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# UPDATED PHASE I ENVIRONMENTAL SITE ASSESSMENT

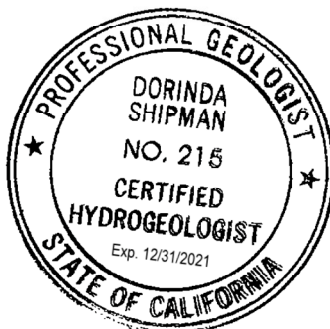
## North Housing - 501 Mosley Avenue Alameda, California

*Prepared for:*

**Housing Authority of the City of Alameda**  
701 Atlantic Avenue  
Alameda, CA 94501-2161

*Prepared by:*

**Langan Engineering & Environmental Services, Inc.**  
135 Main Street, 1500  
San Francisco, California 94105



A handwritten signature of Dorinda Shipman in black ink.

**Dorinda Shipman, PG, CHG**  
Principal/Vice President



A handwritten signature of Elizabeth Kimbrel in black ink.

**Elizabeth Kimbrel, PE**  
Senior Project Engineer

**17 January 2022**  
**731734602**

# LANGAN

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1.0 INTRODUCTION.....</b>	<b>5</b>
1.1 Scope of Work.....	7
1.2 Limitations of the Assessment, Significant Assumptions, and Deviations ..	8
<b>2.0 SITE DESCRIPTION .....</b>	<b>9</b>
2.1 Site Use .....	9
2.2 Surrounding Land Use.....	10
2.3 Physical Setting .....	11
2.3.1 Topography .....	11
2.3.2 Geology.....	11
2.3.3 Hydrogeology .....	11
<b>3.0 RECORDS REVIEW .....</b>	<b>12</b>
3.1 Historical Use Information .....	12
3.1.1 Site .....	12
3.1.2 Adjoining and Surrounding Properties .....	13
3.2 Regulatory Review.....	15
3.2.1 Site .....	15
3.2.2 Surrounding Area Properties.....	15
3.2.3 Adjoining Properties .....	17
3.2.4 Orphan Listings.....	19
3.2.5 Water Wells, Injection Wells and Oil and Gas Wells and Facilities ...	20
3.3 Records Review and User/Owner Provided Information .....	20
3.3.1 Previous Environmental Reports.....	20
3.3.2 Owner-Operator Questionnaire .....	31
<b>4.0 SITE RECONNAISSANCE .....</b>	<b>31</b>
<b>5.0 INTERVIEWS.....</b>	<b>33</b>
5.1 Property Representatives.....	33
5.2 Federal, State and/or Local Government Officials .....	33
<b>6.0 VAPOR ENCROACHMENT SCREENING .....</b>	<b>34</b>
6.1 Vapor Encroachment Screening .....	34
<b>7.0 NON-SCOPE CONSIDERATIONS .....</b>	<b>36</b>
7.1 Radon.....	36
7.2 Asbestos-Containing Material, Lead-Based Paint, PCBs, and Mold .....	36
<b>8.0 EVALUATION.....</b>	<b>37</b>
8.1 Findings and Opinions.....	37
8.2 Deviations and Data Gaps .....	38
8.3 Conclusions .....	38
8.4 Environmental Professional Declaration .....	40
<b>9.0 REFERENCES .....</b>	<b>41</b>



## **ATTACHMENTS**

### **LIST OF FIGURES**

Figure 1	Site Location Map
Figure 2	Site Layout
Figure 3	Nearby Properties Map

### **LIST OF APPENDICES**

Appendix A	Site Reconnaissance Photographs
Appendix B	User/Owner Questionnaire
Appendix C	Historical Records
Appendix D	Previous Reports and Other Documents
Appendix E	Regulatory Database Search Report
Appendix F	Resumes of Environmental Professionals

**UPDATED PHASE I ENVIRONMENTAL SITE ASSESSMENT**  
**North Housing - 501 Mosley Avenue**  
**Alameda, California 17 January 2020**

**EXECUTIVE SUMMARY**

Langan Engineering & Environmental Services, Inc. (Langan) has prepared this Updated Phase I Environmental Site Assessment (Updated Phase I ESA) on behalf of the Housing Authority of the City of Alameda (AHA) (the “User”) for the property located at 501 Mosley Avenue in Alameda, Alameda County, California (the “Site”). Langan previously prepared a Phase I ESA for the Site in January 2020 (Langan, 2020). This Updated Phase I ESA reflects a review of current (i.e. post-January 2020) documents, records and site conditions since the previous Phase I ESA was prepared in 2020.

This Updated Phase I ESA was completed in compliance with the American Society for Testing Materials (ASTM) Standard Practice E1527-13 and the United States Environmental Protection Agency’s (USEPA) All Appropriate Inquiry (AAI) Rule.

The Site is part of Former Naval Air Station (NAS) Alameda and the Former Fleet and Industrial Supply Center Alameda Annex (FISCA). The Site was historically owned and operated by the US Department of the Navy (Navy) between 1946 and 1997, when the base was closed. The area where the Site is located is within a larger 42 acre Installation Restoration (IR) site under the Navy’s CERLCA<sup>1</sup> program referred to as IR-25 (Figure 1). The Site occupies filled marshland. The approximately 12.7 acre Site is currently unoccupied. By 1969, the Site was developed by the Navy with the present-day residential units which were occupied by the U.S. Coast Guard within a larger housing development named the North Housing Area. The following Assessor’s Parcel Numbers (APNs) are included in the Site boundary (Figure 3): 74-09050-10 -06 and 74-09050-12-02. The Site transferred ownership from the Navy to the City of Alameda on 30 May 2019 after the Base Realignment and Closure (BRAC) Cleanup Team (BCT) concurred the property was suitable for transfer (Navy, 2019). The AHA accepted the Site from the City via a Certificate of Acceptance and Quitclaim Deed also dated 30 May 2019. The quitclaim deeds associated with these property transfers are referred to herein as the AHA transfer documents. All environmental sites identified at or surrounding the Site have been subject to environmental investigation, assessment, and, if needed, remediation, under regulatory agency oversight.

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<sup>1</sup> Comprehensive Environmental Response, Compensation, and Liability Act, known also as Superfund.

Ownership records indicate that the AHA currently owns the Site.

The Site is bound by Mosley Avenue to the north, Bette Street to the east, a residential structure to the south, and a vacant school to the southwest (Figure 2). Mosley Avenue trends from the northwest through the central area of the Site and a continuation of Mosley Avenue adjoins the northern perimeter of the Site. Lakehurst Circle trends along the northwestern perimeter of the Site, Mayport Circle is located within the central area of the Site, and a continuation of Singleton Avenue bisects the southern area of the Site, and the southernmost portion of the Site was previously occupied by Kollman circle. Twenty multi-unit residential housing units were previously located on the Site. However, to-date, the 20 units have been demolished. The Site is currently vacant and fenced.

The objective of this Updated Phase I ESA was to identify the presence or likely presence, use, or release on the Site of hazardous substances or petroleum products as defined in ASTM E1527-13 as Recognized Environmental Conditions (RECs) since Langan's previous Updated Phase I ESA, which was prepared in January 2020.

The Updated Phase I ESA identified the following REC associated with the Site:

- **REC-1: Known Subsurface Soil and Groundwater Impacts at the Site:** Subsurface investigations performed at the Site in association with IR Site 25 by the Navy between 2000 through 2013 included soil, groundwater, soil gas, crawl space air, indoor air, and ambient air sampling and analysis. The results of the soil and groundwater samples exhibited concentrations of certain volatile organic compounds (VOCs), primarily benzene and naphthalene, above current applicable residential screening criteria. The VOC concentrations were attributed to historical fill present at the Site. Previously conducted investigations and reports conclude that vapor intrusion and indoor air inhalation does not pose an unacceptable cancer risk to occupants or members of the public and is at the lower end or below the risk management range of  $10^{-4}$  to  $10^{-6}$ . However, it should be noted that an existing subsurface clay layer is currently interpreted to be serving as an effective barrier to vapor intrusion. In 2014, the Navy and regulatory agencies determined no further action is necessary to remediate groundwater at the Site. Residual soil contamination must be managed in accordance with the City of Alameda's SMP and City ordinance (further described under CREC-1).

The Updated Phase I ESA identified the following Controlled RECs (CRECs) associated with the Site:

- **CREC-1: Presence of Marsh Crust:** The Marsh Crust is a subsurface soil horizon that lies between the native Bay mud sediment and the overlying artificial fill, within the former intertidal zone throughout much of the eastern and central portions of Alameda NAS. Heavy industrial activity, such as petroleum refineries and manufactured gas plants, prior to the time artificial fill was placed in Alameda, resulted in significant discharges of petroleum waste to the surrounding marshlands. The Marsh Crust contains concentrations of total petroleum hydrocarbons (TPH), semi-volatile organic compounds (SVOCs), and some metals. The Navy's Marsh Crust Remedial Action Plan/Record of Decision (RAP/ROD), which was approved by the Department of Toxic Substances Control (DTSC) on 2 February 2001, selected institutional controls as the remedy for Marsh Crust. These institutional controls were in the form of environmental activity restrictions via deeds, the Covenant to Restrict Use of Property (CRUP) for AHA portion of Site 25, and the City's Excavation Ordinance Number 2824 (Marsh Crust Ordinance [MCO]).

The Marsh Crust must be sampled in accordance with the MCO. The MCO requires preparation of a SMP for handling of materials excavated from below the Marsh Crust Threshold Depth. The City of Alameda's SMP specifies worker health and safety and waste management procedures. In accordance with the MCO the Marsh Crust will need to be sampled prior to development activities at the Site.

- **CREC-2: Historical Operations at Adjacent and Neighboring Facilities:** Previous operations/uses on adjoining properties within the surrounding former Fleet and Industrial Supply Center Alameda Annex (FISCA) property to the north, east, south, and southwest of the Site includes transportation companies; automotive dismantling, salvage, and recycling operations; and fueling and light industrial operations. One or more of these activities within the FISCA property is located in the inferred hydraulically-upgradient direction of the Site and have documented releases of regulated substances. Releases of regulated substances at these surrounding properties may have impacted conditions at the Site. No further action is required by the Navy; however, residual chemical concentrations may remain in the subsurface that must be managed per the SMP.

The following Business Environmental Risk (BER) was identified:

- **BER-1: City Program and Site Management Plan Compliance:** The Site is enrolled in the City of Alameda Land-Use Restriction Tracking and Site Management Plan Program ("City Program"). Any work conducted by the owner or its agent(s) on the property covered by the deed that involves construction, soil excavation or grading, trenching or



groundwater contact shall be conducted pursuant to a Site Management Plan (SMP) that is acceptable to the San Francisco Bay Regional Water Quality Control Board (Regional Water Board), and in accordance with the City Program. The AHA prepared the 19 August 2019 SMP for the Site, which, per the CRUP, provides risk management measures to be implemented for excavation of soil at depths below four feet.

