WOOD
PARTNERS

3 September 2015
Project 731641601

Mr. Mark Detterman, PG, CEG
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Soil and Groundwater Management Plan
2302 Valdez Street
Oakland, California
Alameda County SCP Case No. RO0003149
Langan Project: 731641601

Dear Mr. Detterman:

As a legally authorized representative of CRP/WP Alta Waverly Owner, LLC, and on behalf of CRP/WP Alta Waverly Owner, LLC, I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document titled *Soil and Groundwater Management Pan, 2302 Valdez Street, Oakland, CA*, Alameda County SCP Case No. RO0003149, are true and correct to the best of my knowledge.

Sincerely yours,

Brian Pianca
Wood Partners

SOIL AND GROUNDWATER MANAGEMENT PLAN 2302 VALDEZ STREET Oakland, California

Prepared For:

CRP/WP Alta Waverly Owner, LLC
c/o WP West Development
20 Sunnyside Avenue, Suite B
Mill Valley, California

Prepared By:

Langan Treadwell Rollo
555 Montgomery Street, Suite 1300
San Francisco, California 94111

Noel Liner, PG
Project Geologist

Peter J. Cusack
Senior Associate

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Mr. Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Subject: **DRAFT Soil and Groundwater Management Plan**
2302 Valdez Street
Oakland, California
Langan Project: 731641601

Dear Mr. Detterman:

Langan Treadwell Rollo (Langan) has prepared the attached our Draft Soil and Groundwater Management Plan (SGMP) for the proposed development of the 2302 Valdez Street property, for your review and approval. The SGMP has been prepared to address soil and groundwater management practices and procedures to be employed during development, based on the results of investigation activities conducted at the subject property.

If you have any questions or require additional information, please call.

Sincerely yours,
Langan Treadwell Rollo

Noel Liner, PG
Project Geologist

Peter J. Cusack
Senior Associate

cc: Mr. Brian Pianca – CRP/WP Alta Waverly Owner, LLC

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SOIL AND GROUNDWATER MANAGEMENT PLAN
2302 VALDEZ STREET
Oakland, California

EXECUTIVE SUMMARY

This Soil and Groundwater Management Plan (SGMP) has been prepared in support of a planned development project at 2302 Valdez Street (Site) in Oakland, California. The purpose of this SGMP is to describe Site conditions as associated with past property use, specifically the location and character of use-related environmental contamination. The SGMP also describes measures that are to be taken during development activities to ensure that historic use-related substances are removed in a safe and protective manner during construction.

The Site is within the block encompassed by 23rd, Valdez, Waverly, and 24th Streets and encompasses the addresses of 2302-2342 Valdez Street and 2321-2335 Waverly Street. The Site is bound by Valdez Street on the west, Waverly Street on the east, 23rd Street and an existing 9-story parking garage on the south, and residential buildings and parking lots to the north. The Site is T-shaped, measuring approximately 350 feet along Valdez Street, 115 feet along 23rd Street, and 100 feet along Waverly Street.

The Site is occupied by two buildings and asphalt-paved parking. The Site slopes down to the east; the drop in elevation from the west (Valdez Street side) to the east (Waverly Street side) is approximately 12 feet.

Soil and groundwater sampling performed at the Site has identified contaminants, which include petroleum hydrocarbons, volatile organic compounds and heavy metals. The majority of these contaminants are below applicable screening levels for commercial/industrial land use developed by the California Environmental Protection Agency's (CalEPA) Department of Toxic Substances Control (DTSC); the United States Environmental Protection Agency, Region 9 (USEPA); and the CalEPA's Regional Water Quality Control Board, San Francisco Bay Region (RWQCB).

The proposed development includes demolition of the existing structures within the Site and construction of a mixed-use development with a structural footprint to cover the entire property. The proposed structure is a seven-story, mixed-use (retail and residential) building over a partially below-grade parking level. Residential parking will be below grade along Valdez Street, with an at-grade entrance along Waverly Street.

Based on the proposed finished floor elevation for the residential garage and assuming two feet of additional excavation for floor slabs and foundations, an excavation on the order of 14 feet below the existing street grade will be required along Valdez Street, while there will be only minor excavation along the Waverly Street. Groundwater at the Site has been encountered at depths of 13.5 feet to 16 feet below the ground surface (bgs), therefore no groundwater dewatering is anticipated.

This SGMP has been prepared to satisfy applicable state and federal criteria. This SGMP will also provide guidelines for the contractor to prepare site-specific documents for health and safety measures to be employed during redevelopment activities to protect the public and the environment.

1.0 INTRODUCTION

This Soil and Groundwater Management Plan (SGMP) has been prepared by Langan Treadwell Rollo (Langan) on behalf of CRP/WP Alta Waverly Owner, LLC for use during the development of the property located at 2302 Valdez Street (Site) in Oakland, California. The SGMP is intended to provide soil management procedures for the development activities planned for the Site to mitigate conditions potentially hazardous to human health or the environment during and after construction.

The proposed development plan consists of constructing a mixed-use development of the Site, consisting of below grade parking, street level commercial space, and upper floor residential units which will cover the entire property. The proposed structure is a seven-story, mixed-use (retail and residential) building over a partially below-grade parking level. Residential parking will be below grade along Valdez Street, with an at-grade entrance along Waverly Street. During Site construction, soil will be excavated to approximately 14 feet below ground surface (bgs).

1.1 Objective

This SGMP presents procedures and protocols for the identification, handling, management, and disposal of hazardous materials encountered in Site soil and groundwater during redevelopment. The procedures and protocols are designed to facilitate compliance with applicable federal, state, and local laws and regulations regarding hazardous and industrial waste management. This SGMP does not address hazardous materials that may be encountered in existing structures, such as asbestos-containing materials or lead-based paint. Asbestos and lead-based paint abatement will be evaluated and managed under a separate scope of work.

2.0 SITE BACKGROUND

The Site is within the block encompassed by 23rd, Valdez, Waverly, and 24th Streets, as shown on the Site Location Map, Figure 1. The Site encompasses the addresses of 2302-2342 Valdez Street and 2321-2335 Waverly Street. The Site is bound by Valdez Street on the west, Waverly Street on the east, 23rd Street and an existing 9-story parking garage on the south, and residential buildings and parking lots to the north, Site Plan, Figure 2. The Site is T-shaped, measuring approximately 360 feet along Valdez Street, 115 feet along 23rd Street, and 100 feet along Waverly Street.

The Site is occupied by two buildings and asphalt-paved parking. The Site slopes down to the east from Valdez Street Waverly Street from Elevation 21 to 9 feet1.

2.1 Project Responsibilities and Points of Contact

Unless otherwise noted in this document, CRP/WP Alta Waverly Owner, LLC will be responsible for implementation of the procedures and protocols outlined in this document. Wood Partners may designate construction/excavation responsibilities to an excavation contractor. The primary contact for CRP/WP Alta Waverly Owner, LLC will be Mr. Brian Pianca. The primary oversight agency for approval of this SGMP is the Alameda County Environmental Health (ACEH).

2.2 Historical Information

Historical Site information was presented in the following Phase I Environmental Site Assessments (ESAs) prepared by Langan:

1. *Phase I Environmental Site Assessment, 2302-2332 Valdez Street and 2321-2335 Waverly Street, Oakland, California* dated 30 September 2014.
2. *Phase I Environmental Site Assessment, 2342 Valdez Street, Oakland, California*. Dated 13 November 2014

The 2302 Valdez Street portion of the Site is currently occupied by a one-story warehouse type building and an at-grade parking lot. The Site y was previously occupied by the Oakland Tribune Garage facility, which contained three service bays with hydraulic lifts for vehicle repair, located on the eastern side of the building. A gasoline dispensing pump was formerly located near the center of the building; and a floor sump, presumably used to drain fluids from cleaning the floors, in the northeastern corner of the building. The sump was reportedly removed and sealed in 1988. In addition, two underground storage tanks (USTs) (one 8,000-gallon gasoline tank and one 750-gallon waste oil tank) previously located beneath the Valdez Street sidewalk, directly outside of the western side of the building, were removed in February 1988.

The 2312 Valdez Street portion of the Site, which is located north and adjacent to 2302 Valdez Street (former Oakland Tribune Garage) facility, and currently is occupied by an at-grade asphalt paved parking lot. This portion of the Site was reported to have been in operation as an automotive repair facility between the years of 1933 and 1943.

1 Elevations are referenced to City of Oakland datum.

The 2342 Valdez Street portion of the Site was historically occupied by various residential structures as early as 1889. According to historical sources, the current Site building was constructed in the 1940's. The Site building has been occupied by various electrical and automotive repair companies from the years 1943 to 1991. The Site building has been occupied by an automotive detailing business, Ho's Automotive Detail, from the years 1992 to present.

2.3 Regional Geology and Hydrogeology

According to the map of Quaternary Geology of Alameda County and Surrounding Areas (Helly and Graymer, 1997), the subject Site is underlain by Holocene-age (approximately 11,000 years old to present) alluvial fan deposits. These deposits generally consist of layers of variable composition containing varying amounts of over-consolidated clay, silt, sand and gravels. The main water bearing units consist of unconsolidated Quaternary sedimentary formations, including the Pleistocene Santa Clara and Alameda Formations, and the Holocene Temescal Formation as well as artificial fill. With the exception of artificial fill, these main water-bearing formations were deposited as alluvial fans.

2.4 Surrounding Land Use & Sensitive Ecosystems

The surrounding land use is a mixture of residential and commercial development. Adjacent property uses currently include a parking area on Valdez Street to the west, an existing 9-story parking garage fronting Waverly Street to the east, a two to three story commercial and residential building to the south bordering 23rd Street, and residential buildings and parking lots to the north.

At their nearest points, Glen Echo Creek is located approximately 320 feet east of the subject Site and Lake Merritt is located approximately 640 feet southeast of the subject Site. The San Francisco Bay is approximately 2.2 miles to the northwest of the Site. Glen Echo Creek extends from Mountain View Cemetery, located in the foothills northeast of the Site, until it meets at its confluence near the intersection of Broadway and Interstate 580 eventually discharging at the northern end of Lake Merritt. The creek occupies the surficial contact between the Holocene and Pleistocene alluvial fan deposits. The creek is channelized for approximately 1,700 feet in artificial fill, prior to its discharge point into Lake Merritt, which in turn discharges through a narrow channel at its southern terminus point into the inner Oakland harbor of San Francisco Bay.

The East Bay Municipal Utility District provides potable water for the Site and vicinity. Groundwater in the vicinity of the Site is not used as a source of drinking water, nor does the Site overlie a shallow aquifer used for drinking water.

2.5 Site-Specific Geology and Hydrogeology

Langan has performed several subsurface investigations at the Site, including two geotechnical and environmental subsurface investigations. Based on these studies, the Site is blanketed by about two to five feet of fill, which is comprised of silt, sand, and clay mixtures. The fill is generally underlain by interlayered medium dense to very dense silty and clayey sand and medium stiff to hard silt and clay with varying amounts of sand and gravel. An area of soft to medium stiff clay with varying amounts of sand and silt was encountered in the eastern side of the Site.

Groundwater was encountered in each of the Site's previously installed groundwater monitoring wells at depths ranging from 13.5 feet to 16 feet bgs. Seasonal fluctuations in rainfall influence groundwater levels and may cause several feet of variation.

3.0 RECENT ENVIRONMENTAL INVESTIGATIONS

Previous environmental investigations by Langan include the following:

1. Langan, *Phase I Environmental Site Assessment, 2302-2332 Valdez Street and 2321-2335 Waverly Street, Oakland, California* dated 30 September 2014;
2. Langan, *Environmental Site Characterization, 2302-2332 Valdez Street and 2321-2335 Waverly Street, Oakland, California* dated 22 October 2014;
3. Langan, *Phase I Environmental Site Assessment, 2342 Valdez Street, Oakland, California* dated 13 November 2014;
4. Langan, *Environmental Site Characterization, 2342 Valdez Street, Oakland, California* dated 9 January 2015;
5. Langan, *Technical Memorandum: Summary of Site Environmental Subsurface Conditions for Soil, Groundwater, Soil Vapor, and Request for Case Closure for Multi-Family Residential Use, 2302-2332 Valdez Street and 2321-2335 Waverly Street, Oakland, California* dated 19 March 2015.

