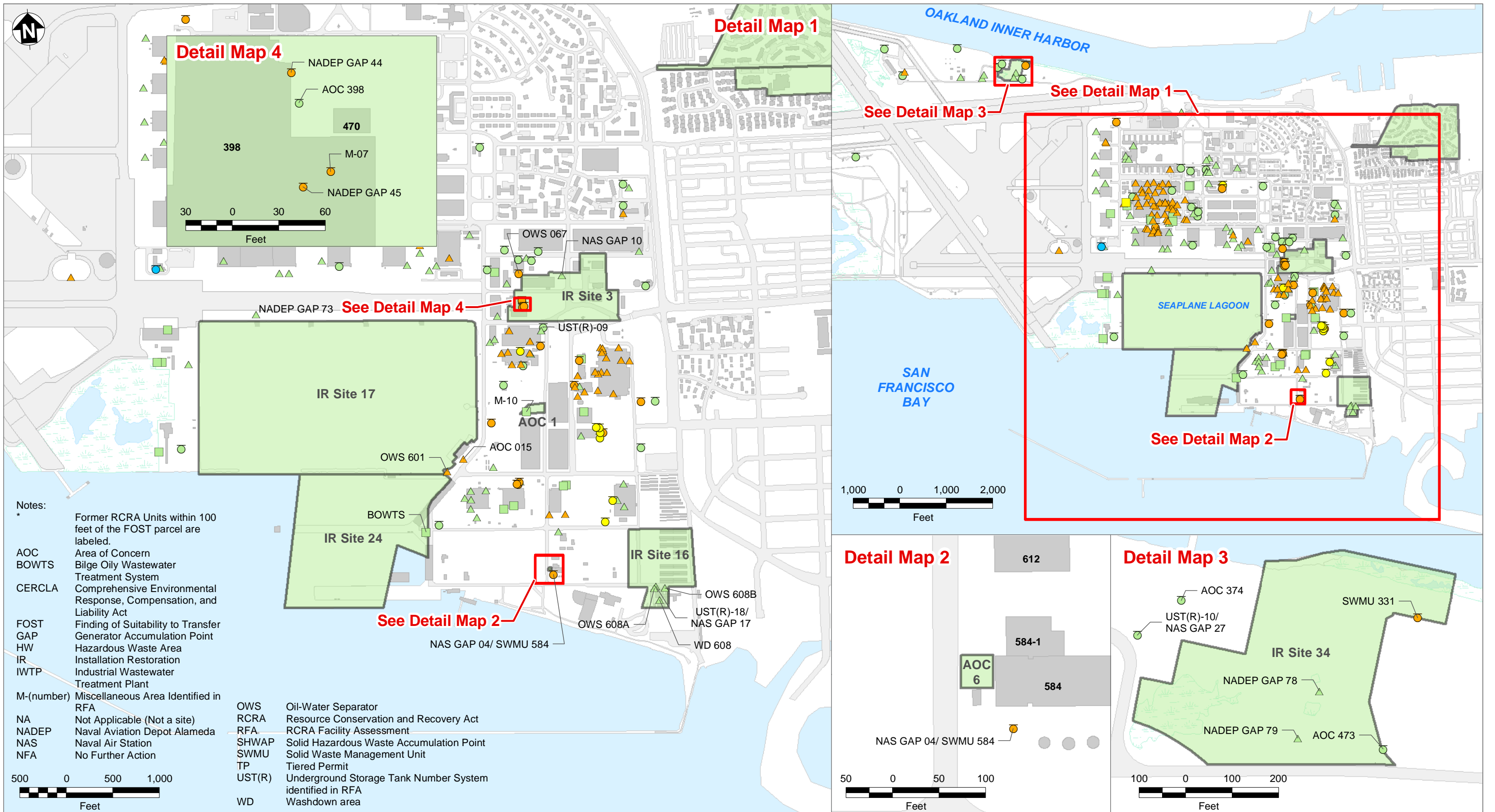
- \* Sites within 100 feet of the FOST parcel are labeled.
- AOC Area of Concern
- CAA Petroleum Program Corrective Action Area
- FOST Finding of Suitability to Transfer
- IR Installation Restoration
- NFA No Further Action



Former NAS Alameda, Alameda, California  
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**Figure 6**  
**Total Petroleum Hydrocarbons**  
**Corrective Action Areas**  
**and Areas of Concern**  
 Finding of Suitability to Transfer Phase 2  
 Former NAS Alameda

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**Solid Waste Management Units\***

- |                                  |                                       |
|----------------------------------|---------------------------------------|
| ■ RCRA; NFA                      | ● Petroleum; Open                     |
| ■ RCRA; NA                       | ● Petroleum; NFA with Restrictions    |
| ▲ CERCLA; Open                   | ● Petroleum; NFA without Restrictions |
| ▲ CERCLA; Response Complete, NFA | ● Petroleum; NA                       |

- |                    |            |
|--------------------|------------|
| ■ FOST Parcel      | ■ Building |
| ■ Road or Airfield | ■ Wetland  |
|                    | ■ Water    |

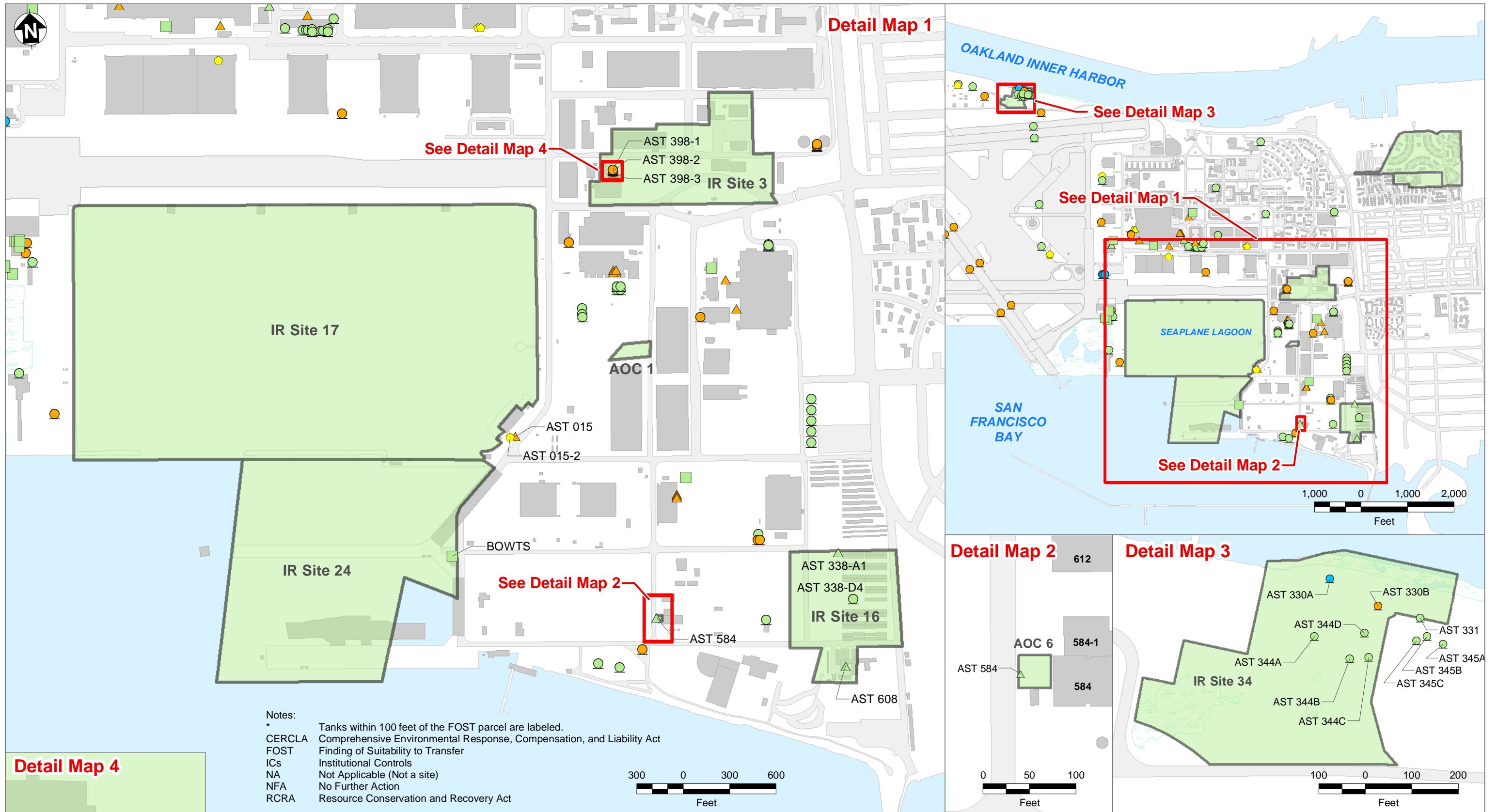


Former NAS Alameda, Alameda, California  
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**Figure 7  
Former Solid Waste  
Management Unit Status**

Finding of Suitability to Transfer Phase 2  
Former NAS Alameda

*""Vj ku'rci g'kpvkqpcn' hgv'drcpn0*



- Aboveground Storage Tanks (ASTs)\***
- RCRA; NA (Compressed Gas)
  - RCRA; NFA
  - CERCLA; Open
  - CERCLA; Response Complete, NFA
  - CERCLA; NA
  - Petroleum; Open
  - Petroleum; NFA with Restrictions
  - Petroleum; NFA without Restrictions

- FOST Parcel
- Road or Airfield
- Building
- Wetland
- Water

Former NAS Alameda, Alameda, California  
 Department of the Navy, BRAC PMO West, San Diego, California

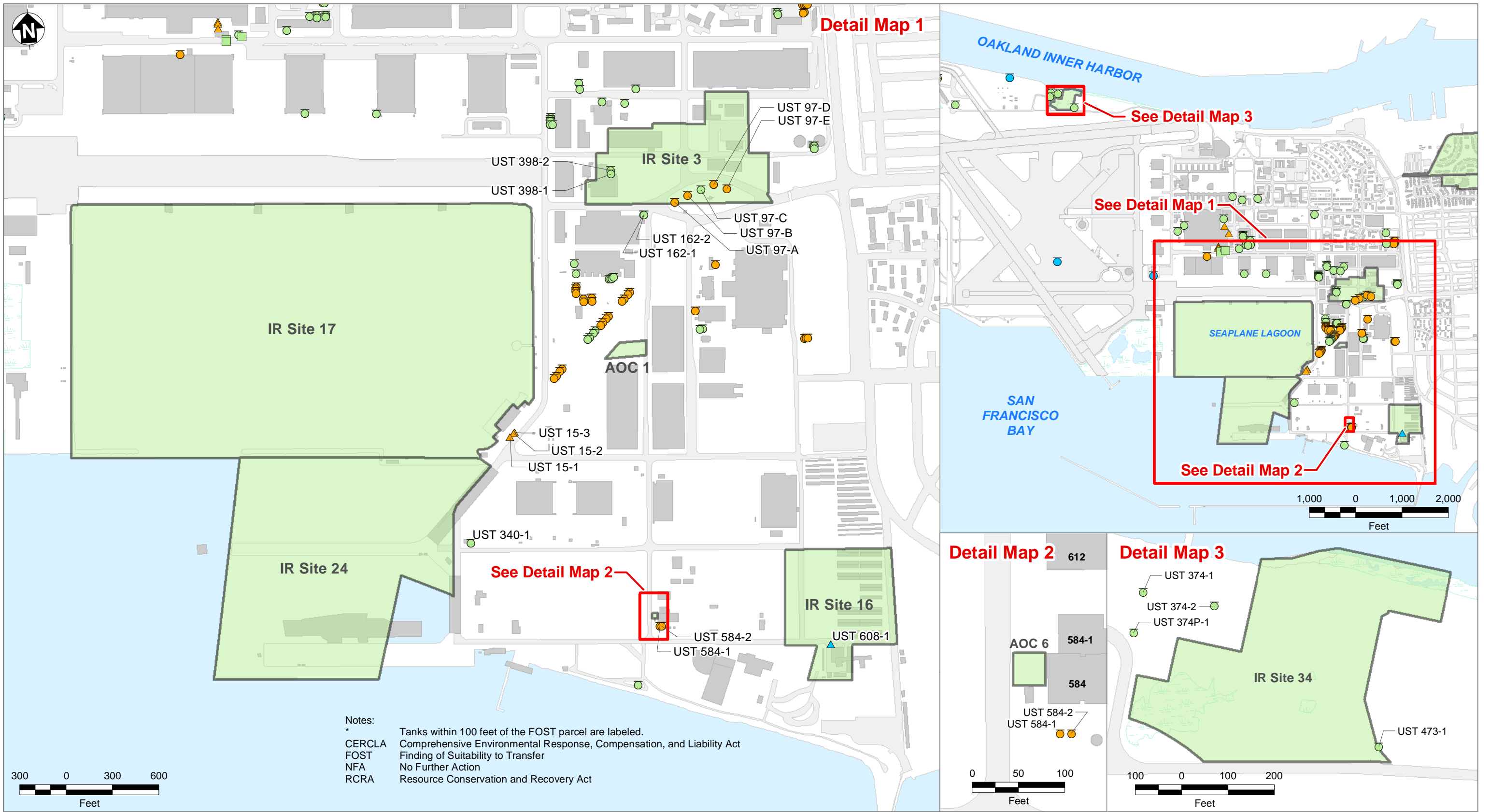
**Figure 8**  
**Aboveground Storage Tank Status**

