

#### A Lennar Company

September 28, 2017

Ms. Karel Detterman Alameda County Environmental Health Services 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

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By Alameda County Environmental Health 9:40 am, Sep 29, 2017

SUBJECT:

SUMMARY OF ENVIRONMENTAL ACTIVITIES REPORT CERTIFICATION

County File # RO 3229

**Lennar Multifamily Communities** 

1750 Webster Street

Oakland, CA

Dear Ms. Detterman:

You will find enclosed one copy of the following document prepared by GeoSolve, Inc. for the subject site:

• Summary of Environmental Activities Report dated September 27, 2017.

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

Should you have any questions, please do not hesitate to contact me at (415) 975-4991.

Sincerely,

**Lennar Multifamily Communities** 

Tyler Wood

**Development Director** 

0769.L3

MAKE IT YOURS





Visit us at www.geosolve-inc.com

Project No. 2015-29 September 27, 2017

Mr. Tyler Wood Lennar Multifamily Communities, Inc. 492 9<sup>th</sup> Street Suite 300 Oakland, California 94607

Subject:

Proposed Multifamily Development

1750 Webster Street, 1810 Webster Street and 301 19th Street

APNs 008-625-017; 008-625-018; and 008-625-002-1

Oakland, California

VRAP Case No. RO0003229

SCP No. RO0002672

SUMMARY OF ENVIRONMENTAL ACTIVITIES REPORT

Dear Mr. Wood:

At your request, *GeoSolve, Inc.* has prepared a Summary of Environmental Activities for the above referenced properties. The subject site consists of three properties located at 1750 Webster Street, 1810 Webster Street and 301 19<sup>th</sup> Street in Oakland, California with Alameda County Assessor Parcel Numbers (APNs) 008-625-017; 008-625-018; and 008-625-002-1.

The purpose of this report is to summarize previous and current environmental conditions at the subject properties at the request of the Alameda County Health Care Services Agency (ACHCSA) to accommodate site closure activities of all three properties. The subject site has historic ACHCSA Voluntary Remediation Action Program (VRAP) Case Number RO0003229 and Former Site Cleanup Program (SCP) Number RO0002672.

#### **History of Subject Site**

GeoSolve, Inc. conducted a Phase I Environmental Site Assessment (November 6, 2015) which identified several uses of the subject site. In 1889, Sanborn maps identified 1810 Webster Street and 301 19<sup>th</sup> Street were occupied by single-family residences, while 1750 Webster Street was vacant. Webster Street, 19<sup>th</sup> Street, and Harrison Street were mapped. Residences were mapped south of the subject property. By 1903, no significant changes were mapped on the subject property; however, APN 008-625-017 (part of 1750 Webster Street) was mapped as being occupied by a residence. By 1911, residences occupied all parcels. By 1950, a restaurant circular

structure was mapped at 301 19<sup>th</sup> Street which was listed as reinforced concrete. No structures were mapped at 1750 Webster Street and an apartment building was mapped immediately south of 1750 Webster Street. By 1964, all parcels were vacant and the Bliss M S Service Station was present on the eastern portion of 301 19<sup>th</sup> Street (former located at 1833 and 1839 Harrison Streets). In 1991, two underground storage tanks (USTs) were removed from the subject site in 1991 and no detectable concentrations of TPHg or BTEX were detected from the confirmation soil samples collected from beneath the former USTs.

#### **Proposed Use of Site**

Lennar Multifamily Communities (LMC) proposed the redevelopments of four parcels within downtown City of Oakland at the addresses 1750 and 1810 Webster and 301 19<sup>th</sup> Streets. LMC received entitlements for the redevelopment in August of 2016. The 19th & Harrison Street Project ("Project") is a seven-story, mixed-use residential building. The construction design is five levels of Type-III wood construction over two, above-grade, levels of Type-I concrete construction. The Project features 224 rental apartment homes, 145 parking spaces, and 144 bicycle parking spaces, which equates approximately 256,897 gross square feet or 195,242 gross square feet of residential uses, 3,709 square feet of ground-floor retail space along 19th Street, and 57,946 square feet of parking.

#### Site Geology and Hydrogeology

The materials underlying the site are mapped as the Late Pleistocene Merritt Sand (Qps) by Helley and Lajoie (1979), which consists of beach and eolian (dune) sand deposits, which are loose, well-sorted, fine- to medium-grained sand with silt. The Merritt Sand is approximately 50 feet in thickness. The Merritt Sand was deposited by wind eroding and transporting steam sediments during the lower stands of sea level, which occurred approximately 40,000 years ago and may have been reworked by shoreline processes as sea levels rose. The Late Pleistocene Merritt Sand is underlain by Bay Mud and alternating layers of older alluvial deposits to approximately 1 to 2 kilometers (km). The older alluvial deposits are underlain by Cenozoic marine bedrock units.

The active trace of the Hayward Fault is situated approximately 3.4-miles northeast of the site and the Hayward Fault is considered active by the Alquist-Priolo Earthquake Fault Zoning Act (AP-Zone) of 1994, and is listed as a strike-slip fault with right-lateral movement (<a href="http://gmw.consrv.ca.gov/shmp/download/quad/OAKLAND\_EAST/maps/OKLND\_E.PDF">http://gmw.consrv.ca.gov/shmp/download/quad/OAKLAND\_EAST/maps/OKLND\_E.PDF</a>). Furthermore, the subject site is not situated within a mapped zone for liquefaction during a moderate to violent earthquake event

 $(\underline{http://gmw.consrv.ca.gov/shmp/download/quad/OAKLAND\_WEST/maps/ozn\_oakw.pdf}).$ 

Based on previous and current environmental work conducted at the site, depth to groundwater varies from 17 feet to 22 feet below ground surface (bgs) and flows toward the northeast along topography.

The subsurface geology is depicted on Geologic Cross-Sections A-A' and B-B', which are attached to this report and are shown on Figures 2 and 3. Geologic Cross-Sections A-A' and B-B' also depict previous groundwater wells, borings, proposed foundations, and proposed elevator



pits. Subsurface geology consists of the Merritt Sand and silty clay units, which are discontinuous. The subsurface soil is mostly highly permeable, except the discontinuous silty clay units.

#### **Previous Environmental Work**

GeoSolve, Inc. reviewed previous environmental reports for each property associated with the subject site, which are summarized below.

#### 301 19th Street (1833 Harrison Street)

One 5,000-gallon gasoline and one 550-gallon motor-oil USTs were removed from this property on September 10, 1991. Approximately 250 cubic yards of soil were over-excavated from the UST locations and properly disposed. Analytical results indicated no detectable concentrations of petroleum hydrocarbons from the tank bottom samples collected (JM-01 through JM-06), as reported in the Environmental Assessment for Three Parcels located in Oakland, California (Applied GeoSciences, Inc., January 6, 1993). No other investigations have been conducted to date on this parcel. The location of the former gasoline service station is shown on Figure 1, Proposed Development Footprint.