No de minimis conditions or HRECs were identified in connection with the Site.

Additional information related to the above listed REC, CRECs, and BER can be found within the body of this report.

Based on the results of this Updated Phase I ESA, Langan does not recommend conducting a Phase II environmental site assessment.



## 1.0 INTRODUCTION

Langan Engineering & Environmental Services, Inc. (Langan) has prepared this Updated Phase I Environmental Site Assessment (Updated Phase I ESA) on behalf of AHA (the “User”) for the property located at 501 Mosley Avenue in Alameda Point, Alameda County, California (the “Site”). Langan previously prepared a Phase I ESA for the Site in January 2020 (Langan, 2020). This Updated Phase I ESA reflects a review of current (i.e. post- January 2020) documents, records and site conditions since the previous Phase I ESA was prepared in 2020.

A United States Geological Survey (USGS) Site Location Map is included as Figure 1. This Updated Phase I ESA was completed in general accordance with the American Society for Testing Materials (ASTM) Standard Practice E1527-13 and the United States Environmental Protection Agency’s (USEPA) All Appropriate Inquiry (AAI) Rule.

The Site is part of Former Naval Air Station (NAS) Alameda and the Former Fleet and Industrial Supply Center Alameda Annex (FISCA). The Site was historically owned and operated by the U.S. Department of the Navy (Navy) between 1946 and 1997, when the base was closed. The area where the Site is located is within a larger 42 acre Installation Restoration site under the Navy’s CERLCA<sup>2</sup> program referred to as IR-25 (Figure 1). The Site occupies filled marshland. The Site is located in a portion of former NAS Alameda that transferred ownership from the Navy to the City of Alameda on 30 May 2019 after the Base Realignment and Closure (BRAC) Cleanup Team (BCT) concurred the property was suitable for transfer (Navy, 2019). The AHA accepted the Site from the City via a Certificate of Acceptance and Quitclaim Deed also dated 30 May 2019. The quitclaim deeds associated with these property transfers are referred to herein as the AHA transfer documents. The BCT for Alameda Point includes representatives of the Navy, U.S. Environmental Protection Agency (EPA), and the State of California through the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) and Department of Toxic Substances Control (DTSC). The BCT is tasked with the implementation, oversight, and coordination of all environmental programs and providing the direction and oversight necessary to remedy environmental impacts and facilitate transfer of Former NAS Alameda property. All environmental sites identified at or surrounding the Site have been subject to environmental investigation, assessment, and, if needed, remediation, under the BCT’s oversight.

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<sup>2</sup> Comprehensive Environmental Response, Compensation, and Liability Act, known also as Superfund.

Ownership records indicate that the Alameda Housing Authority currently owns the Site. This Updated Phase I ESA was completed in advance of AHA's proposed redevelopment of the Site for use as a multi-unit residential housing complex.

The purpose of this Updated Phase I ESA is to identify Recognized Environmental Conditions (RECs) in connection with the Site using the methodology recommended by ASTM and the AAI Rule. Specifically, the ASTM methodology is referred to as "*Standard Practice for Environmental Site Assessments; Phase I Environmental Site Assessment Process, Designation E1527-13*." The USEPA's AAI Rule was designed to establish federal standards and practices for conducting all appropriate inquiries. The AAI Rule, which incorporates the ASTM E1527-13 standard, is used to establish the innocent landowner defense under the CERCLA and to provide additional liability protection for contiguous property owners and bona fide prospective purchasers.

For the purpose of this ESA report, a REC is defined as follows:

*"The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions."*

A Historical REC (HREC) is defined as follows:

*"A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."*

A Controlled REC (CREC) is defined as follows:

*"A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example,*

*property use restrictions, activity and use limitations, institutional controls, or engineering controls).*"

A Business Environmental Risk (BER) is defined as follows:

*"A risk that can have a material environmental or environmental-driven impact on business associated with the current or planned use of a parcel of commercial real estate."*

A de minimis conditions is defined as follows:

*"A condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."*

## **1.1 Scope of Work**

In general, the scope of this Updated Phase I ESA consisted of reviewing readily available information and environmental data relating to the Site; conducting interviews with individuals knowledgeable about the Site; reviewing readily available maps and records maintained by federal, state, and local regulatory agencies; and conducting a Site reconnaissance. The specific scope of this assessment included the following:

- A Site reconnaissance conducted in a systematic manner to visually characterize on-Site conditions and evaluate the property's location with respect to adjacent property uses and natural surface features. In addition, the reconnaissance included the adjacent roads and readily accessible properties to identify potential environmental conditions on neighboring properties. The Site reconnaissance was conducted on 6 January 2022 by Langan Staff Scientist Megan Rollo. During the Site reconnaissance, Ms. Rollo was accompanied by representatives of site ownership, including Mr. Tony Weng with the Housing Authority of the City of Alameda (AHA). Photographs taken as part of the Site reconnaissance are provided in Appendix A.
- A review of responses to the Owner/Operator and User/Client Questionnaire. A copy of completed questionnaire is included in Appendix B.
- A review and interpretation of readily available historical documents, such as topographic maps, aerial photographs, tax maps, city directories, and historical maps to identify prior activities on and in the vicinity of the Site. Copies of the reviewed documents are included in Appendix C.



- A review of previous environmental reports and other pertinent documents associated with the Site. Copies of previous environmental reports are included in Appendix D.
- A review of responses from federal, state and local agencies to requests made under the Freedom of Information Act (FOIA). Copies of the responses are included in Appendix D.
- A review of readily available environmental databases maintained by the USEPA, state, and local agencies as provided by Environmental Data Resources, Inc. (EDR) and described within the Regulatory Review Section of this report. The EDR report is provided in Appendix E.
- A Vapor Encroachment Screening to evaluate potential upgradient off-property releases that may pose Vapor Encroachment Concerns (VEC) at the Site.

## **1.2 Limitations of the Assessment, Significant Assumptions, and Deviations**

This Updated Phase I ESA was conducted by Langan and is limited to the services agreed to with AHA and no other services beyond those explicitly stated should be inferred or are implied.

Langan performed this Updated Phase I ESA of the Site utilizing a standard of good commercial and customary practice that is in general accordance with the ASTM E1527-13 and the 40 Code of Federal Regulations (CFR) Part 312 Standards and Practices for AAI.

The findings and recommendations presented in this report are professional opinions based solely upon Langan's visual observations of the Site and the immediate Site vicinity, and upon Langan's interpretations of the readily available historical information, conversations with persons knowledgeable about the Site, and other readily available information, as referenced in the report. These recommendations are intended exclusively for the purpose stated herein, at the Site indicated, and for the project indicated.

This report is intended for the sole use of AHA. The scope of services performed during this investigation may not be appropriate for other users, and any use or re-use of this document, or the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

This study was not intended to be a definitive investigation of possible contamination at the Site. The purpose and scope of this investigation was to determine if there is reason to suspect the possibility of contamination at the Site. This report is intended to be used in its entirety. No excerpts may be taken to be representative of the findings of this assessment.

Opinions and recommendations presented in this report apply to Site conditions and features as they existed at the time of Langan's Site reconnaissance, and those reasonably foreseeable. They cannot necessarily apply to conditions and features of which Langan is unaware and has not had the opportunity to evaluate.

Langan cannot act as insurers and cannot "certify" that a site is free of environmental contamination, and no expressed or implied representation or warranty is included or intended in our reports, except that our services were performed, within the limits prescribed by our client, with the customary thoroughness and competence of our profession.

## **2.0 SITE DESCRIPTION**

### **2.1 Site Use**

The Site is currently consists of vacant lots and is improved with multiple asphalt-paved roads. The site previously consisted of 20 multi-unit residential structures and were constructed on the Site during the late 1960s. Four of the 20 structures were demolished prior to January 2020 and are documented in Langan's previous Phase I ESA (Langan, 2020). The remaining 16 multi-unit housing units, were demolished between December 2020 and January 2021. Demolition activities associated with these 16 units is discussed further in Section 3.3, below.

The northern area of the Site is comprised of a portion of Alameda County APN 74-09050-10 -06. The central and southern area of the site is comprised of a portion of Alameda County APN 74-09050-12-02. The Site is currently unoccupied. The AHA is the current property owner.

The Site and surrounding area are located within Economic Development Conveyance (EDC) parcel ALA-37-EDC as shown on Figure 2 of the SMP.

Improvements at the Site are summarized in the following table:

<b>Site Improvements</b>	
<b>Size of the Site</b>	Approximately 12.5 acres
<b>Buildings/Spaces/Structures</b>	None
<b>Unimproved Areas</b>	None
<b>Surface Water</b>	None
<b>Potable Water Source</b>	East Bay Municipal Utility District (EBMUD)
<b>Sanitary and Storm Sewer Utilities</b>	EBMUD
<b>Electrical Utilities</b>	Electricity provided by Alameda Municipal Power (AMP), Pacific Gas & Electric (PG&E) provided natural gas



Site Improvements	
<b>Construction Completion Date</b>	1969
<b>General Construction Type</b>	None
<b>Cooling and Ventilation System Type</b>	None
<b>Heating System Type</b>	None
<b>Emergency Power</b>	None

## 2.2 Surrounding Land Use

Based on visual observations of the surrounding area during the Site reconnaissance, the Site is located within an urban area characterized by commercial and residential buildings. The Oakland Inner Harbor is located approximately 1,000 feet north of the Site. Adjoining and surrounding property usage is summarized in the following table and shown on Figure 3

Direction	Parcel Number	Adjoining Properties	Surrounding Properties
North	74-905-42-10	Pond	Oakland Inner Harbor
	74-905-10-3	Estuary Park, Alameda	
South	74-905-42-3	Shinsei Gardens Apartments (401 Willie Stargell Ave)	Residential Properties surrounding Ruby Bridges Elementary School / Bayport Park
	74-1374-2	Parking lot	
	74-905-42-5	Utility lift station	
East	Bette Street		Residential Properties
	74-1371-35	Residential Properties (2730-2758 Bette St)	
	74-1371-41		
	74-1371-47		
	74-1371-53		
	74-1371-59		
	74-1374-14		
	74-1374-20		
	74-1374-11		
	74-1374-31		
	74-1374-37		
West	74-905-10-4	Residential Properties (Admirals Cove Redevelopment)	Residential/ Institutional Properties
	74-905-9-7	Former Island High School/ Miller Elementary School; (250 Singleton Ave)	

## **2.3 Physical Setting**

### 2.3.1 Topography

According to the USGS quadrangle map, the elevation of the Site is approximately 13 feet above mean sea level. Based on Site observations and the topographic quadrangle map, the Site has generally level terrain.

