October 11, 2017

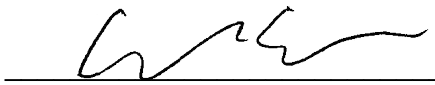
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Re: Data Gap Work Plan; 914 West Grand Avenue, Oakland, California

Dear Sir or Madam:

I have read and acknowledge the content, recommendations, and/or conclusions contained in the attached report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

Sincerely,



Date: Nov 13, 2017

Steven Ho
914 West Grand Avenue Oakland, LLC

CORNERSTONE EARTH GROUP

Type of Services	**Data Gap Work Plan**
Location	**914 W. Grand Avenue** **Oakland, California**
Client	**914 West Grand Avenue Oakland, LLC**
Client Address	**211 10th Street, Suite 222** **Oakland, California 94607**
Project Number	**991-1-1**
Date	**October 11, 2017**

Prepared by

Brent Johnson, P.G.
Project Geologist

Peter Langtry, P.G., C.E.G.
Principal Geologist

1259 Oakmead Parkway | Sunnyvale, CA 94085
T 408 245 4600 | F 408 245 4620

1270 Springbrook Road, Suite 101 | Walnut Creek, CA 94597
T 925 988 9500 | F 925 988 9501

www.cornerstoneearth.com

CORNERSTONE EARTH GROUP

Table of Contents

FIGURES

DATA SUMMARY TABLES

CORNERSTONE EARTH GROUP

Type of Services	**Data Gap Work Plan**
Location	**914 W. Grand Avenue** **Oakland, California**

SECTION 1: INTRODUCTION

On behalf of 914 West Grand Avenue Oakland, LLC, Cornerstone Earth Group (Cornerstone) prepared this Data Gap Work Plan (DGWP) in support of residential development of 914 W. Grand Avenue, in Oakland, California (Site) (Figures 1 and 2). This report was prepared for 914 West Grand Avenue Oakland, LLC in accordance with our September 15, 2016 agreement.

914 West Grand Avenue Oakland, LLC is preparing the Site for residential development and entered into a Voluntary Cleanup Agreement (VCA) with Alameda County Department of Environmental Health (County Health) for oversight associated with investigation and preparation/implementation of a Corrective Action Plan (CAP).

In November 2016, Cornerstone Earth Group (Cornerstone) collected soil, ground water, and soil vapor samples from selected locations on-Site. Based on the results of the investigation and prior investigations by others (summarized in Section 2), Cornerstone submitted the September 12, 2017 Corrective Action Plan (CAP) and CAP Addendum to mitigate risks associated with chemicals of concern (COC) detected in soil, soil vapor and ground water. County Health issued a conditional approval letter of the CAP and Addendum on September 26, 2017. One of the conditions of approval was the submittal of a DGWP to refine the extent of soil, soil vapor and ground water impacts beneath the Site. Results of the DGWP will be used to prepare a Corrective Action Implementation Plan (CAIP).

SECTION 2: SITE BACKGROUND AND ENVIRONMENTAL SITE HISTORY

2.1 DEVELOPMENT PLANS

The development will be a mixed use, six (6) story building of a concrete podium, steel and wood framed construction. A majority of the ground level story is dedicated to residential tenant parking and will be either open or mechanically ventilated. Along West Grand the ground level will also consist of rentable Tenant space, possibly more than one, café or small restaurant. In addition, the residential condominium will have a ground level community space which will allow flexible use (except sleeping) for residents associated with the home owner's association (HOA). Along Market Street, there will be three additional commercial spaces also known as "flex space". The northern edge of the property will include a limited amount (10-foot wide strip) of permeable paving. The building will have a concrete slab-on-grade floor at ground level, except for the ground floor retail space and flex units; the floors within these areas will be depressed approximately 5 feet below the ground level.

Three elevators will service the building. Two will be located at the same location as the original development plan; the third elevator will be located at a new location in the northeast corner of

the building. The development plans are shown in Attachment A. The development plan with relation to previous sample points is shown on Figure 3.

To accommodate construction of the building, soil is anticipated to be excavated to a depth of approximately 2 to 3 feet in ground level floor slab areas, to a depth of approximately 5 feet in the future elevator pit areas, and to a depth of approximately 7 feet in the two depressed slab areas. Except for the former underground storage tank (UST) pit (described below) and any area of concern (AOC) encountered, verification soil samples will not be collected following the excavation for construction; the potential presence of COC will be described in a Land Use Covenant (LUC). This DGWP includes sampling of soil at the planned construction excavation depth to document concentrations of petroleum/volatile COC that may remain after excavation is completed.

2.2 SITE HISTORY

Based on a Phase I Environmental Site Assessment (ESA) prepared by Cornerstone (2016), the northern portion of the Site was historically occupied by single-family dwellings from the early 1900s until the 1960s. The central portion of the Site has been occupied by various commercial businesses since at least 1925 including the Imperial Electric Sign Company, Gridd Stone Company; Bay Cities Venetian Blind Company; Lorentzen Company Linoleum and Carpet; Loralite Company; Bell Sheet Metal Company; The Oakland Terrazzo Company; and A&C Truck Repair. The southern portion of the Site has historically been used by automotive filling and repair businesses since approximately 1963 and includes Lean's Mohawk Service Gasoline Station, LJ Auto Service, 3A Tire Service, and Courtesy Auto Clinic. During the 2015 Phase I ESA, (Salem Engineering, 2015) the Site occupants were observed to be Enrique's Auto Repair and West Oakland Tire Repair (914 West Grand Avenue), and JAC Truck Repair (2236 Myrtle Street). The gasoline service station appears to have operated from approximately the mid-1960s to at least the mid-1970s. The remainder of the Site was vacant or used for storage purposes.

Documentation regarding the removal of the former USTs at 914 West Grand Avenue were not located. An undated plan for the service station that was obtained from the City of Oakland Building Department showed the location of the proposed underground storage tanks (USTs) and fuel pump islands; these proposed locations are shown on Figure 2.

2.3 PREVIOUS ON-SITE ENVIRONMENTAL STUDIES

Results of prior investigations are summarized in Tables A1 through A5 (2005 and 2012 investigations) and Tables B1 through B5 (2016 investigation) in the Data Tables section of this report. Laboratory analytical results for all media (soil, soil vapor and ground water) for each key COC are summarized on Figures 4A through 4J.

2.3.1 Previous Studies by Others

In 2005, Aqua Science performed a Phase II Investigation that consisted of the collection of soil samples from nine locations and ground water grab samples from two locations. Soil samples were collected to depths of up to approximately 11½ feet.

Elevated concentrations of gasoline-range petroleum hydrocarbons (TPHg) (2,100 milligrams per kilogram [mg/kg]); diesel-range petroleum hydrocarbons (TPHd) (370 mg/kg); and the volatile organic compounds (VOCs) ethylbenzene (27 mg/kg), total xylenes (6.1 mg/kg), and

naphthalene (20 mg/kg) were detected in the approximately 11½ foot soil sample collected from boring BH-B, located at the southwest corner of the Site near the former gasoline service station and the south (up-gradient) property boundary. Ground water grab samples collected detected TPHg (40,000 micrograms per liter [µg/L]), oil-range petroleum hydrocarbons (TPHo) (3,300 µg/L), TPHg (150,000 µg/L), dissolved lead (42 µg/L), ethylbenzene (4,500 µg/L), total xylenes (1,800 µg/L), and naphthalene (820 µg/L). A free product sheen reportedly was also observed in ground water while advancing this boring.

In 2012, Salem performed a series of Site investigations that consist of a geophysical survey and soil, soil vapor, and ground water sample collection. In February 2012, a geophysical survey identified three subsurface anomalies and several areas of disturbed soil on the western side of 914 West Grand Avenue. However, many miscellaneous items (i.e., cars, car parts, etc.) were present on-Site that could have affected the results of the survey. A follow-up geophysical survey was performed in May 2012 after these items were cleared. The follow-up survey did not identify the three subsurface anomalies. A pothole investigation was conducted in the areas of disturbed fill. The fill materials encountered at these locations reportedly had a petroleum odor. Salem concluded that these areas formerly contained underground storage tanks (USTs) associated with the historic filling station. No USTs were encountered during the potholing.

In February 2012, Salem collected soil and soil vapor samples from the Site. The soil samples were collected along a railroad spur that was formerly located on-Site, and were analyzed for lead and arsenic. The detected lead and arsenic concentrations were below the residential screening criteria and published background levels. The concentration of benzene detected in soil vapor exceeded its current Tier 1 Environmental Screening Level (ESL, Water Board, 2016) of 48 micrograms per cubic meter (µg/m^3) in 1 of 14 samples analyzed (sample B-3; 520 µg/m^3). This elevated benzene concentration was detected in a soil vapor sample collected from a depth of approximately 10 feet and near the reported former UST location. Benzene was not detected in the sample collected from a depth of 5 feet at this location, or in the other soil vapor samples analyzed.

Tetrachloroethene (PCE, a common dry cleaning compound), was detected in soil vapor sample B-5 at a depth of 10 feet. PCE was not detected in the sample collected at B-5 from a depth of 5 feet or in the other soil vapor samples analyzed.

In May 2012, Salem installed three ground water wells (MW-1, MW-2, and MW-3). Ground water was observed at a depth of approximately 10 feet; no free product was observed. The ground water flow reportedly was to the northwest. No VOCs, TPHd, or TPHg were detected in the ground water samples collected from well MW-2, which was installed north of the suspected former UST location. Chlorinated VOCs (cis-1,2-dichloroethene [cDCE] and trichloroethene [TCE]) were detected in the samples collected from MW-3, which was installed east of the former UST location and near the up-gradient property boundary. Benzene, ethylbenzene, naphthalene, xylenes, and TPHg were detected above their current ground water ESLs (Water Board, 2016) in the sample collected from MW-1, which was installed adjacent to the former UST locations. Salem concluded that UST impacts are present, but appeared to be limited to the area immediately adjacent to the former UST locations.

2.3.2 2016 Investigation by Cornerstone

Subsurface investigation activities were performed on November 9 and 10, 2016, using hydraulic drilling equipment. Seventeen exploratory borings (EB-1 through EB-17) were

advanced to depths of approximately 5 feet to 20 feet for the collection of soil samples; ground water grab sample collection were attempted at seven of these locations. Four additional borings were advanced to approximately 20 feet for the collection ground water grab samples (GW-1 through GW-4). Four borings were advanced to depths of approximately 7 feet to 10 feet to collect soil vapor samples (SV-1 through SV-4). The samples collected and laboratory analyses performed on each parcel/APN are presented in Table 1; as noted above, the analytical results are summarized in the Data Tables section of this report.

Table 1: 2016 Investigation Sample Summary Table

Address/APN	Soil Sampling (EDF No.)	Soil Vapor (EDF No.)	Ground Water (EDF No.)
914 W. Grand Ave 5-431-18-3	BH-A, BH-B to 11.5' (n/a) Analysis: TPHd, TPHo, TPHg, Arsenic, Lead, PCBS, VOCs B-1, B-2, B-3, B-4, B-5 to 1.0' Analysis: Arsenic, Lead (n/a) EB-6, EB-7, EB-8, EB-9, EB-13, EB-14, EB-17 (EDF No: 283192, 284494, 283412 Rev. 1) EB-10, EB-12, EB-15, EB-16 (EDF No.: 283234 & 283420) Analysis: CAM 17 Metals, TPHd, TPHo, TPHg, VOCs, PAHs, OCPs, PCBS,	B-1, B-2, B-3, B-4 to 5' and 10' Analysis: VOCs SV-1, SV-3, SV-4 to 7' (EDF No.: 1611197) Analysis: TPG/VOCs	BH-A, BH-B Analysis: TPHd, TPHo, TPHg, VOCs Dissolved Lead, PCBS MW-1, MW-3 (EDF No. 720-74147-1) Analysis: TPHd, TPHo, TPHg, VOCs EB-7, EB-8, EB-9, GW-3 (EDF No.: 283192) EB-10 (EDF No.: 283234) Analysis: TPHd, TPHo, TPHg, VOCs
2226 Myrtle Street 5-431-21-4	BH-C to 2' Analysis: TPHd, TPHo, TPHg, Lead, PCBs, VOCs EB-1 to 5' (EDF No.: 283192) Analysis: CAM 17 Metals, TPHd, TPHo, PAHs, OCPs, PCBs	---	GW-1 (EDF No.: 183234) Analysis: TPHd, TPHo, TPHg, VOCs
2236 Myrtle Street	EB-2 to 5' (EDF No: 283192 & 283797) Analysis: CAM 17 Metals, TPHd, TPHo, PAHs, OCPs, PCBs	---	---

Continued.

Table 1, continued.

Address/APN	Soil Sampling (EDF No.)	Soil Vapor (EDF No.)	Ground Water (EDF No.)
2220 Myrtle Street 5-431-19-2	BH-D, BH-E, BH-F, BH-G, BH-H to 2' Analysis: TPHg, TPHo, TPHg, Lead, PCBs, VOCs EB-11, EB-5 to 5'-10' (EDF No: 283234, 283420 & 283192) Analysis: CAM 17 Metals, TPhd, TPHo, TPHg, VOCs, PAHs, OCps, PCBs	B-5, B-6, B-7 to 5' and 10' Analysis: VOCs	MW-2 (EDF No.: 720-74147-1) Analysis: TPHd, TPHo, TPHg, VOCs GW-2 (EDF No. 283234) Analysis: TPHd, TPHo, TPHg, VOCs
2281 Market Street 5-431-15-4	BH-I to 2' Analysis: TPHd, TPHo, TPHg, Lead, PCBs, VOCs EB-4 to 5' (EDF No.: 283192 & 283797) Analysis: CAM 17 Metals, TPHd, TPHo, PAHs, OCPs, PCBs	---	---
2277 Market Street 5-431-17-4	EB-3 to 5' (EDF No.: 283192) Analysis: CAM 17 Metals, TPHd, TPHo, PAHs, OCPs, PCBs	---	---

Cornerstone compared detected contaminants of potential concern to Tier 1 Environmental Screening Levels (ESLs)[1]. For compounds where ESLs have not been established, detections were compared to RSLs[2] using a Hazard Quotient of 0.1 for non-carcinogenic compounds. Metal concentrations also were compared to natural background/ambient concentrations (Scott, 1991 and Duverge, 2011)[3]. The results are summarized below.

2.3.2.1 Metals

- Lead was detected at concentrations exceeding the Tier 1 ESL of 80 milligrams per kilogram (mg/kg) in seven samples analyzed at concentrations ranging from 92.4 mg/kg to 1,100 mg/kg. The detected concentration in EB-17 (0-1) exceeded the Total Threshold Limit Concentration (TTLC) of 1,000 mg/kg established by Title 22 of the

[1] Environmental Screening Level (ESL), San Francisco Bay, Regional Water Quality Control Board, February, 2016, revision 3.

[2] Regional Screening Levels are used to screen sites for potential human health concerns where releases of chemicals to soil have occurred. They are risk-based concentrations derived from standardized equations combining exposure information assumptions with EPA toxicity data. RSLs are considered by the EPA to be protective for humans (including sensitive groups) over a lifetime; however, RSLs are not always applicable to a particular site and do not address non-human health endpoints, such as ecological impacts. The RSLs referenced in this report are generic; they are calculated without site-specific information. For non-carcinogenic compounds, the Hazard Quotient is the ratio of potential exposure to a substance and the level at which no adverse effects are expected. If the Hazard Quotient is calculated to be less than 1, then no adverse health effects are expected as a result of exposure. As a conservative comparison, the RSLs presented in this report for non-carcinogenic compounds are based on a Hazard Quotient of 0.1. Thus, for a single compound, raising the Hazard Quotient from 0.1 to 1 raises its respective RLS by an order of magnitude.

[3] Naturally occurring background concentrations of metals, such as arsenic, nickel and chromium, amongst others, in soil may exceed their respective screening levels. Cal/EPA generally does not require cleanup of soil to below background concentrations. Thus, for the metals detected, these data also were compared to regional published background concentrations.

California Code of Regulations (CCR) for determining a non-RCRA (California) Hazardous Waste. In our experience, concentrations exceeding 50 mg/kg may exceed the Soluble Threshold Limit Concentration (STLC) designation for a California Hazardous Waste.

- Nickel was detected in one sample EB-9 (13-13.5) at a concentration of 97.9 mg/kg, which exceeded its Tier 1 ESL of 83 mg/kg.

- The remaining metal concentrations were not detected above their respective Tier 1 ESLs and/or natural background/ambient concentrations.

2.3.2.2 Diesel and Oil Range Petroleum Hydrocarbons

- Total petroleum hydrocarbons in the diesel range (TPHd) was detected in two samples (290 mg/kg in EB-9 [13-13.5] and 240 mg/kg in EB-16 1[2-12.5]) exceeding the Tier 1 ESL of 230 mg/kg. These samples were additionally analyzed using a silica gel cleanup to remove naturally occurring organics, and the detected concentrations were 270 mg/kg (EB-9) and 190 mg/kg (EB-16).

- Total petroleum hydrocarbons in the motor oil range (TPHo) was detected at concentration up to 1,200 mg/kg, which is below its Tier 1 ESL of 5,100 mg/kg

2.3.2.3 Volatile Organic Compounds (VOCs)

- Total petroleum hydrocarbons in the gasoline range (TPHg) was detected at concentrations in two samples (670 mg/kg in EB-16 [12-12.5 feet] and 490 mg/kg in GW-3 [13-13.5 feet]) exceeding its Tier 1 ESL of 100 mg/kg.

- Naphthalene was detected at concentrations up to 30 mg/kg and exceeded its Tier 1 ESL of 0.023 mg/kg in four samples (EB-9 at 13-13.5 feet; EB-13 at 11-12 feet; EB-14 at 12-13 feet; GW-3 at 13-13.5 feet).

- The VOCs ethylbenzene, 2-butanone (MEK), 2-hexanone, acetone, isopropylbenzene, n-butylbenzene, n-propylbenzene and sec-butylbenzene were detected at concentrations less than their respective Tier 1 ESLs or RSLs.

2.3.2.4 Organochlorine Pesticides (OCPs)

- The OCP concentrations detected did not exceed their respective residential screening criteria or hazardous waste thresholds.

2.3.2.5 Polychlorinated Biphenyls (PCBs)

- The PCB compounds detected were below the Tier 1 ESL of 0.25 mg/kg.

2.3.2.6 PAHs

- Benzo[a]pyrene (0.24 mg/kg), benzo[b]fluoranthene (0.25 mg/kg), and dibenz(a,h)anthracene (0.022 mg/kg) were detected in the sample collected from EB-3 (0-1 foot). Detected concentrations of these compounds exceeded their Tier 1 ESLs of

0.016 mg/kg, 0.16 mg/kg, and 0.016 mg/kg, respectively. All other PAH compounds detected were below their respective residential screening criteria.

2.3.3 SUMMARY OF GROUND WATER ANALYTICAL DATA

- TPHd was detected at concentrations up to 1,080 micrograms per liter (µg/L) and exceeded its Tier 1 ESL of 100 µg/L in five samples. These five samples were then analyzed using a silica gel cleanup; TPHd was detected at concentrations up to 850 µg/L and exceeded the Tier 1 ESL in two samples (EB-9 and EB-10).

- Laboratory analysis of sample GW-1 detected TPHo at a concentration of 370 µg/L, which exceeded the ground water Tier 1 ESL of 100 µg/L. GW-1 was reanalyzed for TPHo with silica gel cleanup, and was not detected above the laboratory reporting limit.

- TPHg was detected in 3 of 7 samples at concentrations ranging from 61 µg/L to 1,300 µg/L. The detected concentrations in samples EB-9 (240 µg/L) and EB-10 (1,300 µg/L) exceeded the ground water Tier 1 ESL of 100 µg/L.

- Benzene (1.4 µg/L) and ethylbenzene (60 µg/L) were detected in EB-10 at concentrations exceeding the ground water Tier 1 ESL of 1 µg/L and 13 µg/L, respectively.

- Naphthalene was detected as a VOC in samples EB-9 (4.6 µg/L) and EB-10 (40 µg/L) exceeding the ground water Tier 1 ESL of 0.12 µg/L. Remaining samples were not detected above the laboratory reporting limit, however the laboratory reporting limits exceeded the Tier 1 ESL.

- The chlorinated solvents cis-1,2-dichloroethene (cDCE) (190 ug/L maximum), trans-1,2-dichloroethene (tDCE) (19 ug/L maximum), 1,1-DCE (16 ug/L maximum), tetrachloroethene (PCE) (11 ug/L maximum) and trichloroethene (TCE) (53 ug/L maximum) were detected in ground water samples collected from monitoring well MW-3, located at the up-gradient property boundary. These VOCs were not detected in other ground water samples collected from the Site and appear to be from an up-gradient, off-Site source. Selected VOC concentrations are summarized on Figure 5.

Compared to analytical results from ground water samples collected in 2005 and 2012, the concentrations of petroleum hydrocarbons and VOCs generally appear to have significantly decreased over time. In addition, the detections of TPH and VOCs at the up-gradient property boundary suggests an off-Site source. It is noted that in 2012, free product was reported in an off-site monitoring well located up-gradient of the site on Myrtle Street that was associated with the Burke Property; additional discussion of off-Site sources is presented in Section 2.4.

Ground water grab sample GW-1 was collected from 2226 Myrtle Street to evaluate the area where a UST was depicted on a report for the adjacent City Ventures property. Based on records reviewed by Cornerstone, we did not identify any records indicating the presence of a UST at this location. Laboratory analyses of the ground water grab sample detected TPHd and TPHo in the analysis performed without silica gel cleanup, but no TPHd or TPHo were detected after silica gel cleanup. The TPHd and TPHo detected in GW-1, therefore, may not be associated with petroleum hydrocarbons but rather naturally occurring organic compounds in the ground water.

2.3.4 Soil Vapor Analytical Data

- TPHg was detected in 2 of 4 soil vapor samples at concentrations exceeding the Tier 1 ESL of 50,000 micrograms per cubic meter (µg/m^3) in samples SV-1 (30,000,000 µg/m^3) and SV-4 (5,300,000 µg/m^3).

- The concentrations of all other VOCs detected were below their respective Tier 1 ESL. Note, however, that sample dilution in soil vapor sample SV-1 raised the benzene reporting limit above ethylbenzene and benzene laboratory reporting limits above their respective Tier 1 ESLs.

2.3.4.1 Oxygen, Methane and Carbon Dioxide

Laboratory analyses of soil vapor SV-1 through SV-4 revealed: oxygen at concentrations ranging between 1.9 and 15%, methane from 0.16% to 4.7% (the lower explosive limit for methane is 5%), and carbon dioxide from 3.2% to 13%.

2.4 OFF-SITE INVESTIGATIONS

Readily available information obtained from the Geotracker website for adjacent properties was reviewed for the following purposes: 1) Evaluate whether petroleum hydrocarbons detected in ground water beneath the Site may be from off-Site sources based on off-Site sampling data and reported ground water flow directions, and; 2) Identify ground water quality results on neighboring properties that may be useful in determining whether off-Site an investigation is necessary once the data gap investigation described in Section 4 is completed. A summary of selected off-Site information is presented below, and selected ground water quality data is presented on Figure 5. The locations of nearby fuel leak incidents and former service stations also are shown on Figure 5. Historical service stations shown on Figure 5 include a service station located approximately 70 feet east of the Site (up-gradient to cross-gradient of the Site), across Market Street; no information was available for this service station on the state Geotracker website.

The Burke Property

The Burke Property is located at 949 West Grand Avenue and is adjacent and south of the Site, across West Grand Avenue. This property is listed in the leaking underground storage tank (LUST) database. According to documents obtained from the Water Board's Geotracker Database (The Consulting Group, 2012), a dry cleaning facility and automotive storage/repair business were formerly located at this property. Several soil and ground water investigations were conducted at this property between 2002 and 2005. Analyses of these samples identified TPHg, TPHd, fuel-related VOCs (benzene, toluene, ethylbenzene, and xylenes [BTEX]), and chlorinated VOCs (cDCE, TCE, and PCE). Ground water grab samples collected from the north portion of the Burk property, and approximately 90 feet south (up-gradient) of the Site, detected up to 8,800 µg/L TPHg, 18,000 µg/L TPHd, 9.8 µg/L benzene and 6.2 µg/L TCE (Golden Gate Tank Removal, 2006). Based on ground water flow direction measured on-Site and on the nearby Arco station (discussed below), the Burke property appears to be located up-gradient of the Site with respect to the shallow ground water flow direction.

According to documents filed with the County Health, two monitoring wells (MW-1 and MW-3) are located the Burke Property, and one monitoring well (MW-2) is located on Myrtle Street

approximately 150 feet south of the Site. Quarterly monitoring reportedly was conducted in 2005, and one sampling event reportedly was conducted in June 2012. VOCs were not detected in wells MW-1 and MW-3. However, free product reportedly was observed in monitoring well MW-2. The free product thickness was not provided.

Based on the information reviewed, the reported impacts from this property could have contributed to the TPH and VOC impacts detected in soil, soil vapor, and ground water beneath the Site.

MAC Auto Repair Facility

The MAC Auto Repair facility was located at 905 West Grand Avenue (adjacent and south of the Site across West Grand Avenue). According to documents reviewed (Delta Environmental Labs, 1999), soil and ground water impacts were discovered during the removal of three USTs in 1999. The UST pit was over-excavated to further remove petroleum-impacted soil. After removal, the DEH indicated that *"very low concentrations of contaminants remain in the immediate former underground tank pit*" and *"the contaminant plume appears contained within the site*". The DEH granted closure in a letter dated March 6, 2000. Based on the information reviewed, the impacts from this leaking UST are not expected to significantly impact the Site.