3.1 Phase I Environmental Site Assessments

Langan's Phase I Environmental Site Assessments (ESA) revealed no evidence of recognized environmental conditions (RECs) in connection with the Site. Our assessments did reveal one controlled REC (CREC) and one Business Environmental Risk (BER) in connection with the Site, as summarized below:

A CREC is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a no further action [NFA] 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 (e.g., property use restrictions, activity and use limitation [AULs], institutional controls, or engineering controls). The following CREC was identified for the 2302 Valdez Street property within the Site:

<u>CREC 1 – Fuel Leak Site Case Closure at Oakland Tribune Building, 2302 Valdez Street, Oakland, CA</u>

> Two underground storage tanks (USTs) were removed from the 2302 Valdez Street property in March 1988. Petroleum hydrocarbon contamination was detected in the soil and groundwater and over excavation within the former USTs pits was performed and a total of nine groundwater monitoring wells were installed and sampled. Based on the analytical results, it appeared that the contamination was limited in area and that the groundwater contamination would continue to naturally attenuate over time.

Based on the contaminated soil remediation and groundwater monitoring activities, administrative case closure for the fuel leak was granted by the Alameda County Department of Environmental Health Services (ACEHS) in a letter dated 31 July 1998 for the former Oakland Tribune Garage.

A BER includes risks which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of the Site, not necessarily limited to those environmental issues required to be investigated within the standard scope of ASTM E1527-13. BERs may affect the liabilities and financial obligations of the Client, the health and

safety of the Site occupants, and the value and marketability of the Site. The following BER was identified for the 2342 Valdez Street within the Site:

> Although this assessment revealed no evidence of any documented release(s) at the property, our assessment of the property's land-use history revealed that the property has been occupied by commercial businesses associated with electrical and automotive repair from as early as 1943 to 1991 and automotive detailing from 1992 to present. Due to both the nature and duration of these types of businesses occupying the property, there is a potential risk that undocumented release(s) of hazardous substances or petroleum products may have occurred on the property.

Due to the findings of Langan's Phase I ESAs and the above identified CREC and BER, Langan conducted multiple subsurface investigations in order to evaluate the current subsurface Site conditions.

3.2 Environmental Subsurface Investigations

Between September 2014 and March 2015, Langan performed subsurface investigations at the Site for soil, groundwater, and soil vapor. The analytical results and general findings are summarized below. Soil, groundwater and soil vapor sampling locations are presented on Figure 2

3.2.1 Soil Investigation

On 6 September 2014, soil samples were collected from six environmental borings (EB-1 through EB-6) and four geotechnical borings (B-1 through B-4). On 6 December 2014, soil samples were collected from four additional geotechnical borings (B-5 through B-7 and CPT-7). On 7 February 2015, soil samples were collected from three additional environmental borings (EB-7 through EB-9). All soil samples were submitted to McCampbell Analytical, Inc. (McCampbell), a state-certified analytical laboratory in Pittsburg, California and analyzed for some or all of the following:

- Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8021/8015;
- TPH as diesel (TPHd) by EPA Method 8015;
- TPH as motor oil (TPHmo) by EPA Method 8015;
- Volatile organic compounds (VOCs) by EPA Method 8260;

- Semi-volatile organic compounds (SVOCs) by EPA Method 8270;
- Organochlorine pesticides (OCPs) by EPA Method 8081/8082;
- Polychlorinated biphenyls (PCBs) by EPA Method 8081/8082;
- California assessment manual (CAM 17) by EPA Method 7000/6010; and,
- Leaking Underground Fuel Tank (LUFT) 5 metals by EPA Method 7000/6010.

Analytical results for metal concentrations in soil were compared to the total threshold limit concentration (TTLC). Samples with concentrations of any metal greater than ten times the soluble threshold limit concentration (STLC) were also analyzed for soluble metals using the California waste extraction test (WET) method. Any sample exceeding the STLC value after analysis with the WET method was submitted for analysis by the Federal toxicity characteristic leaching potential (TCLP). These analyses were run to assess if metal concentrations in soil exceeded State and/or Federal hazardous waste criteria.

3.2.2 Soil Analytical Results

The soil analytical results for non-metals are presented in Table 1. TPHg was detected at or above the method reporting limit (1.0 milligrams per kilogram (mg/kg)) in one (EB-3-1.5) of the 51 soil samples analyzed at a concentration of 2.9 mg/kg. TPHd was detected at or above the method reporting limit (1.0 mg/kg) in 17 of the 51 soil samples analyzed at concentrations ranging from 1.0 mg/kg to 290 mg/kg. Based on these results, one sample (EB-3-1.5), exceeds the established environmental screening level (ESL) for TPHd in shallow soils (< 3 meters bgs) associated with residential land use of 100 mg/kg (Table B-1, RWQCB, 2013). TPHmo was detected at or above the method reporting limit (5.0 mg/kg) in 15 of the 51 soil samples analyzed at concentrations ranging from 5.4 mg/kg to 660 mg/kg. Based on these results, two samples (CPT-7-3.0 and EB-3-1.5) exceed the ESL for TPHmo in shallow soils (< 3 meters bgs) associated with residential land use of 100 mg/kg (Table B-1, RWQCB, 2013). Of the 21 soil samples analyzed for VOCs, one sample (CPT-7-3.0) detected naphthalene above the method reporting limit, at a trace concentration of 0.029 mg/kg. This detection does not exceed the established environmental screening level (ESL) for naphthalene in shallow soils, 1.2 mg/kg (Table A-1, RWQCB, 2013). No other VOCs were detected at or above the method reporting limits in the remaining 20 samples analyzed. Of the 21 soil samples analyzed for SVOCs, three samples detected low concentrations of fluoranthene, phenanthrene, and/or pyrene; all of which do not exceed the established ESLs of 40 mg/kg, 11 mg/kg, and 85 mg/kg, respectively.

No other SVOCs were detected at or above the method reporting limits in the remaining 18 samples analyzed. No OCPs or PCBs were detected at or above the method reporting limits in any of the soil samples analyzed.

The soil analytical results for metals are presented in Table 2. Total lead was detected at or above the method reporting limits in each of the 46 soil samples analyzed, at concentrations ranging from 2.6 mg/kg to 2,600 mg/kg. One sample exceeded the State of California hazardous waste criteria of 1,000 mg/kg and was subsequently run for TCLP lead to determine if the material represents a Federal RCRA hazardous waste. Total lead was detected at concentrations at or above 50 mg/kg but below 1,000 mg/kg in nine samples. Each of these samples was subsequently run for STLC analysis and TCLP analysis, to determine soluble lead levels.

STLC lead was detected at or above the method reporting limit (0.20 milligrams per liter (mg/L)) in all nine soil samples analyzed ranging in concentrations from 1.2 mg/L to 27 mg/L, six of which exceeds the California hazardous waste classification of 5.0 mg/L. TCLP lead was detected at or above the method reporting limit (0.20 mg/L) in three of the ten samples analyzed at concentrations ranging from 0.36 mg/L to 15 mg/L, one of which exceeds the Federal waste criteria of 5.0 mg/L.

Total chromium was detected at or above the method reporting limits in each of the 46 soil samples analyzed, at concentrations ranging from 12 mg/kg to 150 mg/kg. A total of 18 soil samples that detected the highest concentrations of total chromium were subsequently run for STLC chromium to determine if the material represents a State of California hazardous waste. STLC chromium was detected at or above the method reporting limit (0.050 mg/L) in five of the 18 soil samples analyzed at concentrations ranging from 0.075 mg/L to 5.6 mg/L, one of which exceeds the California hazardous waste classification of 5.0 mg/L.

The remaining metals detected were within typical background levels of the San Francisco Bay Area.

3.2.3 Groundwater Investigation

Previously installed groundwater monitoring wells (MW-1 through MW-9) were located on-Site and in the adjacent right-of-ways. All remain except MW-1 and MW-5, which were decommissioned prior to our investigation, and thus, no groundwater samples were collected at these former monitoring well locations. Groundwater monitoring wells MW-2, MW-4, MW-7,

MW-8, and MW-9) were re-developed and sampled by Langan on 4 September 2014 and 12 September 2014, respectively. Langan conducted additional groundwater purging and sampling on 24 September 2014 from groundwater monitoring wells MW-2, MW-4, MW-6, and MW-9. During our 6 December 2014 investigation, grab groundwater samples were collected from three geotechnical borings B-5, B-7, and CPT-7. Sampling at geotechnical boring B-6 was attempted via hydropunch, but no groundwater was encountered. On 7 February 2015, grab groundwater samples were collected at environmental borings EB-8 and EB-9, and a new groundwater monitoring well (MW-10) was installed by Langan. On 4 March 2015, both groundwater monitoring wells MW-3 and MW-10 were sampled. Approximate groundwater sampling locations are shown on Figure 2. All groundwater samples were submitted to McCampbell and analyzed for some or all of the following:

- TPHg by EPA Method 8021/8015;
- TPHd by EPA Method 8015;
- TPHmo by EPA Method 8015;
- VOCs by EPA Method 8260;
- SVOCs by EPA Method 8270;
- PCBs by EPA Method 8081/8082;
- CAM 17 metals by EPA Method 7000/6010; and
- LUFT 5 metals by EPA Method 7000/6010.

It should be noted that two sampling events occurred at previously installed groundwater monitoring wells MW-2, MW-4, and MW-9. Because the monitoring wells were apparently dormant for a number of years, it is Langan's opinion that the second sampling event (24 September 2014), after additional groundwater purging, is the most representative of the current groundwater conditions at the Site and surrounding area. Analytical results of the groundwater samples were compared to the December 2013 RWQCB ESLs, where groundwater is not a current or potential drinking water resource (Table F-1b, RWQCB, 2013). The City of Oakland's water system derives its water from the Hetch Hetchy regional water system and not local groundwater sources.

Groundwater analytical results for petroleum hydrocarbons and VOCs are presented in Table 3. TPHg was detected at or above the method reporting limit (50 micrograms per liter (µg/L)) in three of the 13 groundwater samples analyzed at concentrations ranging from 94 µg/L to 3,100 µg/L. Off-Site groundwater monitoring well MW-9 and on-Site grab groundwater sample from location EB-8, which had concentrations of TPHg of 520 µg/L and 3,100 µg/L, respectively, both exceed the ESL where groundwater is not a current or potential drinking water resource of 500 µg/L (Table F-1b, RWQCB, 2013). TPHd was detected at or above the method reporting limit (50 µg/L) in six of the 13 groundwater samples analyzed at concentrations ranging from 63 µg/L to 720 µg/L. Grab groundwater sample from location EB-8 with TPHd at a concentration of 720 µg/L exceeds the ESL of 640 µg/L (Table F-1b, RWQCB, 2013). TPHmo was detected at or above the method reporting limit (250 µg/L) in two of the 13 groundwater samples analyzed at concentrations of 250 µg/L and 670 µg/L. The grab groundwater sample from location B-7 had TPHmo at a concentration of 670 µg/L slightly exceeding the ESL of 640 µg/L (Table F-1b, RWQCB, 2013).. Low-level concentrations of various VOCs were detected in five of the 11 groundwater samples analyzed for VOCs. None of the detected VOC concentrations in groundwater exceed the RWQCB ESLs, where established ESLs exist for the respective compounds. No SVOCs or PCBs were detected at or above the method reporting limits in any of the soil samples analyzed.

The groundwater analytical results for metals are presented in Table 4. The metal concentrations were within the background ranges found in the western United States and San Francisco Bay Area.

