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Environmental Health Services
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SUBJECT: Perjury Statement

To Whom It May Concern:

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached reports, 2nd Qtr Semi-annual 2013 and Preferential Pathway Study and Data Gaps Investigation Workplan for the site at 3442 Adeline Street, Oakland, CA, is true and correct to the best of my knowledge.

Signed: Steffi Zimmerman Dated 3/30/14

December 13, 2013

PREFERENTIAL PATHWAY STUDY AND DATA GAPS INVESTIGATION WORKPLAN

Property Identification:
3442 Adeline Street
Oakland, California

AEI Project No. 281939
ACEH Site: RO 02936

Prepared for:
Ms. Steffi Zimmerman
3289 Lomas Verdes Place
Lafayette, CA 94545

Prepared by:
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1.0 INTRODUCTION

AEI Consultants (AEI) has prepared this Preferential Pathway Study and Data Gaps Investigation Workplan on behalf of Ms. Steffi Zimmerman, the owner of the property located at 3442 Adeline Street in the City of Oakland, Alameda County, California (Figure 1, hereinafter referred to as the "site" or "property". The Preferential Pathway Study and Data Gaps Investigation Workplan were requested by Alameda County Environmental Health Department (ACEH).

Previous site investigations identified a release of gasoline from a underground storage tank (UST) previously located under the sidewalk on Chestnut Street in the southeast corner of the site. This report summarizes the preferential pathway study and work plan for an additional investigation to further delineate the impact to soil and groundwater at the site.

2.0 SITE DESCRIPTION AND BACKGROUND

The subject site is situated on the northeast corner of 35th Street and Chestnut Street in a mixed commercial, industrial and residential area of Oakland. The main entrance to the property is on 3442 Adeline Street. A second entrance is located at 3433 Chestnut Street. The on-site building covers approximately 65% of the property and is currently being used as a warehouse and a sports facility. Refer to Figure 2 for an aerial photo of the property and Figure 3 for a site plan.

2.1 UST Removal

On February 22, 2000, Clearwater Group (Clearwater) removed of a single-wall 3,750 gallon UST. Sidewall soil samples and a grab groundwater sample were collected from the tank excavation. Total Petroleum Hydrocarbons as gasoline (TPH-g), Total Petroleum Hydrocarbons as diesel (TPH-d) and benzene were reported at concentrations up to 920 milligrams per kilogram (mg/kg), 850 mg/kg, and 0.3 mg/kg, respectively. The results of the soil analyses are summarized in Table 1, Soil Sample Analytical Data. TPH-g, TPH-d, and benzene were reported in the grab groundwater sample from the excavation at concentrations of 7,400 micrograms per liter (µg/L), 34,000 µg/L, and 3,300 µg/L, respectively. The results of the groundwater analyses are summarized in Table 2, Groundwater Sample Analytical Data.

2.2 Site Investigations

2.2.1 Clearwater Phase II Investigation

On June 23, 2006, Clearwater performed a Phase II Environmental Site Investigation which included advancing four (4) soil borings (S1 - S4). The location of the soil borings are shown on Figure 3. Analysis of grab groundwater samples reported TPH-g and benzene at concentrations up to 120,000 µg/L and 7,000 µg/L, respectively. TPH-d was not detected at or

above the elevated laboratory reporting limits. The results of the soil analyses are summarized in Table 1, Soil Sample Analytical Data. The results of the soil boring grab groundwater analyses are summarized in Table 2, Groundwater Sample Analytical Data.

2.2.2 2007-2008 AEI Investigations

In October and December of 2007 and May of 2008, AEI advanced thirty-one (31) soil borings (SB-1 through SB-31) to a depth of 16 feet below the ground surface (bgs) and three (3) soil vapor samples were also collected, two (2) from within the building (VB-1 and VB-2) and one in the sidewalk at the southeast corner of the building (VB-3). The boring locations are shown on Figure 3.

The maximum concentrations of TPH-g, TPH-d, and BTEX reported in soil were 1,200 mg/kg, 450 mg/kg, 6.9 mg/kg, 2.5 mg/kg, 24 mg/kg and 110 mg/kg, respectively. Methyl tertiary butyl ether (MTBE) was reported at a concentration of 0.14 mg/kg in one sample, SB-11-15. The results of the soil analyses are summarized in Table 1, Soil Analytical Data and TPH-g data is included on Figures 4, 5, and 6.

The maximum concentrations of TPH-g, TPH-d and BTEX reported in grab groundwater samples were 83,000 µg/L, 12,000 µg/L, 10,000 µg/L, 640 µg/L, 2,700 µg/L and 7,900 µg/L, respectively. No MTBE was reported in groundwater samples from any of the soil borings. The results of the soil boring grab groundwater analyses are summarized in Table 2, Groundwater Sample Analytical Data and on Figure 7, TPH-g in Grab Water Samples (2007 - 2008).

The maximum concentrations of TPH-g and benzene, toluene, ethylbenzene, and xylenes (BTEX) reported in soil vapor samples were 3,100 micrograms per cubic meter (µg/$m^{3)}$, 130 µg/m^3, 42 µg/m^3, 16 µg/m^3, and 49 µg/m^3respectively. No MTBE was reported in soil vapor samples. The results of the soil vapor analyses are summarized in Table 3, Soil Vapor Analytical Data and the locations of the soil vapor samples are shown on Figure 3.

Soil and grab groundwater analytical data indicated that the gasoline plume in the soil and groundwater trends in a westerly direction, beneath the warehouse building on the property. TPH-g concentrations decrease rapidly to the north, south and east of the former UST. The results of these and previous soil, soil vapor, and groundwater analyses can be found in AEI's Site Investigation Report dated February 14, 2008.

2.2.3 2009 Interim Source Removal

During March and April of 2009, AEI removed impacted soil from down gradient of the former UST and inside the building. The excavation measured 35 feet by 75 feet by approximately 12 feet deep. Excavated soil was disposed of at West Contra Costa Sanitary Landfill (745.37 tons) and Keller Canyon Landfill (352.84 tons). The excavation was backfilled with a layer of permeable drain rock. Five (5) 4-inch diameter casings (BF-1 through BF-5) were installed in the permeable bridge to facilitate dewatering the excavation. The excavation and backfill activities are summarized in AEI's Interim Source Removal Report, dated August 31, 2009. Casing BF-4 was subsequently destroyed, the locations of the remaining backfill casings are shown on Figure 3, Site Plan.

2.2.4 Additional Investigation and Well Installation

On April 1 and 2, 2009 and May 12 and 13, 2009, AEI advanced eight soil borings (MW-1 through MW-7 and IW-1) at the property and converted seven (7) of the borings (MW-1 through MW-7) into groundwater monitoring wells and one boring (IW-1) into an injection/sparge well. The monitoring wells were installed at a depth of 17 feet bgs; the sparge well was installed at a depth of 15 feet bgs. The locations of the wells are shown on Figure 3.

The details of the well installation are summarized in the AEI's Groundwater Monitoring Well Installation Report, dated July 31, 2009. The details of well construction are summarized on Table 4, Monitoring Well Construction Details.

TPH-g was reported in soil samples collected from the groundwater monitoring wells at concentrations ranging from ND<1.0 mg/kg to 1,100 mg/kg (MW-4-1). TPH-d was reported at concentrations ranging from non-detectable at less than 1.0 (ND<1.0) mg/kg to 99 mg/kg (MW-4-12). Inspection of the SW8015Bm chromatographs indicates that the hydrocarbon present in the soil is weathered gasoline and that the diesel range hydrocarbon concentrations reported represent the heavy portion of gasoline component compounds.

MTBE was reported in soil samples MW-6-19 and MW-6-25 at 0.12 mg/kg and 0.029 mg/kg, respectively. Benzene was reported at concentrations ranging from ND<0.005 mg/kg to 0.81 mg/kg (MW-2-12). Toluene was reported at concentrations ranging from ND<0.005 mg/kg to 2.9 mg/kg (MW-4-12). Ethylbenzene was reported at concentrations ranging from ND<0.005 mg/kg to 6.7 mg/kg (IW-1-10.5). Xylenes were reported concentrations ranging from ND<0.005 mg/kg to 3.5 mg/kg (IW-1-10.5). The results of analyses of soil samples from the groundwater monitoring wells are shown on Table 1, Soil Sample Analytical Data.

TPH-g was reported in groundwater samples at concentrations ranging from 220 µg/L (MW-1) to 14,000 µg/L (MW-5). TPH-d was reported at concentrations ranging from 97 µg/L (MW-1) to 3,700 µg/L (MW-7). Inspection of the SW8015Bm chromatographs indicated that the hydrocarbons present in the soil is gasoline. The diesel range hydrocarbon concentrations reported represent the heavy portion of gasoline component compounds.

MTBE was reported as ND<5.0 µg/L in MW-1 and as non-detectable at elevated reporting limits in the other monitoring wells. Benzene was reported at concentrations ranging from 10 µg/L (MW-1) to 3,000 µg/L (MW-5). Toluene was reported at concentrations ranging from ND<0.5 µg/L (MW-1) to 37 µg/L (MW-7). Ethylbenzene was reported at concentrations ranging from 2.3 µg/L (IW-1) to 340 µg/L (MW-5). Xylenes were reported at a concentrations ranging from 5.4 µg/L (MW-1) to 920 µg/L (MW-3).

On March 27, 2009, TPH-g and MBTEX were reported in backfill well casing BF-1 at concentrations of 19,000 µg/L, ND<250 µg/L, 890 µg/L, 27 µg/L, 460 µg/L, and 1200 µg/L, respectively.

The results of ongoing groundwater monitoring are summarized in Table 5, Groundwater Elevation Data and Table 6, Monitoring Well Groundwater Analytical Data. The results of the last groundwater monitoring event are shown on Figures 8 and 9.

3.0 GEOLOGY AND HYDROLOGY

The site lies on the distal end of the Temescal Creek Alluvial Fan at approximately 45 feet above mean seal level (amsl). The Temescal Alluvial Fan is a low relief broad alluvial fan sloping westerly and southwesterly from the mouth of the Temescal Creek. The Holocene age alluvial fan deposits are mapped as Quaternary Holocene alluvial fan deposits (Qhaf) (Helley 1997). The sediments are described as typically, brown to tan gravelly sand or sandy gravel, which generally grades upward into sandy or silty clay.

At the subject site, the sediments in the upper four (4) to five (5) feet underlying the site are black silty clay – clayey silt containing variable amounts of scattered gravel. These sediments are considered to be bay and bay margin sediments.

The shallow fine grained surface layer is underlain by alluvial deposits of intercalated, lenticular bodies of silt, clay, sand, and gravel. The sediments are typically highly variable mixtures of the four primary lithologies. Permeability (transmissivity) of the coarse grained sediments is typically low due to the presence of interstitial clay; however scattered clean sands and gravels are present with good permeability. These individual permeable channel deposits appear to act as preferential channels for groundwater flow across the site and are the likely cause of the slightly sinuous, asymmetric appearance of the hydrocarbon plume in the soil and groundwater.

4.0 PREFERENTIAL PATHWAYS AND UTILTIY SURVEY

4.1 Utility Survey

AEI requested utility maps from Pacific Gas and Electric (PG&E) and East Bay Municipal District (EBMUD). In April 2013, AEI performed a geophysical survey to confirm the accuracy of these maps. The survey included ground penetrating radar (GPR) and passive and active electromagnetic detectors. These maps were also compared to the Utility maps prepared by Taber Consultants (Taber) for the Former City of Paris Cleaners site at 3516 Adeline Street.

The maps and AEI's geophysical survey identified a sanitary sewer, gas main, water lines and lateral lines down gradient of the site in Adeline Street. No storm drains are present adjacent to the subject site. The locations of the lines are consistent with those shown on both the public utilities' maps and the City of Paris Cleaners map prepared by Taber. The water, sewer, and gas lines are approximately 16 feet, 25 feet, and 45 feet from the down gradient edge of the site. The down gradient property line is approximately 265 feet down gradient of the former UST.

The depth of the bottom of sanitary sewer pipe was measured at the manhole adjacent to the site in Adeline Street at 8.0 feet bgs and flows to the south. The bottom of the utility trench is expected to be no more than 18 inches deeper than the bottom of the pipe or 9.5 feet bgs. Based on GPR, the depths of the water main and gas are 6 feet and 3.5 feet bgs, respectively. The depth first groundwater in monitoring MW-6 is approximately 11 feet bgs. The shallow aquifer is confined and although the groundwater level in MW-6 has been as shallow as 4.66

feet below the top of the casing (btc), the utility trenches do not appear to intersect the shallow aquifer. The locations of the Utilities are shown on Figure 10, Utility Map and Figure 11, Site Conceptual Model.

A sanitary sewer, two gas lines, two water lines and lateral lines were located up gradient of the site in Chestnut Street. The locations of the lines are consistent with those shown on both the public utilities' maps and the City of Paris Cleaners map prepared by Taber. A gas line, unidentified line, water line, gas line, sanitary sewer, and second water line are located approximately 4 feet, 6 feet, 7 feet, 1 feet, 23 feet, and 45 feet, respectively, from the up gradient edge of the former UST.

The depth of the former UST excavation is estimated to be approximately 13-feet bgs. Based on GPR interpretation, depth of the closest gas line is 2.5 feet bgs, the depth of the closest water main is 7-feet bgs and the second gas main is 2.5 feet bgs. The depth of the water and first gas line trenches are estimated at 8.0-feet to 3.5 feet bgs, respectively.

The depth of the bottom of sanitary sewer pipe was measured at the manhole adjacent to the northeast corner of the site Chestnut Creek Street at a depth of 7.0 feet bgs. The bottom of the utility trench is expected to be 8.5-feet bgs. The depth to first groundwater in monitoring MW-7 was approximately 12-feet bgs. The shallow aquifer is confined and although the groundwater level in MW-7 has been as shallow as 5.34 feet below the top of the casing (btc), it appears that the utility trenches do not intersect the shallow aquifer. However, distribution of hydrocarbons in the shallow soil south of the former USTs location (Figures 4, 5, and 6.) and significant soil contamination at a depth of 6-feet bgs in the remedial excavation suggest that the water line immediately adjacent to and up gradient of the former UST has acted as a conduit and allowed hydrocarbons to migrate 70 feet laterally (south), cross gradient to the approximate location of SB-19.