On February 7 and 17, 1998, Norcal Geophysical Consultants, Inc. conducted a magnetometer survey of Parcels 008-0625-002-1 and 008-0625-004, which identified a metallic anomaly on the south-central portion of parcel 008-0625-002-1. No other information was revealed during this survey (Norcal Geophysical Consultants, Inc., March 2, 1998). *GeoSolve, Inc.* also advanced borings B-2 and B-9 in the immediate vicinity of the former UST and pump islands as shown on Figure 1.

#### 1750 Webster Street

Multiple environmental investigations were conducted on the 1750 Webster Street property, which included the possible presence of underground storage tanks (USTs). Applied GeoSciences, Inc. conducted a subsurface investigation to evaluate the subsurface soil and groundwater for the presence of petroleum hydrocarbons. Elevated concentrations of petroleum hydrocarbons reported as gasoline (TPHg) and benzene, toluene, ethyl benzene and total xylenes (BTEX) in groundwater (Applied GeoSciences, Inc., April 1, 1993). Up to 200,000 micrograms per liter ( $\mu$ g/L) of TPHg were detected. A geophysical survey was conducted on the property by ATC Associates, Inc. (ATC) in 1998 to identify any USTs; however, only metallic utility lines (ATC Associates, Inc. March 19, 1998). ATC also conducted another subsurface investigation, which included drilling up to twelve borings to groundwater (ATC Associates, Inc. March 19, 1998), in which TPHg was detected up to 760,000  $\mu$ g/L and trichloroethylene (TCE) was detected up to 13  $\mu$ g/L in borings G-3 and G-6, which are located on the southern and central portions of the property. No USTs were identified on the subject property and vadose zone soil did not contain residual petroleum hydrocarbons; therefore, it was concluded that the TPHg, TCE and BTEX originated from an off-site and up-gradient source.



ATC drilled and installed three groundwater monitoring wells (A-1 through A-3, later renamed MW-1 through MW-3) in April 1998 (ATC Associates, Inc., September 25, 1998) on the subject property. The groundwater gradient was determined to be toward the northeast at 0.01 foot per feet (ft/ft) and TPHg was detected up to 84,000  $\mu$ g/L and benzene was detected up to 12,000  $\mu$ g/L in wells A-2 and A-1, which were installed on the northern and southern portion of the property. Depth to groundwater was measured at 18 feet to 20 feet bgs. The locations of wells MW-1 through MW-3 are shown on Figure 1 and the laboratory analytical results of soil samples collected from borings A-1 through A-3 are shown on Table 1 below. Groundwater analytical data is not included in this summary since the data is over 15 years old. Results of groundwater testing supported the earlier conclusion that the TPHg, TCE, and BTEX had migrated onto the property from an upgradient source.

In a February 16, 2000 letter to the owner of the site, Prentiss Properties, the Alameda County Health Care Services Agency agreed with the conclusion that groundwater impacts were due to an upgradient source.

#### Current Environmental Work - Without ACHCSA Oversight

#### 1750 Webster Street, 1810 Webster Street and 301 19th Street

In October through November 2015, *GeoSolve, Inc.* conducted a Phase I Environmental Site Assessment (ESA) for all nine parcels at 1732-1734 Webster Street, 1750 Webster Street, 1801 Webster Street, 301 19<sup>th</sup> Street, 1711 Harrison Street, 1801 Harrison Street, 1805 Harrison Street, 1811 Harrison Street, and 1817-1839 Harrison Street in Oakland, California with APNs 008-0625-016; 008-0625-017; 008-0625-018; 008-0625-002-1; 008-0625-004; 008-0625-005; 008-0625-006; 008-0625-007; and 008-0625-008. The Recognized Environmental Conditions (RECs) identified at the subject property included:

- elevated concentrations of TPHg, BTEX, and TCE in groundwater beneath the 1750 Webster Street property;
- the existence of a historic gasoline service station at 1833 and/or 1839 Harrison Street and a third UST maybe present on the south-central portion of the 301 19<sup>th</sup> Street property;
- possible elevated concentrations of lead and/or ACMs in the surficial soil based on the historical residences which used to occupy every parcel at the site until the late 1940s to early 1950s; and;
- up-gradient sources of TPHg, BTEX and other volatile organic compounds (VOCs) from historical uses as gasoline stations and dry cleaner facilities.

Based on the findings in the Phase I ESA, elevated concentrations of total petroleum hydrocarbons reported as gasoline (TPHg) and benzene were detected in groundwater up to 200,000 micrograms



per liter ( $\mu$ g/L) and 14,000  $\mu$ g/L on the southern portion of the property along Webster Street, which were determined to have originated from 1700 Webster Street, situated approximately 160 feet south of the subject property and up-gradient.

## Phase II ESA - 1750 Webster Street and 301 19th Street - November 2015

In November 2015, *GeoSolve, Inc.* observed the advancement of three borings (B-1 through B-3) on the subject site to evaluate the concentrations of petroleum hydrocarbons in subsurface soil and groundwater in our Phase II ESA (*GeoSolve, Inc.*, November 7, 2015). The locations of borings B-1 through B-3 are shown on Figure 1. Based on the laboratory analytical results of soil samples, concentrations of TPHg, BTEX, or MTBE were not detected in all soil samples analyzed from borings B-1 through B-3 as shown on Table 2, with the exception of total xylenes. Total xylenes were the only chemical constituent detected in soil sample B1-25 at 0.016 mg/Kg, which is significantly below the California Regional Water Quality Control Board – Region 2 (RWQCB) Environmental Screening Level (ESL) of 111 mg/Kg for residential development (Table B, December 2013).

Lead was detected at 170 mg/Kg in soil sample B1-5, which exceeded the residential ESL of 80 mg/Kg and lead was detected below the residential ESL in all other soil samples analyzed from borings B-1 through B-3.

TPHg, BTEX, MTBE and lead were not detected in groundwater samples collected from borings B-2 or B-3 and the groundwater samples are shown on Table 3. MTBE was not detected in groundwater sample B-1. Lead was detected up to 0.54  $\mu$ g/L in groundwater sample B-1. An elevated concentration of TPHg was detected at 26,000  $\mu$ g/L in groundwater sample B-1. Concentrations of benzene, toluene, ethyl benzene and total xylenes exceeded ESLs (Table 3).

## Additional Phase II ESA – 1750 Webster Street and 301 19th Street – December 2015

In December 2015, *GeoSolve, Inc.* conducted an Additional Phase II ESA at 1750 Webster and 301 19<sup>th</sup> Streets by observing the advancement of borings B-4 through B-6 to groundwater to evaluate the lateral and vertical extent of the petroleum hydrocarbons and VOCs in the subsurface soil and groundwater beneath the site (*GeoSolve, Inc.*, December 23, 2015). The locations of borings B-4 through B-6 are shown on Figure 1. Based on the laboratory analytical results of the soil and groundwater samples collected from borings B-4 through B-6, no detectable concentrations of TPHg or BTEX were reported in soil samples analyzed from 10 feet and 20 feet bgs; however, minor concentrations of TPHg or BTEX were detected in the soil samples collected from 25 feet bgs in borings B-4 and B-5. Furthermore, no detectable concentrations of chlorinated hydrocarbons or MTBE were detected in any soil and/or groundwater sample collected from borings B-4 through B-6. This data is summarized in Tables 4 and 5. Elevated concentrations of TPHg and BTEX were detected in groundwater from borings B-4 through B-6, with the greatest concentration detected in groundwater from boring B-6. These elevated concentrations of TPHg and BTEX are most likely from an up-gradient and off-site source.