3.2.4 Sub-Slab Vapor and Soil Vapor Investigation

Five vapor samples were collected on 6 September 2014; two sub-slab vapor samples (SSG-1 and SSG-2) were collected from beneath the concrete slap of the existing Oakland Tribune Garage, and three soil vapor samples (SG-1 through SG-3) were collected from temporary five-foot vapor wells, installed across the Site. On 14 February 2014, an additional vapor investigation was conducted within the Site's existing Oakland Tribune Garage. The additional investigation consisted of the installation and sampling of four nested temporary soil vapor wells (SG-4 through SG-7), each installed at depths of five and ten feet bgs, and the installation and sampling of a permanent soil vapor probe (SGW-1), installed in the southwestern corner of the former Oakland Tribune Garage to a depth of five feet bgs. For quality assurance and quality control (QA/QC) purposes, one duplicate soil vapor sample and one ambient air sample were also collected and analyzed. Approximate vapor sampling locations are shown on Figure 2.

The sub-slab vapor and soil vapor samples were delivered under chain-of-custody control to Curtis & Tompkins Laboratories (Curtis & Tompkins), a state-certified analytical laboratory in Berkeley, California. Sub-slab vapor and soil vapor samples were submitted and analyzed for some or all of the following:

1. VOCs by EPA Method TO-15;
2. Naphthalene by EPA Method TO-17; and
3. Helium by ASTM Method D1946.

During the February 2015 additional subsurface investigation, all four temporary vapor wells (SG-4 through SG-7) and the previously installed permanent soil vapor point (SGW-1) were constructed with Teflon® tubing and not the traditional low-density polyethylene (LDPE) or nylaflow® tubing. Naphthalene can potentially preferentially sorb onto traditional soil vapor tubing, thus reporting a false non detection (Hayes)2, therefore, following Department of Toxic Substances Control's (DTSC) sampling guidelines (DTSC)3, all wells were constructed with Teflon® tubing. In addition, all vapor wells were sampled twice; one vapor sample was collected in a one-liter summa canister and analyzed for VOCs via EPA Method TO-15 and a second 50mL vapor sample was collected in a plastic 60 mL capacity syringe and injected into sorbent tubing for naphthalene specific SVOC analysis via TO-17; per DTSC sampling guidelines[2].

This additional TO-17 sampling, requested by ACEH, is a QA/QC procedure that ensures that the EPA Method TO-15 analyses for VOCs in soil vapor are not producing false non-detections of naphthalene.

Sub-slab and soil vapor results were compared to calculated screening levels derived from the RWQCB soil vapor ESLs for ambient and indoor air for the lowest residential exposure (Table E-3, RWQCB, 2013); sub-slab comparisons were calculated using a DTSC default slab attenuation factor of 0.05.

2 Hayes, H., N. Khan, and D. Benton. Impact of Sampling Media on Soil Gas Measurements. In Proceedings; Air and Waste Management Association's Vapor Intrusion Symposium: The Next Great Environmental Challenge – An Update, Los Angeles, CA; pgs. 69-83, September 2006.

3 Department of Toxic Substances Control. Advisory – Active Soil Gas Investigations, Appendix E: Naphthalene Soil Gas Collection, April 2012.

Sub-slab vapor and soil vapor analytical results are presented in Table 5. Benzene was detected above its calculated ESL (1.68 micrograms per cubic meter (µg/m^3) in the sub-slab sample collected at location SSG-2, at a concentration of 5.9 µg/m^3. No other sub-slab vapor or soil vapor detections were reported at concentrations exceeding residential ESLs. Additionally, naphthalene was not detected in any of the nine samples analyzed by both EPA Method TO-15 and EPA Method TO-17. Planned construction calls for removal of the existing concrete slab, beneath which sample SSG-2 was collected, and the removal of approximately ten feet of existing soil as part of Site development activities. For these reasons, vapor intrusion is not expected to be an issue at this Site.

4.0 ANALYSIS OF FINDINGS

Observations during Site investigations indicate the Site is blanketed by up to five feet of fill, which overlays clay and sandy clay, a coarse deposit of sand and sandy gravel, and clay and gravelly clay to the maximum depth explored. The soil sample analytical results indicated that some of the fill material at the Site contains elevated total lead and soluble lead and chromium at concentrations exceeding State of California and Federal hazardous waste levels.

As shown in Figure 3, the area of fill material containing lead concentrations exceeding the Federal hazardous waste criteria is near boring B-6 at a depth of 2.0 feet bgs, this sample also exceeded the State of California hazardous waste criteria for soluble chromium. The areas of fill material containing total and soluble lead concentrations exceeding the State of California hazardous waste criteria are near borings EB-3 at a depth of 1.5 feet bgs, EB-4 at depths of 1.5 feet bgs and 3.0 feet bgs, and EB-5 at depths of 1.5 feet bgs, 3.0 feet bgs, and 5.0 feet bgs. The fill material near the sampling locations and depths that exceeded Federal and State of California hazardous waste criteria will be disposed as Federal Class I RCRA hazardous waste and State of California Class I non-RCRA, respectively. The remaining fill material and any residual petroleum hydrocarbon contaminated soil encountered will be excavated and disposed off-Site as Class II non-hazardous waste.

Residual petroleum hydrocarbons exceeding ESLs in groundwater appear limited in extent to the vicinity of on-Site borings B-7 and EB-8, and at the off-Site monitoring well MW-9. Low levels of dissolved petroleum hydrocarbons remain in groundwater in the vicinity of borings B-5 and EB-9. VOC concentrations detected in groundwater do not exceed ESLs, where established. Because the previously installed groundwater monitoring wells were idle for a number of years, prior to Langan's recent redevelopment, purging, and sampling activities at

the Site, it is Langan's opinion that the sampling results following purging (24 September 2014 and 4 March 2015) were the best representation of the groundwater conditions at the Site.

Based on the sub-slab vapor and soil vapor sampling conducted by Langan, vapor intrusion is not expected to be an issue at this Site. Only benzene (detected at a concentration of 5.9 µg/m^3 in sub-slab vapor sample SSG-2) exceeded the calculated residential ESL of 1.68 µg/m^3. VOCs were not detected exceeding their respective residential ESLs in the remaining 13 sub-slab vapor and soil vapor samples.

5.0 REGULATORY LAND USE CHANGE AND PROPOSED DEVELOPMENT PLANS

As previously summarized in Section 3.1, Langan's Phase I ESA identified a controlled recognized environmental condition (CREC) at 2302 Valdez Street address, resulting from a past release of hazardous substances or petroleum products associated with two former USTs. The final level(s) of contamination consists of 655 parts per billion (ppb) or micrograms per liter (µg/L) of TPH as gasoline (TPHg) and 630 ppb, 49 ppb, 21 ppb, and 130 ppb of benzene, toluene, ethylbenzene, and xylenes (BTEX), respectively. It should be noted that the TPHg concentration detected in groundwater was reported incorrectly in the closure letter from ACEHS at 665 ppb, the detected soil TPHg soil concentration, and should be reported at 3,500 ppb instead.

Based on the contaminated soil remediation and groundwater monitoring activities, administrative case closure for the fuel leak was granted by the Alameda County Department of Environmental Health Services (ACEHS) in a letter dated 31 July 1998, contingent on stating the following:

1. If a change in land use is proposed or excavation of soils is planned at this site, then an evaluation of risk from exposure to contaminated soil and groundwater must be made.

To address the change in land use, Langan conducted multiple environmental subsurface investigations, as previously summarized in Section 3.2. The investigations and analytical results were detailed in Langan's Technical Memorandum: *Summary of Site Environmental Subsurface Conditions for Soil, Groundwater, Soil Vapor, and Request for Case Closure for Multi-Family Residential Use, 2302-2332 Valdez Street and 2321-2335 Waverly Street, Oakland, California* dated 19 March 2015. In addition, Langan developed a Site Conceptual Model (SCM), which was included with the technical memorandum as an attachment. The technical

memorandum and attached SCM was submitted to the ACEHS for review and approval on 19 March 2015.

In their letter dated 14 May 2015, ACEH confirmed that they were in agreement with the recommendation for Site case closure for unrestricted use, including the proposed multi-family residential use. However, prior to closure being granted, ACEH requires the preparation of a Site Management Plan (SMP) and the additional uploading of electronic report(s) and data to the GeoTracker website, to obtain compliance with both GeoTracker and State of California requirements. This report, Langan's SGMP, is being submitted to meet the ACEH requirement of a SMP.

The proposed development, as shown on plans by Pyatok dated 21 November 2014, includes demolition of the existing structures within the Site and construction of a development with a structure footprint to cover the entire property. The proposed structure is a seven-story, mixed-use (retail and residential) building with below grade parking along Valdez Street and an at-grade entrance along Waverly Street. The proposed lowest level finished floor is at Elevation 9 feet (based on the *2300 Valdez Street - Tentative Parcel Map No. 10318, Vesting Tentative Map for Condominium Purposes* plans by BKF dated 21 November 2014).

Based on the proposed finished floor elevation for the residential garage and assuming two feet of additional excavation for floor slabs and foundations, an excavation on the order of 14 feet below the existing street grade will be required along Valdez Street, while there will be only minor excavation along Waverly Street.

6.0 ENVIRONMENTAL MEASURES

The results of our environmental investigation at the Site indicate that low levels of petroleum hydrocarbons, heavy metals, and VOCs were detected in the soil and groundwater. The presence of these compounds poses soil and groundwater management and potential H&S issues to be addressed as part of the Site development activities. The soil and groundwater management objectives for the Site are to minimize exposure to construction workers at the Site, nearby residents and/or pedestrians, and future users of the Site to constituents in the soil and groundwater.

6.1 Health and Safety Measures

The contractor will be responsible for establishing and maintaining proper health and safety procedures to minimize worker and public exposure to Site contaminants during construction.

6.2 Health and Safety Issues

On the basis of our experience on similar sites, there are potential health and safety risks associated with the heavy metals and petroleum hydrocarbons detected at the Site for construction workers, nearby residents and/or pedestrians, and future users of the Site. The routes of potential exposure to the petroleum hydrocarbons and metals could be through three pathways: 1) dermal (skin) contact with the soil; 2) inhalation of dusts; and 3) ingestion of the soil.

The most likely potential for human exposure to the petroleum hydrocarbons and metals in the soil will be during soil excavation operations. Because on-site materials contain concentrations of petroleum hydrocarbons and lead in excess of the Proposition 65 guidelines, we recommend that proper health and safety procedures, as well as warning requirements, be implemented during construction. The Site contractor should be responsible for establishing and maintaining proper health and safety procedures to minimize worker and public exposure to Site contaminants during construction.

6.2.1 Health and Safety Plan

The potential health risk to on-site construction workers and the public will be minimized by developing and implementing a comprehensive health and safety plan (HASP), which should be prepared by a certified industrial hygienist (CIH) that represents the Site contractor. The contractor will be responsible for implementing the HASP.

The purpose of the HASP will be to provide field personnel with an understanding of the potential chemical and physical hazards, protection of any off-site receptors, procedures for entering the project Site, H&S procedures, and emergency response to hazards should they occur. The HASP plan will describe the H&S training requirements, i.e. trained in accordance with Section 1910.120 of 29 Code of Federal Regulations (HAZWOPER training), specific personal hygiene, and monitoring equipment that will be used during construction to protect and verify the H&S of the construction workers and the general public from exposure to constituents in the soil. A copy of the HASP will be kept on Site during field activities and will be reviewed and updated as necessary.

6.2.2 Health and Safety Officer

A Site health and safety officer (HASO) identified by the CIH in the HASP will be on Site at all times during excavation activities to ensure that all health and safety measures are maintained. The HASO will have authority to direct and stop (if necessary) all construction activities in order to ensure compliance with the HASP.