Finding of Suitability to Transfer Phase 2  
 Former NAS Alameda



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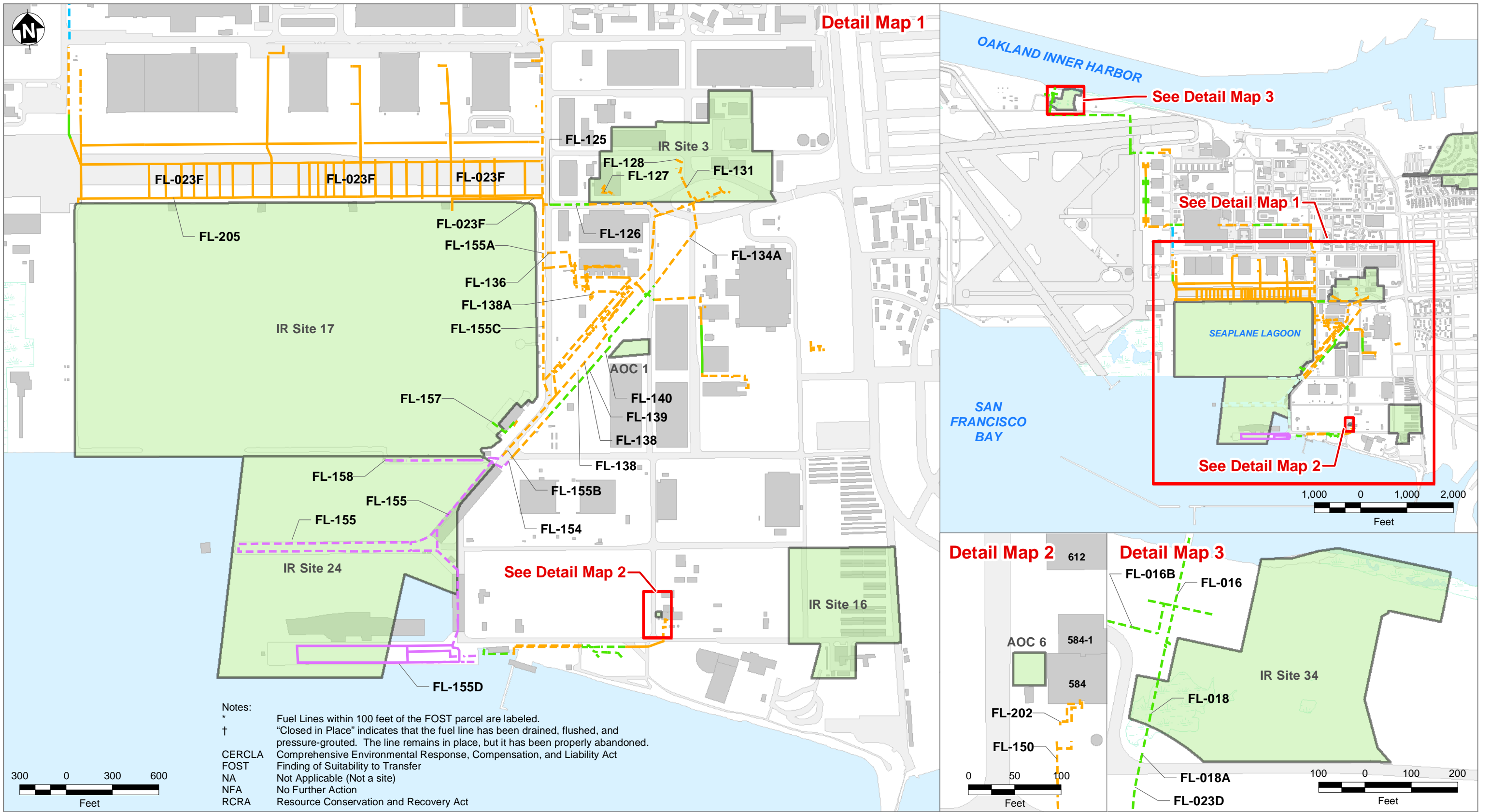




Former NAS Alameda, Alameda, California  
 Department of the Navy, BRAC PMO West, San Diego, California

**Figure 9**  
**Underground Storage Tank Status**  
 Finding of Suitability to Transfer Phase 2  
 Former NAS Alameda

*""Vj ku'rci g'kpvkqpcnf 'gh'drcpn0*



Notes:  
 \* Fuel Lines within 100 feet of the FOST parcel are labeled.  
 † "Closed in Place" indicates that the fuel line has been drained, flushed, and pressure-grouted. The line remains in place, but it has been properly abandoned.  
 CERCLA Comprehensive Environmental Response, Compensation, and Liability Act  
 FOST Finding of Suitability to Transfer  
 NA Not Applicable (Not a site)  
 NFA No Further Action  
 RCRA Resource Conservation and Recovery Act

Fuel Line Site Status and Physical Disposition\*

- Removed, Open
- Removed, NFA with Restrictions
- Removed, NFA without Restrictions
- Removed, NA
- Closed-in-Place†, Open
- Closed-in-Place†, NFA without Restrictions
- Closed-in-Place†, NA
- █ FOST Parcel
- █ Road or Airfield
- █ Building
- █ Wetland
- █ Water

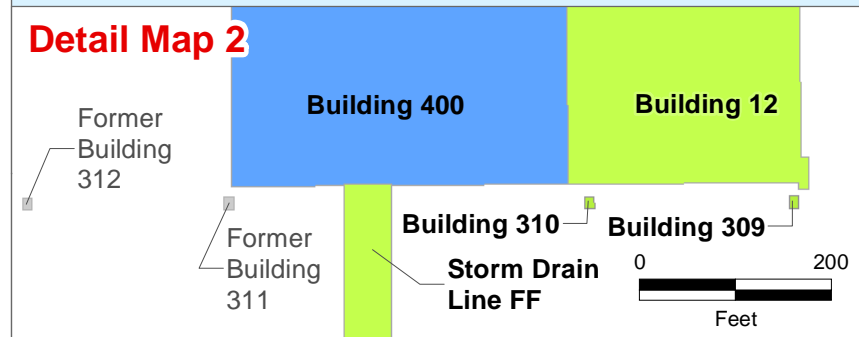
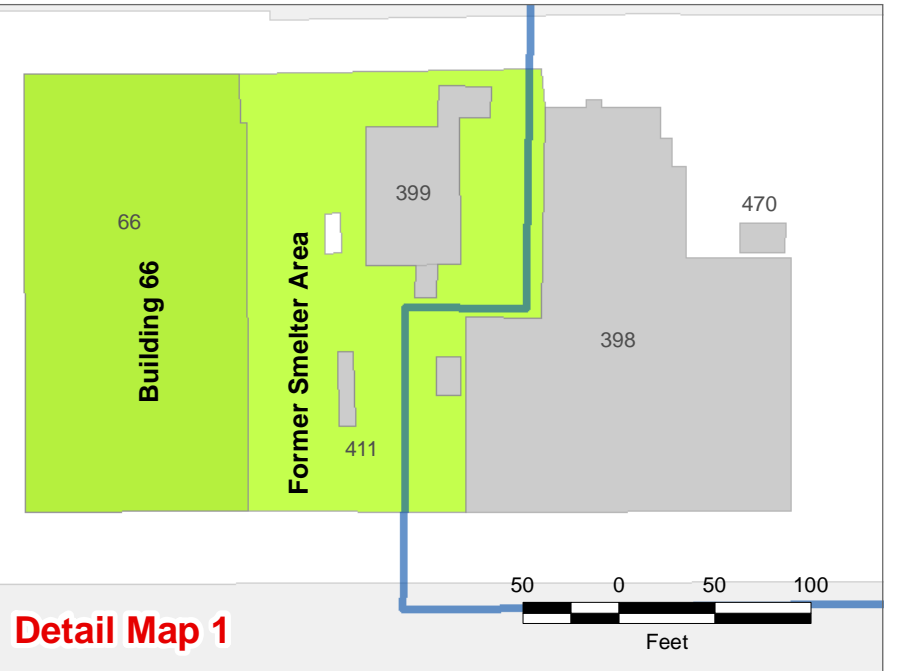
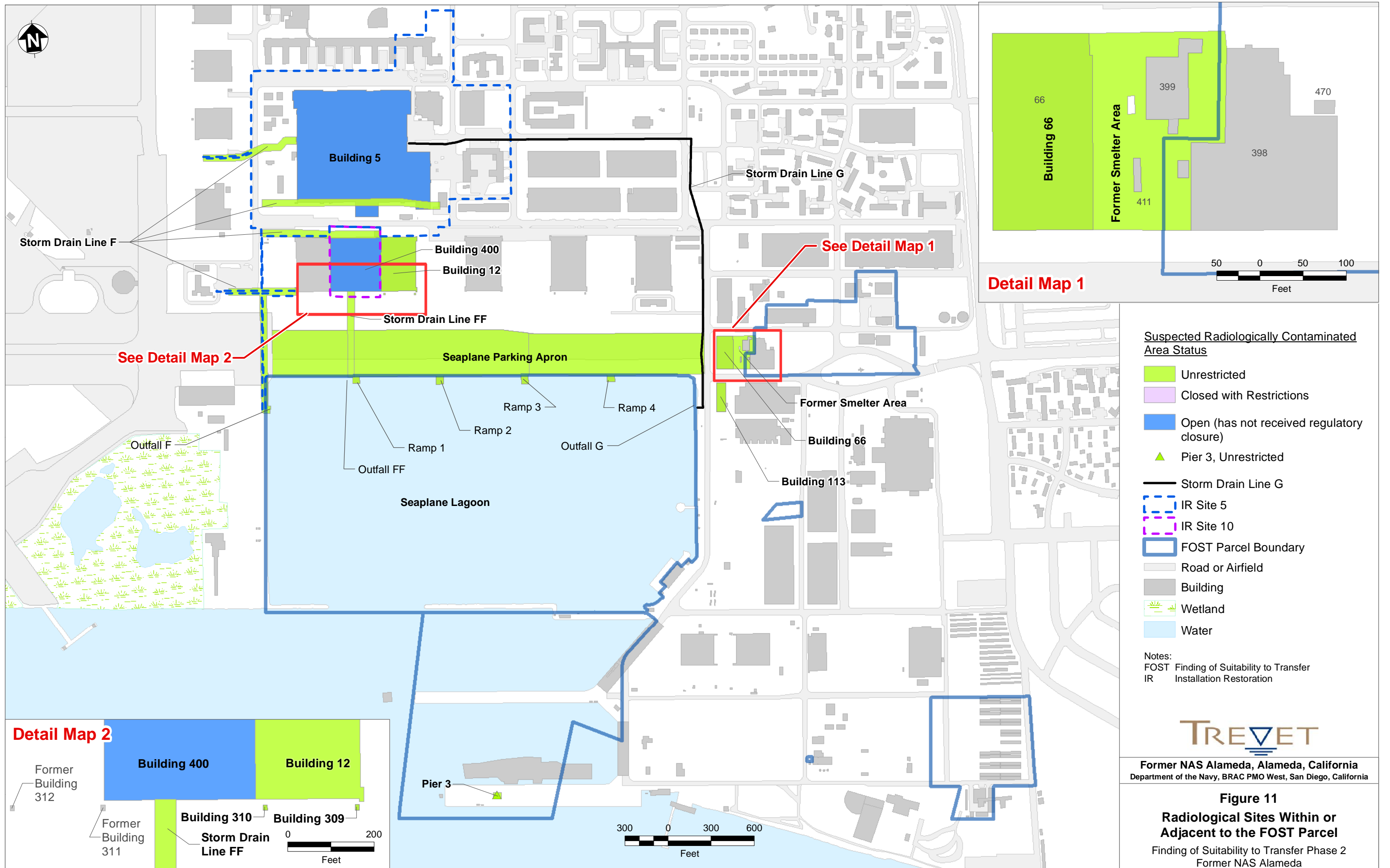
Former NAS Alameda, Alameda, California  
 Department of the Navy, BRAC PMO West, San Diego, California

**Figure 10**  
**Underground Fuel Line Status**

Finding of Suitability to Transfer Phase 2  
 Former NAS Alameda



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**Suspected Radiologically Contaminated Area Status**

- Unrestricted
- Closed with Restrictions
- Open (has not received regulatory closure)
- Pier 3, Unrestricted
- Storm Drain Line G
- IR Site 5
- IR Site 10
- FOST Parcel Boundary
- Road or Airfield
- Building
- Wetland
- Water

