Carryl MacLeod
Project Manager, Marketing Business Unit

August 11, 2017

RECEIVED
By Alameda County Environmental Health 9:06 am, Aug 11, 2017

Mr. Mark Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Dear Mr. Detterman:

Attached for your review is the *Request for Case Closure* for former Chevron-branded service station 94612, located at 3616 San Leandro Street in Oakland, California (Case #: RO0000233). This report was prepared by Stantec Consulting Services Inc. (Stantec), upon whose assistance and advice I have relied. I have read and acknowledge the content, recommendations, and/or conclusions contained in the attached report submitted on my behalf to Alameda County Environmental Health's FTP server and the State Water Resources Control Board's GeoTracker™ Website.

If you have any further questions, please do not hesitate to contact me or the Stantec project manager, Travis Flora, at (408) 356-6124 ext. 238, or travis.flora@stantec.com.

Sincerely,

Carryl MacLeod
Project Manager

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Request for Case Closure

Former Chevron-branded
Service Station 94612
3616 San Leandro Street
Oakland, California
Case #: RO0000233

Stantec

Prepared for:
Chevron Environmental
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August 11, 2017

REQUEST FOR CASE CLOSURE

Former Chevron-branded Service Station 94612, 3616 San Leandro Street, Oakland, California
August 11, 2017

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1.0 Introduction

On behalf of Chevron Environmental Management Company (CEMC), Stantec Consulting Services Inc. (Stantec) is pleased to submit this *Request for Case Closure* for Former Chevron-branded Service Station 94612, located at 3616 San Leandro Street, Oakland, Alameda County, California (Site - shown on **Figure 1**).

In a letter dated May 6, 2014, Alameda County Department of Environmental Health (ACDEH) approved Stantec's *Site Conceptual Model and Data Gap Work Plan*, dated February 28, 2014, and requested a Soil and Groundwater Investigation Report. The scope of work included advancement of two off-site soil borings. While conducting a utility locate for the investigation, a high priority petroleum pipeline was discovered underground adjacent to the original proposed soil boring locations, so the proposed borings were relocated to down-gradient off-site private properties. Due to issues obtaining access to the off-site private properties, Stantec has been unable to conduct the requested investigation.

In a letter dated June 7, 2017, ACDEH requested a Work Plan Addendum to relocate the proposed soil borings to on Site and provide technical justification for the groundwater-specific criteria of the State Water Resources Control Board (SWRCB) Low-Threat Underground Storage Tank (UST) Case Closure Policy (LTCP). ACDEH also requested the Site be put on an interim semi-annual (previously annual) groundwater monitoring and sampling interval. This report provides an updated Site Conceptual Model (SCM) summarizing current Site conditions and compares these conditions to the closure criteria specified in the LTCP. As described in the following sections, based on Stantec's review of current conditions, the Site meets the general and media-specific criteria for closure specified in the LTCP and should be closed.

2.0 Site Background

2.1 SITE DESCRIPTION AND LAND USE

The Site is a former Chevron-branded service station located on the northern corner at the intersection of San Leandro Street and 37th Avenue in Oakland, California. The Site is currently comprised of two commercial-zoned parcels (Alameda County Assessor's Parcel Number [APN] 33-2178-9-1 and APN 33-2178-10) owned by separate private parties. A one-story commercial building occupies the northwestern parcel, while the southeastern parcel is a paved parking lot. A Chevron-branded service station operated at the Site from approximately 1967 until 1976.

Former Site features consisted of three gasoline USTs (two 10,000-gallon and one 5,000-gallon) located in the northwestern portion of the Site, a 1,000-gallon waste oil UST located in the northern portion of the Site, two fuel dispenser islands located in the southern portion of the Site, associated product piping, and a station building with two hydraulic hoists located in the center of the Site. In 1976, the service station was closed and all Site features including USTs, dispenser islands, hydraulic hoists, and conveyance lines were removed. The Site remained a vacant lot until the existing building was constructed in approximately 1988. A Site Plan is shown on **Figure 2**.

Land use near the Site consists of a mixture of commercial and residential properties. The Site is bounded to the northwest by a residence, to the northeast by a Bay Area Rapid Transit (BART) parking lot and elevated rail tracks, on the southeast by 37th Avenue followed by a commercial building, and on the southwest by San Leandro Street followed by a mixed commercial and residential area.

2.2 REGIONAL AND LOCAL GEOLOGY AND HYDROGEOLOGY

The Site lies conformably above Holocene-age, medium-grained alluvium consisting of unconsolidated, moderately to poorly sorted, fine-grained sand, silt, and clayey silt, with a few thin beds of coarse sand. These materials are underlain by late Pleistocene-age alluvium consisting of weakly consolidated, slightly weathered, poorly sorted clay, silt, sand, and gravel (Conestoga-Rovers & Associates [CRA], 2009).

Soil boring and well construction logs are included in **Appendix A**. Historical geologic cross-sections A-A' and B-B' prepared for the *Case Closure Request*, dated February 2, 2009 (CRA, 2009) are included in **Appendix B**. These cross-sections show Site stratigraphy; historical low and high depth-to-groundwater (DTW) measurements; the DTW measurements collected on November 13, 2008; soil and groundwater sample depths; and total petroleum hydrocarbons as gasoline range organics (TPH-GRO), total petroleum hydrocarbons as diesel range organics (TPH-DRO), benzene, and methyl *tertiary*-butyl ether (MtBE) analytical results for select soil and groundwater samples collected during historical assessments. As shown in the soil boring logs and illustrated on the cross-sections, soils beneath the Site generally consist of silt and clay interbedded with silty to clayey sand and gravel strata to the greatest depth explored (approximately 31 feet below ground surface [bgs]). As further detailed in Section 2.5, the

service station was closed before MtBE was used as an additive, so MtBE impacts are attributed to an off-site source.

Well construction details and an assessment of whether Second Quarter 2017 groundwater samples were collected when groundwater elevations were measured across the well screen intervals are presented in **Table 1**. During Second Quarter 2017, wells MW-2 through MW-4 were screened across the prevailing groundwater table, while the groundwater elevation in well VH-1 was measured above the upper screen interval, and the entire screen interval was submerged.

Historical groundwater elevation data are presented in **Table 2**. The historical range of DTW measurements for the Site is approximately 5 to 16 feet below top of casing (TOC). During Second Quarter 2017, DTW measurements for the Site ranged from 8.42 to 9.16 feet below TOC. Based on a review of historical soil boring logs and hydrologic data, there is no evidence of multiple shallow aquifers (groundwater-bearing zones) at the Site. A groundwater elevation contour map (based on Second Quarter 2017 data) is shown on **Figure 3**, and a Groundwater Flow Direction Rose Diagram illustrating the direction of groundwater flow from First Quarter 1993 to Second Quarter 2017 (65 sampling events) is shown on **Figure 4**. The predominant direction of groundwater flow at the Site has been toward the south-southwest (Stantec, 2017).

2.3 RELEASE HISTORY

In 1976, all Site features associated with the former service station were removed. Although no release was documented, any releases are believed to have occurred prior to the removal of Site features in 1976.

A hazardous materials release and notification report, dated February 22, 1988, is on file with ACDEH. The report states that an unknown amount of gasoline was released to the subsurface at the Site, which was discovered during assessment activities on February 19, 1988 (ACDEH, 1988).

In a letter dated September 13, 1994, a Groundwater Technology, Inc. (GTI) representative stated that there was a hole in the property fence just southeast of the warehouse building along San Leandro Street. Just inside the fence, used motor oil stains were observed on the ground (unpaved lot). In addition, a broken car battery was found on the ground (GTI, 1994).

