

#### DEPARTMENT OF THE NAVY

BASE REALIGNMENT AND CLOSURE PROGRAM MANAGEMENT OFFICE WEST 33000 NIXIE WAY, BLDG 50 SAN DIEGO, CA 92147

> 5090 Ser BPMOW.dd/0418 December 16, 2016

Ms. Xuan-Mai Tran U.S. EPA Region IX 75 Hawthorne Street San Francisco, California 94105-3901

Mr. James Fyfe Department of Toxic Substances Control 700 Heinz Avenue Berkeley, California 94710

Ms. Yemia Hashimoto Regional Water Quality Control Board 1515 Clay Street, Suite 1400 Oakland, California 94612

SUBJECT: DRAFT FINDING OF SUITABILITY TO TRANSFER PHASE 3A, FORMER NAVAL AIR STATION ALAMEDA, ALAMEDA, CALIFORNIA

I am pleased to provide the Draft Finding of Suitability to Transfer (FOST) Phase 3A for former Naval Air Station Alameda, Alameda, California (Alameda Point). This document determines that a portion of Alameda Point is suitable for transfer and summarizes how the requirements and notifications for hazardous substances, petroleum products, and other regulated materials have been satisfied.

Please provide comments by January 17, 2017. If you have any questions or need additional information, please contact me at (619) 524-4569.

Sincerely,

**CECILY SABEDRA** 

**BRAC Environmental Coordinator** 

Certy Sabedra

By direction of the Director

Enclosure: 1. Draft Finding Of Suitability To Transfer Phase 3a, Former Naval Air Station Alameda, Alameda, California (December 2016)

Copy to: (next page)

5090 Ser BPMOW.dd/0418 December 16, 2016

Copies to: Mr. Peter Russell Russell Resources, Inc. 440 Nova Albion Way San Rafael, California 94903

Ms. Jennifer Ott Development Manager Development Services Department 950 West Mall Square Alameda, California 94501-7552

#### **DRAFT**

# Finding of Suitability to Transfer Phase 3A Former Naval Air Station Alameda

Alameda, California

**December 16, 2016** 



Department of the Navy BRAC Program Management Office West 33000 Nixie Way, Bldg 50, Second Floor San Diego, CA 92147

#### **TABLE OF CONTENTS**

Acro	onyms	and Abbreviations	v		
1.0	Pur	pose	1		
2.0	2.0 Property Description				
3.0	Reg	Regulatory Coordination			
	3.1	Resource Conservation and Recovery Act Part A or B Permits and Subtitle C Corrective Action	3		
	3.2 Resource Conservation and Recovery Act Subtitle I Corrective Action				
	3.3	Comprehensive Environmental Response, Compensation, and Liability Act			
4.0	Sun	Summary of Environmental Conditions and Notifications			
	4.1	CERCLA Program			
		4.1.1 Storm-Drain Line G (OU-2C)			
		4.1.2 AOC 23 (IR Site 35)			
	4.2	Petroleum Products and Derivatives			
		4.2.1 Open Petroleum Program Sites			
		4.2.2 Closed Petroleum Program Sites			
	4.3	Asbestos-Containing Material			
	4.4	Lead-Based Paint			
	4.5	Polychlorinated Biphenyls			
	4.6	Munitions and Explosives of Concern			
	4.7	Radiological Program			
		4.7.1 Naval Nuclear Propulsion Program			
	4.0	4.7.2 General Radioactive Material			
	4.8	Pesticides			
	4.9	Other Areas Investigated/Issues			
5.0	Sun	nmary of Restrictions	12		
	5.1	CERCLA			
		5.1.1 Marsh Crust			
	5.2	Petroleum Products and Derivatives			
	5.3	Asbestos-Containing Material			
	5.4	Lead-Based Paint	15		
6.0	Adj	Adjacent Properties			
	6.1	EnviroStor and GeoTracker Listed Sites	15		
	6.2	Former NAS Alameda Adjacent Property	16		
		6.2.1 IR Site 6 (OU-1)	17		
		6.2.2 IR Site 21 (OU-2B)	17		

i

10.0	References	s	23
9.0	Finding of Suitability to Transfer Statement		<b>2</b> 1
8.0	Covenants	S	19
7.0	Access Cla	ause	19
	6.2.5	Petroleum Sites	19
	6.2.4	Radiological Sites	18
	6.2.3	IR Site 35	17

#### **Figures**

igure 1	Site Location Map
igure 2	FOST Parcel
igure 3	Buildings in or Adjacent to the FOST Parcel
igure 4	Operable Units, IR Sites, and Areas of Concern
Figure 5	Total Petroleum Hydrocarbons Corrective Action Areas and Areas of Concern
igure 6	Underground Fuel Line Status
igure 7	Radiological Sites Within or Adjacent to the FOST Parcel

#### **Tables**

Table 1 Property Disposal to DateTable 2 CERCLA Site Status

#### **Attachments**

Attachment 1: Responses to Regulatory Agency Comments Attachment 2: Hazardous Substances Notification Table This page intentionally left blank.

#### Acronyms and Abbreviations

§ Section

ACM asbestos-containing material

AOC area of concern

ARRA Alameda Reuse and Redevelopment Authority

BCT BRAC Cleanup Team

BRAC Base Realignment and Closure

CAA Petroleum Program Corrective Action Area

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

DERP Defense Environmental Restoration Program

DoD Department of Defense

DTSC California Department of Toxic Substances Control

EBS environmental baseline survey

EDC Economic Development Conveyance

FFA Federal Facility Agreement

FFSRA Federal Facility Site Remediation Agreement

FIFRA Federal Insecticide, Fungicide, and Rodenticide Act

FL fuel line

FOST finding of suitability to transfer

G-RAM general radioactive material

HRA historical radiological assessment HSC California Health and Safety Code

IC institutional control

IR Installation Restoration (Program)

LBP lead-based paint

LHA Lifetime Health Advisory

LIFOC Lease in Furtherance of Conveyance

LPL Large Parcel Lease

mg/kg milligrams per kilogram

MEC munitions and explosives of concern

MOA Memorandum of Agreement

NACIP Navy Assessment and Control of Installation Pollutants

NAS Naval Air Station

Navy U.S. Department of the Navy

NFA No Further Action

OU operable unit

PAH polycyclic aromatic hydrocarbons

PCB polychlorinated biphenyl

PCE tetrachloroethene

Ra-226 radium-226

RACR Remedial Action Completion Report

RAP remedial action plan

RCRA Resource Conservation and Recovery Act

RFA RCRA facility assessment RI remedial investigation ROD Record of Decision

SWMU solid waste management unit

TCE trichloroethene

TCRA time-critical removal action TPH total petroleum hydrocarbons

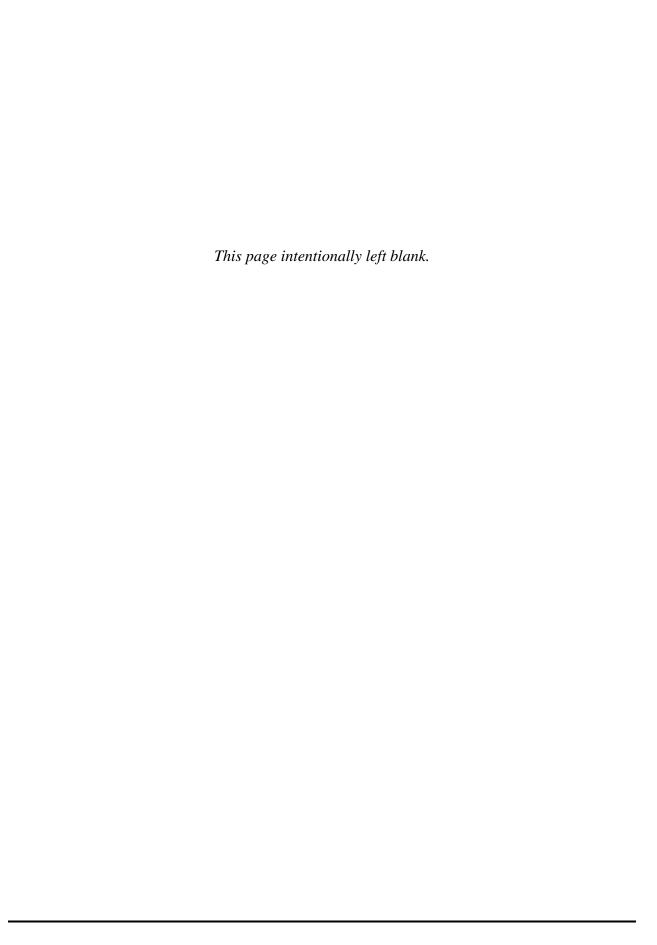
U.S. EPA United States Environmental Protection Agency

U.S.C. *United States Code* 

UST underground storage tank

VOC volatile organic compound

Regional Water Board Regional Water Quality Control Board (San Francisco Bay)



#### 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).

For simplicity, the lands covered by this FOST are referred to hereinafter as the FOST Parcel. The FOST Parcel is composed of one upland area. Figure 2 shows the FOST Parcel. The land identified for this FOST is 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 is long and narrow, encompassing approximately 3 acres of upland area along Ferry Point. Building 544 is the only building in the FOST Parcel as shown on Figure 3.

The FOST Parcel contains a portion of two CERCLA sites: Operable Unit (OU) 2C and Installation Restoration (IR) Site 35, which are located within the central portion of Alameda Point (Figure 4). Storm Drain Line G, which runs the length of the FOST Parcel, is a part of Operable Unit (OU) 2C. Storm Drain Line G conveys storm water primarily from Building 5 in OU-2C to its discharge near the northeast corner of Seaplane Lagoon. The land to the east and west of Storm Drain Line G is part of IR Site 35. These sites are described in more detail in Section 4.1.

The FOST Parcel area is currently leased by the Navy to the City of Alameda (City) under a Lease in Furtherance of Conveyance (LIFOC).

Prior to the LIFOC 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 LIFOC 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, as the recognized Local Redevelopment Authority, assumed all of ARRA's rights, duties, assets, and obligations under the LIFOC and the MOA. To date, the Navy has transferred approximately 89% 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/or 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 LIFOC.

#### 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 (Regional 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 Regional 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 Regional 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 two sites that were evaluated and addressed under the Navy's CERCLA and Defense Environmental Restoration Program (DERP) authority, as well as 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). The FOST Parcel does not contain any non-permitted units. Both closed and open petroleum sites are present within the FOST Parcel (see Section 4.2).

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

The Regional 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

Regional 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 *et seq.*) 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 *et seq.*), which addresses releases to soil and groundwater from former petroleum fuel-containing USTs, aboveground storage tanks, 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. The FOST Parcel consists of a portion of two designated CERCLA sites: OU-2C and IR Site 35. 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 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. § 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 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 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.

A portion of two out of 34 Alameda Point IR sites are located within the FOST Parcel (Figure 4). These sites are a portion of OU-2C (Storm Drain Line G) and IR Site 35. Storm Drain Line G, originally part of IR Site 18, was incorporated into OU-2C, where the line originates, and was further investigated as part of the OU-2C investigations.

Environmental sites within the FOST Parcel have received regulatory agency concurrence for No Further Action (NFA). The status of the environmental sites within the FOST Parcel is presented in Table 2. A NFA 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. NFA 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. Marsh Crust restrictions are required within all of the FOST Parcel.

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

#### 4.1.1 Storm-Drain Line G (OU-2C)

OU-2C, located in the central portion of Alameda Point is an approximately 53-acre area consisting of IR Sites 5 (Building 5, Aircraft Rework Facility), 10 (Building 400, Missile Rework Facility), and 12 (Building 12, Power Plant) (Figure 4). In addition, OU-2C includes several drain lines, which variously conveyed stormwater, sanitary wastewater, and industrial wastewater from OU-2C's cluster of IR sites. The FOST Parcel coincides with a segment of one of these drain lines: Storm Drain Line G, which flows from Building 5 to its discharge point near the northeast corner of Seaplane Lagoon (Figure 3). Portions of Petroleum Program Corrective Action Area (CAA) B and Fuel Line (FL) 125 are located within this portion of OU-2C (Figure 5). No current or former SWMUs are within the footprint of this portion of OU-2C. The Petroleum Program sites located within the FOST Parcel are discussed in Section 4.2.

The 2016 ROD for OU-2C Drain Lines Located Outside of Buildings 5 and 10 identifies no contaminant of concern (COC) for the FOST Parcel's portion of OU-2C (Storm Drain Line G). Per the ROD, "sediment was removed from within these storm drain lines and subsequent video surveys, radiological surveys, and sampling did not show any indication of contamination associated with Storm Drain Lines A, B, and G." The 2016 ROD documents no further action for Storm Drain Line G (Navy, 2016a [pending]).