Notes:  
 FOST Finding of Suitability to Transfer  
 IR Installation Restoration



Former NAS Alameda, Alameda, California  
 Department of the Navy, BRAC PMO West, San Diego, California

**Figure 11**  
**Radiological Sites Within or Adjacent to the FOST Parcel**  
 Finding of Suitability to Transfer Phase 2  
 Former NAS Alameda

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## **Tables**

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**TABLE 1. PROPERTY DISPOSAL TO DATE**

Finding of Suitability to Transfer Phase 2 - Former NAS Alameda

Type of Disposal	Recipient	When	Description	Acres
NC-EDC	City of Alameda	2000	East Housing	75.00
Lease Termination	City of Alameda	2000	Lease Termination	161.50
Federal Agency to Federal Agency	U.S. Coast Guard	2008	Marina Village Housing	28.00
PBC	City of Alameda	2009	Via U.S. Dept. of Interior (Park & Rec.)	44.00
NC-EDC (Phase 1)	City of Alameda	2013	June 2013 Conveyance	1,379.21
PBC	City of Alameda	2013	Estuary Park	8.00
Federal Agency to Federal Agency	Veterans' Administration	2014	June 2014 Conveyance	624.00

Notes:

EDC = Economic Development Conveyance

NC = No Cost

PBC = Public Benefit Conveyance

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## TABLE 2: RCRA UNIT CLOSURES AND REASSIGNMENTS

Finding of Suitability to Transfer Phase 2 - Former NAS Alameda

RCRA Unit Identification	Description	Material Stored / Disposed Of	Program Reassignment	Assigned Site	Status	Closure Reference°
AOC 398	USTs 398-1 and 398-2	JP-5 (UST 398-1) and JP-TS (UST 398-2)	Petroleum	UST 398-1, UST 398-2	NFA without Restrictions	Water Board 2014n
AOC 473	UST 473-1	Gasoline	Petroleum	UST 473-1	NFA without Restrictions	
BOWTS	Bilge Oily Water Treatment System		RCRA		NFA	DTSC 2000a, DTSC 2000b
M-07	Building 398 solvent distillation unit; Drize Test Shop	PD-680, paint thinners, and acetone	Petroleum	CAA-03A	Open	
M-10	Area 37 Annex	Spent solvents (toluene, MEK, 1,1,1-TCA, and methylene chloride), waste flammable liquids, beryllium, and mercury	RCRA		NFA	DTSC 2000c
NADEP GAP 44	ASTs 398-1, 398-2, and 398-3	Lube oil, JP-5, and M-114 solvent	Petroleum	CAA-03A	Open	
NADEP GAP 45	Building 398, Shop 96327 (Turbine Accessory Shop) GAP	Aerosol paint and paper towels contaminated with oil	Petroleum	CAA-03A	Open	
NADEP GAP 78	Building 479 Shop 65234 GAP	Aerosol paint, primer, alcohol, poly paint, naphtha, and acetone	CERCLA	IR 34	Response Complete, NFA	EPA 2014
NADEP GAP 79	Building 472 Shop 65234 GAP	Blasting grit (media)	CERCLA	IR 34	Response Complete, NFA	DTSC 1999c, EPA 2014
NAS GAP 10	Building 112 GAP	Solvents, lubrication and hydraulic oils, and asbestos (doubled bags)	CERCLA	IR 03	Response Complete, NFA	DTSC 1999c
OWS 608A	Oil-Water Separator 608A	Wastewater from cleaning automobiles with commercial soaps or drive train degreasers	CERCLA	IR 16	Response Complete, NFA	DTSC 2012, URS 2012b
OWS 608B	Oil-Water Separator 608B	Wastewater from cleaning automobiles with commercial soaps or drive train degreasers	CERCLA	IR 16	Response Complete, NFA	DTSC 2012, URS 2012b

## TABLE 2: RCRA UNIT CLOSURES AND REASSIGNMENTS (Continued)

Finding of Suitability to Transfer Phase 2 - Former NAS Alameda

RCRA Unit Identification	Description	Material Stored / Disposed Of	Program Reassignment	Assigned Site	Status	Closure Reference <sup>o</sup>
UST(R)-18/ NAS GAP 17	UST RCRA Unit 18 and Naval Air Station Generator Accumulation Point 17: UST 608-1	Waste oil	CERCLA	IR 16	Response Complete, NFA	Navy In Press-i
WD 608	Washdown Area Building 608	Wastewater from cleaning automobiles with commercial soaps or drive train degreasers	CERCLA	IR 16	Response Complete, NFA	DTSC 2005e, Navy 2007b

Notes:

<sup>o</sup>	If blank, the site remains open	JP-5	Jet propellant #5	UST(R)	UST numbering system as identified in RFA
AOC	Area of Concern	JP-TS	Jet propellant #5 thermally stabilized	WD	Washdown area
BOWTS	Bilge oily water treatment system	RCRA	Resource Conservation and Recovery Act		
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	M	Miscellaneous area identified in RFA		
CAA	Petroleum Program Corrective Action Area	MEK	Methyl ethyl ketone		
DTSC	Department of Toxic Substances Control	NADEP	Naval Aviation Depot		
EPA	Environmental Protection Agency	NAS	Naval Air Station		
GAP	Generator accumulation point	NFA	No Further Action		
IC	Institutional Control	OWS	Oil-water separator		
IR	Installation Restoration	TCA	Trichloroethane		
		UST	Underground storage tank		

### TABLE 3: CERCLA SITE STATUS

Finding of Suitability to Transfer Phase 2 - Former NAS Alameda

Identification	Site Name	Status	Reference
AOC 1	Arsenic and cobalt (storage yard)	NFA	CH2MHill 2014, EPA 2015a
AOC 6	Hexavalent chromium (likely source is AST 584 stored wastewater condensate from a heater)	NFA	CH2MHill 2014, EPA 2015a
IR 03	Abandoned Fuel Storage Area	Response Complete, includes ICs	EPA 2015b, Navy 2015a, Navy 2015c
IR 16	C-2 CANS Area (Shipping Container Storage)	Response Complete, includes ICs	URS 2012b, Navy In Press-b, Navy In Press-i
IR 17	Seaplane Lagoon	Response Complete, includes ICs	Tetra Tech EC 2014a, Navy In Press-e
IR 24	Pier Area	Response Complete, NFA	DTSC 2013a, EPA 2013, Tetra Tech EC 2013
IR 25	Estuary Park and the Coast Guard Housing Area	Response Complete, includes ICs	Navy 2007a, Navy 2007c, Navy 2015b
IR 30	Miller School	Response Complete, NFA	Navy 2007a, Navy 2009, Navy 2015b
IR 34	Former Northwest Shop Area	Response Complete, NFA	DTSC 2014, EPA 2014, ERS 2014

Notes:

AOC Area of Concern  
AST Aboveground storage tank  
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act  
DTSC California Department of Toxic Substances Control  
IC Institutional Control  
IR Installation Restoration  
LUC RD Land Use Control Remedial Design  
NAS Naval Air Station  
Navy Department of the Navy  
NFA No Further Action

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**TABLE 4: PETROLEUM CORRECTIVE ACTION AREA AND AREAS OF CONCERN SITE STATUS**

Finding of Suitability to Transfer Phase 2 - Former NAS Alameda

<b>Identification</b>	<b>Site Name</b>	<b>Status</b>	<b>Closure Reference<sup>o</sup></b>
CAA-03A	Petroleum Corrective Action Area 03A	Open	
CAA-03B	Petroleum Corrective Action Area 03B	Open	
CAA-03C	Petroleum Corrective Action Area 03C	Open	
CAA-09A	Petroleum Corrective Action Area 09A	Open	
CAA-09B	Petroleum Corrective Action Area 09B	NFA without Restrictions	Navy In Press-b
CAA-14	Petroleum Corrective Action Area 14	Open	
CAA-A	Petroleum Corrective Action Area Fuel Line A	NFA without Restrictions	Water Board 2007

Notes:

- <sup>o</sup> If blank, the site remains open
- CAA Petroleum Program Corrective Action Area
- NAS Naval Air Station
- NFA No Further Action
- Water Board Regional Water Quality Control Board

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**TABLE 5: STORAGE TANK STATUS**

Finding of Suitability to Transfer Phase 2 - Former NAS Alameda

Tank	Program	Physical Status	Contents	Capacity (gallons)	Install Date	Removal Date	Regulatory Status	Associated Site	Closure Reference°
AST 330A	Petroleum	Removed	Diesel	60	Unknown	Before 1994	NFA with Restrictions		Water Board 2013c
AST 330B	Petroleum	Removed	Diesel	60	Unknown	Before 1994	Open		
AST 331	Petroleum	Removed	Diesel	500	Unknown	Unknown	NFA without Restrictions		Water Board 2013b
AST 338-A1	CERCLA	Removed	Propane	500	Unknown	Unknown	Response Complete, NFA	IR 16	Navy 2007b
AST 338-D4	Petroleum	Removed	Diesel	200	Unknown	1992 - 1994	NFA without Restrictions		Water Board 2014j
AST 344A	Petroleum	Removed	Diesel	100	Unknown	Before 1994	NFA without Restrictions		Water Board 2014k
AST 344B	Petroleum	Removed	Diesel	100	Unknown	Before 1994	NFA without Restrictions		Water Board 2014k
AST 344C	Petroleum	Removed	Diesel	100	Unknown	Before 1994	NFA without Restrictions		Water Board 2014k
AST 344D	Petroleum	Removed	Diesel	100	Unknown	Before 1994	NFA without Restrictions		Water Board 2014k
AST 398-1	Petroleum	Removed					Open	CAA-03A	
AST 398-2	Petroleum	Removed					Open	CAA-03A	
AST 398-3	Petroleum	Removed					Open	CAA-03A	
AST 584	CERCLA	Removed	Industrial Wastewater (condensate from heater containing corrosion-resistant chemicals)	15,000	Unknown	NA	NFA	AOC 6	CH2MHill 2014
AST 608	CERCLA	Removed	Waste Oil	1,000	Unknown	NA	Response Complete, NFA	IR 16	Navy 2007b
UST 97-A	Petroleum	Removed	115/145 AVGAS	100,000	1943	1987	Open	CAA-03C	

**TABLE 5: STORAGE TANK STATUS (Continued)**

Finding of Suitability to Transfer Phase 2 - Former NAS Alameda

Tank	Program	Physical Status	Contents	Capacity (gallons)	Install Date	Removal Date	Regulatory Status	Associated Site	Closure Reference <sup>o</sup>
UST 97-B	Petroleum	Removed	115/145 AVGAS	100,000	1943	1987	Open	CAA-03C	
UST 97-C	Petroleum	Removed	115/145 AVGAS	100,000	1943	1987	NFA without Restrictions		Water Board 2015h
UST 97-D	Petroleum	Removed	115/145 AVGAS	100,000	1943	1987	Open	CAA-03C	
UST 97-E	Petroleum	Removed	115/145 AVGAS	100,000	1962	1987	Open	CAA-03C	
UST 398-1	Petroleum	Removed	JP-5	10,000	1969	4/27/1995	NFA without Restrictions		Water Board 2014n
UST 398-2	Petroleum	Removed	JP-TS	10,000	1969	4/27/1995	NFA without Restrictions		Water Board 2014n
UST 473-1	Petroleum	Removed	Gasoline	500	1948	11/3/1994	NFA without Restrictions		Water Board 2000, Water Board 2014r
UST 608-1	CERCLA	Removed	Waste Oil	600	Unknown	2/6/1995	NFA without Restrictions	IR 16	Navy In Press-i, Navy In Press-b

## Notes:

<sup>o</sup> If blank, the site remains open  
 AOC Area of Concern  
 AST Aboveground storage tank  
 AVGAS Aviation Gasoline  
 CAA Petroleum Program Corrective Action Area  
 CERCLA Comprehensive Environmental Response, Compensation, and Liability Act  
 IR Installation Restoration

JP-TS Jet propellant #5 thermally stabilized  
 NA Not applicable  
 NAS Naval Air Station  
 Navy Department of the Navy  
 NFA No Further Action  
 UST Underground storage tank  
 Water Board Regional Water Quality Control Board

## TABLE 6: UNDERGROUND FUEL LINE STATUS

Finding of Suitability to Transfer Phase 2 - Former NAS Alameda

Identification	Physical Status	Regulatory Status	Associated Site	Closure Reference <sup>o</sup>
FL-018	Removed	NFA without Restrictions	CAA-A	Water Board 2007
FL-128	Removed	Open	CAA-03C	
FL-131	Removed	Open	CAA-03C	
FL-155	Closed-in-Place	NA		Water Board 2015k
FL-158	Closed-in-Place	NA		Water Board 2015k

Notes:

<sup>o</sup>	If blank, the site remains open
CAA	Corrective Action Area
FL	Fuel Line
NA	Not Applicable (Not designated a site)
NAS	Naval Air Station
NFA	No Further Action
Water Board	Regional Water Quality Control Board

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**TABLE 7: RADIOLOGICALLY IMPACTED SITES WITHIN THE FOST PARCEL**

Finding of Suitability to Transfer Phase 2 - Former NAS Alameda

<b>Identification</b>	<b>Associated CERCLA Site</b>	<b>Description</b>	<b>Status</b>	<b>Closure Reference</b>
Former Smelter Area	IR Site 3	Melting of scrap metals (Ra-226). Former smelter was immediately east of Building 66, in use until approximately 1946. Former smelter area extends into a small portion of IR Site 3; see Figure 11.	Unrestricted	ChaduxTt 2012e
Seaplane Lagoon	IR Site 17	Location where seaplanes entered and exited the bay. Discharge location for the storm drain lines from Building 5 and 400 (Ra-226).	Response Complete, with Dredging Restrictions	Tetra Tech EC 2014a, Navy In Press-e

Notes:

FOST Finding of Suitability to Transfer  
 IR Installation Restoration  
 NAS Naval Air Station  
 Ra-226 Radium-226

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**Attachment 1: Responses to Regulatory Agency Comments**

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**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Navy Initiated Change</b>	
<b>General</b>	As a result of significant CERCLA progress made at OU5 and OU2B, the FOST schedules for these areas have converged with those areas previously included in the DRAFT Phase 2 FOST. Therefore, in furtherance of the BRAC Program Management Office mission to dispose of Department of the Navy BRAC property the Navy is initiating changes to the Draft Final FOST Phase 2 document to incorporate the remaining portions of OU5 (i.e. IR Site 30 and the remainder of IR Site 25) and a portion of OU2B (IR Site 3 - lead impacted area).