No elevated concentrations of lead were detected in any soil sample analyzed from borings B-4 through B-6.

#### Phase II ESA - 1810 Webster Street - February 2016

In February 2016, *GeoSolve, Inc.* conducted a Phase II ESA on 1810 Webster Street and observed the advancement of borings B-1 through B-3 on 301 19<sup>th</sup> Street to groundwater (*GeoSolve, Inc.*, February 11, 2016). The locations of borings B-1 through B-3 are shown on Figure 1. Based on the laboratory analytical results of soil samples, concentrations of TPHg, BTEX, or MTBE were not detected in soil samples analyzed from borings B-1 through B-3 at 15 feet and 20 feet bgs as shown on Table 6, with the exception of a minor detection of ethyl benzene at 0.12 mg/Kg at 20 feet in boring B-2. TPHg was detected above the RWQCB's ESLs for residential development (February 2016) of 100 mg/Kg at 22.5 feet bgs. Lead was detected above the ESL of 80 mg/Kg in soil sample B2-1 at one foot at 130 mg/Kg. Lead was detected below the ESL in all other soil samples analyzed. Benzene or MTBE were not detected in any soil sample analyzed from borings B-1 through B-3.

TPHg and benzene were detected above ESLs in groundwater samples B-1, B-2, and B-3. The groundwater analytical results are shown on Table 7. Elevated concentrations of toluene, ethyl benzene and total xylenes were detected in groundwater sample B-3. MTBE was not detected in any groundwater sample analyzed.

Chlorinated volatile compounds were not detected in any of the soil or groundwater samples.

## Soil-Gas Survey - 1750 Webster Street, 1810 Webster Street and 301 19th Street - February 2016

In February 2016, *GeoSolve, Inc.* observed the soil-gas sampling and mobile laboratory analysis of six soil-vapor probes (SG-1 through SG-6) at the subject site (*GeoSolve, Inc.* February 22, 2016). Isopropyl alcohol (IPA) was not used as a leak test, since the mobile laboratory collected the soil-gas samples using a syringe directly from the vapor-probes. The location of soil-gas probes SG-1 through SG-6 are shown on Figure 1. No detectable concentrations of VOCs were reported in most soil-gas samples collected from the vadose zone. A low concentration of tetrachloroethylene (PCE) was detected in soil-gas samples SG5-15 and duplicate soil-gas sample SG5-15D at 150 micrograms per cubic meter ( $\mu$ g/m³) and 160  $\mu$ g/m³, respectively. A moderate concentration of benzene was detected in soil-gas sample SG5-5 at 120  $\mu$ g/m³. PCE was detected below the ESL of 240  $\mu$ g/m³ for residential development in soil-gas (February 2016). Benzene was detected slightly above the ESL of 42  $\mu$ g/m³ in soil-gas sample SG5-5, but below the commercial ESL of 2,100  $\mu$ g/m³. The concentrations of PCE and benzene detected in vapor samples at SG5-15 and SG5-15D are very low and do not indicate the presence of an ongoing residual source. The soil-gas analytical results are shown on Table 8. Detection limits for some of the volatiles were above residential ESLs, but all were below commercial ESLs.



#### Additional Phase II ESA - 301 19th Street - July 2016

In July 2016, *GeoSolve, Inc.* conducted an Additional Phase II ESA and observed the advancement of borings B-7 through B-9 on 301 19<sup>th</sup> Street to groundwater (*GeoSolve, Inc.*, August 8, 2016). The locations of borings B-7 through B-9 are shown on Figure 1. Based on the laboratory analytical results of soil samples, concentrations of TPHg, BTEX, or MTBE were not detected in all soil samples analyzed from borings B-7 through B-9 at 1 foot, 10 feet or 15 feet bgs, as shown on Table 1 and were detected below the RWQCB's ESLs listed at the base of Table 8. Lead was detected at concentrations ranging from 1.7 mg/Kg to 9.7 mg/Kg, which were below the residential soil ESL of 80 mg/Kg. In addition, MTBE was not detected in any soil sample analyzed from borings B-7 through B-9.

No detectable concentrations of TPHg (less than 50  $\mu$ g/L, BTEX (less than 0.50  $\mu$ g/L) or MTBE (less than 0.05  $\mu$ g/L) were measured in groundwater grab samples B-7 through B-9, with the exception of a very low concentration of toluene of 0.77  $\mu$ g/L in groundwater grab sample B-9 (Table 9).

Lead was detected in groundwater at concentrations ranging from 34  $\mu$ g/L to 440  $\mu$ g/L.

## Additional Soil-Gas Survey - 1750 and 1810 Webster Streets, and 301 19th Street - August 2016

In August 2016, *GeoSolve, Inc.* observed the additional soil-gas sampling and mobile laboratory analysis of six soil-vapor probes (SG-1 through SG-6) at the subject site (*GeoSolve, Inc.* August 31, 2016). The location of soil-gas probes SG-1 through SG-6 are shown on Figure 1 and were advanced in the same locations as in February 2016.

Based on the laboratory analytical results of the soil-gas samples collected from vapor-probes SG-1 through SG-6, no detectable concentrations of VOCs were reported in most soil-gas samples collected from the vadose zone. A low concentration of PCE was detected in soil-gas sample SG6-10 at 120 µg/m<sup>3</sup>. Low concentrations of benzene were also detected in soil-gas samples SG5-5 at 160 μg/m³ and in SG5-10 at 88 μg/m³. PCE detected in soil-gas sample SG6-10 was detected below the ESL of 240 µg/m<sup>3</sup> for residential development in soil-gas. Benzene was detected slightly above the screening level of 48 µg/m³, but well below the commercial screening level of 420 µg/m³ in soil-gas sample SG5-5. The concentrations measured do not indicate a significant source for either of these constituents. Although TPHg was not analyzed during this Additional Soil-Gas Survey, TEG or Northern California, Inc. stated their results support no TPHg concentrations greater than 10,000 µg/m<sup>3</sup> were indicated in all soil-gas samples analyzed, confirming results from the initial soil-gas survey conducted in February 2016. The PCE and benzene detected in soil-gas were below the commercial ESLs of 420 μg/m³ for benzene and 2,100 μg/m³ for PCE. As firstlevel residential occupation is not planned for the development at the site, commercial ESLs are the recommended screening criteria for the site. Therefore, the low concentrations of benzene and PCE detected in soil-gas samples SG5-5, SG5-10, and SG6-10 are not a concern for the subject development at the site. The additional soil-gas analytical results are shown on Table 11. As



indicated for the July 2016 soil gas survey, detection limits for some of the volatiles were above residential ESLs, but all were below commercial ESLs.