### 2.3.2 Geology

The Site is blanketed by about four to five and a half feet of fill consisting of very loose to medium dense sand and clayey sand. Below the fill is a layer of high organic content soil known as the Marsh Crust. The Marsh Crust coincides with the surface of buried tidal and subtidal mudflats. The Marsh Crust and fill is underlain by about nine to 15 feet of marine deposits consisting of weak, compressible, very soft to medium stiff, highly plastic clay known locally as Bay Mud, and interbedded layers of very loose to medium dense sand, silty sand, clayey sand, and sand with silt. The Bay Mud ranges from about four to ten feet thick, generally increasing in thickness from south to north at the Site (Navy, 2014).

The Bay Mud is generally underlain by medium dense to very dense sand, clayey sand, silty sand, clayey silty sand, and sand with silt, with occasional layers of stiff to hard clay with variable sand content, to the maximum depths explored at an adjacent site (104½ feet bgs).

### 2.3.3 Hydrogeology

Groundwater flow is typically topographically influenced, as shallow groundwater tends to originate in areas of topographic highs and flow towards areas of topographic lows, such as rivers, stream valleys, ponds, and wetlands. A broader, interconnected hydrogeologic network often governs groundwater flow at depth or in the bedrock aquifer. Groundwater depth and flow direction are also subject to hydrogeologic and anthropogenic variables such as precipitation, evaporation, extent of vegetation cover, and coverage by impervious surfaces. Other factors influencing groundwater include depth to bedrock, the presence of artificial fill, and variability in local geology and groundwater sources or sinks.

The closest surface water body appears to be the Oakland Inner Harbor located approximately 800 feet north-northwest of the Site (Figure 1). Based on the local topography and proximity to nearby surface water features, the inferred groundwater flow direction at the Site is to the north. According to EDR Report for the Site (Appendix E) there are no mapped wetlands at the Site. The closest mapped wetland is approximately 40 feet to the northeast of the Site (Figure 3). The Site is located in the 500-year flood zone as shown on Figures 2 and 3.

Where measured on adjacent sites, groundwater was encountered at depths between about four and six feet bgs. Due to the proximity of the site to the San Francisco Bay, groundwater levels are expected to fluctuate with the tides and possibly seasonally.

### 3.0 RECORDS REVIEW

#### 3.1 Historical Use Information

The Site is located on a portion of former NAS Alameda that transferred ownership from the Navy to the City after the BCT concurred the property was suitable for transfer (Navy, 2019). All environmental sites identified at the Site have been subject to environmental investigation, assessment, and, if needed, remediation, under regulatory agency oversight. All environmental sites near the Site boundaries have received regulatory agency concurrence for either No Further Action (NFA) or response complete.

Langan reviewed the documents referenced below for the Site and surrounding area. Copies of historical aerial photographs, historical Sanborn Maps, historical USGS topographic maps, and city directory abstract are included in Appendix C.

Reference	Dates
Aerial Photographs	1939, 1946, 1958, 1963, 1968, 1974, 1982, 1993, 1998, 2005, 2009, 2012, and 2016
Historical Sanborn Maps	Sanborn maps are unavailable for review.
Historical USGS Topographic Quadrangles	1895, 1899, 1915, 1948, 1949, 1959, 1968, 1973, 1980, 1996, and 2012
City Directory Abstract (available business directories, including city, cross-reference, and telephone directories)	1920 through 2014

The following is a summary of relevant information for the Site, adjoining properties, and surrounding area based on our review of the above historical references.

##### 3.1.1 Site

Based on a review of the above references, Site use and other pertinent information is summarized below.

- Late 1800s: The Site is occupied by a marsh. No development was evident at the Site and surrounding areas (USGS Topographic Maps).

- Mid-1910s to late 1930s: The majority of the marshland has been filled in, a railroad is depicted as bisecting through the northern area of the Site. (USGS Topographic Maps) the adjoining area to the south of the Site remains marshland which is entirely filled by 1939. Structures are depicted further to the north and east of the Site.
- Mid 1940s to late 1950s: By 1946, the Site is developed with residential properties to approximately 1963. The Site was occupied by John Muir School from at least 1946 to approximately 1968 (Aerial Photographs).
- Late 1960s: The Site is undeveloped (Aerial Photographs).
- Early 1970s to present: By 1973, the Site is developed with residential properties and roadways (USGS Topographic Maps). Residential structures on Site were utilized as part of the larger US Coast Guard (USCG) housing at North Village. The Site remains unchanged in subsequent aerial photographs through 2016. As noted above, the Site is currently vacant as previous on-Site residential housing units have been demolished.

Based on our review of the above historical references, imported fill material was used to raise the Site topography, the presence of fill material is of potential concern. No evidence of former Site use as observed in historical records indicates potential sources of contamination or environmental concern.

### 3.1.2 Adjoining and Surrounding Properties

Scarce development was evident at the surrounding areas of the Site from 1895 to 1915. The surrounding area is a marsh and a railroad that runs northwest to southeast located north of the property (USGS Topographic Maps, 1895 to 1915). By 1939, the railroad is removed and the surrounding areas northeast and east are occupied by industrial buildings (Aerial Photographs 1939). By 1946, the areas north, east, and south of the Site are occupied by large naval warehouses as part of the Fleet and Industrial Supply Center Alameda Annex (FISCA), and the area west of the Site is occupied by residential housing which has been constructed for use by the Navy as part of the Alameda Point Naval Air Station (NAS). The adjoining area located south of the Site is vacant, but the surrounding area is residential. (Aerial Photographs 1946). In 1949, the area located southeast of the Site is occupied by Notre Dame Academy. By 1959, the surrounding areas south of the Site are occupied with five warehouses and Notre Dame Academy has been demolished and redeveloped as a drive in theater (USGS Topographical Quadrangle 1959). Beginning in 1963, NAS housing undergoes redevelopment (Aerial Photographs 1963). By 1968, Alameda NAS housing to the west of the Site is completely torn down while the surrounding area remains unchanged (USGS Topographical Quadrangle 1968). By 1973, new residential buildings occupied the Alameda NAS USCG North Housing area. By 1993, one of the



warehouses associated with the FISCA, south of the Site is removed and replaced with additional residential buildings. By 2005, all warehouses and portions of residential housing south of the Site are completely removed. One warehouse east of the Site is also removed. The field southeast of the Site becomes a recreational sports field. By 2009, the area south of the Site has been redeveloped and occupied with residential housing and developed roadways. By 2016, the eastern warehouses are all removed and replaced with residential and commercial buildings (Aerial Photographs 2016). The following adjoining or surrounding area properties are of environmental interest based on their current or historical use.

#### *Adjoining Properties*

- 250 Singleton Ave (southwestern adjoining property): included residential housing in 1946, vacant land in 1958, a naval scrapyard from 1963 to 1982, George P. Miller Elementary School from 1982 to 2007, and Island High school from 2007 to Present (Aerial Photographs).
- 401 Willie Stargell Avenue (southern adjoining property): included a naval scrapyard from 1946 to 1982, vacant from 1993 to 2005, and Shinsei Gardens following construction in 2008 (Aerial Photographs).
- 2730-2758 Bette Street (eastern adjoining property): included the FISCA, naval industrial supply center from 1946 to 1998, vacant space from 2005 to 2012, and residential buildings from 2012 to present (Aerial Photographs).

#### *Surrounding Properties*

- 2610 5<sup>th</sup> Street (approximately 436 feet southeast – inferred upgradient): included a naval scrapyard from 1958 to 1982, vacant space from 1993 to 2012, and a commercial shopping center from 2016 to present (Aerial Photographs).
- 2600-2650 5<sup>th</sup> Street (approximately 438 feet east – inferred upgradient): included the FISCA, naval industrial supply center from 1946 to 2012, and a commercial shopping center from 2016 to present (Aerial Photographs).
- 2203 Mariner Square (approximately 1169 feet east – inferred upgradient): included a warehouse from at least 1939, vacant land from at least 1963 to 1975, and a commercial building from 1982 to present (Aerial Photographs).

Potential releases of hazardous substances and/or petroleum products at the above adjoining and surrounding area properties may have adversely impacted groundwater and/or soil vapor quality at the Site. One or more of these properties is discussed in Section 3.2 below.



## **3.2 Regulatory Review**

Langan reviewed an environmental database search report, prepared by EDR, for the Site and surrounding area. The EDR report is a listing of properties identified on select federal and state standard source environmental databases within the approximate search radius specified by ASTM Standard Practice for E1527-13. This information is reported to Langan by EDR, and to EDR by government sources; therefore, neither Langan nor EDR can verify the completeness and accuracy of the database information. Langan reviewed each environmental database on a record-by-record basis to determine if certain sites identified in the report are suspected to represent a potential impact to the Site. Descriptions of regulatory databases are provided in the EDR report. A copy of regulatory database information was provided by EDR and is included in Appendix E. The following is a summary of records for the Site, adjoining properties, and surrounding properties with potential environmental concerns.

### 3.2.1 Site

The database review indicated that the Site is listed in the Department of Defense (DOD) database. The Site is listed within the DOD database for having operated as a portion of the Alameda Naval Air Station (NAS) between 1940 and 1997. Numerous investigations and releases are associated with off-Site property included within the former NAS. The Site is included within the former IR-25 area, a larger 42 acre area part of the former Alameda NAS. Details regarding environmental investigations at the IR-25 property are provided in further detail below in Section 3.3.1.

Although the information presented by EDR findings is limited, additional information presented in Section 3.3.1 indicates that the Site may be impacted by a REC and several CRECs.

### 3.2.2 Surrounding Area Properties

Based on our review of surrounding area property listings, most of the nearby listings were either: (1) closed by the regulatory agency, (2) located in the inferred hydrologically down-gradient direction from the Site, (3) determined to be a significant distance from the Site, and/or 4) determined not to have a potential impact on the Site based on our review of available database information. However, the following properties in the surrounding area are of environmental interest.

Sally Beauty Supplies #B-2A (2610 5th Street – Approximately 436 feet southeast and inferred upgradient)

This facility is listed in the CERZ Haz Waste database. The listing documents that the business generates hazardous waste in the form of discarded and expired products including aerosols, waste flammable liquids, waste oxidizing solids, and hazardous waste liquids. Because of the nature and documentation of chemical storage at and no reported releases from the site, this facility is not considered a REC.

Safeway #3281 (2600 5<sup>th</sup> Street – Approximately 438 feet inferred upgradient)

This facility is listed in the CERZ HAZ WASTE and CERS databases. The facility is listed as a hazardous waste generator. Available records document violations associated with records keeping of hazardous materials inventory and manifests on site. All violations have been reported as having been returned to compliance. Due to the nature of the facility, the descriptions of violations and corrective actions taken, this facility is not considered a REC.

Petco #5319 (2650 5TH Street Suite 30 – Approximately 439 feet inferred upgradient)

This facility is listed in the CERZ HAZ WASTE database. The facility is listed as a hazardous waste generator. Available records document violations associated with training, records keeping and labeling of hazardous materials inventory on site. All violations have been reported as having been returned to compliance. Due to the nature of the facility, the descriptions of violations and corrective actions taken, this facility is not considered a REC.