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from Xuan-Mai Tran, Project Manager, USEPA - dated June 11, 2014</b>		
<b>Comment No.</b>	<b>General Comment</b>	<b>Response</b>
<b>1</b>	<p>EPA’s review of the Draft Finding of Suitability to Transfer (FOST) Phase 2 for Former Naval Air Station Alameda is based on the expectation that the following listed documents will be finalized and/or approved prior to the FOST signature:</p> <ul style="list-style-type: none"> <li>a. OU-2B Record of Decision (ROD)</li> <li>b. IR Site 16 Explanation of Significant Differences (ESD)</li> <li>c. IR Site 16 Remedial Action Completion Report (RACR)</li> <li>d. IR Site 17 Remedial Action Completion Report (RACR)</li> <li>e. Amended Site Inspection for Economic Development Conveyance (EDC) 12</li> </ul>	<p>1. Comment acknowledged. The OU-2B ROD, the Site 17 RACR, and the Amended SI for EDC 12 have been finalized. The Site 16 ESD should be final by July 2015. In accordance with resolution of comments on the Site 16 ESD, the Site 16 RACR will be a LUC/RD. In accordance with BCT discussions, a Site 17 ESD and LUC-RD will also be completed prior to the Final FOST.</p>
<b>2</b>	<p>EPA notes that Navy policy provides for a 30-day public notice prior to the signing of the FOST.</p>	<p>2. A Notice of Intent to Sign, Finding of Suitability to Transfer (FOST) will be published in local Alameda newspaper(s) 30 days prior to signing of the FOST.</p>
<b>Comment No.</b>	<b>Specific Comments</b>	<b>Response</b>
<b>1</b>	<p><b>Section 4.1.3, IR Site 17 (OU-4B), Page 9:</b> To be consistent with the other documents for IR Site 17 Seaplane Lagoon (SPL), please replace the acres of Site 17 SPL from “111 submerged acres...” to “approximately 110 submerged acres...”</p>	<p>1. Comment incorporated.</p>

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from Xuan-Mai Tran, Project Manager, USEPA - dated June 11, 2014</b>		
<b>Comment No.</b>	<b>Specific Comments</b>	<b>Response</b>
<b>2</b>	<b>Section 4.1.3, IR Site 17 (OU-4B), Page 10:</b> “RACR” is missing after “Final” on the second line of the first complete paragraph.	2. Comment incorporated.
<b>3</b>	<b>Section 4.8, Pesticides, Page 20:</b> EPA does not agree with the Navy assertion regarding its obligation to address post-transfer discovery of pesticide contamination. If such contamination requires a response action, it is not excluded from the Navy’s CERCLA obligation.	3. The Navy's position on the responsibility for legally applied pesticides remains unchanged. The FOST was not changed as a result of this comment. Despite the Navy and EPA's difference of opinion, in the past EPA has concurred with the Navy's determination that the parcel is suitable for transfer but has included the following statement in its concurrence letter: "EPA concurs with the Navy's determination that the parcel is suitable for transfer; however, it is EPA's position that residual pesticide contamination, if discovered following transfer at levels requiring a response action, is not excluded from the Navy's post-transfer obligations."
<b>Comment No.</b>	<b>Minor Comment</b>	<b>Response</b>
<b>1</b>	The full justification of the document caused the spelling on some of the words to be incorrect. Please do a global search throughout the document to correct them.	1. Comment incorporated.

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from Jennifer Ott, Chief Operating Officer, City of Alameda - dated June 12, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
<b>1</b>	p. v. "Acronyms": Include acronym for "SI", see, e.g. pp. 11-12.	1. Comment incorporated.
<b>2</b>	Throughout: Numerous sites are referenced as having received EPA and DTSC concurrence as to remedial status, yet approvals are noted as "(PENDING)" or "(Navy in Press)". Those sites are not ready for transfer until those approvals are provided in final, including EPA and DTSC approval of the Seaplane Lagoon RACR, including Draft Appendix W, "Evaluation of Items with Radiological Activity...".	2. Comment acknowledged.
<b>3</b>	p. 1: In the first paragraph, text should refer to "a portion of" the former NAS as being the subject to the FOST.	3. Comment incorporated.
<b>4</b>	p. 1: In the third paragraph, first sentence, text again should refer to "a portion of" the real property as being made available.	4. Comment incorporated.
<b>5</b>	2.0 Property Description, p. 1, bottom paragraph; 4.1 CERCLA Program, p. 6, first full paragraph: The southwest corner of IR Site 34 is not included in the FOST Parcel (see FOST Figure 3). The first sentence in each paragraph should state that a portion, not "all", of IR Site 34 is in the FOST Parcel.	5. Comment incorporated.
<b>6</b>	§3.2 p.4: Second to last line, add an "s" to "release"	6. Comment incorporated.

## Responses to Agency Comments

Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)

Comments from Jennifer Ott, Chief Operating Officer, City of Alameda - dated June 12, 2014		
Comment No.	Comment	Response
7	4.1.2 IR Site 16 (OU-1), p. 8: Consider mentioning in this section that an automobile service and repair facility was present in IR Site 16, as is done in Section 4.2.1 for CAA-09B (p. 13).	7. Comment incorporated.
8	4.1.3 IR Site 17 (OU-4B), p. 10, first complete sentence: Portions of the construction debris piles that were removed from the north shore of Seaplane Lagoon were sometimes exposed. Please consider adding “and intertidal” to the sentence: “Between October 2008 and December 2009, a time-critical removal action (TCRA) was conducted to remove the submerged <i>and intertidal</i> construction debris piles located along the northern shoreline of Site 17.”	8. Comment incorporated.
9	4.1.5 IR Site 34, p. 11, 3 <sup>rd</sup> paragraph and elsewhere; The text states that “NFA”, defined as “no further action”, was selected for groundwater by the IR Site 34 ROD. This implies “action” had already occurred for IR Site 34 groundwater, but none had. The selected remedy for IR Site 34 states in part that “no action is required for groundwater.” (ROD Section 2.9.1). The FOST contains many instances, for both CERCLA and Petroleum Program sites, where “NFA” is used as a shorthand for “no action”. In the interest of accuracy and to avoid confusion among FOST readers who would wonder what prior remedial/removal action they should be aware of, please consider reviewing the FOST for occurrences of “NFA” and “no further action” and substituting “no action” when appropriate.	9. NFA is standard language used throughout the Navy ER Program and is the appropriate terminology to use for all sites, including Site 34 that has undergone site characterization as part of the Remedial Investigation (RI) phase of the CERCLA process. The use of NFA terminology in the FOST is justified because the act of collecting samples and reviewing site risk are considered to be actions under both CERCLA and the UST programs.

## Responses to Agency Comments

Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)

Comments from Jennifer Ott, Chief Operating Officer, City of Alameda - dated June 12, 2014		
Comment No.	Comment	Response
10	4.2 Petroleum Products and Derivatives, p. 12, bottom paragraph, 2 <sup>nd</sup> sentence: “Separately” makes the sentence ambiguous and somewhat awkward to understand. Please consider beginning the sentence with “In addition”, instead.	10. Text revised for clarification: <i>“Some of the sites included in the Petroleum Program were originally identified as part of the RFA prepared by the Navy and DTSC in 1992 (<a href="#">DTSC 1992b</a>); the purpose of the RFA was to identify sites potentially requiring closure under RCRA regulations.”</i>
11	4.2.1 Open Petroleum Program Sites, p. 13: Please consider adding additional detail to the CAA discussions in this section. For example, the Navy has completed considerable corrective-action efforts at CAAs-3A, -3B, and -3C, which cleaned up the vast majority of the petroleum contamination, and is now undertaking the final steps (hopefully) before site closure. However, the FOST does not provide this basic status information. Please consider revising the section to provide more detail about each site, its status, and its closure prospects.	11. Comment incorporated. The text was revised as follows (italics identify updated text):  <i>“This 9-acre site overlaps IR Site 3. The site was subdivided into CAA-03A, CAA-03B, and CAA-03C. Historic activities at CAA-03A, CAA-03B and CAA-03C resulted in the release of aviation fuel to soil and groundwater. The Navy has performed investigations and completed <i>substantial</i> corrective-action at CAAs-03A, -03B, and -03C; <i>these efforts have</i> cleaned up the vast majority of the petroleum contamination (<a href="#">Shaw E&amp;I 2013</a>). USTs 398-1 and 398-2, which are included in CAA-03A, were closed with a NFA letter from the Water Board dated October 13, 2014 (<a href="#">Water Board 2014e</a>); other components of CAA-03A are being investigated or are under review for closure (<a href="#">Table 4 and Table 5</a>). UST 97-C, which is part of CAA-03C, was closed with a NFA letter from the Water Board dated April 21, 2015 (<a href="#">Water Board 2015c</a>). Residual contamination at CAA-03B and -03C requires further investigation and possibly corrective action prior to requesting closure.”</i>
12	4.2.1 Open Petroleum Program Sites, p. 13, 1 <sup>st</sup> paragraph, 2 <sup>nd</sup> sentence: The sentence refers to “NFA requests” for Petroleum Program sites. Customarily at Alameda Point,	12. Comment incorporated. The text in 4.2.1, first paragraph, second sentence was changed from “NFA” requests to “site closure” requests.

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from Jennifer Ott, Chief Operating Officer, City of Alameda - dated June 12, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
	such requests are called “Site Closure Summaries”, or simply site closure requests. Please consider revising the FOST to identify petroleum site closure requests in the usual manner.	
<b>13</b>	4 <sup>th</sup> paragraph of section—last sentence—revise to read “The tables identify the program under which closure is being addressed.”	13. Comment incorporated. The text of Section 4.2, second to last paragraph, was revised to read: “The tables identify the program under which closure is being addressed.”
<b>14</b>	4.2.1 Open Petroleum Sites, pp. 13-14: Incomplete descriptions of current investigation, remediation and/or regulatory status are provided for some of the sites (see, e.g. CAA-03C and CAA-09A).	14. Comment incorporated. See RTC # 11, above for CAA-03. Information provided for CAA-09A is what is available to date. Information was added to the text for CAA-09B (see Response to Water Board Comment #4, below).
<b>15</b>	§4.1.3 IR Site 17 (p.9) and §4.7.2 General Radioactive Material (p.18): The FOST anticipates EPA concurrence and DTSC certification of the remedial action performed in Seaplane Lagoon (“SPL”) consistent with the IR Site 17 ROD, but this is premature. During implementation of the SPL sediment excavation remedy, 51 radiological devices (“RDs”) were unexpectedly found within the excavated sediment, requiring their removal and offsite disposal at an out-of-state low level radiation waste disposal site. The Navy prepared, as Appendix W to the RACR for the sediment removal remedy, an evaluation of, among other risks, the potential risk of additional RDs residing in the unexcavated SPL sediment. Appendix W is currently under review by DTSC and CDPH’s Environmental Management Branch (“EMB”). EMB has not yet commented on Appendix W or made a written determination whether SPL can be released for unrestricted use. Until all branches of CDPH complete their review, as necessary, SPL is not ready for	15. The Site 17 RACR documents that the RAOs in the 2006 ROD and completion criteria in the RAWP were achieved and that IR Site 17 does not pose a risk to human health or the environment under current or proposed future use. In accordance with previous agreements between the BCT and the City, the Navy is preparing a ROD ESD and LUC/RD for Site 17, and the City will be responsible for preparing the Sediment Management Plan (SMP). Section 4.1.3 will be modified to include the following:  “An ESD and LUC RD were completed to add ICs as a component of the remedy. To ensure proper disposal and prevent potential exposure to Ra-226 in the sediment (including items with Ra-226 activity that may be present in the sediment), the ICs prohibit dredging unless performed subject to an approved Sediment Management Plan”