Oxygen Soil-Gas Survey - 1750 and 1810 Webster Streets, and 301 19th Street - October 21, 2016

On October 21, 2016, *GeoSolve, Inc.* observed the installation of five oxygen soil-gas probes (OG-1 through OG-5) to five feet bgs. Laboratory analytical results of the subsurface soil-gas oxygen samples are shown on Table 12 and oxygen concentrations ranged from 13% to 14%. The location of oxygen soil-gas samples OG-1 through OG-5 are shown on Figure 1.

#### Current Environmental Work - With ACHCSA Oversight

Additional Soil-Gas Survey - 1750 and 1810 Webster Streets, and 301 19th Street - May 2017

At the request of the ACHCSA, *GeoSolve, Inc.* observed the installation of four temporary soilgas probes (SG-7 through SG-10) along Webster Street and one vapor-probe at the location of the proposed elevator pit (SG-10) on May 15, 2017. Probes SG-7 through SG-9 were installed at 5 feet bgs and were installed to evaluate the concentrations of oxygen, methane and carbon dioxide, while probe SG-10 was installed at 6 feet bgs to evaluate vinyl chloride in soil-gas at the bottom of the proposed elevator pit due to earlier detection limit concerns. IPA was used as a leak detection during soil-gas sampling activities. The locations of SG-7 through SG-10 are shown on Figure 1 and the soil-gas sample results are shown on Table 13. Oxygen in soil-gas was tested between 16% to 17% and vinyl chloride was not detected in any soil-gas sample analyzed. Methane was not detected and carbon dioxide was detected below 0.04%. The results of testing at SG-10 confirm that the PCE detected previously at location SG-5 in August 2016 did not extend in the direction of the nearby elevator location.

#### **Summary of Environmental Results**

Based on the findings of the Phase I ESA, sources of petroleum hydrocarbons in soil and groundwater were identified from former gasoline stations situated on-site and off-site. Potential off-site sources were identified in the Environmental Assessment of the Site prepared by Applied Geosciences, Inc. (1993a), including the Douglas Parking site located at 1721 Webster Street, and the former Chevron site located at the southwest comer of 17th Street and Harrison. Both of these sites have been identified as sources of groundwater petroleum hydrocarbon contamination, and are located generally upgradient of the 1750 Webster Street site. USTs were also assumed to be present beneath the 1750 Webster Street property and one UST and pump islands were removed from a former gasoline service station on 301 19<sup>th</sup> Street in 1991. Previous environmental work was conducted on 1750 Webster Street by ATC in 1998, included performing a geophysical survey using a magnetometer; however, no large metallic anomalies were discovered.

Based on the conclusions of multiple Phase II ESAs conducted on the subject property from 2015 through May 2017, no concentrations of TPHg, BTEX or MTBE or VOCs were reported in soil



samples in any boring from ground surface to 20 feet bgs indicating an on-site source. TPHg was detected at slightly elevated concentrations at 22 feet bgs and represents the groundwater capillary fringe zone derived from dissolved TPHg concentrations in groundwater.

Elevated concentrations of dissolved TPHg and BTEX were detected in groundwater samples collected boring borings B-1, and B-4 through B-6 and borings B-1 through B-3 (1810 Webster Street) at concentrations up to 130,000  $\mu$ g/L and 610  $\mu$ g/L in boring B-6.

Lead was mostly not detected in any soil sample analyzed from the subject site, except three samples, in which lead was detected at 170 mg/Kg in soil sample B1-5 (October 2015), 130 mg/Kg in soil sample B2-1 (February 2016) and 760 mg/Kg in soil sample SPB3-A (February 2017). These were detected above the ESL of 80 mg/Kg for residential development and will either be removed during excavation of the fill material to accommodate development of the property, or located under the parking garage slab. Moderate concentrations of dissolved lead were detected in all groundwater samples collected from borings B-1 through B-9. These moderately elevated dissolved lead concentrations detected in groundwater grab samples B-1 through B-9 do not pose a significant risk given regional groundwater conditions.

At the request of LMC to further isolate the lead concentrations in shallow soil, *GeoSolve, Inc.* observed the advancement of 29 borings (L1 through L29) to 10 feet bgs using a direct-push drilling rig, equipped with a dual-core sampling rods lined with acetate liners on May 15, 2017. The location of borings L1 through L29 is shown on Figure A. The acetate liners were extracted from each 5-foot boring interval and soil samples were hand-sawed at 2-feet, 4-feet, 6-feet, 8-feet and 10-feet in every boring, in which the ends were covered with Teflon tape, capped, labeled and placed within a pre-chilled ice chest for temporary storage. The soil samples were delivered under chain-of-custody documentation to McCampbell Analytical, Inc. and analyzed for lead. Soil sample L6-2 was the only sample indicating a lead concentration above the residential ESL, at 86 mg/Kg, but was less than the commercial ESL of 320 mg/Kg. The attached lead analytical results are shown on Table 14. ACDEH had verbally approved collection of these samples for disposal characterization without submission of a separate workplan.

Low concentrations of PCE were detected in soil-gas samples SG5-5 and SG6-10 at 120 µg/m³ and 160 µg/m³, respectively. PCE was not detected in soil gas sample SG-10, near SG-5. Although the PCE concentrations detected in soil-gas are below the ESL, the source of the PCE is not known. The low concentrations measured do not indicate an ongoing source in either soil or groundwater. Groundwater concentrations of PCE measured across the site do not indicate a risk from vapor intrusion. Oxygen concentrations in soil-gas were detected at 13% to 17%. Although detection limits in the mobile laboratory for the soil vapor samples exceeded residential screening levels for some compounds, the detection limits were below commercial screening levels, which are recommended to be used for the site. Furthermore, vinyl chloride was not detected in the soil-gas samples collected from 5- to 6-feet bgs near the future elevator pit bottoms in soil-gas samples SG-4 and SG-10.

Based on the data, the former gasoline service station situated along Harrison Street did not significantly impact the subject property and the existing petroleum-hydrocarbon groundwater



plume detected on 1750 Webster Street has not impacted groundwater under the southern portion of the 301 19<sup>th</sup> Street property.

#### **Regional Groundwater Plume Conditions**

The source of the TPHg and BTEX contamination at 1700 Webster Street is under RWQCB oversight and residual dissolved petroleum hydrocarbons are expected to continue to naturally attenuate over time. Results of two soil gas sampling events at the site indicate that soil vapor from the underlying dissolved petroleum-hydrocarbon plume is attenuated at depth and vapors measured at the 5-foot depth are not a potential source of vapor intrusion risk for the proposed development.

Based on the data presented in this Summary of Environmental Activities Report and GeoDesign, Inc.'s Groundwater Monitoring Report: October 2016 (November 14, 2016) and groundwater "grab" samples collected from borings on 1750 and 1810 Webster and 301 19<sup>th</sup> Streets, a regional Site Map was prepared as Figure 4 and Approximate Groundwater Elevation Contour map was prepared as Figure 5. Total hydrocarbons reported as gasoline (GRO) and diesel (DRO) are depicted on iso-concentration maps as Figures 6 and 7. Iso-concentrations of Naphthalene in groundwater is depicted as Figure 9. Iso-concentrations of Toluene, Benzene and Ethyl Benzene are depicted as Figures 10 through 12. Iso-concentrations of Trichloroethylene (TCE) and Tetrachloroethylene (PCE) are depicted as Figures 13 and 14, and iso-concentrations of Carbon Tetrachloride are depicted as Figure 15, which are all attached to this Report.