4.2 Well Survey

As part of the Preferential Pathway Study, AEI obtained the Well Drillers reports from the California Department of Water resources (DWR) for all wells within 1000 feet of the subject site. The State Water Resources Control Board GeoTracker database was also searched to obtain the coordinates of the wells identified within 1,000 feet of the site. The locations of these wells are attached as Table 7 and shown on Figure 12. The results of the well survey demonstrate that no wells are threatened by the hydrocarbon plume.

5.0 CONCEPTUAL SITE MODEL (CSM)

The Site Conceptual Model identifies the source of contaminants, release mechanism, exposure pathways and potential human and ecological receptors. Figure 11 presents a cross section view of the release area and impacted soil and groundwater at the site.

5.1 Hydrogeologic setting

The site is located approximately 0.85 miles east of the San Francisco Bay on the East Bay Alluvial plain. The topographic surface slopes gently to the west southwest.

The site lies on the distal end of the Temescal Creek Alluvial Fan at approximately 45 feet above mean seal level (amsl). At the subject site, the sediments in the upper four (4) to five (5) feet underlying the site are black silty clay – clayey silt containing variable amounts of scattered gravel. These sediments are considered to be bay and bay margin sediments.

The shallow fine grained surface layer is underlain by alluvial deposits of intercalated, lenticular bodies of silt, clay, sand, and gravel. Permeability (transmissivity) of the coarse grained sediments is typically low due to the presence of interstitial clay; however scattered clean sands and gravels are present with good permeability. These individual permeable channel deposits appear to act as preferential channels for groundwater flow across the site.

The gravel layer encountered in the base of the interim source removal excavation consisted of permeable gravels 12- to 18-inches across the yielded water into the excavation with similar width intervals with low permeability that contributed little or no water to the excavation.

The groundwater appears to be confined as first water is typically encountered at depths of 10 feet or greater bgs and depth to water in monitoring wells is typically three to 5 feet shallower. Static depth to groundwater in groundwater monitoring wells has range from 3.25 feet bgs (MW-5, 5/5/2011) to 11.84 feet bgs (MW-6, 8/27/2009). Seasonal fluctuation in groundwater averages between 1.5 to 2.5 feet.

The site is completely covered by buildings and or paving with no local recharge. Groundwater recharge appears to be from Temescal Creek inn the upper part of the alluvial fan.

Groundwater use is classified as municipal and domestic supply. No water supply wells are within 1,000 feet of the site. No nearby surface water bodies are present.

5.2 Source of Release

The source of the release has been reported as a single walled, 3,750 gallon single walled steel tank located under the sidewalk at the south east corner of the property (Figure 3). The dispenser appears to have been located immediately adjacent to the UST, inside the building. The UST system was used to store and dispense gasoline.

5.3 Impacted media

Data available to date indicates that the release impacted the soil surrounding former UST and a broad area down gradient of the UST. Groundwater underlying the tank hold and down gradient of the former tank hold has also been impacted. Vapor phase impact appears to be limited to the area around the former tank hold.

5.3.1 Soil

TPH-g and BTEX have been identified in the soil at the source area. No MTBE or daughter products have been identified in the source area, however MTBE was identified in soil samples in down gradient well MW-6.

Previous investigations have identified significant concentrations of hydrocarbon contamination in the shallow soil, typically between depths of 5 feet to 12 feet bgs. The distribution of impacted soil is show on Figures 4, 5 and 6. No significant hydrocarbons (TPH-g <50 mg/kg) has been identified above 5 feet bgs. At depths below 5-feet bgs and above 9-feet bgs (smear zone) significant hydrocarbons remain in the area of the former tank hold, along the south end of the source removal excavation and in SB-13 and MW-3 (down gradient of the north portion of the excavation).

At depths below 9-feet bgs and above 14-feet bgs (aquifer) significant hydrocarbons remain in the area of the former tank hold, along the south and east sides of the source removal excavation and in a lobate plume extending west (down gradient) of the source removal excavation for approximately 140 feet. The impacted soil in this interval is related to impacted groundwater in permeable gravels.

At depths below 14-feet bgs, significant hydrocarbons have been identified only in the area of MW-6, adjacent to Adeline Street. The presence of hydrocarbons in the deeper zone is MW-6 is related to the impacted groundwater permeable gravels that make up the aquifer stepping downward and the resulting drop in the water table.

The distribution of hydrocarbons in the soil is variable and appears related to vertical (layering) and lateral (channels) variations in lithology and related permeability variations.

5.3.2 Groundwater

Maximum concentrations of TPH-g and BTEX reported in grab groundwater samples from soil borings were 120,000 µg/L (S-4), 10,000 µg/L (SB-11) 640 µg/L (SB-11), 3,500 µg/L (S-4), and 7,900 µg/L (SB-11), respectively. No MTBE or daughter products have been reported in groundwater samples. Historical groundwater concentrations of hydrocarbons are presented on Table 2, Groundwater Analytical Sample Data and soil boring groundwater data on Figure 7, TPH-g in Grab Water Samples (2007 - 2008).

Maximum concentrations of TPH-g and BTEX were in the monitoring wells have been reported at 26,000 µg/L in MW-2 on August 27, 2009, 3,600 µg/L in MW-2 on August 27, 2009, 70 µg/L in MW-2 on December 15, 2009, 1,700 µg/L in MW-2 on May 5, 2011, and 3,000 µg/L in MW-2 on August 27, 2009, respectively. No MTBE has been reported in groundwater samples at elevated reporting limits. No light non-aqueous phase liquid (LNAPL) has been reported at the subject site. Historical groundwater concentrations of hydrocarbons are presented on Table 7, Monitoring Well Groundwater Analytical Data and current data is shown on Figure 9, Monitoring Well Groundwater Data (4/4/2013).

The primary contaminant reported in soil and groundwater analyses is a gasoline range fuel with related BTEX. Diesel range hydrocarbons are typically reported at significantly lower concentration than TPH-g and examination of SW8015Bm chromatograph charts of groundwater samples from the wells found no indication of diesel present. The chart patterns that are consistent with a gasoline range fuel release.

An exception to the observation of higher gasoline concentrations and significantly lower diesel concentrations is seen the groundwater samples from soil borings SB-16, SB-18 and SB-19. These borings are located on the up gradient edge of the plume in Chestnut Street and are up gradient of the former UST location. The analytical reports of diesel range hydrocarbons in these samples typically carry laboratory flags indicating the presence of oil range hydrocarbons. The analyses for these samples were re-quantified as diesel and motor oil. The re-quantified results for these samples reported motor oil at significantly higher concentration than either gasoline or diesel. Examination of the chromatograph charts for these three samples show the presence of a hydrocarbon centered in the overlap between the diesel and motor oil ranges. These heavier than diesel hydrocarbons suggest a separate release up gradient of the site, such as heavy heating oil, has occurred.

5.4 Contaminant Transport and Exposure Pathways

5.4.1 Transport

The calculated direction of groundwater flow is to the west with an average hydraulic gradient of 0.018 ft/ft. However, the orientation of the hydrocarbon plume and hydrocarbon distribution in the groundwater indicates that the actual groundwater flow is somewhat sinuous and appears to follow permeability channels (sands and gravels). The aquifer is composed of gravelly sands and sandy gravels. The permeability of the sediments is highly variable and appears to have been deposited by braided stream flowing down the alluvial fan.

Attenuation of hydrocarbon concentrations down gradient appears to be primarily by dilution and dispersion. Dissolved oxygen (DO) concentrations within the hydrocarbon plume are typically less than 0.90 mg/L indicate that the aquifer is anaerobic and biodegradation was limited by the low levels of dissolved oxygen.

Oxygenation of the aquifer subsequent to the interim source removal appears to be reducing groundwater contaminant concentration by enhancing biodegradation.

5.4.2 Preferential Pathways

Groundwater migration is along permeability channels within alluvial sands and gravels. The depth to both the gravels and the water table increases to the west.

The effect of these pathways can be seen in the significant decrease in hydrocarbons in monitoring wells MW-1, MW-4, and MW-5 due to down gradient migration of oxygenated groundwater in the remedial excavation, which has been kept oxygenated by the client. Despite the decrease in these wells, well MW-2 shows no significant decrease in hydrocarbon concentrations.

As noted above, the utility trenches along Chester Street appear to have acted as preferential pathways. No data has been collected along Adeline Street; however the preferential pathway study indicate that the utility trenches in this area are shallower than the groundwater..

5.4.3 Points of exposure

As the site is completely covered, no direct pathways except the possibility of vapor intrusion exist. Past soil vapor monitoring results have all been below vapor intrusion guidelines.

5.4.4 Sensitive Receptors

The residential area along the south edge of the identified contaminant plume represents a sensitive receptor. The extent of impact to this area is not known at present.

6.0 DATA GAP WORK PLAN

6.1 Data Gaps

In the 2010 Remedial Investigation and Feasibility Study (RIFS) work plan, AEI proposed to further delineate the extent of impact the groundwater and to monitor the effects of aeration of the current excavation and former UST excavations. AEI proposed to install additional wells and perform an air sparge and soil vapor extraction pilot test.

Significant changes have occurred to hydrocarbon concentrations in the groundwater in what was formerly the center of the groundwater plume. AEI believes that this groundwater data invalidates the basis for the feasibility study as proposed. In addition the ACEH requested that soil borings be advanced rather than installing groundwater monitoring wells.

The down gradient limit of the impact to the soil and groundwater to the west has not been defined. The cross gradient limit of the impact to the soil and groundwater, to the south of the site in the residential properties, has not been established. Data needs to be collected to further define the limits of impact in these areas.

The utility trenches adjacent to and up gradient of the former UST have acted as preferential pathways. Although it does not appear that utility trenches in Adeline Street have acted as preferential pathways; however no data is available to in the areas of the trenches to demonstrate whether this is the case or not. Several soil borings along the sewer trench are needed to determine if this trench has acted as a preferential pathway.

6.2 Proposed Soil Borings and Monitoring Well Installation

AEI proposes to install one (1) groundwater monitoring well and advance ten (10) soil borings to further delineate the extent of hydrocarbon impact to the groundwater underlying the site. The location of the sampling points were chosen as described below. The locations of proposed monitoring well MW-8 and soil borings SB-32 through SB-41 are shown on Figure 10.

Monitoring well MW-8 will be located near soil boring SB-7 and is designed to provide ongoing monitoring in the lateral (cross gradient) lobe of impacted groundwater.

Three (3) soil borings (SB-32 and SB-34) will be advanced on the residential lots south of the subject site. One soil boring (SB-35) will be advanced on the lot west of soil boring SB-34 These soil borings are designed to further delineate the extent of impacted soil and groundwater to the south. Installation of these borings will be contingent of obtaining access agreements from the three parcels involved.

Two (2) soil borings (SB-36 and SB-37) will be advanced south of MW-6, along the east side of Adeline Street to further delineate the extent of impacted soil and groundwater south of MW-6.

One (1) soil boring (SB-38) will be advanced west of SB-37 and south of SB-39 adjacent to the sewer utility trench to determine if the utility trench has acted as a conduit for the migration hydrocarbons.

Two (2) soil borings (SB-39 and SB-40) will be advanced down gradient of well MW-6, to further delineate the extent of impacted soil and groundwater along the apparent groundwater plume's axis. Soil boring SB-39 will be located adjacent to the sanitary sewer to better establish to relationship between the top of the shallow aquifer and the sanitary sewer utility trench.

One (1) soil boring (SB-41) will be advanced midway between MW-6 and SB-30, along the west boundary of the site to further delineate the extent of impact to the soil and groundwater on the northern side of the groundwater plume.

A well construction permit will be obtained from Alameda County Public Works Agency. The groundwater monitoring well will be advanced with nominal 8-inch hollow stem augers. The well will be set at an approximate depth of 17 feet bgs in the clay layer below the first wet zone in the shallow groundwater. Samples will be collected at intervals of 5 feet using a split spoon samples. The well will be constructed with 2-inch diameter Schedule 40 PVC well casing. The wells will be screened from 17 feet to 7-feet bgs. A sand pack will be installed in the annulus of well to approximately 1 foot above the screen interval. A bentonite seal will be placed above the sand and the remainder of the annulus will be sealed with neat cement grout. A traffic rated flush mounted well box will be installed at the surface. The well will be developed no sooner than 3 days after sealing the well by surging, bailing, and purging to remove accumulated fines from the casing and sand pack.

The temporary soil borings will be advanced with a direct push drilling rig using dual tube tooling. A continuous soil core will be cut to a depth of 32 feet bgs. Soil samples will be retained for possible chemical analysis at intervals not to exceed 5-feet. Additional soil samples may be retained at the discretion of the onsite geologist from lithologic changes, intervals with elevated field screening levels, and from zones of obvious impact.

Field screening of the soil cores will be performed at intervals not to exceed 5-feet and at lithologic changes and from zones of obvious impact. Field screening data will be used to select the samples analyzed. A minimum of three soil samples will be collected from each boring at depths between 5.0 and 25 feet bgs. Sample selection will be based on PID readings and sensory perception.

If a deeper aquifer is encountered, a groundwater sample will be collected using a HydroPunch or similar sampling tool.

6.3 Decontamination

Sampling equipment will be decontaminated between samples using a triple rinse system containing Alconox™ or similar detergent. Rinse water will be contained in sealed labeled DOT approved 55-gallon drums in a secure location onsite pending proper disposal.

6.4 Waste Storage

Pending the results of the soil sample analyses, drill cuttings will be stored in Department of Transportation (DOT) approved 55-gallon drums in a secure location onsite. Upon receipt of analytical data, drill cutting and waste liquid disposal will be arranged with a properly licensed waste hauler and disposal facility(s).

6.5 XYZ Well Survey

The monitoring well will be surveyed relative to each other, mean sea level, and a known datum by a California licensed land surveyor. Soil boring locations will be surveyed relative to each other, monitoring wells. As required, survey data will be obtained utilizing global positioning system (GPS) technology, and will be reported in a format acceptable for submission to the California GeoTracker database, and hydrologic evaluation.

6.6 Reporting

Following receipt of all laboratory analytical and well survey data, a technical report will be prepared. The report will detail the results of laboratory analyses and field protocols. The final report will include figures, data tables, logs of borings and well construction details, and interpretation of the contaminant distributions. Recommendations may be made for further assessment as deemed appropriate.