#### 4.1.2 AOC 23 (IR Site 35)

IR Site 35, the West Housing Area, consists of 23 study areas, occupying about 75 acres of open space, residences, and commercial/industrial buildings in the northeastern portion of Alameda Point. One of these study areas – Area of Concern (AOC) 23 – is part of IR35 (Figure 5). Historically, AOC 23 was used for vehicle and equipment parking, and maintenance gear and

equipment washdown. Building 544, located on the FOST Parcel, was used as a liquid oxygen facility. AOC 23 is an IR Site 35 study area because initial investigations indicated volatile organic compounds (VOCs) in groundwater, most prominently vinyl chloride. However, supplemental investigations did not replicate the presence of vinyl chloride concentrations in groundwater at AOC 23. The ROD concluded that "risk re-evaluations confirmed that risks associated with other constituents in groundwater did not warrant further action [at AOC 23]" and thus, that "because there is no threat to human health or the environment for current and future conditions, no action or no further action is necessary under CERCLA for IR Site 35" (Navy, 2010).

#### 4.2 Petroleum Products and Derivatives

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

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 Regional Water Board and DTSC. The Regional Water Board issued a letter in 2001 providing concurrence on the approach (Regional Water Board 2001).

The Navy identified a variety of CAAs as part of the Petroleum Program (Figure 5). The only CAA that is wholly or partially within the FOST Parcel is CAA-B. CAA-B consists of 11 fuel lines. Only FL-023F, FL-071, and FL-109 are partially within the portion of CAA-B that is in the FOST Parcel. In addition, a short portion of FL-125 is within the FOST Parcel. The CAA-B fuel lines and FL-125 are shown on Figure 6. All of these fuel lines reportedly transmitted jet fuel.

#### 4.2.1 Open Petroleum Program Sites

CAA B is the only open Petroleum Program site within the FOST Parcel. CAA B will be transferred prior to obtaining regulatory closure subject to the restrictions discussed in Section 5.2. The open site has an outstanding site closure request that is awaiting written regulatory concurrence. This site is shown on Figure 5.

**CAA-B**: This Corrective Action Area consists of underground steel fuel-conveyance pipelines, one north/south segment of which underlies much of the length of the FOST Parcel. The Navy removed this segment (a six-inch steel pipe) in 1998. The Navy recorded observations and analyzed soil and groundwater samples in conjunction with the fuel line removal. In 2016, Langan Associates completed a data-gap investigation that included the portion of CAA-B

within the FOST Parcel, and submitted a site closure request to the Regional Water Board on behalf of the Navy.

#### 4.2.2 Closed Petroleum Program Sites

FL-125 is the only closed Petroleum Program site within the FOST Parcel. This fuel line consists of the area around a 6-inch steel underground fuel pipeline. The site was closed with concurrence in 2014 (Water Board 2014) without restrictions. A very short segment at the west end of FL-125 is in the FOST Parcel.

#### 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).

As noted in Section 2, 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.

A notification regarding the potential presence of ACM within the FOST property, including the potential for inaccessible underground utilities or structures with ACM, 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 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.

#### 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 onsite 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). DoD 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 – (1) storm drain lines associated with Buildings 5 and 400 (including Storm Drain Line G) and (2) Seaplane Ramp and Parking Apron – are partially located within the FOST Parcel. The radiological site locations and status of each site within the FOST Parcel are shown on Figure 7.

At Storm Drain Line G, hydro-jetting, video surveys, gamma surveys, and sediment sampling were conducted in 2012 to address potential radiological contamination within the line and its sediments (TtECI, 2016). The OU-2C Technical Memorandum, "Operable Unit 2C Drain Lines, Storm Drain Lines A, B, G and Industrial Waste Line" documents the removal of sediment and the absence of Ra-226 contamination within Storm Drain Lines A, B, and G (TtECI, 2016).

Only a very small portion of the Parking Apron at the eastern end of the Seaplane Lagoon is in the FOST Parcel. As thoroughly discussed in Section 6.2.4, this area does not have unacceptable levels of radiological material.

#### 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

#### 4.9.1 Perfluorinated Compounds (PFCs)/Polyfluoroalkyl Substances (PFAS)

Perfluorinated compounds (PFCs) and polyfluoroalkyl substances (PFAS) including perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are currently classified as unregulated or "emerging" contaminants, and as such have not been previously included in basewide groundwater monitoring. In May 2016, the U.S. EPA issued a Lifetime Health Advisory (LHA) to provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS in drinking water (U.S. EPA 2016a). U.S. EPA established the health advisory level at 70 parts per trillion for the combined concentrations of PFOA and PFOS in drinking water.

Groundwater at the former NAS Alameda is not used as a drinking water source and is not anticipated to be a future drinking water source. However, in October 2016, the Navy conducted a basewide groundwater monitoring event across the former NAS Alameda, which included sampling and analysis to confirm the presence or absence of PFCs/PFAS; specifically, PFOS, PFOA, and perfluorobutane sulfonate (PFBS) at five selected IR sites. The results of this sampling are further detailed in Section 6 – Adjacent Properties.

#### 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 subsection, ICs will be implemented to prevent exposures to COCs in soil on the FOST Parcel. ICs will be included in the deed between the Navy and the property recipient and in Covenant(s) to Restrict Use of Property between the DTSC and the Navy to limit exposure to contaminated soil. 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 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 the FOST Parcel.

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 managed 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, 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 the petroleum site within the FOST parcel. The Navy shall retain responsibility for obtaining regulatory closure, including required investigation, remediation, and reporting, for the open site 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.

After property transfer, the presence of residual petroleum in some areas of the FOST Parcel 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 may be necessary.

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 and the Regional 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. A footprint of sites to which the Covenant shall apply shall be identified on a map to be approved by the Regional 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 Regional Water Board, or has not been investigated to the satisfaction of the Regional 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 Regional 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, structures and inaccessible underground utilities 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, i.e., Building 544, 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 adjacent sites are not likely to be a potential source of contamination to the FOST Parcel, as further discussed below.

#### 6.1 EnviroStor and GeoTracker Listed Sites

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 State 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 Site 3 to the east 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 six non-Navy, environmental sites on the Alameda Peninsula that are within approximately 1 mile of the FOST Property. There are two 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.

One of the open sites is not related to petroleum releases: Cross Alameda Trail. The Cross Alameda Trail property is a recently identified former railroad corridor along the south side of the Ralph Appezzato Memorial Parkway that terminates at Main Street, adjacent to IR Site 3. The chemicals of potential concern (COPCs) include arsenic, lead, PAHs, and total petroleum hydrocarbons (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 one remaining open site is a petroleum site: Alameda Gateway Limited. Alameda Gateway Limited UST, is approximately 3,000 feet to the northeast of the FOST Parcel. The groundwater flow direction is likely to the north, so it is not likely to impact the FOST Parcel.

The GeoTracker database lists four closed UST sites east of Main Street, approximately 1,000 feet to the east of the FOST Parcel. 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. The two City 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 Regional Water Board for USTs 13-1 through 13-5 in 2001, and USTs 173-1, -2, and -3 in 2014. These two sites with eight USTs are not expected to impact the FOST Parcel.

#### 6.2 Former NAS Alameda Adjacent Property

Sites located on Alameda Point 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 based on CERCLA contaminants. 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. PFAS was identified in the 2016 Five Year Review (Navy 2016b) as an emerging contaminant. In 2016, the Navy sampled groundwater at five separate IR sites at Alameda Point where PFAS constituents may have been used. The areas include fire fighter training areas, plating shops, aircraft maintenance shops, and hangars. PFAS was detected above the U.S. EPA 2016 LHA in at least one groundwater sample at each site. IR

Sites 6 and 4 are located west and southeast of the FOST parcel, respectively. PFAS has not been delineated at either site, however, neither site is directly upgradient from the FOST parcel. While the Navy has confirmed presence of PFAS in groundwater samples above the LHA at adjacent IR Sites Alameda point, the U.S. EPA's LHA for PFOA and PFOS are intended to evaluate exposure scenarios involving drinking water. The shallow groundwater within the FOST parcel is not used for drinking water and is not anticipated to be used for future drinking water. The presence of PFAS has not been confirmed within the FOST parcel. Additionally, the FOST parcel is upgradient from both Sites 4 and 6 and is unlikely to be impacted by PFAS.

#### 6.2.1 IR Site 6 (OU-1)

IR Site 6, Aircraft Intermediate Maintenance Facility, is 5.6 acres in size and located west of the FOST parcel. No COCs are identified for soil. The selected remedy for groundwater is In-situ chemical oxidation (ISCO), monitoring natural attenuation and institutional controls. ISCO was implemented in May 2010. Plume boundaries for CERCLA contaminants within IR Site 6 do not impact the FOST Parcel.

#### 6.2.2 IR Site 21 (OU-2B)

IR Site 21 is located east of the FOST Parcel at the northeast corner of Seaplane Lagoon. It is about 5.1 acres 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 2015). 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 vapor intrusion mitigation measures. This site is not expected to impact the FOST Parcel.

#### 6.2.3 IR Site 35

IR Site 35 is composed of 23 study areas, known as AOCs that are located throughout Alameda Point. One of the AOCs (23) is partially in the FOST Parcel as discussed in Section 4.1.2. Between 1995 and 1997, a time-critical removal action (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 non-time-critical removal action 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 2010) as being protective of unrestricted site use. The ROD 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 remedial action completion report (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 (U.S. EPA 2012) and DTSC also concurred on September 6, 2012 (DTSC 2012). 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. This site is not expected to impact the FOST Parcel.

#### 6.2.4 Radiological Sites

Several radiological sites are located adjacent to the FOST Parcel (see Figure 7). 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. A small portion at the eastern end of the Parking Apron is in the FOST Parcel as discussed in Section 4.7.2 (see Figure 7). The seaplane ramps are cantilevered structures associated with the adjacent apron.

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 Parking Apron. The 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 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 Parking Apron and no further action was required (Navy 2014). This conclusion was

concurred by both U.S. EPA and DTSC (U.S. EPA 2016b, DTSC 2016). The eastern portion of the Parking Apron was transferred in 2013.

IR Sites 5 and 10. A TCRA was conducted for IR Sites 5 and 10 (see Figure 4). The TCRA involved the removal of storm drain lines F and FF that originate in Buildings 5 and 400 in OU-2C's IR Sites 5 and 10, respectively, 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. IR Sites 5 and 10 will not impact the FOST Parcel, because they are nearly 1000 feet or more from the FOST Parcel.

#### 6.2.5 Petroleum Sites

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

**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 2010). 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-B is partially within the FOST Parcel (see Section 4.2.1).

Fuel Line 155A. This site consists of a former north-west fuel line segment within Ferry Point. This fuel line was removed in 1998. Recent investigations conducted in the vicinity of the fuel line have identified petroleum constituents in soil and groundwater. The residual TPH is not expected to impact the FOST Parcel.

#### 7.0 Access Clause

The deed(s) will reserve and the transferee shall grant to the United States access to the FOST Parcel pursuant to CERCLA Section 120(h)(3)(A)(iii). DTSC, the Regional 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	s FOST and the notices	s, restrictions, and	covenants that
will be contained in the deed, the FOST Pa	arcel at the Alameda P	oint is suitable for	transfer.

Signature:		Date:	
	Lawrence Lansdale, P.E.		
	BRAC Environmental Director		
	By Direction		

This page intentionally left blank.

#### 10.0 References

- Battelle. 2010. Petroleum Management Plan. November 24.
- Battelle. 2012. 2012 Update-Petroleum Management Plan. February 28.
- DoD (Department of Defense). 1994. Department of Defense Policy on the Environmental Review Process to Reach a Finding of Suitability to Transfer for Property Where Release or Disposal Has Occurred. June 1.
- DoD. 2006. Base Redevelopment and Realignment Manual. Office of the Deputy Under Secretary of Defense (Installations and Environment). March.
- DTSC (California Department of Toxic Substances Control). 1992a. Federal Facility Site Remediation Agreement for Alameda Point. September 29.
- DTSC. 1992b. RCRA Facility Assessment, Naval Air Station, Alameda, California. April.
- DTSC. 1997. Letter Regarding Analysis of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Constituent Analysis at Sites Designated Petroleum-Only, Alameda Point, Alameda, California. From Daniel E. Murphy, P.E., Chief, Closing Bases Unit, Office of Military Facilities. To Ms. Shin-Roei Lee, Leader, DoD Section, Alameda Bay Water Board. June 20.
- DTSC. 2000a. Letter Regarding "Acceptance of Closure Certification Report for Building 13, Flammable Waste Storage Facility, Naval Air Station Alameda, Alameda, CA EPA ID No. CA2170023236." From Mohinder S. Sandhu, Chief, Standardized Permits and Corrective Action Branch, DTSC. To Steve Edde, BRAC Environmental Liaison Naval Facilities Engineering Command. February 3.
- DTSC. 2000b. Letter Regarding "Acceptance of Closure Certification Reports and Activities for All Regulated Units in Building 13, Naval Air Station Alameda, Alameda, CA EPA ID No. CA2170023236." From Mohinder S. Sandhu, Chief, Standardized Permits and Corrective Action Branch, DTSC. To Steve Edde, BRAC Environmental Liaison Naval Facilities Engineering Command. May 4.
- DTSC. 2000c. Letter Regarding Closure Certification Acceptance for Area 37 Annex Hazardous Waste Storage Facility, at the Former U.S. Naval Air Station Alameda, Alameda Point, California. EPA ID No.: CA2 170 023 236. From Mohinder S. Sandhu, Chief, Standardized Permits and Corrective Action Branch, DTSC. To Steve Edde, BRAC Environmental Liaison Naval Facilities Engineering Command. October 10.
- DTSC. 2012. Letter Regarding DTSC Concurrence with Final Remedial Action Completion Report Installation Restoration Site 35 Areas of Concern 3, 10, and 12 in Transfer Parcel EDC-5, Alameda Point, Alameda, California. August. From Karen Toth, Unit Chief, Brownfields and Environmental Restoration Program, DTSC. To Derek J. Robinson, Navy, BRAC, Program Management Office West. September 6.