All chemical constituents shown on Figures 6 through 15 indicate dissolved chemical masses migrating from 1700 Webster Street toward the subject site, confirming the conclusion in 2000 by the ACDEH that groundwater contamination at the site has an upgradient source. The bulk of the dissolved mass in groundwater appears to be between 1700 and 1750 Webster Streets, flowing with groundwater toward the north and northeast. It should be noted the groundwater results presented on Figures 5 through 15 are approximate since groundwater "grab" samples collected from borings are not groundwater samples collected from groundwater monitoring wells. Groundwater samples collected as grab samples are typically higher than those collected from monitoring wells, and must be evaluated separately from monitoring well samples. Furthermore, since the proposed development will have two non-residential levels (retail on ground floor and parking on the second story), *GeoSolve, Inc.* recommends using the commercial ESLs for this project.

Based on the findings and results presented in this Summary, *GeoSolve*, *Inc*. recommends formal closure of ACHCSA VRAP Case No. RO0003229 and SCP No. RO0002672 in response to the ACHCSA comfort letter dated February 16, 2000. A land use covenant and approved soil management plan have been prepared for the site to obtain site closure.



If you have any questions or need further information regarding this Summary of Environmental Activities Report, please call us at (925) 963-1198.

Sincerely,

GeoSolve, Inc.



Robert D. Campbell, M.S., P.G., C.E.G., Q.S.D. Principal Engineering Geologist

Attachments: Figure 1, Proposed Development Footprint

Figure 2, Cross-Section A-A' Figure 3, Cross-Section B-B'

Figure 4, Site Plan

Figure 5, Approximate Groundwater Elevation Contours

Figure 6, GRO Isoconcentrations in Groundwater

Figure 7, DRO Isoconcentrations in Groundwater Figure 8, Naphthalene Isoconcentrations in Groundwater

Figure 9, Xylene Isoconcentrations in Groundwater

Figure 10, Toluene Isoconcentrations in Groundwater

Figure 11, Benzene Isoconcentrations in Groundwater

Figure 12, Ethyl Benzene Isoconcentrations in Groundwater

Figure 13, TCE Isoconcentrations in Groundwater

Figure 14, PCE Isoconcentrations in Groundwater

Figure 15, Carbon Tetrachloride Isoconcentrations in Groundwater

Figure A, Boring L1 through L29 Locations



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#### TABLE 1 SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

Prentiss Properties LTD, Inc. 1750 Webster Street Oakland, California October 28, 2015

Sample ID	Sample Depth (feet)	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)
A-1-10.5	10.5	<1	<5	<5	<5	<5	<20
A-1-15	15	<1	<5	<5	<5	<5	<20
A-2-11	11	<1	<5	<5	<5	<5	<20
A-2-16	16	<1	<5	<5	<5	<5	<20
A-3-11.5	11.5	<1	<5	<5	<5	<5	<20
A-3-17.5	17.5	<1	<5	<5	<5	<5	<20
ESL Residential (Res)		740	0.23	970	5.1	560	42
ESL Commercial (Com)		3,900	1.0	4,600	22	2,400	180

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).

ESLs = Environmental Screening Levels – Summary of Soil (RWQCB, Rev. 3 February 2016).

# TABLE 2 LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES 1750 Webster Street and 301 19th Street

1750 Webster Street and 301 19<sup>th</sup> Street Oakland, California October 28, 2015

Sample ID	Sample Depth	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)	Lead (mg/Kg)
	(feet)	( 0 0		, , ,				
B1-5	5	NA	NA	NA	NA	NA	NA	170
B1-10	10	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	5.8
B1-15	15	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<5.0
B1-17.5	17.5	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<5.0
B1-22	22	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<5.0
B1-25	25	<1.0	< 0.005	< 0.005	< 0.005	0.016	< 0.05	<5.0
B1-30	30	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	6.8
B2-5	5	NA	NA	NA	NA	NA	NA	5.3
B2-10	10	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<5.0
B2-15	15	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<5.0
B2-20	20	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<5.0
B2-25	25	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	9.8
B3-5	5	NA	NA	NA	NA	NA	NA	5.3
B3-10	10	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<5.0
B3-15	15	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	6.7
B3-20	20	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<5.0
B3-20D	20	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	8.9
B3-25	25	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	7.3
ESLs – Res		740	0.23	970	5.1	560	42	80
ESL - Com		3,900	1.0	4,600	22	2,400	180	320

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).

NA = not analyzed.



ESLs =

Environmental Screening Levels – Summary of Soil (RWQCB, Rev. 3 February 2016).

# TABLE 3 LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES 1750 Webster Street and 301 19th Street

Oakland, California October 28, 2015

Sample ID	Sample Depth (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (μg/L)	MTBE (µg/L)	Lead (µg/L)
B-1	22	26,000	140	1,300	1,100	4,900	<250	0.54
B-2	17	<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
B-3	17	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
MCL		220	1.0	40	30	20	5	15

 $\mu g/L =$ 

micrograms per liter, equivalent to parts per billion (ppb).

MCL =

Maximum Contaminant Level (Summary of Groundwater -RWQCB, Rev. 3 February 2016 ESLs).

# TABLE 4 LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES 1750 Webster Street

Oakland, California December 11, 2015

Sample ID	Sample Depth (feet)	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)	VOCs (mg/Kg)	Lead (mg/Kg)
B4-1	1	NA	NA	NA	NA	NA	NA	NA	< 5.0
B4-2	2	NA	NA	NA	NA	NA	NA	NA	< 5.0
B4-3	3	NA	NA	NA	NA	NA	NA	NA	< 5.0
B4-4	4	NA	NA	NA	NA	NA	NA	NA	<5.0
B4-5	5	NA	NA	NA	NA	NA	NA	NA	<5.0
B4-10	10	<1.0	< 0.005	< 0.005	< 0.005	0.016	< 0.05	<0.005 - <0.1	< 5.0
B4-20	20	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<0.005 - <0.1	<5.0
B4-25	25	1.3	0.074	0.0072	0.089	0.020	< 0.050	0.038	<5.0
B5-1	1	NA	NA	NA	NA	NA	NA	NA	<5.0
B5-2	2	NA	NA	NA	NA	NA	NA	NA	<5.0
B5-3	3	NA	NA	NA	NA	NA	NA	NA	<5.0
B5-4	4	NA	NA	NA	NA	NA	NA	NA	<5.0
B5-5	5	NA	NA	NA	NA	NA	NA	NA	<5.0
B5-10	10	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<0.005 - <0.1	<5.0
B5-20	20	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<0.005 - <0.1	<5.0
B5-25	25	<1.0	0.011	< 0.005	< 0.005	< 0.005	< 0.05	0.01	<5.0
B6-1	NA	NA	NA	NA	NA	NA	NA	NA	6.2
B6-2	NA	NA	NA	NA	NA	NA	NA	NA	6.2
B6-3	NA	NA	NA	NA	NA	NA	NA	NA	6.3
B6-4	NA	NA	NA	NA	NA	NA	NA	NA	5.1
B6-5	NA	NA	NA	NA	NA	NA	NA	NA	6.7
B6-10	10	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<0.005 - <0.1	<5.0



Sample ID	Sample Depth (feet)	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)	VOCs (mg/Kg)	Lead (mg/Kg)
B6-20	20	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	<0.005 - <0.1	< 5.0
		800	0.68	4.7	10	45	< 0.05	76ª	<5.0
B6-25	25					560	42	560	80
ESLs - Res		740	0.23	970	5.1				
ESLs - Com		3,900	1.0	4,600	22	2,400	180	2,400	320

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).