ARCO Station #2169

ARCO Station #2169 is located at 889 West Grand Avenue (east of Market Street and south of Grand Avenue). According to documents reviewed (Broadbent, 2014), ground water contamination does not appear to have migrated significantly off of the Arco property. During quarterly and semi-annual ground water monitoring performed between 2000 and 2014, the ground water flow direction reportedly was estimated to range between the northeast to northwest.

2240 Filbert Street

City Ventures is developing the property adjacent to the north of the site (various parcels) and the property across Myrtle Street (2240 Filbert Street) to the west of the site. City Ventures submitted to ACDEH a Soil Management Plan (SMP) for excavation of near-surface soil with lead contamination on the adjacent property. The SMP summarized ground water sampling performed on the City Ventures property in 1994 and 2005.

In 1994, ground water sample were collected. One sample was collected from the southeast corner of the City Ventures property, directly across Myrtle Street from 914 West Grand Avenue and the other was collected from property adjacent to the north (see Figure 7). Laboratory analyses of ground water samples collected from the one monitoring well and three exploratory borings located nearest to the site across Myrtle Street did not detect TPHg, benzene, toluene, ethylbenzene or xylenes, with the exception of 100 ug/L TPHg detected in one of the samples. These ground water sample locations are located approximately 60 to 70 feet down-gradient of the former on-Site service station. Because the former on-Site service station pre-dates the 1994 sampling event, a significant on-Site release likely would have been detected in the 1994 sample results. The monitoring well located along Market Street on the property north of the site detected 1,100 µg/L of TPHg, 730 µg/L TPHd and 7.5 µg/L of benzene. Based on the ground water flow direction, the TPHg detected on the adjacent property appears likely to be associated with a former service station to the east of the Site.

A Groundwater Sampling Report produced by IT Corporation (1996) presented the analytical results of ground water sample collected from four ground water grab samples. One sample collected from the property adjacent to the north detected 840 µg/L TPHg and low levels (e.g. concentration below their respective screening levels) of benzene toluene, ethyl benzene, and xylene. The monitoring well located at the corner of West Grand and Myrtle Street did not detect any hydrocarbons or VOCs above their laboratory reporting limits.

In 2005, five ground water grab samples were collected from the property adjacent to the north. Laboratory analyses of these samples detected elevated concentrations of TPHg (up to 110,000 ug/L) in two samples collected near Market Street, with the highest concentration detected in the sample nearest 2281 Market Street (see Figure 5). Laboratory analyses of the other three samples did not detected TPHg or VOCs. The detected TPHg on the adjacent property appears likely to be associated with a former service station to the east of the Site.

City Ventures submitted a Remedial Action Plan (RAP) to ACDEH in March 2017. The rap summarizes the work performed in the 2014 Soil and Soil Vapor Investigation. One soil boring located across Myrtle from the Site did not detect concentration of analytes above their respective laboratory reporting limits. A collocated soil vapor probe detected 140 µg/m^3 of Freon 12. The samples collected from the four soil borings advanced on the Market Street Parcel, located north of the site were not analyzed for hydrocarbons or VOCs.

In June 2017, the 3rd Addendum to the RAP presented the results of a Data Gap Investigation Work Plan. A ground water grab sample collected from near the corner of West Grand and Myrtle Street, across from 914 West Grand Avenue (Figure 5), detected 700 µg/L TPHg, 290 µg/L TPHd, and various other VOCs below their screening levels. The soil vapor probes located in the same area detected low level VOCs that do not appear to be related to a fuel release. Soil vapor sample collected from the Market Street Parcel north of the Site detected concentrations of benzene ranging from 39 µg/m^3 to 120 µg/m^3. Four of the soil vapor samples detected benzene concentration exceeding the benzene Tier 1 ESL for sub-slab soil gas of 48 µg/m^3. The highest concentrations detected in the southeast corner of the parcel along Market Street.

2.5 AUGUST 2016 GROUND WATER SAMPLING

On August 26,2016, the three on-Site ground water monitoring wells were sampled to evaluate current ground water quality and flow direction. Based on the measured depth to ground water and surveyed wellhead elevations, the ground water flow was measured to the northwest.

The ground water samples were collected using low flow methodology in accordance with the August 15, 2016 Scope of Work submitted to County Health.

The ground water samples were analyzed for the following:

- Volatile organic compounds (VOCs) and gasoline-range petroleum hydrocarbons (TPHg) (EPA Test Method 8260).
- Total petroleum hydrocarbons in the diesel range (TPHd) and motor oil (TPHmo) (EPA Test Method 8015) with and without silica gel cleanup.

Analytical results are summarized in Table B5 in the Tables section of this report and are discussed below.

SECTION 3: CONCEPTUAL SITE MODEL

A tabular Conceptual Site Model (CSM) is presented in Figure 6. The CSM and components used to develop the CSM are discussed below.

3.1 HISTORICAL SITE USE

Based on the information reviewed during this study, the Site appears to have been developed since at least the late 1800s. During the late 1800s to early 1900s, the Site was primarily used for residential purposes and consisted of single-family homes. By at least 1950, much of the Site was used for commercial/industrial purposes, consisting of a sheet metal manufacturing business, carpet warehouse, a venetian blind facility, and a linoleum warehouse. Residential structures were still present at the northwestern corner of the Site. By the 1960s, a gasoline station was present at 914 West Grand Avenue and an automotive repair business was present at 2226 Myrtle Street. The residential structures were no longer present by approximately 1970. Since approximately 1970, the Site has been used for commercial and industrial purposes.

3.2 CURRENT SITE AND VICINITY CHARACTERISTICS

Currently, the Site was observed to consist of a truck repair business (2226 Myrtle Drive), an automotive repair business (914 West Grand Avenue [western side]), a tire shop (914 West Grand Avenue [eastern side]), and an inaccessible structure (2271 Market Street). The structures were surrounded by asphalt-paved parking areas, and each business was separated and secured with a chain-linked fence.

3.3 GEOLOGY AND HYDROGEOLOGY

Based on monitoring well boring logs completed by Salem (2012), the subsurface material consists of sandy silt to clay material. Shallow ground water has been measured at depths of approximately 10 feet beneath the Site, and generally flows northeast to northwest. Generalized subsurface materials and ground water depth are shown on the cross sections on Figures 7A and 7B.

3.4 PROPERTY-WIDE ENVIRONMENTAL CONDITIONS

TPH and VOC-impacted soil has been detected along the southern portion of the Site. Data from one soil sample collected from a depth of approximately 11.5 feet near the southern property boundary detected TPHd, TPHo, ethyl benzene, and total xylenes above their respective screening criteria.

The petroleum hydrocarbons TPHd, TPHo and TPHg, and the VOCs benzene, ethyl benzene, total xylenes, naphthalene, cDCE, tDCE, 1,1-dichloroethene (1,1-DCE), PCE, TCE, and vinyl chloride were detected above their respective ESLs in ground water samples in collected near the southern property boundary of the Site.

In addition, benzene was detected above its residential soil vapor ESL in one soil vapor sample collected at a depth of approximately 10 feet near the southwestern corner of the Site.

3.5 PRIMARY SOURCE

The primary source of the elevated VOCs and TPH detected in soil and ground water samples at the south property boundary appear to be from off-Site, up-gradient sources, and/or from the former on-Site USTs.

3.6 CONTAMINANTS OF POTENTIAL CONCERN

Based on the soil, ground water, and soil vapor samples collected on Site, the contaminants of potential concern (COPC) are TPHd, TPHo, TPHg, benzene, ethyl benzene, xylenes, PCE, TCE, naphthalene, cDCE, tDCE, and 1,1,-DCE. Various PAHs were detected and some were detected above their respective screening levels.

The remaining VOCs were detected at concentrations below their respective residential ESLs. Therefore, these detected VOCs are not considered COPCs.

3.7 EXTENT OF ENVIRONMENTAL IMPACTS

Analytical results for COC in soil, soil vapor and ground water are presented on Figures 4A through 4J, and are briefly summarized below.

3.7.1 Soil

Elevated concentrations of TPH and VOCs were detected in one sample collected at a depth of 11.5 feet from located BH-B. Soil samples collected from the upper 2 feet of soil from 2220 Myrtle Street, 2226 Myrtle Street, and 2281 Market Street did not detect TPH, arsenic, lead, or VOCs above their respective screening levels of published natural background concentrations for metals.

Subsequent sampling detected elevated concentrations of lead in the upper 1 foot of soil at 2220 Myrtle Street, 2226 Myrtle Street, and 914 West Grand Avenue. Lead and PAH impacted soil was detected in the upper foot of soil at 2281 Market Street, with elevated lead detection extending to approximately 3 feet. Soil samples collected from 914West Grand detected elevated concentrations of detect TPH and VOCs between depths of 11 to 13 feet.

Based on these detections, the extent of TPH and VOC impacts encountered appear to be localized along the southern portion of the property, while lead appears to be sporadically detected in the upper 1 to 3 feet across the Site.

3.7.2 Ground Water

Elevated concentrations of TPH and VOCs were detected in ground water samples collected from locations within 914 West Grand Avenue (Figure 4B through 4J). Samples collected from 2220 and 2226 Myrtle Street (GW-1 and GW-2, respectively) detect TPHd, but was not detected above the laboratory reporting limit with a silica-gel cleanup. County Health will require additional sampling along the western boundary to evaluate whether contamination is migrating off-site.

Based on these detections, and the ground water samples collected from the adjacent properties to the north and west, the extent of impacted ground water appear to be localized along the southern portion of the property.

3.7.3 Soil Vapor

VOC compounds in soil or ground water can volatilize and produce soil vapor that can migrate into structures. Benzene was detected above its residential soil vapor ESL in one sample collected at a depth of approximately ten feet from temporary soil vapor probe B-3, which was located near the reported location of one of the former on-Site USTs. Vapor probes SV-1 and SV-4 installed to seven feet detected concentration of TPHg above its residential screening level. Based on these data, is likely due to residual impacts from the reported USTs and appears to be restricted to the area adjacent to the former UST location.

3.8 TRANSPORT MECHANISMS

3.8.1 Direct Contact with Soil

Direct contact with soil will be addressed in the Soil Management Plan to be prepared by Cornerstone to establish controls and best practices for management, handling, and disposal of contaminated soil during site development. The entire property will be covered with a concrete podium. Therefore, direct contact should be considered an incomplete pathway with the completion of the SMP.

3.8.2 Direct Contact with Ground Water

Direct contact with ground water is not considered a pathway for potential contamination due to the depth of ground water beneath the site and the shallow foundation system planned for the building. In the event shallow ground water is encountered during construction, the SMP will address protocols for management, handling and disposal of ground water, if needed.

3.8.3 Volatilization

Volatilization is considered an incomplete pathway for the future development, based on the design elements of the planned structure. Further evaluation of on-Site soil vapor quality is discussed below in Section 4.

3.8.4 Leaching into Ground Water

Leaching into ground water is considered an incomplete pathway due to the low COPC and VOC concentrations detected in soil samples collected from the Site; the elevated concentrations of TPH and VOCs detected in a soil sample collected from BH-B from the top of the shallow ground water appear to be from an off-Site source. However, there could be pockets of soil in the former on-Site UST areas that exceed leaching-based ESLs. Implementation of the data gap work plan discussed below is intended to identify whether soil is present on-Site that would require removal during construction.

3.9 POTENTIAL RECEPTORS

3.9.1 On and Off-Site Receptors

The planned residential usage for the site indicates that future occupants and on-Site construction workers are potential receptors. The design elements of the planned development

are expected to eliminate exposure routes to future occupants, and the SMP will provide protocols that limit the exposure of construction workers to the potentially impacted soil.

3.9.2 Ecological

The nearest surface water body is located approximately 5,400 feet east of the Site (Lake Merritt). Based on this distance, this surface water body is not likely to be impacted by contaminated ground water.

3.10 EXPOSURE PATHWAY EVALUATION

Volatilization of VOCs to gas is considered a potential pathway for exposure, but will be mitigated by design elements of the planned development (e.g., podium structure with no ground-level residences, sub-slab vapor membrane). Additional soil vapor quality evaluation is presented below, and mitigation measures will be presented in the CAIP and SMP based on the results of our investigation.

All other pathways are considered incomplete due to the proposed mitigation measures and/or the detected COPCs and their concentrations.

SECTION 4: DATA GAP WORK PLAN

Based on the CSM and the data collected to date, additional soil, ground water, and soil vapor samples will be collected to address potential data gaps for subsurface conditions on-Site. In general, the data gaps identified include the following: 1) additional near-surface soil quality for pesticides, metals, polyaromatic hydrocarbons (PAHs), TPHd, TPHo, VOCs, and TPHg to help determine appropriate soil management during construction and quality of soil remaining after excavation for construction of the ground level floor and foundations; 2) soil and soil vapor quality evaluation in the planned elevator pit; 3) quality of backfill from the reported former UST areas; and 4) additional soil, soil vapor, and ground water quality in the former service station area. Proposed exploratory boring/sample locations are shown on Figure 8.

Soil vapor samples will be collected from adjacent to the existing sanitary sewer laterals connecting the buildings at 914 West Grand Avenue and 2220 Myrtle Street. These sample locations are shown on Figure 8 the locations will be confirmed in the field based on the locations of the sewer laterals.

4.1 PRE-FIELD ACTIVITIES

Utility Clearance and Permitting

Prior to performing field work, we will mark our boring locations at least two working days prior to beginning our explorations as required by law, and notify the regional utility notification center – Underground Service Alert (USA), so that public and private utilities can be identified and marked at the ground surface.

A permit from the Alameda County Department of Public Works will be obtained to complete the borings.

4.2 SOIL SAMPLE COLLECTION

The current soil management approach is to perform excavation required for construction without the collection of verification soil samples (except the former tank area and any suspect areas encountered, if any). The deed restriction will note the potential presence of contaminants of concern in soil exceeding residential screening criteria. Based on our meetings with County Health Staff, to support this approach, County Health staff will require soil samples be collected from the final excavation depths to document concentrations of petroleum-related VOCs, TPHg, TPHo and TPHd.
Our field geologist or engineer will continuously log in general accordance with the Unified Soil Classification System (ASTM D-2487), and sample up to 20 exploratory borings advanced to depths of approximately 5 to 10 feet.

The borings will be advanced using limited access direct push technology equipped with a Dual Wall Sampling System. The Dual Wall Sampling System will help prevent cross contamination between sampling intervals. The Dual Wall Sampler is comprised of two main components: an exterior steel casing and an inner sample barrel. The outer casing has a 2-inch outer diameter (OD) and a 1.5-inch inner diameter (ID). The sample barrel is 5 feet in length with a 1.375-inch OD and a 1-inch ID. The Dual Wall sample barrel is loaded with a 5-foot acetate liner and installed inside the outer casing. The outer drive casing and inner sample barrel are then hydraulically pushed to a depth of approximately 5 feet. As these tools are advanced, the inner sampling barrel collects the soil core sample. This sampler is then retrieved while the outer casing remains in place, protecting the integrity of the hole. A new sampler is lowered into place and advanced another 5 feet to collect the next soil sample. This process continues until the desired depth has been reached. The boring advanced for the collection of a ground water sample will be advanced approximately 5 feet into the first water yielding zone. The boring will be tremie grouted upon completion.

4.3 OVM MONITORING

Soil samples will be monitored with a MiniRAE 3000 Organic Vapor Meter (OVM) to record VOC vapors. The soil will be screened by drilling a small diameter hole in the acetate liner extending approximately ½ inch into the soil core. The OVM probe tip will then inserted into the created void space to record an OVM reading. OVM readings will be listed on the boring logs.

4.4 GROUND WATER SAMPLE COLLECTION

Ground water samples will be collected from nine exploratory borings and 3 existing monitoring wells. Prior to collection samples from the on-Site monitoring wells, we will measure and record the depth to water to the nearest 0.01 foot using an interface probe. All monitoring wells will be purged and sampled using low-flow sampling methods.

Based on recent ground water data, we anticipate ground water to occur at a depth of approximately 10 feet beneath the site, however, the formation did not conduct water well. The exploratory borings for ground water grab sampling will be advanced to depths of approximately 20 feet. At each location, a section a slotted PVC pipe will be lowered into the exploratory boring to facilitate ground water sample collection.

Ground water samples will be collected using a peristaltic pump and clean tubing. The 12 ground water grab samples will be analyzed for TPHd and TPHo (EPA Test Method 8015), TPHg and VOCs (EPA Test Method 8260). Analyses for TPHd and TPHo will be performed with and without silica gel cleanup. The borings will be filled with grout after sample collection.

4.5 SOIL VAPOR SAMPLE COLLECTION

In total, twenty-one temporary soil vapor probes will be installed to depths of approximately 7 to 8 feet beneath the Site for the collection of soil vapor samples. The probes will be installed using stainless steel tubing and in accordance with DTSC guidelines. Each probe will be allowed to equilibrate for at least 2 hours prior to sample collection per DTSC guidance. Soil vapor samples will be collected and analyzed for TPHG and VOCs plus naphthalene (EPA Test Method TO-17) and methane (ASTM D-1946). One sample will also be collected from the sampling shroud for isopropyl alcohol to evaluate if the effect of the shroud atmosphere on the samples collected, if any. The soil vapor probes will be removed and borings filled with grout after sample collection.

We will provide a report of these results in the Site Management Plan prepared under Section 7.

4.6 SOIL SAMPLE COLLECTION AND ANALYSES

Based on our meetings with County Health staff and the project team, the current soil management approach being considered is to perform excavation required for construction without the collection of verification soil samples (except the former tank area and any suspect areas encountered, if any). A deed restriction will note the potential presence of contaminants of concern in soil exceeding residential screening criteria. To support this approach, County Health staff will require soil samples be collected from the final excavation depths to document concentrations of petroleum-related volatile organic compounds (VOCs), gasoline-range petroleum hydrocarbons (TPHg), motor oil-range petroleum hydrocarbons (TPHo) and diesel-range petroleum hydrocarbons (TPHd).

We will collect samples from thirty-two exploratory borings. Seven of the boring will be collocated with ground water sample locations and five will be collected from the soil vapor borings. Sample will be collected from depth intervals of approximately 2 to 3 feet 4 to 5 feet. The samples collected from the soil vapor probe locations will be collected at depth intervals of approximately 2 to 3 feet, 4 to 5 feet, and 7 to 8 feet. Note that the sample intervals may change and/or additional samples may be retained based on OVM measurements and/or visible signs of apparent contamination. Up to 30 soil selected soil samples collected from the 2 to 3 feet depth interval and 7 feet depth interval will be analyzed for TPHg and VOCs (EPA Test Method 8260) and TPHd and TPHo (EPA Test Method 8015, without silica gel cleanup). Six soil samples collected from the future landscape area will be additionally analyzed for PAHs (EPA Test Method 8270SIM) and CAM 17 metals (EPA Test Method 6000/7000). Remaining samples collected will be placed on hold at the laboratory, pending analytical results.

4.7 SAMPLE STORAGE AND SAMPLE TRANSPORT

The soil, ground water grab, and soil vapor samples will be collected in laboratory-provided containers (preserved where appropriate). The soil samples will be collected in acetate liner and capped. The soil and ground water grab samples will be placed in an ice chilled cooler for transport to the laboratory. Chains of custody will be maintained for all samples.

4.8 QUALITY ASSURANCE / QUALITY CONTROL

Quality assurance / Quality control (QA/QC) will consist field measures (trip blank [ground water sample] and soil vapor shroud sample [isopropyl alcohol] and measures performed by the laboratory, (i.e., laboratory method blanks, matrix spike/matrix spike duplicate, and laboratory control samples). All QA/QC measures will be evaluated to determine the precision and accuracy of the laboratory analyses.

SECTION 5: CORRECTIVE ACTION IMPLEMENTATION PLAN AND SOL AND GROUND WATER MANAGEMENT PLAN

We will prepare a CAIP that will be submitted to the ACDEH for review and approval. In accordance with the September 26, 2017 letter from County Health, the CAIP will include the following elements:

- Protocols that will be used to overexcavate residual and secondary source material that is impacted with total petroleum hydrocarbons and VOCs that is in the former UST pit and fuel system area.
- Soil management protocol for surface soil with sporadic detections of lead that will be excavated for construction of the ground floor slab and foundation systems.
- Detailed construction plans and specifications for the selected vapor mitigation system (VMS) design.
- Construction quality assurance plan describing contractor and inspector qualifications and experience, procedures for VMS construction monitoring and documentation.
- Construction sequencing plan presenting the sequence of measures that will be used to protect the installed VMS during building construction activities.

In addition, a soil and ground water management plan (SGMP) will be prepared that presents protocols for ground water and soil management during Site redevelopment associated with removing, handling, characterizing and appropriately disposing of soil and ground water; dust control measures; Site access and security during construction.

SECTION 6: SCHEDULE

The subsurface exploration/sampling currently will be scheduled upon approval of this work plan by County Health. The field activities will take up to six days to complete. A CAIP will be submitted to County Health for review following completion of the field activities.

SECTION 7: LIMITATIONS

Cornerstone prepared this Data Gap Investigation Work Plan to support 914 West Grand Avenue Oakland LLC. Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

SECTION 8: REFERENCES.

Aqua Science Engineers, Inc., 2005 *Report of Soil and Ground Water Assessment, 2271-2281 Market Street, 2220-2236 Myrtle Street, and 914 West Grand Avenue, Oakland, California.*

Broadbent & Associates, Inc., 2014. *First Quarter 2014 Monitoring Report, Atlantic Richfield Company Station #2169, 889 West Grand Avenue, Oakland, Alameda County, California.*

Cornerstone Earth Group, 2016. *Phase I Environmental Site Assessment, 914 West Grand Avenue, 2220, 2226, and 2236 Myrtle Street, and 2277 and 2281 Market Street*

Gold Gate Tank Removal, Inc., 2006. *Report on the Search for Underground Storage Tanks and Environmental Site Condition, 925-949 West Grand Avenue, Oakland, California.*

McCulley, Frick and Gilman, Inc., 1994. Report on Investigation of Impacts from Off-Site Sources, Former Safeway Ice Cream Plant, 2240 Filbert Street, Oakland, California.

Salem Engineering Group, Inc., 2012. Phase II Environmental Site Assessment, Proposed FoodsCo Supermarket #536, Hahn Property, NEC West Grand Avenue and Myrtle Street, Oakland, California.

Salem Engineering Group, Inc,. 2012. Site Assessment Report, Proposed Foods Co. Supermarket #536, Hahn Property, NEC West Grand and Myrtle Street, Oakland, California.

Salem Engineering Group, Inc., 2015 Phase I Environmental Site Assessment, Hahn Property NEC West Grand Avenue and Myrtle Street, Oakland, California.