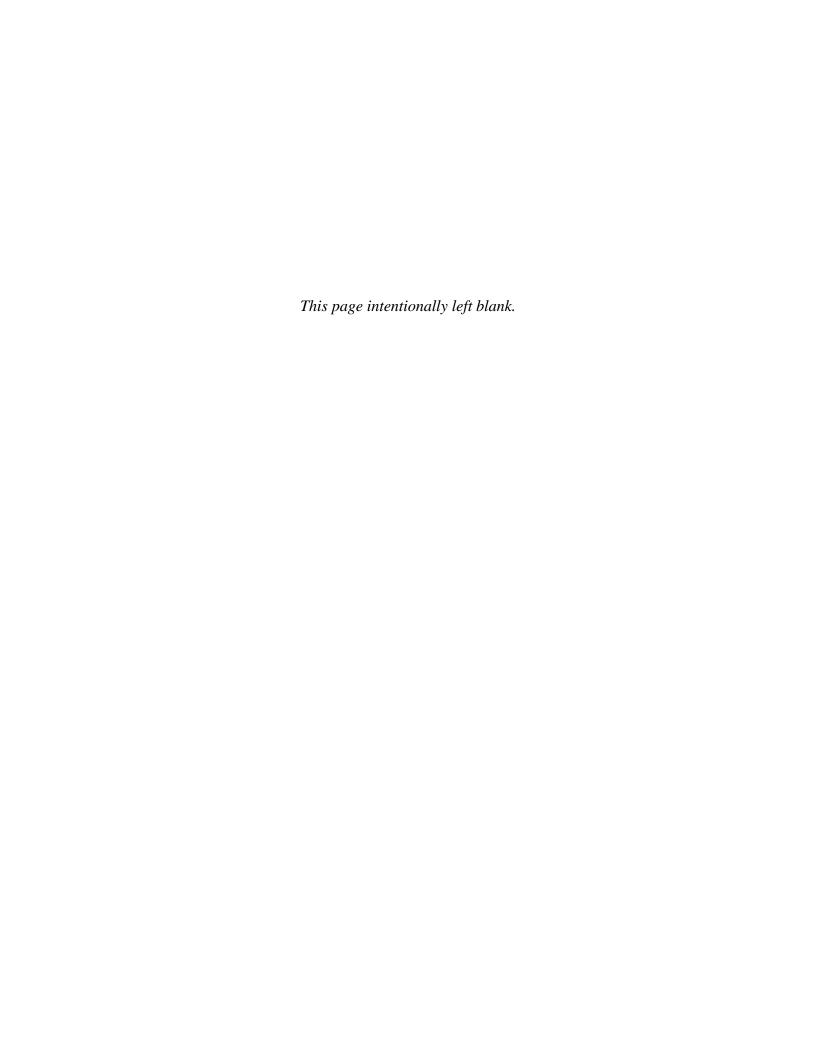
- DTSC. 2016. Letter Regarding DTSC Concurrence with Final Remedial Action Completion Report Installation Restoration Site 37, Alameda Point, Alameda, California. April. From Karen Toth, Unit Chief, Brownfields and Environmental Restoration Program, DTSC. To Cecily Sabedra, Navy, BRAC, Program Management Office West. April 1.
- Ecology and Environment. 1983. Initial Assessment Study of Naval Air Station Alameda. April.
- EFA-West (Engineering Field Activity West Naval Facilities Engineering Command). 1999. Final Environmental Impact Statement for the Disposal and Reuse of NAS Alameda and the FISC, Alameda Annex, and Facility, Alameda, California. October.
- ERM-West (ERM-West, Inc.). 1994. Final Basewide Environmental Baseline Survey/Community Environmental Response Facilitation Act Report for NAS/Naval Aviation Depot Alameda. October.
- FWC (Foster Wheeler Corporation). 2004. Final Project Close-Out Report. CERCLA Time-Critical Removal Action at West Housing Area, Alameda Point, Alameda, California. February 13.
- IT. (International Technology Corporation). 1997. Sewer Sampling and Analysis Summary Report, NAS Alameda, Alameda, California. November.
- Navy (Department of the Navy). 1997. BRAC Cleanup Plan for Alameda Point, Alameda, California, March 1.
- Navy. 2000. Letter Regarding Submittal of NAS Alameda Historical Radiological Assessment (HRA), Volume I, Naval Nuclear Propulsion Program. From Commander, Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility. To U.S. EPA, Region IX (Attn. Anna-Marie Cook) and California DTSC, Region 2 (Attn. Mary Rose Cassa). April 19.
- Navy. 2001. Final Remedial Action Plan/Record of Decision (ROD) for the Marsh Crust at the Fleet and Industrial Supply Center Oakland Alameda Facility/Alameda Annex and for the Marsh Crust and Former Subtidal Area at Alameda Point. February.
- Navy. 2008c. Policy for Processing Findings of Suitability to Transfer or Lease. December 12.
- Navy. 2010. Final Record of Decision for Installation Restoration Site 35, Areas of Concern in Transfer Parcel EDC-35, Alameda Point. Alameda, California. February.
- Navy. 2014. Final Remedial Action Completion Report, Installation Restoration Site 17, Seaplane Lagoon, Alameda Point, Alameda, California. September.
- Navy. 2015. Final Record of Decision for Operable Unit 2B, Former Naval Air Station, Alameda, California. March.
- Navy. 2016a [pending]. Final Record of Decision for OU-2C Drain Lines, Alameda Point, Alameda, California. December.
- Navy. 2016b. Final Five-Year Review, Alameda Point and Fleet and Industrial Supply Center Oakland, Alameda Facility/Alameda Annex, Alameda, California. September.

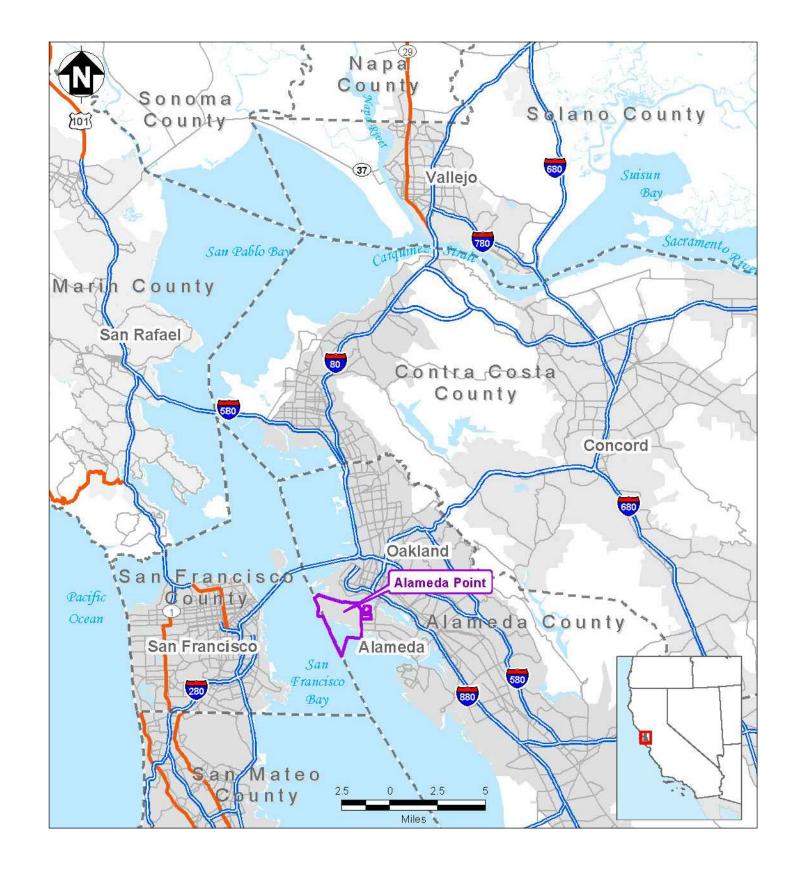
- Navy and ARRA (Navy and Alameda Reuse and Redevelopment Authority). 1997. Department of the Navy (Navy) entered into a Large Parcel Lease (LPL) with the former Alameda Reuse and Redevelopment Authority (ARRA) to allow the City of Alameda to lease various property and buildings prior to transfer. March 24.
- Navy and ARRA. 2000a. Lease in Furtherance of Conveyance between the United States of America and the Alameda Reuse and Redevelopment Authority for the Former Naval Air Station Alameda. June 6 (Amendment #1, November 28, 2000; Amendment #2, March 30, 2009; and Amendment #3, August 23, 2012).
- Navy and ARRA. 2000b. Memorandum of Agreement between the United States of America Acting by and through the Secretary of the Navy United States Department of the Navy and the Alameda Reuse and Redevelopment Authority for Conveyance of Portions of the Naval Air Station Alameda from the United States of America to the Alameda Reuse and Development Authority. June 6 (amended July 31 and January 13, 2012).
- NOSSA (Naval Ordnance Safety and Security Activity). 2013. Letter Regarding Close-Out Explosives Safety Inspection of Naval Air Station Alameda (UIC:00236). From Commanding Officer, Naval Ordnance Safety and Security Activity. To Director, Navy BRAC Program Management Office West. October 28.
- NOSSA. 2014. Letter Regarding Request to Remove Exclusion Zones and Explosives Safety Quantity Distance Arcs Established for Magazines, Operating Buildings, and Other Sites Former Naval Air Station Alameda, Alameda, California [FF-024]. From: Commanding Officer, Naval Ordnance Safety and Security Activity. To Headquarters, Naval Facilities Engineering Command, Director, BRAC Program Management Office West (BPMOW/PAM). February 25.
- OTIE. (Oneida Total Integrated Enterprises). 2012. Final Remedial Action Completion Report Installation Restoration Site 35 Areas of Concern 3, 10, and 12 in Transfer Parcel EDC-5, Alameda Point, Alameda, California. August 6.
- PHNSY (Pearl Harbor Naval Shipyard). 2000. Historical Radiological Assessment, Naval Air Station Alameda, Volume I, Naval Nuclear Propulsion Program, 1966-1997. April.
- Regional Water Board (San Francisco Bay Regional Water Quality Control Board). 2001.

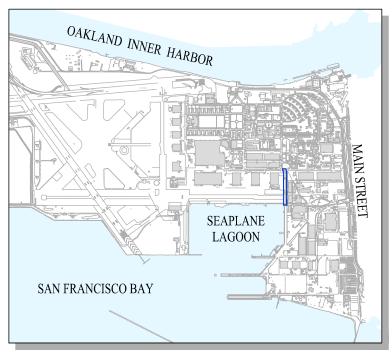
  Consensus Letter on the Preliminary Remediation Criteria and Closure Strategy for Petroleum-Contaminated Sites at Alameda Point from Brad Job, Regional Water Board to Mike McClelland, Navy. June 11.
- Regional Water Board. 2014. Letter Regarding No Further Action for Former Fuel Line Segment 125, Former Alameda Naval Air Station, Alameda County. From Bruce H. Wolfe, Regional Water Board to Derek J. Robinson (Navy). July 15.
- Shaw E&I (Shaw Environmental and Infrastructure, Inc.). 2003. Site Closure Report. Parcels 79, 98, 105, 106, and 107 Non-Time-Critical Removal Action. Revision O. Alameda Point, Alameda, California. November 4.
- Shaw E&I. 2004. Final Removal Action Site Closeout Report. Revision 1. Time-Critical Removal Action for Building 195 Pesticide Shed Demolition and Soil Removal. Alameda Point, Alameda, California. February 5.