Safeway Fuel #3281 (501 Willie Stargell Avenue – Approximately 513 feet inferred crossgradient)

This facility is listed in the RCRA NonGen/ NLR, CERS HAZ WASTE, CERS Tanks, CERS, Tanks, and UST database. This facility is listed as a handler of hazardous materials and a UST operator due to its operation as an active gasoline filling station. Records document violations related to improperly functioning leak detection systems on site as well improperly labeled plans submitted for CERS database filing. All violations are recorded as having been returned to compliance. No records of spills or leaks are associated with the site. Due to the resolution of documented violations associated with the leak detection system on site this facility is not considered a REC.

Retail Center (2600 – 2690 5th Street – Approximately 677 feet inferred upgradient)

This facility is listed in the Envirostor and VCP databases. This site has been redeveloped under the oversight of the DTSC's Site Mitigation and Brownfields Reuse Program (SMBRP). The facility

is an active listing within the VCP database as of 2018. Due to the active regulatory oversight associated with this cleanup site, this facility is not considered a REC.

Alameda Naval Air Station Former USTs 1W & 2E (2600 5th Street – 881 feet inferred cross-gradient)

This facility is listed in the Military UST and CERS Tanks databases. This facility is recorded as having stored potential fuels including: diesel, gasoline, heating oil/ fuel oil, naphthalene, and petroleum products. During site redevelopment activities, two USTs were discovered in 2014. Tank contents were removed, the tanks thoroughly cleaned, and the USTs were crushed and removed as scrap metal. No leaks or evidence of spills or releases were observed during tank removal. An NFA letter was issued by the Regional Water Board following the removal action. Due to the lack of observed release from the former USTs at this facility and inferred cross-gradient location, this facility is not considered a REC.

Michael's Store #1234 (2650 5th Street Suite A – 1009 feet inferred upgradient)

This facility is listed in the RCRA NonGen / NLR database. This facility is listed as a handler of and transporter of hazardous materials. No records of violations are associated with this site. Due to the nature of this facility and the lack of documentation of any releases or spills this facility is not considered a REC.

Mariner Developers Company (2203 Mariner Square – 1,169 feet inferred cross gradient)

This facility is listed in the CPS-SLIC, Alameda County Contaminated Sites (CS), and CERS databases. This facility is listed as a cleanup program site which following discovery of an unreported quantity and undefined contamination in 1965. Records indicate that the site was closed as of November 6, 1996. Database listings do not provide any further information on the extent and nature of contamination at the site. Due to the distance and cross gradient orientation of this cleanup site, this facility is not considered a REC.

### 3.2.3 Adjoining Properties

Below are summaries of adjoining properties of concern in regards to possible contamination at the Site. The western adjoining property was not identified in any of the EDR databases.

Northern and Eastern Adjoining – FISCA (refer to Figure 3 – inferred down and cross -gradient)

This facility is listed in the CPS-SLIC and CERS databases. This facility is listed on the GeoTracker website as having operated a dewatering and treatment system under an NPDES permit



beginning in 2004 during site redevelopment within the FISCA boundary. Treatment of effluent dewatered during earthwork activities was treated for petroleum hydrocarbons. Dewatering activities were terminated in 2005 and a shutdown report was issued. Two unauthorized discharges occurred during the system operation period however these were due to operator error and the releases were contained to the area of the treatment systems. Due to the nature of the operation of this listing and the cross gradient location relative to the site, this facility is not considered a REC.

Southern Adjoining – Shinsei Gardens (401 Willie Stargell Avenue – inferred up-gradient)

This facility is listed in the ENVIROSTOR, Voluntary Cleanup Program (VCP), and DEED databases. The facility is listed in the Envirostor database for releases of contamination associated with former use as a portion of the Naval FISCA. Information available from the GeoTracker database notes that this property was used primarily as a screening lot and scrap yard. Contamination in the form of arsenic, benzene, cadmium, Naphthalene, polycyclic aromatic hydrocarbons (PAHs), TPH-diesel, TPH-gas, TPH-Motor Oil, polychlorinated biphenyls (PCBs), lead, total chromium, and hexavalent chromium present in soil and groundwater is associated with historical use of the property. The site is included in the VCP database for the remedial actions taking place at the property during redevelopment of the property. The site was included within a 2000 Interim Covenant restricting site usage. The Navy remediated cadmium and PCB impacted soil in 2004; however, concentrations of benzene and naphthalene remained at concentrations in excess of the Regional Water Board's residential Environmental Screening Levels (ESLs). Contingent on a 2006 release of interim covenant, a portion of residential land use restrictions were terminated on the property following remedial excavation and the installation of a sub slab depressurization system completed with new residential unit construction in 2009. In 2010, an O&M agreement outlining maintenance, inspection, five year reviews, and DTSC oversight cost reimbursement was issued. In 2016, the remainder of the 2006 Land Use Covenant for the property was terminated. In 2017 the ongoing O&M agreement was terminated. Per the last five year review report, written in 2014, concentrations of contaminants of concern, including benzene and naphthalene, remain above levels of concern within soil, soil gas, and groundwater. No further information regarding concentrations of contaminants of concern present at the property is available for review. Because of the presence of VOCs at concentrations above levels of concern within the soil and groundwater and the close proximity to the Site, this facility is considered a CREC. If present at the Site, residual chemical concentrations must be managed per the SMP.

Southwestern Adjoining – Island High School/ Miller Elementary School/ Woodstock Daycare Alameda Point/ Alameda Naval Air Station – IR Site 30 (250 Singleton Avenue – inferred up and cross-gradient)

This facility is listed in the Envirostor and school (SCH) databases. The Envirostor listing for the site notes that the site was historically undeveloped marshlands before its inclusion in the larger Alameda NAS. The marshland was then filled in with sand and dredge material from nearby tidal flats, the Oakland Inner Harbor, and San Francisco Bay. Site characterization revealed petroleum contamination in soil is likely due to historical disposal of petroleum related products in the marshlands, former manufactured gas plants adjacent to the Oakland Inner Harbor, and the adjacent former FISCA scrapyard. PAH contamination is attributed to use of PAH containing sludge as fill. Further investigation to determine indoor air and soil gas concentrations was determined to not be necessary. Because of the nature of PAH content within the historical fill material and the close proximity to the Site, this facility is considered a CREC. If present at the Site, residual chemical concentrations must be managed per the SMP.

3.2.4 Orphan Listings

According to EDR, an orphan listing is a property that cannot be mapped due to poor or inadequate address information. Eight orphan listings were identified during Langan's review of EDR data. Orphan sites located adjacent to the Site are described in additional detail below.

Southern Adjoining – Stargell Commons (Bounded by Bette Street, Willie Stargell Avenue, Fifth Street and Residential Area – inferred up-gradient)

This facility is identified as an orphan site and is listed in the ENVIROSTOR and Voluntary Cleanup Program (VCP). Based on limited information available on this site's Envirostor database, the site is currently being managed under a *Land Use Covenant and Agreement Environmental Restrictions* which recorded on 16 November 2015 (Covenant). Annual inspection reports for 2020 and 2017 are available on the site's Envirostor webpage. Based on the 2020 Annual Inspection Report prepared by the Housing Authority of the City of Alameda dated 18 June 2021, no violations of prohibited activities documented in the Covenant were observed during a site inspection conducted on 16 June 2021.

Southern Adjoining – Cadence and Linear at Alameda Landing (Mitchell Avenue and Fifth Street – inferred up-gradient)

This facility is identified as an orphan site and is listed in the ENVIROSTOR and Voluntary Cleanup Program (VCP). The facility is listed in the Envirostor database for releases of contamination



associated with historical activities conducted by the United States Navy. Information available from the GeoTracker database notes that the facility is underlain with petroleum hydrocarbon-related compounds, though it was determined that vapor intrusion risk as the facility is not a significant concern (Engeo, 2019). A soil investigation conducted in 2019 by Engeo, Incorporated (Engeo), concluded that detected concentrations of residual constituents in soil did not pose a risk to human health and no further actions were recommended. The facility currently has an *Interim Covenant to Restrict Use of Property* which was recorded on 20 July 2000.

### 3.2.5 Water Wells, Injection Wells and Oil and Gas Wells and Facilities

A review of the Geotrack section of the EDR Regulatory Database Report (Appendix E) not identify any water wells on the property.

The report identified several State of California groundwater wells located at distances of ½-mile to 1-mile around the Site (north, east south and west). The report indicated that these were monitoring wells or wells for unknown use. The report also identified one USGS water well within ¾-mile west of the Site.

No injection wells were identified within ¼-mile of the Site.

## **3.3 Records Review and User/Owner Provided Information**

### 3.3.1 Previous Environmental Reports

The following environmental report was available for review and is provided in Appendix D:

- Amendment to the Record of Decision, OU-5/ FISCA IR-02 Groundwater, Prepared by the Department of the Navy dated August 2014;

The following environmental reports were provided by the Owner of the property and are provided in Appendix D:

- Phase I Environmental Site Assessment, North Housing Project – IR25, Alameda Point, Prepared by Ninyo & Moore dated 16 November 2015.

Relevant information from the above-listed report is summarized below. Many of the historical Site features discussed below are shown in Figure 3. In addition, hazardous building materials surveys, building inspection and bulk material sampling reports (for asbestos containing material, lead-based paint and polychlorinated biphenyls) and building demolition permits were provided for review. These additional documents are discussed below and included in Appendix D.

### Operational History of the Site

The Site was once part of the larger Alameda Point NAS, which operated between the years of 1940 to 1997. The construction of a total of 20 two-story multi-unit housing structures at the site was completed in 1969 due to increased housing demands. The Site is included within a larger 42 acre area titled Installation Restoration Area 25 (IR-25) located within a larger area titled Operable Unit 5 (OU-5). Historically OU-5 was utilized for naval housing.

The OU-5 area is bordered to the North, East, and South by the former FISCA. Operations within the FISCA included stockpile and inventory for Naval Supplies. Areas of the FISCA immediately adjacent to the Site include areas formerly used as a junkyard and stockpile area. Following the end of Alameda NAS operations in 1997, the Alameda Point BCT became responsible for the environmental cleanup program across the site. Contamination in the form naphthalene and benzene was detected in groundwater beneath the site following site characterization activities advanced by the BCT.

The housing units within the Site remained occupied until 2008. Since then the housing units have been occupied by squatters, various utilities have been removed by illegal scrapping operations, and several units have been demolished for construction related to the Admiral's Cove redevelopment activities taking place on the western adjacent property.

The multi-unit residential structure at 401 Mosley Avenue, was previously demolished for the northwest to southeast continuation of Mosley Avenue through the northernmost portion of the site.

Three multi-unit residential structures located at 2000 Mayport Circle, 2000 and 2010 Kollman Circle were demolished for the northwest to southeast continuation of Singleton Avenue through the central southern portion of the site.