The general public will be protected through the following measures:

1. The Site will be fenced;
2. Exposed soil at the construction Site will be watered at least twice a day to prevent visible dust from migrating off-site;
3. Soil stockpiles will be covered;
4. Water will be misted or sprayed during the loading of soil onto trucks for off haul;
5. Trucks transporting contaminated soil will be covered with a tarpaulin or other cover;
6. The wheels of the trucks exiting the Site will be cleaned prior to entering public streets;
7. Public streets will be swept daily if soil is visible;
8. Excavation and loading activities will be suspended if winds exceed 20 miles per hour; and
9. The fence will be posted with confirming to the requirements of the safe drinking water and toxic enforcement act (Proposition 65).

6.3 Soil Management

The proposed construction activities will disturb soil during the mass excavation, Site grading, the construction of new foundations, and utility lines. During all excavation activities, dust control measures will be implemented to reduce potential exposure. These measures may include moisture-conditioning the soil using dust suppressants and covering the exposed soil and stockpiles with weighed down plastic sheeting to prevent exposure of the soil.

The Site's HASP (prepared by the contractor's CIH) will contain additional dust monitoring, action levels, dust control measures, and work stoppage provisions that will be followed during construction activities.

6.3.1 Soil Segregation and Disposal

The results of Langan's subsurface investigations and previous investigations indicate that fill material underlies the Site with elevated levels of petroleum hydrocarbons and heavy metals and will need to be disposed off-site at a Class I and Class II regulated landfills. The excavation contractor shall be responsible for tracking the disposition of soil removed from the Site. At this time, the proposed regulated landfills for the Federal RCRA and State of California Class I non-RCRA hazardous waste will be either Clean Harbor's Buttonwillow Landfill in Buttonwillow, California, Waste Management's Kettlemen City Landfill in Kettlemen City, California or ECDC Environmental Landfill in East Carbon, Utah. The Class II non-hazardous will be either Potrero Hill landfill in Fairfield, California or Waste Management's Altamont landfill in Livermore, California.

Based on the limited area of the Site, the excavated soil generated during the construction activities is planned to be directly loaded into trucks for off-site disposal. If needed, additional site characterization of the soil at the Site that will be excavated will be performed. The soil samples will be tested for analysis typically required by regulated landfills and/or will generally follow the guidelines established by Department of Toxic Substances Control (DTSC) *Information Advisory Clean Imported Fill Material*.

If soil stockpiling of suspected contaminated soil is to be performed, the excavation contractor shall establish appropriate soil stockpile locations on the Site to properly segregate, cover, control dust, profile, and manage the excavated soil. Stockpiled soils will be placed on top of one layer of 10-mil polyethylene sheeting (or equivalent), such as Visqueen. When stockpiled soil is not actively being handled, top sheeting will be adequately secured so that all surface areas are covered.

6.3.2 Soil Disposition

The contractor will establish appropriate off-site soil disposal locations and direct truck loading scheduling and/or soil stockpile locations on the Site to properly segregate, cover, moisture control, and profile the excavated soil. Soil profiling criteria will ultimately depend on the acceptance criteria of the facilities receiving the soil. These procedures will be established by

the excavation contractor and coordinated with the proposed facilities prior to initiating soil excavation.

The contractor, on behalf of the owner, will be responsible for tracking final soil dispositions. Any excavated soil considered Federal RCRA of State of California non-RCRA hazardous waste will be tracked using the Uniform Hazardous Waste Manifest System (USEPA Form 8700-22), as applicable. Soil not considered hazardous waste will be tracked using non-hazardous bills of lading. These two systems will be used to comply with appropriate state and local requirements. All manifest and bills of lading will be provided to Langan during the excavation activities.

The contractor will arrange for transportation of all wastes off-site. The excavated material waste will be transported to the appropriate disposal facility using a permitted, licensed, and insured transportation company. Transporters of hazardous waste must meet the requirements of 40 CFR 263 and 22 CCR 66263. All trucks transporting bulk hazardous waste will be properly lined and covered with compatible materials.

In the event soil is to be exported off-site that is characterized as a hazardous waste, an appropriate USEPA Generator Identification Number will be recorded on the hazardous waste manifests used to document transport of hazardous waste off-site. The hazardous waste transporter, disposal facility, and U.S. Department of Transportation (DOT) waste description required for each manifest will be determined on a case-by-case basis. A description of the number of containers being shipped, the type of container, and the total quantity of waste being shipped will also be included on each manifest.

The excavation contractor will be responsible for accurate completion of the hazardous waste manifests and nonhazardous bills of lading. Records of all wastes shipped off-site will be maintained by the owner and will be made available for inspection on request. The final destination of wastes transported off-site will be documented in the Soil Management Completion Report (Section 7.0).

The following records will be kept by the owner for the indicated length of time:

1. Copies of uniform hazardous waste manifests signed by the designated waste disposal facility will be retained for at least five years from the date the waste was accepted by the initial transporter.

2. All records pertaining to the characterization of hazardous or nonhazardous waste will be retained for a minimum of three years.

6.3.3 Stockpile Sampling

If needed, chemical testing of the stockpiled soil will be performed to profile the soil for disposal. Soil profiling criteria depends on the proposed landfill location or off-site receiving facility. These procedures shall be established by the excavation contractor and coordinated with the proposed landfills prior to initiating soil excavation. Typical soil profiling requirements for landfills are one four-point composite sample per 250 - 500 cubic yards to be disposed. The samples will be analyzed for analyses typically required by regulated landfills and if the soil is not planned for disposal at a regulated landfill, the soil profiling analysis will generally follow the guidelines established by Department of Toxic Substances Control (DTSC) *Information Advisory Clean Imported Fill Material*.

If soil samples are required for analysis, the samples shall be collected using a hand-driven sampler with an inside diameter of two inches, lined with a clean stainless steel tube, and driven into the soil. The ends of the sample tube shall be covered with Teflon and sealed with plastic end caps, and placed into an ice-chilled cooler until delivery under chain-of-custody protocol to a California-certified analytical laboratory. The soil samples collected from the stockpile shall be identified by using a progressive numbering sequence with the date of the sample collection and the location. All appropriate regulatory sampling methods, holding times, and detection limits shall be followed.

6.3.4 Remedial Action Goals

Remedial action goals for the Site are included for chemicals of potential concern (COPC) for soil and groundwater. COPCs include any chemical with a single detection in soil or groundwater at the Site. The listed goals are intended to quickly guide any additional excavation needed with minimal additional communications, and provide the general knowledge of what the remedial goal at the end of the excavation will be. The COCs and remedial goals include the following:

1. COPCs in soil are TPH-g, TPH-d, TPH-mo, and Title 22 (CAM 17) metals. The selected remedial action goals for the COPCs in soils are the Regional Water Quality Control Board's December 2013 environmental screening levels (ESLs) shallow residential soil where groundwater is not a current or potential drinking water resource (table B-1, included as Attachment A.)

2. COPCs in groundwater are TPH-g, TPH-d, TPH-mo, and VOCs. The selected remedial action goals for the COPCs in groundwater are the December 2013 ESLs for groundwater that is not a current or potential drinking water resource (table F-1b, included as Attachment B.)

In the case of arsenic in soil, the residential ESL is 0.39 mg/kg. Langan evaluated the mean arsenic concentration for soils at the Site using soil samples that did not have detected concentrations of TPH. A total of 14 samples were collected and a mean value of 3.56 mg/kg was calculated using ProUCL. As previously stated in section 2.3, the geologic unit underlying the Site has been mapped as Holocene alluvium. Mean arsenic concentrations within Holocene and Pleistocene alluvium were found to be 5.10 mg/kg and 3.65 mg/kg, respectively (Duverge, 2011). Therefore, it is likely that detections of arsenic in soils at the Site will naturally exceed the ESL due to background conditions. To account for background conditions, as well as possible natural variations in arsenic concentrations on a per-sample basis, the following approach will be undertaken to evaluate samples relative to arsenic:

1. Should a single confirmation sample exceed the mean concentration of the Holocene alluvium (5.10 mg/kg), either the location with the sample will be excavated and resampled until the resampled concentration is below Holocene alluvium mean concentration of 5.10 mg.kg, OR
2. The sample concentration will be included in an exposure point concentration (EPC) calculated as the 95% upper confidence limit of the mean of all the sample concentrations at the Site. Prior to calculating the EPC, the sample concentration will be statistically evaluated as to whether the concentration of the sample is considered to be a hot spot or an outlier; if so, it will be excavated and the surrounding soil will be re-sampled, and the confirmation samples used to re-calculate an updated EPC. If the concentration is not a statistical outlier or hotspot, and the EPC is below the mean value of the Holocene alluvium, then no further excavation would be necessary for that location relative to arsenic.

6.3.5 Perimeter and Excavation Base Sampling

Verification soil samples will be collected from the base and sidewalls of the excavation to verify that the lateral and vertical extent of the removal action meets the remedial action goals. However, if verification sample concentrations exceed those specified in the cleanup goals, excavation activities may continue laterally and/or vertically until sampling results are below cleanup goals or a decision is made to stop excavation without achieving the cleanup goals. Samples will generally be collected in following manner:

1. Sidewall verification samples would be collected at the midpoint depth of the excavation sidewall at 50 foot lateral intervals, and in locations of elevated PID readings;
2. Bottom verification samples will be collected on grids covering every approximately 2,500 square feet (50 foot by 50 foot grid). Additional bottom samples will be collected in locations of staining or odorous soils or locations of elevated PID readings; and,
3. Additional samples would be collected at the discretion of the field geologist.

Should additional excavation be necessary, excavation in sidewalls would be performed by extending the excavation a minimum of 1 foot into the sidewall, 5 feet to either side of the original sample that exceeded the cleanup goal and to the full depth of the excavation. Additional verification samples would be collected as follows: one sample would be collected directly behind the original sample in the new sidewall at the same depth and lateral location and one sample would be collected from the center of the base of the new excavation. The locations of selected samples could be adjusted by the field geologist based on field conditions, such as stained or odorous soils.

4. Additional excavations in the base of excavations would be performed by excavating a minimum of six additional inches below the base area represented by the sample exceeding the cleanup goal. One verification sample would be collected from the new excavation base; and
5. Excavation boundaries and excavation depths measured across the excavations will be recorded.

In some cases, it may not be possible to extend the excavation laterally and/or vertically due to physical constraints at the site, such as sidewalks and roads. In this case, the confirmation sampling and lateral remedial excavation extent will be confined to the site boundary. A final sidewall sample will be collected, preferentially in any sidewall-locations of stained, odorous or otherwise suspect material that would remain and surrounding samples will be collected to characterize the vertical and horizontal extent of the material.

6.4 Dust Control

Prior to initiating construction activities, a dust control plan (prepared by others and specific to this project) will be implemented to reduce potential exposure, and included as an appendix to the Site's HASP (prepared by others). This document will contain measures to protect construction workers and the public, including dust monitoring, action levels, dust control measures, and work stoppage provisions that will be followed during construction activities.

Dust control will be accomplished through implementation of engineering controls, including light water spraying or misting of stockpiled soil, truck loading areas and work areas. Misting or spraying will be performed to sufficiently reduce fugitive dust emissions, but limited to prevent water runoff. Efforts will also be made to minimize the soil drop height from an excavator's bucket onto soil piles or into transport trucks. The site-specific dust control plan will, as needed, include some or all of the following procedures: site fencing; wetting soil; analysis of wind direction; dust monitors at the work zone and at the Site perimeter and appropriate record keeping, visible inspection; establishing a hotline for community response; limiting excavation area; soil storage regulations (e.g. covering stockpiles); windbreaks; paving; truck loading requirements (e.g. covering vehicles or excavator bucket drop heights); Site vehicle speed limits; wheel washing; street sweeping; termination of excavation if winds exceed 25 mph; and/or addition of soil stabilizers; or other responses as needed.