- SulTech. 2007. Compendium of SWMU Evaluation Reports. June 22.
- Tetra Tech (TetraTech EMI). 2013. Final Status Survey Report, Pier 3, Alameda Point, Alameda, California. October 15.
- TtECI (Tetra Tech EC Inc.). 2011. Final Time-Critical Removal Action Completion, IR Sites 5 and 10, Buildings 5 and 400, Storm Drain Line Removal, Alameda Point, Alameda, California. September.
- TtECI. 2016. Final Technical Memorandum, Operable Unit 2C Drain Lines, Storm Drain Lines A, B, G and Industrial Waste Line, Alameda Point, Alameda, California. January.
- U.S. EPA (U.S. Environmental Protection Agency). 2012. Letter Regarding Final Remedial Action Completion Report, IR Site 35, Alameda Point, Alameda, California. August 2012. From Michael Montgomery, Assistant Director, Superfund Division, Federal Facilities and Site Cleanup Branch, U.S. EPA. To Derek Robinson, Navy, BRAC, Program Management Office West. August 27.
- U.S. EPA. 2016a. "Lifetime Health Advisories and Health Effects Support Documents for Perfluorooctanoic Acid and Perfluorooctane Sulfonate". *Federal Register* 81, no. 101: 33250. May 25.
- U.S. EPA. 2016b. Letter Regarding Final Remedial Action Completion Report, IR Site 17, Alameda Point, Alameda, California. September 2014. From Angeles Herrera, Assistant Director, Superfund Division, Federal Facilities and Site Cleanup Branch, U.S. EPA. To Cecily Sabedra, Navy, BRAC, Program Management Office West. August 27.
- Weston (Weston Solutions, Inc.). 2007. Final Historical Radiological Assessment Volume II, Alameda Naval Air Station, Use of General Radioactive Materials, 1941-2005. June.

This page intentionally left blank.







 $\frac{\text{VICINITY MAP}}{1" = 3,000'}$ 

# LEGEND



### Note:

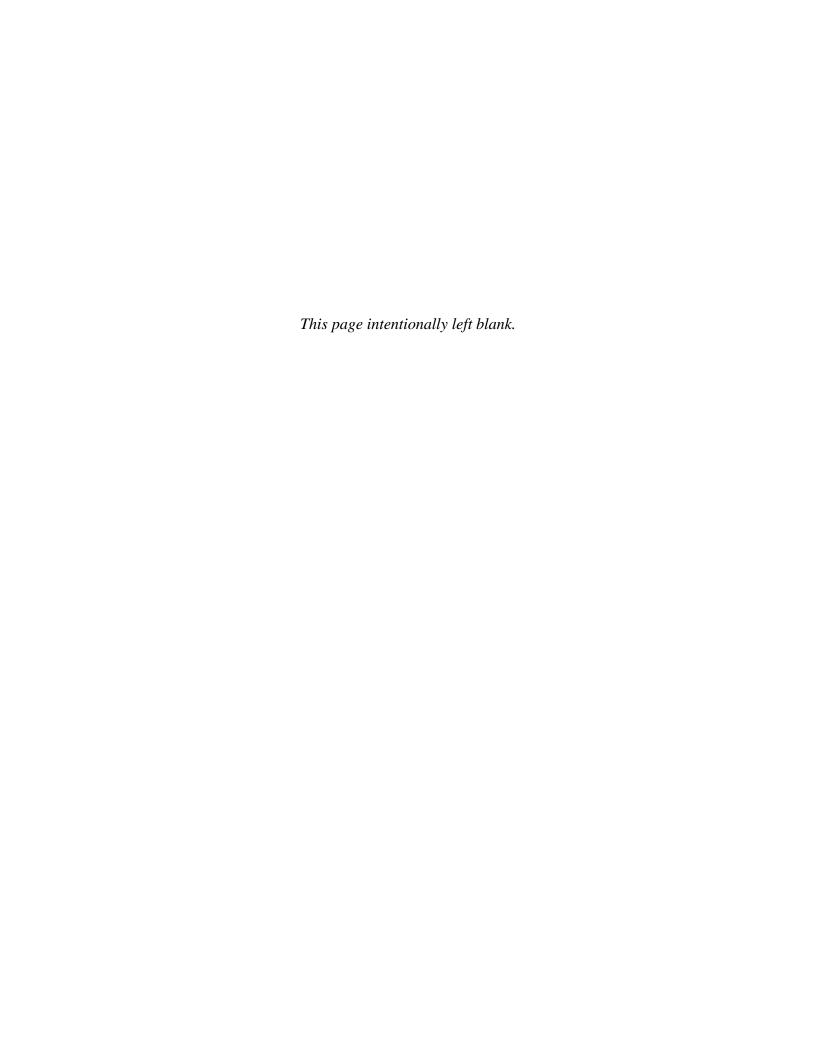
\* Darker shading indicates greater population density