In February 1997, the property owner indicated a kerosene spill of unknown volume had occurred within the warehouse building on Site and that the spill had spread into the rest room where well VH-1 is located. During routine groundwater monitoring, it was noted that the spill was cleaned up adequately and there were no signs of liquid product, but the rest room exhibited a strong kerosene odor (Chevron Products Company [Chevron], 1997).

2.4 PREVIOUS INVESTIGATIONS AND REMEDIATION

Historical groundwater monitoring data and analytical results are summarized in **Table 2** through **Table 6**. Historical soil analytical results are summarized in **Table 7**. Historical soil vapor analytical

results are summarized in **Table 8** and **Table 9**. Locations of historical soil borings, monitoring wells, and soil vapor probes are shown on **Figure 2**. Soil boring and well construction logs are included in **Appendix A**.

As described above, in 1976, the service station was closed and all Site features including USTs, dispenser islands, hydraulic hoists, and conveyance lines were removed (CRA, 2009). Further documentation on these activities could not be found in ACDEH records, and it is unknown if soil sampling or excavation of impacted soil, if present, was conducted.

In February 1988, Rogers/Pacific oversaw advancement of three on-site geotechnical soil borings (B-1 through B-3) to total depths of 21.5 feet bgs (borings B-1 and B-3) and 26.5 feet bgs (boring B-2). A strong gasoline odor was observed in saturated soil in all three borings at a depth of approximately 20 feet bgs. No soil samples were collected for laboratory analysis during this investigation (Vonder Harr Hydrology [Vonder Harr], 1988).

In August 1988, Vonder Harr oversaw installation of one on-site groundwater monitoring well (VH-1) to an approximately total depth of 30 feet bgs. TPH-GRO were not detected above laboratory reporting limits (LRLs) in any soil sample collected during this investigation, while the maximum concentration of benzene in soil (0.042 milligrams per kilogram [mg/kg]) was detected in the sample collected at 20.5 feet bgs (Vonder Harr, 1988).

In February 1993, GTI oversaw installation of two on-site groundwater monitoring wells (MW-2 and MW-3) to a total depth of approximately 20 feet bgs. Petroleum hydrocarbons were not detected above LRLs in any soil sample collected during this investigation (GTI, 1993).

In August 1995, GTI oversaw installation of one off-site groundwater monitoring well (MW-4) to a total depth of approximately 20 feet bgs and advancement of one on-site soil boring (SB-1) to a total depth of 21.5 feet bgs. The maximum concentration of TPH-GRO in soil (16 mg/kg) was detected in the sample collected from boring SB-1 at 21.5 feet bgs, while benzene was not detected above LRLs in any soil sample collected. A grab groundwater sample was collected from boring SB-1 at 18 feet bgs, and TPH-GRO and benzene were detected at concentrations of 21,000 micrograms per liter (µg/L) and 240 µg/L, respectively (GTI, 1995).

In June 1998, oxygen release compound (ORC) was installed in wells VH-1, MW-2, and MW-3 (Chevron, 1998a). Based on available historical information, it is believed that ORC was only applied on this one occasion; however, this was never specifically documented. After installation of the ORC, dissolved oxygen (DO) levels in wells VH-1, MW-2, and MW-3 were not significantly different than the levels in down-gradient background well MW-4, indicating the ORC had little success in increasing DO levels to stimulate aerobic biodegradation.

In February 1999, Gettler-Ryan Inc. (G-R) oversaw advancement of two on-site soil borings (VB-1 and VB-2) and subsequent collection of soil vapor samples from each of the borings at a depth of approximately 3 feet bgs. No soil samples were collected for laboratory analysis during this investigation. Soil vapor samples were analyzed for toxic organics (G-R, 1999). All detected concentrations are below soil gas California Regional Water Quality Control Board – San

Francisco Bay Region (RWQCB) Tier 1 Environmental Screening Levels (ESLs) and do not indicate a vapor intrusion risk at the Site.

In July 2001, G-R oversaw advancement of three on-site soil borings (GP-1 through GP-3) to total depths of 15 feet bgs (borings GP-2 and GP-3) and 16 feet bgs (boring GP-1). Petroleum hydrocarbons were not detected above LRLs in any soil sample collected during this investigation; although, a soil sample was not collected from boring GP-1 at 15.5 feet bgs, where the reported photoionization detector (PID) reading was 1,413 parts per million (ppm). Elevated PID readings were not present at total depth in soil borings GP-2 and GP-3 (G-R, 2002a).

In March 2002, G-R oversaw advancement of three off-site, down-gradient soil borings (HA-1 through HA-3) to total depths of 9.5 feet bgs (boring HA-2) and 10 feet bgs (borings HA-1 and HA-3). Petroleum hydrocarbons were not detected above LRLs in any soil sample collected from borings HA-2 and HA-3. Minor detections of toluene, ethylbenzene, and total xylenes were detected in the soil sample collected from boring HA-1 at 5 feet bgs; however, TPH-GRO and benzene were not detected above LRLs in that sample. Grab groundwater samples were collected from soil borings HA-1 through HA-3 at total depth, and petroleum hydrocarbons were not detected above LRLs in any of the groundwater samples (G-R, 2002a).

In May 2008, CRA oversaw installation of four on-site soil vapor probes (VP-1 through VP-4) to total depths of 6 feet bgs and advancement of three on-site soil borings (SB-2 through SB-4) to total depths of 12 feet bgs. Of the soil samples collected during this investigation, only MtBE was detected above LRLs, and it was detected at a maximum concentration of 0.001 mg/kg in the sample collected from boring SB-4 at 12 feet bgs (within the saturated zone), which is below the Tier 1 soil ESL for MtBE (0.023 mg/kg). Grab groundwater samples were collected from boreholes VP-3 and VP-4 and borings SB-2 through SB-4 at a depth of 10.5 feet bgs, and maximum concentrations of TPH-GRO, TPH-DRO, and benzene (1,100 µg/L, 560 µg/L, and 36 µg/L, respectively) were detected in the sample collected from borehole VP-3. Soil vapor sampling was conducted at vapor probes VP-1 through VP-4 in June 2008. Maximum concentrations of TPH-GRO and TPH-DRO in soil vapor (4.5 micrograms per cubic meter [µg/m^3] and 1,200 µg/m^3, respectively) were detected in the sample collected from vapor probe VP-4, while the maximum concentration of benzene (8.2 µg/m^3) was detected in the sample collected from vapor probe VP-1 (CRA, 2008). All concentrations are below Tier 1 soil gas ESLs and do not indicate a vapor intrusion risk at the Site or the adjacent residential properties.

2.5 OFF-SITE SOURCES

In the cover letter that accompanied the Second Quarter 1998 groundwater monitoring report, dated June 30, 1998, Chevron stated there was no explanation for the presence of MtBE at the Site, because Chevron did not use this oxygenate in gasoline until 1991 (Chevron, 1998b), and the gasoline USTs were removed in 1976. Therefore, the MtBE concentrations detected in groundwater are due to an additional off-site source. The TPH-DRO concentrations consistently detected in groundwater in well MW-3 may also be due to an off-site source, because it does not appear that diesel was ever dispensed at the Site, and TPH-DRO was not detected in any soil

sample collected at the Site. In approximately half of the groundwater samples in which TPH-DRO was detected, the laboratory noted unidentified hydrocarbons were observed during analysis, which could indicate hydrocarbons heavier than diesel. Hydrocarbons heavier than diesel would most likely be expected in the area of well MW-3, because it is adjacent to the former waste oil UST. Another indication that off-site sources may be contributing to Site impacts is that strong gasoline odors were observed in boring B-1, located approximately 28 feet north (up-gradient) of the former gasoline USTs associated with the Site.