Following completion of the Data Gap Investigation, AEI will prepare a work plan for interim remediation and or pilot testing.

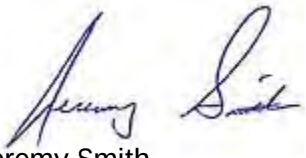
7.0 CLOSING STATEMENT AND SIGNATURES

AEI has prepared this report and work plan on behalf of Ms. Steffi Zimmerman relating to the release of petroleum hydrocarbons on the property located at 3442 Adeline Street, Oakland, California. The discussion rendered in this report is based on field investigations and laboratory testing of material samples. This report does not reflect subsurface variations that may exist between sampling points. These variations cannot be anticipated, nor could they be entirely accounted for, in spite of exhaustive additional testing. This report should not be regarded as a guarantee that no further contamination, beyond that which could have been detected within the scope of past investigations is present beneath the property or that all contamination present at the site could be identified, treated, or removed. Undocumented, unauthorized releases of hazardous material(s), the remains of which are not readily identifiable by visual inspection and/or

are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation and may or may not become apparent at a later time. All specified work was performed in accordance with generally accepted practices in environmental engineering, geology, and hydrogeology and were performed under the direction of appropriate registered professional.

We look forward to hearing your comments regarding this work plan. Should you have any questions or need any additional information, please contact either Mr. Flory at (925) 746-6000 or 925-457-7517 or by e-mail at rflory@aeiconsultsnts.com if you have any questions or need any additional information.

Sincerely,
AEI Consultants



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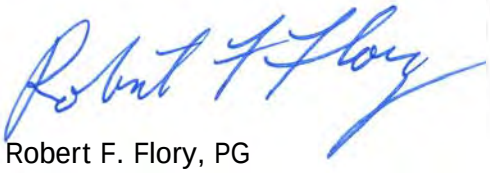
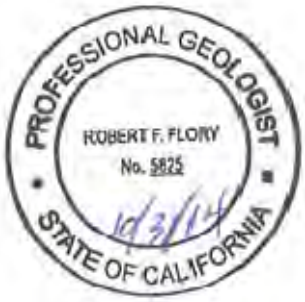
Senior project Manager





Robert F. Flory, PG
Senior Geologist/Project Manager

DISTRIBUTION

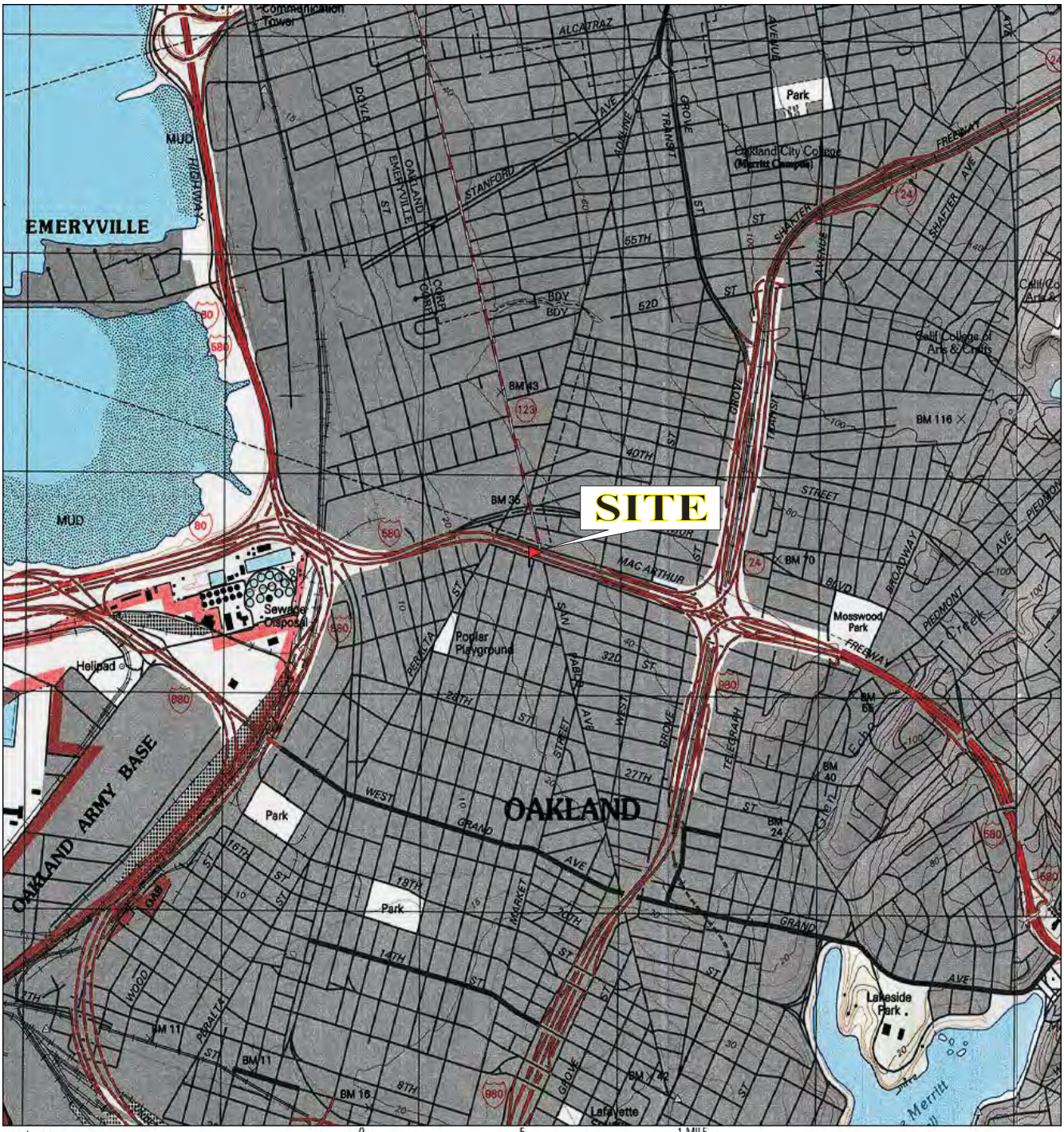
Ms. Steffi Zimmerman
3289 Loma Verdes Place
Lafayette, CA 94549

Dilan Roe
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

GeoTracker

File

FIGURES



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Site Location Map

3442 Adeline Street
Oakland, CA 94608

FIGURE 1
Job No: 281939

Property Boundary

Former UST Area

Approximate Scale:
1 inch = 55 feet

0’ 55’

N

AEI CONSULTANTS
2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597

Site Vicinity Map

3442 Adeline Street
Oakland, CA 94608

FIGURE 2
Job No: 281939

1"=30'

SCALE IN FEET
0 15 30 60 90

ADELINE STREET

CHESTNUT STREET

DRIVE

GATE

SHED

CANOPY

BUILDING

BUILDING

TANK EXCAVATION

REMEDIAL EXCAVATION

RESIDENCE

RESIDENCE

RESIDENCE

RESIDENCE

RESIDENCE

RESIDENCE

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 SB-8 SB-9 SB-10 SB-11 SB-12 SB-13 SB-14 SB-15 SB-16 SB-17 SB-18 SB-19 SB-20 SB-21 SB-22 SB-23 SB-24 SB-25 SB-26 SB-27 SB-28 SB-29 SB-30 SB-31

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7

VB-1 VB-2 VB-3

S1 S2 S3 S4

TW-1

LEGEND

- Monitoring Well
- AEI Soil Boring
- Clear Water Soil Boring
- Soil vapor Sample
- Former Gasoline UST
- Interim Source Removal Excavation

DRAFTED BY RFF

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2500 CAMINO DIABLO, WALNUT CREEK

SITE PLAN

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 3
PROJECT NO. 281939

LEGEND

DRAFTED BY RFF

- Soil Boring - 2006
- Soil Boring - 2007
- Monitoring Well
- Excavation Sidewall Sample 6-8 feet bgs
- Former UST
- Source Removal Excavation
- TPH-g concentration isopleth

1,200 - TPH-g Concentration (mg/kg)
6-8 feet bgs

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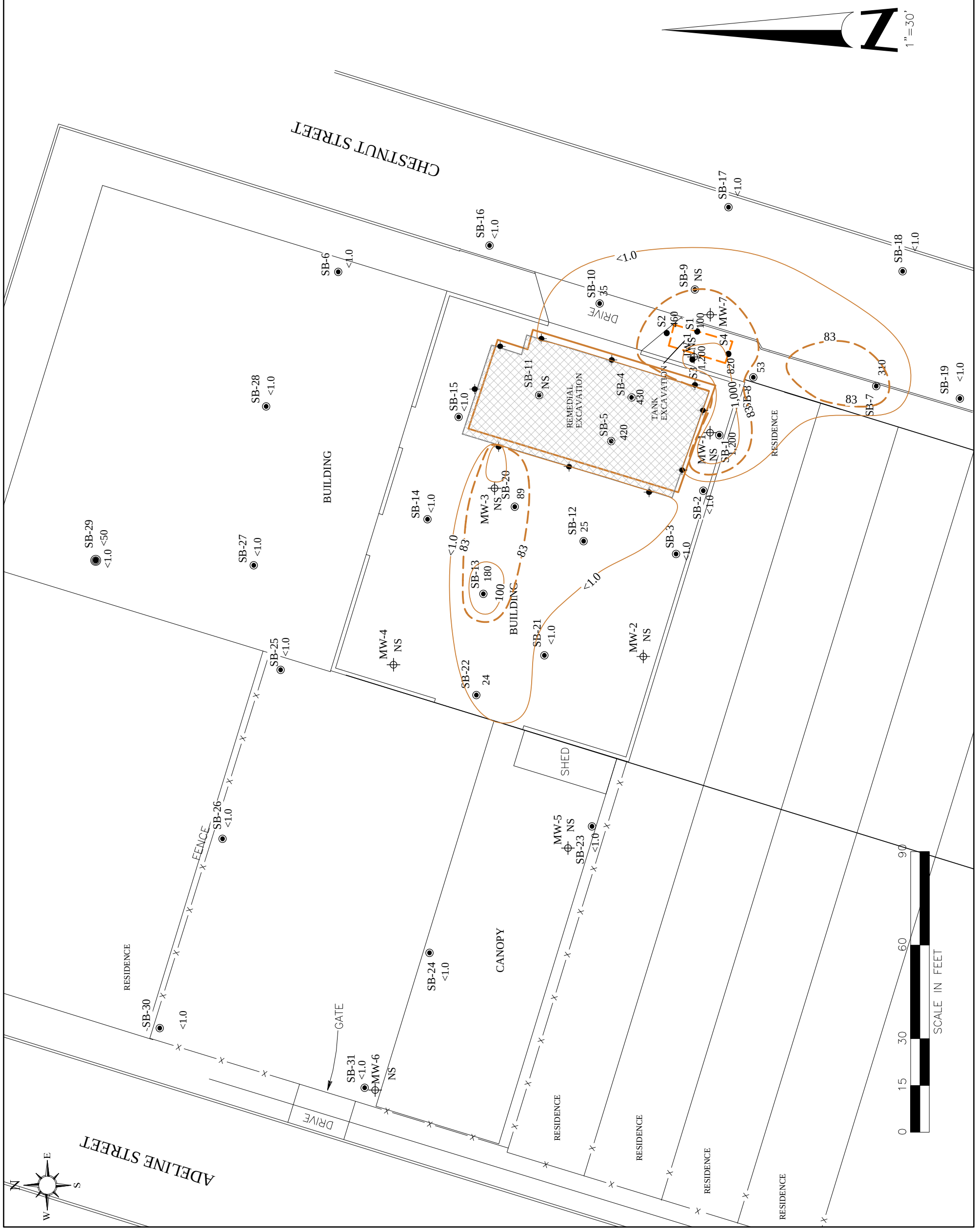
2500 CAMINO DIABLO, WALNUT CREEK

TPH-g in Soil (6 - 8ft bgs)

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 4
PROJECT NO. 281939



LEGEND

DRAFTED BY RFF

- Soil Boring - 2006
- Soil Boring - 2007
- Monitoring Well
- Former UST
- Source Removal Excavation
- Excavation Sidewall Sample 11.5 - 12 feet bgs
- TPH-g concentration isopleth

1,200 - TPH-g Concentration (mg/kg)
11.5 -12 feet bgs

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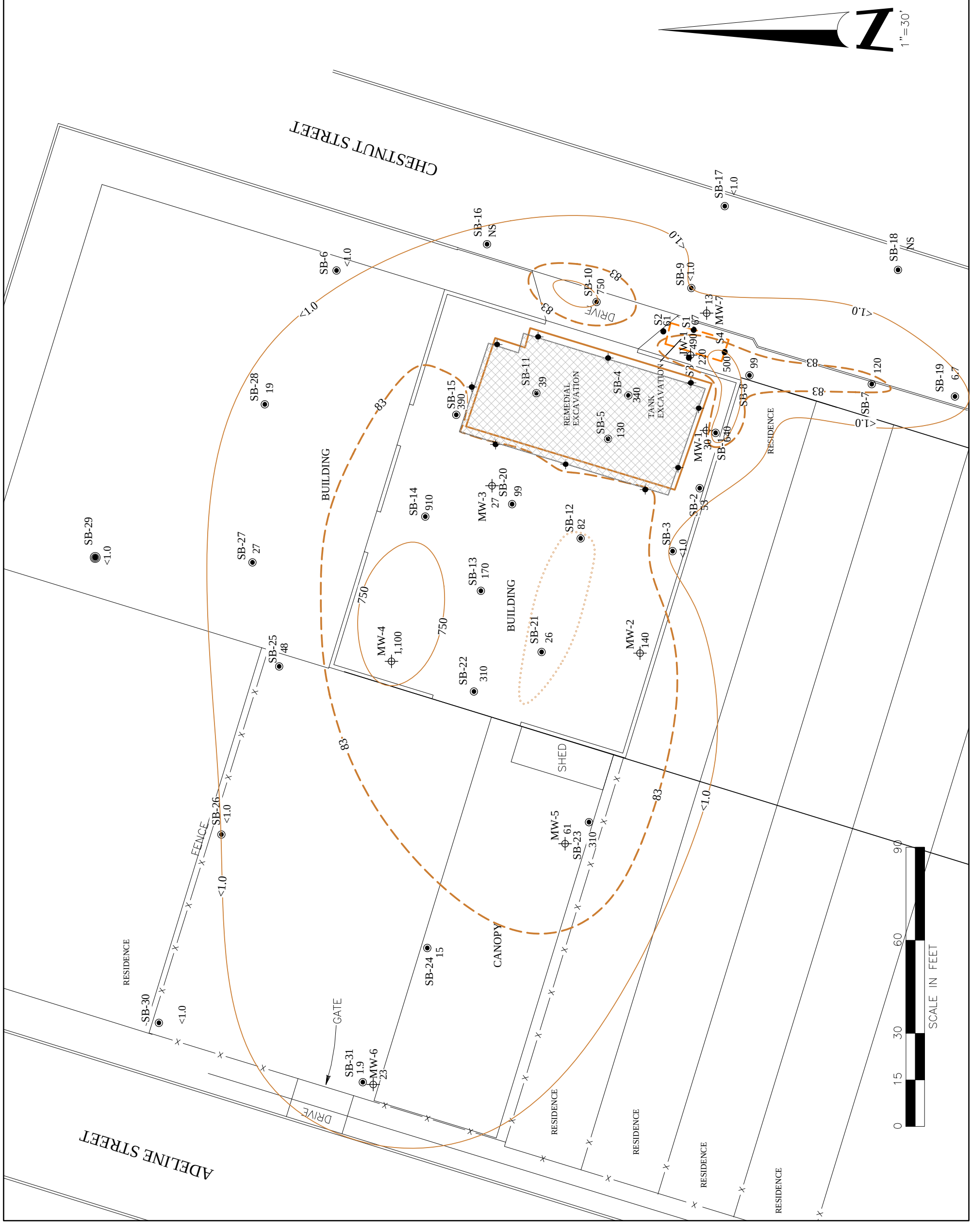
2500 CAMINO DIABLO, WALNUT CREEK