ESLs = Environmental Screening Levels – Summary of Soil (RWQCB, Rev. 3 February 2016).

NA = not analyzed.

a = Total xylene concentration detected below ESLs.

#### TABLE 5 LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES

1750 Webster Street Oakland, California December 11, 2015

Sample ID	Sample Depth (feet)	TPHg (μg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (μg/L)	MTBE (μg/L)	VOCs (µg/L)	Lead (µg/L)
D 4	21	8,100	1,000	77	580	200	< 500	930 <sup>a</sup>	430
B-4			-	73	140	140	<300	490a	550
B-5	21	6,800	620					13,000 <sup>b</sup>	3,500
B-6	22	130,000	610	12,000	3,000	13,000	<900		3,300
MCI.		220	1.0	40	30	20	5	1 - 40	15

 $\mu g/L$  = micrograms per liter, equivalent to parts per billion (ppb).

MCL = Maximum Contaminant Level (Summary of Groundwater -RWQCB, Rev. 3 February 2016 ESLs).

a = Benzene concentration. b = Toluene concentration.

## TABLE 6 LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES

1810 Webster Street Oakland, California February 2, 2016

Sample ID	Sample Depth (feet)	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)	VOCs (mg/Kg)	Lead (mg/Kg)
B1-1	1	NA	NA	NA	NA	NA	NA	NA	7.5
B1-15	15	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.10	2.2
B1-20	20	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.10	1.9
B1-22.5	22.5	390	< 0.005	< 0.005	2.5	5.3	< 0.05	17ª	2.6
B2-1	1	NA	NA	NA	NA	NA	NA	NA	130
B2-15	15	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.10	2.2
B2-20	20	46	< 0.005	< 0.005	0.12	< 0.005	< 0.05	0.14 <sup>b</sup>	4.6
B2-22.5	22.5	660	< 0.005	0.34	0.78	0.76	< 0.05	8.1°	3.0
B3-1	1	NA	NA	NA	NA	NA	NA	NA	16
B3-15	15	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.10	2.2
B3-13 B3-20	20	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.10	2.3
B3-20.5	22.5	170	< 0.005	0.30	0.39	1.7	< 0.05	14 <sup>d</sup>	3.1
		740	0.23	970	5.1	560	42	5.1 - 970	80
ESLs - Res ESLs - Com		3,900	1.0	4,500	22	2,400	180	1 – 4,600	320



milligrams per kilogram, equivalent to parts per million (ppm). mg/Kg =

Environmental Screening Levels - Summary of Soil (RWQCB, Rev. 3 February 2016). **ESLs** 

not analyzed. NA

1,2,4-Trimethylbenzene and 4.9 mg/Kg of total xylenes.

n-Propyl benzene. b

n-Propyl benzene and 4.1 mg/Kg n-Butyl benzene. 1,2,4-Trimethylbenzene and 3.4 mg/Kg of total xylenes.

#### TABLE 7 LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES 1810 Webster Street

Oakland, California February 2, 2016

Sample ID	Sample Depth (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (μg/L)	MTBE (μg/L)	VOCs (µg/L)	Lead (µg/L)
B-1	20.5	7,500	28	14	45	46	<250	1,200a	21
B-2	19	14,000	66	11	99	21	< 0.50	270 <sup>b</sup>	13
B-3	20.5	4,700	110	450	110	300	< 0.50	1,200°	5.9
MCI.	20.5	220	1.0	40	30	20	5	20 - 40	15

micrograms per liter, equivalent to parts per billion (ppb). µg/L

Maximum Contaminant Level (Summary of Groundwater -RWQCB, Rev. 3 February 2016 ESLs). MCL

t-Butyl alcohol (TBA), 670 μg/L of 1,2,4-Trimethylbenzene and 460 μg/L of total xylenes.

n-Propyl benzene, 120 μg/L Naphthalene, and 110 μg/L of ethyl benzene. b

1,2,4-Trimethylbenzene,  $280 \mu g/L$  of benzene,  $1,100 \mu g/L$  of toluene, and  $930 \mu g/L$  of total xylenes.

#### TABLE 8 LABORATORY ANALYTICAL RESULTS OF SOIL-GAS SAMPLES 1750 and 1810 Webster Streets and 301 19th Street Oakland, California February 3 and 4, 2016

Sample ID	Sample Depth	TPHg (μg/m³)	Benzene (μg/m³)	Toluene (μg/m³)	Ethyl Benzene (μg/m³)	Total Xylenes (μg/m³)	PCE (μg/m³)	TCE (μg/m³)
	(feet)							
SG1-5	5	<10,000	<80	<200	<100	<200	<100	<100
SG1-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG1-15	15	<10,000	<80	<200	<100	<200	<100	<100
SG1-15D	15	<10,000	<80	<200	<100	<200	<100	<100
SG2-5	5	<10,000	<80	<200	<100	<200	<100	<100
SG2-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG2-15	15	<10,000	<80	<200	<100	<200	<100	<100
SG3-5	5	<10,000	<80	<200	<100	<200	<100	<100
SG3-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG3-15	15	<10,000	<80	<200	<100	<200	<100	<100
SG4-5	5	<10,000	<80	<200	<100	<200	<100	<100
SG4-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG4-15	15	<10,000	<80	<200	<100	<200	<100	<100
SG5-5	5	<10,000	120	<200	<100	<200	<100	<100
SG5-10	10	<10,000	<80	<200	<100	<200	<100	<100



Sample ID	Sample Depth (feet)	TPHg (µg/m³)	Benzene (μg/m³)	Toluene (μg/m³)	Ethyl Benzene (μg/m³)	Total Xylenes (μg/m³)	PCE (μg/m³)	TCE (µg/m³)
SG5-15	15	<10,000	<80	<200	<100	<200	150	<100
SG5-15D	15	<10,000	<80	<200	<100	<200	160	<100
SG6-5	5	<10,000	<80	<200	<100	<200	<100	<100
SG6-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG6-15	15	<10,000	<80	<200	<100	<200	<100	<100
ESLs – Res		300,000	48	160,000	450	52,000	240	240
ESLs - Com		3.200.000	420	1.300,000	4,900	440,000	2,100	3,000

micrograms per cubic meter.  $\mu g/m^3 =$ 

Environmental Screening Levels – (RWQCB, Summary of Vapor ESLs Rev. 3 February 2016). ESLs =

Tetrachloroethylene. **PCE** Trichloroethylene. TCE = Duplicate soil-gas sample. SG1-1D =

All soil-gas sample results were detected below commercial ESLs.