The dust monitors shall be capable of continuous, real-time monitoring, data-logging, and data transmission, measurement of air-borne particulates 10 micrometers in size (PM-10) or less, measurement of a 15-minute time-weighted average (TWA), a detection limit range of between 1 microgram per cubic meter (µg/m3) and 400,000 µg/m3 and be able to trigger visual and/or remote alarms consisting of a flashing light, or similar, to alert on-site monitoring and/or contractor personnel an action level has been exceeded. The remote alarm, if used, will consist of a text message, email, phone message, or similar, to alert off-site monitoring personnel an action level has been exceeded.

Except in the case of heavy fog or precipitation events, the dust monitors will be set up on a daily basis, for the first week of each new, potential dust-generating activity conducted at the Site (e.g., one week of dust monitoring at the start of grading, one week of dust monitoring at the start of excavation, etc.). The dust monitors will be set up by dust monitoring personnel at the start of each work-day prior to the start of the dust generating activity, and taken down at the conclusion of each work-day. Additionally, dust monitoring personnel will be present on-site to monitor field conditions and consult with contractor personnel on suitable dust suppression measures at:

1. The start of each new dust-generating activity, and for one to two days thereafter depending on the observed Site conditions.
2. The day after an exceedance of the daily average action level, if any.
3. The day of and/or the day after an exceedance of the 15-minute TWA action level, if any.

4. The day of and/or the day after visual observation of fugitive dust, if any.

5. The day of and/or the day after neighbor complaints of dust, if any.

Two dust monitors will be placed at the Site perimeter at an upwind location, and at a downwind location. Wind direction will be evaluated based on a wind sock or flag located at the Site as well as a weather forecasting and reporting website. Dust monitor locations will be re-located in the case of significant changes in the wind direction. The locations of the dust monitors will be recorded in dedicated field logs.

Action levels for analytes in dust will be calculated for the Site. The action levels will be defined as the concentration of total dust in the air at which the contaminant of concern would be at its established OSHA Permissible Exposure Limits (PEL of 0.05 mg/m^3 for lead) and the highest detected concentration of the analyte in soil (lead in soil of 510 mg/kg). If the daily average from perimeter monitoring exceeds the California Air Resources Board (CARB) standard of 50 µg/m^3 or the 15-minute TWA, additional dust control measures will be implemented. The daily average will be calculated over a 24 hour period based on the continuous dust monitoring data collected over the course of the work day. Visual and/or remote alarms on the perimeter dust monitors will be set to trigger if the 15 minute TWA is exceeded. Baseline dust conditions for the day may be either measurements collected from the upwind dust monitoring location prior to the start of the work day or as continuous monitoring data over an 8-hour period collected one to two days before the start of construction activities and extrapolated over the remainder of the 24 hour period.

6.5 Odor Control

When needed, odor suppression measures will be implemented by the contractor to minimize odor during excavation activities. The means to be considered for minimization of odors during excavation activities includes, but are not limited to: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; (c) use of foams to cover exposed odorous soil and rock material; (d) use of chemical odorants in spray or misting systems; and, (e) use of staff to monitor odors in surrounding area.

6.6 Storm Water Pollution Controls

Storm water pollution controls will be implemented to minimize storm water runoff and sediment transport from the Site. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared by the excavation contractor prior to soil-related activities. The SWPPP will identify

Best Management Practices (BMPs) for activities as specified by the California Storm Water Best Management Practices Handbook (Stormwater Quality Task Force, 1993) and/or the Manual of Standards for Erosion and Sediment Control Measures (ABAG, 1995). The BMPs will include measures guiding the management and operation of the Site to control and minimize potential contribution of Site pollutants to storm runoff.

6.7 Groundwater Management

Our investigations at the Site suggest that the groundwater level varies between about 13.5 and 16 feet bgs. We do not anticipate the need for groundwater dewatering during excavation for the building foundations and garage. If groundwater is encountered in quantities that would require removal during construction, the groundwater will be pumped into appropriate containers (i.e. Baker Tanks) and samples will be obtained for chemical analyses. The groundwater will be tested for parameters established by East Bay Municipal Utility District (EBMUD) for discharge into the sanitary sewer system. A permit will be obtained from EBMUD prior to any groundwater discharge. If analytes in the groundwater exceed the EBMUD discharge limits, the groundwater will be properly treated prior to disposal.

6.8 Maintenance Requirements

When the proposed development-required excavation is implemented, all concentrations of chemicals of concern will have been removed from the Site and no maintenance activities are expected to be required with respect to residual environmental conditions at the Site.

6.9 Contingency Procedures

The following tasks should be implemented during soil excavation if unanticipated hazardous materials are encountered. Such materials may include underground storage tanks (USTs) and associated product lines, sumps, and/or vaults, former monitoring wells, and soil with significant petroleum hydrocarbon odors and/or stains**:**

Stop work in the area where the suspect material is encountered and cover with plastic sheets. Notify the Site superintendent and Langan for site inspection and appropriate action in the suspect area. Langan will notify the ACEH of any changes in Site conditions.

Review the existing health and safety plan for revisions, if necessary, and have appropriately trained personnel on-site to work with the affected materials, once directed by the contractor.

If a UST, product line, sump, or vault is found, ACEH will be notified and a licensed tank removal contractor will properly remove and dispose of the UST. Proper permits and notifications should be in place prior to removal of the UST. If soil staining is observed, the affected soil will be placed in a stockpile on plastic sheets and covered with plastic sheets. Langan will complete soil sampling and analysis tasks for UST closure in accordance with ACEH and the Oakland Fire Department.

If a sump and/or vaults are located during excavation activities, Langan will be contacted for inspection and appropriate action. If no liquid, obvious soil staining or odors are noted, the sump and/or vault will be destroyed and disposed of. If liquid is present within the sump and/or vault and/or obvious staining and odors are noted, Langan will collect samples for analyses to evaluate proper disposal of the material.

If stained soil or odors are noted, plastic sheeting will be placed over the affected area and Langan will be contacted for inspection and appropriate action. If the material is to be excavated, the material will be stockpiled onto plastic sheeting and covered with plastic sheeting. Soil samples will be collected and analyzed to determine proper disposal of the material.

7.0 SOIL MANAGEMENT COMPLETION REPORT

A Soil Management Completion Report (SMCR) will be prepared that summarizes the soil and groundwater management activities and any subsequent investigative and removal activities that were completed during redevelopment and submitted to ACEH.

This SMCR will present a chronology of the construction events, a summary of analytical data, a copy of all manifests from the Site, and a description of all soil and groundwater management activities at the Site. The report will also contain laboratory analytical results and figures, as appropriate, to provide detail regarding the amount and type of contamination encountered during various activities. The report will also summarize any residual contaminants that were left on the Site after completion of redevelopment activities and document that soil handling procedures were implemented in accordance with this SGMP. We will discuss the report with ACEH and respond to questions as needed.

8.0 MODIFICATIONS TO THE SGMP

There may be a need to modify the SGMP as Site conditions change. Additionally, as implementation of the SGMP proceeds, CRP/WP Alta Waverly Owner, LLC and ACEH may request revised provisions of the SGMP, including those related to the soil and/or groundwater at specified locations within the Site. Such requests for modification will be included in amendments to the SGMP.

9.0 LIMITATIONS

This SGMP has been prepared on behalf of CRP/WP Alta Waverly Owner, LLC. All conclusions and recommendations in this report concerning the Site are the professional opinions of the Langan personnel involved with the project, and this report should not be considered a legal interpretation of existing environmental regulations. Opinions presented herein apply to Site conditions existing at the time of our assessment, and cannot necessarily be taken to apply to Site changes or conditions of which we are not aware and have not had the opportunity to evaluate.

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TABLES

Table 1
Non-Metals Analytical Results in Soil
23rd and Valdez Street
Oakland, California

Sample ID	Sample Depth (feet)	Date Sample	TPHg	TPHd	TPHmo	VOCs	SVOCs	OCPs	PCBs
			(mg/kg)						
B-1-3.0	3.0	09/06/14	< 1.0	2.1	8.9	--	--	--	--
B-1-9.0	9.0	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
B-2-3.0	3.0	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
B-2-5.5	5.5	09/06/14	< 1.0	1.3	< 5.0	--	--	--	--
B-3-3.0	3.0	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
B-3-5.0	5.0	09/06/14	< 1.0	2.6	< 5.0	--	--	--	--
B-4-3.0	3.0	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
B-4-5.5	5.5	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
B-5-2.0	2.0	12/6/2014	< 1.0	< 1.0	< 5.0	ND	ND	ND	< 0.050
B-5-5.5	5.5	12/6/2014	< 1.0	< 1.0	< 5.0	ND	--	--	--
B-5-8.5	8.5	12/6/2014	< 1.0	< 1.0	< 5.0	--	--	--	--
B-6-2.0	2.0	12/6/2014	< 1.0	7.4	27	--	ND	ND	--
B-6-3.5	3.5	12/6/2014	< 1.0	2.8	6.0	ND	ND	--	< 0.050
B-6-5.5	5.5	12/6/2014	< 1.0	< 1.0	< 5.0	--	ND	--	--
B-7-2.0	2.0	12/6/2014	< 1.0	< 1.0	5.4	--	--	ND	--
B-7-5.5	5.5	12/6/2014	< 1.0	< 1.0	< 5.0	ND	ND	--	< 0.050
B-7-8.5	8.5	12/6/2014	< 1.0	< 1.0	< 5.0	ND	--	--	--
CPT-7-1.5	1.5	12/6/2014	< 1.0	2.4	14	ND	ND[2]	ND	< 0.050
CPT-7-3.0	3.0	12/6/2014	< 1.0	81	**140**	ND[1]	ND[3]	ND	--
CPT-7-8.0	8.0	12/6/2014	< 1.0	3.5	11	ND	ND[4]	--	< 0.050
EB-1-1.5	1.5	09/06/14	< 1.0	< 1.0	< 5.0	--	--	ND	ND
EB-1-5.0	5.0	09/06/14	< 1.0	2.7	33	ND	ND	--	--
EB-1-8.0	8.0	09/06/14	< 1.0	1.1	5.5	--	--		--
EB-2-1.5	1.5	09/06/14	< 1.0	2.2	19	--	--	--	--
EB-2-3.0	3.0	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
EB-2-8.0	8.0	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
EB-3-1.5	1.5	09/06/14	2.9	**290**	**660**	--	--	ND	ND
EB-3-5.0	5.0	09/06/14	< 1.0	< 1.0	< 5.0	ND	ND	--	--
EB-4-1.5	1.5	09/06/14	< 1.0	4.5	59	--	--	--	--
EB-4-3.0	3.0	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
EB-4-8.0	8.0	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
EB-5-1.5	1.5	09/06/14	< 1.0	3.8	26	--	--	ND	ND
EB-5-3.0	3.0	09/06/14	< 1.0	1.2	15	--	--	--	--
EB-5-5.0	5.0	09/06/14	< 1.0	3.6	70	--	--	--	--
EB-5-8.0	8.0	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
EB-6-1.5	1.5	09/06/14	< 1.0	< 1.0	< 5.0	--	--	--	--
EB-6-3.0	3.0	09/06/14	< 1.0	1.0	< 5.0	ND	ND	--	< 0.050
EB-7-1.5	1.5	02/07/15	< 1.0	< 1.0	< 5.0	ND	ND	ND	ND
EB-7-5.0	5.0	02/07/15	< 1.0	< 1.0	< 5.0	ND	ND	ND	ND
EB-7-7.5	7.5	02/07/15	< 1.0	< 1.0	< 5.0	ND	ND	ND	ND
EB-7-15	15.0	02/07/15	< 1.0	< 1.0	< 5.0	ND	ND	ND	ND
EB-7-20	20.0	02/07/15	< 1.0	< 1.0	< 5.0	--	--	--	--
EB-8-3.0	3.0	02/07/15	< 1.0	< 1.0	< 5.0	ND	ND	ND	ND
EB-8-7.5	7.5	02/07/15	< 1.0	< 1.0	< 5.0	ND	ND	ND	ND
EB-8-10	10.0	02/07/15	< 1.0	< 1.0	< 5.0	ND	ND	ND	ND
EB-8-15	15.0	02/07/15	< 1.0	< 1.0	< 5.0	--	--	--	--
EB-9-3.0	3.0	02/07/15	< 1.0	< 1.0	< 5.0	ND	ND	ND	ND
EB-9-5.0	5.0	02/07/15	< 1.0	< 1.0	< 5.0	ND	ND	ND	ND
EB-9-7.5	7.5	02/07/15	< 1.0	< 1.0	< 5.0	ND	ND	ND	ND
EB-9-10	10.0	02/07/15	< 1.0	< 1.0	< 5.0	--	--	--	--
EB-9-15	15.0	02/07/15	< 1.0	< 1.0	< 5.0	--	--	--	--
ESLs			100	100	100	NE	NE	NE	NE