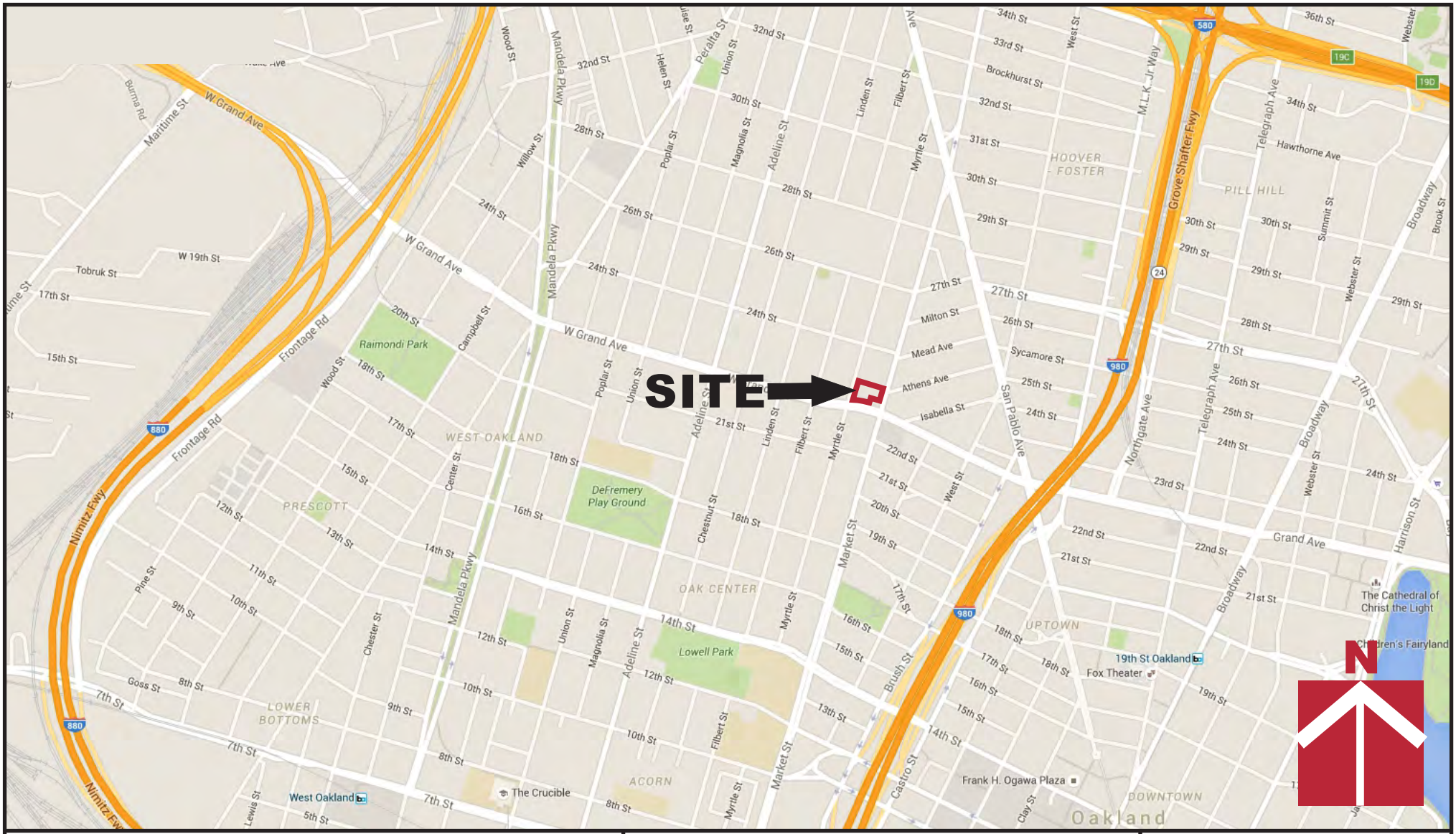
Stantec, 2015. *Soil Management Plan, Oakland 2 Site, Multiple Parcels, Filbert Street, West Grand Avenue, and Myrtle Street.*

Stantec, 2017. *Data Gap Work Plan and Addendum, Oakland 2 Site, Multiple Parcels, Filbert Street, West Grand Avenue, and Myrtle Street, Oakland, California*

Stantec, 2017. *Remedial Action Plan, Revised Remedial Action Plan, and Addendums 1, 2 and 3, Oakland 2 Site, Multiple Parcels, Filbert Street, West Grand Avenue, and Myrtle Street, Oakland, California – RO003157*

CORNERSTONE
EARTH GROUP

FIGURES



CORNERSTONE EARTH GROUP

Vicinity Map

914 West Grand Avenue
Residential Development
Oakland, CA

Project Number	991-1-1
Figure Number	Figure 1
Date	October 2017
Drawn By	RRN

APN: 5-431-23
2236 Myrtle Street

APN: 5-431-15-4
2281 Market Street

APN: 5-431-21-4
2226 Myrtle Street

APN: 5-431-17-1
2277 Market Street

APN: 5-431-19-2
2220 Myrtle Street

APN: 5-431-18-3 (portion)
914 West Grand Avenue

Approximate Site Boundary

Future elevator pit

Future elevator pit

Soil and gravel

Former fuel island canopy

Approximate location of former USTs and fuel pump islands based on updated map obtained from Oakland Building Department showing "proposed" locations

LANDS OF OAKLAND 2 INV, LLC

LANDS OF HAHN (TR) DEED DOC. 2005479053 39,133± SQ.FT. 0.90± ACRES

LANDS OF CHEN (TR)

MYRTLE STREET (58')

MARKET STREET (80')

West Grand Avenue

Legend

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe
- Existing building

0 30 60
APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Topographic & Boundary Survey - C-1, dated 9/6/2017

Project Number 991-1-1

Figure Number Figure 2

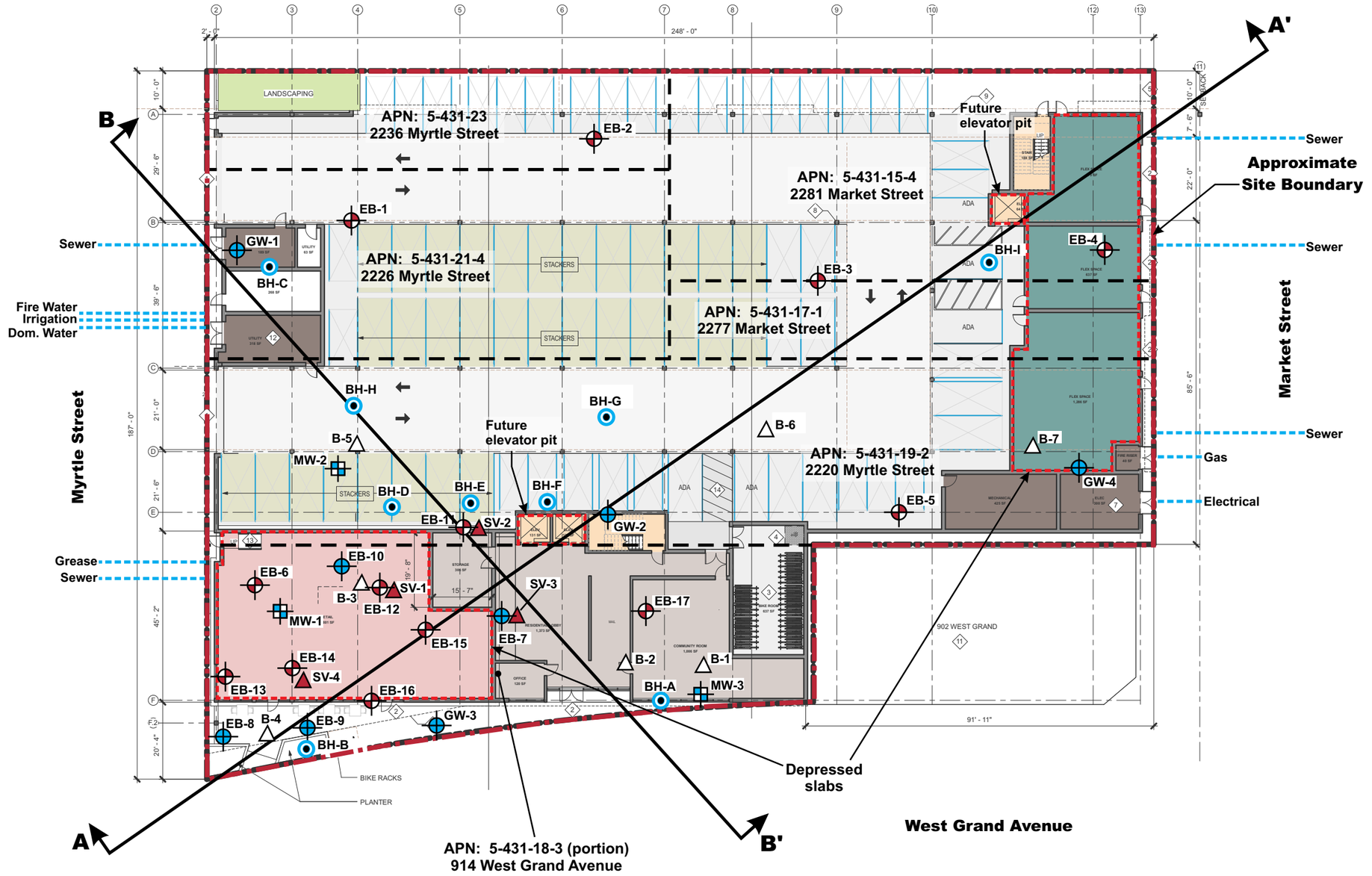
Drawn By RRN

Date September 2017

Site Plan

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP



Legend

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe
- A A' Approximate location of cross section

N

0 30 60

APPROXIMATE SCALE (FEET)

Base by Lowney Architecture, Level 1 Plan - A2.1, undated

Project Number 991-1-1

Figure Number Figure 3

Drawn By RRN

Date September 2017

Development Plan - Ground Floor

914 West Grand Avenue Residential Development Oakland, CA

CORNERSTONE EARTH GROUP

Screening Levels	Residential ESL [1] - mg/kg	Residential ESL [1] - µg/L
Lead	80	---
Total Lead	80	---
Dissolved Lead	---	2.5

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region , Tier 1 - February 2016, Revision 3

< Not Detected at or above laboratory reporting limit

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Blue Indicates sample expected to be removed during construction

EB-1	11/9/2016
Depth (ft)	Lead
0 to 1	**92.4** mg/kg
2 to 3	4.84 mg/kg

BH-C	3/23/2005
Depth (ft)	Total Lead
2	28 mg/kg

BH-G	3/23/2005
Depth (ft)	Total Lead
2	28 mg/kg

BH-F	3/23/2005
Depth (ft)	Total Lead
2	8.1 mg/kg

BH-E	3/23/2005
Depth (ft)	Total Lead
2	37 mg/kg

BH-H	3/23/2005
Depth (ft)	Total Lead
2	7.8 mg/kg

B-5	2/16/2012
Depth (ft)	Total Lead
1	8.0 mg/kg

MW-2	6/4/2012
Dissolved Lead	--- µg/L
	8/24/2016
	--- µg/L

BH-D	3/23/2005
Depth (ft)	Total Lead
2	8.1 mg/kg

EB-11	11/10/2016
Depth (ft)	Lead
0 to 1	**222** mg/kg
2 to 3	5.69 mg/kg
4½ to 5	<10 mg/kg
9½ to 10	<10 mg/kg

EB-10	11/10/2016
Depth (ft)	Lead
0 to 1	11.5 mg/kg

B-3	2/15/2012
Depth (ft)	Total Lead
1	8.5 mg/kg

MW-1	6/4/2012
Dissolved Lead	--- µg/L
	8/24/2016
	--- µg/L

EB-14	11/9/2016
Depth (ft)	Lead
6 to 7	31.1 mg/kg

B-4	2/16/2012
Depth (ft)	Total Lead
1	5.4 mg/kg

EB-9	11/9/2016
Depth (ft)	Lead
4½ to 5	<9.4 mg/kg
13 to 13½	10.3 mg/kg

BH-B	3/23/2005
Depth (ft)	Total Lead
11½	7.1 mg/kg
BH-B	3/23/2005
Dissolved Lead	**42** µg/L

EB-16	11/10/2016
Depth (ft)	Lead
0 to 1	13.3 mg/kg
12 to 12½	7.59 mg/kg

EB-7	11/9/2016
Depth (ft)	Lead
0 to 1	**404** mg/kg

EB-17	11/9/2016
Depth (ft)	Lead
0 to 1	**1,100** mg/kg
2 to 3	<10 mg/kg
4 to 5	<9.2 mg/kg

B-2	2/15/2012
Depth (ft)	Total Lead
1	9.9 mg/kg

BH-A	3/23/2005
Depth (ft)	Total Lead
11½	7.1 mg/kg
BH-A	3/23/2005
Dissolved Lead	<0.5 µg/L

EB-2	11/9/2016
Depth (ft)	Lead
0 to 1	3.91 mg/kg
2 to 3	3.47 mg/kg

EB-4	11/9/2016
Depth (ft)	Lead
0 to 1	**529** mg/kg
2 to 3	**345** mg/kg
4½ to 5	<9.7 mg/kg

BH-I	3/23/2005
Depth (ft)	Total Lead
2	24 mg/kg

EB-3	11/9/2016
Depth (ft)	Lead
0 to 1	**139** mg/kg
2 to 3	77.5 mg/kg

EB-5	11/9/2016
Depth (ft)	Lead
0 to 1	5.06 mg/kg
2 to 3	4.13 mg/kg

B-1	2/15/2012
Depth (ft)	Total Lead
1	11 mg/kg

MW-3	6/4/2012
Dissolved Lead	--- µg/L
	8/24/2016
	--- µg/L

Approximate Site Boundary

APN: 5-431-23
2236 Myrtle Street

APN: 5-431-21-4
2226 Myrtle Street

APN: 5-431-15-4
2281 Market Street

APN: 5-431-17-1
2277 Market Street

APN: 5-431-19-2
2220 Myrtle Street

APN: 5-431-18-3 (portion)
914 West Grand Avenue

Future elevator pit

Future elevator pit

Myrtle Street

Market Street

West Grand Avenue

902 WEST GRAND

4.84

Legend

Soil Data

Ground Water Data

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe

N

0 30 60

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

Project Number 991-1-1

Figure Number Figure 4A

Drawn By RRN

Date September 2017

Lead Concentrations

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP

TPHd Concentrations

914 West Grand Avenue Residential Development Oakland, CA

Screening Levels

TPHd (diesel)	Residential ESL [1] - mg/kg	Residential ESL [1] - µg/L
	230	100

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region , Tier 1 - February 2016, Revision 3

< Not Detected at or above laboratory reporting limit

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Blue Indicates sample expected to be removed during construction

Project Number	991-1-1
Figure Number	Figure 4B
Drawn By	RRN
Date	September 2017

EB-1	11/9/2016
Depth (ft)	TPHd
0 to 1	1.7 mg/kg
2 to 3	1.5 mg/kg

BH-E	3/23/2005
Depth (ft)	TPHd
2	<1.0 mg/kg

BH-F	3/23/2005
Depth (ft)	TPHd
2	<1.0 mg/kg

GW-2	11/10/2016
TPHd	98 µg/L

EB-2	11/9/2016
Depth (ft)	TPHd
0 to 1	45 mg/kg
2 to 3	2.4 mg/kg

BH-G	3/23/2005
Depth (ft)	TPHd
2	<1.0 mg/kg

BH-H	3/23/2005
Depth (ft)	TPHd
2	<1.0 mg/kg

GW-1	11/10/2016
TPHd	**750** µg/L

BH-C	3/23/2005
Depth (ft)	TPHd
2	<1.0 mg/kg

B-5	2/16/2012
Depth (ft)	TPHd
1	--- mg/kg

MW-2	6/4/2012
TPHd	<0.05 µg/L
	8/24/2016
	<52 µg/L

BH-D	3/23/2005
Depth (ft)	TPHd
2	<1.0 mg/kg

EB-11	11/10/2016
Depth (ft)	TPHd
0 to 1	<1.0 mg/kg
2 to 3	<1.0 mg/kg
4½ to 5	1.5 mg/kg
9½ to 10	1.2 mg/kg
14½ to 15	<1.0 mg/kg

EB-12	11/10/2016
Depth (ft)	TPHd
2 to 3	1.2 mg/kg
4½ to 5	<1.0 mg/kg
9½ to 10	<1.0 mg/kg

EB-10	11/10/2016
Depth (ft)	TPHd
0 to 1	8.4 mg/kg
2 to 3	2.2 mg/kg
4½ to 5	<1.0 mg/kg
9½ to 10	1.6 mg/kg

EB-10	11/10/2016
TPHd	**1,800** µg/L

EB-6	11/9/2016
Depth (ft)	TPHd
2 to 3	1.3 mg/kg
4 to 5	37 mg/kg
9 to 10	57 mg/kg
14 to 15	<1.0 mg/kg

B-3	2/15/2012
Depth (ft)	TPHd
1	--- mg/kg

MW-1	6/4/2012
TPHd	<0.05 µg/L
	8/24/2016
	<50 µg/L

EB-14	11/9/2016
Depth (ft)	TPHd
2 to 3	<5.0 mg/kg
4 to 5	1.0 mg/kg
6 to 7	13 mg/kg
9 to 10	<1.0 mg/kg
11 to 12	90 mg/kg
14 to 15	2.6 mg/kg

EB-13	11/9/2016
Depth (ft)	TPHd
2 to 3	2.7 mg/kg
4 to 5	<1.0 mg/kg
9 to 10	<1.0 mg/kg
11 to 12	1.8 mg/kg
14 to 15	<1.0 mg/kg

EB-8	11/9/2016
Depth (ft)	TPHd
2 to 3	1.3 mg/kg
4 to 5	<0.99 mg/kg
9 to 10	<1.0 mg/kg
EB-8	11/10/2016
TPHd	**180** µg/L

B-4	2/16/2012
Depth (ft)	TPHd
1	--- mg/kg

BH-B	3/23/2005
Depth (ft)	TPHd
11½	**370** mg/kg
BH-B	3/23/2005
TPHd	**150,000** µg/L

EB-9	11/9/2016
Depth (ft)	TPHd
2 to 3	1.4 mg/kg
4½ to 5	<1.0 mg/kg
9½ to 10	<1.0 mg/kg
13 to 13½	**290** mg/kg
EB-9	11/10/2016
TPHd	**1,000** µg/L

GW-3	11/9/2016
Depth (ft)	TPHd
13 to 13½	110 mg/kg
GW-3	11/10/2016
TPHd	**790** µg/L

EB-16	11/10/2016
Depth (ft)	TPHd
0 to 1	51 mg/kg
2 to 3	2.0 mg/kg
4½ to 5	<1.0 mg/kg
12 to 12½	**240** mg/kg
14½ to 15	<1.0 mg/kg

EB-15	11/10/2016
Depth (ft)	TPHd
2 to 3	<1.0 mg/kg
4½ to 5	<1.0 mg/kg
9½ to 10	<0.99 mg/kg

EB-7	11/9/2016
Depth (ft)	TPHd
0 to 1	180 mg/kg
2 to 3	<1.0 mg/kg
4 to 5	<1.0 mg/kg
9 to 10	<1.0 mg/kg
EB-7	11/10/2016
TPHd	--- µg/L

BH-A	3/23/2005
Depth (ft)	TPHd
11½	<1.0 mg/kg
BH-A	3/23/2005
TPHd	<50 µg/L

EB-4	11/9/2016
Depth (ft)	TPHd
0 to 1	3.9 mg/kg
2 to 3	1.0 mg/kg
14½ to 15	1.0 mg/kg

BH-I	3/23/2005
Depth (ft)	TPHd
2	<1.0 mg/kg

EB-3	11/9/2016
Depth (ft)	TPHd
0 to 1	50 mg/kg
2 to 3	1.6 mg/kg

EB-5	11/9/2016
Depth (ft)	TPHd
0 to 1	4.8 mg/kg
2 to 3	1.7 mg/kg

EB-17	11/9/2016
Depth (ft)	TPHd
0 to 1	10 mg/kg
2 to 3	<0.99 mg/kg
4 to 5	<1.0 mg/kg
9 to 10	<1.0 mg/kg

B-2	2/15/2012
Depth (ft)	TPHd
1	--- mg/kg

B-1	2/15/2012
Depth (ft)	TPHd
1	--- mg/kg

MW-3	6/4/2012
TPHd	<0.05 µg/L
	8/24/2016
	<50 µg/L

Approximate Site Boundary

APN: 5-431-23
2236 Myrtle Street

APN: 5-431-15-4
2281 Market Street

APN: 5-431-21-4
2226 Myrtle Street

APN: 5-431-17-1
2277 Market Street

APN: 5-431-19-2
2220 Myrtle Street

APN: 5-431-18-3 (portion)
914 West Grand Avenue

Future elevator pit

Future elevator pit

Myrtle Street

Market Street

902 WEST GRAND

LANDSCAPING

BIKE RACKS

PLANTER

Legend

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe

Soil Data

Ground Water Data

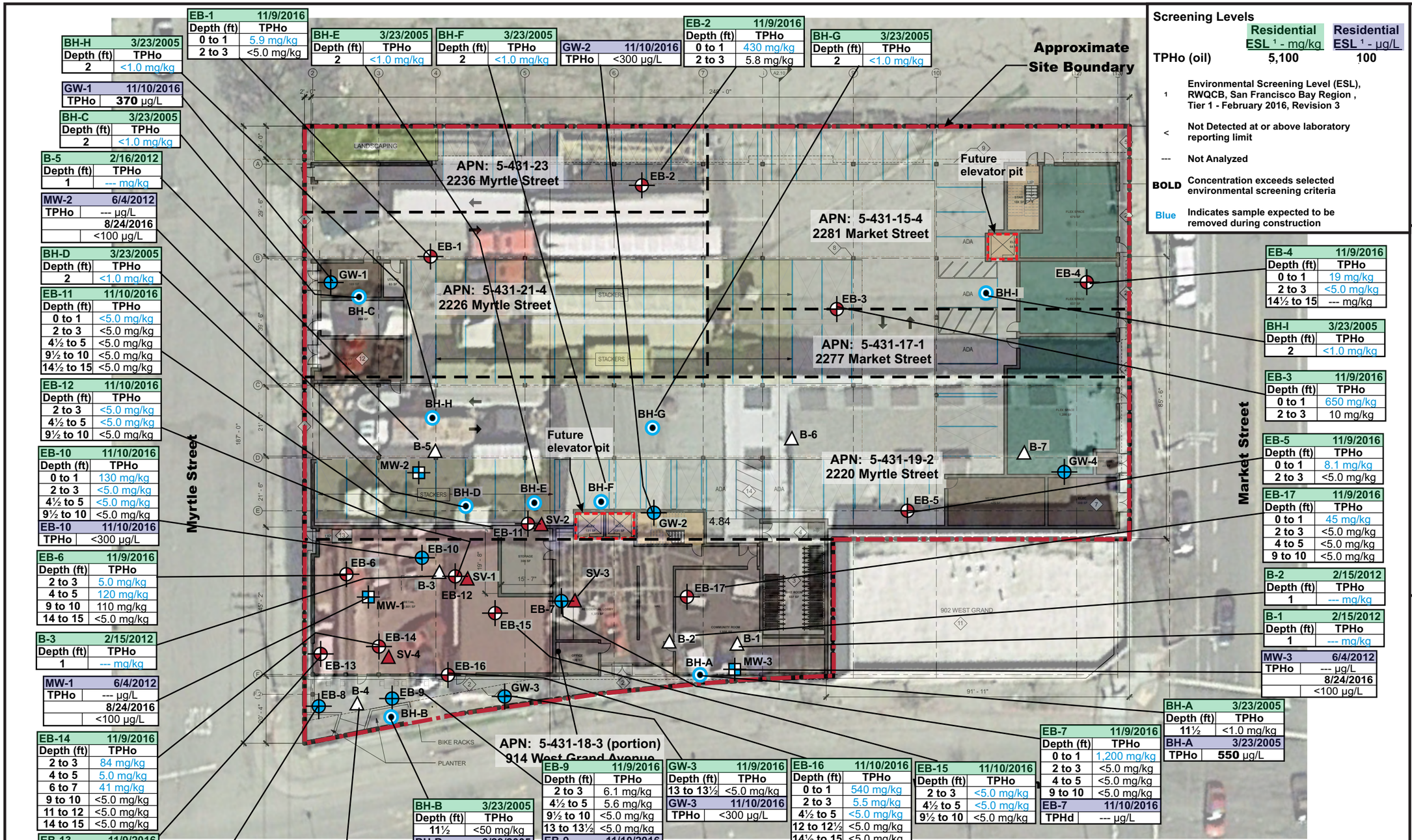
N

0 30 60

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

CORNERSTONE EARTH GROUP



EB-1	11/9/2016
Depth (ft)	TPHo
0 to 1	5.9 mg/kg
2 to 3	<5.0 mg/kg

BH-H	3/23/2005
Depth (ft)	TPHo
2	<1.0 mg/kg

GW-1	11/10/2016
TPHo	**370** µg/L

BH-C	3/23/2005
Depth (ft)	TPHo
2	<1.0 mg/kg

B-5	2/16/2012
Depth (ft)	TPHo
1	--- mg/kg

MW-2	6/4/2012
TPHo	--- µg/L
	8/24/2016
	<100 µg/L

BH-D	3/23/2005
Depth (ft)	TPHo
2	<1.0 mg/kg

EB-11	11/10/2016
Depth (ft)	TPHo
0 to 1	<5.0 mg/kg
2 to 3	<5.0 mg/kg
4½ to 5	<5.0 mg/kg
9½ to 10	<5.0 mg/kg
14½ to 15	<5.0 mg/kg

EB-12	11/10/2016
Depth (ft)	TPHo
2 to 3	<5.0 mg/kg
4½ to 5	<5.0 mg/kg
9½ to 10	<5.0 mg/kg

EB-10	11/10/2016
Depth (ft)	TPHo
0 to 1	130 mg/kg
2 to 3	<5.0 mg/kg
4½ to 5	<5.0 mg/kg
9½ to 10	<5.0 mg/kg

EB-10	11/10/2016
TPHo	<300 µg/L

EB-6	11/9/2016
Depth (ft)	TPHo
2 to 3	5.0 mg/kg
4 to 5	120 mg/kg
9 to 10	110 mg/kg
14 to 15	<5.0 mg/kg

B-3	2/15/2012
Depth (ft)	TPHo
1	--- mg/kg

MW-1	6/4/2012
TPHo	--- µg/L
	8/24/2016
	<100 µg/L

EB-14	11/9/2016
Depth (ft)	TPHo
2 to 3	84 mg/kg
4 to 5	5.0 mg/kg
6 to 7	41 mg/kg
9 to 10	<5.0 mg/kg
11 to 12	<5.0 mg/kg
14 to 15	<5.0 mg/kg

EB-13	11/9/2016
Depth (ft)	TPHo
2 to 3	19 mg/kg
4 to 5	<5.0 mg/kg
9 to 10	<5.0 mg/kg
11 to 12	<5.0 mg/kg
14 to 15	<5.0 mg/kg

BH-E	3/23/2005
Depth (ft)	TPHo
2	<1.0 mg/kg

BH-F	3/23/2005
Depth (ft)	TPHo
2	<1.0 mg/kg

GW-2	11/10/2016
TPHo	<300 µg/L

EB-2	11/9/2016
Depth (ft)	TPHo
0 to 1	430 mg/kg
2 to 3	5.8 mg/kg

BH-G	3/23/2005
Depth (ft)	TPHo
2	<1.0 mg/kg

EB-4	11/9/2016
Depth (ft)	TPHo
0 to 1	19 mg/kg
2 to 3	<5.0 mg/kg
14½ to 15	--- mg/kg

BH-I	3/23/2005
Depth (ft)	TPHo
2	<1.0 mg/kg

EB-3	11/9/2016
Depth (ft)	TPHo
0 to 1	650 mg/kg
2 to 3	10 mg/kg

EB-5	11/9/2016
Depth (ft)	TPHo
0 to 1	8.1 mg/kg
2 to 3	<5.0 mg/kg

EB-17	11/9/2016
Depth (ft)	TPHo
0 to 1	45 mg/kg
2 to 3	<5.0 mg/kg
4 to 5	<5.0 mg/kg
9 to 10	<5.0 mg/kg