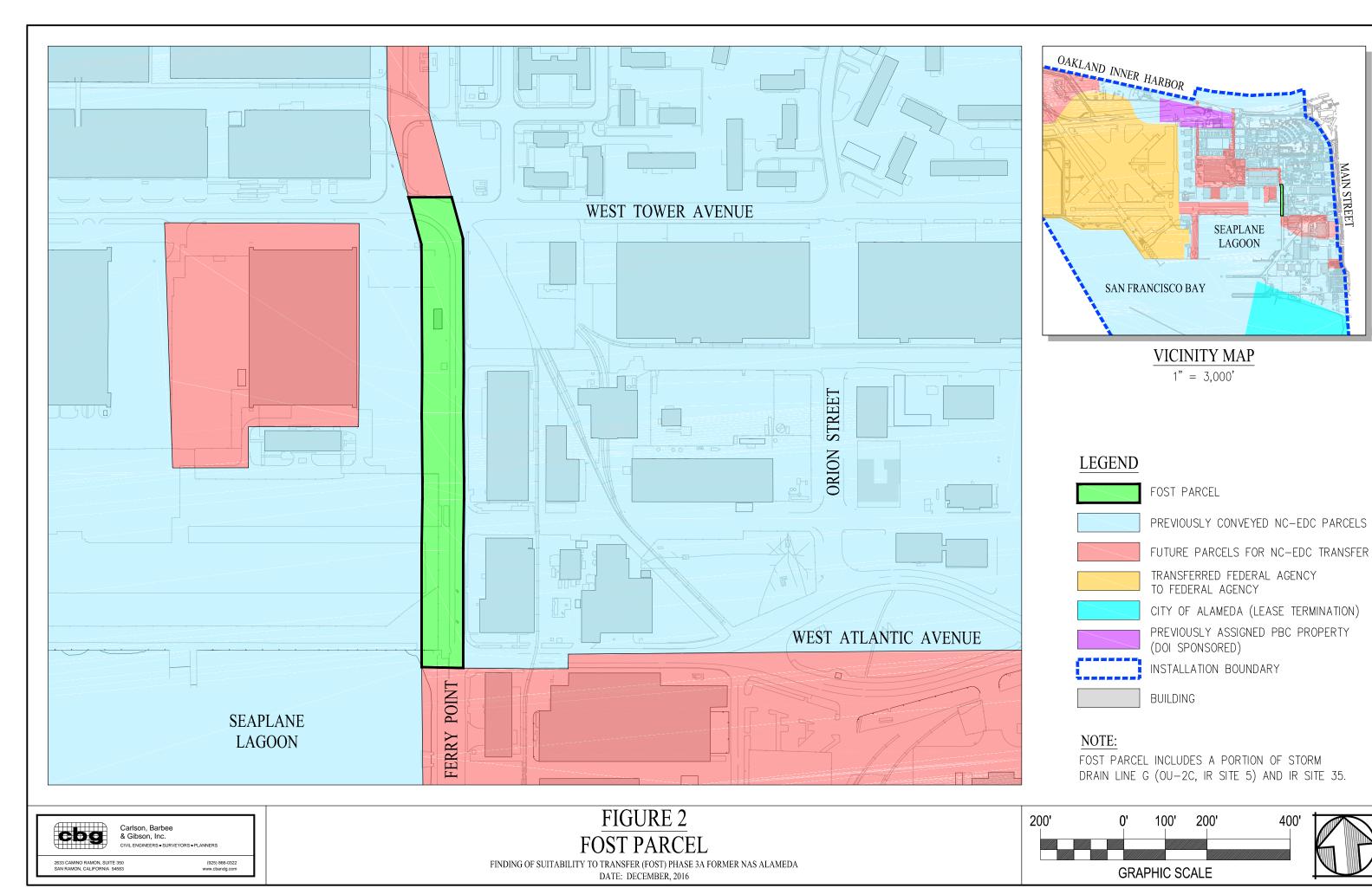


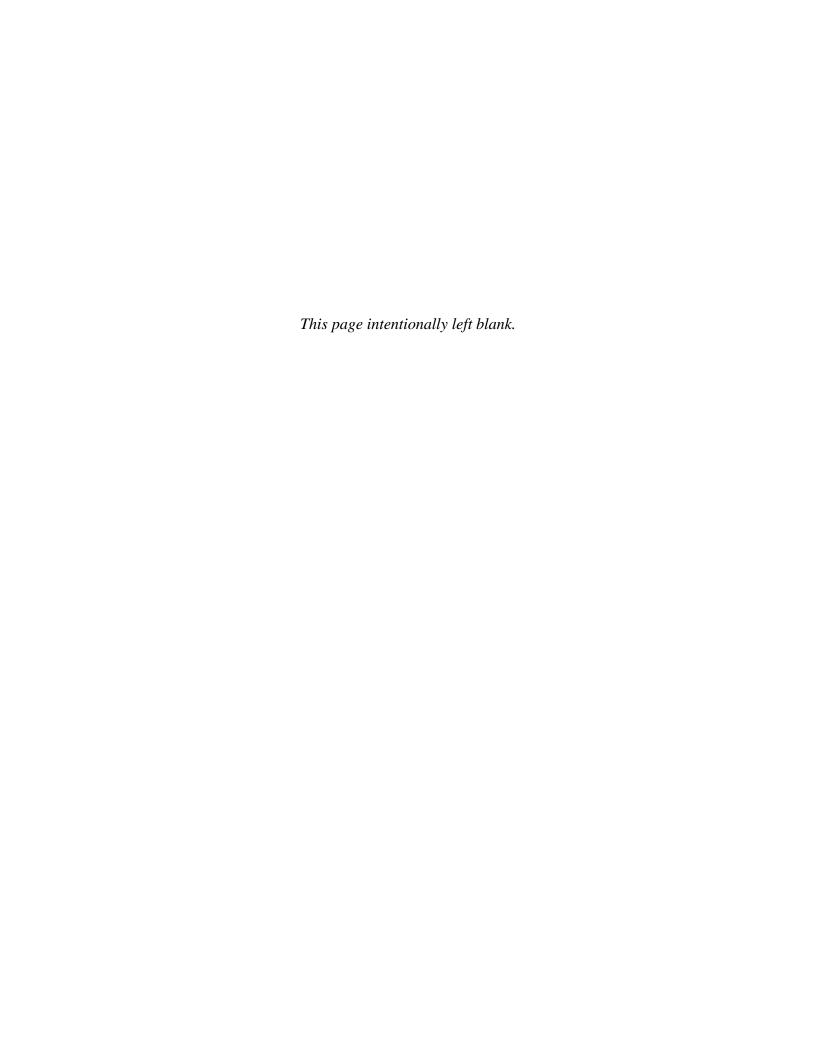
FIGURE 1 SITE LOCATION MAP

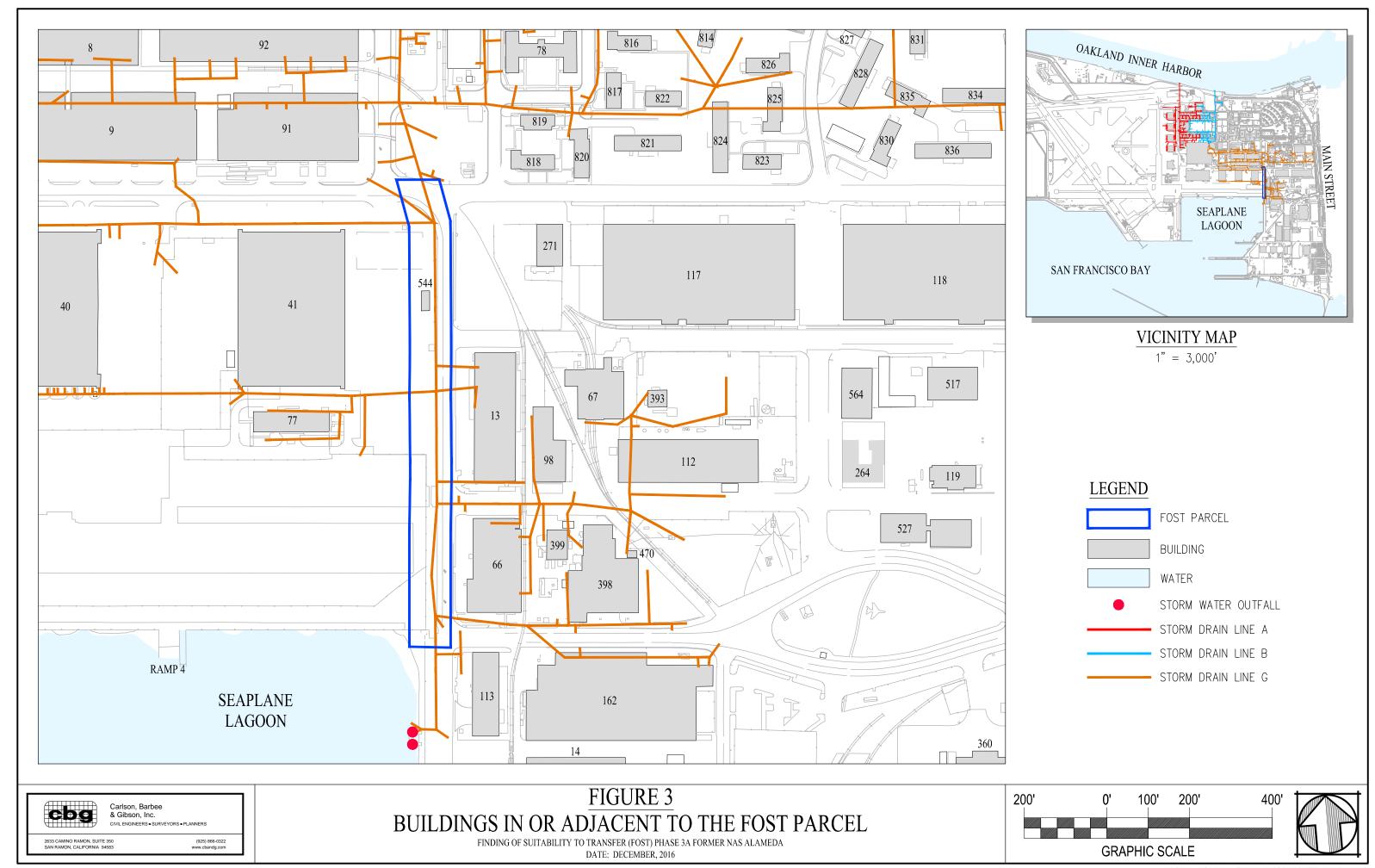
FINDING OF SUITABILITY TO TRANSFER (FOST) PHASE 3A FORMER NAS ALAMEDA DATE: DECEMBER, 2016

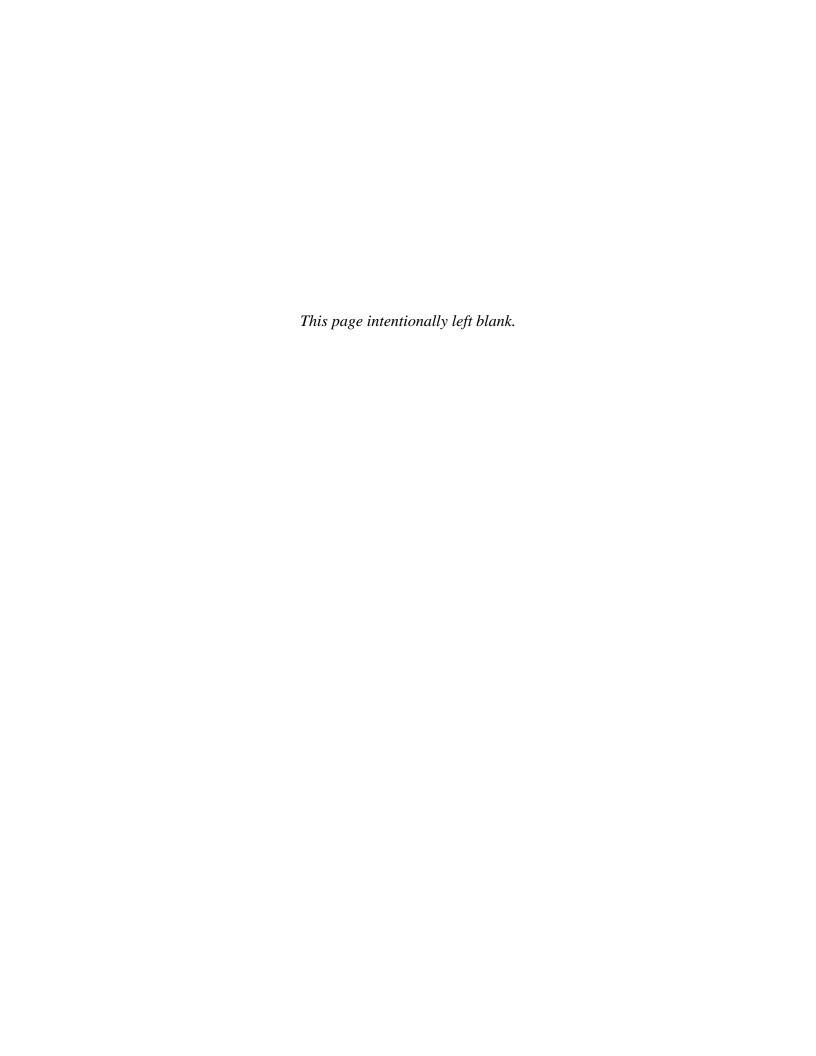


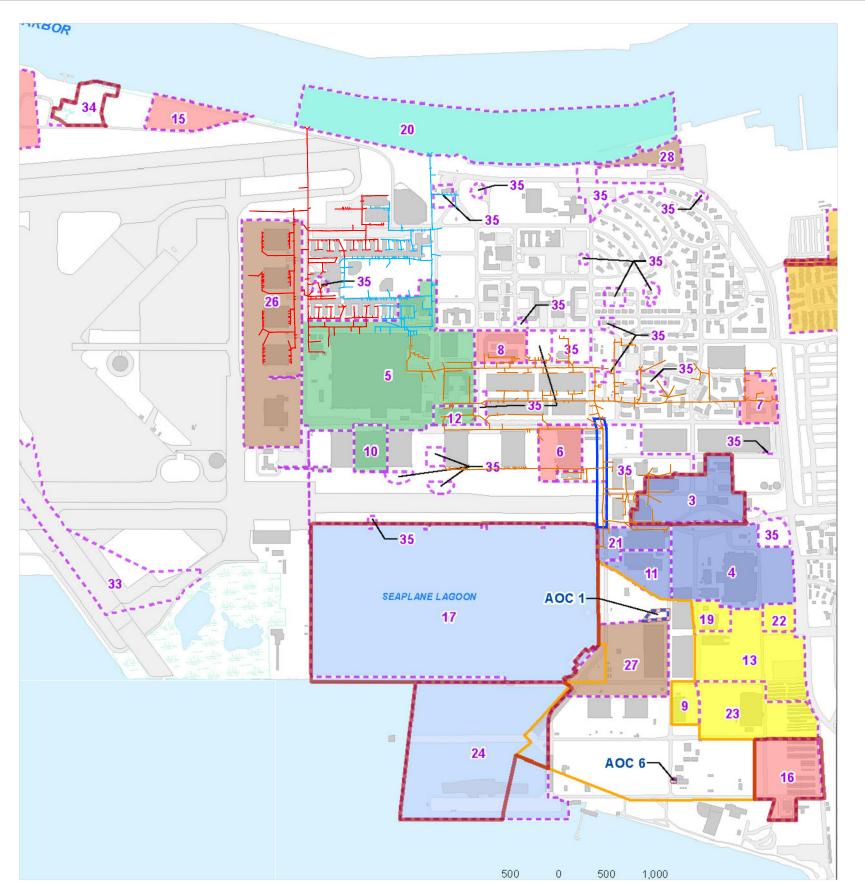














1	2A	2B	2C	3
4A	4B	4C	5	6

FOST Parcel Boundary (Phase 2)

FOST PARCEL

Installation Restoration (IR) Site\*

CERCLA Program Area of Concern†

EDC-12 Site Inspection Area

Road or Airfield Wetland Building Water

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.

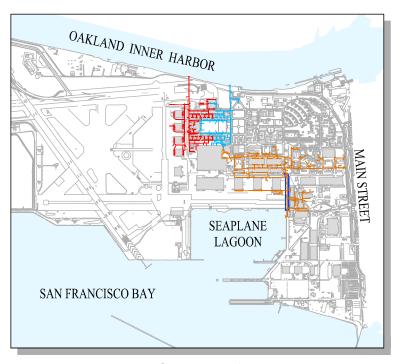
Area of Concern

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

Economic Development Conveyance

STORM DRAIN LINE A

STORM DRAIN LINE B STORM DRAIN LINE G



VICINITY MAP 1" = 3,000'

# INSTALLATION RESTORATION SITE DESCRIPTION

- 1943-1956 Disposal Area
- West Beach Landfill and Wetlands
- Abandoned Fuel Storage Area
- Building 360 (Aircraft Engine Facility)
- Building 5 (Aircraft Rework Facility)
- Building 41 (Aircraft Intermediate Maintenance Facility)
- Building 459 (Navy Exchange Service Station)
- Building 114 (Pesticide Storage Area)
- 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)

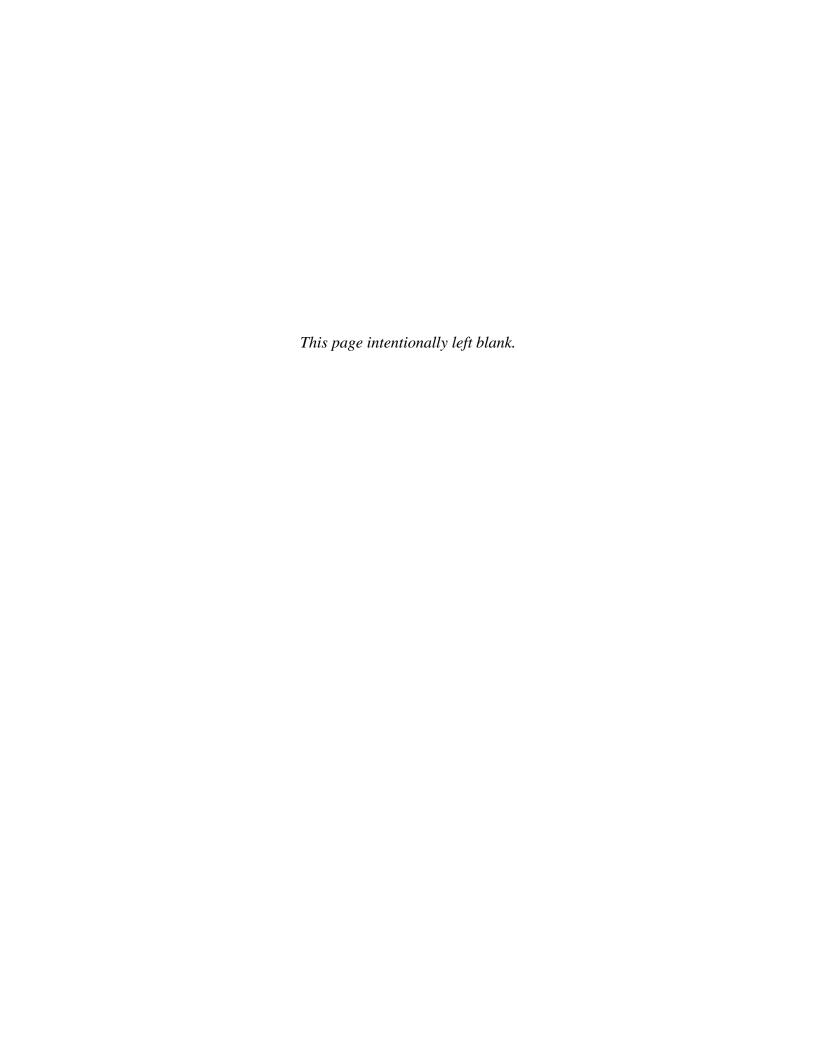
- 20 Oakland Inner Harbor
- 21 Building 162 (Ship Fitting and Engine Repair)
- 22 Building 547 (Former Service Station 23 Building 530 (Missile Rework Operations)
- 24 Pier Area
- 25 Former North Village Housing and Estuary Park
- 26 Western Hangar Zone
- 27 Dock Zone
- 28 Todd Shipyard
- 29 Skeet Range
- 30 Miller School
- 31 Marina Village Housing
- 32 Northwestern Ordnance Storage Area
- 33 South Tamac 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