TPH-g in Soil 11.5 -12 ft bgs

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 5
PROJECT NO. 281939



LEGEND

DRAFTED BY RFF

- Soil Boring - 2006
- Soil Boring - 2007
- Monitoring Well
- Former UST
- Source Removal Excavation
- TPH-g concentration isopleth

1,200 - TPH-g Concentration (mg/kg)
16 feet bgs

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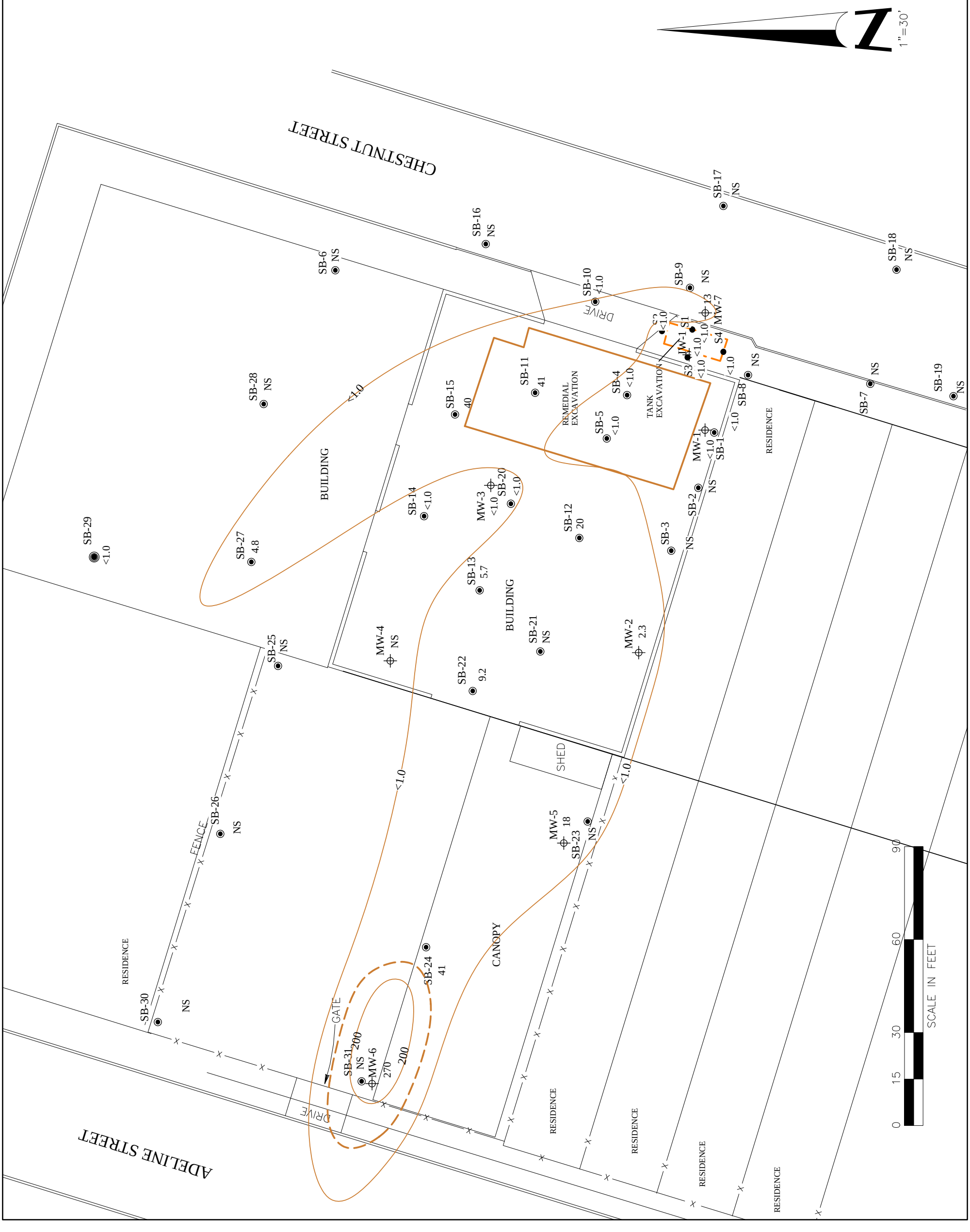
2500 CAMINO DIABLO, WALNUT CREEK

TPH-g in Soil 16 feet bgs

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 6
PROJECT NO. 281939



LEGEND

DRAFTED BY RFF

- Soil Boring - 2006
- Soil Boring - 2007
- Monitoring Well
- Former UST
- Source Removal Excavation
- TPH-g concentration isopleth

890 - TPH-g Concentration (µg/L)

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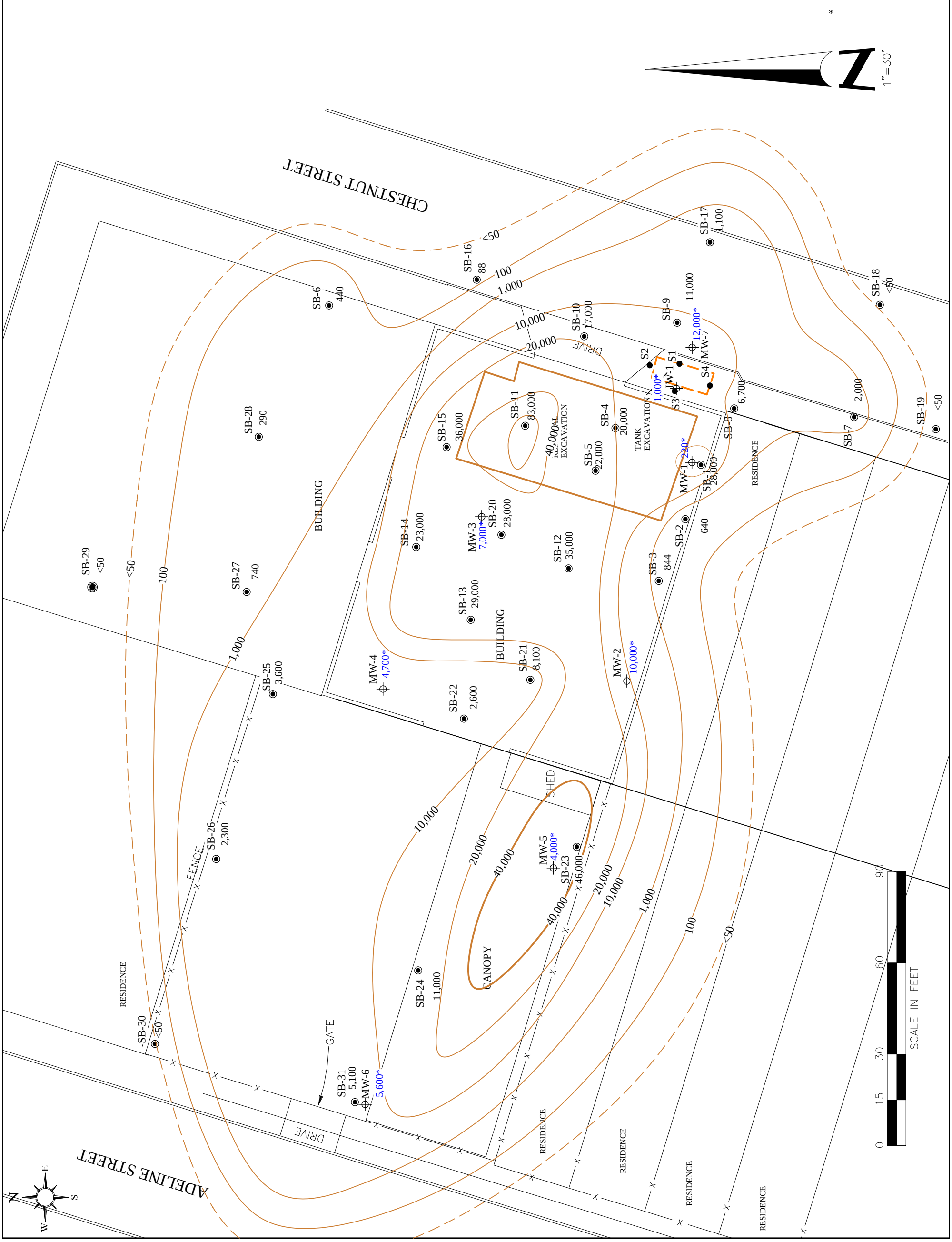
2500 CAMINO DIABLO, WALNUT CREEK

TPH-g in Grab Water Samples (2007 - 2008)

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 7
PROJECT NO. 281939



LEGEND

DRAFTED BY RFF

- Monitoring Well
- Backfill Casings
- Tank Excavation
- Interim Source Removal Excavation

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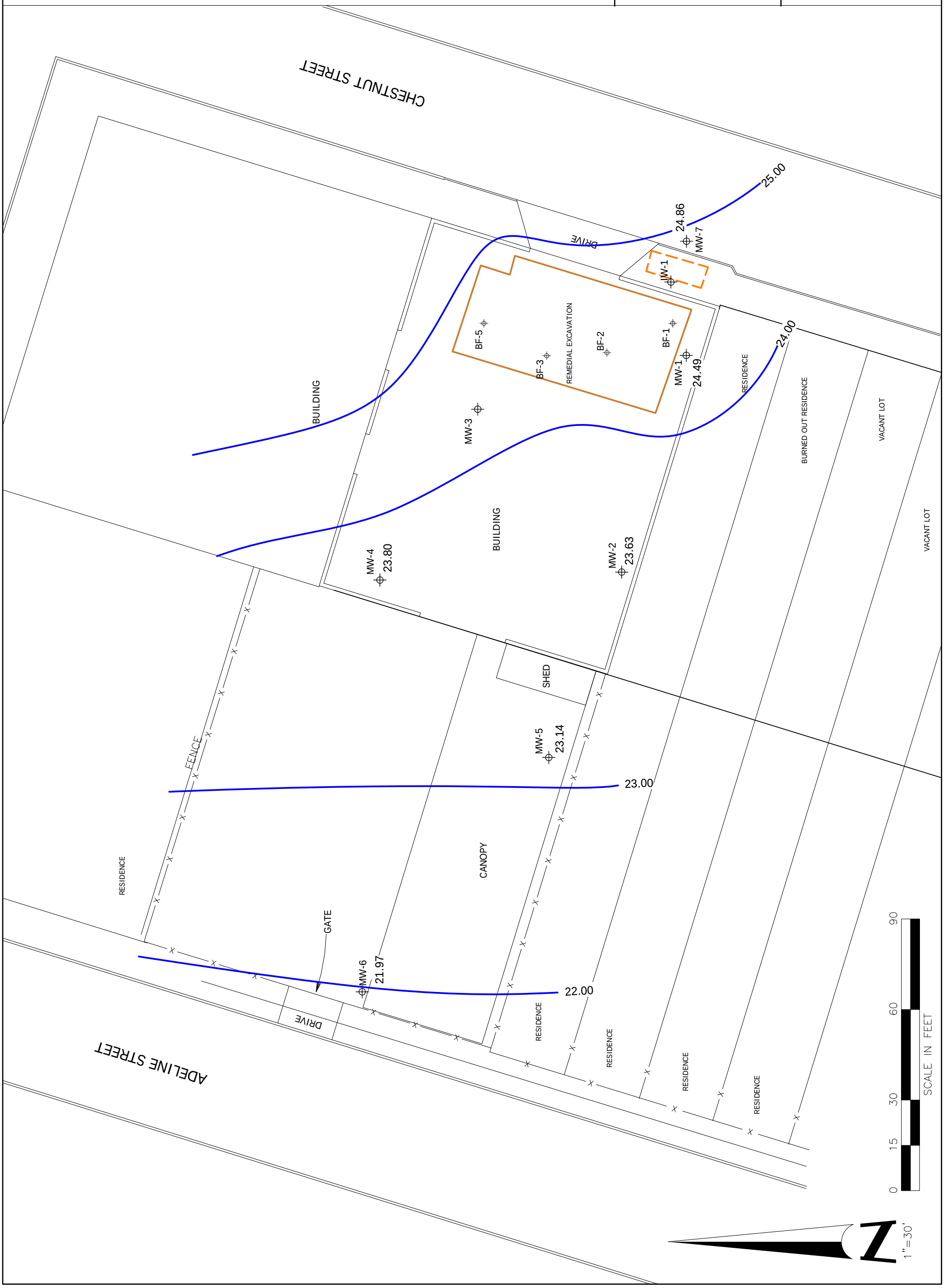
2500 CAMINO DIABLO, WALNUT CREEK