On June 4, 2002, G-R conducted a Site vicinity survey to identify potential off-site sources. Two operating service stations were identified during the survey; Tony's Express Auto Services is located at 3609 International Boulevard, approximately 620 feet north-northeast (up-gradient) of the Site and Guy's Service Station is located at 3820 San Leandro Street, approximately 500 feet southeast (cross-gradient) of the Site (G-R, 2002b). Guy's Service Station has an open case with the ACDEH (Case No. RO0000089), but given that it is located cross-gradient of the Site, it is unlikely to be contributing to petroleum hydrocarbon concentrations at the Site. Although the ACDEH case for Tony's Express Auto Services (Case No. RO0000265) was closed on January 18, 2011, when the furthest down-gradient well associated with that site (well MW-12, located approximately 345 feet up-gradient of the Site) was last sampled in August 2008, the MtBE concentration was 13 µg/L, which is consistent with MtBE concentrations detected at the Site (ranging from 1 to 2 µg/L during Second Quarter 2017) (SWRCB, 2017a).

A recent Site vicinity survey identified two additional sites as potential off-site sources. Fruitvale Bart is located from the western edge of Fruitvale Avenue to the eastern edge of 37th Avenue and Fruitvale Transit Village is located from 3501 to 3601 East 12th Street. Fruitvale Bart has an open case with the ACDEH (Case No. RO0002490) and Fruitvale Transit Village has an open case with the RWQCB (Case No. 01S0639) (ACDEH, 2017; SWRCB, 2017a).

Groundwater samples were collected from the Fruitvale Transit Village site in locations approximately 320 and 400 feet north (up-gradient) of the Site (borings TR-7 and TR-8, respectively; depths of 16 feet bgs) in 2005 and maximum TPH-GRO, TPH-DRO, total petroleum hydrocarbons as motor oil (TPH-MO), benzene, and MtBE concentrations were 26,000 µg/L, 5,200 µg/L, 350 µg/L, 12 µg/L, and 22 µg/L, respectively (soil concentrations were relatively low). Additional groundwater samples were collected in similar locations in 2016 (borings TR-11 and TR-12; depth of 9.5 feet bgs) and maximum TPH-GRO, TPH-DRO, TPH-MO, and MtBE concentrations were 120 µg/L, 160 µg/L, 350 µg/L, and 2 µg/L, respectively (benzene was non-detect). In a letter dated March 6, 2017, the RWQCB indicated the case is eligible for closure under the LTCP and that the groundwater pollution is likely due to migration from off-site and up-gradient sources (SWRCB, 2017a).

In association with the Fruitvale Bart site, a soil sample was collected from a test pit (Test Pit 19) approximately 50 feet north (up-gradient) of the Site in 1999 (depth of 2 to 3 feet bgs) and TPH-DRO and TPH-MO were detected at concentrations of 2,800 mg/kg and 6,000 mg/kg, respectively. A groundwater sample was collected in approximately the same location (boring GW3) in 2000 and TPH-GRO, TPH-DRO, benzene, and MtBE concentrations in that sample were

380 µg/L, 96 µg/L, 6.0 µg/L, and 110 µg/L, respectively. The boring log indicates that groundwater was encountered at approximately 14 feet bgs, and it is assumed that the groundwater sample was collected at this depth (ACDEH, 2017). GeoTracker™ lists the Fruitvale Bart site as being inactive since January 21, 2016 (SWRCB, 2017a).

Based on the petroleum hydrocarbon concentrations observed in soil and groundwater at the identified up-gradient sites, all may have contributed to Site impacts; however, given that the Fruitvale Bart site is closer to the Site and has higher concentrations, it is more likely that impacts may have originated from that site.

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3.0 Extent of Petroleum Hydrocarbons

3.1 EXTENT OF PETROLEUM HYDROCARBONS IN SOIL

Historical soil sample analytical results are presented in **Table 7.** Soil analytical results are compared to Tier 1 ESLs (RWQCB, 2016).

Based on soil analytical results collected from 1988 to 2008, there have been slight detections of TPH-GRO, benzene, toluene, ethylbenzene, and total xylenes (BTEX Compounds), and total lead in shallow soil; however, no soil samples collected in association with the Site exhibited concentrations of petroleum hydrocarbons above Tier 1 soil ESLs and historical assessment activities have provided adequate lateral and vertical coverage of former fueling features in vadose zone soil. Therefore, the lateral and vertical extents of petroleum hydrocarbons in soil are considered defined, and this is not considered a data gap.

There are reports of strong gasoline odor in borings B-1 through B-3 at 20 feet bgs; however, odor is subjective, especially within the saturated zone. In addition, historical soil samples were collected from borehole VH-1 at 20.5 and 25.5 feet bgs, which is near borings B-1 through B-3, and the reported concentrations are below Tier 1 ESLs. Soil data from VH-1 defines the vertical extent of petroleum hydrocarbons in soil in the area of borings B-1 through B-3. Elevated PID readings were reported in borehole MW-2 at 15 and 19 feet bgs, borehole MW-3 at 15 feet bgs, boring GP-1 at 15.5 feet bgs, and boring SB-1 at 21.5 feet bgs. Of these samples, only the soil sample collected from boring SB-1 at 21.5 feet bgs was submitted for laboratory analysis, and the reported concentrations were below Tier 1 soil ESLs by up to one order of magnitude.

3.2 EXTENT OF PETROLEUM HYDROCARBONS IN GROUNDWATER

Historical groundwater analytical results are included in **Table 2** through **Table 6**. A figure showing the Second Quarter 2017 groundwater analytical data plotted on a Site map is included as **Figure 5**. A TPH-GRO isoconcentration map for Second Quarter 2017 is shown on **Figure 6**. A benzene isoconcentration map for Second Quarter 2017 is shown on **Figure 7**. These maps illustrate the approximate lateral extent of dissolved-phase impacts.

During Second Quarter 2017, maximum concentrations of TPH-GRO, benzene, toluene, total xylenes, and MtBE (3,000 µg/L, 5 µg/L, 0.9 µg/L, 2 µg/L, and 2 µg/L, respectively) were observed in well VH-1, located approximately 6 feet from the former gasoline USTs. The TPH-GRO concentrations in wells VH-1, MW-2, and MW-3 are above the Tier 1 ESL for TPH-GRO of 100 µg/L and the benzene concentration in well VH-1 is above the Tier 1 ESL for benzene of 5 µg/L. Ethylbenzene was not detected above LRLs and toluene, ethylbenzene, and MtBE (attributed to an off-site source) were not detected above Tier 1 ESLs (40 µg/L, 20 µg/L, and 5 µg/L, respectively). TPH-DRO was detected above the Tier 1 ESL (100 µg/L) in the one well in which it is analyzed, well MW-3, located approximately 4 feet from the former waste oil UST (Stantec, 2017).

The TPH-GRO plume is defined to the southeast by concentrations below LRLs in well MW-4, and

the benzene plume is defined to the northeast and southeast by concentrations below LRLS in wells MW-2, MW-3, and MW-4. The plumes are also delineated to the southwest and west using historical groundwater samples collected from borings HA-1, HA-2, HA-3, SB-3, and SB-4. The TPH-GRO and benzene plumes are adequately defined.

Based on a review of historical boring and well logs and hydrologic data, there is no evidence of multiple shallow aquifers (groundwater-bearing zones) at the Site, and previously collected groundwater samples appear representative of Site groundwater, including the current delineation of the dissolved-phase plume.