Notes:
mg/kg - milligrams per kilogram
TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M
TPHd - Total Petroleum Hydrocarbons as Diesel Range, EPA Method 8015M
TPHmo - Total Petroleum Hydrocarbons as Motor Oil EPA Method 8015M
VOCs - Volatile Organics, EPA Method 8260B
SVOCs - Semi-Volatile Organics, EPA Method 8270C
OCPs - Organochlorine Pesticides (EPA Method 8081A/8082)
PCBs - Polychlorinated Biphenyls (EPA Method 8081A/8082)
[1] - Naphthalene was detected at a concentration of 0.029 mg/kg.
[2] - Pyrene was detected at a concentration of 0.26 mg/kg.
[3]- Floranthene was detected at a concentration of 6.2 mg/kg; Phenanthrene was detected at a concentration of 8.1 mg/kg; and Pyrene was detected at a concentration of 5.6 mg/kg.
[4] - Floranthene was detected at a concentration of 0.26 mg/kg, and Pyrene was detected at a concentration of 0.30 mg/kg.
ESLs - Regional Water Quality Control Board, SFBay, Environmental Screening Level from Summary Table for Shallow Soils (December 2013)
Bold - concentration exceeds screening level(s)
< 1.0 - Analyte was not detected above the laboratory reporting limit (1.0 mg/kg)
-- Not analyzed
ND - Not detected at or above the laboratory reporting limit
NE - ESL(s) Not Established

Table 2
Metal Analytical Results in Soil
23rd and Valdez Street
Oakland, California

Sample ID	Sample Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium STLC	Cobalt	Copper	Lead	Lead STLC	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			(mg/kg)						(mg/L)	(mg/kg)			(mg/L)		(mg/kg)							
B-1-3.0	3.0	09/06/14	< 0.50	4.0	140	0.68	< 0.25	62	< 0.050	14	20	7.1	--	--	0.074	< 0.50	92	< 0.50	< 0.50	< 0.50	47	41
B-1-9.0	9.0	09/06/14	--	--	--	--	< 0.25	59	< 0.050	--	--	7.7	--	--	--	--	78	--	--	--	--	49
B-2-3.0	3.0	09/06/14	--	--	--	--	< 0.25	39	--	--	--	4.8	--	--	--	--	32	--	--	--	--	20
B-2-5.5	5.5	09/06/14	--	--	--	--	< 0.25	62	< 0.050	--	--	12	--	--	--	--	94	--	--	--	--	41
B-3-3.0	3.0	09/06/14	< 0.50	3.8	120	0.51	< 0.25	49	--	11	17	5.1	--	--	0.077	< 0.50	66	< 0.50	< 0.50	< 0.50	40	33
B-4-3.0	3.0	09/06/14	< 0.50	2.8	180	< 0.50	0.31	29	1.2	9.0	14	60	1.2	< 0.20	0.054	< 0.50	27	< 0.50	< 0.50	< 0.50	28	120
B-4-5.5	5.5	09/06/14	--	--	--	--	< 0.25	44	--	--	--	4.8	--	--	--	--	38	--	--	--	--	29
B-5-2.0	2.0	12/6/2014	< 0.50	2.4	160	0.63	< 0.25	53	< 0.050	11	12	4.8	--	--	0.066	< 0.50	100	< 0.50	< 0.50	< 0.50	29	27
B-5-5.5	5.5	12/6/2014	--	--	--	--	< 0.25	51	< 0.050	--	--	8.4	--	--	--	--	72	--	--	--	--	46
B-5-8.5	8.5	12/6/2014	--	--	--	--	0.39	48	--	--	--	5.3	--	--	--	--	84	--	--	--	--	36
B-6-2.0	2.0	12/6/2014	--	--	--	--	< 0.25	150	**5.6**	--	--	**2,600**	--	**15**	--	--	82	--	--	--	--	180
B-6-3.5	3.5	12/6/2014	0.64	4.9	550	0.64	< 0.25	42	--	8.8	27	36	--	--	0.093	0.93	46	< 0.50	< 0.50	< 0.50	52	49
B-6-5.5	5.5	12/6/2014	--	--	--	--	< 0.25	29	--	--	--	17	--	--	--	--	29	--	--	--	--	330
B-7-2.0	2.0	12/6/2014	< 0.50	3.4	110	0.57	< 0.25	56	0.075	3.4	15	7.0	--	--	< 0.050	0.52	44	< 0.50	< 0.50	< 0.50	39	36
B-7-5.5	5.5	12/6/2014	--	--	--	--	< 0.25	53	< 0.050	--	--	7.4	--	--	--	--	110	--	--	--	--	40
B-7-8.5	8.5	12/6/2014	< 0.50	2.9	200	0.55	< 0.25	62	< 0.050	7.4	20	5.5	--	--	< 0.050	< 0.50	68	< 0.50	< 0.50	< 0.50	39	46
CPT-7-1.5	1.5	12/6/2014	--	--	--	--	< 0.25	39	--	--	--	14	--	--	--	--	44	--	--	--	--	36
CPT-7-3.0	3.0	12/6/2014	< 0.50	3.0	89	< 0.50	< 0.25	25	--	4.8	13	53	--	--	0.052	< 0.50	23	< 0.50	< 0.50	< 0.50	25	48
CPT-7-8.0	8.0	12/6/2014	0.58	5.4	150	0.64	0.31	53	0.11	14	23	130	4.1	< 0.20	0.11	< 0.50	60	< 0.50	< 0.50	< 0.50	47	90
EB-1-1.5	1.5	09/06/14	< 0.50	3.6	180	0.54	< 0.25	50	< 0.050	14	17	10	--	--	< 0.050	0.65	38	< 0.50	< 0.50	< 0.50	39	32
EB-1-5.0	5.0	09/06/14	--	--	--	--	< 0.25	38	--	--	--	5.1	--	--	--	--	74	--	--	--	--	30
EB-1-8.0	8.0	09/06/14	--	--	--	--	< 0.25	53	< 0.050	--	--	14	--	--	--	--	79	--	--	--	--	46
EB-2-1.5	1.5	09/06/14	0.59	4.3	140	0.52	< 0.25	43	--	10	19	44	--	--	0.052	< 0.50	43	< 0.50	< 0.50	< 0.50	39	54
EB-2-3.0	3.0	09/06/14	--	--	--	--	< 0.25	49	--	--	--	7.6	--	--	--	--	54	--	--	--	--	31
EB-2-8.0	8.0	09/06/14	--	--	--	--	< 0.25	61	0.077	--	--	15	--	--	--	--	85	--	--	--	--	52
EB-3-1.5	1.5	09/06/14	--	--	--	--	0.50	38	--	--	--	290	**24**	1.1	--	--	32	--	--	--	--	260
EB-3-5.0	5.0	09/06/14	--	--	--	--	< 0.25	40	--	--	--	6.3	--	--	--	--	27	--	--	--	--	26
EB-4-1.5	1.5	09/06/14	1.8	6.7	350	0.57	0.51	45	--	13	52	190	**8.5**	< 0.20	0.45	0.57	44	< 0.50	< 0.50	< 0.50	42	180
EB-4-3.0	3.0	09/06/14	--	--	--	--	< 0.25	45	--	--	--	310	**26**	< 0.20	--	--	38	--	--	--	--	65
EB-4-8.0	8.0	09/06/14	--	--	--	--	< 0.25	12	--	--	--	2.6	--	--	--	--	7.8	--	--	--	--	43
EB-5-1.5	1.5	09/06/14	1.0	6.6	320	0.68	0.34	44	--	13	42	170	**11**	< 0.20	0.24	0.61	47	< 0.50	< 0.50	< 0.50	41	150
EB-5-3.0	3.0	09/06/14	--	--	--	--	0.37	48	--	--	--	510	**27**	0.36	--	--	57	--	--	--	--	210
EB-5-5.0	5.0	09/06/14	--	--	--	--	0.53	36	--	--	--	360	**19**	< 0.20	--	--	30	--	--	--	--	250
EB-5-8.0	8.0	09/06/14	--	--	--	--	< 0.25	60	--	--	--	7.8	--	--	--	--	55	--	--	--	--	28

Table 2
Metal Analytical Results in Soil
23rd and Valdez Street
Oakland, California

Sample ID	Sample Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium STLC	Cobalt	Copper	Lead	Lead STLC	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			(mg/kg)						(mg/L)	(mg/kg)			(mg/L)		(mg/kg)							
EB-6-1.5	1.5	09/06/14	--	--	--	--	< 0.25	57	< 0.050	--	--	7.1	--	--	--	--	89	--	--	--	--	36
EB-6-3.0	3.0	09/06/14	< 0.50	3.6	130	0.62	< 0.25	58	< 0.050	--	18	6.0	--	--	< 0.050	< 0.50	89	< 0.50	< 0.50	< 0.50	43	38
EB-7-1.5	1.5	02/07/15	< 0.50	3.8	150	< 0.50	< 0.25	35	--	7.8	16	170	4.1	< 0.20	0.34	0.56	24	< 0.50	< 0.50	< 0.50	28	170
EB-7-5.0	5.0	02/07/15	< 0.50	2.9	130	< 0.50	< 0.25	32	--	7.4	12	17	--	--	0.092	< 0.50	26	< 0.50	< 0.50	< 0.50	30	29
EB-7-7.5	7.5	02/07/15	< 0.50	3.8	150	0.75	< 0.25	60	< 0.050	7.2	24	5.8	--	--	0.091	< 0.50	81	< 0.50	< 0.50	< 0.50	41	47
EB-7-15	15.0	02/07/15	< 0.50	4.8	200	0.56	< 0.25	52	--	15	16	7.3	--	--	0.052	0.71	79	< 0.50	< 0.50	< 0.50	43	33
EB-8-3.0	3.0	02/07/15	< 0.50	3.8	280	0.55	< 0.25	49	--	12	14	7.6	--	--	0.055	< 0.50	60	< 0.50	< 0.50	< 0.50	39	29
EB-8-7.5	7.5	02/07/15	< 0.50	4.0	230	< 0.50	< 0.25	44	--	8.0	15	5.0	--	--	< 0.050	< 0.50	51	< 0.50	< 0.50	< 0.50	38	36
EB-8-10	10.0	02/07/15	< 0.50	2.0	600	< 0.50	0.33	44	--	17	23	9.2	--	--	< 0.050	0.64	110	< 0.50	< 0.50	< 0.50	42	40
EB-9-3.0	3.0	02/07/15	< 0.50	3.7	180	< 0.50	< 0.25	41	--	9.2	12	6.5	--	--	< 0.050	< 0.50	33	< 0.50	< 0.50	< 0.50	34	21
EB-9-5.0	5.0	02/07/15	< 0.50	3.9	270	0.64	< 0.25	57	< 0.050	17	21	11	--	--	< 0.050	< 0.50	93	< 0.50	< 0.50	< 0.50	53	48
EB-9-7.5	7.5	02/07/15	< 0.50	3.3	150	0.68	< 0.25	52	--	9.5	19	6.5	--	--	0.11	< 0.50	70	< 0.50	< 0.50	< 0.50	42	41
Hazardous Waste Criterion																						
TTLC	(mg/kg)		500	500	10,000	75	100	2,500	--	8,000	2,500	1,000	--	--	20	3,500	2,000	100	500	700	2,400	5,000
STLC	(mg/L)		15	5	100	0.75	1	--	5	80	25	--	5	--	0.2	350	20	1	5	7	24	250
TCLP	(mg/L)		--	5	100	--	1	--	--	--	--	--	--	5	0.2	--	--	1	5	--	--	--
ESL	(mg/kg)		20	0.39	750	4.0	12	1,000	--	23	230	80	--	--	6.7	40	150	10	20	0.78	200	600