Groundwater Elevations (4/4/2013)

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 8
PROJECT NO. 281939



LEGEND

DRAFTED BY RFF

Monitoring Well

Backfill Casings

Former Gasoline UST

Interim Source Removal Excavation

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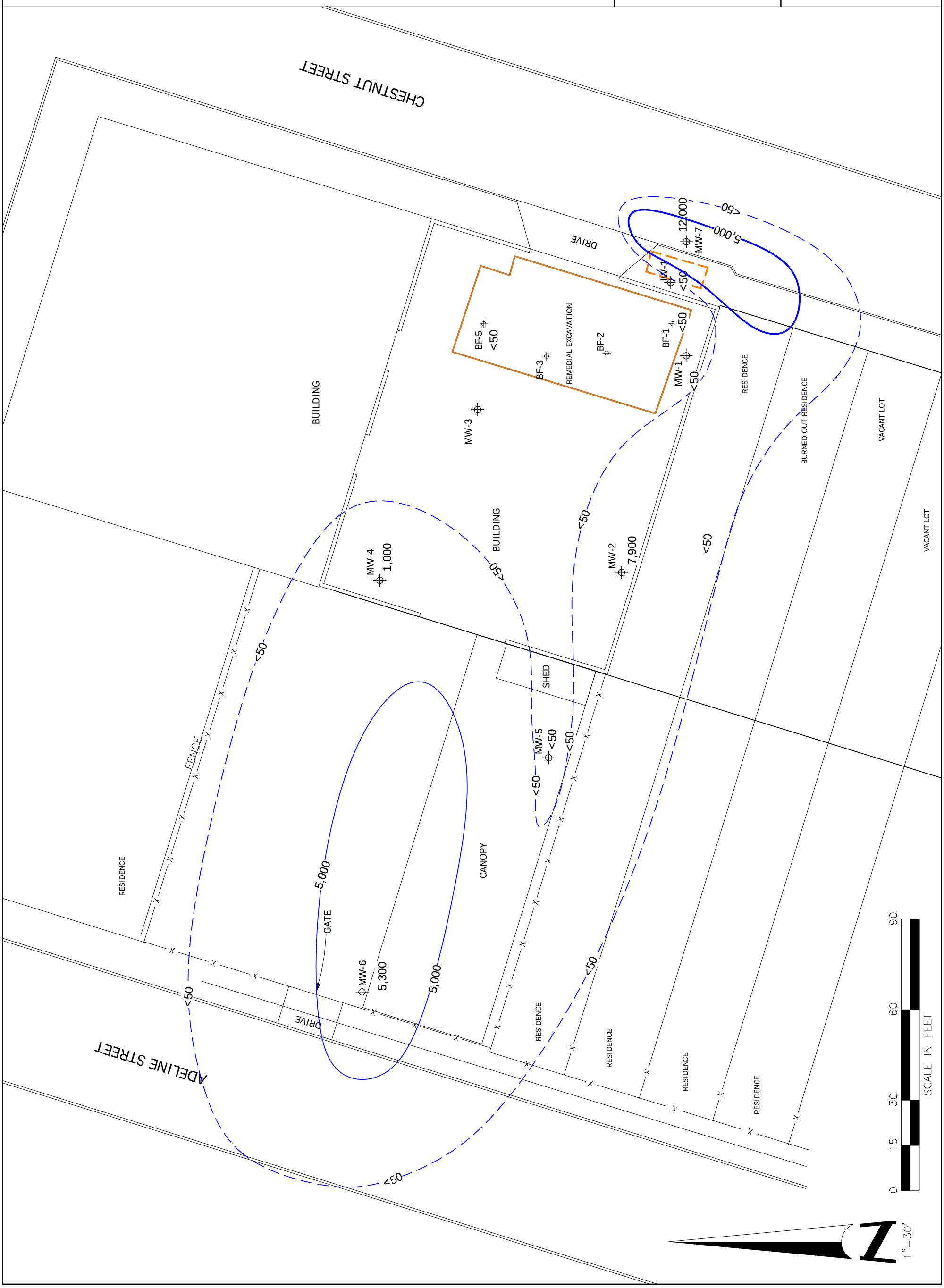
2500 CAMINO DIABLO, WALNUT CREEK

TPH-g in Monitoring Wells (4/4/2013)

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 9

PROJECT NO. 281939



LEGEND

DRAFTED BY RFF

Monitoring Well

Backfill Casings

Former Gasoline UST

Interim Source Removal Excavation

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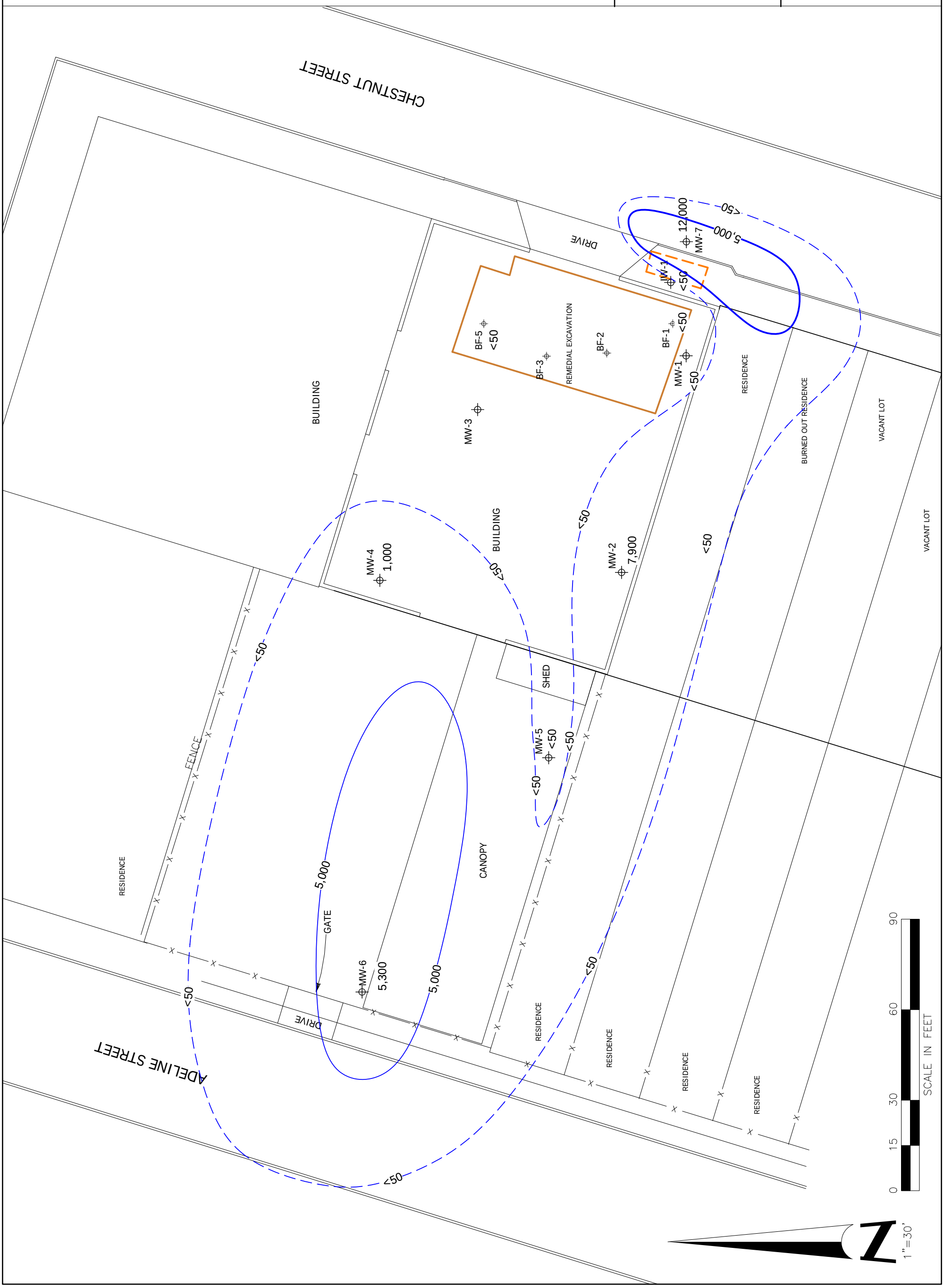
2500 CAMINO DIABLO, WALNUT CREEK

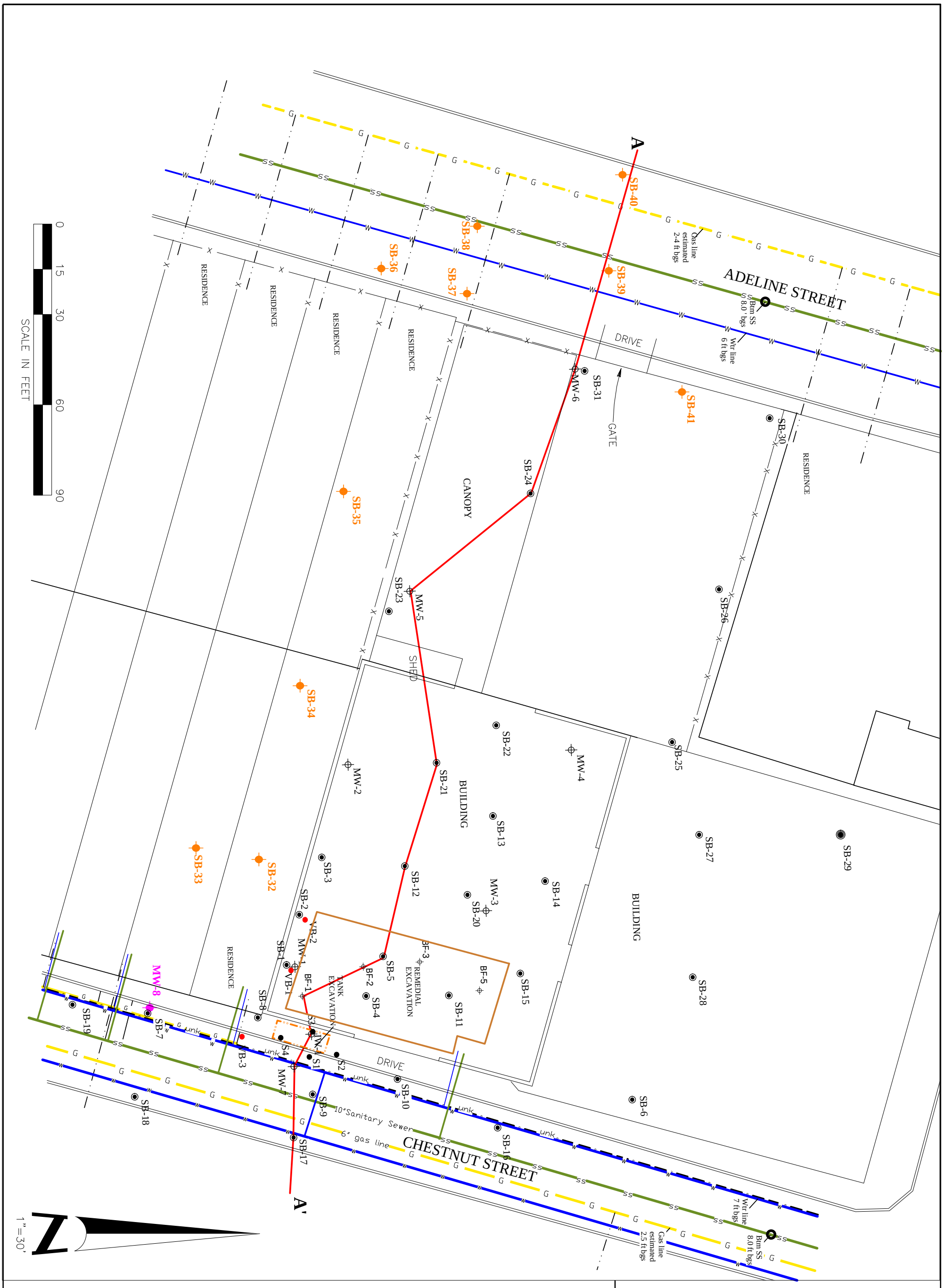
TPH-g in Monitoring Wells (4/4/2013)

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 9

PROJECT NO. 281939





LEGEND

DRAFTED BY RFF

- Monitoring Well
- AEI Soil Boring
- Clear Water Soil Boring
- Soil vapor Sample
- Proposed Monitoring well
- Proposed Soil Boring
- Cross Section A - A'
- Former Gasoline UST
- Interim Source Removal Excavation
- Natural Gas Main
- Natural Gas lateral
- Sanitary Sewer
- Water Main
- Poor trace - unidentified

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2500 CAMINO DIABLO, WALNUT CREEK

Utility Map and Proposed Borings/Wells

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 10

PROJECT NO. 281939

A A' MW-6 SB-24 MW-5 SB-21 SB-12 SB-5 BF-1 IW-1 MW-7 SB-17 A"

Gas Mains | Sanitary Sewer | Water Mains | Gas Mains | Sanitary Sewer | Water Mains

Vertical Scale in Feet: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24

16" Gas line dead | 6" Gas line | water line

Clayey Silt, black, 5 % fine gravel, slightly plastic, slightly moist

Gravelly Sand - Sandy Gravel, yellowish red, clayey, firm very slightly moist FILL ??