3.2.1 Plume Stability

Hydrographs based on current and historical groundwater elevations and analytical results are included in **Appendix C**. Current and historical groundwater quality data indicate the dissolved-phase petroleum hydrocarbon plume associated with the Site is generally stable or decreasing in overall size and concentration. During Second Quarter 2017, all concentrations of TPH-GRO, TPH-DRO, BTEX Compounds, and MtBE (attributed to an off-site source) were within historical limits at all wells sampled. Concentrations appear to have an inverse relationship with changes in groundwater elevation; however, overall stable or decreasing concentration trends are still observed (Stantec, 2017).

4.0 Site Conceptual Model

An updated SCM was prepared to identify complete and potentially complete exposure pathways relevant to human health risks at the Site based on analyses of the following components:

- Current and future land uses;
- Water well, surface water, and conduit surveys;
- Potentially exposed populations; and
- Complete and potentially complete exposure pathways.

4.1 CURRENT AND FUTURE LAND USES

Land use near the Site consists of a mixture of commercial and residential properties. The Site is bounded to the northwest by a residence, to the northeast by a BART parking lot and elevated rail tracks, on the southeast by 37th Avenue followed by a commercial building, and on the southwest by San Leandro Street followed by a mixed commercial and residential area.

The Site and properties to the northwest, southwest, and southeast of the Site are zoned as commercial (mixed housing and business), while the properties to the northeast of the Site are zoned for transit oriented purposes.

Based on the land use of the Site and its location at a major intersection, the Site will likely continue to be used for commercial purposes in the future.

4.2 WATER SURVEY

The Site is located in the East Bay Plain groundwater basin, which has been designated as having existing beneficial uses for municipal, domestic, industrial process, industrial service, and agricultural water supply (RWQCB, 2011).

4.2.1 Groundwater Wells

A well survey was conducted in 1993 (using information provided by the California Department of Water Resources [DWR]) to identify water supply wells within a 0.5-mile (2,640-foot) radius of the Site (GTI, 1993). Out of the 36 active wells identified, the records indicated three water supply wells within the radius, which includes one irrigation well and two wells with unknown uses. The irrigation well is located approximately 0.29 miles (1,531 feet) northeast (up-gradient) of the Site. One of the wells with an unknown use is located approximately 0.26 miles (1,373 feet) west (cross-gradient) of the Site, and the other is located approximately 0.46 miles (2,429 feet) west-southwest (cross- to down-gradient) of the Site. Total depth information was not available for these wells. Based on the predominant direction of groundwater flow at the Site (south-

southwest), the distance to the water supply wells, the limited extent of the plume, and the location of the water supply wells up-gradient or cross-gradient of the Site, the water supply wells are not likely to be impacted by the dissolved-phase petroleum hydrocarbon plume. A recent review of the SWRCB GeoTracker™ GAMA Database did not identify any additional water supply wells within a 0.5-mile (2,640-foot) radius of the Site (SWRCB, 2017b). Given the limited extent of the dissolved-phase petroleum hydrocarbon plume, it does not appear that additional research on water supply wells in the area is necessary.

4.2.2 Surface Water Bodies

The United States Geological Survey (USGS) 7.5-minute Oakland East Quadrangle topographic map and aerial photos from Google Earth® were reviewed to identify any surface water within a 0.5-mile radius of the Site. The nearest surface water body is the Inner Oakland harbor of the Oakland-Alameda Estuary, located approximately 2,350 feet southwest (down-gradient) of the Site. Based on the distance to this surface water body, it is unlikely that it will be impacted by the dissolved-phase petroleum hydrocarbon plume associated with the Site.

4.3 CONDUIT SURVEY

A Site Plan showing the location of utilities in the vicinity and down-gradient of the Site is shown on **Figure 2**. Underground utilities that have been identified down-gradient of the Site beneath San Leandro Street include sanitary sewer, natural gas, and water lines. In addition, a Shell fuel pipeline has been reported trending along the south side of San Leandro Street. The depth and flow directions of these utilities are unknown. In March 2002, three down-gradient hand-augered soil borings (HA-1 through HA-3) were advanced to depths of 9.5 feet bgs (boring HA-2) and 10 feet bgs (borings HA-1 and HA-3) to evaluate if the utilities were acting as preferential pathways. Borings HA-1 and HA-2 were located on either side of the sanitary sewer line in San Leandro Street and boring HA-3 was located on the up-gradient side of the natural gas line. Concentrations of petroleum hydrocarbons in grab groundwater samples collected from the borings were below LRLs and it was concluded that the sanitary sewer and natural gas lines did not appear to be acting as preferential pathways (G-R, 2002a). Boring HA-3 and well MW-4 are in locations where they could intersect any groundwater leaving the Site before reaching the trench for the natural gas line, and groundwater concentrations in those locations are below LRLs. In addition, based on concentrations below LRLs in boring HA-2, the plume does not appear to extend to the sanitary sewer line, the water line, or the fuel line at the estimated depth of these utilities.

Based on these data, there is no evidence to suggest utility trenches are acting as preferential pathways for the dissolved-phase plume associated with the Site, and the dissolved-phase plume is defined by these samples. Therefore, additional assessment of utilities and other sensitive receptors (basements, crawl spaces, dewatering sump pumps, etc.) is not warranted and the Site satisfies the groundwater-specific criteria of the LTCP regarding plume definition, as described in Section 5.2.1.

4.4 POTENTIALLY EXPOSED POPULATIONS

4.4.1 On-Site Current or Potential Populations

Based on the current and likely future use of the Site as commercial, the current or future potentially exposed populations on Site include commercial workers, customers, and construction workers.

4.4.2 Off-Site Current or Potential Populations

Based on the current and likely future use of adjacent and down-gradient properties as commercial or residential, the current or future potentially exposed populations off Site include commercial workers, customers, construction workers, and residents.

4.4.3 Potential Sensitive Populations

Stantec conducted a survey to determine if any potential sensitive populations were located in the vicinity of the Site. Potential sensitive populations are people who would potentially be more susceptible to risks resulting from exposure to Site-related hydrocarbons such as school-age children, medically-compromised people, and the elderly. The potential sensitive populations located within a 0.5-mile (2,640-foot) radius of the Site are listed in the following table:

Potential Sensitive Receptor	Address	Distance from Site (feet)	Direction from Site
Ascend Elementary School	3709 E. 12th St.	264	E, cross-gradient
Las Bougainvilleas Retirement Community	1223 37th Ave.	422	NE, up-gradient
DeColores Head Start	1155 35th Ave.	581	N-NE, up-gradient
Twenty-Four Hour Oakland PTC	3500 E. 9th St.	686	SW, down-gradient
Arise High School	3301 E. 12th St.	845	NW, cross-gradient
St. Elizabeth Elementary and Middle Schools	1516 33rd Ave.	1,690	N, cross-gradient
St. Elizabeth High School	1530 34th Ave.	1,742	N, cross-gradient
Oakland Charter Middle School	3001 International Blvd.	2,270	NW, cross-gradient
Fruitvale Health Care Center	3020 E. 15th St.	2,376	NW, cross-gradient
Lazear Elementary School	824 29th Ave.	2,534	W-NW, cross-gradient
Rose Garden Residential Care	1615 High St.	2,534	E, cross-gradient

Based on the predominant direction of groundwater flow associated with the Site (south-southwest), only one of identified potential sensitive populations within a 0.5-mile (2,640-foot) radius of the Site (Twenty-Four Hour Oakland PTC) is located down-gradient. However, based on its distance from the Site (approximately 0.13 miles [686 feet]) and the limited extent of the current dissolved-phase plume (less than 250 feet), Twenty-Four Hour Oakland PTC is unlikely to be at risk from exposure to Site-related petroleum hydrocarbons.