Between December 2020 and January 2021, 16 multi-storied residential units located at 2001 Mayport Circle, 2002 Mayport Circle, 2003 Mayport Circle, 2004 Mayport Circle, 2005 Mayport Circle, 2002 Kollman Circle, 2004 Kollman Circle, 2006 Kollman Circle, 2008 Kollman Circle, 2000 Lakehurst Circle, 2001 Lakehurst Circle, 2002 Lakehurst Circle, 2003 Lakehurst Circle, 2004 Lakehurst Circle, 400 Mosley Avenue, and 501 Mosley Avenue were demolished in preparation for a redevelopment of the Site. Demolished building footprints are shown on Figure 2. Currently, the property is undeveloped and vacant.

Langan's Site observations are summarized in Section 4.0.

### Investigation History and Remedial Actions – Site

Multiple environmental investigations or assessments were performed at the former IR-25 property since the closure of the NAS in 1997. The following is a summary of pertinent investigations and remedial actions performed at the Site, categorized by date and media of focus.

#### Marsh Crust

The Marsh Crust is a subsurface soil horizon that lies between the native Bay mud sediment and the overlying artificial fill, within the former intertidal zone throughout much of the eastern and central portions of Alameda NAS. Heavy industrial activity, such as operations of petroleum refineries and manufactured gas plants, prior to the time artificial fill was placed in Alameda resulted in significant discharges of petroleum waste to the surrounding marshlands. Previous investigations correlate concentrations of the highest VOC contamination to depths corresponding to the marsh crust strata. It is suspected that contamination present within the Marsh Crust is due to the historic Oakland Gas Works, a former Coal manufactured gas plant (MGP) located within the Oakland inner harbor. Hydrocarbon fingerprinting as well as stable isotope ratio analysis indicates a common source of contamination as having originated from a coal based source. Historic carbonization of coal at MGPs resulted in benzene- and naphthalene-rich by-products that were historically disposed of into adjacent marshlands.

When encountered, the Marsh Crust must be sampled in accordance with the Marsh Crust Ordinance (MCO) and managed per the 23 November 2016 City of Alameda SMP. In accordance with the MCO, if the Marsh Crust is to be disturbed the Marsh Crust will need to be sampled prior to development activities at the Site.

#### Soil

Soil samples were collected in 2007 and 2008 alongside the collection of hydropunch groundwater sampling across the greater IR-25 property. Within the Site, only two locations were sampled. Where detected, concentrations of benzene ranged from 1,300 micrograms per kilogram ( $\mu\text{g/kg}$ ) to 4,600  $\mu\text{g/kg}$ . Where detected, concentrations of naphthalene ranged from 640,000 to 830,000  $\mu\text{g/kg}$ . The highest concentrations were detected in the Marsh Crust Strata at depths of approximately 17 feet bgs.



### Air Sampling

Air samples were collected in 2002 from within crawl spaces, inside units, and from outdoor ambient air within the Site and were analyzed for benzene.

Benzene was detected at concentrations ranging from 0.49 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) to 2.7  $\mu\text{g}/\text{m}^3$  in crawlspaces beneath units along Mayport Circle and Kollman Circle, on Site.

Benzene was detected at concentrations ranging from 0.52  $\mu\text{g}/\text{m}^3$  to 4.6  $\mu\text{g}/\text{m}^3$  within indoor air.

Benzene was detected at concentrations ranging from 0.49  $\mu\text{g}/\text{m}^3$  to 5.2  $\mu\text{g}/\text{m}^3$  in outdoor ambient air.

It was determined that based on the similar magnitude of detected concentrations of benzene within the crawl space, ambient air and indoor air the detected benzene concentrations were most likely not from a vapor intrusion source associated with soil or groundwater impacts as it was expected that crawlspace concentrations would be predominantly higher than indoor air concentrations, however the majority of crawlspace concentrations were lower than their corresponding indoor air results.

It should be noted however that results of indoor air sampled within units on Site are in exceedance of the latest Residential Indoor Air Direct Exposure Risk Level for benzene of 0.097  $\mu\text{g}/\text{m}^3$ .

Langan has observed in prior site investigations that background concentrations of contaminants of concern within ambient air in the Alameda Point area are higher than background and are at times in exceedance of site specific action levels.

### Soil Gas

A total of 42 soil gas samples were collected through OU-5 in 2002. These samples were analyzed for naphthalene and VOCs. Of the 42 soil gas samples, it is unknown what quantity were located within IR-25, and within the target Site.

Based on concentrations of VOCs detected in the 2002 soil gas samples, it was postulated that little volatilization or release of benzene and naphthalene into vadose zone soil is occurring.

In 2007 Gore and Associates installed 17 Gore-Sorber Modules were within the southern area of the Site in Kollman Circle to collect passive soil gas samples. All of the samples collected were non-detect for benzene. Naphthalene was detected at a concentrations ranging from non-detect



to a maximum of  $0.331 \mu\text{g}/\text{m}^3$  which is below the current residential vapor intrusion human health risk ESLs for the cancer end-point.

VOCs in soil gas located above areas of high VOC concentrations in GW were observed to be low.

Sub-slab soil gas sampling was completed following biosparging remedial efforts in 2013 however data was collected from IR-25 property located off-Site. Results of the sub slab soil gas sampling were non-detect for all VOCS.

### Groundwater

In 2004 a groundwater study was conducted in OU-5 by ERRG. Hydropunch data was collected at depths of 20 feet bgs from a total of five locations within the Site. The analytical results of the 2004 groundwater investigation were not available within accessible data for the Site.

A Baseline Human Health Risk Assessment (BHHRA) was conducted in 2004 for the OU-5 site. Maximum concentrations in groundwater were used for all contaminants of potential concern (COPCs) as exposure point concentrations (EPCs) for risk evaluations. EPCs were calculated using a 500 foot and 750 foot radius around the locations with highest concentration of benzene. EPCs were next calculated using two approaches one using Tier 2 groundwater EPCs as input for vapor mitigation models as utilized by the EPA in previous investigations. The second approach used measured soil gas concentrations as driver inputs. Calculated Reasonable Maximum Exposure (RME) factors ranged from 0.0076 to 0.0092 for the noncarcinogenic Hazard Indices (HIs), which are below the acceptable HI of 1.0. RME results for incremental lifetime cancer risks (ILCR) based on available soil gas data ranged from  $5 \times 10^{-8}$  to  $1 \times 10^{-6}$  which are at or below the acceptable ILCR (the acceptable risk management range is typically  $1 \times 10^{-6}$  to  $1 \times 10^{-4}$ ).

A 2007 Record of Determination (ROD) identified chemicals of concern within OU-5 as benzene and naphthalene. Federal or state level maximum contaminant levels were not established as applicable to the site, however remedial goals for benzene and naphthalene were established at 1 micrograms per liter ( $\mu\text{g}/\text{L}$ ) and 100  $\mu\text{g}/\text{L}$  respectively.

In 2007 and 2008 hydropunch groundwater samples were collected from two locations on site. Where detected, concentrations of benzene ranged from 1.7  $\mu\text{g}/\text{L}$  to 1,800  $\mu\text{g}/\text{L}$ . Where detected, concentrations of naphthalene ranged from 0.64  $\mu\text{g}/\text{L}$  to 9,600  $\mu\text{g}/\text{L}$ .

Following the 2007 ROD, a biosparging soil vapor extraction system was installed between 2008 and 2009 to treat the impacted soil beneath portions of the Site, the interpolated lateral extent treated by the biosparge plume is visible within the southwestern extent of the Site (figure 2). The biosparge system injected oxygen to the Marsh Crust fill strata, no additional injection of nutrients or augmentation is noted during the treatment period. The biosparging system was operated between 2009 and 2013. A reported quantity of 9.5 pounds of benzene and 86 pounds of naphthalene were removed by biosparging actions.

Groundwater monitoring results in samples collected after the start of biosparge operation confirmed that the plume of benzene was decreased in size following the treatment.

Groundwater monitoring results for samples collected between 2009 and 2013 were observed to indicate that the implemented biosparging remediation decreased the overall size of the benzene plume on Site. The only on-Site groundwater monitoring well indicated that pre-biosparge remediation concentrations of 230 µg/L and 4,100 µg/L for benzene and naphthalene in 2009, were reduced to 35 µg/L and 37.2 µg/L, respectively, in 2013.

A concentration contour persists on Site that indicates benzene concentrations within groundwater at 1 µg/L.

Post-2007 ROD data indicated that OU-5 groundwater does not meet criteria for a potential drinking water source due to levels of total dissolved solids (TDS), sulfate, iron, and alkalinity. It was also concluded that volatile contamination is not migrating from the source area within the Marsh Crust strata, further treatment was determined to not be necessary.

More recent calculations, completed in 2012 during ongoing biosparging activities for the greater IR-25 property, concluded that the RME ILCR for benzene ranges from  $4.8 \times 10^{-8}$  to  $4.8 \times 10^{-7}$  and the RME ILCR for naphthalene ranges from  $5.6 \times 10^{-8}$  to  $5.0 \times 10^{-6}$ .

Evidence from previously conducted investigations and reports concludes that vapor intrusion and indoor air inhalation does not pose an unacceptable cancer risk to occupants or members of the public and is at the lower end or below the risk management range of  $10^{-4}$  to  $10^{-6}$ .

#### Asbestos Containing Materials Survey

Residential structures on the Site were surveyed for asbestos containing material (ACM) prior to demolition.

As presented in the inspection reports in Appendix D, the demolished structures (including those demolished prior to January 2020 [Langan, 2020]) were observed to possess the following:

- Scratch coat associated with stucco on building exterior containing less than 0.25% to 2% chrysotile asbestos.
- Joint compound and textured material on wallboard and bare, non-textured gypsum wallboard containing 2% chrysotile asbestos. A sample without texture material was reanalyzed and determined to contain less than 0.25% chrysotile asbestos
- Texture material located on all walls and ceilings with the exception of the kitchens, laundry rooms, and bathrooms containing 0.25 to 0.75% chrysotile asbestos.
- Brown mastic and joint compound associated with 5 by 5 inch ceramic tiles within bathroom walls, containing 2% to 3% and 2 % chrysotile asbestos.
- Texture material located on all walls and ceilings with the exception of the kitchens, laundry rooms, and bathrooms containing 0.25 to 3% chrysotile asbestos.

The four previously demolished residential structures were surveyed and determined to possess the following:

401 Mosley was observed to contain the following ACM:

- Gray penetration mastic located on roof vents containing 7% chrysotile asbestos

2000 Kollman Circle was observed to contain the following ACM:

- Gray/ black penetration mastic located on the roof air vent, containing 10% chrysotile asbestos.