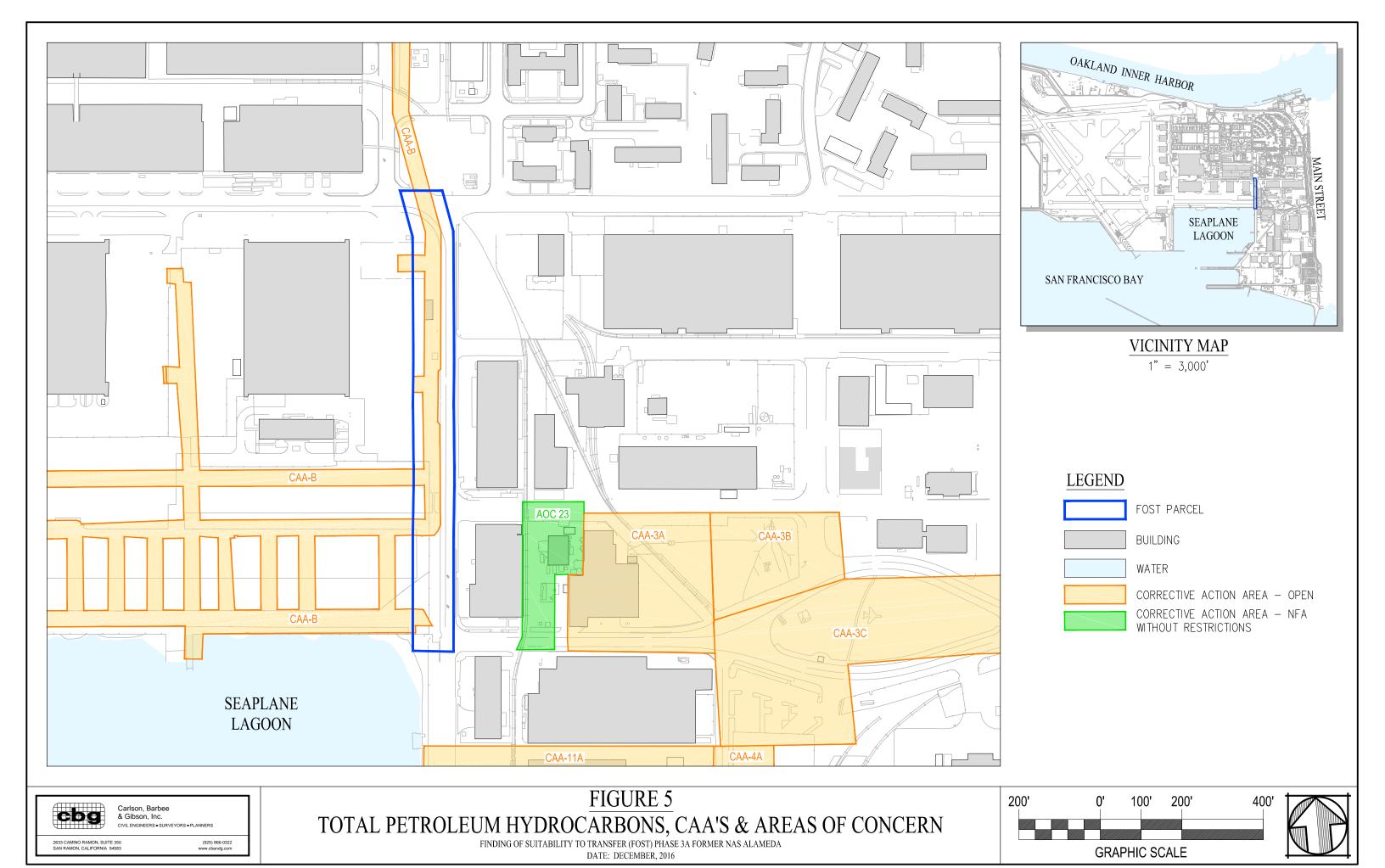


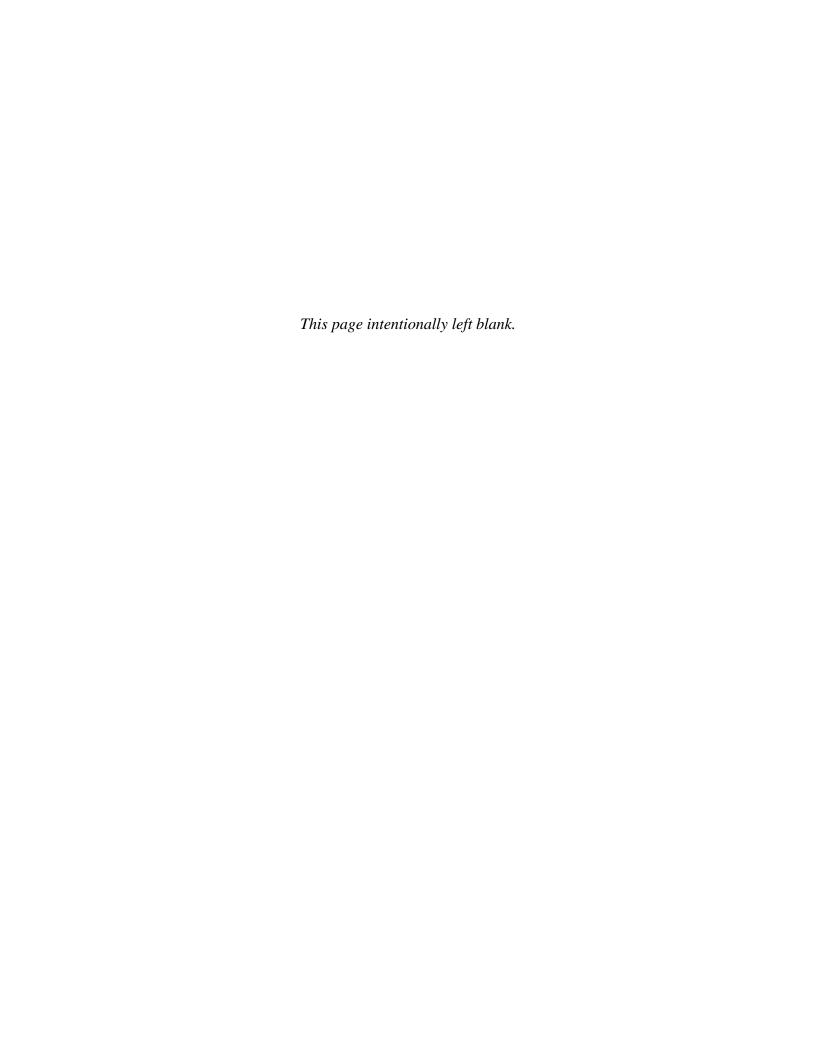
# FIGURE 4 OPERABLE UNITS, IR SITES & AREAS OF CONCERN

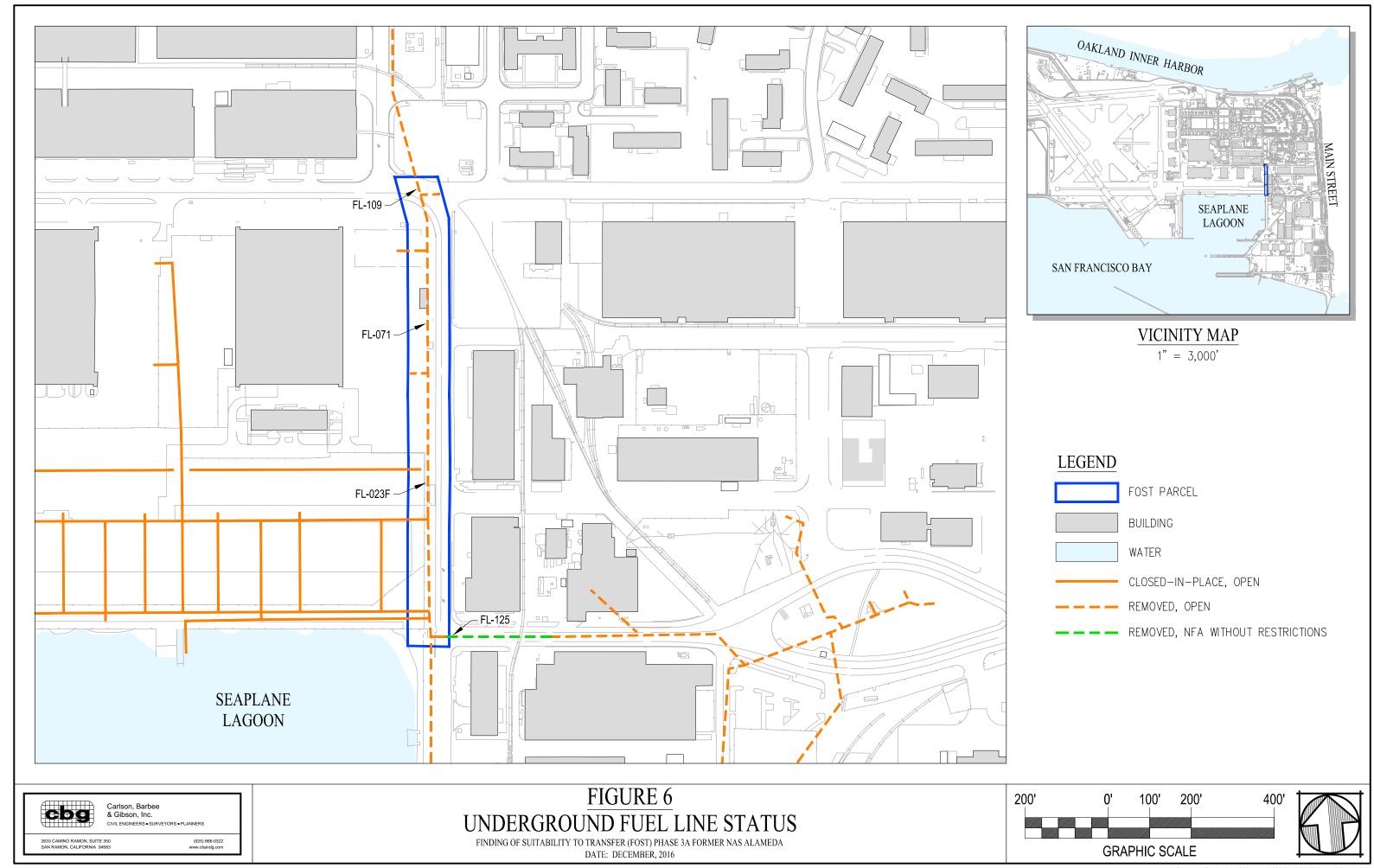
FINDING OF SUITABILITY TO TRANSFER (FOST) PHASE 3A FORMER NAS ALAMEDA DATE: DECEMBER, 2016