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from Jennifer Ott, Chief Operating Officer, City of Alameda - dated June 12, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
	<p>transfer. First, if EMB determines SPL cannot be released for unrestricted use, the City of Alameda (“City”) will need to obtain from CDPH’s Radiologic Health Branch (“RHB”) a radiologic materials license or an exemption from the license obligation, or risk being in violation of the Radiation Law for possessing radiologic materials without a license or exemption upon title transfer. Furthermore, the City’s application for an exemption or license (if necessary) will include notice to RHB that the City’s reuse of SPL will include construction of a ferry terminal and marina in the northeast corner and along the eastern edge of the SPL. The City may choose to build these features by relocating sediment from one place to another along the bottom of the SPL, or it may dispose of such sediment offsite. Also, the City may conduct sediment dredging for maintenance and other purposes, again with final sediment placement in the SPL or offsite.</p> <p>Given the obligations of the Navy and EPA under CERCLA and the NCP to anticipate the City’s anticipated future use of part of the SPL for these purposes, and to select a remedy that reasonably accommodates that future use, and in anticipation of conditions the RHB will otherwise require as part of the license or license exemption process, the City proposes that the Navy, EPA, RHB and the City negotiate the terms of a sediment management plan (“SMP”) for SPL with protocols for the future excavation/ dragging, handling and final placement of any remaining unexcavated SPL sediment and residual RDs, possibly including the disposal of such sediment and RDs without further remediation, whether dragged and placed along the bottom of the other side of the SPL or if disposed of aquatically. Once approved</p>	



**Responses to Agency Comments**

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<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
	<p>by all agencies, that SMP should be added to the Navy’s ROD for the SPL through an Explanation of Significant Differences (“ESD”), as has been done at IR Site 16 (see Draft FOST, pp. 8-9), to reflect the unexpected discovery of the RDs and the updated remedial strategy to address those RDs remaining in SPL sediments, both in situ and in case of future dredging or dragging in connection with the City’s planned reuse of SPL. If the Site is not released for unrestricted reuse by EMB, then the statement at p. 18 of the draft FOST that “existing requirements for sediment disposal are protective if future dredging is performed” appears to insufficiently address the full scope of human health and environmental concerns potentially presented by the residual RDs if dredged, and the remedial actions potentially required to mitigate them. Those potential health concerns and additional remedial actions would be better and more directly addressed now through a site-specific SMP vetted and approved by all relevant agencies and made part of the SPL remedy through an ESD, as proposed above.</p>	
<b>16</b>	<p>§5.1 CERCLA, p. 20: In first sentence, replace “property” with “FOST Parcel.”</p>	<p>16. Comment incorporated.</p>
<b>17</b>	<p>§5.1.1 CERCLA Sites with Remedial Action Complete, p. 20: Draft FOST refers to [“ASSUMES RESPONSE COMPLETE AT IR SITE 17”] and “[ASSUMES NO RESTRICTIONS AT IR 17”]. Neither assumption may be correct per above discussion. May need to be revised, and add a Section 5.1.3 to refer to a SPL SMP.</p>	<p>17. See Response to City Comment #15, above. The text will be revised to reflect the impact of the Site 17 ESD and LUC RD on the FOST Parcel.</p>

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from Jennifer Ott, Chief Operating Officer, City of Alameda - dated June 12, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
<b>18</b>	5.1.2 Marsh Crust, p. 20, 1 <sup>st</sup> paragraph, last sentence: The remedy selected in the 2001 Marsh Crust RAP/ROD applies to “the marsh crust and former subtidal area”, which is depicted in Figure 4 of the RAP/ROD. IR Site 34 is not included in the marsh crust and former subtidal area. Please consider appending “, except IR Site 34” to the subject sentence, and revising FOST Figure 10 accordingly.	18. Comment incorporated. Site 34 is not in the footprint of the Former Subtidal Area and Tidal Marshland as shown on Figure 4 in the RAP/ROD. However, the “City of Alameda Ordinance No. 2824, Alameda Municipal Code Chapter XIII, Section 13-56” (dated June 2000), shows that IR Site 34 is subject to the Marsh Crust/Subtidal Restriction.
<b>19</b>	§ 5.2 Petroleum Products and Derivatives, p. 21: In the last paragraph regarding federal quitclaim deeds for transfers of property that includes open petroleum sites, to remove ambiguity, language should be added to make clear that although the property where these sites are located will be enrolled in the City Program and work will be conducted pursuant to a soil/groundwater management plan acceptable to the Water Board, “such regulatory closure remains the Navy’s responsibility and will be obtained at Navy direction or by negotiating an agreement with the transferee to complete these actions on behalf of the Navy.”	19. Comment incorporated. A sentence was added at the end of the paragraph and the text was revised to read: “...plan is acceptable to the Water Board, in accordance with the City Program. However, such regulatory closure remains the Navy’s responsibility and will be obtained at Navy direction or by negotiating an agreement with the transferee to complete these actions on behalf of the Navy.”
<b>20</b>	6.2.4 IR Site 23, pp. 24 & 25, sentence that spans the page break: The remedy selected in the 2001 Marsh Crust RAP/ROD applies to “the marsh crust and former subtidal area”, which is depicted in Figure 4 of the RAP/ROD. A portion of IR Site 23 is not included in the marsh crust and former subtidal area. Please consider prefacing the subject sentence with “A portion of”.	20. Comment incorporated. The text spanning pages 24-25 was revised to read: “A portion of IR Site 23 includes areas where the Marsh Crust is known to exist...” [now on p. 26]

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<b>Comments from Jennifer Ott, Chief Operating Officer, City of Alameda - dated June 12, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
<b>21</b>	§ 6.2.4 IR Site 23, pp. 24-25: In second paragraph, please clarify whether two OWSs referenced have been removed or not.	21. Comment incorporated. The test was revised to include this sentence: <i>“Navy Public Works pressure-washed the oil water separators and sealed the surface access ways prior to base closure.”</i> [now on p. 31]
<b>22</b>	§ 6.2.5 IR Site 27, p. 25 First sentence, change to read that IR Site 27 is located “adjacent to” [not “in”] the southeastern portion of Seaplane Lagoon.	22. Comment incorporated. The text was revised to read: “IR Site 27, the Dock Zone, is located southeast of IR Site 17 and northeast of IR Site 24; it is 15.8 acres in size.”
<b>23</b>	6.2.9 Petroleum Sites, p. 32, 2 <sup>nd</sup> sentence of AOC 3 (EDC 12) and AOC 5 (EDC 12) sections: The text states that “no further action is required” for each of the AOCs. However, the Navy has referred both of these AOCs to the Petroleum Program for evaluation of petroleum contamination. Please consider appending “for the CERCLA Program” to the subject sentence and adding following it with the sentence: “However, these sites have been transferred to the Alameda Point Petroleum Program to evaluate petroleum contamination.”	23. Comment incorporated. The text was revised to read: <b>AOC 3:</b> “The FOST Parcel is not expected to be impacted by any releases from this site. The Final SI Addendum for EDC 12 concluded that no further action is required under CERCLA (CH2MHill 2014), but because of petroleum compounds in soil exceeded residential screening values, AOC 3 was transferred to the Alameda Point Petroleum Program for evaluation. The entire site was within the 2013 FOST Parcel.” <b>AOC 5:</b> “The FOST Parcel is not expected to be impacted by any releases from this site. The Final SI Addendum for EDC 12 concluded that no further action is required under CERCLA (CH2MHill 2014), but because petroleum compounds in soil exceeded residential screening values, AOC 5 was transferred to the Alameda Point Petroleum Program for evaluation. The entire site was within the 2013 FOST Parcel.”

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from Jennifer Ott, Chief Operating Officer, City of Alameda - dated June 12, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
<b>24</b>	Attachment 3: Hazardous Substances Notification Table Entry for IR Site 17 should note probability of additional RAs being located in remaining undredged SPL sediment and proposed revision to the remedy to reflect preparation and adoption of a SMP.	24. Footnote for IR Site 17: “No hazardous substances are known, but there is a potential for some fragments/items with radioluminescent paint to be present in the sediment based on items found during the dredging conducted for the remediation. Under CERCLA, there is no unacceptable risk associated with these potential items. A ROD ESD and LUC/RD have been prepared to ensure proper disposal of these items if removed from the SPL sediments.”
<b>25</b>	Table 3: CERCLA Status: Status should reflect proposed revision to the remedy to reflect preparation and adoption of a SMP.	25. See response to City comment 15. The status of Site 17 does not need to be updated in Table 3, but the references for the “response complete” status will be updated to include the final RACR for Site 17, the ROD ESD and LUC/RD, which are still pending. The ESD and LUC/RD will be finalized prior to FOST signatures.
<b>26</b>	Table 5: Storage Tank Status, Table 6: RCRA Unit Status: On these tables, many of the storage tanks and RCRA units that are associated with other sites, for example CAAs, have “See Associated Site” as the entry under the Status column heading. This entry may give the impression that the storage tank or RCRA unit is to be closed with the associated site. However, the closure strategy the Water Board and the Navy are utilizing is to first close discrete sites within a CAA followed by separate closure of the CAA itself. Please consider replacing “See Associated Site” with the appropriate status, which in most cases is “Open”.	26. Comment incorporated. Tables 5 and 6 were revised to reflect the current status of the storage tanks and RCRA units as either “Open” or “Closed”.

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from James Fyfe, Department of Toxic Substances Control, Hazardous Substance Engineer - dated June 27, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
<b>1</b>	Page 1, Section 2.0, second paragraph: “The FOST Parcel consist of seven sites, including five Installation Restoration (IR) sites: 16, 17, 24, 34, and portions of 3...” should be corrected to state: “The FOST Parcel consist of seven sites, including five Installation restoration (IR) sites: 16, 17, 24, and portions of 3 and 34...” Make the same correction on Page 6, second paragraph from top.	1. Comment incorporated. Two additional IR Sites have been added to the FOST Parcel (see Navy Initiated Change above). The text on pages 1 and 6 was revised to read: “The FOST Parcel consists of nine sites, including seven Installation Restoration (IR) sites: 3, 16, 17, and 30 and portions of 24, 25 and 34;...”
<b>2</b>	Page 2, Section 3.0, first paragraph: “...the State of California Department of Health Services (now referred to as the California Department of Toxic Substances Control [DTSC])...” should be corrected as: “the state of California Department of Health Services Toxic Substances Control Program (now referred to as California Department of Toxic Substances Control [DTSC])...”	2. Comment incorporated. The text was revised to read: “In September 1992, the Navy, the State of California Department of Health Services Toxic Substances Control Program (now referred to as California Department of Toxic Substances Control [DTSC]), ...”

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**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from James Fyfe, Department of Toxic Substances Control, Hazardous Substance Engineer - dated June 27, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
<b>3</b>	<p>At this time, there are several sites in the FOST Parcel for which there is no concurrence that remedial actions are complete. The sites and their respective status for each site are as follows:</p> <p>a) OU-1, IR Site 16: Currently the Navy is requesting that the Record of Decision for Site 16 Groundwater be modified via and Explanation of Significant Difference (ESD) due to the Beneficial Use Exception (BUE) being granted by the Water Board for groundwater at Site 16. With the BUE, RGs [remedial goals] are revised from MCLs [maximum contaminant levels] to a higher calculated value based on the risk of inhalation from vapor intrusion. The ICs that were developed as a final remedy for Site 16 remain unchanged but the levels of contamination that require the ICs to remain in force will be increased.</p>	<p>3a. Comment acknowledged. The Site 16 ESD will be final prior to the completion of this FOST.</p>
<b>3</b>	<p>b) OU-4B, IR Site 17: The Navy has issued a draft final Remedial Action Completion Report (RACR) for Site 17. There are still remaining issues related to radiological contamination at Site 17. Numerous small radiologically contaminated devices were discovered in the Seaplane Lagoon during dredging and it is assumed that similar devices remain scattered throughout the lagoon. As a result, unrestricted radiological release of Seaplane Lagoon is not possible. Also, the Navy</p>	<p>3b. Comment acknowledged. The Navy is preparing a ROD ESD and LUC/RD for Site 17 to address potential future dredging. The Site 17 RACR, ESD, and LUC/RD will be finalized prior to transfer.</p> <p>The lagoon shoreline is not part of the parcel in this FOST.</p>

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from James Fyfe, Department of Toxic Substances Control, Hazardous Substance Engineer - dated June 27, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
	is seeking unrestricted release of portions of the lagoon shoreline (radiological anomaly area, storm drain outfalls, and shore survey units).	
<b>3</b>	c) OU-2B, IR Site 3 (portion): Site 3 contains two lead-contaminated areas and one cobalt-contaminated area. The lead sites are excluded from the FOST Parcel and will be transferred at a later date after remedial action (excavation and replacement of contaminated soil) is completed. The remedy for cobalt in Site 3 is institutional controls (ICs). The ROD for OU-2B is currently in draft final form and the remedial design is in preliminary form.	3c. Comment acknowledged. The OU-2B ROD was finalized in March 2015, and all of Site 3, not just a portion, is now included in the FOST Parcel. The OU-2B Soil RACR and the LUC RD will be complete prior to completion of the FOST.
<b>3</b>	d) AOC 1 and AOC 6: The Amended Site Inspection Report for EDC 12, which includes AOC 1 and AOC 6, has not yet been finalized and the regulators have not yet concurred with the Navy's determination that no further action is required for AOC 1 and AOC 6.	3d. In accordance with the Alameda FFA document review process, The Addendum to Final Site Inspection Report Transfer Parcel EDC-12 concluding no further action for AOC-1 and AOC-6 was submitted in August 2014 and accepted by the agencies.