Notes:
mg/kg - milligrams per kilogram
mg/L - milligrams per liter
< 0.5 - Analyte was not detected above the laboratory reporting limit (0.5 mg/kg).
– Not analyzed
TTLC - California Total Threshold Limit Concentration - State hazardous waste criterion
STLC - California Soluble Threshold Limit Concentration
TCLP - Federal Toxicity Characteristic Leaching Procedure
ESL - Regional Water Quality Control Board, SFBay, Environmental Screening Level from Summary Table for Shallow Soils (December 2013)
Bold - Exceeds Federal or State of California Hazardous Waste Criteria

Table 3
Non-Metals Analytical Results in Groundwater
23rd and Valdez Street Street
Oakland, California

Sample ID	Date Sampled	TPHg	TPHd	TPHmo	VOCs																		SVOCs	PCBs
					Acetone	Benzene	2-Butanone (MEK)	t-Butyl alcohol (TBA)	n-Butyl benzene	sec-Butyl benzene	tert-Butyl benzene	Chloroform	Diisopropyl ether (DIPE)	Ethyl-benzene	Isopropyl-benzene	4-Isopropyl toluene	Methyl tert-butyl ether (MTBE)	Naph-thalene	n-Propyl benzene	Toluene	1,3,5-Trimethyl-benzene	Total Xylenes	All Other VOCs		
		(µg/L)																						
MW-2	09/12/14	190	< 50	< 250	< 10	< 0.50	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.1	< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.50	ND	–	–
MW-2	09/24/14	< 50	< 50	< 250	< 10	< 0.50	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND	–	–
MW-3	03/04/15	< 50	< 50	< 250	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
MW-4	09/12/14	< 50	78	< 250	< 10	< 0.50	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND	–	–
MW-4	09/24/14	< 50	< 50	< 250	< 10	< 0.50	< 2.0	<2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND	–	–
MW-6	09/24/14	< 50	< 50	< 250	< 10	< 0.50	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND	–	–
MW-7	09/12/14	< 50	< 50	< 250	< 10	< 0.50	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND	–	–
MW-8	09/12/14	< 50	< 50	< 250	< 10	< 0.50	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND	–	–
MW-9	09/12/14	**620**	460	< 250	17	2.3	8.3	< 2.0	2.2	1.7	< 0.50	< 0.50	< 0.50	4.4	11	0.68	< 0.50	6.2	14	2.0	0.73	2.7	ND	–	–
MW-9	09/24/14	**520**	220	< 250	< 10	< 0.50	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.55	0.73	< 0.50	1.5	< 0.50	< 0.50	< 0.50	< 0.50	ND	–	–
MW-10	03/04/15	< 50	< 50	< 250	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
B-5-GW	12/06/14	< 50	190	250	< 10	< 0.50	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND	ND	< 0.50
B-7-GW	12/06/14	< 50	610	**670**	< 10	< 0.50	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	1.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.51	< 0.50	< 0.50	ND	ND	< 0.50
CPT-7-GW	12/06/14	< 50	63	< 250	< 10	< 0.50	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	0.82	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND	ND	< 0.50
EB-8-GW	02/07/15	**3,100**	**720**	< 250	< 20	3.0	< 4.0	< 4.0	13	7.5	2.2	< 0.50	3.2	< 1.0	8.7	2.2	< 1.0	< 1.0	11	< 1.0	< 1.0	< 1.0	ND	–	–
EB-9-GW	02/07/15	94	320	< 250	< 10	< 0.50	3.3	4.7	0.63	0.78	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.53	< 0.50	< 0.50	ND	–	–
ESLs[1]		500	640	640	1,500	27	14,000	18,000	–	–	–	170	–	43	–	–	1,800	24	–	130	–	100	–	–	–

Notes:
µg/L - micrograms per liter
TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M
TPHd - Total Petroleum Hydrocarbons as Diesel Range, EPA Method 8015M
TPHmo - Total Petroleum Hydrocarbons as Motor Oil, EPA Method 8015M
MEK - Methyl Ethyl Ketone
VOC - Volatile Organics Compounds, EPA 8260B
< 50 - Analyte was not detected above the laboratory reporting limit (50 µg/L)
– Not Analyzed
ND - Analyte was not detected above the laboratory reporting limits
ESLs[1] - Regional Water Quality Control Board, SFBay, Environmental Screening Levels Groundwater Where Groundwater is Not a Current or Potential Drinking Water Resource: Table F-1b (December 2013)
Bold - Exceeds Screening Level

Table 4
Metal Analytical Results in Grab Groundwater
23rd and Valdez Street
Oakland, California

Sample ID	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Colbalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
		(µg/L)																
B-5-GW	12/6/2014	< 0.50	3.7	960	9.3	3.5	34	150	33	5.7	< 0.25	< 0.50	640	1.2	0.22	< 0.50	23	160
B-7-GW	12/6/2014	< 10	< 10	400	16	5	46	300	61	< 10	< 0.50	< 10	930	< 10	< 3.8	< 10	31	340
CPT-7-GW	12/6/2014	--	--	--	--	< 5.0	530	--	--	29	--	--	1,400	--	--	--	--	44

Notes:

µg/L - micrograms per Liter

< 0.50 - Analyte was not detected above the laboratory reporting limit (0.5 mg/kg).

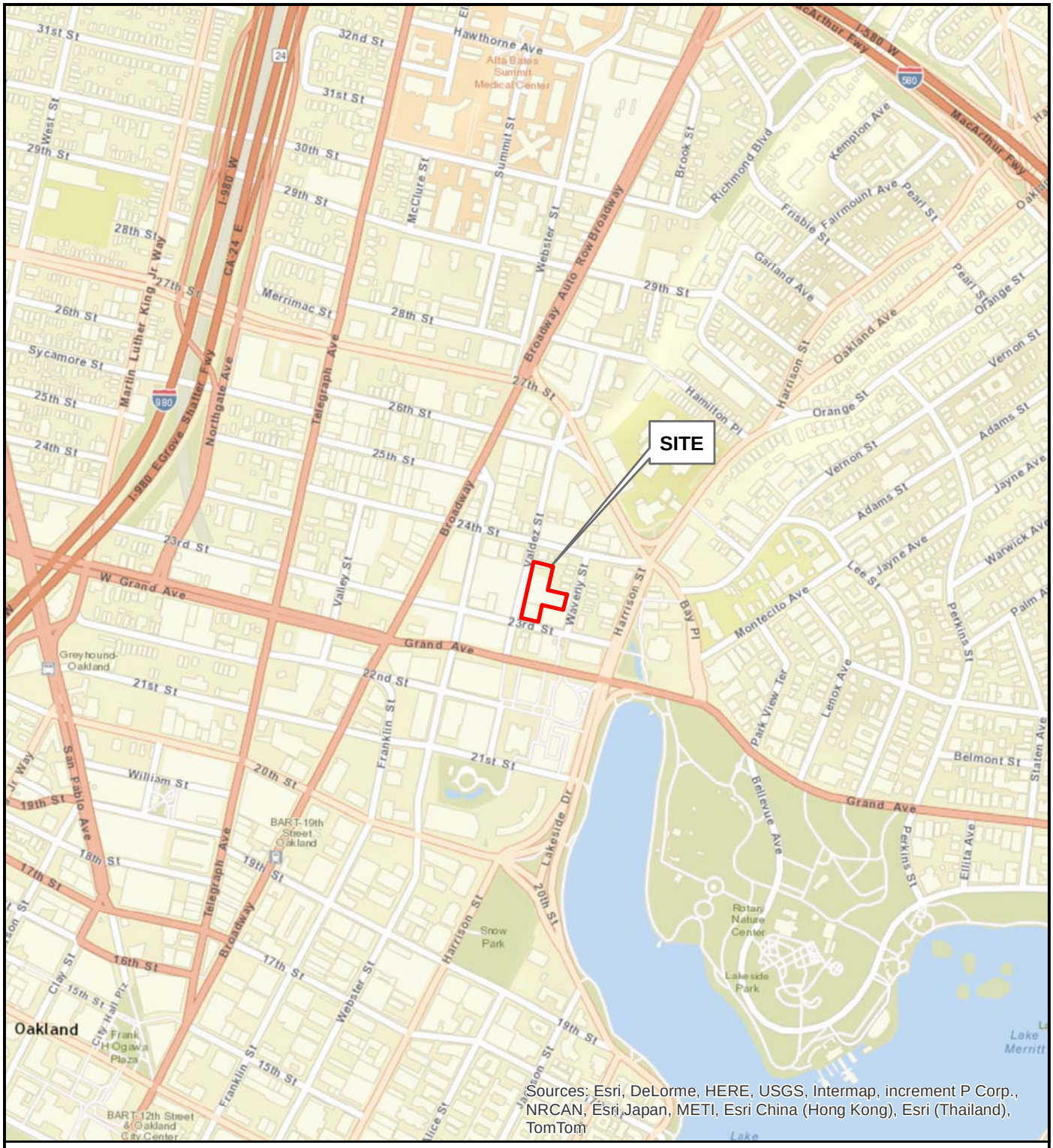
-- Not analyzed

Table 5
Volatile Organic Compounds Analytical Results in Soil Vapor
23rd and Valdez Street Street
Oakland, California