B-2	2/15/2012
Depth (ft)	TPHo
1	--- mg/kg

B-1	2/15/2012
Depth (ft)	TPHo
1	--- mg/kg

MW-3	6/4/2012
TPHo	--- µg/L
	8/24/2016
	<100 µg/L

BH-A	3/23/2005
Depth (ft)	TPHo
11½	<1.0 mg/kg
BH-A	3/23/2005
TPHo	**550** µg/L

EB-7	11/9/2016
Depth (ft)	TPHo
0 to 1	1,200 mg/kg
2 to 3	<5.0 mg/kg
4 to 5	<5.0 mg/kg
9 to 10	<5.0 mg/kg
EB-7	11/10/2016
TPHd	--- µg/L

EB-15	11/10/2016
Depth (ft)	TPHo
2 to 3	<5.0 mg/kg
4½ to 5	<5.0 mg/kg
9½ to 10	<5.0 mg/kg

EB-16	11/10/2016
Depth (ft)	TPHo
0 to 1	540 mg/kg
2 to 3	5.5 mg/kg
4½ to 5	<5.0 mg/kg
12 to 12½	<5.0 mg/kg
14½ to 15	<5.0 mg/kg

GW-3	11/9/2016
Depth (ft)	TPHo
13 to 13½	<5.0 mg/kg
GW-3	11/10/2016
TPHo	<300 µg/L

EB-9	11/9/2016
Depth (ft)	TPHo
2 to 3	6.1 mg/kg
4½ to 5	5.6 mg/kg
9½ to 10	<5.0 mg/kg
13 to 13½	<5.0 mg/kg
EB-9	11/10/2016
TPHd	<300 µg/L

BH-B	3/23/2005
Depth (ft)	TPHo
11½	<50 mg/kg
BH-B	3/23/2005
TPHd	<5,000 µg/L

EB-8	11/9/2016
Depth (ft)	TPHo
2 to 3	18 mg/kg
4 to 5	<5.0 mg/kg
9 to 10	<5.0 mg/kg
EB-8	11/10/2016
TPHo	<300 µg/L

B-4	2/16/2012
Depth (ft)	TPHo
1	--- mg/kg

Soil Data

Ground Water Data

Legend

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe

0 30 60
APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

Screening Levels

	Residential ESL [1] - mg/kg	Residential ESL [1] - µg/L
TPHo (oil)	5,100	100

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region , Tier 1 - February 2016, Revision 3

< Not Detected at or above laboratory reporting limit

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Blue Indicates sample expected to be removed during construction

Project Number 991-1-1

Figure Number Figure 4C

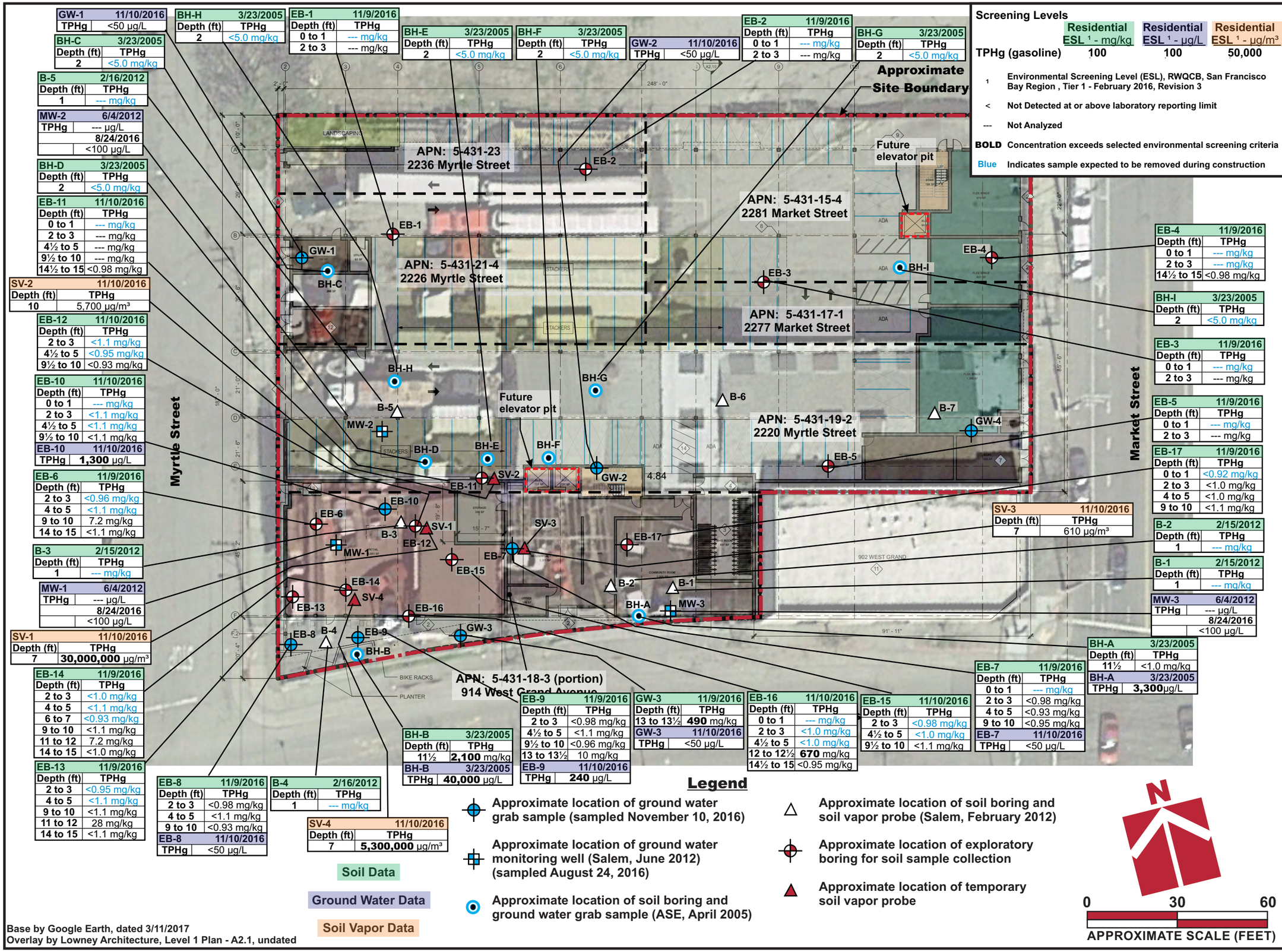
Drawn By RRN

Date September 2017

TPHo Concentrations

914 West Grand Avenue Residential Development Oakland, CA

CORNERSTONE EARTH GROUP



GW-1	11/10/2016
TPHg	<50 µg/L

BH-C	3/23/2005
Depth (ft)	TPHg
2	<5.0 mg/kg

B-5	2/16/2012
Depth (ft)	TPHg
1	--- mg/kg

MW-2	6/4/2012
TPHg	--- µg/L
	8/24/2016
	<100 µg/L

BH-D	3/23/2005
Depth (ft)	TPHg
2	<5.0 mg/kg

EB-11	11/10/2016
Depth (ft)	TPHg
0 to 1	--- mg/kg
2 to 3	--- mg/kg
4½ to 5	--- mg/kg
9½ to 10	--- mg/kg
14½ to 15	<0.98 mg/kg

SV-2	11/10/2016
Depth (ft)	TPHg
10	5,700 µg/m³

EB-12	11/10/2016
Depth (ft)	TPHg
2 to 3	<1.1 mg/kg
4½ to 5	<0.95 mg/kg
9½ to 10	<0.93 mg/kg

EB-10	11/10/2016
Depth (ft)	TPHg
0 to 1	--- mg/kg
2 to 3	<1.1 mg/kg
4½ to 5	<1.1 mg/kg
9½ to 10	<1.1 mg/kg
EB-10	11/10/2016
TPHg	**1,300** µg/L

EB-6	11/9/2016
Depth (ft)	TPHg
2 to 3	<0.96 mg/kg
4 to 5	<1.1 mg/kg
9 to 10	7.2 mg/kg
14 to 15	<1.1 mg/kg

B-3	2/15/2012
Depth (ft)	TPHg
1	--- mg/kg

MW-1	6/4/2012
TPHg	--- µg/L
	8/24/2016
	<100 µg/L

SV-1	11/10/2016
Depth (ft)	TPHg
7	**30,000,000** µg/m³

EB-14	11/9/2016
Depth (ft)	TPHg
2 to 3	<1.0 mg/kg
4 to 5	<1.1 mg/kg
6 to 7	<0.93 mg/kg
9 to 10	<1.1 mg/kg
11 to 12	7.2 mg/kg
14 to 15	<1.0 mg/kg

EB-13	11/9/2016
Depth (ft)	TPHg
2 to 3	<0.95 mg/kg
4 to 5	<1.1 mg/kg
9 to 10	<1.1 mg/kg
11 to 12	28 mg/kg
14 to 15	<1.1 mg/kg

EB-8	11/9/2016
Depth (ft)	TPHg
2 to 3	<0.98 mg/kg
4 to 5	<1.1 mg/kg
9 to 10	<0.93 mg/kg
EB-8	11/10/2016
TPHg	<50 µg/L

B-4	2/16/2012
Depth (ft)	TPHg
1	--- mg/kg

SV-4	11/10/2016
Depth (ft)	TPHg
7	**5,300,000** µg/m³

BH-H	3/23/2005
Depth (ft)	TPHg
2	<5.0 mg/kg

EB-1	11/9/2016
Depth (ft)	TPHg
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-E	3/23/2005
Depth (ft)	TPHg
2	<5.0 mg/kg

BH-F	3/23/2005
Depth (ft)	TPHg
2	<5.0 mg/kg

GW-2	11/10/2016
TPHg	<50 µg/L

EB-2	11/9/2016
Depth (ft)	TPHg
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-G	3/23/2005
Depth (ft)	TPHg
2	<5.0 mg/kg

BH-B	3/23/2005
Depth (ft)	TPHg
11½	**2,100** mg/kg
BH-B	3/23/2005
TPHg	**40,000** µg/L

EB-9	11/9/2016
Depth (ft)	TPHg
2 to 3	<0.98 mg/kg
4½ to 5	<1.1 mg/kg
9½ to 10	<0.96 mg/kg
13 to 13½	10 mg/kg
EB-9	11/10/2016
TPHg	**240** µg/L

GW-3	11/9/2016
Depth (ft)	TPHg
13 to 13½	**490** mg/kg
GW-3	11/10/2016
TPHg	<50 µg/L

EB-16	11/10/2016
Depth (ft)	TPHg
0 to 1	--- mg/kg
2 to 3	<1.0 mg/kg
4½ to 5	<1.0 mg/kg
12 to 12½	**670** mg/kg
14½ to 15	<0.95 mg/kg

EB-15	11/10/2016
Depth (ft)	TPHg
2 to 3	<0.98 mg/kg
4½ to 5	<1.0 mg/kg
9½ to 10	<1.1 mg/kg

EB-7	11/9/2016
Depth (ft)	TPHg
0 to 1	--- mg/kg
2 to 3	<0.98 mg/kg
4 to 5	<0.93 mg/kg
9 to 10	<0.95 mg/kg
EB-7	11/10/2016
TPHg	<50 µg/L

BH-A	3/23/2005
Depth (ft)	TPHg
11½	<1.0 mg/kg
BH-A	3/23/2005
TPHg	**3,300**µg/L

EB-4	11/9/2016
Depth (ft)	TPHg
0 to 1	--- mg/kg
2 to 3	--- mg/kg
14½ to 15	<0.98 mg/kg

BH-I	3/23/2005
Depth (ft)	TPHg
2	<5.0 mg/kg

EB-3	11/9/2016
Depth (ft)	TPHg
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-5	11/9/2016
Depth (ft)	TPHg
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-17	11/9/2016
Depth (ft)	TPHg
0 to 1	<0.92 mg/kg
2 to 3	<1.0 mg/kg
4 to 5	<1.0 mg/kg
9 to 10	<1.1 mg/kg

SV-3	11/10/2016
Depth (ft)	TPHg
7	610 µg/m³

B-2	2/15/2012
Depth (ft)	TPHg
1	--- mg/kg

B-1	2/15/2012
Depth (ft)	TPHg
1	--- mg/kg

MW-3	6/4/2012
TPHg	--- µg/L
	8/24/2016
	<100 µg/L

Screening Levels

TPHg (gasoline)	Residential ESL [1] - mg/kg	Residential ESL [1] - µg/L	Residential ESL [1] - µg/m³
	100	100	50,000

[1] Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region , Tier 1 - February 2016, Revision 3

< Not Detected at or above laboratory reporting limit

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Blue Indicates sample expected to be removed during construction

Legend

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe

Soil Data

Ground Water Data

Soil Vapor Data

N

0 30 60

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

Project Number 991-1-1

Figure Number Figure 4D

Drawn By RRN

Date September 2017

TPHg Concentrations

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP

GW-1	11/10/2016
Benzene	<0.5 µg/L

BH-H	3/23/2005
Depth (ft)	Benzene
2	<0.005 mg/kg

EB-1	11/9/2016
Depth (ft)	Benzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-E	3/23/2005
Depth (ft)	Benzene
2	<0.005 mg/kg

BH-F	3/23/2005
Depth (ft)	Benzene
2	<0.005 mg/kg

GW-2	11/10/2016
Benzene	<1.7 µg/L

EB-2	11/9/2016
Depth (ft)	Benzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-G	3/23/2005
Depth (ft)	Benzene
2	<0.005 mg/kg

BH-C	3/23/2005
Depth (ft)	Benzene
2	<0.005 mg/kg

B-5	2/15/2012
Depth (ft)	Benzene
5	<40 µg/m³
10	<36 µg/m³

MW-2	6/4/2012
Benzene	<1.0 µg/L
	8/24/2016
	<0.50 µg/L

BH-D	3/23/2005
Depth (ft)	Benzene
2	<0.005 mg/kg

EB-11	11/10/2016
Depth (ft)	Benzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg
4½ to 5	--- mg/kg
9½ to 10	--- mg/kg
14½ to 15	<0.005 mg/kg

SV-2	11/10/2016
Depth (ft)	Benzene
10	<190 µg/m³

EB-12	11/10/2016
Depth (ft)	Benzene
2 to 3	<0.0049 mg/kg
4½ to 5	<0.0046 mg/kg
9½ to 10	<0.005 mg/kg

EB-10	11/10/2016
Depth (ft)	Benzene
0 to 1	--- mg/kg
2 to 3	<0.0044 mg/kg
4½ to 5	<0.0056 mg/kg
9½ to 10	<0.0055 mg/kg

EB-10	11/10/2016
Benzene	1.4 µg/L

EB-6	11/9/2016
Depth (ft)	Benzene
2 to 3	<0.0053 mg/kg
4 to 5	<0.005 mg/kg
9 to 10	<0.0041 mg/kg
14 to 15	<0.0042 mg/kg

B-3	2/15/2012
Depth (ft)	Benzene
5	<36 µg/m³
10	**520** µg/m³

MW-1	6/4/2012
Benzene	**1.2** µg/L
	8/24/2016
	<100 µg/L

SV-1	11/10/2016
Depth (ft)	Benzene
7	<490 µg/m³

EB-14	11/9/2016
Depth (ft)	Benzene
2 to 3	<0.0052 mg/kg
4 to 5	<0.0047 mg/kg
6 to 7	<0.0043 mg/kg
9 to 10	<0.0041 mg/kg
11 to 12	<5.0 mg/kg
14 to 15	<0.0043 mg/kg

EB-13	11/9/2016
Depth (ft)	Benzene
2 to 3	<0.005 mg/kg
4 to 5	<0.0046 mg/kg
9 to 10	<0.0052 mg/kg
11 to 12	<0.0038 mg/kg
14 to 15	<0.0041 mg/kg

EB-8	11/9/2016
Depth (ft)	Benzene
2 to 3	<0.0048 mg/kg
4 to 5	<0.0047 mg/kg
9 to 10	<0.0048 mg/kg

EB-8	11/10/2016
Benzene	<0.5 µg/L

B-4	2/15/2012
Depth (ft)	Benzene
5	<72 µg/m³
10	<72 µg/m³

SV-4	11/10/2016
Depth (ft)	Benzene
7	23 µg/m³

BH-B	3/23/2005
Depth (ft)	Benzene
11½	<0.005 mg/kg

BH-B	3/23/2005
Benzene	<100 µg/L

EB-9	11/9/2016
Depth (ft)	Benzene
2 to 3	<0.0044 mg/kg
4½ to 5	<0.0045 mg/kg
9½ to 10	<0.004 mg/kg
13 to 13½	<5.0 mg/kg

EB-9	11/10/2016
Benzene	<0.5 µg/L

GW-3	11/9/2016
Depth (ft)	Benzene
13 to 13½	**490** mg/kg

GW-3	11/10/2016
Benzene	<0.5 µg/L

EB-16	11/10/2016
Depth (ft)	Benzene
0 to 1	--- mg/kg
2 to 3	<0.0049 mg/kg
4½ to 5	<0.0049 mg/kg
12 to 12½	**<0.25** mg/kg
14½ to 15	<0.0046 mg/kg

EB-15	11/10/2016
Depth (ft)	Benzene
2 to 3	<0.0041 mg/kg
4½ to 5	<0.0043 mg/kg
9½ to 10	<0.0046 mg/kg

EB-7	11/9/2016
Depth (ft)	Benzene
0 to 1	--- mg/kg
2 to 3	<0.0047 mg/kg
4 to 5	<0.0044 mg/kg
9 to 10	<0.0045 mg/kg

EB-7	11/10/2016
Benzene	<0.5 µg/L

SV-3	11/10/2016
Depth (ft)	Benzene
7	<0.38 µg/m³

BH-I	3/23/2005
Depth (ft)	Benzene
2	<0.005 mg/kg

EB-4	11/9/2016
Depth (ft)	Benzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-3	11/9/2016
Depth (ft)	Benzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

B-6	2/15/2012
Depth (ft)	Benzene
5	<36 µg/m³
10	<72 µg/m³

B-7	2/15/2012
Depth (ft)	Benzene
5	<36 µg/m³
10	<72 µg/m³

EB-5	11/9/2016
Depth (ft)	Benzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-17	11/9/2016
Depth (ft)	Benzene
0 to 1	<0.0061 mg/kg
2 to 3	<0.0057 mg/kg
4 to 5	<0.0043 mg/kg
9 to 10	<0.0044 mg/kg

B-2	2/15/2012
Depth (ft)	Benzene
5	<36 µg/m³
10	<36 µg/m³

B-1	2/15/2012
Depth (ft)	Benzene
5	<36 µg/m³
10	<36 µg/m³

MW-3	6/4/2012
Benzene	<1.0 µg/L
	8/24/2016
	<0.50 µg/L

BH-A	3/23/2005
Depth (ft)	Benzene
11½	<0.005 mg/kg

BH-A	3/23/2005
Benzene	<0.5 µg/L

Screening Levels

	Residential ESL [1] - mg/kg	Residential RSL [2] - µg/L	Residential ESL [1] - µg/m³
Benzene	100	0.46	48

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region , Tier 1 - February 2016, Revision 3

2 Regional Screening Level (RSL), USEPA Region 9 - November 2015

< Not Detected at or above laboratory reporting limit

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Blue Indicates sample expected to be removed during construction

APN: 5-431-23
2236 Myrtle Street

APN: 5-431-21-4
2226 Myrtle Street

APN: 5-431-15-4
2281 Market Street

APN: 5-431-17-1
2277 Market Street

APN: 5-431-19-2
2220 Myrtle Street

APN: 5-431-18-3 (portion)
914 West Grand Avenue

Approximate Site Boundary

Future elevator pit

Future elevator pit

Myrtle Street

Market Street

902 WEST GRAND

LANDSCAPING

STACKERS

BIKE RACKS

PLANTER

248' - 0"

4.84

91' - 11"

Legend

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe

Soil Data

Ground Water Data

Soil Vapor Data

N

0 30 60

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

Project Number 991-1-1

Figure Number Figure 4E

Drawn By RRN

Date September 2017

Benzene Concentrations

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP

Toluene Concentrations

914 West Grand Avenue
Residential Development
Oakland, CA

Project Number	991-1-1
Figure Number	Figure 4F
Drawn By	RRN
Date	September 2017

Screening Levels

	Residential ESL [1] - mg/kg	Residential RSL [2] - µg/L	Residential ESL [1] - µg/m³
Toluene	2.9	110	160,000

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region , Tier 1 - February 2016, Revision 3

2 Regional Screening Level (RSL), USEPA Region 9 - November 2015

< Not Detected at or above laboratory reporting limit

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Blue Indicates sample expected to be removed during construction

GW-1	11/10/2016
Toluene	<0.5 µg/L

BH-C	3/23/2005
Depth (ft)	Toluene
2	<0.005 mg/kg

B-5	2/15/2012
Depth (ft)	Toluene
5	<55 µg/m³
10	<50 µg/m³

MW-2	6/4/2012
Toluene	<1.0 µg/L
	8/24/2016
	<0.50 µg/L

BH-D	3/23/2005
Depth (ft)	Toluene
2	<0.005 mg/kg

EB-11	11/10/2016
Depth (ft)	Toluene
0 to 1	--- mg/kg
2 to 3	--- mg/kg
4½ to 5	--- mg/kg
9½ to 10	--- mg/kg
14½ to 15	<0.005 mg/kg

SV-2	11/10/2016
Depth (ft)	Toluene
10	20 µg/m³

EB-12	11/10/2016
Depth (ft)	Toluene
2 to 3	<0.0049 mg/kg
4½ to 5	<0.0046 mg/kg
9½ to 10	<0.005 mg/kg

EB-10	11/10/2016
Depth (ft)	Toluene
0 to 1	--- mg/kg
2 to 3	<0.0044 mg/kg
4½ to 5	<0.0056 mg/kg
9½ to 10	<0.0055 mg/kg

EB-10	11/10/2016
Toluene	0.5 µg/L

EB-6	11/9/2016
Depth (ft)	Toluene
2 to 3	<0.0053 mg/kg
4 to 5	<0.005 mg/kg
9 to 10	<0.0041 mg/kg
14 to 15	<0.0042 mg/kg

B-3	2/15/2012
Depth (ft)	Toluene
5	<50 µg/m³
10	<50 µg/m³

MW-1	6/4/2012
Toluene	**1.2** µg/L
	8/24/2016
	<100 µg/L

SV-1	11/10/2016
Depth (ft)	Toluene
7	<690 µg/m³

EB-14	11/9/2016
Depth (ft)	Toluene
2 to 3	<0.0052 mg/kg
4 to 5	<0.0047 mg/kg
6 to 7	<0.0043 mg/kg
9 to 10	<0.0041 mg/kg
11 to 12	<5.0 mg/kg
14 to 15	<0.0043 mg/kg

EB-13	11/9/2016
Depth (ft)	Toluene
2 to 3	<0.005 mg/kg
4 to 5	<0.0046 mg/kg
9 to 10	<0.0052 mg/kg
11 to 12	<0.0038 mg/kg
14 to 15	<0.0041 mg/kg

EB-8	11/9/2016
Depth (ft)	Toluene
2 to 3	<0.0048 mg/kg
4 to 5	<0.0047 mg/kg
9 to 10	<0.0048 mg/kg

EB-8	11/10/2016
Toluene	<0.5 µg/L

B-4	2/15/2012
Depth (ft)	Toluene
5	<100 µg/m³
10	<100 µg/m³

SV-4	11/10/2016
Depth (ft)	Toluene
7	2,600 µg/m³

BH-B	3/23/2005
Depth (ft)	Toluene
11½	<0.005 mg/kg

BH-B	3/23/2005
Toluene	<100 µg/L

EB-9	11/9/2016
Depth (ft)	Toluene
2 to 3	<0.0044 mg/kg
4½ to 5	<0.0045 mg/kg
9½ to 10	<0.004 mg/kg
13 to 13½	<5.0 mg/kg

EB-9	11/10/2016
Toluene	<0.5 µg/L

GW-3	11/9/2016
Depth (ft)	Toluene
13 to 13½	**490** mg/kg

GW-3	11/10/2016
Toluene	<0.5 µg/L

EB-16	11/10/2016
Depth (ft)	Toluene
0 to 1	--- mg/kg
2 to 3	<0.0049 mg/kg
4½ to 5	<0.0049 mg/kg
12 to 12½	<0.25 mg/kg
14½ to 15	<0.0046 mg/kg

EB-15	11/10/2016
Depth (ft)	Toluene
2 to 3	<0.0041 mg/kg
4½ to 5	<0.0043 mg/kg
9½ to 10	<0.0046 mg/kg

EB-7	11/9/2016
Depth (ft)	Toluene
0 to 1	--- mg/kg
2 to 3	<0.0047 mg/kg
4 to 5	<0.0044 mg/kg
9 to 10	<0.0045 mg/kg

EB-7	11/10/2016
Toluene	<0.5 µg/L

BH-H	3/23/2005
Depth (ft)	Toluene
2	<0.005 mg/kg

EB-1	11/9/2016
Depth (ft)	Toluene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-E	3/23/2005
Depth (ft)	Toluene
2	<0.005 mg/kg

BH-F	3/23/2005
Depth (ft)	Toluene
2	<0.005 mg/kg

GW-2	11/10/2016
Toluene	<1.7 µg/L

EB-2	11/9/2016
Depth (ft)	Toluene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-G	3/23/2005
Depth (ft)	Toluene
2	<0.005 mg/kg

BH-I	3/23/2005
Depth (ft)	Toluene
2	<0.005 mg/kg

EB-4	11/9/2016
Depth (ft)	Toluene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-3	11/9/2016
Depth (ft)	Toluene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

B-6	2/15/2012
Depth (ft)	Toluene
5	63 µg/m³
10	110 µg/m³

B-7	2/15/2012
Depth (ft)	Toluene
5	150 µg/m³
10	150 µg/m³

EB-5	11/9/2016
Depth (ft)	Toluene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-17	11/9/2016
Depth (ft)	Toluene
0 to 1	<0.0061 mg/kg
2 to 3	<0.0057 mg/kg
4 to 5	<0.0043 mg/kg
9 to 10	<0.0044 mg/kg