4.5 EXPOSURE PATHWAY ANALYSIS

An exposure pathway is considered complete or potentially complete if it meets four basic requirements: 1) presence of chemical sources; 2) release and transport within an environmental medium; 3) an exposure route; and 4) a receptor. A graphical representation of the exposure pathway analysis for the Site is shown on **Figure 8**.

Incomplete exposure pathways are justified as follows:

- The ingestion of groundwater and dermal contact with groundwater exposure pathways are considered incomplete for all human receptors because there is no mechanism for deliberate consumption of the groundwater (no Site or nearby down-gradient water supply wells), and because excavation at or below the groundwater table is unlikely. Although excavation work to access the utilities within San Leandro Street would likely encounter groundwater, the identified utilities do not appear to be acting as preferential pathways.

- The ingestion and dermal contact surface soil exposure pathways are considered incomplete for all human receptors, because no shallow (less than 10 feet bgs) soil impacts were observed in association with the Site.

- The ingestion, dermal contact, and inhalation of outdoor particulates from excavated soil exposure pathways are considered incomplete for all human receptors, because excavation to potentially impacted depths, which were below the groundwater table, is unlikely.

- The soil gas emission pathways (inhalation of indoor and outdoor air) are considered incomplete for all human receptors as no shallow (less than 10 feet bgs) soil impacts were observed in association with the Site.

Potentially complete exposure pathways are summarized as follows:

- The groundwater emission pathways (inhalation of indoor and outdoor air) are considered potentially complete for on-site and off-site receptors due to the potential for petroleum hydrocarbons in shallow groundwater to volatilize and be inhaled in the indoor or outdoor air.

4.6 RISK EVALUATION

The groundwater emission pathways (inhalation of indoor and outdoor air) are considered potentially complete for on-site and off-site receptors; however, soil vapor sampling was conducted beneath the current on-site building in June 2008 and all results are below Tier 1 ESLs; therefore, there is no indication of a vapor intrusion risk for on-site or off-site human receptors associated with this pathway. Furthermore, as indicated on the ACDEH's LTCP checklist on GeoTracker™, dated June 7, 2017, Site conditions meet the petroleum vapor intrusion to indoor air and direct contact and outdoor air exposure criteria set forth in the LTCP.

5.0 LTCP Evaluation

This section presents the low-threat general and media-specific criteria defined by the SWRCB's LTCP (SWRCB, 2012a) and includes an evaluation of Site conditions compared to these criteria. This evaluation correlates with the ACDEH evaluation (LTCP Checklist) presented in GeoTracker™, dated June 7, 2017, with the exception of the portion regarding the groundwater media-specific criteria. The ACDEH LTCP Checklist does not identify the groundwater media-specific criteria as being satisfied; however, Stantec presents justification for why this criterion is satisfied below. A completed SWRCB LTCP Checklist is included in **Appendix D**.

5.1 GENERAL CRITERIA

- **Is the unauthorized release located within the service area of a public water system?**

  Yes. The Site is located within the service area of the East Bay Municipal Utility District.

- **Does the unauthorized release consist only of petroleum?**

- **Yes.** The constituents of concern (COCs) at the Site are petroleum hydrocarbons associated with gasoline hydrocarbons from a former service station, including TPH-GRO and BTEX compounds.

- **Has the unauthorized ("primary") release from the UST system been stopped?**

  Yes. As detailed in Section 2.0, all Site features associated with the former service station were removed in 1976 (41 years ago). This includes three gasoline USTs (two 10,000-gallon and one 5,000-gallon) located in the northwestern portion of the Site, a 1,000-gallon waste oil UST located in the northern portion of the Site, two fuel dispenser islands located in the southern portion of the Site, associated product piping, and a station building with two hydraulic hoists located in the center of the Site (CRA, 2009).

  Dissolved-phase petroleum hydrocarbon concentrations associated with the Site are decreasing, indicating that there is no longer a petroleum hydrocarbon source propagating on Site.

- **Has free product been removed to the maximum extent practicable (per CCR Chapter 16 Section 2655 a-c)?**

  Not applicable. Free product has not been observed or documented in any Site wells to-date; therefore, no free product removal activities have been conducted at any Site wells.

- **Has a Conceptual Site Model that assesses the nature, extent, and mobility of the release been developed?**

  Yes. This document assesses the nature, extent, and mobility of the release.

- **Has secondary source been removed to the extent practicable?**

  Yes. Historical remedial efforts at the Site have consisted of installation of ORC in wells VH-1, MW-2, and MW-3 in June 1998 and natural attenuation processes.

  According to the frequently asked questions sheet included in the LTCP, "following removal or destruction of the secondary source, additional removal or active remedial actions shall not be required by regulatory agencies unless: (1) necessary to abate a demonstrated threat to human health, or (2) the groundwater plume does not meet the definition of low-threat as described in the policy." As described in Section 4 of this report, there is no demonstrated threat to human health at the Site, and as described below in Section 5.2.1, the groundwater plume meets LTCP groundwater-specific criteria; therefore, further active remediation at the Site is not warranted.

- **Has soil or groundwater been tested for MtBE and results reported in accordance with Health and Safety Code section 25296.15?**

  Yes. MtBE was analyzed in soil samples collected in association with the Site beginning in July 2001. MtBE was routinely analyzed in groundwater during monitoring and sampling events since Fourth Quarter 1995. Results have been reported to ACDEH and uploaded to GeoTracker™.

- **Does nuisance as defined by Water Code section 13050 exist at the site? A "nuisance" is defined as anything which meets the following (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property; (2) Affects at the same time an entire community or neighborhood; (3) Occurs during, or as a result of, the treatment or disposal of wastes.**

  No. The conditions of "nuisance" as defined by Water Code section 13050 do not exist at the Site.

- **Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?**

  No.

5.2 MEDIA-SPECIFIC CRITERIA

5.2.1 Groundwater-Specific Criteria

The information presented below should clarify the evaluation of groundwater media-specific LTCP criteria, as presented in the GeoTracker™ LTCP Checklist, dated June 7, 2017. Current Site conditions satisfy groundwater-specific criteria scenario #2 as follows:

- The contaminant plume that exceeds water quality objectives (described in Section 3.2) is less than 250 feet in length;
- There is no free product;
- There are no water supply wells or surface water bodies identified within 1,000 feet of the defined plume boundary; and
- Dissolved benzene and MtBE concentrations are below 3,000 µg/L and 1,000 µg/L, respectively.

5.2.2 Petroleum Vapor Intrusion to Indoor Air Criteria

Current Site conditions satisfy criteria "a" based on scenario #4 for a bioattenuation zone (Direct Measurement of Soil Gas Concentrations) as follows:

1. **There is a minimum of five vertical feet of soil between the soil vapor measurement and the foundation of an existing building or ground surface of future construction.**

   Soil vapor samples were collected beneath the current on-site building from vapor probes VP-1 through VP-4 in June 2008. These probes have screen interval depths ranging from 5.25 to 5.75 feet bgs.

2. **TPH (TPHg + TPHd) is less than 100 mg/kg (measured in at least two depths within the five-foot zone).**

   TPH concentrations were below LRLs and therefore less than 100 mg/kg in all historical soil samples collected from 0 to 5 feet bgs.

3. **Oxygen is greater than or equal to four percent measured at the bottom of the five-foot zone.**

   Oxygen was measured in soil vapor samples collected from vapor probes VP-1 through VP-4, and all oxygen levels were greater than 4 percent, but less than levels that would indicate leakage of outside air.