The 16 residential structures that were demolished between 2020 and 2021 were surveyed and determined to possess the following:

2001 Lakehurst Circle was observed to contain the following ACM:

- Olive-Brown mastic associated with 3 by 5 inch ceramic tiles within laundry room wall bases, containing 3% and 4% chrysotile asbestos.
- Gray/ black penetration mastic located on the roof air vent, containing 6% chrysotile asbestos.

2002 Lakehurst Circle was observed to contain the following ACM:

- Olive-Green mastic associated with 3 by 5 inch ceramic tiles within laundry room wall bases, containing 2% chrysotile asbestos.
- Gray/ black penetration mastic located on the roof air vent, containing 6% chrysotile asbestos.

2004 Lakehurst Circle was observed to contain the following ACM:

- Olive-Green mastic associated with 3 by 5 inch ceramic tiles within laundry room wall bases, containing 2% chrysotile asbestos.
- Olive-Brown mastic associated with 3 by 5 inch ceramic tiles within laundry room wall bases, containing 2% chrysotile asbestos.

400 Mosley Avenue was observed to contain the following ACM:

- Olive-Brown mastic associated with 3 by 5 inch ceramic tiles within laundry room wall bases, containing 3% chrysotile asbestos.

2001 Mayport Circle was observed to contain the following ACM:

- Olive-Green mastic associated with 3 by 5 inch ceramic tiles within laundry room wall bases, containing 2% chrysotile asbestos.
- Olive-Brown mastic associated with 3 by 5 inch ceramic tiles within laundry room wall bases, containing 2% chrysotile asbestos.

2002 Mayport Circle was observed to contain the following ACM:

- Olive-Green mastic associated with 3 by 5 inch ceramic tiles within laundry room wall bases, containing 2% chrysotile asbestos.
- Gray/ black penetration mastic located on the roof air vent, containing 5% chrysotile asbestos.

2002 Mayport Circle was observed to contain the following ACM:

- Olive-Green mastic associated with 3 by 5 inch ceramic tiles within laundry room wall bases, containing 2% chrysotile asbestos.



Between 2020 and 2021, the above 16 residential structures were demolished. These buildings were surveyed for ACM during demolition (Intertek, 2020b; Intertek, 2021). No ACM materials were visually observed during demolition activities (Appendix D).

#### Polychlorinated Biphenyls (PCBs)

A PCB survey was completed for the site in which ten bulk samples were collected from the former units on Site prior to their demolition (Ninyo and Moore, 2018; Appendix D). Samples of caulking were collected and sent to EMSL laboratory in Cinnaminson, NJ for analysis. PCB analysis for all 10 bulk samples indicated concentrations of PCB were below the regulatory level of 50 mg/kg. As presented in Appendix D, no further actions to address PCBs at the Site were recommended.

#### Lead Based Paint (LBP)

Eleven structures of the former 20 residential structures on the Site were surveyed for LBP or Lead Containing Paint (LCP) prior to demolition. As documented in reports provided in Appendix D, LBP and LCP was present in the surveyed buildings. Between 2020 and 2021, the remaining residential structures on Site were demolished. These buildings were surveyed for LBP during demolition (Intertek, 2020a). No LBP materials were visually observed during demolition activities (Appendix D).

#### Indoor Air- Crawlspace and Vapor Intrusion

Vapor intrusion was determined not to be a risk on Site according to previous reports and data. Lithology data postulates that there is a thin, mostly continuous confining clay layer throughout the artificial fill present on site. The 2014 ROD amendment ascertains that the source of benzene and naphthalene contamination is isolated to the thin layer of Marsh Crust and is due to historic MGP waste products in the Oakland Inner Harbor Area. Isolation of the Marsh Crust as the source of contamination is determined by the increasing concentrations of benzene and naphthalene concentrations with depth, the greatest concentrations being present within the Marsh Crust strata.

Previously completed reports assert that volatiles from the first water bearing zone (FWBZ) are not migrating upward into structures on the Site to sufficiently create indoor air concentrations that pose a carcinogenic or noncarcinogenic risk. Tetra Tech (2012) postulates that models do not account for lithologic conditions at the Site, a predominant and present feature being an observed confining lens of clay within the strata beneath the Site. Data collected from soil above the clay layer reported concentrations of contamination much lower than concentrations below

the layer. The clay layer is interpreted to be approximately 2 feet thick across the majority of the Site, serving as an effective barrier.

Detections of contamination within air samples collected within the Site and on the greater IR-25 property do not indicate significantly higher levels of indoor air contamination than concentrations observed in collocated ambient air. It is interpreted from this data as well as observed strata that there does not exist a significant vapor intrusion pathway at this Site.

Based on calculations completed with data collected previously, during, and following remedial activities within and from off-Site property, there does not exist an inhalation risk for residents due to vapor intrusion at the Site.

#### Phase I, prepared by Ninyo & Moore

A Phase I ESA was prepared by Ninyo & Moore in 2015 to assess the environmental conditions present at the Site. The subject property included in this assessment is the same bounds as the Site assessed in this Phase I ESA.

Ninyo & Moore did not identify any RECS at the Site.

A CREC was identified in association with soils located beneath buildings and/or hardscapes or below a depth of two feet in areas that were not excavated during a Time Critical Removal Action (TCRA) conducted in 2001-2002 to remove polycyclic aromatic hydrocarbon (PAH) impacted soil from Clover Park, an adjacent, off-Site property.

A second CREC was identified in association with the presence of the Marsh Crust beneath the Site. The listing references that permit restrictions exist for any future excavations below 10 and 15 feet below ground surface.

The Ninyo & Moore Phase I identified one HREC associated with the removed PAH impacted soil from the upper two feet of soil from the western portion of the Site. Ninyo & Moore state that no institutional controls remain at the Site following the TCRA.

#### Regulatory History of the Site

##### 2001 Federal Facility Agreement

A Federal Facility Agreement (FFA) was signed between the USEPA and the Department of the Navy (DON) on 5 July 2001. In 2005 this FFA was also signed by the DTSC as well as the Regional Water Board. The FFA documents the intention of the DON to meet obligations and

implementation of CERCLA in partnership with the USEPA, DTSC, and Regional Water Board. Prior to the 2007 ROD, Federal Facility Site Remediation Agreement (FFSRA) obligations for groundwater at OU-5 were removed from legal obligation, resulting in the FFA as the remaining regulatory agreement.

#### 2007 ROD

Following extensive characterization as well as risk assessments calculated using data from sampling points located both on and off the Site a Record of Determination was recorded for the greater IR-25 property in 2007. The 2007 ROD stipulated that remedial actions would be necessary to address the delineated detections of benzene and naphthalene in groundwater according to the remedial goals set forth in the ROD, remedial goals are discussed in further detail above.

#### 2014 NFA ROD Amendment

Following the implementation of biosparging remediation as well as further analysis of existing data, in 2014 an amendment ROD was issued for the greater IR-25 site, formerly part of the OU-5 area within Alameda NAS. The 2014 ROD states that no further action is necessary to remediate groundwater at the Site due to a reevaluation of risk using contemporary methodology.

Based on the findings of previous extensive field investigations including groundwater, sub-slab, indoor, and ambient air sampling, remedial actions, as well as reevaluations of groundwater use and risk, there are no land-use restrictions, ongoing monitoring, corrective actions, or other remedial activities required for groundwater at the site.

#### 2016 Finding of Suitability to Transfer

The 2016 Finding of Suitability to Transfer (FOST) was prepared by the Navy to summarize the extent to which requirements and notifications for hazardous substances, petroleum products, and other regulated materials have been addressed for portions of the former Alameda NAS. The FOST provides provisions for transfer of the former Navy property included within the Alameda NAS to multiple recipients under separate conveyance authorities.

The FOST provides documentation that a portion of the real property included within the former Alameda NAS is environmentally suitable for transfer by deed. Summaries of required restrictions are documented for individual sites within the former Alameda NAS.



The FOST documents that institutional controls require future land owners of IR-25 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 as well as the development of a soil management plan. The FOST states that no further action is required for the IR-25 (OU-5) groundwater and that the portion of IR-25 which includes the Site is suitable for transfer.

### 3.3.2 Owner-Operator Questionnaire

Per ASTM E1527-13, a user questionnaire was provided to the User to inquire about specialized information related to the Site. Completed questionnaires have been provided to Langan by Mr. Tony Weng. The completed owner questionnaire is included in Appendix B.

## **4.0 SITE RECONNAISSANCE**

A Site reconnaissance was conducted that focused on the spatial extent of the Site and then progressed to the adjacent and surrounding properties. The assessment of the adjacent and surrounding properties was limited to identifying, if possible, any indications of past or current use that may involve the use, storage, disposal, or generation of hazardous substances or petroleum products; noting the general type of current use; the general topography of the surrounding area; and providing a general description of adjoining or adjacent structures. The adjacent properties were observed from an on-Site vantage point. Site reconnaissance photographs that illustrate the current condition of the Site are presented in Appendix A.

A Site reconnaissance was performed by Megan Rollo of Langan on 6 January 2022. Site access was provided by the Site contact, Tony Weng and a user/owner interview was conducted prior to the site walk. The weather at the time of the inspections was foggy and approximately 55 degrees Fahrenheit.

<b>General Site Setting Information</b>	
Current use(s) of the property	The Site is an undeveloped vacant lot.
Past use(s) of the property	The Site has been vacant since approximately 2008. Tony Weng, the property manager, stated that the existing structures at the Site were once occupied by coast guard employees and that units were vacated in 2008.
Current use(s) of adjoining properties	The Site is bounded to the north and northeast by vacant lots currently used for construction staging, to the east, southeast and south by numerous residential properties, to the southwest by a vacant school property, and to the west and northwest by an active construction site for a residential development.
Past use(s) of adjoining properties	Langan did not observe visible indications of past uses at adjoining properties.



General Site Setting Information	
Current or past uses in the surrounding area	Surrounding properties consist of residential developments, residential neighborhoods and vacant public buildings.
Geologic, hydrogeologic, hydrologic, and topographic conditions	Refer to Section 2.3.
General description of structures	No structures are present on the Site.
Roads	The Site is adjoined by Mosley Avenue to the north, Bette Street to the east, A residential development adjoins to the South and to the West. A vacant school borders to the southwest. Mosley Avenue Trends from the Northwest through the central area of the Site, a continuation of Mosley Avenue adjoins the northern perimeter of the Site. Lakehurst Circle trends along the northwestern perimeter of the Site, Mayport Circle is located within the central area of the site, a continuation of Singleton avenue bisects through the southern area of the site, and previously Kollman Circle was located within the southern-most portion of the Site, but roadway has since been removed.
Potable water supply	EBMUD provides the potable water supply.
Sewage disposal system (including septic systems and drain fields)	EBMUD provides the sewage disposal system.