Sample ID	Sample Depth (Feet)	Date Sampled	VOCs																								Helium
			1,3-Butadiene	Acetone	cis - 1,2-Dichloroethene	Carbon Disulfide	Isopropanol	Methylene Chloride	n-Hexane	2-Butanone (MEK)	Ethyl Acetate	Tetrahydrofuran	Cyclohexane	Benzene	n-Heptane	4-Methyl - 2-Pentanone (MIBK)	Toluene	Tetrachloroethylene (PCE)	Ethylbenzene	mp-Xylenes	o-Xylenes	Total Xylenes	1,2,4-Trimethylbenzene	1,3-Dichlorobenzene	Methyl tert-butyl ether (MTBE)	Naphthalene		All Other VOCs	
																										Method TO-15	Method TO-17		
			($\mu g/m^3$)																								(Mol %)
SSG-1	0.5	09/06/14	< 2.0	35	< 3.6	< 2.8	260	< 3.2	< 3.2	14	< 3.3	< 2.7	< 3.1	< 2.9	< 3.7	< 3.7	7.8	< 6.2	< 4.0	13	4.9	17.9	< 4.5	9.7	< 3.3	< 19	–	ND	< 0.18
SSG-2	0.5	09/06/14	3.4	350	< 3.5	4.3	420	< 3.1	8.1	40	4.1	< 2.6	12	**5.9**	9.0	< 3.6	13	< 6.0	< 3.9	11	4.8	15.8	< 4.4	25	< 3.2	< 19	–	ND	< 0.18
ESL-R[1]			–	6.4E+05	146	–	–	104	–	1.04E+05	–	–	–	1.68	–	6.20E+04	6,200	8.2	19.4	–	–	2,000	–	–	188	1.44		–	–
SG-1	5.0	09/06/14	4.5	86	< 3.6	< 2.9	51	< 3.2	24	14	< 3.3	6.8	17	8.8	10	< 3.8	9.4	< 6.2	120	450	140	590	< 4.5	8.6	< 3.3	< 19	–	ND	< 0.18
SG-2	5.0	09/06/14	6.8	57	< 3.9	4.4	78	< 3.4	48	19	< 3.5	< 2.9	11	20	15	< 4.0	19	33	64	240	78	318	< 4.8	23	< 3.5	< 21	–	ND	< 0.20
SG-3	5.0	09/06/14	7.3	22	< 3.9	6.8	60	< 3.4	11	9.8	< 3.5	9.2	8.4	16	7.4	< 4.0	22	< 6.7	72	270	88	358	7.1	14	< 3.6	< 21	–	ND	<0.20
SG-4-5.0	5.0	02/14/15	15	200	< 4.5	11	< 11	< 4.0	9.0	35	< 4.1	< 3.4	< 3.9	4.2	< 4.7	< 4.7	9.3	< 7.8	< 5.0	< 5.0	< 5.0	< 5.0	< 5.6	< 6.9	< 4.1	< 24	< 10	ND	**3.1**
SG-4-10.0	10.0	02/14/15	< 4.4	23	10	< 6.1	< 19	< 6.9	< 7.0	7.0	< 7.1	< 5.8	< 6.8	< 6.3	< 8.1	< 8.1	7.9	< 13	< 8.6	< 8.6	< 8.6	< 8.6	< 9.7	< 12	< 7.1	< 41	< 10	ND	< 0.4
SG-5-5.0	5.0	02/14/15	4.2	27	< 3.8	3.7	< 9.5	< 3.4	< 3.4	7.1	< 3.5	< 2.9	< 3.3	3.9	< 4.0	< 4.0	8.2	< 6.6	< 4.2	< 4.2	< 4.2	< 4.2	< 4.8	< 5.8	< 3.5	< 20	< 10	ND	0.20
SG-5-10.0	10.0	02/14/15	23	14	< 3.8	6.7	< 9.5	< 3.4	11	3.7	< 3.5	< 2.9	< 3.3	11	5.6	< 4.0	14	24	< 4.2	5.2	< 4.2	5.2	< 4.8	< 5.8	< 3.5	< 20	< 10	ND	< 0.19
SG-6-5.0	5.0	02/14/15	3.7	130	< 3.4	9.8	< 8.4	< 3.0	< 3.0	20	< 3.1	< 2.5	< 2.9	3.4	< 3.5	< 3.5	6.1	< 5.8	< 3.7	< 3.7	< 3.7	< 3.7	< 4.2	< 5.1	< 3.1	< 18	< 10	ND	< 0.17
DUP-1	5.0	02/14/15	3.6	130	< 3.4	10	< 8.3	< 2.9	< 3.0	20	< 3.0	< 2.5	< 2.9	3.4	< 3.5	< 3.5	6.3	< 5.7	< 3.7	< 3.7	< 3.7	< 3.7	< 4.2	< 5.1	< 3.0	< 18	–	ND	< 0.17
SG-6-10.0	10.0	02/14/15	65	18	< 3.8	75	< 9.4	< 3.3	24	4.3	< 3.4	< 2.8	56	17	9.3	< 3.9	150	< 6.5	7.6	26	10	36	< 4.7	< 5.7	< 3.4	< 20	< 10	ND	< 0.19
SG-7-5.0	5.0	02/14/15	2.6	84	< 3.5	5.1	15	< 3.1	< 3.2	22	< 3.2	< 2.6	< 3.1	4.0	< 3.7	< 3.7	6.7	< 6.1	< 3.9	< 3.9	< 3.9	< 3.9	< 4.4	< 5.4	< 3.2	< 19	< 10	ND	< 0.18
SG-7-10.0	10.0	02/14/15	150	36	< 13	13	< 33	< 12	73	12	< 12	< 9.8	41	32	32	< 14	27	< 23	< 14	< 14	< 14	< 14	< 16	< 20	< 12	< 70	< 10	ND	< 0.22
SGW-1	5.0	02/14/15	< 2.2	38	< 3.9	68	29	4.1	22	7.2	< 3.5	< 2.9	16	< 3.1	4.5	< 4.0	47	< 6.6	11	35	7.8	42.8	5.4	< 5.9	< 3.5	< 20	< 10	ND	0.93
AA-1	–	02/14/15	< 2.0	52	< 3.6	< 2.9	< 9.0	< 3.2	< 3.2	9.6	< 3.3	< 2.7	< 3.2	< 2.9	< 3.8	3.8	< 3.5	< 6.2	< 4.0	< 4.0	< 4.0	< 4.0	< 4.5	< 5.5	< 3.3	< 19	NA	ND	–
ESL-R[2]			–	1.60E+07	3,700	–	–	2,600	–	2.60E+06	–	–	–	42	–	1.60E+06	1.60E+05	210	490	–	–	5.20E+04	–	–	4,700	36		–	–

Notes:
$\mu g/m^3$ - micrograms per cubic meter
VOCs - Volatile Organics, EPA Method 8260B
SSG-1 - Sub-slab vapor sample
SG-1 - Soil vapor sample
DUP-1 - Duplicate soil vapor sample
SGW-1 - Soil vapor sample from permanent soil vapor well
AA-1 - Ambient air sample
< 2.0 - Analyte was not detected above the laboratory reporting limit (2.0 $\mu g/m^3$)
ND - Not detected at or above method reporting limits
Bold - Exceeds Screening Level(s)
ESL-R[1]: Regional Water Quality Control Board, Table E-3, Environmental Screening Levels for lowest residential Ambient and Indoor Air, December 2013 and calculated with an attenuation factor of 0.05
ESL-R[2]: Regional Water Quality Control Board, Table E-2, Environmental Screening Levels for lowest residential Soil Gas, December 2013

FIGURES



Notes:

1. World street basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online. Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN.
2. Map displayed in California State Plane Coordinate System , Zone III, North American Datum of 1983 (NAD83) , US Survey Feet.

0 300 600 1,200
Feet

N

23RD AND VALDEZ
Oakland, California

SITE LOCATION MAP

LANGAN TREADWELL ROLLO

Date 06/08/15	Project No. 731641601	Figure 1

EXPLANATION

- **B-1** — Approximate location of geotechnical boring by Langan Treadwell Rollo, September and December 2014
- **CPT-1** — Approximate location of geotechnical cone penetration test by Langan Treadwell Rollo, September and December 2014 (Note: CPT-1A & CPT-2A were grab sample locations)
- **MW-1** — Approximate location of previously installed monitoring well by Langan Treadwell Rollo, November 2010
- **MW-10** — Approximate location of installed monitoring well by Langan Treadwell Rollo, February 2015
- Approximate location of former USTs. Removed February 1988
- Approximate Site boundary
- **SGW-1** — Approximate location of permanent soil vapor probe by Langan Treadwell Rollo, February 2015
- **EB-5** — Approximate location of environmental boring by Langan Treadwell Rollo, September 2014 and February 2015
- **SG-7** — Approximate location of environmental soil vapor sampling by Langan Treadwell Rollo, September 2014 and February 2015
- **SSG-1** — Approximate location of environmental sub-slab soil vapor sampling by Langan Treadwell Rollo, September 2014
- Abandoned monitoring well

N

0 50 Feet

Approximate scale

Reference: Base map from drawing titled "Existing Site Boundary Plan", by BKF, dated 21 November 2014.

23RD AND VALDEZ
Oakland, California

SITE PLAN

Date 06/09/15	Project No. 731641601	Figure 2

LANGAN TREADWELL ROLLO

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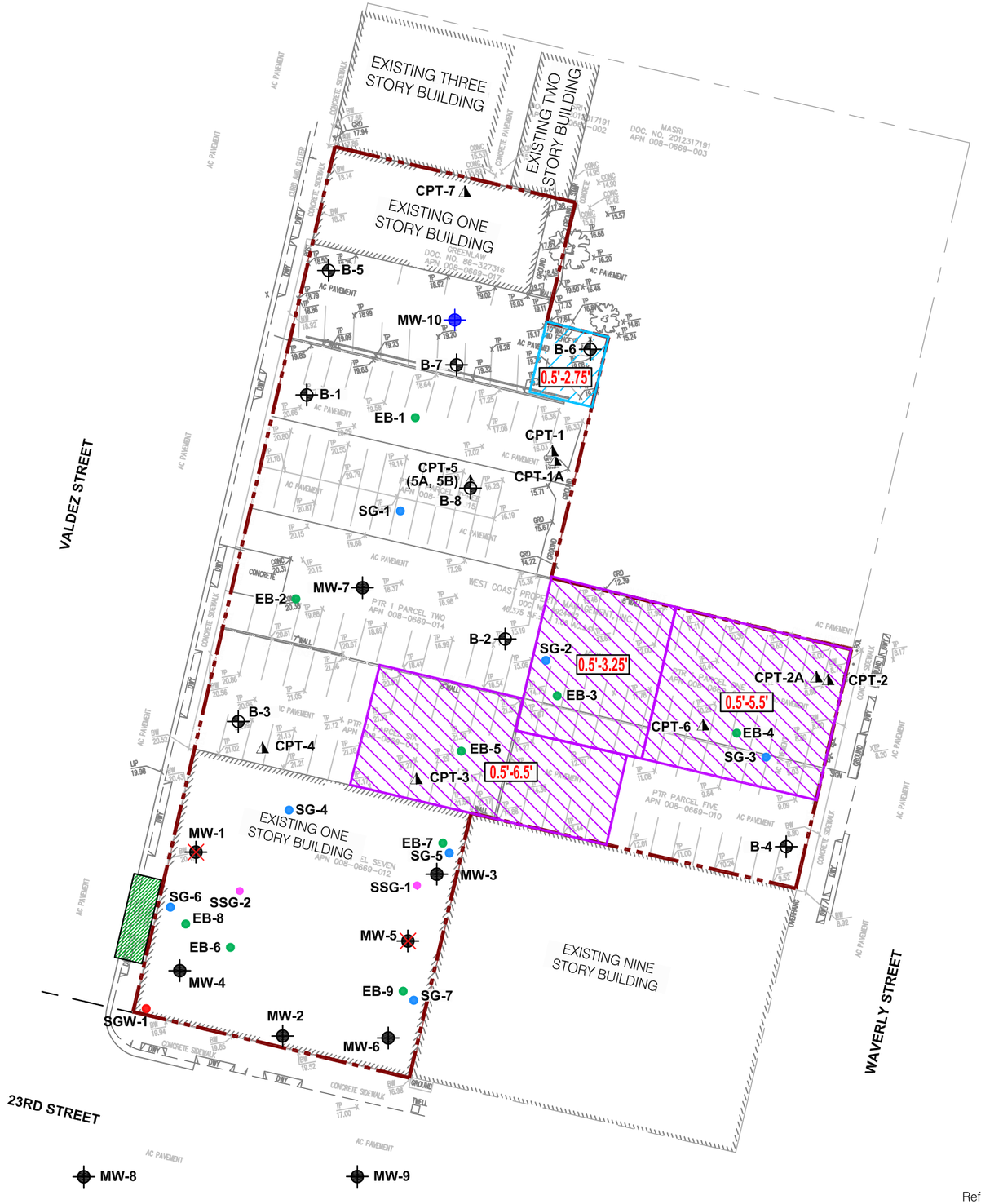

EXPLANATION

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- **SSG-1** — Approximate location of environmental sub-slab soil vapor sampling by Langan Treadwell Rollo, September 2014
- Abandoned monitoring well
- Approximate extent of Federal RCRA Hazardou Material
- Approximate extent of State of California Non-RCRA Hazardous Material
- **0.5'-2.75'** — Approximate depth of material to be excavated (feet below the ground surface)

N

0 50 Feet

Approximate scale

Reference: Base map from drawing titled "Existing Site Boundary Plan", by BKF, dated 21 November 2014.

23RD AND VALDEZ
Oakland, California

SITE PLAN WITH APPROXIMATE EXTENT OF FEDERAL AND STATE OF CALIFORNIA HAZARDOUS MATERIAL

Date 06/09/15	Project No. 731641601	Figure 3

LANGAN TREADWELL ROLLO

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