Clay, olive gray, silty, 5% gravel slightly plastic, becoming increasingly sandy silty downward

Clayey Silt, - Clayey Sand olive gray, very fine g, 5-10% gravel moderately firm, moist

TPH-g 5,600

Gravelly Sand - Sandy Gravel, olive gray, clayey, coarse sand - medium garvel, wet

Clayey Gravelly Sand, brown - yellowish brown, coarse grained , wet

Clayey Gravelly Sand, brown - yellowish brown, coarse grained , wet

Sand, brown - yellowish brown, med. grained moderately firm, wet

Gravelly Clay, dark reddish brown, very moist

Fill

Silty Clay, black, stiff, dry

Gravelly Silt, dark reddish brown, moderately loose

Silty Gravel, very dark gray - dark greenish gray, loose

Siltlt Clay, light yellowish brown - grayish green mottling moist

Clayey Silt, light yellowish brown - grayish green mottling moist

Silty Clay, greenish black, 10% fine gravel, soft, moist moderate plasticity

Silty Clay, strong brown, hard, dry

Silty Clay, dark greenish gray, firm, moist

Silty Gravel, grn gry- dark greenish gray, mod. loose, wet

Silty Clay, dark grn. gray, stiff, moist

Silty Gravel, grn gry- dark greenish gray, mod. loose, wet

Clayey, dark greenish gray- grn gray - olive yellow - lite yellowish brn, mod. soft, moist

Clay, strong brown, gravelly, firm, moist

Clayey Sand, strong brown - yellowish brown, gravelly, mod soft, moist

Gravelly Sand, strong brown - yellowish brown, fine - coarse grain, moderastely firm, wet

Sandy Gravel, strong brown, clayey, firm, wet

Fill

Silty Clay, black, 5% fine gravel, stiff

Gravelly Silty Clay, dark gray, 10 % fine gravel, stiff

Silty Clay, greenish gray, 10 % fine gravel, moderate plasticity

Very Gravelly Clay, multicolored - green, blue, orange, brown, soft

Silty Clay, light yellowish brown - greenish gray mottled, moderately plasticity, moist

Clay, light yellowish brown, 10% fine gravel moist

Clay, light yellowish brown with orange streaks high plasticity, moist

Silty Clay, black, 5% fine gravel, stiff, dry

Silty Clay, light grayish green w/s orange mottling

Gravelly Silty Sand dark greenish gray, clayey, soft

Gravelly Silty Clay yellowish brown, orange mottling, gravel increasing downward, moist

Gravelly Sand, light yellowish brown, wet

Silty Clay, light yellowish brown, orange mottling gravelly, moist

Clay, light yellowish brown with orange streaks high plasticity, moist

Silty Clay, black, 5% fine gravel, stiff, dry

EXCAVATION BACKFILL

EXCAVATION BACKFILL

SiltyClay, olive gray, orangge streaks, moderate plasticity, moist

FILL

Silty Clay, It. olive brown - yellowish brown, dk bluish gray - red mottling, moderately plastic, moist

Asphalt

Silty Clay, greenish black, 10% fine gravel, soft, moist moderate plasticity

Gravelly Silt, dark greenish gray 25% gravel, very stiff, hard, dry

Silty Gravel, greenish gray, 10 % gravel, loose

Clay, dark greenish gray - greenish gray, gravelly, very hard, dry

Very Clayey Sand - Sandy Clay, locally Clayey Sandy Gravel olive - olive yellow - brownish yellow, firm, very moist

Clayey Gravel, dark greenish gray, hard, wet

Silty Clay, olive yellow, w/s brownish yellow, moderately plastic, moist

Asphalt

Silty Clay, black, fine gravel, hard, low plasticity, dry

Water line

Gravelly Silty Sand, darkol rown ish gray - grayish green mottling, gravelly, firm, moist

Silty Sandy Clay, dark brownish gray mottled grayish green, fine gravel, moderately soft, very slightly moist

Silty Clay, dark grayish green, stiff, slightly moist

Gravelly Silty Clay - Clayey Gravel light olive brown, fine - medium gravel, moderately stiff, wet

Sandy Gravel, strong brown - light olive, hard, wet

Gravelly Sand, strong brown - light olive, coarse grained, moderately soft, wet

Gravelly Silty Clay, strong brown - light olive brown, moderatly plastic, wet

Approximate limit of contamination

Approximate limit of contamination

TPH-g 14,000

TPH-g 1,000

TPH-g 12,000

TPH-g 35,000

TPH-g 22,000

TPH-g 8,100

TPH-g 11,000

High Groundwater level in well.

Low Groundwater level in well.

First groundwater borings.

High Groundwater level in wells.

Low Groundwater level in wells.

First groundwater borings.

1.0 | <1.0 | 4.8 | 12.1 | 23.9 | 25 | 5.0 | <1.0 | 49.0 | 167 | 82 | 26 | 12.7 | 61 | 15 | 58 | 23 | 270 | 1.8 | <1.0 | 41 | 243 | 18 | 20 | 20.5 | <1.0 | 20.5 | 12 | <1.0 | 1.7 | 4.2 | <1.0 | 6.7

0 25 50 75 100

HORIZONTAL SCALE IN FEET

Stable depth to water in well

Depth to water is soil borings

243 PID Field Screening - PPMV

41 TPH-g Soil Analysis - mg/kg

TPH-g 11,000 Grab Water Sample - ug/L

TPH-g 14,000 Monitoring well Sample - ug/L

Clay

Silt

Gravel

Sand

Clayey Sediments

Permeable intervals

AEI CONSULTANTS

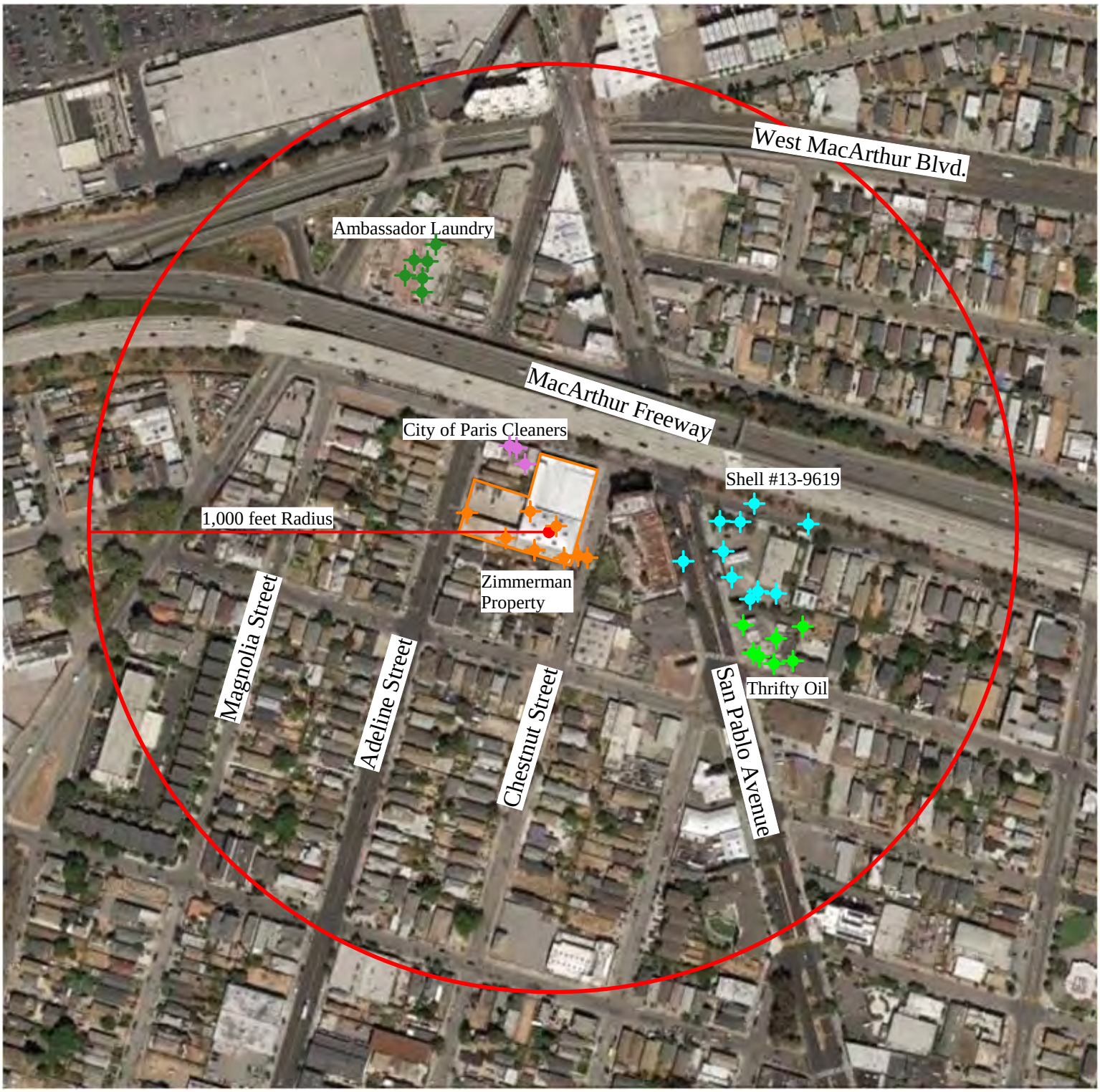
2500 CAMINO DIABLO, WALNUT CREEK

Site Conceptual Model

3442 Adeline Street
Oakland, California

Figure 11

PROJECT NO. 281939



- Zimmerman Property
- Ambassador Laundry
- City of Paris Cleaners
- Shell #13-9619
- Thrifty Oil

Subject Property

AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK

Well Survey Map

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 12
PROJECT NO. 281939

TABLES

Table 1: Soil Sample Analytical Data
3442 Adeline St. Oakland, CA 94608
AEI Project #281939

Sample ID	Depth	Date	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
			Method 8015		*Method 8021B*				
	ft		mg/kg		mg/kg				
Potential Drinkingwater									
Res Shallow Soil ESL			100	100	0.023	0.044	2.9	3.3	2.3
C/I Shallow Soil ESL			110	500	0.023	0.044	2.9	3.3	2.3
Non-drinkingwater									
Res Shallow Soil ESL			100	100	8.4	0.74	9.3	4.7	11
C/I Shallow Soil ESL			100	500	8.4	1.2	9.3	4.7	11
NW	*6.5*	2/22/00	130	**130**	---	0.16	0.26	0.73	6.3
SW	*6.5*	2/22/00	850	**920**	---	0.3	0.37	5.3	22
S-1	*5*	6/23/06	5.6	<1.0	---	0.011	<0.0050	<0.0050	<0.0050
	8		26	**100**	---	1.3	0.22	2.0	7.2
	12		45	67	---	0.098	<0.025	0.73	0.39
	14.5		1.2	<1.0	---	<0.0050	<0.0050	<0.0050	0.01
S-2	*4*	6/23/06	4.7	<1.0	---	0.016	<0.0050	<0.0050	<0.0050
	7.5		84	**460**	---	1.2	0.36	9.4	24
	12		49	61	---	0.33	0.055	0.84	2.4
	14		<1.0	<1.0	---	<0.0050	<0.0050	<0.0050	<0.0050
S-3	*3.5*	6/23/06	3.1	<1.0	---	<0.0050	<0.0050	<0.0050	<0.0050
	7.5		250	**1,200**	---	0.47	0.52	18	100
	10		76	220	---	0.26	<0.040	6.2	7.2
	14.5		1.3	<1.0	---	<0.0050	<0.0050	0.0056	0.016
S-4	*3.5*	6/23/06	3.5	<1.0	---	<0.0050	<0.0050	<0.0050	<0.0050
	7.5		240	**820**	---	<0.20	<0.20	6.7	4.4
	11.5		120	**500**	---	0.079	<0.040	3.5	4.8
	14.5		1.3	<1.0	---	<0.0050	<0.0050	<0.0050	<0.0050
SB-1	4	10/1/07	---	2.9	<0.05	0.016	0.0079	<0.005	0.0094
	7.5		450	**1,200**	<5.0	3.1	2.5	24	110
	11.5		90	**640**	<2.5	0.40	1.5	9.3	23
	15.5		---	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-2	7.5	10/1/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	11		6.1	53	<0.05	<0.005	0.24	0.0084	0.19
SB-3	7.5	10/1/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	11.5		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-4	3.5	10/1/07	---	1.2	<0.05	<0.005	<0.005	<0.005	<0.005
	7.5		170	**430**	<1.0	1.2	0.99	3.6	1.2
	11.5		25	340	<1.0	2.4	0.92	7.1	9.7
	15.5		---	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-5	3.5	10/1/07	---	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	7.5		54	**420**	<1.5	4.0	1.1	9.5	18
	11.5		22	**130**	<1.0	0.43	0.10	1.2	0.77
	15.5		---	<1.0	<0.05	0.017	<0.005	<0.005	<0.005

Table 1: Soil Sample Analytical Data
3442 Adeline St. Oakland, CA 94608
AEI Project #281939

Sample ID	Depth	Date	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
			Method 8015		*Method 8021B*				
	ft		mg/kg		mg/kg				
Potential Drinkingwater									
Res Shallow Soil ESL			100	100	0.023	0.044	2.9	3.3	2.3
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Non-drinkingwater									
Res Shallow Soil ESL			100	100	8.4	0.74	9.3	4.7	11
C/I Shallow Soil ESL			100	500	8.4	1.2	9.3	4.7	11
SB-6	7.5	10/1/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	11.5		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-7	7.5	10/3/07	90	**310**	<1.0	<0.10	0.48	0.28	0.38
	11.5		37	120	<0.50	0.21	0.069	0.39	0.22
SB-8	7.5	10/3/07	23	53	<0.10	<0.010	0.030	0.034	0.13
	11.5		13	**99**	<0.17	0.24	0.070	0.66	0.46
SB-9	4	10/3/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	11.5		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-10	7.5	10/3/07	5.1	35	<0.10	0.72	0.024	0.47	0.079
	11.5		74	**750**	<10	6.9	1.6	13	33
	15.5		---	<1.0	<0.05	0.012	<0.005	<0.005	0.0052
SB-11	11.5	10/3/07	13	39	<0.3	0.68	0.086	0.76	2.3
	15.5		10	41	0.14	1.1	0.071	0.55	1.5
SB-12	8	12/20/07	1.8	25	<0.10	0.097	0.024	0.81	1.3
	12		23	82	<0.50	0.74	0.14	1.5	2.9
	16		---	20	<0.25	0.51	0.083	0.48	1.8
SB-13	8	12/20/07	66	**180**	<0.50	0.46	0.10	2.5	2.7
	12		74	170	<0.50	1.1	0.21	2.4	6.7
	16		<50	5.7	<0.05	0.87	0.017	0.12	0.10
SB-14	8	12/20/07	<1.0	<1.0	<0.05	0.0092	<0.005	<0.005	<0.005
	12		83	910	<2.5	3.3	0.43	10	16
	16		---	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-15	8	12/20/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		61	390	<2.5	2.7	0.47	6.7	13
	16		---	40	<0.1	0.26	0.047	0.37	1.3
SB-16	8	12/20/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-17	8	12/20/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-18	8	12/20/07	18	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-19	8	12/20/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		<1.0	6.7	<0.05	<0.005	<0.005	<0.005	<0.005