Feature	Observed?		Description
	Yes	No	
Exterior Observations			
Pits, ponds, or lagoons		X	Langan did not observe pits, ponds, or lagoons at the Site or adjoining properties.
Stained soil or pavement	X		Langan observed white material in the area surrounding six 55-gallon drums temporarily staged by others. As presented on drum labels, the drums are anticipated to contain drilling cuttings (including soil and groundwater) associated with a subsurface investigation at an adjacent property.
Stressed vegetation		X	Langan did not observe stressed vegetation at the Site.
Solid waste	X		Langan observed a small pile of concrete debris and metals materials in the southern most portion of the Site.
Wastewater	X		No cisterns water wells, or wastewater discharges were observed at the Site; however, storm drains were observed within the roadways present on Site.
Wells		X	Langan did not observe any wells at the Site.
Septic Systems		X	The septic system is provided by East Bay Mud.
Drums	X		Langan observed six 55-gallon steel drums filled with soil, water and drilling cuttings at the southern end of Lakehurst Circle. Based on a discussion with Mr. Weng on 14 January 2022, Langan understands that these drums have since been removed from the Site.

## **5.0 INTERVIEWS**

### **5.1 Property Representatives**

*Tony Weng, Senior Project Manager for AHA*

Langan conducted an interview with Tony Weng, Senior Project Manager, AHA on 6 January 2022. Relevant information regarding the Site, which was provided by Mr. Weng, is included in various portions of this report where appropriate. According to Mr. Weng, the Site has been vacant since 2008.

Mr. Weng did not have any knowledge of former storage tanks or environmental incidents at the Site. According to Mr. Weng, the demolition of numerous multi-unit residential structures at the Site took place between 2018 and 2021.

Six 55-gallon drums were observed on-Site during the Site reconnaissance with Langan on 6 January 2022 (Photos 6 and 7, Appendix A). Based on a conversation with Mr. Weng, Langan understands that these drums were associated with an investigation conducted on an adjacent property. The drums appeared to be in good condition. On 14 January 2022, Mr. Weng confirmed that the drums were removed from the Site.

It should be noted that, in the completed User questionnaire provided in Appendix B, Mr. Weng noted that “hazardous waste generator notices or reports” are known to exist and “copies would be provided” to Langan. However, based on a conversation between Mr. Weng and Langan on 17 January 2022, Langan understands that the hazardous waste generator notices or reports to which Mr. Weng was referring are associated with the ACM and LBP abatement inspection reports, which were prepared prior to demolition of the previous on-Site buildings (as discussed in Section 3.3.1 and provided in Appendix D). Based on Langan’s conversation with Mr. Weng on 17 January 2022, Mr. Weng is not aware of other hazardous waste generator notices or reports associated with the Site.

### **5.2 Federal, State and/or Local Government Officials**

Federal, state, and local officials were not interviewed as part of this Updated Phase I ESA; however, the agencies were contacted via email correspondence, telephone interviews, and/or online requests to obtain available records of environmental concerns, violations, and/or permits pertaining to the Site, as summarized below:

- USEPA – Database search;

- DTSC – Database Search;
- Envirostor- Database Search;
- GeoTracker- Database Search;
- Regional Water Quality Control Board, San Francisco Bay Region – database search; and
- Alameda County Environmental Health Division –records request.

In addition to the FOIA requests, Langan performed a search of the USEPA MyEnvironment, MyPropertyInfo, and ECHO databases on 6 January 2022. No further information was provided. Copies of the database information are included in Appendix D.

#### Alameda County Environmental Health Division

Requests for records and documentation of environmental investigations, releases of contamination to the environment as well as UST records were submitted. Copies of correspondence detailing the lack of information or listings for the Site are included in Appendix D.

#### DTSC's Envirostor and Regional Water Board's GeoTracker Databases

Copies of regulatory and investigatory reports are included in Appendix D.

## **6.0 VAPOR ENCROACHMENT SCREENING**

### **6.1 Vapor Encroachment Screening**

An evaluation of potential vapor encroachment conditions is included. Vapor intrusion is defined as the migration of volatile chemicals from the subsurface into overlying buildings. Our assessment for potential vapor encroachment conditions at the Site was in general accordance with ASTM E2600-10, using the EDR VEC app. The EDR is included in Appendix E.

Properties within 1/10th of a mile from the Site with current or historical known releases of petroleum hydrocarbons were evaluated as part of the vapor encroachment survey. Within 1/3rd of a mile of the Site, properties with known or historical releases of other chemicals were evaluated. Langan reviewed EDR's Radius Map Report with GeoCheck to evaluate potential vapor intrusion from the surrounding properties meeting the above criteria, as well as regulatory records for the selected sites using information available from the Envirostor and GeoTracker databases.



Based on the analysis, Langan identified the following on-Site sources and off-Site properties as potential sources of vapor encroachment to the Site:

- On-Site Marsh Crust – Marsh Crust is a thin layer of high organic content soil located on-Site between Site fill and the native bay mud surface. The Marsh Crust consists of historic MGP waste products discharged to the former marshes in the Oakland Inner Harbor Area. According to the Navy's 2014 ROD Amendment that covers the Site, the marsh crust is believed to be the source of benzene and naphthalene contamination at the Site. Subsurface investigations performed at the Site in association with IR Site 25 by the Navy between 2000 through 2013 included soil, groundwater, soil gas, crawl space air, indoor air, and ambient air sampling and analysis. The results of the soil and groundwater samples exhibited concentrations benzene and naphthalene above current applicable residential screening criteria. Previously conducted investigations and reports, described under Section 3.3, conclude that vapor intrusion and indoor air inhalation does not pose an unacceptable cancer risk to occupants or members of the public and is at the lower end or below the risk management range of  $10^{-4}$  to  $10^{-6}$ . However, it should be noted that an existing subsurface clay layer is currently interpreted to be serving as an effective barrier to vapor intrusion. In 2014, the Navy and regulatory agencies determined no further action is necessary to remediate groundwater at the Site. Residual contamination must be managed in accordance with the City of Alameda's SMP and MCO.
- Southern Adjoining – Shinsei Gardens (401 Willie Stargell Avenue – inferred up-gradient): The property at 401 Willie Stargell Avenue was formerly included within the Naval FISCAs and was used primarily as a screening lot and scrap yard. Contamination includes, but is not limited to, benzene, naphthalene, and petroleum hydrocarbons present in soil and groundwater. A sub-slab depressurization system was completed with new residential unit construction in 2009 to address the contamination. Per the last five year review report (2014), concentrations of contaminants of concern, including benzene and naphthalene, among others, remain above levels of concern within soil, soil gas, and groundwater. Because of the presence of VOCs at concentrations above levels of concern within the soil and groundwater and the close proximity to the Site, this facility is considered a potential source of vapor encroachment to the Site. If present at the Site, residual chemical concentrations must be managed per the SMP.
- Fuel Center: A fuel center (Safeway Fuel Center #3281) is located southeast, cross gradient of and over 1,200 feet from the Site. A vapor encroachment condition was ruled



out at the Site based on the fact that previous leak detection violations were resolved and no reported releases have occurred based available information and the orientation and distance from the Site.

- Various Former USTs: Site records indicate the former presence of military USTs southeast of the Site. A vapor encroachment condition was not ruled out at the Site based on available information and Site proximity.

The properties listed above each have some component of upgradient or crossgradient groundwater flow direction to the Site, based on an inferred northern groundwater flow direction. Other than the Safeway Fuel Station, a potential vapor intrusion condition related to the other properties cannot be ruled out at the subject Site.

Other properties not discussed above were not considered by Langan as likely potential sources of vapor encroachment to the Site.

## **7.0 NON-SCOPE CONSIDERATIONS**

### **7.1 Radon**

Radon is a colorless, odorless, radioactive gas that results from the natural breakdown of uranium minerals in soil, rock, and water, which subsequently enters the atmosphere. Radon can concentrate in buildings, entering through cracks and other penetrations of a building foundation. Some areas are more likely to have elevated concentrations of radon than others, reflecting subsurface lithologic conditions.

According to Federal Area Radon information provided by EDR, Alameda County is a Radon Zone 2 (indoor average less than 4 picocuries per liter [pCi/L]). The USEPA recommends indoor air radon levels should be less than 4 pCi/L. Based on available information, there is limited potential for elevated radon levels at the Site. Radon is not considered a REC, but rather a non-scope consideration and business environmental risk (BER) because it may result in mitigation costs.

### **7.2 Asbestos-Containing Material, Lead-Based Paint, PCBs, and Mold**

A formal survey to identify ACM, LBP, PCB-containing material, and/or mold was not conducted as part of this Updated Phase I ESA. Documentation regarding the presence of ACM, PCBs and LBP is summarized in Section 3.3. In addition, no obvious mold was observed during the reconnaissance.

## **8.0 EVALUATION**

### **8.1 Findings and Opinions**

The Updated Phase I ESA identified one on-Site REC, two CRECs, and one BER as discussed in detail below.

The on-Site REC-1 and CREC-1 are related to the presence of known impacted soil and groundwater at the Site. Subsurface investigations conducted at the Site since 1997 have identified concentrations of VOCs above applicable Regional Water Board residential screening criteria in soil, groundwater, indoor and ambient air. These concentrations were attributed to the presence of Marsh Crust in soil beneath the Site. Additionally, the presence of historical fill and Marsh Crust would not trigger a regulatory reporting obligation, but a regulatory obligation to test soil within the Marsh Crust soil exists if soil excavation and site redevelopment activities require excavation beneath the Marsh Crust Layer. This may result in premium costs for handling and disposal during any future construction. Details regarding construction and/or soil handling have not been provided for the Site; therefore, further investigation of soil and groundwater at the Site is not warranted at this time.

The CREC-2 is related to historical operations at adjacent and neighboring facilities. Previous operations/uses on surrounding properties to the south included uses associated with potential petroleum- and/or solvent-related contamination. These properties also have documented releases of regulated substances as well as remedial actions. The following is a summary of the available Site analytical data related to these potential off-Site concerns.

- Groundwater samples collected on the Site during previous investigations contained concentrations of VOCs above applicable regulatory screening criteria;
- Soil samples collected on the Site during previous investigations did not contain concentrations of contamination above applicable regulatory screening criteria.
- Soil gas samples were not collected on Site as part of the previous investigations.

Releases of regulated substances at these surrounding properties may have impacted conditions at the Site. No further action is required by the Navy; however, residual chemical concentrations may remain in the subsurface that must be managed per the SMP.

BER-1 relates to an obligation to comply with the City of Alameda's Land-Use Restriction Tracking and Site Management Plan Program ("City Program") and Site Management Plan. Any work

conducted by the owner or its agent(s) on the property covered by the deed that involves construction, soil excavation or grading, trenching or groundwater contact shall be conducted pursuant to a Site Management Plan (SMP) that is acceptable to the San Francisco Bay Regional Water Quality Control Board (Regional Water Board), and in accordance with the City Program. The City prepared the 23 November 2016 SMP which includes the subject property as noted within the AHA transfer documents portion of Alameda Point, which provides risk management measures to be implemented prior to, during, and after site redevelopment in accordance with the City Program.