SV-3	11/10/2016
Depth (ft)	Toluene
7	<0.53 µg/m³

B-2	2/15/2012
Depth (ft)	Toluene
5	<50 µg/m³
10	<50 µg/m³

B-1	2/15/2012
Depth (ft)	Toluene
5	51 µg/m³
10	<50 µg/m³

MW-3	6/4/2012
Toluene	<1.0 µg/L
	8/24/2016
	<0.50 µg/L

BH-A	3/23/2005
Depth (ft)	Toluene
11½	<0.005 mg/kg

BH-A	3/23/2005
Toluene	<0.5 µg/L

Approximate Site Boundary

APN: 5-431-23
2236 Myrtle Street

APN: 5-431-21-4
2226 Myrtle Street

APN: 5-431-15-4
2281 Market Street

APN: 5-431-17-1
2277 Market Street

APN: 5-431-19-2
2220 Myrtle Street

APN: 5-431-18-3 (portion)
914 West Grand Avenue

Future elevator pit

Future elevator pit

Myrtle Street

Market Street

902 WEST GRAND

LANDSCAPING

STACKERS

BIKE RACKS

PLANTER

248' - 0"

4.84

91' - 11"

Legend

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe

Soil Data

Ground Water Data

Soil Vapor Data

N

0 30 60

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

CORNERSTONE EARTH GROUP

GW-1	11/10/2016
Ethylbenzene	<0.5 µg/L

BH-C	3/23/2005
Depth (ft)	Ethylbenzene
2	<0.005 mg/kg

B-5	2/15/2012
Depth (ft)	Ethylbenzene
5	<55 µg/m³
10	<50 µg/m³

MW-2	6/4/2012
Ethylbenzene	<1.0 µg/L
	8/24/2016
	<0.50 µg/L

BH-D	3/23/2005
Depth (ft)	Ethylbenzene
2	<0.005 mg/kg

EB-11	11/10/2016
Depth (ft)	Ethylbenzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg
4½ to 5	--- mg/kg
9½ to 10	--- mg/kg
14½ to 15	<0.005 mg/kg

SV-2	11/10/2016
Depth (ft)	Ethylbenzene
10	<0.76 µg/m³

EB-12	11/10/2016
Depth (ft)	Ethylbenzene
2 to 3	<0.0049 mg/kg
4½ to 5	<0.0046 mg/kg
9½ to 10	<0.005 mg/kg

EB-10	11/10/2016
Depth (ft)	Ethylbenzene
0 to 1	--- mg/kg
2 to 3	<0.0044 mg/kg
4½ to 5	<0.0056 mg/kg
9½ to 10	<0.0055 mg/kg

EB-10	11/10/2016
Ethylbenzene	60 µg/L

EB-6	11/9/2016
Depth (ft)	Ethylbenzene
2 to 3	<0.0053 mg/kg
4 to 5	<0.005 mg/kg
9 to 10	<0.0041 mg/kg
14 to 15	<0.0042 mg/kg

B-3	2/15/2012
Depth (ft)	Ethylbenzene
5	<50 µg/m³
10	<110 µg/m³

MW-1	6/4/2012
Ethylbenzene	79 µg/L
	8/24/2016
	<50 µg/L

SV-1	11/10/2016
Depth (ft)	Ethylbenzene
7	<980 µg/m³

EB-14	11/9/2016
Depth (ft)	Ethylbenzene
2 to 3	<0.0052 mg/kg
4 to 5	<0.0047 mg/kg
6 to 7	<0.0043 mg/kg
9 to 10	<0.0041 mg/kg
11 to 12	<5.0 mg/kg
14 to 15	<0.0043 mg/kg

EB-13	11/9/2016
Depth (ft)	Ethylbenzene
2 to 3	<0.005 mg/kg
4 to 5	<0.0046 mg/kg
9 to 10	<0.0052 mg/kg
11 to 12	0.028 mg/kg
14 to 15	<0.0041 mg/kg

EB-8	11/9/2016
Depth (ft)	Ethylbenzene
2 to 3	<0.0048 mg/kg
4 to 5	<0.0047 mg/kg
9 to 10	<0.0048 mg/kg

EB-8	11/10/2016
Ethylbenzene	<0.5 µg/L

B-4	2/15/2012
Depth (ft)	Ethylbenzene
5	<100 µg/m³
10	<100 µg/m³

SV-4	11/10/2016
Depth (ft)	Ethylbenzene
7	<380 µg/m³

BH-B	3/23/2005
Depth (ft)	Ethylbenzene
11½	27 mg/kg

BH-B	3/23/2005
Ethylbenzene	4,500 µg/L

EB-9	11/9/2016
Depth (ft)	Ethylbenzene
2 to 3	<0.0044 mg/kg
4½ to 5	<0.0045 mg/kg
9½ to 10	<0.004 mg/kg
13 to 13½	<5.0 mg/kg

EB-9	11/10/2016
Ethylbenzene	2.3 µg/L

GW-3	11/9/2016
Depth (ft)	Ethylbenzene
13 to 13½	490 mg/kg

GW-3	11/10/2016
Ethylbenzene	0.6 µg/L

EB-16	11/10/2016
Depth (ft)	Ethylbenzene
0 to 1	--- mg/kg
2 to 3	<0.0049 mg/kg
4½ to 5	<0.0049 mg/kg
12 to 12½	<0.25 mg/kg
14½ to 15	<0.0046 mg/kg

EB-15	11/10/2016
Depth (ft)	Ethylbenzene
2 to 3	<0.0041 mg/kg
4½ to 5	<0.0043 mg/kg
9½ to 10	<0.0046 mg/kg

EB-7	11/9/2016
Depth (ft)	Ethylbenzene
0 to 1	--- mg/kg
2 to 3	<0.0047 mg/kg
4 to 5	<0.0044 mg/kg
9 to 10	<0.0045 mg/kg

EB-7	11/10/2016
Ethylbenzene	<0.5 µg/L

BH-H	3/23/2005
Depth (ft)	Ethylbenzene
2	<0.005 mg/kg

EB-1	11/9/2016
Depth (ft)	Ethylbenzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-E	3/23/2005
Depth (ft)	Ethylbenzene
2	<0.005 mg/kg

BH-F	3/23/2005
Depth (ft)	Ethylbenzene
2	<0.005 mg/kg

GW-2	11/10/2016
Ethylbenzene	<1.7 µg/L

EB-2	11/9/2016
Depth (ft)	Ethylbenzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-G	3/23/2005
Depth (ft)	Ethylbenzene
2	<0.005 mg/kg

BH-I	3/23/2005
Depth (ft)	Ethylbenzene
2	<0.005 mg/kg

EB-4	11/9/2016
Depth (ft)	Ethylbenzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-3	11/9/2016
Depth (ft)	Ethylbenzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

B-6	2/15/2012
Depth (ft)	Ethylbenzene
5	<50 µg/m³
10	<100 µg/m³

B-7	2/15/2012
Depth (ft)	Ethylbenzene
5	<50 µg/m³
10	<100 µg/m³

EB-5	11/9/2016
Depth (ft)	Ethylbenzene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-17	11/9/2016
Depth (ft)	Ethylbenzene
0 to 1	<0.0061 mg/kg
2 to 3	<0.0057 mg/kg
4 to 5	<0.0043 mg/kg
9 to 10	<0.0044 mg/kg

SV-3	11/10/2016
Depth (ft)	Ethylbenzene
7	<0.76 µg/m³

B-2	2/15/2012
Depth (ft)	Ethylbenzene
5	<50 µg/m³
10	<50 µg/m³

B-1	2/15/2012
Depth (ft)	Ethylbenzene
5	<50 µg/m³
10	<50 µg/m³

MW-3	6/4/2012
Ethylbenzene	<1.0 µg/L
	8/24/2016
	<0.50 µg/L

BH-A	3/23/2005
Depth (ft)	Ethylbenzene
11½	<0.005 mg/kg

BH-A	3/23/2005
Ethylbenzene	1.0 µg/L

Screening Levels

	Residential ESL [1] - mg/kg	Residential ESL [2] - µg/L	Residential ESL [1] - µg/m³
Ethylbenzene	1.4	13	560

[1] Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region , Tier 1 - February 2016, Revision 3

< Not Detected at or above laboratory reporting limit

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Blue Indicates sample expected to be removed during construction

Approximate Site Boundary

APN: 5-431-23
2236 Myrtle Street

APN: 5-431-21-4
2226 Myrtle Street

APN: 5-431-15-4
2281 Market Street

APN: 5-431-17-1
2277 Market Street

APN: 5-431-19-2
2220 Myrtle Street

APN: 5-431-18-3 (portion)
914 West Grand Avenue

Future elevator pit

Future elevator pit

Myrtle Street

Market Street

902 WEST GRAND

LANDSCAPING

BIKE RACKS

PLANTER

Legend

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe

Soil Data

Ground Water Data

Soil Vapor Data

N

0 30 60

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

Project Number 991-1-1

Figure Number Figure 4G

Drawn By RRN

Date September 2017

Ethylbenzene Concentrations

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP

Xylenes Concentrations

914 West Grand Avenue
Residential Development
Oakland, CA

Project Number	991-1-1
Figure Number	Figure 4H
Drawn By	RRN
Date	September 2017

Screening Levels

	Residential ESL [1] - mg/kg	Residential RSL [2] - µg/L	Residential ESL [1] - µg/m³
Xylenes	2.3	20	52,000

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region , Tier 1 - February 2016, Revision 3

2 Regional Screening Level (RSL), USEPA Region 9 - November 2015

< Not Detected at or above laboratory reporting limit

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Blue Indicates sample expected to be removed during construction

GW-1	11/10/2016
Xylenes	<0.5 µg/L

BH-C	3/23/2005
Depth (ft)	Xylenes
2	0.018 mg/kg

B-5	2/15/2012
Depth (ft)	Xylenes
5	<165 µg/m³
10	<150 µg/m³

MW-2	6/4/2012
Xylenes	<1.0 µg/L
	8/24/2016
	<1.0 µg/L

BH-D	3/23/2005
Depth (ft)	Xylenes
2	<0.005 mg/kg

EB-11	11/10/2016
Depth (ft)	Xylenes
0 to 1	--- mg/kg
2 to 3	--- mg/kg
4½ to 5	--- mg/kg
9½ to 10	--- mg/kg
14½ to 15	<0.005 mg/kg

SV-2	11/10/2016
Depth (ft)	Xylenes
10	<0.98 µg/m³

EB-12	11/10/2016
Depth (ft)	Xylenes
2 to 3	<0.0049 mg/kg
4½ to 5	<0.0046 mg/kg
9½ to 10	<0.005 mg/kg

EB-10	11/10/2016
Depth (ft)	Xylenes
0 to 1	--- mg/kg
2 to 3	<0.0044 mg/kg
4½ to 5	<0.0056 mg/kg
9½ to 10	<0.0055 mg/kg

EB-10	11/10/2016
Xylenes	<0.5 µg/L

EB-6	11/9/2016
Depth (ft)	Xylenes
2 to 3	<0.0053 mg/kg
4 to 5	<0.005 mg/kg
9 to 10	<0.0041 mg/kg
14 to 15	<0.0042 mg/kg

B-3	2/15/2012
Depth (ft)	Xylenes
5	293 µg/m³
10	<150 µg/m³

MW-1	6/4/2012
Xylenes	**188** µg/L
	8/24/2016
	<1.0 µg/L

SV-1	11/10/2016
Depth (ft)	Xylenes
7	<1,300 µg/m³

EB-14	11/9/2016
Depth (ft)	Xylenes
2 to 3	<0.0052 mg/kg
4 to 5	<0.0047 mg/kg
6 to 7	<0.0043 mg/kg
9 to 10	<0.0041 mg/kg
11 to 12	<5.0 mg/kg
14 to 15	<0.0043 mg/kg

EB-13	11/9/2016
Depth (ft)	Xylenes
2 to 3	<0.005 mg/kg
4 to 5	<0.0046 mg/kg
9 to 10	<0.0052 mg/kg
11 to 12	<0.0038 mg/kg
14 to 15	<0.0041 mg/kg

EB-8	11/9/2016
Depth (ft)	Xylenes
2 to 3	<0.0048 mg/kg
4 to 5	<0.0047 mg/kg
9 to 10	<0.0048 mg/kg

EB-8	11/10/2016
Xylenes	<0.5 µg/L

B-4	2/15/2012
Depth (ft)	Xylenes
5	<300 µg/m³
10	<300 µg/m³

SV-4	11/10/2016
Depth (ft)	Xylenes
7	<0.98 µg/m³

BH-B	3/23/2005
Depth (ft)	Xylenes
11½	**6.1** mg/kg

BH-B	3/23/2005
Xylenes	**1,800** µg/L

EB-9	11/9/2016
Depth (ft)	Xylenes
2 to 3	<0.0044 mg/kg
4½ to 5	<0.0045 mg/kg
9½ to 10	<0.004 mg/kg
13 to 13½	<5.0 mg/kg

EB-9	11/10/2016
Xylenes	<0.5 µg/L

GW-3	11/9/2016
Depth (ft)	Xylenes
13 to 13½	**490** mg/kg

GW-3	11/10/2016
Xylenes	<0.5 µg/L

EB-16	11/10/2016
Depth (ft)	Xylenes
0 to 1	--- mg/kg
2 to 3	<0.0049 mg/kg
4½ to 5	<0.0049 mg/kg
12 to 12½	<0.25 mg/kg
14½ to 15	<0.0046 mg/kg

EB-15	11/10/2016
Depth (ft)	Xylenes
2 to 3	<0.0041 mg/kg
4½ to 5	<0.0043 mg/kg
9½ to 10	<0.0046 mg/kg

EB-7	11/9/2016
Depth (ft)	Xylenes
0 to 1	--- mg/kg
2 to 3	<0.0047 mg/kg
4 to 5	<0.0044 mg/kg
9 to 10	<0.0045 mg/kg

EB-7	11/10/2016
Xylenes	<0.5 µg/L

BH-H	3/23/2005
Depth (ft)	Xylenes
2	<0.005 mg/kg

EB-1	11/9/2016
Depth (ft)	Xylenes
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-E	3/23/2005
Depth (ft)	Xylenes
2	<0.005 mg/kg

BH-F	3/23/2005
Depth (ft)	Xylenes
2	<0.005 mg/kg

GW-2	11/10/2016
Xylenes	<1.7 µg/L

EB-2	11/9/2016
Depth (ft)	Xylenes
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-G	3/23/2005
Depth (ft)	Xylenes
2	<0.005 mg/kg

SV-3	11/10/2016
Depth (ft)	Xylenes
7	<0.98 µg/m³

BH-I	3/23/2005
Depth (ft)	Xylenes
2	<0.005 mg/kg

EB-4	11/9/2016
Depth (ft)	Xylenes
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-3	11/9/2016
Depth (ft)	Xylenes
0 to 1	--- mg/kg
2 to 3	--- mg/kg

B-6	2/15/2012
Depth (ft)	Xylenes
5	<150 µg/m³
10	<300 µg/m³

B-7	2/15/2012
Depth (ft)	Xylenes
5	120 µg/m³
10	<300 µg/m³

EB-5	11/9/2016
Depth (ft)	Xylenes
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-17	11/9/2016
Depth (ft)	Xylenes
0 to 1	<0.0061 mg/kg
2 to 3	<0.0057 mg/kg
4 to 5	<0.0043 mg/kg
9 to 10	<0.0044 mg/kg

B-2	2/15/2012
Depth (ft)	Xylenes
5	<150 µg/m³
10	<150 µg/m³

B-1	2/15/2012
Depth (ft)	Xylenes
5	<150 µg/m³
10	<150 µg/m³

MW-3	6/4/2012
Xylenes	<1.0 µg/L
	8/24/2016
	<1.0 µg/L

BH-A	3/23/2005
Depth (ft)	Xylenes
11½	<0.0054 mg/kg

BH-A	3/23/2005
Xylenes	3.4 µg/L

APN: 5-431-23
2236 Myrtle Street

APN: 5-431-21-4
2226 Myrtle Street

APN: 5-431-15-4
2281 Market Street

APN: 5-431-17-1
2277 Market Street

APN: 5-431-19-2
2220 Myrtle Street

APN: 5-431-18-3 (portion)
914 West Grand Avenue

Approximate Site Boundary

Future elevator pit

Future elevator pit

Myrtle Street

Market Street

902 WEST GRAND

LANDSCAPING

BIKE RACKS

PLANTER

STACKERS

ADA

248' - 0"

4.84

91' - 11"

Legend

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe

Soil Data

Ground Water Data

Soil Vapor Data

N

0 30 60

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

CORNERSTONE EARTH GROUP

GW-1	11/10/2016
Naphthalene	<2.0 µg/L

BH-C	3/23/2005
Depth (ft)	Naphthalene
2	0.018 mg/kg

BH-H	3/23/2005
Depth (ft)	Naphthalene
2	<0.005 mg/kg

EB-1	11/9/2016
Depth (ft)	Naphthalene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-E	3/23/2005
Depth (ft)	Naphthalene
2	<0.005 mg/kg

BH-F	3/23/2005
Depth (ft)	Naphthalene
2	<0.005 mg/kg

GW-2	11/10/2016
Naphthalene	<6.7 µg/L

EB-2	11/9/2016
Depth (ft)	Naphthalene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

BH-G	3/23/2005
Depth (ft)	Naphthalene
2	<0.005 mg/kg

MW-2	6/4/2012
Naphthalene	<1.0 µg/L
	8/24/2016
	<1.0 µg/L

BH-D	3/23/2005
Depth (ft)	Naphthalene
2	<0.005 mg/kg

EB-11	11/10/2016
Depth (ft)	Naphthalene
0 to 1	--- mg/kg
2 to 3	--- mg/kg
4½ to 5	--- mg/kg
9½ to 10	--- mg/kg
14½ to 15	<0.005 mg/kg

EB-12	11/10/2016
Depth (ft)	Naphthalene
2 to 3	<0.0049 mg/kg
4½ to 5	<0.0046 mg/kg
9½ to 10	<0.005 mg/kg

EB-10	11/10/2016
Depth (ft)	Naphthalene
0 to 1	--- mg/kg
2 to 3	<0.0044 mg/kg
4½ to 5	<0.0056 mg/kg
9½ to 10	<0.0055 mg/kg

EB-10	11/10/2016
Naphthalene	**40** µg/L

EB-6	11/9/2016
Depth (ft)	Naphthalene
2 to 3	<0.0053 mg/kg
4 to 5	<0.005 mg/kg
9 to 10	<0.0041 mg/kg
14 to 15	<0.0042 mg/kg

MW-1	6/4/2012
Naphthalene	**188** µg/L
	8/24/2016
	<1.0 µg/L

EB-14	11/9/2016
Depth (ft)	Naphthalene
2 to 3	<0.0052 mg/kg
4 to 5	<0.0047 mg/kg
6 to 7	<0.0043 mg/kg
9 to 10	<0.0041 mg/kg
11 to 12	**30** mg/kg
14 to 15	<0.0043 mg/kg

EB-13	11/9/2016
Depth (ft)	Naphthalene
2 to 3	<0.005 mg/kg
4 to 5	<0.0046 mg/kg
9 to 10	<0.0052 mg/kg
11 to 12	**0.47** mg/kg
14 to 15	<0.0041 mg/kg

EB-8	11/9/2016
Depth (ft)	Naphthalene
2 to 3	<0.0048 mg/kg
4 to 5	<0.0047 mg/kg
9 to 10	<0.0048 mg/kg

EB-8	11/10/2016
Naphthalene	<2.0 µg/L

BH-B	3/23/2005
Depth (ft)	Naphthalene
11½	20 mg/kg

BH-B	3/23/2005
Naphthalene	**820** µg/L

EB-9	11/9/2016
Depth (ft)	Naphthalene
2 to 3	<0.0044 mg/kg
4½ to 5	<0.0045 mg/kg
9½ to 10	<0.004 mg/kg
13 to 13½	**13** mg/kg

EB-9	11/10/2016
Naphthalene	**4.6** µg/L

GW-3	11/9/2016
Depth (ft)	Naphthalene
13 to 13½	**7.2** mg/kg

GW-3	11/10/2016
Naphthalene	<2.0 µg/L

EB-16	11/10/2016
Depth (ft)	Naphthalene
0 to 1	--- mg/kg
2 to 3	<0.0049 mg/kg
4½ to 5	<0.0049 mg/kg
12 to 12½	<0.25 mg/kg
14½ to 15	<0.0046 mg/kg

EB-15	11/10/2016
Depth (ft)	Naphthalene
2 to 3	<0.0041 mg/kg
4½ to 5	<0.0043 mg/kg
9½ to 10	<0.0046 mg/kg

EB-7	11/9/2016
Depth (ft)	Naphthalene
0 to 1	--- mg/kg
2 to 3	<0.0047 mg/kg
4 to 5	<0.0044 mg/kg
9 to 10	<0.0045 mg/kg

EB-7	11/10/2016
Naphthalene	<2.0 µg/L

MW-3	6/4/2012
Naphthalene	<1.0 µg/L
	8/24/2016
	<1.0 µg/L

BH-A	3/23/2005
Depth (ft)	Naphthalene
11½	<0.005 mg/kg

BH-A	3/23/2005
Naphthalene	**1.1** µg/L

BH-I	3/23/2005
Depth (ft)	Naphthalene
2	<0.005 mg/kg

EB-4	11/9/2016
Depth (ft)	Naphthalene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-3	11/9/2016
Depth (ft)	Naphthalene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-5	11/9/2016
Depth (ft)	Naphthalene
0 to 1	--- mg/kg
2 to 3	--- mg/kg

EB-17	11/9/2016
Depth (ft)	Naphthalene
0 to 1	<0.0061 mg/kg
2 to 3	<0.0057 mg/kg
4 to 5	<0.0043 mg/kg
9 to 10	<0.0044 mg/kg

Screening Levels

	Residential ESL [1] - mg/kg	Residential ESL [1] - µg/L
Naphthalene	0.033	0.12

[1] Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region , Tier 1 - February 2016, Revision 3

< Not Detected at or above laboratory reporting limit

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Blue Indicates sample expected to be removed during construction

Approximate Site Boundary

APN: 5-431-23
2236 Myrtle Street

APN: 5-431-21-4
2226 Myrtle Street

APN: 5-431-15-4
2281 Market Street

APN: 5-431-17-1
2277 Market Street

APN: 5-431-19-2
2220 Myrtle Street

APN: 5-431-18-3 (portion)
914 West Grand Avenue

Future elevator pit

Future elevator pit

Myrtle Street

Market Street

902 WEST GRAND

LANDSCAPING

BIKE RACKS

PLANTER

248' - 0"

91' - 11"

85' - 6"

4.84

Legend

Approximate location of ground water grab sample (sampled November 10, 2016)

Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)

Approximate location of soil boring and ground water grab sample (ASE, April 2005)

Approximate location of soil boring and soil vapor probe (Salem, February 2012)

Approximate location of exploratory boring for soil sample collection

Approximate location of temporary soil vapor probe

Soil Data

Ground Water Data

N

0 30 60

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

Project Number 991-1-1

Figure Number Figure 4I

Drawn By RRN

Date September 2017

Naphthalene Concentrations

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP

PCE/TCE Concentrations
914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP

Project Number	991-1-1
Figure Number	Figure 4J
Drawn By	RRN
Date	September 2017

Screening Levels

	Residential ESL [1] - mg/kg	Residential ESL [1] - µg/L	Residential ESL [1] - µg/m³
PCE	0.42	3.0	240
TCE	0.46	5.0	NE

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region , Tier 1 - February 2016, Revision 3

< Not Detected at or above laboratory reporting limit

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Blue Indicates sample expected to be removed during construction

Approximate Site Boundary

APN: 5-431-23
2236 Myrtle Street

APN: 5-431-21-4
2226 Myrtle Street

APN: 5-431-15-4
2281 Market Street

APN: 5-431-17-1
2277 Market Street

APN: 5-431-19-2
2220 Myrtle Street

APN: 5-431-18-3 (portion)
91[illegible] Myrtle Street

Future elevator pit

Future elevator pit

902 WEST GRAND

EB-1	11/9/2016	
Depth (ft)	PCE	TCE
0 to 1	--- mg/kg	--- mg/kg
2 to 3	--- mg/kg	--- mg/kg

BH-F	3/23/2005	
Depth (ft)	PCE	TCE
2	0.012 mg/kg	<0.005 mg/kg

BH-G	3/23/2005	
Depth (ft)	PCE	TCE
2	<0.005 mg/kg	<0.005 mg/kg

GW-1	11/10/2016	
	<0.50 µg/L	<0.50 µg/L

BH-H	3/23/2005	
Depth (ft)	PCE	TCE
2	<0.005 mg/kg	<0.005 mg/kg

BH-E	3/23/2005	
Depth (ft)	PCE	TCE
2	<0.005 mg/kg	<0.005 mg/kg

EB-2	11/9/2016	
Depth (ft)	PCE	TCE
0 to 1	--- mg/kg	--- mg/kg
2 to 3	--- mg/kg	--- mg/kg