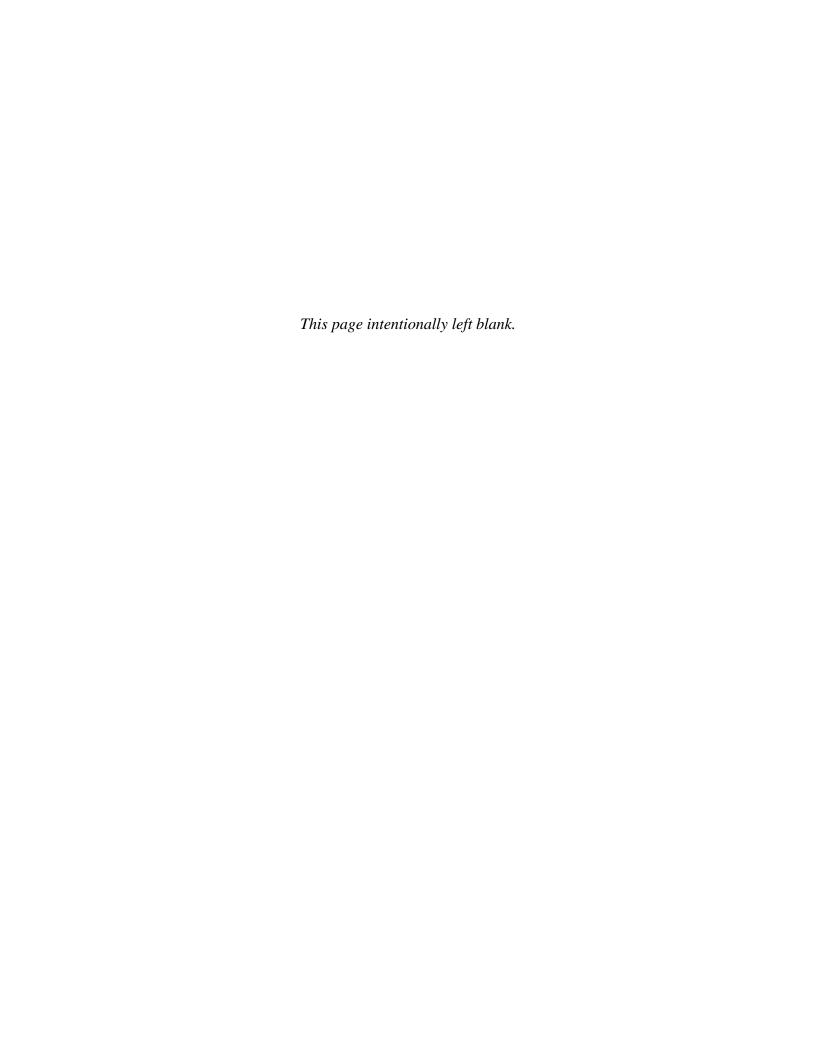


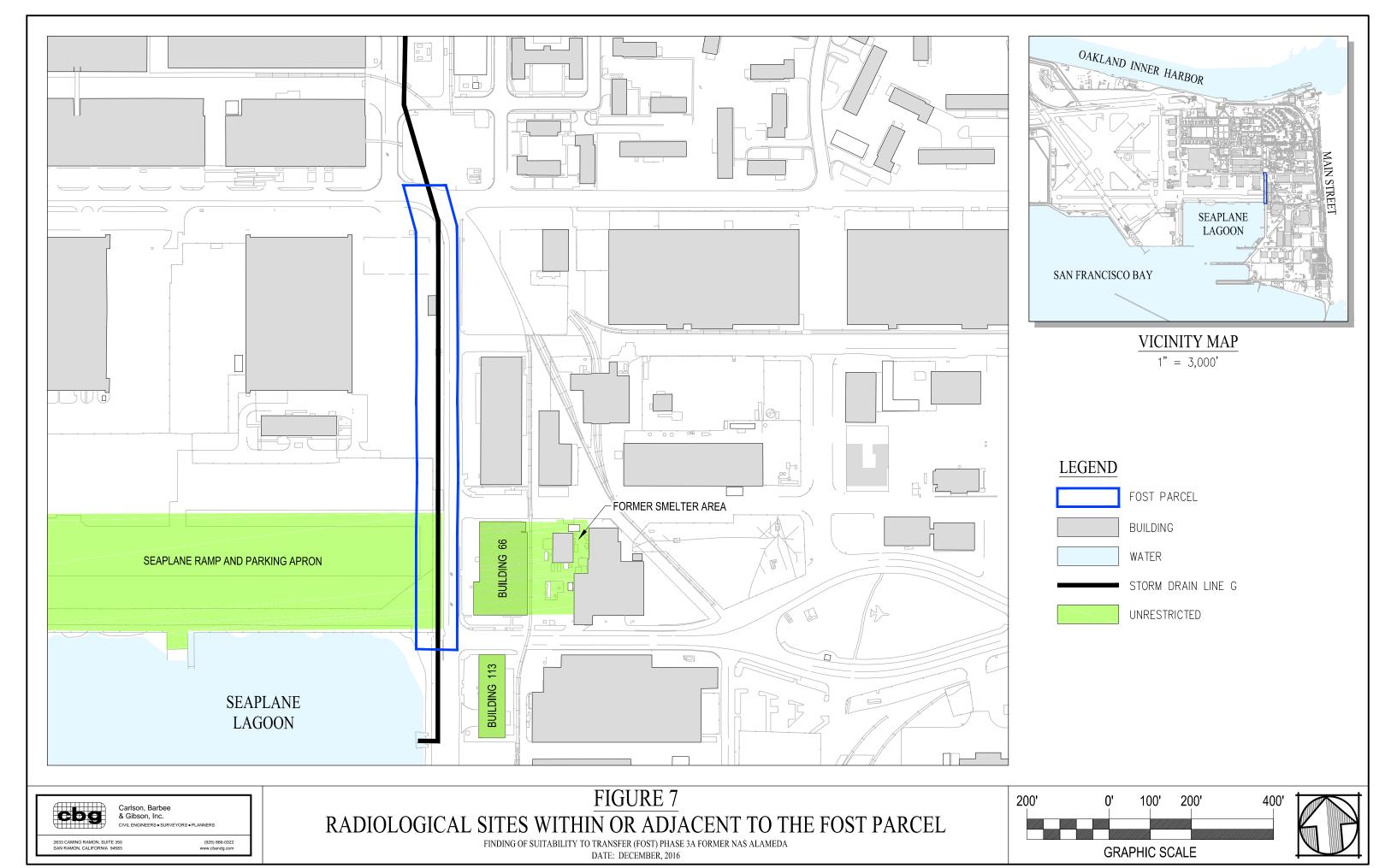


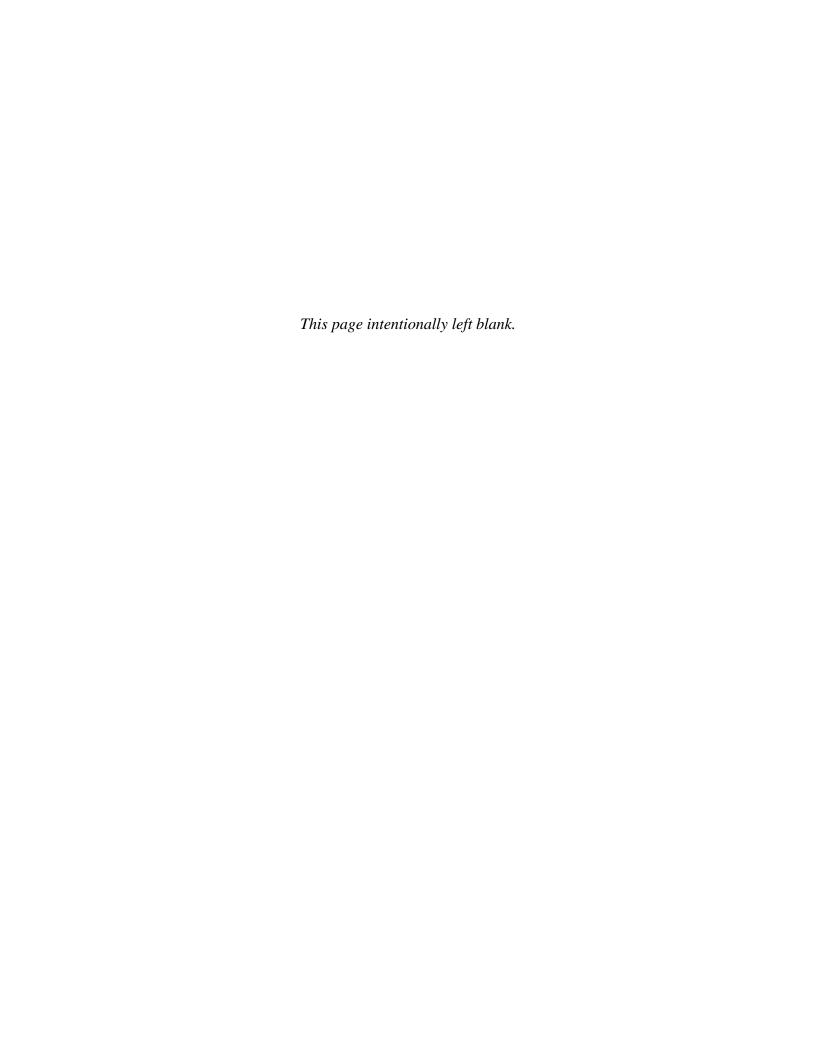


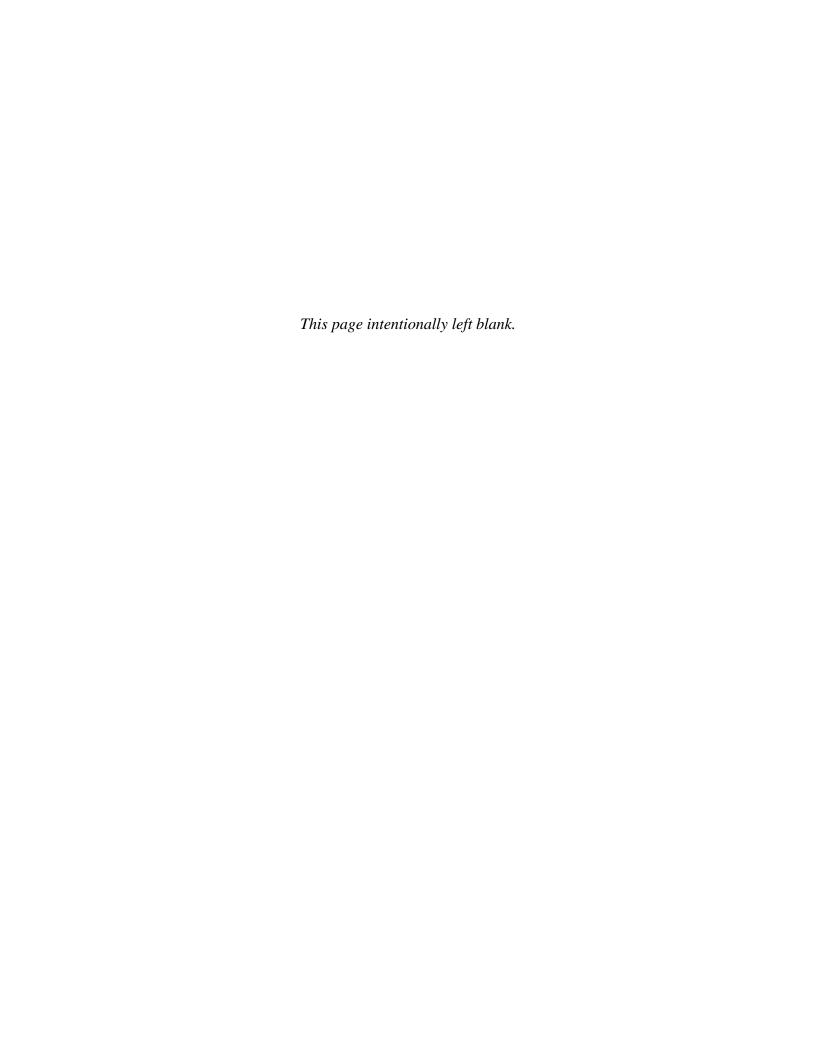












**Table 1 Property Disposal to Date** Finding of Suitability to Transfer Phase 3A – Former NAS Alameda

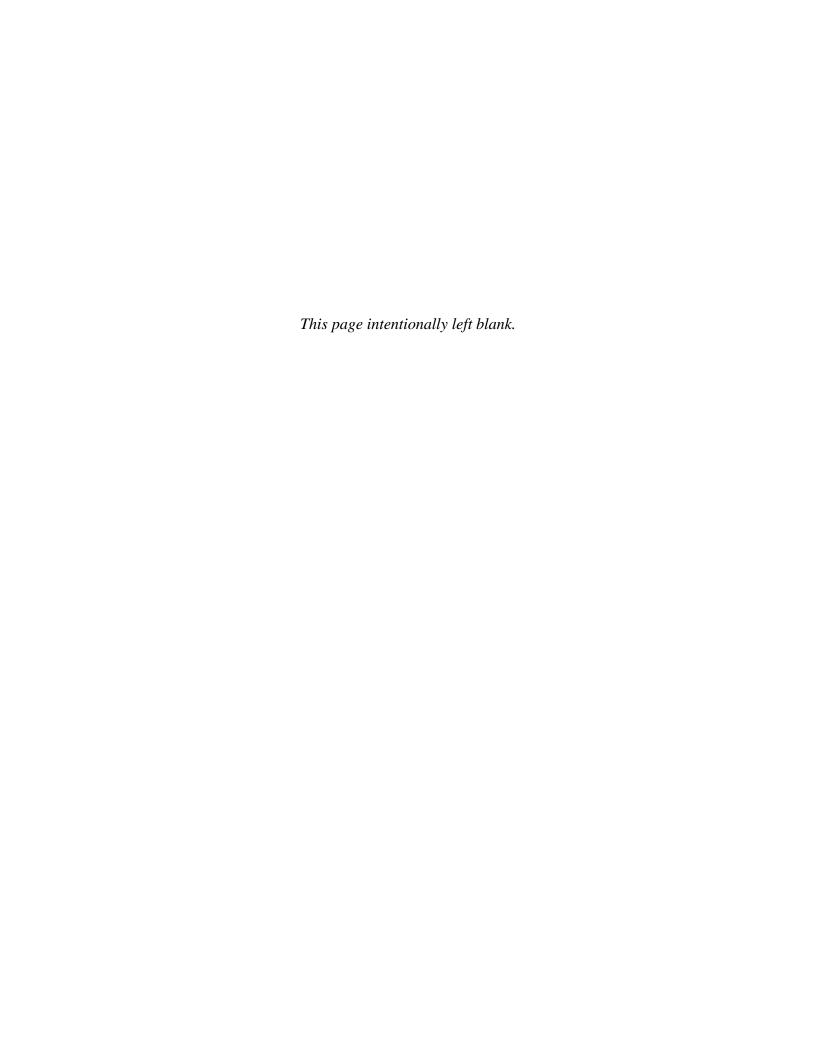
Type of Disposal	Recipient	When	Description	Acres
NC-EDC	City of Alameda	2000	East Housing	75.00
Lease Termination	City of Alameda	2000	Lease Termination	161.50
Federal Agency to Federal Agency	U.S. Coast Guard	2008	Marina Village Housing	28.00
PBC	City of Alameda	2009	Via U.S. Dept. of Interior (Park & 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	623.6
NC-EDC	City of Alameda	2016	April 2016 Conveyance	183.44
PBC	Alameda Unified School District	2016	Island High School/Woodstock CDC	6.73

Notes:

EDC = Economic Development Conveyance

NC = No Cost

PBC = Public Benefit Conveyance



**Table 2 CERCLA Site Status**Finding of Suitability to Transfer Phase 3A – Former NAS Alameda

Identification	Site Name	Status	<b>Closure Reference</b>	
IR 35	West Housing Area	NFA	Navy 2010	
OU-2C Storm Drain Line G	Naval Air Rework Facility	NFA	Navy 2016a	