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from James Fyfe, Department of Toxic Substances Control, Hazardous Substance Engineer - dated June 27, 2014</b>		
<b>3</b>	<p>e) Pier 3 (located in IR Site 24): The Navy completed a cleanup of radioactive contamination on Pier 3 and issued a free release determination in 1996. A Final Status Survey Report (FSSR) was finalized in October 2013 recommending no further action in the area. California Department of Public Health, Environmental Management Branch has yet to concur with the FSSR and issue a Recommendation for Unrestricted Radioactive Release for Pier 3.</p>	<p>3e. Comment acknowledged. Site 24 is a sediment site which does not include structures (i.e. Pier 3). The TERM-1 Parcel includes the landside base and almost half of Pier 3. The entirety of Pier 3 reverted to the City of Alameda when the Navy’s lease of TERM-1 was terminated. The FSSR (October 2013) was finalized resolving agency comments in accordance with the Alameda FFA document review process, and concluded no further action is required for Pier 3 .</p>
<b>4</b>	<p>Will finalization of the FOST Phase 2 be delayed until remedial action is completed or “operating properly and successfully” (with concurrence from regulators) for all sites contained in the FOST Parcel?</p>	<p>4. The FOST Phase 2 may be further delayed or sites removed (or added) such that all sites contained in the FOST Parcel have remedial action completed or are determined to be OPS prior to completion of the FOST. The Navy anticipates that all sites will have remedial actions completed prior to publication of the final FOST Phase 2 as currently scheduled.</p>



## Responses to Agency Comments

Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)

Comments from George Leyva, Project Manager, Regional Water Quality Control Board - dated June 30, 2014		
Comment No.	Comment	Response
1	DTSC's October 2011 Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air is applicable and we expect the guidance to be considered and implemented for all FOST parcels being transferred.	1. The vapor intrusion pathway is evaluated as part of the restoration process. DTSC guidance is considered in the restoration process and implemented where appropriate.
2	<p>The term "beneficial use exception" cited in several locations in the report should be changed to "exception to sources of drinking water policy." As an example, under Section 4.1.1 IR Site 30 (OU-2B), the last paragraph of page 10 should be changed to:</p> <p>"By letter dated August 6, 2012, the Navy provided information demonstrating that groundwater under the portions of IT Site 3 identified above meet State Water Board Resolution NO. 88-63 and Regional Water Board Resolution NO. 89-39, "Sources of Drinking Water," exception criteria (a) and (c): proximity to San Francisco Bay and potential for salt water intrusion, high salinity, current county restrictions on well installation in shallow groundwater, and potential for surface runoff to contaminate groundwater (Navy 2012a). The regulatory agencies concurred with the Navy's assessment (Water Board 2012a, USEPA 2012b). As a result, standards for cleanup are based upon protection of ecological resources and human health, by both direct and indirect exposures."</p> <p>See also page 9 and page 12, and revised as needed.</p>	<p>2. Comment incorporated as below with minor variances noted in italics.. The term "beneficial use exception" was removed from the OU-2B ROD, and the FOST was revised to use the suggested language throughout.</p> <p>"By letter dated August 6, 2012, the Navy provided information demonstrating that groundwater <i>in the southeast portion of the base, including all of IR Site 3,</i> meets State Water Board Resolution No. 88-63 and Regional Water Board Resolution No. 89-39, "Sources of Drinking Water," exception criteria (a) and (c). <i>Information presented included</i> proximity to San Francisco Bay and potential for salt water intrusion, high salinity, current county restrictions on well installation in shallow groundwater, and potential for surface runoff to contaminate groundwater (<a href="#">Navy 2012a</a>). The regulatory agencies concurred with the Navy's assessment (<a href="#">Water Board 2012a</a>, <a href="#">USEPA 2012c</a>). <i>Therefore, it is unlikely that shallow groundwater will be used as a municipal water supply</i></p>

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from George Leyva, Project Manager, Regional Water Quality Control Board - dated June 30, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
<b>3</b>	As for any of the properties being considered for a FOST transfer please indicate whether, or not, the IR site is located above any known tarry refinery waste (TRW) areas. For any area located above TRW with contaminant concentrations that create, or threaten to create, a condition of pollution or nuisance that is harmful to human health or the environment, and if the TRW has been or will be evaluated and closed under CERCLA and not the Petroleum Program, then the FOST must state that the State will continue to regulate the TRW, including requiring additional site investigation, cleanup, and/or institutional controls under Water Board authority.	3. This FOST does not include property with TRW. Property adjacent to the FOST Parcel, which transferred in 2013, includes OU-2A where TRW is present.
<b>4</b>	Section 4.1.2 – IR Site 16 (OU-1) – The report states “No COCs were identified in the RI report for soil under any of the IR Site 16 scenarios based on the human health risk assessment (HHRA).” Even though this report pertains to CERCLA hazardous waste issues, if there is soil or groundwater contamination of petroleum above residential and/or commercial cleanup goals, please state this also. If a petroleum cleanup is needed, please include this site in Table 4- Petroleum Program.	4. The general location of IR Site 16 is also the Petroleum Program site CAA-9B. CAA-9B is included in Table 4 as an open petroleum site and is currently under review for closure by the Water Board.
<b>5</b>	Section 4.2.1 – Open Petroleum Program Sites – AST 331 is described in this section as a closed site. However, it is not listed as a closed site in Section 4.2.5 – Closed Sites. Please review and correct if needed.	5. Comment incorporated. AST 331 was added to the list of closed sites under 4.2.5. It is also listed on Table 5 as closed with agency concurrence.

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from George Leyva, Project Manager, Regional Water Quality Control Board - dated June 30, 2014</b>		
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>
<b>6</b>	Section 4.2.1 – Open Petroleum Program Sites – Please consider the first section to read: “The Petroleum Program sites within the FOST Parcel discussed in this section are open and will be transferred prior to obtaining regulatory closure subject to the restrictions discussed in Section 5.2. The open sites are those with...”	6. Comment incorporated. The text was revised to read: “The Petroleum Program sites within the FOST Parcel discussed in this section are open and will be transferred prior to obtaining regulatory closure subject to the restrictions discussed in Section 5.2. The open sites are those with...”
<b>7</b>	Section 4.2.1 Open Petroleum Program Sites - Please change “The Petroleum Program sites within the FOST Parcel discussed in this section are open” to “The Petroleum Program sites within the FOST Parcel discussed in this section are open and will be transferred prior to obtaining regulatory closure subject to the restrictions discussed in section 5.2. The open sites are those with....”	7. Comment incorporated.
<b>8</b>	Section 4.2.1 – Open Petroleum Program Sites – CAA-03B & CAA-03C – Please cite source reports describing characterization and that provide representative soil and groundwater data. In addition, unless this Water Board has agreed to a “No Further Action” for a site, please delete statements that assert that “no source contamination remains” from the FOST.	8. Comment incorporated. See Response to City Comment #11, above, for text revisions to CAA-03(A, B, and C). A citation (Shaw E&I 2013) was added at the end of the new paragraph under 4.2.1, Open Petroleum Sites, describing CAA03. The text saying “the site has been characterized and there is no source remaining,” was deleted.

**Responses to Agency Comments**

**Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)**

<b>Comments from George Leyva, Project Manager, Regional Water Quality Control Board - dated June 30, 2014</b>																										
<b>Comment No.</b>	<b>Comment</b>	<b>Response</b>																								
<b>9</b>	<p>Section 4.8 Pesticides – Please correct the typo on p. 20 in reference to Title 42; the appropriate code citing should be section 9620 not 06720. Section 9620 provides that a deed of transfer shall contain: (ii) a covenant warranting that –</p> <p>(I) All remedial action necessary to protect human health and the environment with respect to any such substance remaining on the property has been taken before the date of such transfer, and</p> <p>(II) Any additional remedial action found to be necessary after the date of such transfer shall be conducted by the United States.</p>	9. Comment incorporated. The typo was corrected.																								
<b>10</b>	<p>Section 5.0 Summary of Restrictions – The report indicates that ICs will be prepared. Comment: Even though the ICs may be prepared independent of the FOST, we request to review the full deed restriction document prior to Water Board final concurrence with the FOST.</p>	10. Comment acknowledged. The Water Board will be provided a review copy of the proposed deed restrictions when the deeds are drafted; however, please note deeds are not drafted prior to the Final FOST.																								
<b>11</b>	<p>Section 6.1 EnviroStor and Geotracker Listed Sites – Please delete sentence as underlined below:</p> <p>“Two sites including eight USTs, USTs 173-1 through 173-3 and USTs 13-1 through 13-5, shown as located east of Main Street, are part of Former NAS Alameda. <u>However, the location is inaccurate and the status is not current in GeoTracker.</u> Site closure letters have been issued by the Water Board for each of these sites, and the USTs are <u>actually</u> located west of Main Street, but outside of the FOST Parcel. These two sites with eight USTs are not expected to impact the FOST Parcel.”</p>	<p>11. Comment incorporated. The latitudes and longitudes for the USTs are provided here for the Water Board’s use in GeoTracker:</p> <table border="1"> <thead> <tr> <th>ENVUST_ID</th> <th>POINT_X</th> <th>POINT_Y</th> </tr> </thead> <tbody> <tr> <td>UST 13-1</td> <td>-122.29771556800</td> <td>37.78150336350</td> </tr> <tr> <td>UST 13-2</td> <td>-122.29772382200</td> <td>37.78146835270</td> </tr> <tr> <td>UST 13-3</td> <td>-122.29772606000</td> <td>37.78143642780</td> </tr> <tr> <td>UST 13-4</td> <td>-122.29773673300</td> <td>37.78137690580</td> </tr> <tr> <td>UST 13-5</td> <td>-122.29768344700</td> <td>37.78137310360</td> </tr> <tr> <td>UST 173-1</td> <td>-122.29190024700</td> <td>37.78067628840</td> </tr> <tr> <td>UST 173-2</td> <td>-122.29186735500</td> <td>37.78067140450</td> </tr> </tbody> </table>	ENVUST_ID	POINT_X	POINT_Y	UST 13-1	-122.29771556800	37.78150336350	UST 13-2	-122.29772382200	37.78146835270	UST 13-3	-122.29772606000	37.78143642780	UST 13-4	-122.29773673300	37.78137690580	UST 13-5	-122.29768344700	37.78137310360	UST 173-1	-122.29190024700	37.78067628840	UST 173-2	-122.29186735500	37.78067140450
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## Responses to Agency Comments

Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)

Comments from George Leyva, Project Manager, Regional Water Quality Control Board - dated June 30, 2014		
Comment No.	Comment	Response
	Comment: If there is an error on GeoTracker we should try to fix it rather than state in this report that GeoTracker is not correct. The locations on GeoTracker are easily correctable but we need exact latitude and longitude information which originate with the discharger/responsible party.	<p>UST 173-3      -122.29187689400      37.78062497530</p> <p>Conversations between the Navy and Water Board indicate that USTs 173-1, -2, and -3 were not formally closed. The text was rewritten as follows (<i>italics identify updated text</i>):</p> <p>“Two sites including eight USTs, <i>USTs 13-1 through 13-5 and USTs 173-1 through 173-3</i>, are part of Former NAS Alameda. Site closure letters were issued by the Water Board for USTs 13-1 through 13-5 in 2001, and USTs 173-1, -2, and -3 <i>in 2014</i>. The USTs are located west of Main Street, but outside of the FOST Parcel. These two sites with eight USTs are not expected to impact the FOST Parcel.”</p>
12	Section 6.2.1 IR Site 4 – “The 100-foot IC buffer for the OU-2B groundwater plume beneath IR Site 4 impinges on the FOST Parcel.” Comment: If the IR Site 4 overlaps onto FOST property, then that portion of the FOST should be “carved out” and retained for further remedy.	12. Comment acknowledged. However, the OU-2B plume buffer zone is not an area where groundwater contains contaminants above remediation goals. The institutional controls associated with the buffer zone are included in the OU-2B LUC RD, which will be finalized prior to transfer.
13	Section 6.2.2 IR Site 11 – The report refers to the OU-2B ROD – Please add a reference for this document.	13. Comment incorporated. Reference to the OU-2B Final ROD dated March 2015 has been added.