TABLE 9 LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES 301 19th Street Oakland, California July 14, 2016

Sample ID	Sample Depth (feet)	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)	Lead (mg/Kg)
B7-1	1	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	5.1
B7-10	10	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	1.7
B7-15	3	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	2.0
B8-1	1	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	9.7
B8-10	10	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	2.0
B8-15	15	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	2.3
B9-1	1	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	NA
B9-10	10	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	1.6
B9-15	1	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	2.5
ESLs – Res		740	0.23	970	5.1	560	42	80
ESLs - Com		3.900	1.0	4,600	22	2,400	180	320

milligrams per kilogram, equivalent to parts per million (ppm). mg/Kg =

Environmental Screening Levels - Summary of Soil (RWQCB, Rev. 3 February 2016). **ESLs** 

not analyzed. NA



# TABLE 10 LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES 301 19th Street

Oakland, California July 14, 2016

Sample ID	Sample Depth (feet)	TPHg (µg/L)	Benzene (μg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (μg/L)	MTBE (µg/L)	Lead (µg/L)
B-7	17.5	<50	< 0.50	< 0.50	< 0.50	< 0.050	<5	280
B-8	15	<50	< 0.50	< 0.50	< 0.50	< 0.050	<5	440
B-9	17.5	<50	< 0.50	0.77	< 0.50	< 0.050	<5	34
MCL		220	1.0	40	30	20	5	15

 $\mu g/L$  = micrograms per liter, equivalent to parts per billion (ppb).

MCL = Maximum Contaminant Level (Summary of Groundwater -RWQCB, Rev. 3 February 2016 ESLs).

# TABLE 11 LABORATORY ANALYTICAL RESULTS OF SOIL-GAS SAMPLES 1750 and 1810 Webster Streets and 301 19th Street Oakland, California August 10, 2016

Sample ID	Sample Depth (feet)	Benzene (µg/m³)	Toluene (µg/m³)	Ethyl Benzene (μg/m³)	Total Xylenes (μg/m³)	PCE (μg/m³)	TCE (μg/m³)
SG1-5	5	<80	<200	<100	<200	<100	<100
SG1-10	10	<80	<200	<100	<200	<100	<100
SG1-10D	15	<80	<200	<100	<200	<100	<100
SG2-5	5	<80	<200	<100	<200	<100	<100
SG2-10	10	<80	<200	<100	<200	<100	<100
SG3-5	5	<80	<200	<100	<200	<100	<100
SG3-10	10	<80	<200	<100	<200	<100	<100
SG4-5	5	<80	<200	<100	<200	<100	<100
SG4-10	10	<80	<200	<100	<200	<100	<100
SG5-5	5	160	<200	<100	<200	<100	<100
SG5-10	10	88	<200	<100	<200	<100	<100
SG6-5	5	<80	<200	<100	<200	<100	<100
SG6-10	10	<80	<200	<100	<200	120	<100
ESLs – Res		48	160,000	450	52,000	240	240
ESLs - Com		420	1,300,000	4,900	440,000	2,100	3,000

 $\mu g/m^3$  = micrograms per cubic meter.

ESLs = Environmental Screening Levels – (RWQCB, Summary of Vapor ESLs Rev. 3 February 2016).

PCE = Tetrachloroethylene.
TCE = Trichloroethylene.

ESLs = Environmental Screening Levels – Residential (RWQCB, December 2013 – Table E).

SG1-10D= Duplicate soil-gas sample.

All soil-gas sample results were detected below commercial ESLs.



#### TABLE 12 LABORATORY ANALYTICAL RESULTS OF SOIL-GAS OXYGEN SAMPLES 1750 and 1810 Webster Streets and 301 19th Street Oakland, California

October 21, 2016

Sample ID	Sample Depth (feet)	Oxygen (µL/L)	Oxygen (%)
OG-1	5	130,000	13
OG-2	5	140,000	14
OG-3	5	140,000	14
OG-4	5	140,000	14
OG-5	5	140,000	14

microliters per liter.  $\mu L/L$ 

#### TABLE 13 LABORATORY ANALYTICAL RESULTS OF SOIL-GAS SAMPLES 1750 Webster Streets and 301 19th Street Oakland, California May 15, 2017

Sample ID	Sample Depth (feet)	Oxygen (%)	Methane (%)	Carbon Dioxide (%)	Vinyl Chloride (µg/m³)	IPA (μg/m³)
SG-7	5	17	< 0.00020	0.036	<1.3	<50
SG-8	5	17	< 0.00020	0.039	<1.3	<50
SG-9	5	16	< 0.00020	0.037	<1.3	<50
SG-10	6	16	< 0.00020	0.038	<1.3	< 50
ESLs – Res					4.7	
ESLs - Com					160	

micrograms per cubic meter.  $\mu g/m^3$ 

Environmental Screening Levels - (RWQCB, Summary of Vapor ESLs Rev. 3 February **ESLs** 

2016).

Tetrachloroethylene **PCE** = Trichloroethylene TCE Vinyl Chloride VC



Table 14
Lead Analytical Results in Soil
1750 Webster Street and 301 19<sup>th</sup> Street
Oakland, California
May 15, 2017

Sample ID	Depth (feet)	Lead (mg/Kg)
L1-2	2	3.1
L1-2	4	4.1
L1-6	6	5.6
L1-8	8	4.6
L1-10	10	3.1
L2-2	2	2.7
L2-4	4	3.3
L2-6	6	3.8
L2-8	8	4.6
L2-10	10	3.7
L3-2	2	3.5
L3-2	4	3.5
L3-4	6	5.4
L3-8	8	4.3
L3-10	10	2.6
L4-2	2	5.9
L4-4	4	4.5
L4-4	6	5.5
L4-8	8	3.6
L4-10	10	2.9
L5-2	2	3.3
L5-4	4	4.7
L5-6	6	3.4
L5-8	8	5.3
L5-10	10	2.6
L6-2	2	86
L6-4	4	3.5
L6-6	6	4.9
L6-8	8	4.1
L6-10	10	2.8
L7-2	2	3.4
L7-4	4	4.3
L7-6	6	4.8
L7-8	8	5.0
L7-10	10	3.8
L8-2	2	4.7
L8-4	4	7.2
L8-6	6	4.9

Sample ID	Depth	Lead
	(feet)	(mg/Kg)
L8-8	8	4.2
L8-10	10	4.1
L9-2	2	16
L9-4	4	3.2
L9-6	6	4.0
L9-8	8	4.5
L9-10	10	2.7
L10-2	2	5.3
L10-4	4	4.3
L10-6	6	5.3
L10-8	8	4.9
L10-10	10	3.9
L11-2	2	5.2
L11-4	4	4.4
L11-6	6	4.2
L11-8	8	2.9
L11-10	10	1.9
L12-2	2	3.4
L12-4	4	4.7
L12-6	6	3.8
L12-8	8	3.2
L12-10	10	2.1
L13-2	2	13
L13-4	4	3.3
L13-6	6	4.7
L13-8	8	3.8
L13-10	10	4.2
L14-2	2	4.0
L14-4	4	4.2
L14-6	6	2.9
L14-8	8	2.3
L14-10	10	1.9
L15-2	2	3.3
L15-4	4	3.9
L15-6	6	2.6
L15-8	8	2.3
L15-10	10	2.0
L16-2	2	2.8
L16-4	4	6.1
L16-6	6	4.0
L16-8	8	2.9
L16-10	10	2.7
L17-2	2	3.8