Because conditions satisfy the criteria for a bioattenuation zone, soil gas screening levels for low-threat consideration are 85,000 µg/m^3 benzene, 1,100,000 µg/m^3 ethylbenzene, and

93,000 µg/m^3 naphthalene for the more conservative residential land use; although, it is likely that this Site will continue to be used for commercial purposes. Benzene and ethylbenzene concentrations in soil vapor samples collected from probes VP-1 through VP-4 (shown in **Table 9**) are below these screening levels.

Soil vapor samples collected from probes VP-1 through VP-4 were not analyzed for naphthalene; however, the naphthalene concentration that would potentially be present can be back-calculated using the maximum concentrations of TPH-GRO and TPH-DRO in the soil vapor samples and the Leaking Underground Fuel Tank (LUFT) Guidance Manual average naphthalene percentages in gasoline and diesel of 0.25 percent and 0.26 percent, respectively (SWRCB, 2012b). Maximum concentrations of TPH-GRO and TPH-DRO in the soil vapor samples were 4.5 µg/m^3 and 1,200 µg/m^3, respectively, in the sample collected from probe VP-4. This amounts to approximately 3.13 µg/m^3 naphthalene [(0.0025*4.5 µg/m^3 TPH-GRO)+ (0.0026*1,200 µg/m^3 TPH-DRO) = 3.13 µg/m^3 naphthalene]. Therefore, the estimated concentrations of naphthalene in the soil vapor samples collected from probes VP-1 through VP-4 would also be below the screening levels, and Site conditions satisfy the LTCP petroleum vapor intrusion to indoor air criteria.

5.2.3 Direct Contact and Outdoor Air Exposure Criteria

Current Site conditions satisfy the LTCP direct contact and outdoor air exposure criteria.

The concentrations of benzene and ethylbenzene in the upper 10 feet of soil are less than the residential and commercial/industrial limits for direct contact and outdoor air exposure specified in Table 1 of the LTCP.

It does not appear that soil samples were analyzed for naphthalene from 0 to 10 feet bgs as specified in the LTCP; however, benzene exclusion criteria are considered conservative for naphthalene given that naphthalene is less volatile than benzene and is typically present in gasoline at much lower fractions than benzene (SWRCB, 2012c). Using SWRCB staff precedent from recent case closure reviews, "the relative concentration of naphthalene in soil can be conservatively estimated using published relative concentrations of naphthalene and benzene in gasoline" (SWRCB, 2017c). The lack of naphthalene data is not considered a data gap, and Site conditions can be assessed by using benzene concentrations. Gasoline mixtures contain approximately 2% benzene and 0.25% naphthalene (SWRCB, 2012b); therefore, benzene can be directly substituted for naphthalene concentrations with an approximate safety factor of eight. As previously described, the concentrations of benzene in the upper 10 feet of soil are less than the residential and commercial/industrial limits for direct contact and outdoor air exposure specified in Table 1 of the LTCP; therefore, it is anticipated that the estimated naphthalene concentrations across the Site are also below the residential and commercial/industrial limits presented in Table 1 of the LTCP.

Polynuclear aromatic hydrocarbons (PAHs) were not historically included in the analytical suite for soil; however, the groundwater sample collected from well MW-3 in August 2011 was analyzed for PAHs and all concentrations were below LRLs, with the exception of naphthalene, which was detected at a concentration of 2 µg/L. There is no evidence to suggest a release from the former waste oil UST is impacting soil or groundwater, and the LTCP checklist provided by ACDEH on GeoTracker™ states that the Site meets the criteria for direct contact and outdoor air exposure set forth in the LTCP. Therefore, further analysis of PAHs is not warranted.

6.0 Recommendations

Based on the results and conclusions presented herein, Stantec requests that ACDEH proceed with low-threat case closure. Site conditions meet the general and media-specific criteria established in the SWRCB's LTCP and pose a low threat to human health, safety, and the environment. Groundwater monitoring and sampling will cease while ACDEH evaluates this case for closure.

7.0 References

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TABLES

Table 1
Well Details / Screen Interval Assessment
Second Quarter 2017
Former Chevron-Branded Service Station 94612
3616 San Leandro Street, Oakland, California

Well ID	Date Installed	Well Type	Casing Diameter (inches)	Top of Casing (feet above msl)	Construction Well Depth (feet bgs)	Current Well Depth[1] (feet below TOC)	Current Depth to Groundwater[1] (feet below TOC)	Screen Interval (feet bgs)	Screen Interval Assessment
VH-1	08/09/88	Monitoring	4	27.91	30.00	28.97	8.88	10-30	Depth-to-groundwater above screen interval.
MW-2	02/01/93	Monitoring	2	28.05	20.00	19.46	9.06	5-20	Depth-to-groundwater within screen interval.
MW-3	02/01/93	Monitoring	2	29.04	20.00	17.96	9.16	5-20	Depth-to-groundwater within screen interval.
MW-4	08/15/95	Monitoring	2	27.27	20.00	17.84	8.42	7-20	Depth-to-groundwater within screen interval.

Notes:
bgs = below ground surface
msl = mean sea level
TOC = top of casing
[1] = As measured on June 29, 2017.

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-MO (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)	TOG (µg/L)
VH-1												
08/10/88	--	13.00	--	--	--	11,000	3,300	200	520	540	--	--
06/01/89	--	10.32	--	--	--	15,000	2,200	120	540	310	--	--
09/15/89	--	15.69	--	--	--	5,600	1,900	90	350	160	--	--
12/08/89	--	14.77	--	--	--	11,000	1,900	69	270	99	--	--
03/07/91	--	11.26	--	--	--	4,500	820	39	120	77	--	--
09/24/91	--	12.98	--	--	--	3,300	520	19	39	27	--	--
01/08/92	--	13.77	--	--	--	5,000	600	34	81	76	--	--
04/20/92	--	8.18	--	--	--	7,400	670	60	110	140	--	--
03/26/93	27.85	6.71	21.14	--	--	4,900	600	40	72	94	--	--
05/27/93	27.85	8.58	19.27	--	--	13,000	1,600	120	230	220	--	--
08/18/93	27.85	10.46	17.39	--	--	2,700	210	10	8.1	18	--	--
11/03/93	27.85	12.57	15.28	--	--	4,600	680	42	35	68	--	--
02/10/94	27.85	9.08	18.77	--	--	1,900	260	19	22	29	--	--
05/12/94	27.85	8.09	19.76	--	--	2,000	390	28	3.9	29	--	--
08/26/94	27.85	10.75	17.10	--	--	4,900	500	<5.0	23	31	--	--
11/14/94	27.85	9.45	18.40	--	--	760	69	<2.0	<2.0	2.2	--	--
02/01/95	27.85	5.97	21.88	--	--	1,300	120	5.9	<0.5	13	--	--
05/12/95	27.85	7.71	20.14	--	--	4,400	460	31	45	49	--	--
08/22/95	27.85	9.26	18.59	--	--	2,900	310	15	28	32	--	--
12/19/95	27.85	8.80	19.05	--	--	930	53	<2.5	<2.5	<2.5	39	--
01/31/96	27.85	5.50	22.35	--	--	3,700	320	<10	41	40	180	--
04/30/96	27.85	8.04	19.81	--	--	3,900	270	<20	<20	<20	120	--
08/01/96	27.85	9.18	18.67	--	--	2,700	140	11	18	28	200	--
10/30/96	27.85	10.76	17.09	--	--	2,700	140	<12	<12	<12	280	--
02/07/97	27.85	8.10	19.75	--	--	220	13	0.6	<0.5	1.6	15	--
05/07/97	27.85	9.52	18.33	--	--	5,200	33	12	21	26	330	--
07/22/97	27.85	10.42	17.43	--	--	4,200	80	<10	16	24	400	--
11/03/97	27.85	11.00	16.85	--	--	2,400	150	6.8	6.5	9.5	510	--
01/28/98	27.85	7.10	20.75	--	--	850	69	4.8	5.0	11	38/48[12]	--
05/08/98	27.85	7.71	20.14	--	--	4,200	200	30	40	42	310/200[12]	--
07/29/98	27.85	9.45	18.40	--	--	3,800	54	10	27	30	35/290[12]	--
11/06/98	27.85	10.70	17.15	--	--	4,800	100	20	12	23	360/210[12]	--
02/09/99[5]	27.85	5.98	21.87	--	--	2,950	79.5	<10	<10	<10	435/312[12]	--
05/13/99	27.85	8.14	19.71	--	--	4,180	147	12.8	16.5	20.3	433/245[12]	--
09/07/99	27.85	9.91	17.94	--	--	2,750	57.6	<5.0	6.53	<5.0	297/233[12]	--
11/24/99	27.85	10.49	17.36	--	--	2,550	38	3.18	2.54	5.21	216[1,12]	--
02/25/00	27.85	6.65	21.20	--	--	120	2.7	<0.5	<0.5	<0.5	20.5/11.9[12]	--