## Responses to Agency Comments

Document Title: Draft Finding of Suitability to Transfer Phase 2, Former Naval Air Station, Alameda, California (May 2014)

Comments from George Leyva, Project Manager, Regional Water Quality Control Board - dated June 30, 2014		
Comment No.	Comment	Response
14	Section 6.2.8 Radiological Sites – Seaplane Apron drying pad – The report states that a survey will be done when the drying pad is removed. Please state in this section that any previously undiscovered radiological contamination is a “Navy Retained Condition” and will be cleaned up as directed by DTSC/CADPH.	14. Comment acknowledged. The report was revised to clarify the status of this area: The drying pad has been removed and a radiological survey completed (Appendix Z to the Site 17 RACR) to confirm that drying pad activities did not contaminate the underlying surface and allowing down posting of the Radiologically Controlled Area (RCA) in accordance with contractor’s RAD license and with CDPH-RHB oversight.
15	Section 6.2.9 Petroleum Sites – AOC-23, please add the word “and” in this sentence – “This site consists of petroleum site AOC 23 <u>and</u> a 1,3-dichloroethane plume...”	15. Comment incorporated. The text was revised to read: “This site consists of petroleum site AOC 23 and a 1,3-dichloroethane plume...”
16	Section 6.2.9 Petroleum Sites – CAA-11A & 11B – The report states “The Water Board was provided a Summary Closure Report for these petroleum sites in October of 2011 (Navy 2011b). The Water Board has not issued NFA concurrence for these sites as of the date of this FOST.” Comment: Several of these sites may have already been closed. Please review your records and express the current status of those closures.	16. Comment acknowledged. The Tables have been updated in accordance with current status.
17	In the paragraph regarding AOC 3 and AOC 5 (EDC 12), on page 32, where the report states “no further action is required” please change the sentence to read “no further action is required for CERCLA related contamination. Any petroleum related cases will be cleaned up separate from CERCLA activities.” Also, please include these sites on Table 4 Petroleum Program.	17. See Response to City of Alameda Comment # 23, above. AOCs 3 and 5 are adjacent sites and Table 4 addresses sites within the FOST Parcel; therefore AOCs 3 and 5 were not added to Table 4.

**Attachment 2: Hazardous Substances Notification Table**

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**ATTACHMENT 2: HAZARDOUS SUBSTANCES NOTIFICATION TABLE**

Finding of Suitability to Transfer Phase 2, Former NAS Alameda

Identification <sup>a</sup>	Media/Description	Hazardous Substance <sup>b,c</sup>	Reportable Quantity (lbs) <sup>b</sup>	CAS Number	RCRA Waste Code <sup>b</sup>	Quantity Stored, Released, or Disposed <sup>d</sup>	Date Stored, Released, or Disposed <sup>d</sup>	Stored (S), Released (R), or Disposed (D)	Action Taken <sup>e</sup>
IR Site 3	Soil	Cobalt	NA	NA	NA	Unknown	Unknown	R	Between 1991 and 2008, a series of soil and groundwater investigations were conducted at the site. The OU2B ROD, which includes IR Site 3, was signed in 2015. The ROD selected ICs for cobalt-impacted soil and excavation of lead impacted soil. The excavation work has been completed. No action is required for other soil within IR Site 3. No remedial action is required for groundwater at IR Site 3; however, ICs associated with a VI buffer zone for the OU-2B plume to the south of IR Site 3 extend into IR Site 3. All ICs are in place.
		Lead	10	7439-92-1	NA	Unknown	Unknown	R	
IR Site 16	Soil	Lead	10	7439-92-1	NA	Unknown	Unknown	R	Between 1990 and 2009 a series of soil and groundwater investigations and removal actions were conducted at the site in correlation with OU-1. The OU-1 ROD selected the remedial action of soil excavation and off-site disposal, which was conducted from November 2009 to July 2010. The ROD selected remedial action of ISCO/Bioremediation, monitored natural attenuation and ICs for groundwater. The RACR for soil remedial action documents that the RAOs have been met and the action is complete. The ESD for groundwater documents that RAOs have been met for groundwater.
		Chlordane	1	57-74-9	U035	Unknown	Unknown	R	
		Dieldrin	1	60-57-1	P037	Unknown	Unknown	R	
		Heptachlor	1	76-44-8	P059	Unknown	Unknown	R	
		Heptachlor Epoxide	1	1024-57-3	NA	Unknown	Unknown	R	
		PCBs	1	1336-36-3	NA	Unknown	Unknown	R	
	Groundwater	Nickel	100	7440-02-0	NA	Unknown	Unknown	R	
		1,3-Dichlorobenzene	100	541-73-1	NA	Unknown	Unknown	R	
		1,4-Dichlorobenzene	100	106-46-7	U072	Unknown	Unknown	R	
		Cyanide	NA	57-12-5	NA	Unknown	Unknown	R	
		Tetrachloroethene	100	127-18-4	U210	Unknown	Unknown	R	
Trichloroethane	100	79-01-6	U228	Unknown	Unknown	R			
Vinyl chloride	1	75-01-4	U043	Unknown	Unknown	R			

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IR Site 17	Sediment	Cadmium	10	7440-43-9	NA	Unknown	Unknown	R	Between 1993 and 2013, various investigations and removal actions were conducted at IR Site 17. A TCRA was conducted between October 2008 and December 2009 to remove debris piles along the shoreline. Between July 2008 and September 2010, another TCRA was conducted for IR Sites 5 and 10, which included the stormwater lines that discharge into the lagoon. Between January 2011 and 2013, dredging removed contaminated sediment in the northeast and northwest corners of the site; the dredge spoils were dried, radiologically surveyed, sampled, and properly disposed. During sediment processing, 51 radiological devices with Radium 226 activity were removed and properly disposed. The RACR documents that the RAOs from the ROD have been met. No hazardous substances are known to remain on site, but there is a potential for some fragments/items with radioluminescent paint to be present in the sediment based on items found during the dredging conducted for the remediation. Under CERCLA, there is no unacceptable risk associated with these potential items. ICs for future sediment management were added to the remedy via a ROD ESD and LUC RD to ensure proper disposal of these items if removed from the Seaplane Lagoon sediments. Remedial action is complete.
		Chromium	5,000	7440-47-3	NA	Unknown	Unknown	R	
		Lead	10	7439-92-1	NA	Unknown	Unknown	R	
		PCBs	1	1336-36-3	NA	Unknown	Unknown	R	
		Dichlorodiphenyltrichloroethane (DDT)	1	50-29-3	NA	Unknown	Unknown	R	
		Dichlorodiphenyldichloroethane (DDD)	1	72-54-8	NA	Unknown	Unknown	R	
		Dichlorodiphenyldichloroethene (DDE)	1	72-55-9	NA	Unknown	Unknown	R	
		Radium 226	0.1 Ci	7440-14-4	NA	Unknown	Unknown	R	
IR Site 24	Sediment	Cadmium	10	7440-43-9	NA	Unknown	Unknown	R	Sediment sampling was conducted in 1997, 2005, and 2006. No human health risks were identified, but the northeastern corner of the site was identified as an area of ecological concern. The ROD selected sediment removal via dredging to remediate the area of ecological concern. The remedial action occurred between December 2011 and June 2012. The RACR documents that the RAOs have been met and remedial action is complete.
		Lead	10	7439-92-1	NA	Unknown	Unknown	R	
		PCBs	1	1336-36-3	NA	Unknown	Unknown	R	
		Dichlorodiphenyltrichloroethane (DDT)	1	50-29-3	NA	Unknown	Unknown	R	
		Dichlorodiphenyldichloroethane (DDD)	1	72-54-8	NA	Unknown	Unknown	R	
		Dichlorodiphenyldichloroethene (DDE)	1	72-55-9	NA	Unknown	Unknown	R	

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Finding of Suitability to Transfer Phase 2, Former NAS Alameda

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IR Site 25	Soil	PAHs	NA	NA	NA	Unknown	Unknown	D	Between 1994 and 2005, a series of soil and groundwater investigations were conducted at the site. These investigations concluded that metals in the soil are present at concentrations consistent with background levels, but PAHs were identified as COCs in IR Site 25 soil. The PAHs are not related to a Navy release but appear to be associated with contaminated fill placed at the site prior to the Navy obtaining the property. Two TCRA's were conducted in 2000 and 2001-2002 to address PAHs in IR Site 25 soil. Over 66,700 cubic yards of soil was removed during the TCRAs and disposed off-site; then clean topsoil was added to return the excavated areas to grade. The ROD for IR Site 25 soil was signed in 2007 and selected ICs for soil beneath structures and at depths greater than 4 feet bgs. Groundwater at IR Site 25 is part of the OU5/FISCA IR-02 groundwater discussed below. In 2015 a ROD Amendment recommended NFA for OU5/FISCA IR-02 Groundwater with regulatory concurrence. Remedial action is complete.
IR Site 30	Soil	PAHs	NA	NA	NA	Unknown	Unknown	D	Between 1994 and 2005, a series of soil and groundwater investigations and a removal action for soil were conducted at the site. The TCRA was completed at IR Site 30 in 2004 to address PAHs in soil associated with contaminated fill placed at the site prior to the Navy obtaining the property. The TCRA also removed Aroclor 1254, cadmium, chromium, copper, and lead present in one boring location. Following the TCRA, risk assessment results showed that there is no unacceptable risk for school, daycare, residential, or other land uses. The ROD for IR Site 30 soil was signed in 2009 and selected NFA for soil. Groundwater at IR Site 30 is part of OU5/FISCA IR-02 groundwater. In 2015 a ROD Amendment recommended NFA for OU5/FISCA IR-02 Groundwater with regulatory concurrence.
		Aroclor 1254	1	11097-69-1	NA	Unknown	Unknown	R	
		Cadmium	10	7440-43-9	NA	Unknown	Unknown	R	
		Chromium	5,000	7440-47-3	NA	Unknown	Unknown	R	
		Copper	5,000	7440-50-8	NA	Unknown	Unknown	R	
Lead	10	7439-92-1	NA	Unknown	Unknown	R			
OU5/FISCA IR-02	Groundwater	Benzene	10	71-43-2	U019	Unknown	Unknown	R	Between 1988 and 2013, a series of environmental investigations and a remedial action were conducted for shallow groundwater at OU-5/FISCA IR-02. Benzene and naphthalene are the COCs; there is stratification, with the highest concentrations located at depths adjacent to the Marsh Crust. A ROD for the shallow groundwater was signed in 2007; the selected remedy was biosparging with soil vapor extraction in the plume centers, monitored natural attenuation, and ICs. Biosparge wells screened at the Marsh Crust were installed between 2008 and 2009. Operation of the treatment system began in 2009 and ended in 2013. Following evaluation of potential vapor intrusion using current methodologies and toxicities and indoor air sampling conducted in 2013, a ROD Amendment documenting that NFA is required for shallow groundwater was signed in 2015.
		Naphthalene	100	91-20-3	U165	Unknown	Unknown	R	

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IR Site 34	Soil	Arsenic	1	7440-38-2	NA	Unknown	Unknown	R	A series of soil and groundwater investigations were conducted between 1993 and 2010. The ROD documented NFA for groundwater because groundwater is not a source of drinking water. The ROD selected excavation and off-site disposal for impacted soil. No groundwater COCs were identified. The soil remedial action was conducted between May 2013 and June 2013. The RACR documents that the RAOs have been met and remedial action is complete.
		Lead	10	7439-92-1	NA	Unknown	Unknown	R	
		PCBs	1	1336-36-3	NA	Unknown	Unknown	R	
		Dieldrin	1	60-57-1	P037	Unknown	Unknown	R	
		Heptachlor Epoxide	1	1024-57-3	NA	Unknown	Unknown	R	
	Groundwater	Arsenic	1	7440-38-2	NA	Unknown	Unknown	R	
		Manganese	NA	NA	NA	Unknown	Unknown	R	
		1,2-Dichloroethane	100	107-06-2	U077	Unknown	Unknown	R	
AOC 1	Soil	Cobalt	NA	NA	NA	Unknown	Unknown	R	Results of samples collected in December 2013 did not exceed screening criteria, therefore, NFA required. (CH2MHill 2014)
		Arsenic	1	7440-38-2	NA	Unknown	Unknown	R	
AOC 6	Soil	Hexavalent Chromium	NA	18540-29-9	NA	Unknown	Unknown	R	Results of samples collected in December 2013 did not exceed the risk management range, therefore, NFA required. (CH2MHill 2014)
Annex Area 37/M10 (AOC 1)	Covered, bermed storage area	Toluene	1,000	108-88-3	U220	Unknown	Unknown	S	DTSC concurred NFA for Alameda Annex Area 37 by letter dated October 10, 2000.
		Methyl Ethyl Ketone	5,000	78-93-3	U159	Unknown	Unknown	S	
		1,1,1-Trichloroethane	1,000	71-55-6	U226	Unknown	Unknown	S	
		Methylene chloride	1,000	75-09-2	U080	110,994	Unknown	S	
		Mercury	1	7439976	NA	Unknown	Unknown	S	
		Beryllium	10	7440-41-7	P015	Unknown	Unknown	S	