Table 1: Soil Sample Analytical Data
3442 Adeline St. Oakland, CA 94608
AEI Project #281939

Sample ID	Depth	Date	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
			Method 8015		*Method 8021B*				
	ft		mg/kg		mg/kg				
Potential Drinkingwater									
Res Shallow Soil ESL			100	100	0.023	0.044	2.9	3.3	2.3
C/I Shallow Soil ESL			110	500	0.023	0.044	2.9	3.3	2.3
Non-drinkingwater									
Res Shallow Soil ESL			100	100	8.4	0.74	9.3	4.7	11
C/I Shallow Soil ESL			100	500	8.4	1.2	9.3	4.7	11
SB-20	8	12/20/07	9.7	**89**	<0.25	0.070	0.14	0.050	0.14
	12		32	**99**	<0.17	0.61	0.061	1.6	1.4
	16		---	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-21	8	12/21/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		5.8	26	<0.05	0.28	0.048	0.31	0.30
SB-22	8	12/21/07	<1.0	24	<0.05	<0.005	0.070	0.016	0.059
	12		150	**310**	<1.7	0.17	<0.17	4.1	3.2
	16		---	9.2	<0.05	0.021	0.032	0.0052	0.0083
SB-23	8	5/7/08	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		73	**310**	<3.0	1.3	0.31	4.3	0.11
SB-24	8	5/7/08	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		3.4	15	<0.15	0.011	0.023	0.020	0.044
	16		<1.0	41	<0.50	<0.050	<0.050	0.11	0.11
SB-25	8	5/7/08	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		12	48	<0.50	0.027	0.079	0.029	0.11
SB-26	8	5/7/08	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-27	8	5/7/08	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		4.2	27	<0.05	<0.005	0.10	<0.005	0.061
	16		1.5	4.8	<0.05	0.0053	0.020	<0.005	0.0074
SB-28	8	5/7/08	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		1.6	19	<0.05	0.24	0.034	0.031	0.036
SB-29	8	5/7/08	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-30	8	5/7/08	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-31	8	5/7/08	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
	12		<1.0	1.9	<0.05	<0.005	0.016	<0.005	<0.005
MW-1	12	4/1/09	1.5	30	<0.05	0.034	0.026	0.042	0.11
	15		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005

Table 1: Soil Sample Analytical Data
3442 Adeline St. Oakland, CA 94608
AEI Project #281939

Sample ID	Depth	Date	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
			Method 8015		*Method 8021B*				
	ft		mg/kg		mg/kg				
Potential Drinkingwater									
Res Shallow Soil ESL			100	100	0.023	0.044	2.9	3.3	2.3
C/I Shallow Soil ESL			110	500	0.023	0.044	2.9	3.3	2.3
Non-drinkingwater									
Res Shallow Soil ESL			100	100	8.4	0.74	9.3	4.7	11
C/I Shallow Soil ESL			100	500	8.4	1.2	9.3	4.7	11
MW-2	12	4/1/09	21	**140**	<0.05	0.81	<0.10	1.9	2.6
	16		<1.0	2.3	<0.05	0.062	<0.005	0.016	0.0091
	19		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
MW-3	12	4/1/09	4.3	27	<0.10	0.57	0.049	0.69	0.62
	16		<1.0	<1.0	<0.05	0.018	0.0059	0.0061	0.023
MW-4	12	4/2/09	99	**1100**	<10	<1.0	2.9	1.1	1.3
	16		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
MW-5	12	5/12/09	31	61	<1.0	0.27	0.12	0.66	0.92
	16		1.9	18	<0.05	0.15	0.0055	0.23	0.33
MW-6	12	4/2/09	2.3	23	<0.05	0.12	0.018	0.15	0.34
	16		29	270	<2.5	<0.25	0.67	0.43	0.81
	19		5	1.8	0.12	<0.005	<0.005	<0.005	<0.005
	25		<1.0	<1.0	0.029	<0.005	<0.005	<0.005	<0.005
MW-7	12	5/13/09	<1.0	13	<0.05	0.067	0.030	0.042	0.020
	16		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
IW-1	10.5	5/12/09	86	**490**	<1.0	0.19	0.69	6.7	3.5
	15		<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005

Notes:
mg/kg = milligrams per kilogram
ESL = Environmental Screening Level
NW = Soil Sample Collected from northwest sidewall during excavation
SW = Soil Sample Collected from southwest sidewall during excavation
TPH-g = total petroleum hydrocarbons as gasoline
TPH-d = total petroleum hydrocarbons as diesel
MTBE = methyl tert-butyl ether
1100 = **Bold value** at or above Drinking Water ESL
Drinkingwater = Groundwater with current use or potential use as drinking water.
Res <3m bgs Soil ESL= Shallow soil (<3 meters bgs), residential land use. Table A-1, SF RWQCB Dec 2013
Res >3m bgs Soil ESL = deep soil (>3 meters bgs), residential land use. Table C-1, SF RWQCB Dec 2013
Non-drinkingwater = Groundwater with no current use or potential use as drinking water.
Res <3m bgs Soil ESL= Shallow soil (<3 meters bgs), residential land use. Table A-1, SF RWQCB Dec 2013
Res >3m bgs Soil ESL = deep soil (>3 meters bgs), residential land use. Table C-1, SF RWQCB Dec 2013

Table 2: Grab Groundwater Sample Analytical Data
3442 Adeline St. Oakland, CA 94608
AEI Project #281939

Sample ID	Date	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
		Method 8015		*Method 8021B*				
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Drinkingwater ESL		100	100	5.0	1.0	40	30	20
Non-drinkingwater ESL		640	500	1800	27	130	43	100
Pit Water	2/22/00	34,000	7,400	---	3,300	930	400	6,200
S-1	6/23/06	<10,000	20,000	---	980	70	1,500	1,100
S-2	6/23/06	<4,000	31,000	---	7,000	260	920	2,800
S-3	6/23/06	<1,500	23,000	---	490	67	1,200	3,300
S-4	6/23/06	<40,000	120,000	---	200	<15	3,500	2,900
SB-1	10/1/07	6,100	28,000	<170	2,000	77	1,600	4,100
SB-2	10/1/07	300	640	<5.0	1.8	2.2	1.1	4.9
SB-3	10/1/07	<50	84	<5.0	2.4	<0.5	4.2	11
SB-4	10/1/07	2,200	20,000	<600	6,600	110	390	430
SB-5	10/1/07	7,400	22,000	<250	1,900	86	1,200	2,100
SB-6	10/1/07	---	440	---	17	<0.5	0.99	2.2
SB-7	10/3/07	1,000	2,000	<25	30	5.1	56	82
SB-8	10/3/07	1,600	6,700	---	110	6.3	160	140
SB-9	10/3/07	5,700	11,000	<50	440	14	720	1,000
SB-10	10/3/07	1,700	17,000	<100	3,800	55	420	830
SB-11	10/3/07	4,300	83,000	---	10,000	640	2,700	7,900
SB-12	12/20/07	4,900	35,000	<450	5,200	110	1,000	1,800
SB-13	12/20/07	5,100	29,000	<250	5,300	80	1,400	3,900
SB-14	12/20/07	12,000	23,000	<240	2,600	15	1,500	1,800
SB-15	12/20/07	3,000	36,000	<350	7,700	190	1,600	4,700
SB-16	12/20/07	480	88	<5.0	0.60	<0.5	<0.5	0.83
SB-17	12/20/07	320	1,100	<5.0	<0.5	6.2	<0.5	4.2
SB-18	12/20/07	1,800	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-19	12/20/07	280	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-20	12/20/07	3,900	28,000	<160	3,400	22	1,200	930
SB-21	12/21/07	1,200	8,100	<50	1,600	<5.0	160	84
SB-22	12/21/07	620	2,600	<10	110	0.90	150	55
SB-23	5/14/08	4,800	46,000	<450	9,000	40	2,300	5,200

Table 2: Grab Groundwater Sample Analytical Data
3442 Adeline St. Oakland, CA 94608
AEI Project #281939

Sample ID	Date	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
		Method 8015		*Method 8021B*				
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Drinkingwater ESL		100	100	5.0	1.0	40	30	20
Non-drinkingwater ESL		640	500	1800	27	130	43	100
SB-24	5/14/08	2,900	11,000	<50	80	<5.0	440	290
SB-25	5/9/08	1,300	3,600	<5.0	42	1.90	65	36
SB-26	5/14/08	770	2,300	<10	22	2.1	<1.0	2.4
SB-27	5/14/08	180	740	<5.0	7.4	3.70	<0.5	1.0
SB-28	5/16/08	72	290	<5.0	1.3	0.93	2.7	4.0
SB-29	5/16/08	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-30	5/14/08	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-31	5/14/08	770	5,100	<110	270	6.3	79	7

Notes:
µg/L = micrograms per liter
ESL = Environmental Screening Level
TPH-g = total petroleum hydrocarbons as gasoline
TPH-d = total petroleum hydrocarbons as diesel
MTBE = methyl tert-butyl ether
Drinkingwater ESL = Table F-1a, Groundwater with current or potential use as drinkingwater SF RWQCB Dec 2013
Non-drinkingwater ESL Table F-1b, Groundwater with no current or potential use as drinkingwater SF RWQCB Dec 2013

Table 3: Soil Vapor Analytical Data
3442 Adeline St. Oakland, CA 94608
AEI Project #281939

Boring	Date	Isopropyl Alcohol	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
		Method TO15						
		µg/m^3						
VB-1	10/1/2007	<25	1,900	<48	130	35	<8.8	<27
VB-2	10/1/2007	<25	3,100	<48	32	42	11	50
VB-3	10/1/2007	<25	2,500	<48	40	42	16	49
Residential ESL		---	300,000	4,700	42	160,000	490	52,000
Commercial / Industrial ESL			2,500,000	47,000	420	1,300,000	4,900	44,000

µg/m^3 = micrograms per cubic meter
ESL = Environmental Screening Levesl, Table E-2, Soil Gas to Indoor Air, SF RWQCB Dec 2013
TPH-g = total petroleum hydrocarbons as gasoline
MTBE = methyl tert-butyl ether

Table 4: Monitoring Well Construction Details
3442 Adeline Street St. Oakland, CA 94608
AEI Project #281939

Well ID	Date Installed	Top of Casing Elevation (ft amsl)	Well Box Rim Elevation (ft amsl)	Depth to Water 4/4/13 (ft btc)	Well Depth (ft btc)	Casing Material	Casing Diameter (in)	Slotted Casing (ft btc)	Slot Size (in)	Sand Interval (ft btc)	Sand Size	Bentonite Interval (ft btc)	Grout Interval (ft btc)
MW-1	04/01/09	31.12	32.13	6.63	17	PVC	4	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-2	04/01/09	31.19	31.43	7.56	17	PVC	4	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-3	04/01/09	32.07	32.39	----	17	PVC	4	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-4	04/02/09	31.68	31.98	7.88	17	PVC	2	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-5	05/12/09	30.39	30.82	7.25	17	PVC	2	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-6	04/02/09	29.34	29.96	5.23	17	PVC	2	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-7	05/13/09	31.04	31.45	----	17	PVC	2	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
IW-1	05/12/09	31.66	31.90	12.81	15	PVC/ stainless	2	13-15	40 mesh	12-15	# 2/12	11-12	0.75-12

Notes:
ft amsl = feet above mean sea level ft btc = feet below top of casing

Table 5: Groundwater Elevation Data

3442 Adeline Street St. Oakland, CA 94608

AEI Project #281939

Well ID (Screen Interval)	Date Collected	Top of Casing Elevation *(ft amsl)*	Depth to Water *(ft)*	Groundwater Elevation *(ft amsl)*	Elevation Change *(ft)*
MW-1 (7-17)	6/10/2009	31.12	7.01	24.11	----
	8/27/2009	31.12	6.96	24.16	0.05
	12/15/2009	31.12	5.96	25.16	1.00
	3/12/2010	31.12	5.06	26.06	0.90
	10/21/2010	31.12	7.00	24.12	-1.94
	5/5/2011	31.12	5.88	25.24	1.12
	4/25/2012	31.12	5.33	25.79	0.55
	12/12/2012	31.12	5.35	25.77	-0.02
	4/4/2013	**31.12**	**6.63**	**24.49**	**-1.28**
MW-2 (7-17)	6/10/2009	31.19	9.50	21.69	----
	8/27/2009	31.19	10.50	20.69	-1.00
	12/15/2009	31.19	8.68	22.51	1.82
	3/12/2010	31.19	5.09	26.10	3.59
	10/21/2010	31.19	7.51	23.68	-2.42
	5/5/2011	31.19	6.68	24.51	0.83
	4/25/2012	31.19	5.58	25.61	1.10
	12/12/2012	31.19	6.47	24.72	-0.89
	4/4/2013	**31.19**	**7.56**	**23.63**	**-1.09**
MW-3 (7-17)	6/10/2009	32.07	8.44	23.63	----
	8/27/2009	32.07	8.59	23.48	-0.15
	12/15/2009	32.07	7.66	24.41	0.93
	3/12/2010	Well inaccessible	----	----	----
	10/21/2010	Well inaccessible	----	----	----
MW-4 (7-17)	6/10/2009	31.68	9.45	22.23	----
	8/27/2009	31.68	10.29	21.39	-0.84
	12/15/2009	31.68	8.19	23.49	2.10
	3/12/2010	31.68	5.45	26.23	2.74
	10/21/2010	31.68	9.93	21.75	-4.48
	5/5/2011	31.68	6.60	25.08	3.33
	4/25/2012	31.68	5.73	25.95	0.87
	12/12/2012	31.68	6.21	25.47	-0.48
	4/4/2013	**31.68**	**7.88**	**23.80**	**-1.67**
MW-5 (7-17)	6/10/2009	30.39	9.13	21.26	----
	8/27/2009	30.39	9.54	20.85	-0.41
	12/15/2009	30.39	8.33	22.06	1.21
	3/12/2010	**Well inaccessible**	----	----	----
	10/21/2010	30.39	6.85	23.54	1.48
	5/5/2011	30.39	3.25	27.14	3.60
	4/25/2012	30.39	4.50	25.89	-1.25
	12/12/2012	30.39	5.43	24.96	-0.93
	4/4/2013	**30.39**	**7.25**	**23.14**	**-1.82**