Sample ID	Depth	Lead
	(feet)	(mg/Kg)
L17-4	4	3.7
L17-6	6	2.8
L17-8	8	2.4
L17-10	10	2.1
L18-2	2	3.3
L18-4	4	4.2
L18-6	6	3.1
L18-8	8	2.4
L18-10	10	2.0
L19-2	2	19
L19-4	4	4.7
L19-6	6	4.1
L19-8	8	2.7
L19-10	10	2.0
L20-2	2	6.3
L20-4	4	4.2
L20-6	6	2.9
L20-8	8	2.6
L20-10	10	1.8
L21-2	2	4.6
L21-4	4	6.6
L21-6	6	3.0
L21-8	8	2.3
L21-10	10	1.9
L22-2	2	6.0
L22-4	4	3.6
L22-6	6	3.2
L22-8	8	2.5
L22-10	10	1.8
L23-2	2	3.5
L23-4	4	3.9
L23-6	6	3.3
L23-8	8	2.6
L23-10	10	2.0
L24-2	2	3.0
L24-4	4	2.0
L24-6	6	8.3
L24-8	8	4.8
L24-10	10	3.8
L25-2	2	44
L25-4	4	5.0
L25-6	6	3.7
L25-8	8	3.0

Sample ID	Depth	Lead	
	(feet)	(mg/Kg)	
L25-10	10	2.4	
L26-2	2	5.1	
L26-4	4	5.3	
L26-6	6	2.9	
L26-8	8	1.9	
L26-10	10	1.9	
L27-2	2	4.5	
L27-4	4	4.7	
L27-6	6	4.3	
L27-8	8	3.0	
L27-10	10	1.9	
L28-2	2	6.0	
L28-4	4	4.1	
L28-6	6	2.4	
L28-8	8	2.3	
L28-10	10	1.7	
L29-2	2	13	
L29-4	4	6.5	
L29-6	6	2.8	
L29-8	8	2.2	
L29-10	10	2.1	
Residential ESL		80	
Commercial ESL		320	

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).

ESLs = Environmental Screening Levels – Summary of Soil (RWQCB, February 2016)

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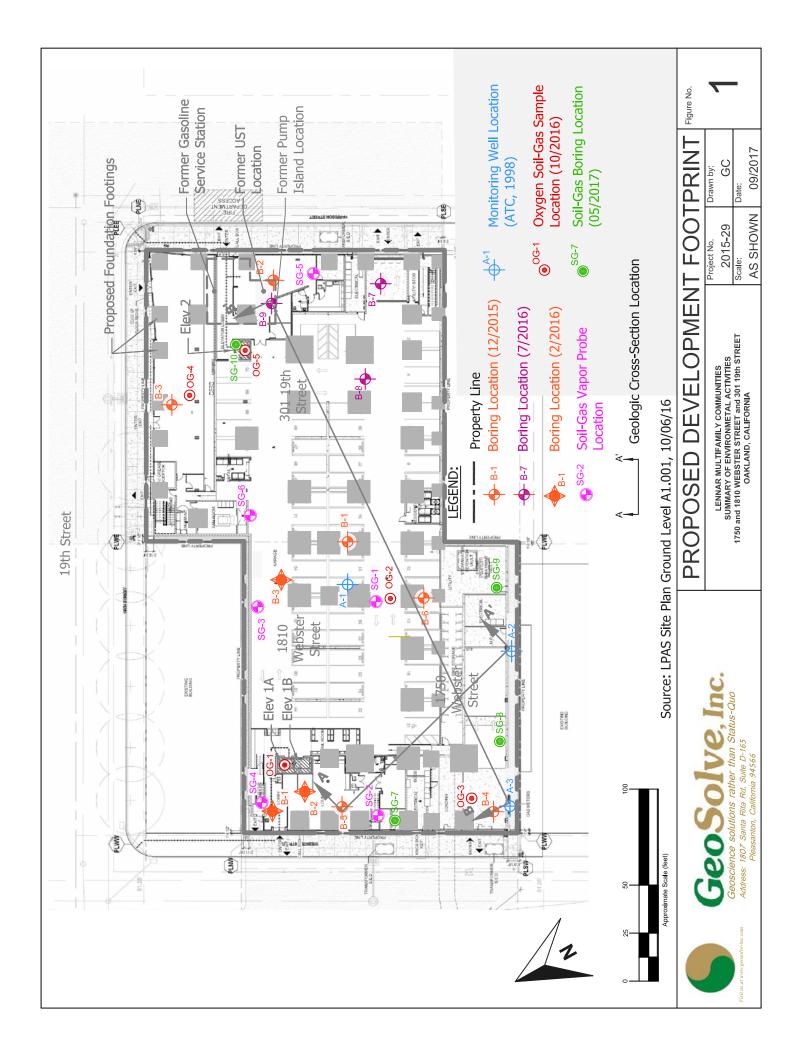
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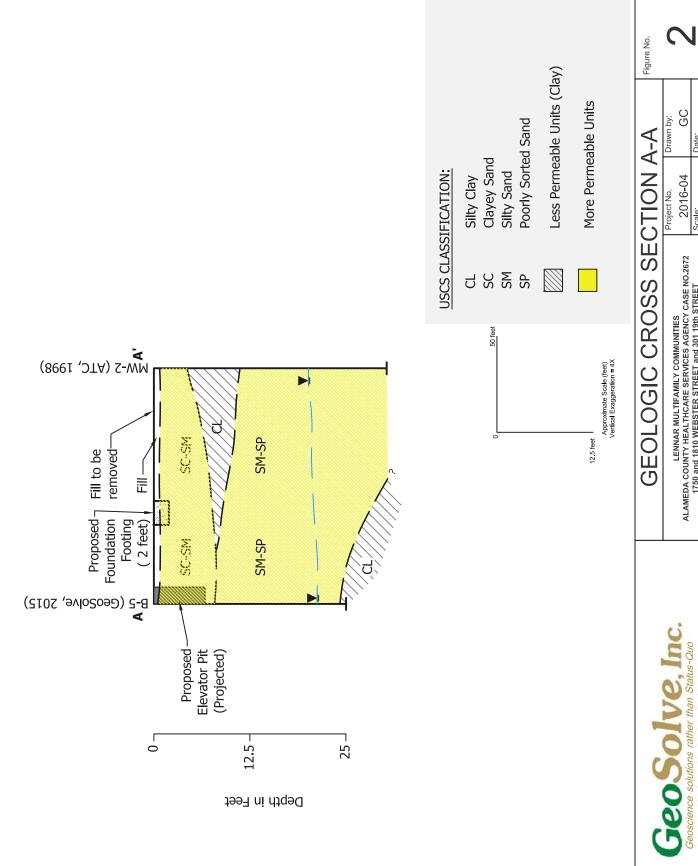
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10/2016