GW-2	11/10/2016	
	<1.7 µg/L	<1.7 µg/L

BH-C	3/23/2005	
Depth (ft)	PCE	TCE
2	<0.005 mg/kg	<0.005 mg/kg

B-5	2/15/2012	
Depth (ft)	PCE	TCE
5	<55 µg/m³	<60 µg/m³
10	84 µg/m³	<50 µg/m³

BH-D	3/23/2005	
Depth (ft)	PCE	TCE
2	<0.005 mg/kg	<0.005 mg/kg

MW-2	6/4/2012	8/24/2016
PCE	<1.0 µg/L	<0.50 µg/L
TCE	<1.0 µg/L	<0.50 µg/L

EB-11	11/10/2016	
Depth (ft)	PCE	TCE
0 to 1	--- mg/kg	--- mg/kg
2 to 3	--- mg/kg	--- mg/kg
4½ to 5	--- mg/kg	--- mg/kg
9½ to 10	--- mg/kg	--- mg/kg
14½ to 15	<0.005 mg/kg	<0.005 mg/kg

SV-2	11/10/2016	
Depth (ft)	PCE	TCE
10	38 µg/m³	<0.57 µg/m³

EB-12	11/10/2016	
Depth (ft)	PCE	TCE
2 to 3	<0.0049 mg/kg	<0.0049 mg/kg
4½ to 5	<0.0046 mg/kg	<0.0046 mg/kg
9½ to 10	<0.005 mg/kg	<0.005 mg/kg

EB-10	11/10/2016	
Depth (ft)	PCE	TCE
0 to 1	--- mg/kg	--- mg/kg
2 to 3	<0.0044 mg/kg	<0.0044 mg/kg
4½ to 5	<0.0056 mg/kg	<0.0056 mg/kg
9½ to 10	<0.0055 mg/kg	<0.0055 mg/kg

EB-10	11/10/2016	
PCE	<0.5 µg/L	
TCE	<0.5 µg/L	

EB-6	11/9/2016	
Depth (ft)	PCE	TCE
2 to 3	<0.0053 mg/kg	<0.0053 mg/kg
4 to 5	<0.005 mg/kg	<0.005 mg/kg
9 to 10	<0.0041 mg/kg	<0.0041 mg/kg
14 to 15	<0.0042 mg/kg	<0.0042 mg/kg

B-3	2/15/2012	
Depth (ft)	PCE	TCE
5	<50 µg/m³	<50 µg/m³
10	<50 µg/m³	<50 µg/m³

MW-1	6/4/2012	8/24/2016
PCE	<1.0 µg/L	<0.50 µg/L
TCE	<1.0 µg/L	<0.50 µg/L

SV-1	11/10/2016	
Depth (ft)	PCE	TCE
7	<1,200 µg/m³	<740 µg/m³

EB-14	11/9/2016	
Depth (ft)	PCE	TCE
2 to 3	<0.0052 mg/kg	<0.0052 mg/kg
4 to 5	<0.0047 mg/kg	<0.0047 mg/kg
6 to 7	<0.0043 mg/kg	<0.0043 mg/kg
9 to 10	<0.0041 mg/kg	<0.0041 mg/kg
11 to 12	<5.0 mg/kg	<5.0 mg/kg
14 to 15	<0.0043 mg/kg	<0.0043 mg/kg

EB-13	11/9/2016	
Depth (ft)	PCE	TCE
2 to 3	<0.005 mg/kg	<0.005 mg/kg
4 to 5	<0.0046 mg/kg	<0.0046 mg/kg
9 to 10	<0.0052 mg/kg	<0.0052 mg/kg
11 to 12	<0.0038 mg/kg	<0.0038 mg/kg
14 to 15	<0.0041 mg/kg	<0.0041 mg/kg

EB-8	11/9/2016	
Depth (ft)	PCE	TCE
2 to 3	<0.0048 mg/kg	<0.0048 mg/kg
4 to 5	<0.0047 mg/kg	<0.0047 mg/kg
9 to 10	<0.0048 mg/kg	<0.0048 mg/kg

EB-8	11/10/2016	
PCE	<0.5 µg/L	
TCE	<0.5 µg/L	

B-4	2/15/2012	
Depth (ft)	PCE	TCE
5	<100 µg/m³	<100 µg/m³
10	<100 µg/m³	<100 µg/m³

SV-4	11/10/2016	
Depth (ft)	PCE	TCE
7	<470 µg/m³	<470 µg/m³

BH-B	3/23/2005	
Depth (ft)	PCE	TCE
11½	<1.0 mg/kg	<0.005 mg/kg
BH-B	3/23/2005	
	<100 µg/L	<100 µg/L

EB-9	11/9/2016	
Depth (ft)	PCE	TCE
2 to 3	<0.0044 mg/kg	<0.0044 mg/kg
4½ to 5	<0.0045 mg/kg	<0.0045 mg/kg
9½ to 10	<0.004 mg/kg	<0.004 mg/kg
13 to 13½	<5.0 mg/kg	<5.0 mg/kg

EB-9	11/10/2016	
PCE	<0.5 µg/L	
TCE	<0.5 µg/L	

GW-3	11/9/2016	
Depth (ft)	PCE	TCE
13 to 13½	<0.005 mg/kg	<0.005 mg/kg
GW-3	11/10/2016	
	<2.5 µg/L	<2.5 µg/L

EB-16	11/10/2016	
Depth (ft)	PCE	TCE
0 to 1	--- mg/kg	--- mg/kg
2 to 3	<0.0049 mg/kg	<0.0049 mg/kg
4½ to 5	<0.0049 mg/kg	<0.0049 mg/kg
12 to 12½	<0.25 mg/kg	<0.25 mg/kg
14½ to 15	<0.0046 mg/kg	<0.0046 mg/kg

EB-15	11/10/2016	
Depth (ft)	PCE	TCE
2 to 3	<0.0041 mg/kg	<0.0041 mg/kg
4½ to 5	<0.0043 mg/kg	<0.0043 mg/kg
9½ to 10	<0.0046 mg/kg	<0.0046 mg/kg

SV-3	11/10/2016	
Depth (ft)	PCE	TCE
7	<0.94 µg/m³	<0.57 µg/m³

BH-I	3/23/2005	
Depth (ft)	PCE	TCE
2	<0.005 mg/kg	<0.005 mg/kg

EB-4	11/9/2016	
Depth (ft)	PCE	TCE
0 to 1	--- mg/kg	--- mg/kg
2 to 3	--- mg/kg	--- mg/kg

EB-3	11/9/2016	
Depth (ft)	PCE	TCE
0 to 1	--- mg/kg	--- mg/kg
2 to 3	--- mg/kg	--- mg/kg

B-6	2/15/2012	
Depth (ft)	PCE	TCE
5	<50 µg/m³	<50 µg/m³
10	<100 µg/m³	<100 µg/m³

B-7	2/15/2012	
Depth (ft)	PCE	TCE
5	<50 µg/m³	<100 µg/m³
10	<100 µg/m³	<50 µg/m³

EB-5	11/9/2016	
Depth (ft)	PCE	TCE
0 to 1	--- mg/kg	--- mg/kg
2 to 3	--- mg/kg	--- mg/kg

EB-17	11/9/2016	
Depth (ft)	PCE	TCE
0 to 1	<0.0061 mg/kg	<0.0061 mg/kg
2 to 3	<0.0057 mg/kg	<0.0057 mg/kg
4 to 5	<0.0043 mg/kg	<0.0043 mg/kg
9 to 10	<0.0044 mg/kg	<0.0044 mg/kg

B-2	2/15/2012	
Depth (ft)	PCE	TCE
5	<50 µg/m³	<60 µg/m³
10	<50 µg/m³	<60 µg/m³

B-1	2/15/2012	
Depth (ft)	PCE	TCE
5	<50 µg/m³	<50 µg/m³
10	<50 µg/m³	<50 µg/m³

MW-3	6/4/2012	8/24/2016
PCE	11 µg/L	<1.0 µg/L
TCE	<0.50 µg/L	53 µg/L

BH-A	3/23/2005	
Depth (ft)	PCE	TCE
11½	<0.005 mg/kg	<0.005 mg/kg
BH-A	3/23/2005	
	<0.50 µg/L	<0.50 µg/L

EB-7	11/9/2016	
Depth (ft)	PCE	TCE
0 to 1	--- mg/kg	--- mg/kg
2 to 3	<0.0047 mg/kg	<0.0047 mg/kg
4 to 5	<0.0044 mg/kg	<0.0044 mg/kg
9 to 10	<0.0045 mg/kg	<0.0045 mg/kg

EB-7	11/10/2016	
PCE	<0.5 µg/L	
TCE	<0.5 µg/L	

Legend

Soil Data

Ground Water Data

Soil Vapor Data

- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe

N

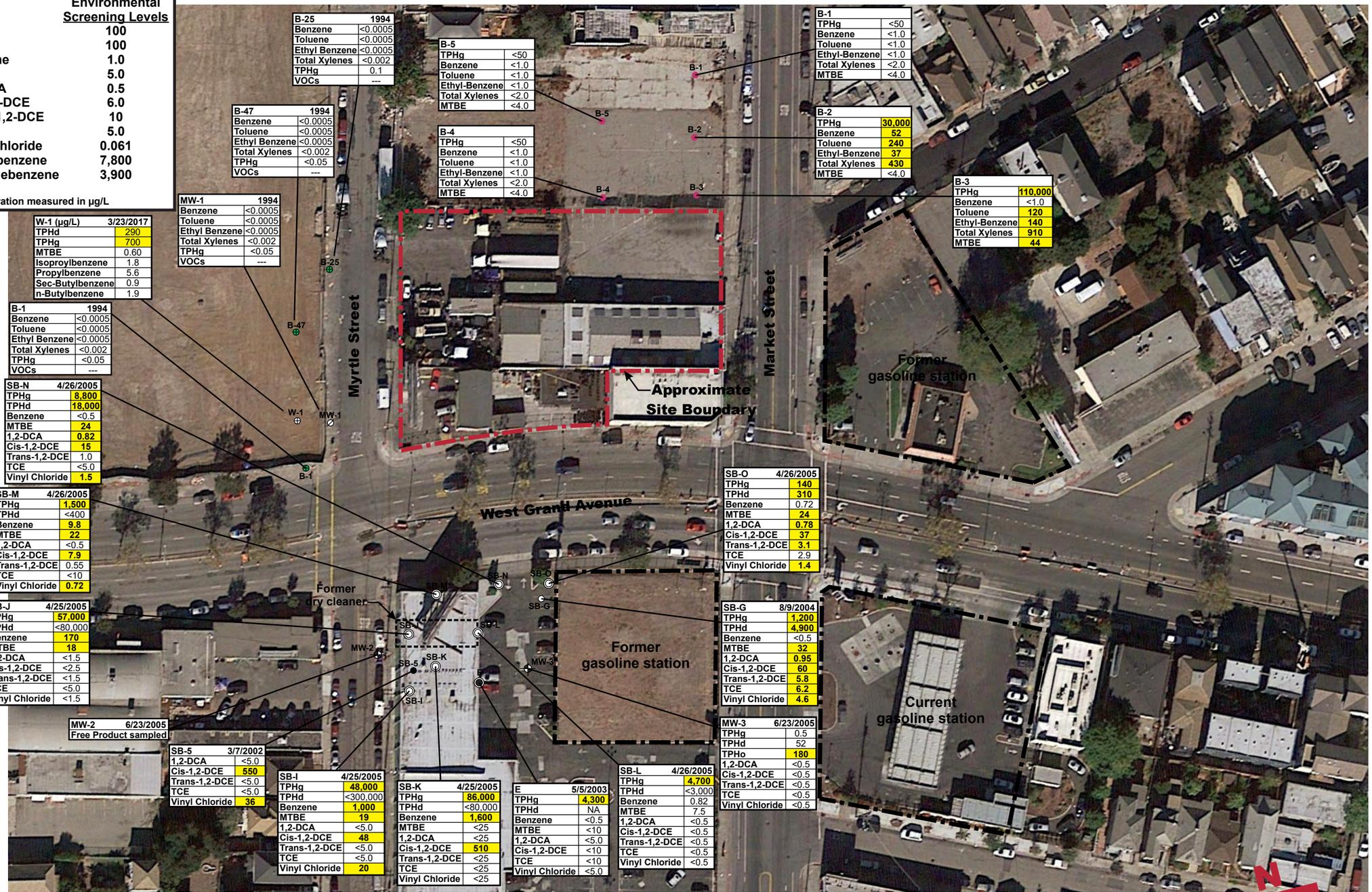
0 30 60

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

Screening Levels	Environmental Screening Levels
TPHg	100
TPHd	100
Benzene	1.0
MTBE	5.0
1,2-DCA	0.5
Cis-1,2-DCE	6.0
Trans-1,2-DCE	10
TCE	5.0
Vinyl Chloride	0.061
Butylebenzene	7,800
n-Butylebenzene	3,900

Concentration measured in µg/L



B-25	1994
Benzene	<0.0005
Toluene	<0.0005
Ethyl Benzene	<0.0005
Total Xylenes	<0.002
TPHg	0.1
VOCs	---

B-47	1994
Benzene	<0.0005
Toluene	<0.0005
Ethyl Benzene	<0.0005
Total Xylenes	<0.002
TPHg	<0.05
VOCs	---

MW-1	1994
Benzene	<0.0005
Toluene	<0.0005
Ethyl Benzene	<0.0005
Total Xylenes	<0.002
TPHg	<0.05
VOCs	---

B-1	1994
Benzene	<0.0005
Toluene	<0.0005
Ethyl Benzene	<0.0005
Total Xylenes	<0.002
TPHg	<0.05
VOCs	---

W-1 (µg/L)	3/23/2017
TPHd	290
TPHg	700
MTBE	0.60
Isopropylbenzene	1.8
Propylbenzene	5.6
Sec-Butylbenzene	0.9
n-Butylbenzene	1.9

SB-N	4/26/2005
TPHg	8,800
TPHd	18,000
Benzene	<0.5
MTBE	24
1,2-DCA	0.82
Cis-1,2-DCE	15
Trans-1,2-DCE	1.0
TCE	<5.0
Vinyl Chloride	1.5

SB-M	4/26/2005
TPHg	1,500
TPHd	<400
Benzene	9.8
MTBE	22
1,2-DCA	<0.5
Cis-1,2-DCE	7.9
Trans-1,2-DCE	0.55
TCE	<10
Vinyl Chloride	0.72

SB-J	4/25/2005
TPHg	57,000
TPHd	<80,000
Benzene	170
MTBE	18
1,2-DCA	<1.5
Cis-1,2-DCE	<2.5
Trans-1,2-DCE	<1.5
TCE	<5.0
Vinyl Chloride	<1.5

MW-2	6/23/2005
Free Product sampled	

SB-5	3/7/2002
1,2-DCA	<5.0
Cis-1,2-DCE	550
Trans-1,2-DCE	<5.0
TCE	<5.0
Vinyl Chloride	36

SB-I	4/25/2005
TPHg	48,000
TPHd	<300,000
Benzene	1,000
MTBE	19
1,2-DCA	<5.0
Cis-1,2-DCE	48
Trans-1,2-DCE	<5.0
TCE	<5.0
Vinyl Chloride	20

SB-K	4/25/2005
TPHg	86,000
TPHd	<80,000
Benzene	1,600
MTBE	<25
1,2-DCA	<25
Cis-1,2-DCE	510
Trans-1,2-DCE	<25
TCE	<25
Vinyl Chloride	<25

E	5/5/2003
TPHg	4,300
TPHd	NA
Benzene	<0.5
MTBE	<10
1,2-DCA	<5.0
Cis-1,2-DCE	<10
TCE	<10
Vinyl Chloride	<5.0

SB-L	4/26/2005
TPHg	4,700
TPHd	<3,000
Benzene	0.82
MTBE	7.5
1,2-DCA	<0.5
Cis-1,2-DCE	<0.5
Trans-1,2-DCE	<0.5
TCE	<0.5
Vinyl Chloride	<0.5

SB-O	4/26/2005
TPHg	140
TPHd	310
Benzene	0.72
MTBE	24
1,2-DCA	0.78
Cis-1,2-DCE	37
Trans-1,2-DCE	3.1
TCE	2.9
Vinyl Chloride	1.4

SB-G	8/9/2004
TPHg	1,200
TPHd	4,900
Benzene	<0.5
MTBE	32
1,2-DCA	0.95
Cis-1,2-DCE	60
Trans-1,2-DCE	5.8
TCE	6.2
Vinyl Chloride	4.6

MW-3	6/23/2005
TPHg	0.5
TPHd	52
TPHo	180
1,2-DCA	<0.5
Cis-1,2-DCE	<0.5
Trans-1,2-DCE	<0.5
TCE	<0.5
Vinyl Chloride	<0.5

B-5	
TPHg	<50
Benzene	<1.0
Toluene	<1.0
Ethyl-Benzene	<1.0
Total Xylenes	<2.0
MTBE	<4.0

B-4	
TPHg	<50
Benzene	<1.0
Toluene	<1.0
Ethyl-Benzene	<1.0
Total Xylenes	<2.0
MTBE	<4.0

B-1	
TPHg	<50
Benzene	<1.0
Toluene	<1.0
Ethyl-Benzene	<1.0
Total Xylenes	<2.0
MTBE	<4.0

B-2	
TPHg	30,000
Benzene	52
Toluene	240
Ethyl-Benzene	37
Total Xylenes	430
MTBE	<4.0

B-3	
TPHg	110,000
Benzene	<1.0
Toluene	120
Ethyl-Benzene	140
Total Xylenes	910
MTBE	44

Legend

- Approximate location of previous soil boring (B) (1994)
- Approximate location of former ground water monitoring well (MW) (1994)
- Approximate location of previous soil boring (B) (Stantec, 2005)
- Approximate location of previous boring (SB) (Golden Gate Tank Removal, Inc., March 2002)
- Approximate location of previous boring (SB) (Golden Gate Tank Removal, Inc., May 2003)
- Approximate location of previous boring (SB) (Golden Gate Tank Removal, Inc., August 2004)
- Approximate location of previous monitoring well (MW) (Golden Gate Tank Removal, Inc., August 2004)
- Approximate location of previous boring (SB) (Golden Gate Tank Removal, Inc., April 2005)

N

0 80 160

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 10/30/2015

Project Number 991-1-1

Figure Number Figure 5

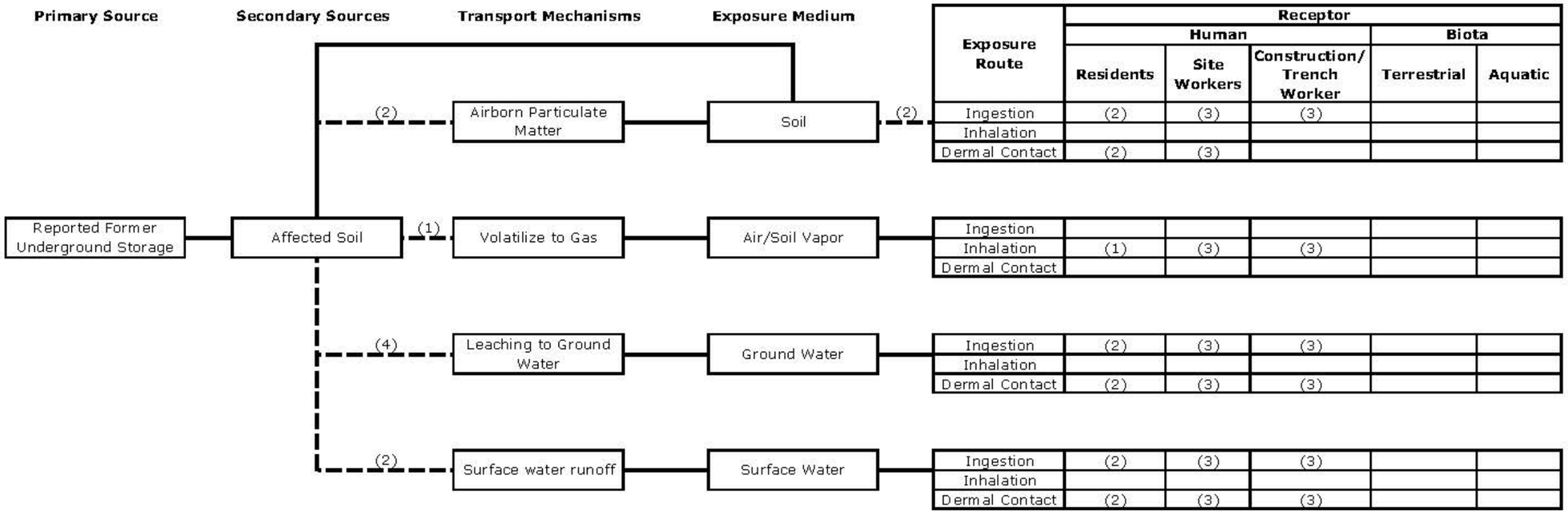
Drawn By RRN

Date October 2017

Off-Site Ground Water Data

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP



Exposure Route	Receptor				
	Human			Biota	
	Residents	Site Workers	Construction/ Trench Worker	Terrestrial	Aquatic
Ingestion	(2)	(3)	(3)		
Inhalation					
Dermal Contact	(2)	(3)			
Ingestion					
Inhalation	(1)	(3)	(3)		
Dermal Contact					
Ingestion	(2)	(3)	(3)		
Inhalation					
Dermal Contact	(2)	(3)	(3)		
Ingestion	(2)	(3)	(3)		
Inhalation					
Dermal Contact	(2)	(3)	(3)		

Notes:
(1) - Incomplete pathway for the future development, based on the design elements of the planned structure
(2) - Incomplete pathway due to controls that will be implemented in the Soil Management Plan.
(3) - Incomplete pathway - Soil Management Plan will provide measures to prevent ingestion, inhalation, and dermal contact with soil to Site Workers and Construction/Trench Workers
(4) - Pathway likely incomplete due to the low COPC and VOC concentrations detected in soil samples collected from the Site

Project Number 991-1-1
Figure Number Figure 6
Drawn By RRN
Date October 2017

Site Conceptual Model

914 West Grand Avenue Residential Development Oakland, CA

CORNERSTONE EARTH GROUP

EB-9	11/9/2016	
Sample depth (ft)	5	13½
Arsenic	<9.4	<9.4
Lead	<9.4	<9.4
Benzo[a]pyrene	<0.001	<0.001
Benzo[b]fluoranthene	<0.001	<0.001
Dibenz(a,h)anthracene	<0.001	<0.001

EB-7	11/9/2016		
Sample depth (ft)	1	3	5
Arsenic	9.3	---	---
Lead	**404**	<9.5	<10
Benzo[a]pyrene	<0.005	---	---
Benzo[b]fluoranthene	<0.005	---	---
Dibenz(a,h)anthracene	<0.005	---	---

BH-F	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005

EB-3	11/9/2016	
Sample depth (ft)	1	3
Arsenic	4.75	3.09
Lead	**139**	77.5
Benzo[a]pyrene	**0.24**	---
Benzo[b]fluoranthene	**0.25**	---
Dibenz(a,h)anthracene	**0.022**	---

EB-4	11/9/2016		
Sample depth (ft)	1	3	5
Arsenic	4.43	3.7	---
Lead	**529**	**345**	<9.7
Benzo[a]pyrene	0.0068	---	---
Benzo[b]fluoranthene	0.0086	---	---
Dibenz(a,h)anthracene	0.0011	---	---

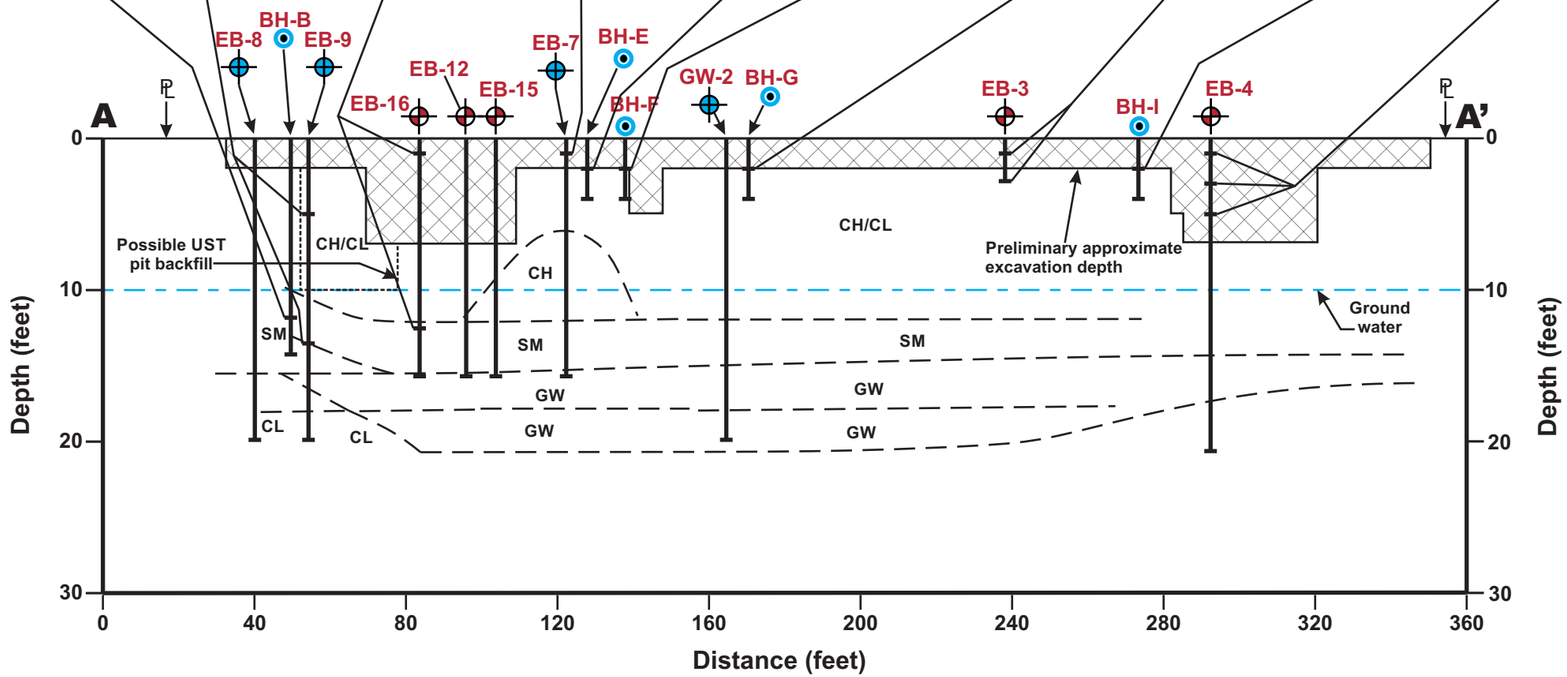
BH-B	3/23/2005
Sample depth (ft)	11.5
TPHd	**370**
TPHg	**2,100**
Ethyl Benzene	**27**
Xylenes	**6.1**

EB-16	11/10/2016	
Sample depth (ft)	1	12½
Arsenic	3.35	6.7
Lead	13.3	7.59
Benzo[a]pyrene	<0.001	0.0027
Benzo[b]fluoranthene	<0.001	0.0024
Dibenz(a,h)anthracene	<0.001	<0.001

BH-E	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005

BH-G	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005

BH-I	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005



Section A-A'

(View Looking Northwest)
1"=40' Horizontal
1"=10' Vertical

Symbols

CL	Lean Clay or sandy clay
CH	Fat Clay
SM	Silty Sand
GW	Well Graded Gravel
⊙	Approximate location of soil boring and ground water grab sample (ASE, April 2005)
⊕	Approximate location of ground water grab sample (sampled November 10, 2016)
⊕	Approximate location of exploratory boring for soil sample collection
PL	Property line

Environmental Screening Levels

TPHd	230 mg/kg
TPHg	100 mg/kg
Ethyl Benzene	14 mg/kg
Total Xylenes	6.1 mg/kg

Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - February 2016

Notes:
1) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
2) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
3) See Figure 2 for location of cross section.