## **8.2 Deviations and Data Gaps**

In order to address data gaps, additional sources of information may be consulted. According to AAI, Section 312.20 (g), "to the extent there are data gaps (as defined in section 312.10) in the information developed...that affect the ability of persons (including the environmental professional) conducting the all appropriate inquiries to identify conditions indicative of releases or threatened releases...such persons should identify such data gaps, identify the sources of information consulted to address such data gaps, and comment upon the significance of such data gaps." According to ASTM E 1527-13, Section 8.3.2.3, "historical research is complete when either: (1) the objectives in 8.3.1 through 8.3.2.2 are achieved; or (2) data failure is encountered. Data failure occurs when all the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met...If data failure is encountered, the report shall document the failure and, if any of the standard historical sources were excluded, give the reasons for the exclusion."

This Updated Phase I ESA was completed without significant data gaps.

## **8.3 Conclusions**

This Updated Phase I ESA was conducted in general accordance with the ASTM Practice E1527-13 (Standard Practice for ESA: Updated Phase I ESA Process) and the EPA AAI Rule. The objective of this Updated Phase I ESA was to identify the presence or likely presence, use, or release on the Site of hazardous substances or petroleum products as defined in ASTM E1527-13 as a REC.

The Updated Phase I ESA identified the following REC associated with the Site:

- **REC-1: Known Subsurface Soil and Groundwater Impacts at the Site:** Subsurface investigations performed at the Site in association with IR Site 25 by the Navy between



2000 through 2013 included soil, groundwater, soil gas, crawl space air, indoor air, and ambient air sampling and analysis. The results of the soil and groundwater samples exhibited concentrations of certain volatile organic compounds (VOCs), primarily benzene and naphthalene, above current applicable residential screening criteria. The VOC concentrations were attributed to historical fill present at the Site. Previously conducted investigations and reports conclude that vapor intrusion and indoor air inhalation does not pose an unacceptable cancer risk to occupants or members of the public and is at the lower end or below the risk management range of  $10^{-4}$  to  $10^{-6}$ . However, it should be noted that an existing subsurface clay layer is currently interpreted to be serving as an effective barrier to vapor intrusion. In 2014, the Navy and regulatory agencies determined no further action is necessary to remediate groundwater at the Site. Residual soil contamination must be managed in accordance with the City of Alameda's SMP and City ordinance (further described under CREC-1).

The Updated Phase I ESA identified the following Controlled RECs (CRECs) associated with the Site:

- **CREC-1: Presence of Marsh Crust:** The Marsh Crust is a subsurface soil horizon that lies between the native Bay mud sediment and the overlying artificial fill, within the former intertidal zone throughout much of the eastern and central portions of Alameda NAS. Heavy industrial activity, such as petroleum refineries and manufactured gas plants, prior to the time artificial fill was placed in Alameda, resulted in significant discharges of petroleum waste to the surrounding marshlands. The Marsh Crust contains concentrations of total petroleum hydrocarbons (TPH), semi-volatile organic compounds (SVOCs), and some metals. The Navy's Marsh Crust Remedial Action Plan/Record of Decision (RAP/ROD), which was approved by the Department of Toxic Substances Control (DTSC) on 2 February 2001, selected institutional controls as the remedy for Marsh Crust. These institutional controls were in the form of environmental activity restrictions via deeds, the Covenant to Restrict Use of Property (CRUP) for AHA portion of Site 25, and the City's Excavation Ordinance Number 2824 (Marsh Crust Ordinance [MCO]).

The Marsh Crust must be sampled in accordance with the MCO. The MCO requires preparation of a SMP for handling of materials excavated from below the Marsh Crust Threshold Depth. The City of Alameda's SMP specifies worker health and safety and waste management procedures.



In accordance with the MCO the Marsh Crust will need to be sampled prior to development activities at the Site.

- **CREC-2: Historical Operations at Adjacent and Neighboring Facilities:** Previous operations/uses on adjoining properties within the surrounding former Fleet and Industrial Supply Center Alameda Annex (FISCA) property to the north, east, south, and southwest of the Site includes transportation companies; automotive dismantling, salvage, and recycling operations; and fueling and light industrial operations. One or more of these activities within the FISCA property is located in the inferred hydraulically-upgradient direction of the Site and have documented releases of regulated substances. Releases of regulated substances at these surrounding properties may have impacted conditions at the Site. No further action is required by the Navy; however, residual chemical concentrations may remain in the subsurface that must be managed per the SMP.

The following Business Environmental Risk (BER) was identified:

- **BER-1: City Program and Site Management Plan Compliance:** The Site is enrolled in the City of Alameda Land-Use Restriction Tracking and Site Management Plan Program ("City Program"). Any work conducted by the owner or its agent(s) on the property covered by the deed that involves construction, soil excavation or grading, trenching or groundwater contact shall be conducted pursuant to a Site Management Plan (SMP) that is acceptable to the San Francisco Bay Regional Water Quality Control Board (Regional Water Board), and in accordance with the City Program. The AHA prepared the 19 August 2019 SMP for the Site, which, per the CRUP, provides risk management measures to be implemented for excavation of soil at depths below four feet.

No de minimis conditions, or HRECs were identified in connection with the Site.

Based on the results of this Updated Phase I ESA, Langan does not recommend conducting a Phase II environmental site assessment.

#### **8.4 Environmental Professional Declaration**

Langan declares that, to the best of its professional knowledge and belief, that the personnel who performed this Updated Phase I ESA meet the definition of *Environmental Professional* as defined in Subsection 312.10 of 40 Code of Federal Regulations (CFR) 312 and that they have the specific qualifications based on education, training, and experience to assess a property of

the nature, history, and setting of the Site. These professionals have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

This Updated Phase I ESA was prepared by Staff Scientist Megan Rollo and Senior Project Engineer Elizabeth Kimbrel and reviewed by Principal Dorinda Shipman. Resumes outlying their qualifications are provided in Appendix F.

## 9.0 REFERENCES

The following references were reviewed as part of this Updated Phase I ESA:

1. Environmental Data Resources, Inc., Inquiry Number: 6809410.4, January 6, 2022. Aerial Photo Decade Package.
2. Environmental Data Resources, Inc., Inquiry Numbers: 58897415, December 3, 2019. City Directory Image Report.
3. Environmental Data Resources, Inc., Inquiry Number: 5889741.4, December 2, 2019. Historical Topographic Map Report.
4. Environmental Data Resources, Inc., Inquiry Number: 6809410.5, January 6, 2022 Radius Map Report with GeoCheck.
5. Environmental Data Resources, Inc., Inquiry Number: 6809410.6, January 6, 2022. Sanborn Map Report.
6. Alameda County Assessor's Office Parcel Viewer.  
[http://gis.acgov.org/Html5Viewer/index.html?viewer=parcel\\_viewer](http://gis.acgov.org/Html5Viewer/index.html?viewer=parcel_viewer), December 2, 2019.
7. United States Geological Survey, Mineral Resources On-Line Spatial Database, Retrieved December 12, 2019, <https://mrddata.usgs.gov/general/map-us.html>.
8. Langan Treadwell Rollo. Geotechnical Investigation, Alameda Point – Site A, Phases 1-3 Infrastructure and Phase 1 Buildings, Alameda, California. 3 March, 2016a.
9. Langan Engineering and Environmental Services, Inc. Marsh Crust Ordinance Reconnaissance Sampling Summary for Backbone Infrastructure, Alameda Point, Alameda, California. November 12, 2018.
10. Langan Engineering and Environmental Services, Inc. Phase I Environmental Site Assessment, 501 Mosley Avenue, Alameda, California. January 15, 2020.
11. DTSC. Covenant to Restrict Use of Property Environmental Restriction (Re: Parcel No. ALA-37-EDC (partial), ALA-38-EDC, ALA-39-EDC, ALA-55-EDC, ALA-56-EDC, ALA-57-

- EDC, ALA-59-EDC, ALA-60-EDC and ALA-61-EDC – DTSC Site Code 201971). Entered into by the City of Alameda and DTSC. June 6, 2013a.
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  13. Tetra Tech, Final Technical Memorandum, OU-5/ FISCA IR-02 Groundwater Data Evaluation, Appendix C. 2012.
  14. City of Alameda, City of Alameda Ordinance No. 2824, Alameda Municipal Code Chapter XIII, Section 13-56, "Threshold Depth Flow (below ground surface) below which an excavation is required." June 20, 2000.  
[https://www.alamedaca.gov/files/sharedassets/public/alameda/building-planning-transportation/marsh-crust/marsh\\_crust\\_ap.pdf](https://www.alamedaca.gov/files/sharedassets/public/alameda/building-planning-transportation/marsh-crust/marsh_crust_ap.pdf).
  15. Navy, Final Remedial Action Plan/Record of Decision for the March 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 2001.
  16. Navy, Final Amendment to the Record of Decision, OU-5/FISCA IR-02 Groundwater, Alameda Point and FISCA, Alameda, California August 2014.
  17. Navy, Final Finding of Suitability to Transfer for Former Naval Air Station Alameda Point Naval Air Station Alameda, Alameda Point, Alameda California. April 2013.
  18. Ninyo & Moore, Hazardous Building Materials Survey, 2000, 2007, & 2009 Mayport Circle, 401 Mosley Avenue and 2000, & 2010 Kollman Circle, Alameda, California. March 19, 2018.
  19. Navy, Quitclaim Deed and Environmental Restriction Pursuant To California Civil Code Section 1471 For The Alameda Housing Authority Parcel (North Housing) At the Former NAS Alameda. May 30, 2019.
  20. City of Alameda, Certificate of Acceptance, Quitclaim Deed and Environmental Restriction Pursuant To California Civil Code Section 1471 For The Alameda Housing Authority Parcel (North Housing) At the Former NAS Alameda. May 30, 2019.
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25. Engeo, Incorporated, 2019. Alameda Landing – Phase III, Alameda, California. Environmental Characterization Report. 23 May, revised 21 June.
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27. Intertek PSI, 2020b. Certificate of Visual Inspection, Asbestos Work. 2001, 2002, 2003, 2004, 2005 Mayport Circle, 2002 Kollman Circle, 2000, 2001, 2002, 2003, 2004 Lakehurst Circle, 400, 501 Mosley Avenue. December.
28. Intertek PSI, 2021. Certificate of Visual Inspection, Asbestos Work. 2004, 2006, 2008 Kollman Circle. January.





Island City  
Development

Fax: (510)-522-7848

TTY/TRS: 711

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701 Atlantic Avenue | Alameda, CA 94501

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## Notice for Exhibit J

Attachments to the Phase 1 Environmental Site Assessment for North Housing can be provided upon request. If you would like to review the entire report please email Jocelyn Layte, Housing Development Specialist, at [jlayte@alamedahsg.org](mailto:jlayte@alamedahsg.org).