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VH-1 (cont)													
05/10/00		27.85	8.09	19.76	--	--	1,400[8]	63	3.3	3.1	4.9	230/110[12]	--
7/31/00[11]		27.85	9.55	18.30	--	--	360[8]	22	2.7	1.6	3.1	100/88[12]	--
10/30/00[11]		27.85	9.94	17.91	--	--	987[10]	47.0	1.00	<0.500	1.80	153/130[12]	--
02/05/01		27.91	8.68	19.23	--	--	2,670	42.7	<5.00	<5.00	<5.00	225/160[12]	--
05/07/01[11]		27.91	8.30	19.61	--	--	1,800[6]	100	8.2	10	7.9	440/110[12]	--
08/06/01[11]		27.91	9.82	18.09	--	--	1,000[6]	67	6.1	2.1	7.1	270/140[12]	--
11/12/01[11]		27.91	10.62	17.29	--	--	220	1.2	<0.50	<0.50	<1.5	63/61[12]	--
02/11/02[11]		27.91	8.08	19.83	--	--	1,700	33	<5.0	6.3	3.8	64/52[12]	--
05/13/02[11]		27.91	8.70	19.21	--	--	2,700	54	4.1	5.6	6.2	100/80[12]	--
08/09/02[11]		27.91	9.41	18.50	--	--	2,400	37	2.4	1.2	3.4	86/89[12]	--
11/07/02[11]		27.91	10.57	17.34	--	--	150	1.3	<0.50	<0.50	<1.5	56/50[12]	--
02/04/03[11]		27.91	8.28	19.63	--	--	1,700	40	3.1	7.8	5.0	100/53[12]	--
05/05/03[11]		27.91	7.50	20.41	--	--	2,100	44	3.4	3.7	5.2	96/62[12]	--
09/06/03[11,14]		27.91	9.60	18.31	--	--	690	7	0.6	<0.5	0.6	59	--
11/14/03[11,14]		27.91	9.92	17.99	--	--	1,000	3	0.6	2	0.7	47	--
02/13/04[14,15]		27.91	7.93	19.98	--	--	2,400	30	2	4	3	47	--
05/13/04[14]		27.91	8.67	19.24	--	--	1,900	49	4	3	5	74	--
08/17/04[14]		27.91	9.65	18.26	--	--	1,800	11	1	0.9	2	58	--
11/10/04		27.91	INACCESSIBLE		--	--	--	--	--	--	--	--	--
02/08/05[14]		27.91	7.83	20.08	--	--	2,700	26	3	4	5	48	--
06/03/05[14]		27.91	8.20	19.71	--	--	3,100	40	5	6	9	45	--
08/05/05[14]		27.91	10.10	17.81	--	--	2,500	34	4	0.6	6	46	--
12/02/05[14]		27.91	8.98	18.93	--	--	3,500	69	7	2	8	57	--
03/03/06[14]	NP[18]	27.91	7.25	20.66	--	--	4,100	37	6	6	8	40	--
05/31/06[14]	NP[18]	27.91	8.17	19.74	--	--	4,100	33	5	3	8	34	--
08/18/06[14]		27.91	9.12	18.79	--	--	3,300	23	4	1	5	33	--
11/17/06[14]		27.91	9.27	18.64	--	--	3,200	18	3	0.6	3	33	--
02/09/07[14]	NP[18]	27.91	8.38	19.53	--	--	3,600	23	4	2	5	28	--
05/11/07[14]	NP[18]	27.91	8.38	19.53	--	--	3,200	14	3	1	5	26	--
08/10/07[14]	NP[18]	27.91	9.50	18.41	--	--	2,400	10	2	0.6	3	21	--
11/08/07[14]	NP[18]	27.91	9.66	18.25	--	--	3,000	10	2	0.5	2	18	--
02/07/08[14]	NP[18]	27.91	7.15	20.76	--	--	4,000	14	3	5	5	14	--
05/02/08[14]	NP[18]	27.91	8.95	18.96	--	--	3,000	14	3	2	4	17	--
07/31/08[14]	NP[18]	27.91	9.68	18.23	--	--	2,700	13	2	0.8	3	14	--
11/13/08[14]	NP[18]	27.91	10.18	17.73	--	--	2,500	6	1	<0.5	1	12	--
02/02/09[14]	NP[18]	27.91	9.91	18.00	--	--	4,000	7	1	<0.5	1	12	--
05/01/09[14]	NP[18]	27.91	9.16	18.75	--	--	3,900	20	3	3	6	15	--
08/10/09[14]	NP[18]	27.91	9.67	18.24	--	--	1,400	6	1	<0.5	1	11	--
01/29/10[14]	NP[18]	27.91	7.23	20.68	--	--	3,700	24	4	5	5	13	--

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3616 San Leandro Street
Oakland, California