Project Number 991-1-1
Figure Number Figure 7A
Drawn By RRN
Date October 2017

Geologic Cross Section A-A' with Soil Results

914 West Grand Avenue Residential Development Oakland, CA

CORNERSTONE EARTH GROUP

BH-C	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	0.018

EB-1	11/9/2016	
Sample depth (ft)	1	3
Arsenic	6.64	1.53
Lead	**92.5**	4.84
Benzo[a]pyrene	<0.00099	---
Benzo[b]fluoranthene	<0.00099	---
Dibenz(a,h)anthracene	<0.001	---

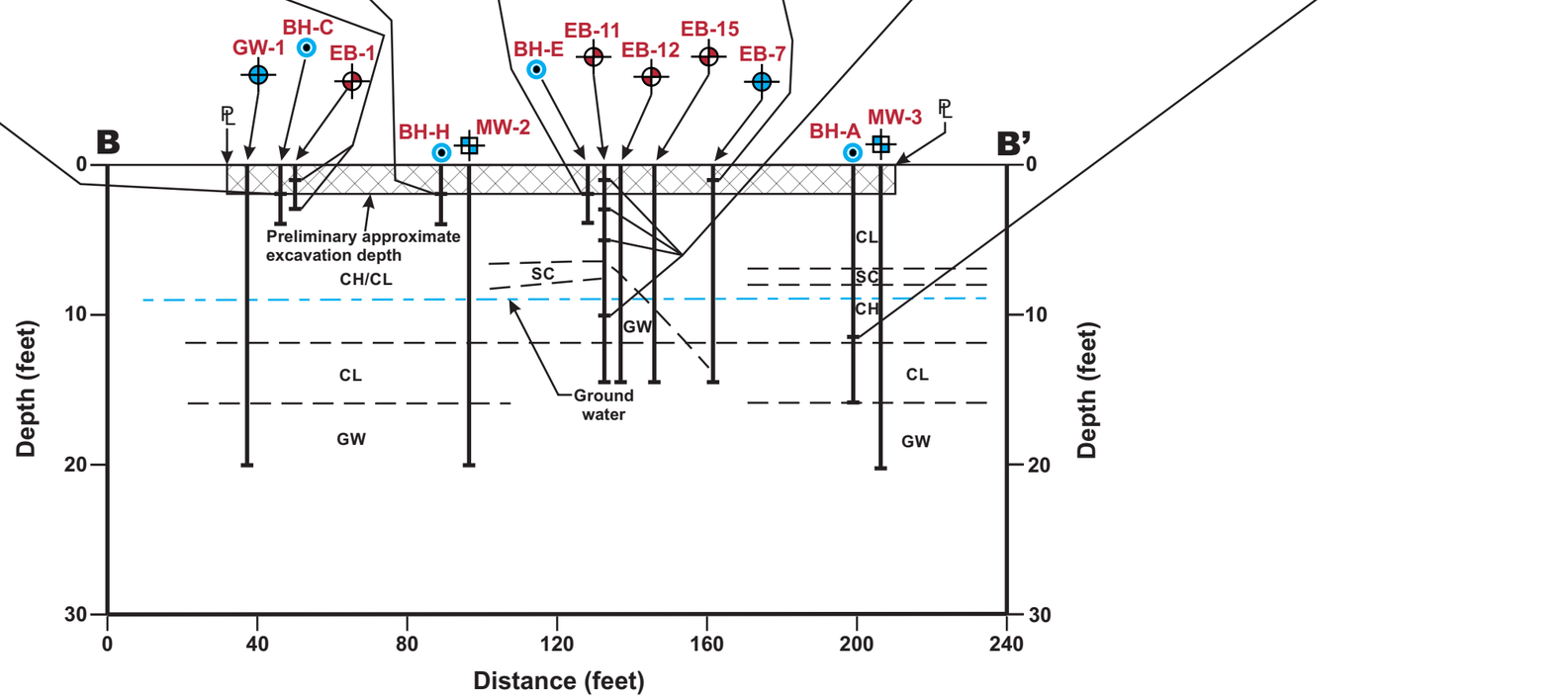
BH-H	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005

BH-E	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005

EB-7	11/9/2016
Sample depth (ft)	1
Arsenic	9.3
Lead	**404**
Benzo[a]pyrene	<0.005
Benzo[b]fluoranthene	<0.005
Dibenz(a,h)anthracene	<0.005

EB-11	11/10/2016			
Sample depth (ft)	1	3	5	10
Arsenic	6.72	2.04	<10	13
Lead	**222**	5.89	<10	<10
Benzo[a]pyrene	<0.001	<0.00099	<0.00099	<0.001
Benzo[b]fluoranthene	<0.001	<0.00099	<0.00099	<0.001
Dibenz(a,h)anthracene	<0.001	<0.00099	<0.00099	<0.001

BH-A	3/23/2005
Sample depth (ft)	11.5
TPHd	<1.0
TPHg	<1.0
Ethyl Benzene	<0.005
Xylenes	<0.0054



Section B-B'

(View Looking East)
1"=40' Horizontal
1"=10' Vertical

Symbols

CL	Lean Clay or sandy clay
CH	Fat Clay
SC	Clayey Sand
SM	Silt
GW	Well Graded Gravel
	Approximate location of ground water monitoring well (Salem, June 2012)
	Approximate location of soil boring and ground water grab sample (ASE, April 2005)
	Approximate location of ground water grab sample (sampled November 10, 2016)
	Approximate location of exploratory boring for soil sample collection
PL	Property line

Environmental Screening Levels

TPHd	230 mg/kg
TPHg	100 mg/kg
Ethyl Benzene	14 mg/kg
Total Xylenes	6.1 mg/kg

Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - February 2016

Notes:
1) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
2) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
3) See Figure 2 for location of cross section.

Project Number 991-1-1

Figure Number Figure 7B

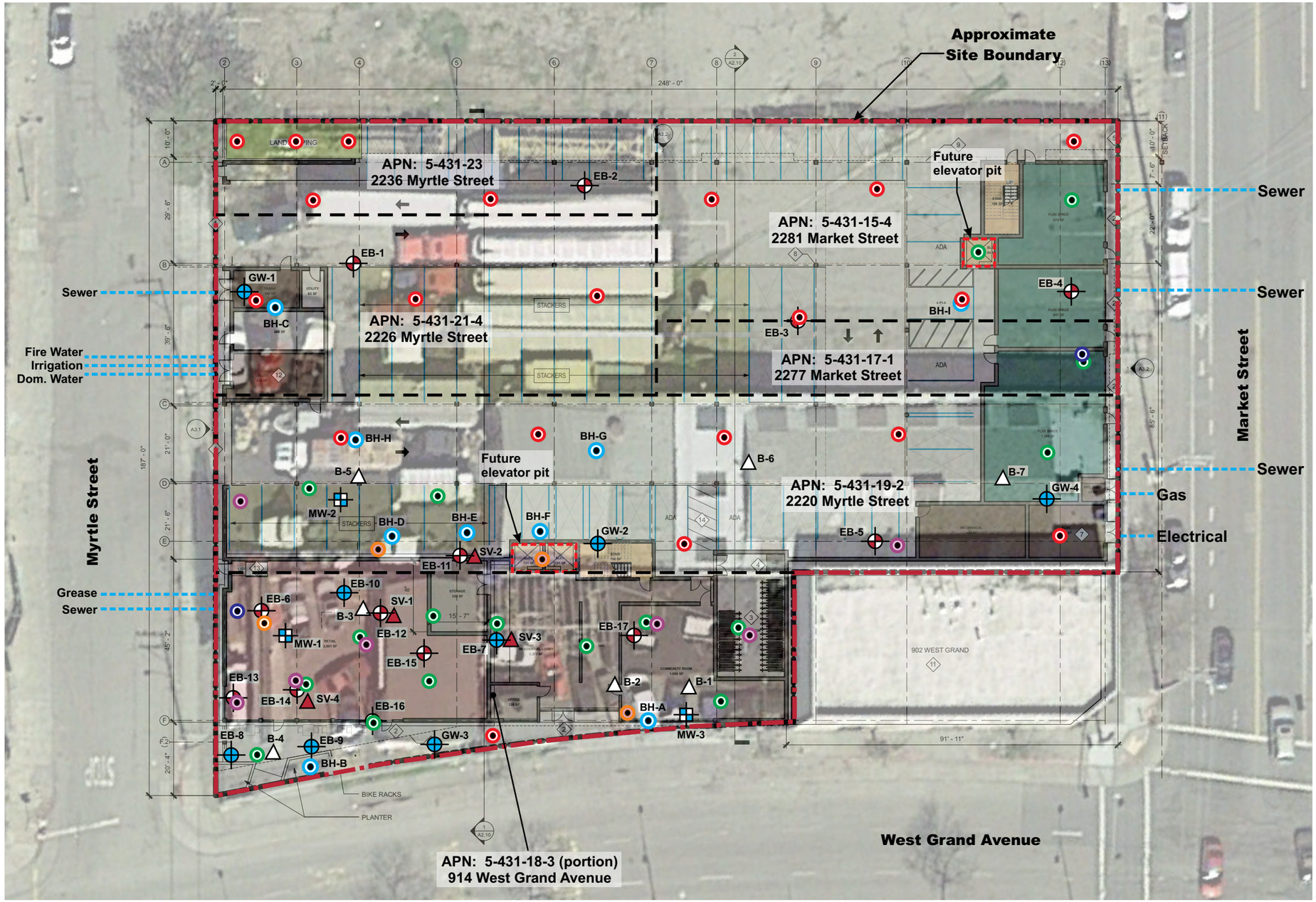
Drawn By RRN

Date October 2017

Geologic Cross Section B-B' with Soil Results

914 West Grand Avenue Residential Development Oakland, CA

CORNERSTONE EARTH GROUP



Legend

- Proposed soil boring various depths
- Proposed ground water boring to 20 feet
- Proposed soil vapor probe to 8 feet
- Proposed soil sample collected from vapor probe or ground water location
- Approximate location of ground water grab sample (sampled November 10, 2016)
- Approximate location of ground water monitoring well (Salem, June 2012) (sampled August 24, 2016)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of exploratory boring for soil sample collection
- Approximate location of temporary soil vapor probe

N

0 30 60

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 3/11/2017
Overlay by Lowney Architecture, Level 1 Plan - A2.1, undated

Project Number 991-1-1

Figure Number Figure 8

Drawn By RRN

Date October 2017

Site Plan with Proposed Sample Locations

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP

CORNERSTONE EARTH GROUP

DATA SUMMARY TABLES

Table A1. Analytical Results of Soil Samples - TPH, Arsenic, Lead, PCBs
(Concentrations in mg/kg)

Sample Location	Sample ID	Date	Depth (feet)	TPHd	TPHo	TPHg	Total Arsenic	Total Lead	PCBS
APN: 5-431-18-3 914 West Grand Ave	BH-A	3/23/2005	11.5	<1.0	<1.0	<1.0	---	7.1	<0.0025
	BH-B	3/23/2005	11.5	**370**	<50	**2,100**	---	20	<0.0025
	B-1	2/15/2012	1.0	---	---	---	2.8	11	---
	B-2	2/15/2012	1.0	---	---	---	<3.5	9.9	---
	B-3	2/15/2012	1.0	---	---	---	<3.5	8.5	---
	B-4	2/16/2012	1.0	---	---	---	<3.5	5.4	---
	B-5	2/16/2012	1.0	---	---	---	<3.5	8	---
APN: 5-431-21-4 2226 Myrtle Street	BH-C	3/23/2005	2.0	<1.0	<1.0	<5.0	---	28	<0.0025
APN: 5-431-19-2 2220 Myrtle Street	BH-D	3/23/2005	2.0	<1.0	<1.0	<5.0	---	8.1	<0.0025
	BH-E	3/23/2005	2.0	<1.0	<1.0	<5.0	---	37	<0.0025
	BH-F	3/23/2005	2.0	<1.0	<1.0	<5.0	---	8.1	<0.0025
	BH-G	3/23/2005	2.0	<1.0	<1.0	<5.0	---	28	<0.0025
	BH-H	3/23/2005	2.0	<1.0	<1.0	<5.0	---	7.8	<0.0025
APN: 5-431-15-4 2281 Market Street	BH-I	3/23/2005	2.0	<1.0	<1.0	<5.0	---	24	<0.0025
Residential ESL[1]				230	5,100	100	0.067/11 [2]	80	0.25

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region, Tier 1 – February 2016, Revision 3.
2 Direct exposure residential ESL/puslished background level (Duverge, 2011)
< Not detected at or above laboratory reporting limit
NE Not Established
--- Not Analyzed
Bold Concentration exceeds selected environmental screening criteria
Blue Indicates sample expected to be removed during construction.

CORNERSTONE EARTH GROUP

Table A2. Analytical Results of Soil Samples - VOCs
(Concentrations in mg/kg)

Sample Location	Sample ID	Date	Depth (feet)	Benzene	Toluene	Ethyl Beneze	Xylenes	n-Butyl Benzene	Isopropyl Benzene	Methyl Tert-Butyl Ether (MTBE)	1,2,4-Trimethyl Benezne	1,3,5-Trimethyl Benzene	sec-Butyl Benzene	Napthalene	n-Propyl Benzene	Tetrachloroethene	Trichloroethene	Other VOCs
APN: 5-431-18-3 914 West Grand Ave	BH-A	3/23/2005	11.5	<0.005	<0.005	<0.005	<0.0054	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
	BH-B	3/23/2005	11.5	<1.0	<1.0	**27**	**6.1**	14	5.7	<1.0	2.7	<1.0	3.8	**20**	24	<1.0	<1.0	ND
APN: 5-431-21-4 2226 Myrtle Street	BH-C	3/23/2005	2.0	<0.005	<0.005	<0.005	0.018	<0.005	<0.005	<0.005	0.0079	0.0052	<0.005	<0.005	<0.005	<0.005	<0.005	ND
APN: 5-431-19-2 2220 Myrtle Street	BH-D	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
	BH-E	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
	BH-F	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
	BH-G	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
	BH-H	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
APN: 5-431-15-4 2281 Market Street	BH-I	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
Residential ESL[1]				0.044	14	14	2.3	3,900 [2]	1,900 [2]	0.023	58 [2]	780 [2]	7,800 [2]	0.033	3,800 [2]	0.42	0.46	Various

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region – February 2016
2 Regional Screening Level (RSL), USEPA Region 9 - May, 2016
< Not detected at or above laboratory reporting limit
ND None detected
BOLD Concentration exceeds selected environmental screening criteria
Blue Indicates sample expected to be removed during construction.

Table A3. Analytical Results of Ground Water Samples - TPH, Lead, PCBs
(Concentrations in µg/L)

Sample Location	Sample ID	Date	TPHd*	TPHo*	TPHg	Dissolved Lead	PCBS
APN: 5-431-18-3 914 West Grand Ave	BH-A	3/23/2005	<50	**550**	**3,300**	<0.5	<2.5
	BH-B	3/23/2005	**150,000**	<5,000	**40,000**	**42**	<2.5
	MW-1	6/4/2012	<0.05	---	**3,300**	---	---
	MW-1	8/24/2016	<50	<100	<50	---	---
	MW-3	6/4/2012	<0.05	---	<50	---	---
	MW-3 (Duplicate)	6/4/2012	<0.05	---	<50	---	---
	MW-3	8/24/2016	<50	<100	**150**	---	---
APN: 5-431-19-2 2220 Myrtle Street	MW-2	6/4/2012	<0.05	---	<50	---	---
	MW-2	8/24/2016	<52	<100	<50	---	---
	MW-2 (Duplicate)	8/24/2016	<51	<100	<50	---	---
Residential ESL[1]			100	100	100	2.5	0.0019

1 Environmental Screening Levles (ESLs). Regional Water Quality Control Board - February 2016. Table GW-2, Final Freshwater Goal
< Not detected at or above laboratory reporting limit
* Samples collected 8/24/2016 were analyzed with and without silica gel cleanup.
NE Not Established
--- Not Analyzed
BOLD Concentration exceeds selected environmental screening criteria
Red Indicates detection limit that exceeds Tier 1 ESL

CORNERSTONE EARTH GROUP

Table A4. Analytical Results of Ground Water Samples - VOCs
(Concentrations in µg/L)

Sample Location	Sample ID	Date	Benzene	Toluene	Ethyl Beneze	Xylenes	n-Butyl Benzene	Isopropyl Benzene	p-Isopropyl Toulene	MTBE	1,2,4-Trimethyl Benezne	1,3,5-Trimethyl Benzene	sec-Butyl Benzene	Napthalene	n-Propyl Benzene	1,1-Dichloroethane	cis-1,2,-Dichlorothene	trans-1,2-Dichloroethene	1,1-Dichloroethene	PCE (Tetracholroethane)	TCE (Trichloroethane)	Vinyl Chloride	Other VOCs
APN: 5-431-18-3 914 West Grand Ave	BH-A	3/23/2005	<0.5	<0.5	1.0	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	BH-B	3/23/2005	<100	<100	**4,500**	**1,800**	180	190	<100	<100	1,800	300	<100	**820**	850	<100	<100	<100	<100	<100	<100	<100	ND
	MW-1	6/4/2012	**1.2**	<1.0	**79**	**188**	3.7	10	3.0	<1.0	110	59	---	**37**	29	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	MW-1	8/24/2016	<0.50	<1.0	<0.50	<1.0	<1.0	<0.50	<1.0	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ND
	MW-3	6/4/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.6	<1.0	<1.0	---	<1.0	<1.0	3.8	**110**	<1.0	**14**	**11**	<1.0	<1.0	ND
	MW-3 (Duplicate)	6/4/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.4	<1.0	<1.0	---	<1.0	<1.0	<1.0	**120**	<1.0	**16**	**11**	<1.0	<1.0	ND
	MW-3	8/24/2016	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<1.0	1.3	<0.50	<0.50	<1.0	<1.0	<1.0	<0.50	**190**	**19**	0.58	<0.50	**53**	**1.8**	ND
APN: 5-431-19-2 2220 Myrtle Street	MW-2	6/4/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	MW-2	8/24/2016	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	ND	<0.50	<0.50	<0.50	<0.50	ND
	MW-2 (Duplicate)	8/24/2016	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<1.0	<0.50	<1.0	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ND
Residential ESL[1]			1.0	40	13	20	NE	NE	NE	5	NE	NE	NE	0.12	NE	5.0	6.0	10	3.2	3.0	5.0	0.061	Various

1 Environmental Screening Levles (ESLs). Regional Water Quality Control Board - February 2016. GW Tier 1 ESL
< Not detected at or above laboratory reporting limit
NE Not Established
--- Not Analyzed
BOLD Concentration exceeds selected environmental screening criteria or is outside of the published background range.
ND Not detected
Red Indicates detection limit that exceeds Tier 1 ESL

CORNERSTONE EARTH GROUP

Table A5. Analytical Results of Soil Vapor Samples
(Concentrations in µg/m³)

Sample Location	Sample ID	Date	Depth (feet)	Benzene	Toluene	Ethylbenzene	Xylenes	Isopropylbenzene	n-Propylbenzene	n-Butylbenzene	Butylbenzene	Teatrachloroethene	Trichloroethene	Other VOCs
APN: 5-431-18-3 914 West Grand Ave	B-1	2/15/2012	5	<36	51	<50	<150	<50	<50	<50	<50	<50	<50	ND
			10	<36	<50	<50	<150	<50	<50	<50	<50	<50	<50	ND
	B-2	2/15/2012	5	<36	<50	<50	<150	<50	<50	<50	<50	<50	<60	ND
			10	<36	<50	<50	<150	<50	<50	<50	<50	<50	<60	ND
	B-3 @ 1 Volume	2/15/2012	5	<36	98	<50	<150	<50	<50	<50	<50	<50	<50	ND
	B-3 @ 3 Volumes			<36	190	<50	170	<50	<50	<50	<50	<50	<50	ND
	B-3 @ 7 Volumes			<36	160	<50	293	<50	<50	<50	<50	<50	<50	ND
	B-3		10	**520**	220	110	<150	2,500	3,800	670	2,200	<50	<100	ND
	B-4	2/15/2012	5	<72	<100	<100	<300	<100	<100	<100	<100	<100	<100	ND
			5 (Duplicate)	<72	<100	<100	<300	<100	<100	<100	<100	<100	<100	ND
			10	<72	<100	<100	<300	<100	<100	<100	<100	<100	<100	ND
APN: 5-431-19-2 2220 Myrtle Street	B-5	2/15/2012	5	<40	<55	<55	<165	<55	<55	<55	<55	<55	<60	ND
			10	<36	<50	<50	<150	<50	<50	<50	<50	84	<60	ND
	B-6	2/15/2012	5	<36	63	<50	<150	<50	<50	<50	<50	<50	<50	ND
			10	<72	110	<100	<300	<100	<100	<100	<100	<100	<100	ND
	B-7	2/15/2012	5	<36	150	<50	120	<50	<50	<50	<50	<50	<100	ND
			10	<72	150	<100	<300	<100	<100	<100	<100	<100	<50	ND
Residential ESL[1]				48	160,000	560	52,000	NE	NE	NE	NE	240	240	Various

1 Environmental Screening Levles (ESLs). Regional Water Quality Control Board - February 2016.
< Not detected at or above laboratory reporting limit
NE Not Established
--- Not Analyzed
BOLD Concentration exceeds selected environmental screening criteria or is outside of the published background range.
ND None detected
Blue Indicates sample expected to be removed during construction.