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Finding of Suitability to Transfer Phase 2, Former NAS Alameda

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AST 338-A1 (IR Site 16)	500 gallon	Propane	NA	74-98-6	NA	Unknown	Unknown	S	NFA documented in 2007 ROD for OU1, tank was removed prior to 2002.
AST 584 (AOC 6)	15,000 gallon	Industrial Wastewater with corrosion resistant chemicals	Various	NA	NA	Unknown	Unknown	S	Results of samples collected in December 2013 indicated no further investigation or action was necessary. (CH2MHill 2014)
AST 608 (IR Site 16)	1,000 gallon	Waste Oil	Various	70514-12-4	NA	Unknown	Unknown	S	Site was investigated as part of the IR Site 16. The RACR for soil remedial action documents the RAOs have been met and the action is complete. The ESD for groundwater documents RAOs have been met.
UST 608-1 (IR Site 16)	600 gallon	Waste Oil	Various	70514-12-4	NA	Unknown	Unknown	S	Site was investigated as part of the IR Site 16. The RACR for soil remedial action documents the RAOs have been met and the action is complete. The ESD for groundwater documents RAOs have been met.
BOWTS (IR Site 24)	Bilge oily water treatment system	Waste Oil	Various	NA	NA	Unknown	Unknown	S	NFA from DTSC in letter dated June 22, 2005.
NADEP GAP 78 (IR Site 34)	Building 479	Paints	Various	NA	NA	Unknown	Unknown	S	NFA IR Site 34 RACR (ERS JV 2014)
		Naphtha	Various	8030-30-6	NA	Unknown	Unknown	S	
		Acetone	5,000	67-64-1	U002	Unknown	Unknown	S	
NADEP GAP 79 (IR Site 34)	Building 472	Blasting Grit	Various	NA	NA	Unknown	Unknown	S	NFA from DTSC in letter dated November 4, 1999. NFA IR Site 34 RACR (ERS JV 2014)
NAS GAP 10 (IR Site 3)	Building 112	Solvents	100	NA	NA	55 gallon	Unknown	S	NFA from DTSC in letter dated November 4, 1999. NFA OU2B ROD (Navy 2015a)
		Lubrication and hydraulic oils	Various	NA	NA	55 gallon	Unknown	S	
		Asbestos (double bagged)	1	1332-21-4	NA	Unknown	Unknown	S	
WD 608/OWS 608A/ OWS 608B (IR Site 16)	Building 608	Waste water	Various	NA	NA	Unknown	Unknown	S	Site was investigated as part of the IR Site 16. The RACR for soil remedial action documents the RAOs have been met and the action is complete. The ESD for groundwater documents RAOs have been met.
UST (R)-18/ NAS GAP 17 (IR Site 16)	AKA UST 608-1	Waste Oil	Various	70514-12-4	NA	Unknown	Unknown	S	Site was investigated as part of the IR Site 16. The RACR for soil remedial action documents the RAOs have been met and the action is complete. The ESD for groundwater documents RAOs have been met.
M-07 (IR Site 3)	Building 398 Turbine Accessory Shop	Solvents	100	NA	NA	15	Unknown	S	NFA per SWMU Evaluation Report (Tetra Tech EMI 2007)

**ATTACHMENT 2: HAZARDOUS SUBSTANCES NOTIFICATION TABLE**

Finding of Suitability to Transfer Phase 2, Former NAS Alameda

Identification <sup>a</sup>	Media/ Description	Hazardous Substance <sup>b,c</sup>	Reportable Quantity (lbs) <sup>b</sup>	CAS Number	RCRA Waste Code <sup>b</sup>	Quantity Stored, Released, or Disposed <sup>d</sup>	Date Stored, Released, or Disposed <sup>d</sup>	Stored (S), Released (R), or Disposed (D)	Action Taken <sup>e</sup>
Building 112 (within IR Site 3 footprint)	Hydraulics; welding and wood finishing	Hydraulic Fluid	Various	NA	NA	Unknown	Unknown	S	Chemical storage was associated with hydraulic systems (hydraulic fluid), welding activities (acetylene, oxygen, and argon gases; cutting fluids; and lubricant oils), and wood finishing activities (paints, stains, varnishes, solvents, adhesives, cleaners, and various corrosive materials). No action necessary. Materials stored on site. No spills or releases reported.
		Acetylene Gas	Various	74-86-2	NA	Unknown	Unknown	S	
		Argon Gas	Various	7440-37-1	NA	Unknown	Unknown	S	
		Lubrication and hydraulic oils	Various	NA	NA	55 gallon	Unknown	S	
		Paints	Various	NA	NA	Unknown	Unknown	S	
		Solvents	100	NA	NA	Unknown	Unknown	S	
		Corrosives	1,000	NA	NA	Unknown	Unknown	S	
Building 337 (within IR Site 3 footprint)	Paved chemical supply storehouse	Paints	Various	NA	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
		Adhesives	Various	NA	NA	Unknown	Unknown	S	
		Waste Oil	Various	NA	NA	Unknown	Unknown	S	
Building 222 (within IR Site 3 footprint)	Garden Shop	Chlorine	10	7782-50-5	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
		Muriatic Acid	5,000	7647-01-0	NA	Unknown	Unknown	S	
Building 517 (within IR Site 3 footprint)	Garden Shop	Pesticides	Various	NA	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
Building 398 (within IR Site 3 footprint)	Turbine Accessories Shop	PD-680 (Solvent)	NA	64742-96-7	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
		Mercury	1	7439976	NA	Unknown	Unknown	S	
		1,1,1-Trichloroethane	1,000	71-55-6	U226	Unknown	Unknown	S	
		Lubrication and hydraulic oils	Various	NA	NA	55 gallon	Unknown	S	
		Paints	Various	NA	NA	Unknown	Unknown	S	
		Solvents	100	NA	NA	Unknown	Unknown	S	
		Acrylic Lacquer	Various	NA	NA	Unknown	Unknown	S	
Acrylic Paint	Various	NA	NA	Unknown	Unknown	S			
Building 608 (within IR Site 16 footprint)	Auto Repair Facility	Lubrication Oil	Various	NA	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
		Solvents	100	NA	NA	Unknown	Unknown	S	
		Hydraulic Fluid	Various	NA	NA	Unknown	Unknown	S	
		Paints	Various	NA	NA	Unknown	Unknown	S	
		Acetylene Gas	Various	74-86-2	NA	Unknown	Unknown	S	
CANS 338A (within IR Site 16 footprint)	Storage Facility	Solvents	100	NA	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
CANS 338H (within IR Site 16 footprint)	Storage Facility	Petroleum Products	Various	NA	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.

**ATTACHMENT 2: HAZARDOUS SUBSTANCES NOTIFICATION TABLE**

Finding of Suitability to Transfer Phase 2, Former NAS Alameda

Identification <sup>a</sup>	Media/Description	Hazardous Substance <sup>b,c</sup>	Reportable Quantity (lbs) <sup>b</sup>	CAS Number	RCRA Waste Code <sup>b</sup>	Quantity Stored, Released, or Disposed <sup>d</sup>	Date Stored, Released, or Disposed <sup>d</sup>	Stored (S), Released (R), or Disposed (D)	Action Taken <sup>e</sup>
Building 402 (within IR Site 16 footprint)	Maintenance Shop and Sand Blast Shelter	Aluminum Oxide	NA	1344-28-1	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
		Blasting Grit	Various	NA	NA	Unknown	Unknown	S	
		Cleaning Compounds	Various	NA	NA	Unknown	Unknown	S	
		Corrosives	1,000	NA	NA	Unknown	Unknown	S	
		Degreaser	Various	NA	NA	Unknown	Unknown	S	
		Ethylene Acetate	5000	141-78-6	U112	Unknown	Unknown	S	
		Hydraulic Fluid	Various	NA	NA	Unknown	Unknown	S	
		Paints	Various	NA	NA	Unknown	Unknown	S	
		Petroleum Products	Various	NA	NA	Unknown	Unknown	S	
Solvents	100	NA	NA	Unknown	Unknown	S			
Building 510 (within IR Site 34 footprint)	Storage Facility	Arsenic	1	7440-38-2	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
		Lead	10	7439-92-1	NA	Unknown	Unknown	S	
		Blasting Grit	Various	NA	NA	Unknown	Unknown	S	
Building 343 (within IR Site 34 footprint)	Sheet Metal Shop	Blasting Grit	Various	NA	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
Building 477 (within IR Site 34 footprint)	Paint Booth	Paints	Various	NA	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
		Solvents	100	NA	NA	Unknown	Unknown	S	
		Paint Waste	Various	NA	NA	Unknown	Unknown	S	
Building 475 (within IR Site 34 footprint)	Bead Blast Area	Blasting Grit	Various	NA	NA	Unknown	Unknown	S	No action necessary. Materials stored on site. No spills or releases reported.
Building 476 (within IR Site 34 footprint)	Paint Storage	Paints	Various	NA	NA	Unknown	Unknown	S	None. Materials stored on site. No spills or releases reported.

Notes:

- a No chemicals were found to have been stored, disposed, or released within other areas of the FOST Parcel.
- b This table was prepared in accordance with 40 CFR 373 and 40 CFR 302.4. The substances which do not have chemical-specific break down (and associated annual reportable quantity) are not listed in 40 CFR 302.4, and therefore have no corresponding CAS number, no regulatory synonyms, no RCRA waste numbers, and no reportable quantities. Hazardous substances listed in this table were compiled based on known contamination at the sites and historic activities at specific locations.
- c The FOST Parcel may contain pesticide residue from pesticides that have been applied in the management of the property. The Grantor knows of no use of any registered pesticide in a manner inconsistent with its labeling and believes that all applications were made in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA - 7 U.S.C. Sec. 136, et seq.), its implementing regulations, and according to the labeling provided with such substances. It is the Grantor's position that it shall have no obligation under the covenants provided pursuant to Section 120(h)(3)(A)(ii) of CERCLA, 42 U.S.C. Sections 9620(h)(3)(A)(ii), for the remediation of legally applied pesticides.
- d The quantity stored, released, or disposed, and the date stored, released, or disposed, is unknown because documentation related to storage, release, or disposal of these hazardous substances was not available during records searches for the property.
- e References listed in this section are included in FOST as part of Section 10 References

**ATTACHMENT 2: HAZARDOUS SUBSTANCES NOTIFICATION TABLE**

Finding of Suitability to Transfer Phase 2, Former NAS Alameda

Identification <sup>a</sup>	Media/ Description	Hazardous Substance <sup>b,c</sup>	Reportable Quantity (lbs) <sup>b</sup>	CAS Number	RCRA Waste Code <sup>b</sup>	Quantity Stored, Released, or Disposed <sup>d</sup>	Date Stored, Released, or Disposed <sup>d</sup>	Stored (S), Released (R), or Disposed (D)	Action Taken <sup>e</sup>
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Acronyms and Abbreviations:

AKA	Also known as					NAS		Naval Air Station Alameda	
AST	Aboveground storage tank					Navy		United States Department of the Navy	
AOC	Area of Concern					NFA		No Further Action	
bgs	Below ground surface					OU		Operable Unit	
CAS	Chemical Abstract System					OWS		Oil-Water Separator	
COC	Chemical of concern					PAH		Polycyclic Aromatic Hydrocarbons	
CFR	<i>Code of Federal Regulations</i>					PCB		Polychlorinated biphenyl	
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980					lbs		Pounds	
Cl	Curie					R		Released	
D	Disposed					RACR		Remedial Action Completion Report	
DDD	Dichlorodiphenyldichloroethane					RAOs		Remedial Action Objectives	
DDE	Dichlorodiphenyldichloroethylene					RCRA		Resource Conservation and Recovery Act	
DDT	Dichlorodiphenyltrichloroethane					RD		Remedial Design	
DTSC	Department of Toxic Substances Control					ROD		Record of Decision	
EDC	Economic Development Conveyance					S		Stored	
FISCA	Fleet and Industrial Supply Center Oakland, Alameda Facility/Alameda Annex					SWMU		Solid Waste Management Unit	
FOST	Finding of Suitability to Transfer					TCRA		Time Critical Removal Action	
GAP	Generator Accumulation Point					USEPA		United States Environmental Protection Agency	
IC	Institutional control					U.S.C.		United States Code	
IR	Installation Restoration					UST		Underground storage tank	
ISCO	In situ chemical oxidation					WD		Washdown area	
LUC	Land Use Control								
NA	Not available								
NADEP	Naval Aviation Depot								