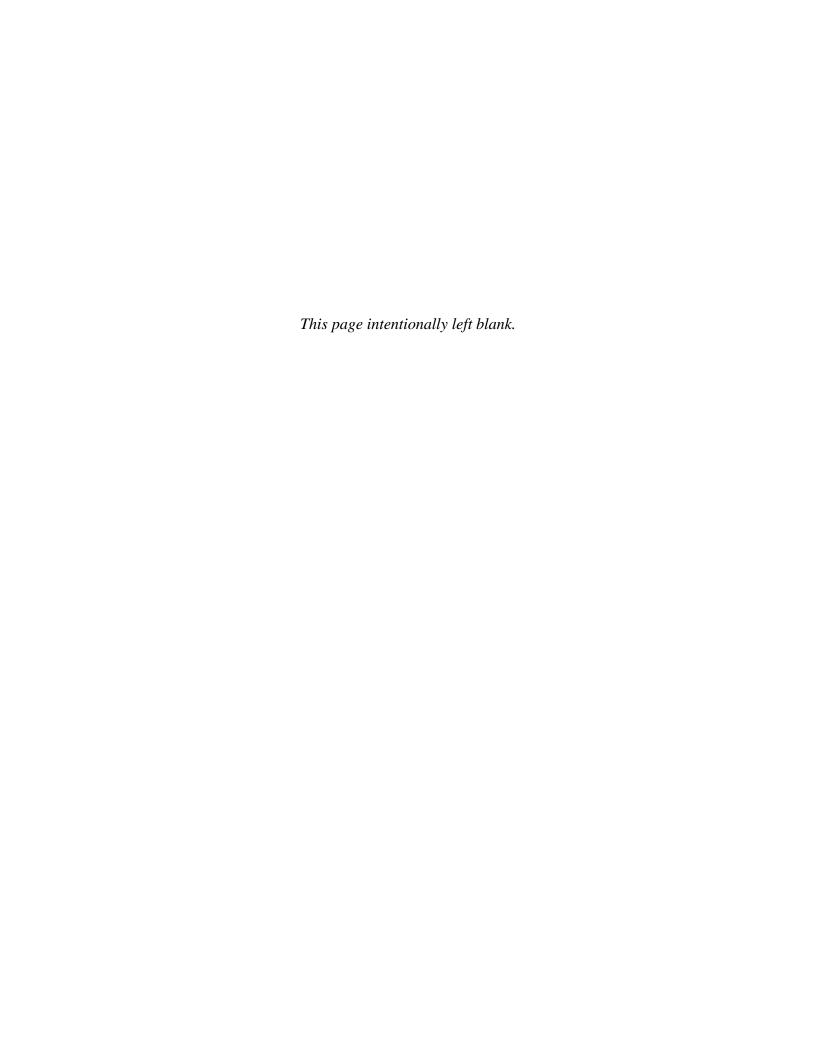
Notes:

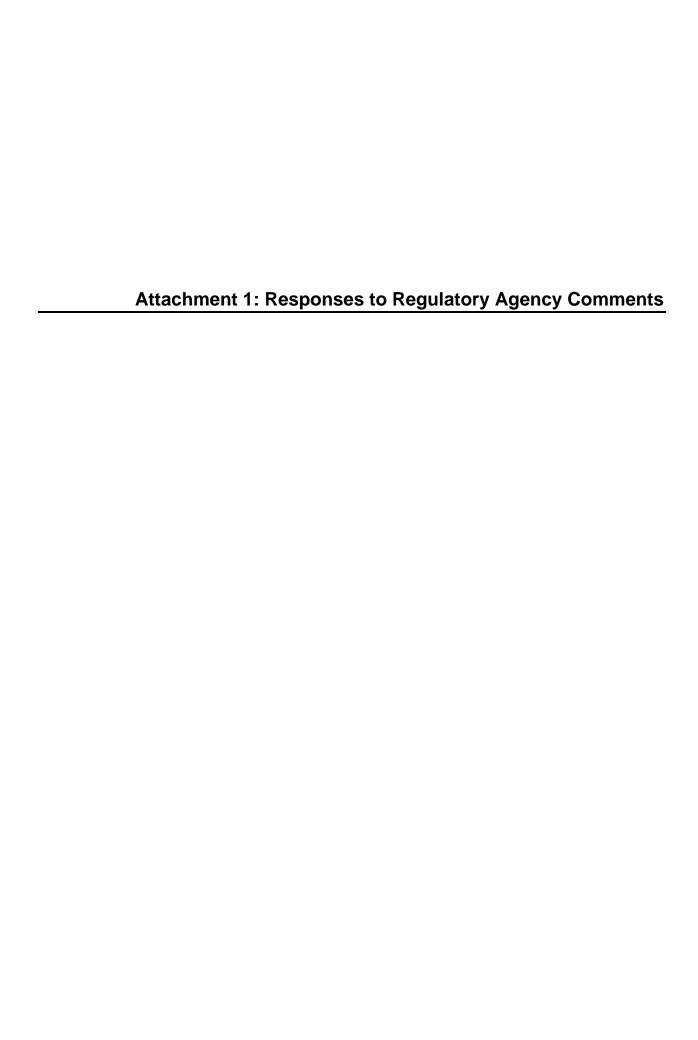
IR = Installation Restoration Site

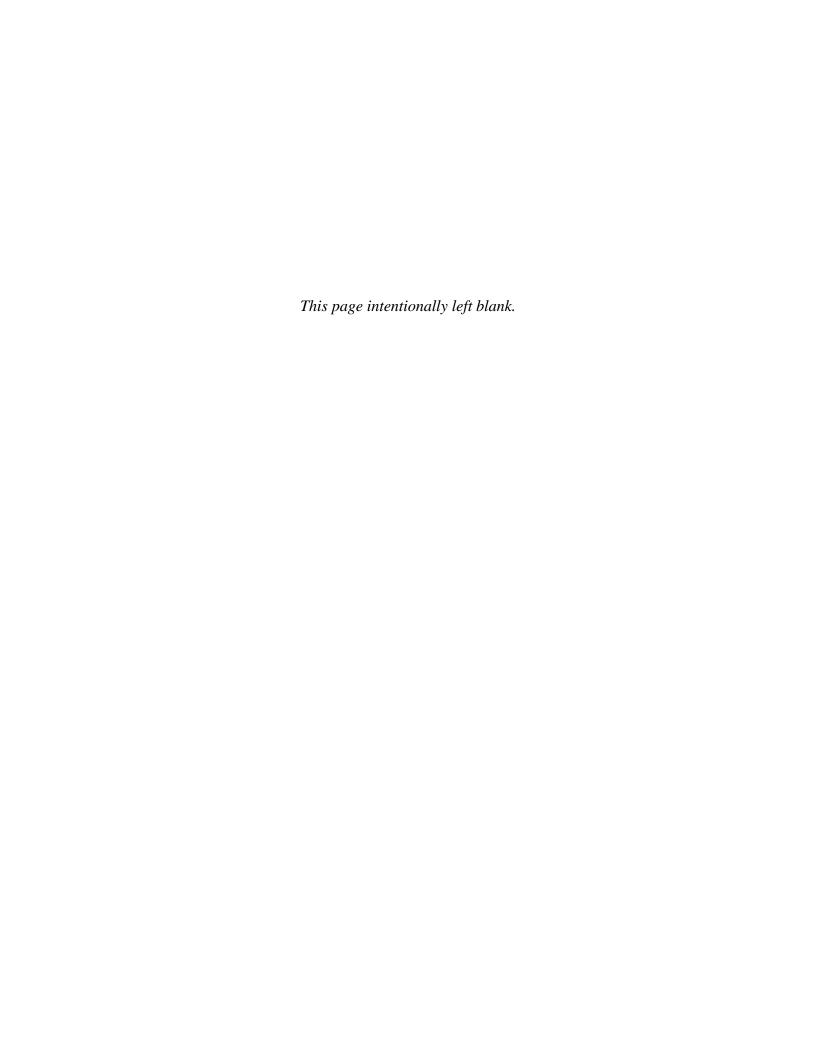
Navy = Department of the Navy

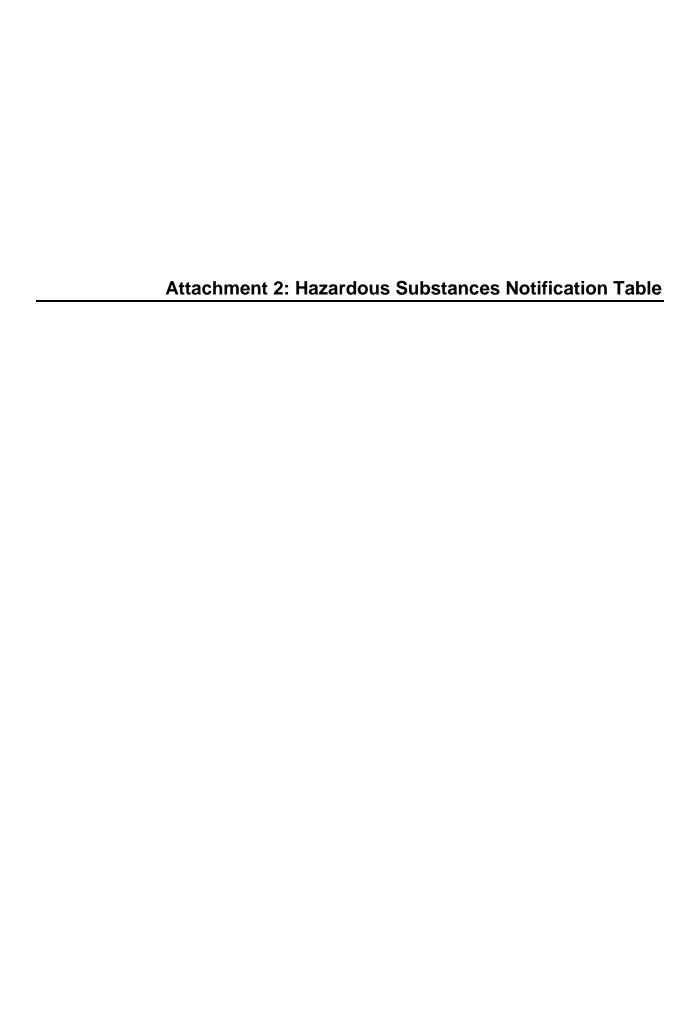
NFA = No Further Action

OU = Operable Unit









## ATTACHMENT 2: HAZARDOUS SUBSTANCES NOTIFICATION TABLE

Finding of Suitability to Transfer Phase 3A - Former NAS Alameda

Identification	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	Stored (S), Released (R), or Disposed (D)	Action Taken <sup>e</sup>
Marsh Crust	Sediment	PAHs	NA	NA	NA	Unknown	Unknown	R	A layer of sediment contaminated with PAHs and referred to as the marsh crust was identified during environmental investigations between 1993 and 2000. The marsh crust was deposited across the Alameda Facility/Alameda Annex from the late 1800s until the 1920s, and is believed to have resulted from direct discharges of petroleum products and wastes from former manufactured gas plants and oil refineries to marshlands that underlie the current uplands. The ROD selected land use controls that prohibit excavation within the marsh crust and former subtidal area, unless proper precautions are taken to protect worker health and safety and to ensure that excavated material is disposed of properly. The property is subject to a deed restriction, a Covenant to Restrict Use of Property, and permitting requirements for excavations in accordance with the Alameda Marsh Crust Ordinance No. 2824.
Storm Drain Line G	Soil	Radium 226	1 Curie	NA	NA	Unknown	Unknown	R	The 2016 ROD for OU-2C Drain Lines Located Outside of Buildings 5 and 10 identifies no contaminant of concern (COC) for the FOST Parcel's portion of OU-2C (Storm Drain Line G). Per the ROD, "sediment was removed from within these storm drain lines and subsequent video surveys, radiological surveys, and sampling did not show any indication of contamination associated with Storm Drain Lines A, B, and G." The 2016 ROD documents no further action for Storm Drain Line G (Navy, 2016a [pending]).

#### 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.

## ATTACHMENT 2: HAZARDOUS SUBSTANCES NOTIFICATION TABLE

Finding of Suitability to Transfer Phase 3A - Former NAS Alameda

- 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 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)(iii), 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 10.0, References.

CAS	Chemical Abstract System	lbs	Pounds	R	Released
CFR	Code of Federal Regulations	NA	Not available	RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response,	NAS	Naval Air Station Alameda	ROD	Record of decision
	Compensation and Liability Act of 1980	Navy	United States Department of the Navy	S	Stored
D	Disposed	OU	Operable unit	U.S.C.	United States Code
FOST	Finding of Suitability to Transfer	ows	Oil-water separator		
gal	Gallon	PAH	Polycyclic aromatic hydrocarbon		