CORNERSTONE
EARTH GROUP

CORNERSTONE EARTH GROUP

Table B1. Analytical Results of Selected Soil Samples - Metals

(Concentrations in mg/kg)

Sample ID	Date	Depth (feet)	Arsenic	Barium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Vanadium	Zinc
EB-1 (0-1)	11/9/2016	0-1	6.64	127	<0.5	19.8	8.28	17	**92.4**	0.32	<1	18.8	24	87.8
EB-1 (2-3)	11/9/2016	2-3	1.53	68.8	<0.5	41.3	5.77	13.3	4.84	<0.14	<1	27.3	21.5	24.9
EB-2 (0-1)	11/9/2016	0-1	3.99	99.6	0.62	19.7	15.9	36.8	3.91	0.6	<1	25.3	62.2	57.6
EB-2 (2-3)	11/9/2016	2-3	3.21	95.8	<0.5	37.4	5.83	11.6	3.47	<0.14	<1	20.5	27	25.6
EB-3 (0-1)	11/9/2016	0-1	4.75	118	0.9	7.06	8.98	31.6	**139**	<0.14	<1	6.82	20.9	160
EB-3 (2-3)	11/9/2016	2-3	3.09	121	<0.5	26.5	5.23	27	77.5	0.44	<1	17.3	21.1	131
EB-4 (0-1)	11/9/2016	0-1	4.43	109	1.25	28.6	6.73	37.2	**529**	<0.14	1.5	57	37.5	144
EB-4 (2-3)	11/9/2016	2-3	3.7	147	<0.5	31.4	4.82	16.3	**345**	0.31	<1	18.6	24	104
EB-4 (4.5-5)	11/9/2016	4½-5	---	---	---	---	---	---	<9.7	---	---	---	---	---
EB-5 (0-1)	11/9/2016	0-1	3.97	92.8	<0.5	32	6.89	10.4	5.06	<0.14	<1	19.3	25.3	19.9
EB-5 (2-3)	11/9/2016	2-3	2.63	100	<0.5	36.9	3.96	10.8	4.13	<0.14	<1	19.8	27.7	19.5
EB-7 (0-1)	11/9/2016	0-1	9.3	218	0.76	41.8	7.64	365	**404**	0.14	<1	41.2	33.6	167
EB-7 (2-3)	11/9/2016	2-3	---	---	---	---	---	---	<9.5	---	---	---	---	---
EB-7 (4-5)	11/9/2016	4-5	---	--	---	---	---	---	<10	---	---	---	---	---
EB-9 (4.5-5)	11/9/2016	4½-5	<9.4	1,200	<2.8	42	<47	<47	<9.4	<0.45	<47	42	47	<47
EB-9 (13-13.5)	11/9/2016	13-13½	7.97	208	0.81	39.6	21	19.3	10.8	<0.14	<1	**97.9**	42.8	43.2
EB-10 (0-1)	11/10/2016	0-1	2.96	125	<0.5	45.9	6.25	12.9	11.5	0.14	<1	24.4	31.2	28.2
EB-11 (0-1)	11/10/2016	0-1	6.72	318	0.5	19.8	5.84	26.6	**222**	0.81	<1	21.3	26.4	93.5
EB-11 (2-3)	11/10/2016	2-3	2.04	118	<0.5	43.8	10	13.6	5.69	<0.14	<1	31.5	25.5	23.3
EB-11 (4.5-5)	11/10/2016	4½-5	<10	230	<3	41	<50	<50	<10	<0.4	<50	42	27	<50
EB-11 (9.5-10)	11/10/2016	9½-10	13	92	<3	24	<50	<50	<10	<0.4	<50	32	45	<50
EB-14 (6-7)	11/9/2016	6-7	3.47	144	<0.5	38.9	10.4	14.2	31.1	<0.14	<1	40.3	30.4	38.2
EB-16 (0-1)	11/10/2016	0-1	3.35	58.7	<0.5	42.4	7.5	14.9	13.3	<0.14	<1	42.1	24.8	39.5
EB-16 (12-12.5)	11/10/2016	12-12½	6.7	153	0.54	53.7	13.9	18.1	7.59	<0.14	<1	69.3	39.9	37.3
EB-17 (0-1)	11/9/2016	0-1	6.65	373	0.95	44.2	7.64	278	**1,100**	1.08	<1	25.1	35.4	421
EB-17 (2-3)	11/9/2016	2-3	---	---	---	---	---	---	<10	---	---	---	---	---
EB-17 (4-5)	11/9/2016	4-5	---	---	---	---	---	---	<9.2	---	---	---	---	---
ESL[1] - Tier 1			0.067	2,900	39	NE	23	3,100	80	13	390	83	600	23,000
Scott, 1991 [2]	Background Range		0.2 to 5.5	---	0.05 to 1.7	30.5 to 72	---	23.8 to 47.5	6.8 to 16.1	---	---	46.4 to 101	---	47.7 to 82.8
	Maximum Background Detection		20	---	14	170	---	67	54	1.3	---	145	---	120
Bradford, 1996 [3]	Background Range		0.6 to 11	133 to 1,400	0.05 to 1.7	23 to 1,579	2.7 to 46.9	9.1 to 96.4	12.4 to 97.1	0.05 to 0.90	0.1 to 9.6	9 to 509	39 to 288	88 to 236
	Upper Quartile		4.7	625	0.44	115	18.3	36.6	26.7	0.34	1.4	56	134	170
LBNL, 2009 [4]	99th Percentile		28	410	5.6	120	25	63	43	0.42	4.8	272	90	140
Duverge, 2011 [5]	Mean		4.6	---	---	---	---	---	---	---	---	---	---	---
	99th Percentile		11	---	---	---	---	---	---	---	---	---	---	---
TTLC [6]			500	10000	100	2500	8000	2500	1000	20	3500	2000	2400	5000
STLC [7] (mg/L)			5	100	1	5	80	25	5	0.2	350	20	24	250

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - February 2016.
2 Scott, Christina. December 1991. Background Metal Concentrations in Soils in Northern Santa Clara County.
3 Bradford, et. al. March 1996. Background Concentrations of Trace and Major Elements in California Soils.
4 LBNL, 2009. Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory.
5 Duverge, 2011. Establishing Backround Arsenic in Soil of the Urbanized San Francisco Bay Region.
6 Total Threshold Limit Concentration - California Code of Regulations, Title 22.
7 Soluble Threshold Limit Concentration - California Code of Regulations, Title 22.
< Not detected at or above laboratory reporting limit
NE Not Established
--- Not Analyzed
BOLD Concentration exceeds selected environmental screening criteria
Note: Red font indicates the laboratory reporting limit exceeds one or more of the selected screening levels.
Blue font indicate sample expected to be removed during construction

CORNERSTONE EARTH GROUP

Table B2. Analytical Results of Selected Soil Samples - Petroleum Hydrocarbons and Volitile Organic Compounds
(Concentrations in mg/kg)

Sample ID	Date	Depth (feet)	TPHd without Silica Gel Cleanup	TPHd with Silica Gel Cleanup	TPHo without Silica Gel Cleanup	TPHo with Silica Gel Cleanup	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	2-Butanone (MEK)	2-Hexanone	Acetone	Isopropylbenzene	Naphthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	Teatrachloroethene	Trichloroethene
EB-1 (0-1)	11/9/2016	0-1	1.7	---	5.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-1 (2-3)	11/9/2016	2-3	1.5	---	<5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-2 (0-1)	11/9/2016	0-1	45	---	430	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-2 (2-3)	11/9/2016	2-3	2.4	---	5.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-3 (0-1)	11/9/2016	0-1	50	---	650	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-3 (2-3)	11/9/2016	2-3	1.6	---	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-4 (0-1)	11/9/2016	0-1	3.9	---	19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-4 (2-3)	11/9/2016	2-3	1.0	---	<5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-4 (4.5-5)	11/9/2016	14½-15	1.0	<5.0	---	---	<0.98	<0.0046	<0.0046	<0.0046	<0.0046	<0.0092	<0.0092	<0.018	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
EB-5 (0-1)	11/9/2016	0-1	4.8	---	8.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-5 (2-3)	11/9/2016	2-3	1.7	---	<5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-6 (2-3)	11/9/2016	2-3	1.3	---	5	---	<0.96	<0.0053	<0.0053	<0.0053	<0.0053	<0.011	<0.011	<0.021	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053
EB-6 (4-5)	11/9/2016	4-5	37	---	120	---	<1.1	<0.005	<0.005	<0.005	<0.005	<0.0099	<0.0099	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
EB-6 (9-10)	11/9/2016	9-10	57	---	110	---	7.2	<0.0041	<0.0041	<0.0041	<0.0041	<0.0083	0.0087	<0.015	<0.0041	<0.0041	<0.0041	<0.0041	0.0067	<0.0041	<0.0041
EB-6 (14-15)	11/9/2016	14-15	<1	---	<5	---	<1.1	<0.0042	<0.0042	<0.0042	<0.0042	<0.0084	<0.0084	<0.017	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042
EB-7 (0-1)	11/9/2016	0-1	180	---	1,200	---	---	---	---	---	---	---	---	---	---	<0.005	---	---	---	---	---
EB-7 (2-3)	11/9/2016	2-3	<1	---	<5	---	<0.98	<0.0047	<0.0047	<0.0047	<0.0047	<0.0095	<0.0095	0.032	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
EB-7 (4-5)	11/9/2016	4-5	<1	---	<5	---	<0.93	<0.0044	<0.0044	<0.0044	<0.0044	<0.0089	<0.0089	<0.018	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
EB-7 (9-10)	11/9/2016	9-10	<1	---	<5	---	<0.95	<0.0045	<0.0045	<0.0045	<0.0045	<0.0089	<0.0089	<0.018	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
EB-8 (2-3)	11/9/2016	2-3	1.3	---	18	---	<0.98	<0.0048	<0.0048	<0.0048	<0.0048	<0.0096	<0.0096	0.023	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
EB-8 (4-5)	11/9/2016	4-5	<0.99	---	<5	---	<1.1	<0.0047	<0.0047	<0.0047	<0.0047	<0.0095	<0.0095	<0.019	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
EB-8 (9-10)	11/9/2016	9-10	<1	---	<5	---	<0.93	<0.0048	<0.0048	<0.0048	<0.0048	<0.0095	<0.0095	<0.019	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
EB-9 (2-3)	11/9/2016	2-3	1.4	---	6.1	---	<0.98	<0.0044	<0.0044	<0.0044	<0.0044	<0.0089	<0.0089	<0.018	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
EB-9 (4.5-5)	11/9/2016	4½-5	<1	---	5.6	---	<1.1	<0.0045	<0.0045	<0.0045	<0.0045	<0.0091	<0.0091	<0.018	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
EB-9 (9.5-10)	11/9/2016	9½-10	<1	---	<5	---	<0.96	<0.004	<0.004	<0.004	<0.004	<0.008	<0.008	<0.016	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
EB-9 (13-13.5)	11/9/2016	13-13½	**290**	**270**	<5	6.0	10	<5	<5	<5	<5	<10	<10	<20	8.9	**13**	28	50	7	<5	<5
EB-10 (0-1)	11/10/2016	0-1	8.4	---	130	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-10 (2-3)	11/10/2016	2-3	2.2	---	<5	---	<1.1	<0.0044	<0.0044	<0.0044	<0.0044	<0.0088	<0.0088	<0.018	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
EB-10 (4.5-5)	11/10/2016	4½-5	<1	---	<5	---	<1.1	<0.0056	<0.0056	<0.0056	<0.0056	<0.011	<0.011	<0.022	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
EB-10 (9.5-10)	11/10/2016	9½-10	1.6	---	<5	---	<1.1	<0.0055	<0.0055	<0.0055	<0.0055	<0.011	<0.011	<0.022	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055
EB-11 (0-1)	11/10/2016	0-1	<1	---	<5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-11 (2-3)	11/10/2016	2-3	<1	---	<5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-11 (4.5-5)	11/10/2016	4½-5	1.5	---	<5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-11 (9.5-10)	11/10/2016	9½-10	1.2	---	<5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-11 (14.5-15)	11/10/2016	14½-15	<1	---	<5	---	<0.98	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	0.17	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
EB-12 (2-3)	11/10/2016	2-3	1.2	---	<5	---	<1.1	<0.0049	<0.0049	<0.0049	<0.0049	0.013	<0.0098	0.073	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
EB-12 (4.5-5)	11/10/2016	4½-5	<1	---	<5	---	<0.95	<0.0046	<0.0046	<0.0046	<0.0046	<0.0091	<0.0091	0.023	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
EB-12 (9.5-10)	11/10/2016	9½-10	<1	---	<5	---	<0.93	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	0.022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
EB-13 (2-3)	11/9/2016	2-3	2.7	---	19	---	<0.95	<0.005	<0.005	<0.005	<0.005	<0.0099	<0.0099	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
EB-13 (4-5)	11/9/2016	4-5	<1	---	<5	---	<1.1	<0.0046	<0.0046	<0.0046	<0.0046	<0.0091	<0.0091	<0.018	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
EB-13 (9-10)	11/9/2016	9-10	<1	---	<5	---	<1.1	<0.0052	<0.0052	<0.0052	<0.0052	<0.01	<0.01	<0.021	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
EB-13 (11-12)	11/9/2016	11-12	18	---	<5	---	28	<0.0038	<0.0038	0.028	<0.0038	<0.0076	<0.0076	0.033	0.13	**0.47**	1.1	0.99	0.12	<0.0038	<0.0038
EB-13 (14-15)	11/9/2016	14-15	<1	---	<5	---	<1.1	<0.0041	<0.0041	<0.0041	<0.0041	<0.0081	<0.0081	0.034	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041
EB-14 (2-3)	11/9/2016	2-3	<5	---	84	---	<1	<0.0052	<0.0052	<0.0052	<0.0052	<0.01	<0.01	<0.02	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
EB-14 (4-5)	11/9/2016	4-5	1	---	5	---	<1.1	<0.0047	<0.0047	<0.0047	<0.0047	<0.0095	<0.0095	<0.017	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
EB-14 (6-7)	11/9/2016	6-7	13	---	41	---	<0.93	<0.0043	<0.0043	<0.0043	<0.0043	<0.0086	<0.0086	<0.016	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043
EB-14 (9-10)	11/9/2016	9-10	<1	---	<5	---	<1.1	<0.0041	<0.0041	<0.0041	<0.0041	<0.0082	<0.0082	<0.016	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041
EB-14 (12-13)	11/9/2016	12-13	90	---	<5	---	7.2	<5	<5	<5	<5	<10	<10	<20	8.8	**30**	22	42	5.7	<5	<5
EB-14 (14-15)	11/9/2016	14-15	2.6	---	<5	---	<1	<0.0043	<0.0043	<0.0043	<0.0043	<0.0087	<0.0087	0.048	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043
EB-15 (2-3)	11/10/2016	2-3	<1	---	<5	---	<0.98	<0.0041	<0.0041	<0.0041	<0.0041	<0.0082	<0.0082	<0.016	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041
EB-15 (4.5-5)	11/10/2016	4½-5	<1	---	<5	---	<1	<0.0043	<0.0043	<0.0043	<0.0043	<0.0087	<0.0087	<0.017	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043
EB-15 (9.5-10)	11/10/2016	9½-10	<0.99	---	<5	---	<1.1	<0.0046	<0.0046	<0.0046	<0.0046	<0.0092	<0.0092	<0.018	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
EB-16 (0-1)	11/10/2016	0-1	51	---	540	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EB-16 (2-3)	11/10/2016	2-3	2	---	5.5	---	<1	<0.0049	<0.0049	<0.0049	<0.0049	<0.0098	<0.0098	0.043	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
EB-16 (4.5-5)	11/10/2016	4½-5	<1	---	<5	---	<1	<0.0049	<0.0049	<0.0049	<0.0049	<0.0097	<0.0097	0.038	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
EB-16 (12-12.5)	11/10/2016	12-12½	**240**	190	<5	<5.0	**670**	<0.25	<0.25	<0.25	<0.25	<0.5	<0.5	<1	0.26	<0.25	1.9	1.5	0.52	<0.25	<0.25
EB-16 (14.5-15)	11/10/2016	14½-15	<1	---	<5	---	<0.95	<0.0046	<0.0046	<0.0046	<0.0046	<0.0092	<0.0092	0.18	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
EB-17 (0-1)	11/9/2016	0-1	10	---	45	---	<0.92	<0.0061	<0.0061	<0.0061	<0.0061	<0.012	<0.012	<0.018	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061
EB-17 (2-3)	11/9/2016	2-3	<0.99	---	<5	---	<1	<0.0057	<0.0057	<0.0057	<0.0057	<0.011	<0.011	<0.021	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057
EB-17 (4-5)	11/9/2016	4-5	<1	---	<5	---	<1	<0.0043	<0.0043	<0.0043	<0.0043	<0.0087	<0.0087	<0.02	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043
EB-17 (9-10)	11/9/2016	9-10	<1	---	<5	---	<1.1	<0.0044	<0.0044	<0.0044	<0.0044	<0.0089	<0.0089	<0.018	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
GW-3 (13-13.5)	11/9/2016	13-13½	110	---	<5	---	**490**	<2.5	<2.5	<2.5	<2.5	<5	<5	<10	3.8	**7.2**	11	20	2.7	<2.5	<2.5
	ESL[1] - Tier 1		230	230	5,100	5,100	100	0.044	2.9	1.4	2.3	5.1	20 [2]	0.5	190 [2]	0.023	390 [2]	380 [2]	780 [2]	0.42	0.46

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - February 2016.
2 Regional Screening Level (RSL) HQ=0.1, USEPA Region 9 - November 2015.
< Not detected at or above laboratory reporting limit
NE Not Established
--- Not Analyzed
BOLD Concentration exceeds selected environmental screening criteria
Note: Red font indicates the laboratory reporting limit exceeds one or more of the selected screening levels.
Blue font indicate sample expected to be removed during construction

CORNERSTONE EARTH GROUP

Table B3. Analytical Results of Selected Soil Samples - Pesticides and PCBs

(Concentrations in mg/kg)

Sample ID	Date	Depth (feet)	4,4´-DDE	Aldrin	beta-BHC	Endosulfan I	gamma-Chlordane	Aroclor 1254	Aroclor 1260
EB-1 (0-1)	11/9/2016	0-1	<0.00022	<0.00021	<0.0002	<0.00016	<0.00018	---	---
EB-2 (0-1)	11/9/2016	0-1	<0.011	<0.01	<0.01	<0.008	<0.009	---	---
EB-3 (0-1)	11/9/2016	0-1	<0.0044	<0.0042	<0.004	<0.0032	<0.0036	---	---
EB-4 (0-1)	11/9/2016	0-1	<0.00044	<0.00042	<0.0004	<0.00032	<0.00036	---	---
EB-5 (0-1)	11/9/2016	0-1	<0.00022	<0.00021	<0.0002	<0.00016	0.00025 J	---	---
EB-7 (0-1)	11/9/2016	0-1	<0.011	<0.01	<0.0099	<0.0079	<0.0089	**0.15**	0.017
EB-9 (4.5-5)	11/9/2016	4½-5	<0.001	<0.00018	0.00042 J	<0.00057	<0.00015	<0.0048	<0.0048
EB-9 (13-13.5)	11/9/2016	13-13½	<0.00022	<0.00021	<0.0002	<0.00016	<0.00018	<0.0048	<0.0048
EB-10 (0-1)	11/10/2016	0-1	<0.0018	<0.0012	<0.0011	<0.0011	<0.0013	---	---
EB-11 (0-1)	11/10/2016	0-1	0.0011 J	<0.00025	<0.00022	<0.00022	<0.00027	---	---
EB-11 (2-3)	11/10/2016	2-3	<0.00036	<0.00025	<0.00022	<0.00022	<0.00026	---	---
EB-11 (4.5-5)	11/10/2016	4½-5	<0.0005	0.00018 J	0.00044 J	<0.00028	<0.000074	---	---
EB-11 (9.5-10)	11/10/2016	9½-10	<0.00029	<0.0001	<0.00021	<0.000088	<0.00012	---	---
EB-14 (6-7)	11/9/2016	6-7	<0.00022	<0.00021	<0.0002	<0.00016	<0.00018	0.012	<0.0048
EB-16 (12-12.5)	11/10/2016	12-12½	<0.00037	<0.00025	<0.00022	0.0011	<0.00027	<0.0048	<0.0048
EB-17 (0-1)	11/9/2016	0-1	<0.00022	<0.00021	<0.0002	<0.00016	<0.00018	0.027	0.016
ESL[1] - Tier 1			1.9	0.036	NE	NE	NE	0.12 [2]	0.24 [2]

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - February 2016.

2 Regional Screening Level (RSL) HQ=0.1, USEPA Region 9 - November 2015.

< Not detected at or above laboratory reporting limit

NE Not Established

--- Not Analyzed

J Estimated concentration between Method Detection Limit (MDL) and Reporting Limit (RL)

Note: Blue font indicate sample expected to be removed during construction

CORNERSTONE EARTH GROUP

Table B4. Analytical Results of Selected Soil Samples - Polyaromatic Hydrocarbons (PAHs)
(Concentrations in mg/kg)

Sample ID	Date	Depth (feet)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
EB-1 (0-1)	11/9/2016	0-1	<0.00099	<0.00099	<0.00099	<0.00099	<0.0012	<0.00099	<0.00099	<0.00099	<0.00099	<0.001	<0.00099	<0.00099	<0.001	<0.00099	<0.00099	<0.00099
EB-2 (0-1)	11/9/2016	0-1	<0.02	<0.02	<0.02	<0.02	<0.025	<0.02	<0.02	<0.02	0.037 J	<0.02	<0.02	<0.02	<0.021	<0.02	0.054 J	<0.02
EB-3 (0-1)	11/9/2016	0-1	<0.003	0.023	0.027	0.16	0.13	**0.24**	**0.25**	0.069	0.18	**0.022**	0.45	0.0048 J	0.12	0.018	0.2	0.53
EB-3 (2-3)	11/6/2016	2-3	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
EB-4 (0-1)	11/9/2016	0-1	<0.001	0.001 J	0.0012 J	0.0059	0.0032 J	0.0068	0.0086	0.0022 J	0.0061	0.0011 J	0.008	<0.001	0.003 J	<0.001	0.0039 J	0.0089
EB-5 (0-1)	11/9/2016	0-1	<0.001	<0.001	<0.001	<0.001	<0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EB-7 (0-1)	11/9/2016	0-1	<0.005	<0.005	<0.005	<0.005	0.015 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0055 J
EB-9 (4.5-5)	11/9/2016	4½-5	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EB-9 (13-13.5)	11/9/2016	13-13½	<0.00099	<0.00099	<0.00099	<0.00099	<0.0012	<0.00099	<0.00099	<0.00099	<0.00099	<0.001	<0.00099	0.0018 J	<0.001	0.016	0.0067	0.0015 J
EB-10 (0-1)	11/10/2016	0-1	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034
EB-11 (0-1)	11/10/2016	0-1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0026 J	<0.001	<0.001
EB-11 (2-3)	11/10/2016	2-3	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099
EB-11 (4.5-5)	11/10/2016	4½-5	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099
EB-11 (9.5-10)	11/10/2016	9½-10	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EB-14 (6-7)	11/9/2016	6-7	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EB-16 (0-1)	11/10/2016	0-1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011 J	<0.001	<0.001
EB-16 (12-12.5)	11/10/2016	12-12½	0.03	0.021	0.013	0.0063	0.0031 J	0.0027 J	0.0024 J	<0.001	0.0069	<0.001	0.018	0.037	<0.001	0.0012	0.071	0.025
EB-17 (0-1)	11/9/2016	0-1	<0.00098	<0.00098	<0.00098	<0.00098	<0.0012	<0.00098	0.0012 J	<0.00098	<0.00098	<0.00099	<0.00098	<0.00098	<0.001	<0.00098	<0.00098	0.001 J
ESL[1] - Tier 1			16	13	2.8	0.16	2.5	0.016	0.16	1.6	3.8	0.016	60	8.9	0.16	0.023	11	85

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - February
< Not detected at or above laboratory reporting limit
--- Not Analyzed
BOLD Concentration exceeds selected environmental screening criteria
J Estimated concentration between Method Detection Limit (MDL) and Reporting Limit
Note: Red font indicates the laboratory reporting limit exceeds one or more of the selected
Blue font indicate sample expected to be removed during construction

CORNERSTONE EARTH GROUP

Table B5. Analytical Results of Selected Ground Water Samples
(Concentrations in µg/L)

Sample ID	Date	TPHd without Silica Gel Cleanup	TPHd with Silica Gel Cleanup	TPHo without Silica Gel Cleanup	TPHo with Silica Gel Cleanup	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	4-Isopropyltoluene	Acetone	Isopropylbenzene	Naphthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	Teatrachloroethene	Trichloroethene
EB-7	11/10/2016	---	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
EB-8	11/10/2016	**180**	<50	<300	<300	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
EB-9	11/10/2016	**1,000**	**490**	<300	<300	**240**	<0.5	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	15	6.6	**4.6**	<0.5	21	1.2	<0.5	<0.5
EB-10	11/10/2016	**1,800**	**850**	<300	<300	**1,300**	**1.4**	0.5	**60**	<0.5	28	6.9	1.2	<10	34	**40**	20	98	12	<0.5	<0.5
GW-1	11/10/2016	**750**	<50	**370**	<300	<50	<0.5	<0.5	<0.5	0.7	1	<0.5	<0.5	<10	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
GW-2	11/10/2016	98	<50	<300	<300	<50	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<33	<1.7	<6.7	<1.7	<1.7	<1.7	<1.7	<1.7
GW-3	11/10/2016	**790**	<50	<300	<300	61	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<2	<0.5	1.5	<0.5	<0.5	<0.5
ESL[1] - GW Tier 1		100	100	100	100	100	1.0	40	13	20	NE	NE	NE	1,500	NE	0.17	NE	NE	NE	3	5

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - February 2016.
2 Regional Screening Level (RSL), USEPA Region 9 - November 2015.
< Not detected at or above laboratory reporting limit
NE Not Established
--- Not Analyzed
BOLD Concentration exceeds selected environmental screening criteria
J Estimated concentration between Method Detection Limit (MDL) and Reporting Limit (RL)
Note: Red font indicates the laboratory reporting limit exceeds one or more of the selected screening levels.

Table B6. Analytical Results of Selected Soil Vapor Samples
(Concentrations in µg/m³)

Sample ID	Date	Depth (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	1,3-Butadiene	2,2,4-Trimethylpentane	4-Methyl-2-Pentanone (MIBK)	Acetone	Cyclohexane	Heptane	Hexane	Teatrachloroethene	Trichloroethene	Ethanol	Carbon Dioxide (%)	Methane (%)	Oxygen (%)
SV-1	11/10/2016	7	**30,000,000**	<490	<690	<980	<1300	<1300	6,600,000	<1300	<2000	<820	<1100	14,000	<1200	<740	<2800	13	4.7	1.9
SV-2	11/10/2016	10	5,700	23	20	<0.76	<0.98	38	<0.42	<0.98	38	9	7.1	14	38	<0.57	<2.1	9.7	0.00024	7
SV-3	11/10/2016	7	610	<0.38	<0.53	<0.76	<0.98	<1.0	23	<0.98	<1.6	<0.63	<0.85	<0.94	<0.94	<0.57	<2.1	11	0.16	2.5
SV-4	11/10/2016	7	**5,300,00**	<190	2,600	<380	<0.98	<510	810,000	5,100	<780	<320	10,000	11,000	<470	<280	5,400	3.2	0.36	15
ESL[1] - Tier 1			50,000	48	160,000	560	52,000	NE	NE	210,000	15,000,000	NE	NE	NE	240	240	NE	NE	NE	NE

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - February 2016.
< Not detected at or above laboratory reporting limit
NE Not Established
Note: Red font indicates the laboratory reporting limit exceeds one or more of the selected screening levels.
Blue font indicate sample expected to be removed during construction