Table 5: Groundwater Elevation Data

3442 Adeline Street St. Oakland, CA 94608

MW-6	6/10/2009	29.34	9.98	19.36	
(7-17)	8/27/2009	29.34	11.84	17.50	-1.86
	12/15/2009	29.34	8.33	21.01	3.51
	3/12/2010	29.34	4.66	24.68	3.67
	10/21/2010	29.34	10.00	19.34	-5.34
	5/5/2011	29.34	5.59	23.75	4.41
	4/25/2012	29.34	4.82	24.52	0.77
	12/20/2012	29.34	5.23	24.11	-0.41
	4/4/2013	**29.34**	**7.37**	**21.97**	**-2.14**
MW-7	6/10/2009	31.04	6.53	24.51	----
(7-17)	8/27/2009	31.04	6.19	24.85	0.34
	12/15/2009	31.04	5.71	25.33	0.48
	3/12/2010	31.04	5.34	25.70	0.37
	10/21/2010	31.04	6.59	24.45	-1.25
	5/5/2011	31.04	5.98	25.06	0.61
	4/25/2012	31.04	5.71	25.33	0.27
	12/20/2012	Well Unaccessible			
	4/4/2013	**31.04**	**6.18**	**24.86**	**-0.47**
IW-1	6/10/2009	31.66	7.65	24.01	----
(13-15)	8/27/2009	31.66	7.70	23.96	-0.05
	12/15/2009	31.66	10.99	20.67	-3.29
	3/12/2010	31.66	6.00	25.66	4.99
	10/21/2010	31.66	9.35	22.31	-3.35
	5/5/2011	31.66	6.73	24.93	2.62
	4/25/2012	31.66	8.05	23.61	-1.32
	12/20/2012	31.66	12.88	18.78	-4.83
	4/4/2013	**31.66**	**12.81**	**18.85**	**0.07**

Event	**Date**	**Average Water Table Elevation** (ft amsl)	**Change from Previous Episode** (ft)	**Flow Direction (gradient)** (ft/ft)
1	6/10/2009	22.40	----	West (0.0186)
2	8/27/2009	21.85	-0.55	West (0.0186)
3	12/15/2009	23.42	1.58	West (0.0181)
4	3/12/2010	25.75	2.33	West (0.004)
5	10/21/2010	22.81	-2.94	North Northwest (0.041)
6	5/5/2011	25.13	2.32	West (0.01)
7	4/25/2012	25.52	0.38	West (0.01)
8	12/20/2012	25.01	-0.51	West (0.01)
9	**4/4/2013**	**23.41**	**-1.60**	**West (0.01)**

Table 6: Monitoring Well Groundwater Analytical Data
3442 Adeline Street St. Oakland, CA 94608

Sample ID	Date	Depth to Water	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
			Method 8015C		*Method 8021B*				
		(ft)	(µg/L)						
Drinkingwater ESL			100	100	5.0	1.0	40	30	20
Non-drinkingwater ESL			640	500	1800	27	130	43	100
MW-1	04/17/09	7.01	97	220	<5.0	10	<0.5	3.0	5.4
	08/27/09	6.96	----	7,000	<180	610	10	320	220
	09/17/09	----	----	92	<15	0.91	0.70	<0.5	<0.5
	12/15/09	5.96	----	2500	<50	170	6.4	66	120
	03/12/10	5.06	----	500	<5.0	4.0	1.1	0.6	0.7
	10/21/10	7.00	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	05/05/11	5.88	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/25/12	5.33	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	12/20/12	5.35	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/13	**6.63**	----	**<50**	**<5.0**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-2	04/17/09	9.50	2,200	7,000	<100	850	19	93	470
	08/27/09	10.50	----	26,000	<1,200	3,600	<25	1,200	3,000
	12/15/09	8.68	----	25,000	<250	2,900	70	1,500	2,400
	03/12/10	5.69	----	7,300	<350	590	7.0	6.4	680
	10/21/10	7.51	----	1,900	<15	140	1.4	28	140
	05/05/11	6.68	----	27,000	<180	2,300	13	1,700	2,600
	04/25/12	5.58	----	9,600	<120	440	8.8	260	920
	12/20/12	6.47	----	2,900	<35	63	2.6	21	85
	04/04/13	**7.56**	----	**7,900**	**<150**	**960**	**10**	**380**	**690**
MW-3	04/17/09	8.44	2,200	10,000	<110	930	5.6	270	920
	08/27/09	8.59	----	17,000	<250	3800	38	730	710
	09/17/09	----	----	260	<15	1.8	1.0	<0.5	2.1
	10/14/09	----	----	1,800	<30	220	13	37	130
	12/15/09	7.66	----	4,900	<50	890	13	160	130
	03/12/10				Well inaccessible				
	10/21/10				**Well inaccessible**				
MW-4	04/17/09	9.45	1,200	4,700	<30	140	2.0	28	18
	08/27/09	10.29	----	4,300	<25	75	11	8.6	3.4
	12/15/09	8.19	----	3,000	<15	64	11	5.6	3.3
	03/12/10	5.45	----	6,100	<35	1200	14	170	6.2
	10/21/10	9.93	----	1,900	<15	120	4.7	5.7	1.8
	05/05/11	6.60	----	4,900	<25	560	2.6	41	17
	04/25/12	5.73	----	330	<5.0	23	1.4	2.0	4.2
	12/20/12	6.21	----	150	<5.0	5.8	<0.5	<0.5	<0.5
	04/04/13	**7.88**	----	**1,000**	**<5.0**	**30**	**4.6**	**0.61**	**0.65**

Table 6: Monitoring Well Groundwater Analytical Data
3442 Adeline Street St. Oakland, CA 94608

Sample ID	Date	Depth to Water	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
			Method 8015C		*Method 8021B*				
		(ft)	(µg/L)						
Drinkingwater ESL			100	100	5.0	1.0	40	30	20
Non-drinkingwater ESL			640	500	1800	27	130	43	100
MW-5	05/22/09	9.13	2,800	14,000	<100	3,000	12	340	420
	08/27/09	9.54	----	25,000	<400	3,300	36	110	160
	12/15/09	8.33	----	8,200	<250	1,200	6.9	300	610
	03/12/10				Well inaccessible				
	10/21/10	6.85	----	<50	<5.0	1.3	<0.5	<0.5	<0.5
	05/05/11	3.25	----	790	<20	140	1.0	29	30
	04/25/12	4.51	----	67	<5.0	3.4	<0.5	1.4	0.83
	12/20/12	5.43	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/13	**7.25**	----	**<50**	**<5.0**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-6	04/17/09	9.98	1,000	5,600	<300	210	3.0	180	160
	08/27/09	11.84	----	2,200	<120	98	7.9	20	1.1
	12/15/09	8.59	----	4,700	<250	370	6.9	260	300
	03/12/10	4.66	----	9,300	<90	210	12	250	110
	10/21/10	10.00	----	380	<5.0	35	1.2	4.6	3.8
	05/05/11	5.59	----	7,000	<75	80	2.9	120	28
	04/25/12	4.82	----	7,400	<150	99	11.0	100	27
	12/20/12	5.23	----	5,500	<50	81	3.1	78	16
	04/04/13	**7.37**	----	**5,300**	**<70**	**76**	**5.7**	**50**	**12**
MW-7	04/17/09	6.53	3,700	12,000	<120	1,000	37	100	36
	08/27/09	6.19	----	12,000	<100	550	30	130	33
	12/15/09	5.71	----	9,600	<100	620	26	140	20
	03/12/10	5.34	----	10,000	<25	850	33	87	28
	10/21/10	6.59	----	7,900	<180	1,100	22	44	21
	05/05/11	5.98	----	9,300	<200	690	23	42	21
	04/25/12	5.71	----	8,600	<75	1,000	31	10	20
	12/20/12				Well inaccesable due to parked car				
	04/04/13	**6.18**	**----**	**12,000**	**<210**	**2,800**	**51**	**96**	**37**
IW-1	05/22/09	7.65	680	1,200	<15	58	2.7	2.3	18
	08/27/09	7.70	----	160	<5.0	4.1	0.5	0.8	1.6
	09/17/09	----	----	300	<5.0	8.0	1.5	1.4	0.85
	12/15/09	10.99	----	220	<5.0	5.4	1.4	0.65	0.7
	03/12/10	6.00	----	<50	<5.0	1.9	<0.5	<0.5	<0.5
	10/21/10	9.35	**----**	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	05/05/11	6.73	**----**	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/25/12	8.05	**----**	<50	<5.0	0.91	<0.5	<0.5	0.57
	12/20/12	12.88	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/13	**12.81**	**----**	**<50**	**<5.0**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Table 6: Monitoring Well Groundwater Analytical Data
3442 Adeline Street St. Oakland, CA 94608

Sample ID	Date	Depth to Water	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
			Method 8015C		*Method 8021B*				
		(ft)	(µg/L)						
Drinkingwater ESL			100	100	5.0	1.0	40	30	20
Non-drinkingwater ESL			640	500	1800	27	130	43	100
BF-1	03/27/09	----	----	19,000	<250	890	27	460	1,200
post H_2O_2	06/17/09	----	----	6,700	<150	840	19	170	150
pre-aeration	08/10/09	----	----	11,000	<120	710	14	440	290
post aeration	08/27/09	----	----	9,600	<90	590	14	350	220
	09/13/09	----	----	<50	<5.0	1.2	<0.5	<0.5	<0.5
	10/14/09	----	----	2,400	<10	83	1.9	5.0	120
	12/11/09	6.70	----	200	<5.0	12	<0.5	2.2	9.6
	03/12/10	5.61	----	<50	<0.5	2.9	<0.5	<0.5	<0.5
	10/21/10	7.95	----	560	<5.0	68	1.5	6.7	25
	05/05/11	6.25	----	<50	<5.0	0.65	<0.5	<0.5	<0.5
	04/25/12	5.85	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	12/20/12	5.82	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/13	**6.78**	**----**	**<50**	**<5.0**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
BF-5	08/27/09	----	----	170	<25	32	0.55	4.2	220
	10/14/09	----	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	12/11/09	7.25	**----**	130	<5.0	40	<0.5	0.91	<0.5
	03/12/10	6.09	**----**	<50	<5.0	4.3	<0.5	0.91	<0.5
	10/21/10	8.62	**----**	80	<5.0	8.8	<0.5	1.4	4.5
	05/05/11	6.75	**----**	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/25/12	6.37	**----**	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	12/20/12	6.33	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/13	**7.25**	**----**	**<50**	**<5.0**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Notes:
µg/L = micrograms per liter
ESL = Environmental Screening Level
TPH-g = total petroleum hydrocarbons as gasoline
TPH-d = total petroleum hydrocarbons as diesel
MTBE = methyl tert-butyl ether
680 = **BOLD** most recent sample
ESL - Drinkingwater = Table F1a, groundwater with current or potential use as drinkingwater, SF RWQCB Dec 2013
ESL - ground water with no current or potential use as drinkingwater, Table F-1b, SF RWQCB Dec 2013

Table 7: Wells within 1,000 feet of Subject Site
3442 Adeline Street St. Oakland, CA 94608
AEI Project #281939

Site Name	Address	Well Name	Well Use	Well Depth	Distance from Site	Direction	Latitude	Longitude
Zimmerman Property	3442 Adeline	MW-1	Monitoring	17	Subject Site		37.8259185	-122.2792277
		MW-2	Monitoring	17			37.8259735	-122.2794776
		MW-3	Monitoring	17			37.8261073	-122.2792940
		MW-4	Monitoring	17			37.8261933	-122.2794920
		MW-5	Monitoring	17			37.8260368	-122.2796924
		MW-6	Monitoring	17			37.8262023	-122.2799646
		MW-7	Monitoring	17			37.8259203	-122.2790968
		IW-1	Injection	17			37.8259338	-122.2791439
		BF-1	backfill	13			37.8259345	-122.2791974
		BF-2	backfill	13			37.8259947	-122.2792330
		BF-3	backfill	13			37.8260502	-122.2792379
		BF-4	backfill	13			37.8260289	-122.2791586
City of Paris Cleaners	3516 Adeline	MW-1	Monitoring	30	150-280	NW cross gradient	37.8266080	-122.2796010
		MW-2	Monitoring	30			37.8265970	-122.2796550
		MW-3	Monitoring	30			37.8265900	-122.2796030
		W-IND	Monitoring	72			37.8264900	-122.2795380
Ambassador Laundry	3623 Adeline	MW-1	Monitoring	29	547-650	NW cross gradient	37.8277715	-122.2802189
		MW-2	Monitoring	29			37.8276511	-122.28028270
		MW-3	Monitoring	29			37.8276570	-122.28036280
		MNW-4	Monitoring	29			37.8275746	-122.28029830
		MW-5	Monitoring	29			37.8275996	-122.28042730
		MW-6	Monitoring	29			37.8275058	-122.28030010
Shell #13-9619	3420 San Pablo	MW-1	Monitoring	25	238-566	E Up gradient	37.8258970	-122.28028271
		MW-2	Monitoring	20			37.8261300	-122.2779125
		MW-3	Monitoring	27.5			37.8256976	-122.2779125
		MW-4	Monitoring	25			37.8258220	-122.2776697
		MW-5	Monitoring	25			37.8256783	-122.2779943
		MW-6	Monitoring	20			37.8257204	-122.2778290
		MW-7	Monitoring	20			37.8259736	-122.2777927
		MW-8	Monitoring	20			37.8258970	-122.2780480
		MW-9	Monitoring	20			37.8261300	-122.2780599
		MW-10	Monitoring	20			37.8261300	-122.2778209
	3420 San Pablo	MW-11	Monitoring	19			37.8261016	-122.2774129
Thrifty Oil #49		MW-1	Monitoring	25	422-552	SE Up and cross gradient	37.8253036	-122.2776729
		MW-1R	Recovery	24.5			37.8253470	-122.2777794
		MW-2R	Recovery	24.5			37.8253705	-122.2778215
		MW-3	Monitoring	25			37.8255205	-122.2778853
		MW-4R	Recovery	24.5			37.8253493	-122.2778075
		MW-5	Monitoring	15			37.8253258	-122.2775179
		MW-6	Monitoring	15			37.8255314	-122.2774455
		MW-7	Monitoring	15			37.8254341	-122.2776472