WELL ID/ DATE		TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-MO (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)	TOG (µg/L)
VH-1 (cont)													
08/23/10[14]	NP[18]	27.91	9.28	18.63	--	--	3,600	18	3	2	4	9	--
08/22/11[14]		27.91	9.28	18.63	--	--	3,400	12	2	0.8	3	7	--
05/10/12[14]	NP[18]	27.91	8.26	19.65	--	--	3,100	12	3	2	4	6	--
05/08/13[14]	NP[18]	27.91	8.98	18.93	--	--	3,500	12	2	1	5	5	--
05/13/14[14]	NP[18]	27.91	8.71	19.20	--	--	390	<0.5	<0.5	<0.5	<0.5	2	--
05/14/15[14]	NP[18]	27.91	9.15	18.76	--	--	290	<0.5	<0.5	<0.5	<0.5	2	--
05/02/16[14]	NP[18]	27.91	8.30	19.61	--	--	310	<0.5	<0.5	<0.5	<0.5	1	--
06/29/17[14]	**NP[18]**	**27.91**	**8.88**	**19.03**	**--**	**--**	**3,000**	**5**	**0.9**	**<0.5**	**2**	**2**	**--**
MW-2													
02/16/93		27.51	--	--	--	--	9,200	720	110	250	170	--	--
03/26/93		27.51	7.62	19.89	--	--	--	--	--	--	--	--	--
05/27/93		27.51	9.47	18.04	--	--	360	5.3	2.1	1.8	2.5	--	--
08/18/93		27.51	11.05	16.46	--	--	9,400	1,100	76	110	100	--	--
11/03/93		27.51	12.95	14.56	--	--	8,600	390	20	2.7	120	--	--
02/10/94		27.51	9.79	17.72	--	--	2,700	370	38	44	41	--	--
05/12/94		27.51	8.92	18.59	--	--	3,800	650	76	15	62	--	--
08/26/94		27.51	11.37	16.14	--	--	16,000	1,300	270	28	120	--	--
11/14/94		27.51	10.03	17.48	--	--	5,100	390	10	43	27	--	--
02/01/95		27.51	7.04	20.47	--	--	6,900	520	82	170	110	--	--
05/12/95		27.51	8.75	18.76	--	--	7,700	510	83	110	100	--	--
08/22/95		27.51	10.16	17.35	--	--	4,500	220	16	61	47	--	--
12/19/95		27.51	9.46	18.05	--	--	2,900	240	<10	19	18	220	--
01/31/96		27.51	5.60	21.91	--	--	3,900	320	18	72	39	<25	--
04/30/96		27.51	8.83	18.68	--	--	5,600	200	36	55	47	170	--
08/01/96		27.51	10.26	17.25	--	--	6,200	190	15	62	59	220	--
10/30/96		27.51	11.48	16.03	--	--	5,700	190	<25	67	36	260	--
02/07/97		27.51	9.40	18.11	--	--	8,300	210	34	70	59	330	--
05/07/97		27.51	9.94	17.57	--	--	6,900	190	12	38	37	530	--
07/22/97		27.51	11.15	16.36	--	--	10,000	18	25	62	41	630	--
11/03/97		27.51	11.58	15.93	--	--	6,500	260	8.5	26	14	590/9.6[4,12]	--
01/28/98		27.51	8.13	19.38	--	--	6,700	65	13	67	54	280/94[12]	--
05/08/98		27.51	8.62	18.89	--	--	5,500	91	38	43	61	220/62[12]	--
07/29/98		27.51	10.45	17.06	--	--	3,600	41	8.9	3.6	14	16/94[12]	--
11/06/98		27.51	11.62	15.89	--	--	6,900	77	<5.0	14	17	290/110[12]	--
02/09/99[5]		27.51	6.90	20.61	--	--	8,070	75.6	<10	<10	<10	397/144[12]	--
05/13/99		27.51	9.30	18.21	--	--	5,890	120	<5.0	12.5	26.6	401/69.4[12]	--
09/07/99		27.51	10.94	16.57	--	--	5,820	41.2	<5.0	14.6	<5.0	260/145[12]	--

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-MO (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)	TOG (µg/L)
MW-2 (cont)												
11/24/99	27.51	11.53	15.98	--	--	5,940	40.9	<10	10.8	<10	120[1,12]	--
02/25/00	27.51	6.51	21.00	--	--	6,370	101	9.37	39.8	33.2	321/121[12]	--
05/10/00	27.51	9.02	18.49	--	--	6,100[8]	110	13	27	31	560/120[12]	--
07/31/00[11]	27.51	10.33	17.18	--	--	3,000[8]	75	14	28	28	200/130[12]	--
10/30/00[11]	27.51	10.56	16.95	--	--	6,810[10]	162	<5.00	8.05	<15.0	372/140[12]	--
02/05/01[11]	28.05	9.58	18.47	--	--	5,860	28.4	6.86	16.2	11.8	285/140[12]	--
05/07/01[11]	28.05	9.20	18.85	--	--	4,700[6]	120	15	30	42	540/88[12]	--
08/06/01[11]	28.05	10.74	17.31	--	--	3,700[6]	120	<20	28	33	490/110[12]	--
11/12/01[11]	28.05	11.45	16.60	--	--	7,000	29	<10	27	22	93/98[12]	--
02/11/02[11]	28.05	9.06	18.99	--	--	5,900	43	15	24	27	90/86[12]	--
05/13/02[11]	28.05	9.64	18.41	--	--	5,500	26	5.2	23	26	120/47[12]	--
08/09/02[11]	28.05	10.29	17.76	--	--	5,700	26	3.7	26	50	100/69[12]	--
11/07/02[11]	28.05	11.27	16.78	--	--	5,900	33	4.4	23	21	<100/69[12]	--
02/04/03[11]	28.05	9.13	18.92	--	--	5,400	22	4.7	13	14	<50/55[12]	--
05/05/03[11]	28.05	8.38	19.67	--	--	4,500	23	4.7	12	15	<50/31[12]	--
09/06/03[11,14]	28.05	10.40	17.65	--	--	3,200	13	2	7	7	54	--
11/14/03[11,14]	28.05	10.62	17.43	--	--	4,000	11	2	7	6	55	--
02/13/04[14,15]	28.05	8.79	19.26	--	--	6,200	6	2	8	8	31	--
05/13/04[14]	28.05	9.56	18.49	--	--	3,200	6	3	13	11	34	--
08/17/04[14]	28.05	10.48	17.57	--	--	4,300	7	1	6	5	46	--
11/10/04[14]	28.05	9.53	18.52	--	--	3,000	5	1	6	7	37	--
02/08/05[14]	28.05	8.71	19.34	--	--	4,700	3	2	10	8	22	--
06/03/05[14]	28.05	9.01	19.04	--	--	4,100	4	3	15	11	23	--
08/05/05[14]	28.05	9.76	18.29	--	--	3,500	4	1	<0.5	8	23	--
12/02/05[14]	28.05	9.64	18.41	--	--	2,900	4	2	3	3	24	--
03/03/06[14]	28.05	8.04	20.01	--	--	3,800	5	6	4	5	9	--
05/31/06[14]	28.05	9.01	19.04	--	--	4,600	2	1	3	3	8	--
08/18/06[14]	28.05	9.91	18.14	--	--	4,300	2	1	11	7	14	--
11/17/06[14]	28.05	9.95	18.10	--	--	4,600	2	0.7	7	4	14	--
02/09/07[14]	28.05	9.10	18.95	--	--	3,600	1	0.6	3	3	9	--
05/11/07[14]	28.05	9.12	18.93	--	--	3,600	2	1	5	5	8	--
08/10/07[14]	28.05	10.20	17.85	--	--	3,600	1	1	7	4	9	--
11/08/07[14]	28.05	10.35	17.70	--	--	3,600	2	0.7	5	2	7	--
02/07/08[14]	28.05	7.92	20.13	--	--	5,000	1	1	5	3	5	--
05/02/08[14]	28.05	9.49	18.56	--	--	3,300	1	0.9	3	2	4	--
07/31/08[14]	28.05	10.35	17.70	--	--	3,000	2	0.6	2	1	5	--
11/13/08[14]	28.05	10.81	17.24	--	--	3,800	2	0.5	2	0.8	4	--
02/02/09[14]	28.05	9.97	18.08	--	--	3,500	2	0.6	2	1	5	--
05/01/09[14]	28.05	9.70	18.35	--	--	3,900	2	1	4	3	4	--

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MW-2 (cont)												
08/10/09[14]	28.05	10.38	17.67	--	--	3,100	2	0.8	2	1	4	--
01/29/10[14]	28.05	7.98	20.07	--	--	3,200	1	0.8	2	1	5	--
08/23/10[14]	28.05	10.03	18.02	--	--	3,500	1	0.6	1	0.7	3	--
08/22/11[14]	28.05	9.73	18.32	--	--	3,700	1	0.6	1	0.9	3	--
05/10/12[14]	28.05	8.95	19.10	--	--	2,600	0.8	0.8	1	1	2	--
05/08/13[14]	28.05	9.66	18.39	--	--	2,800	0.9	0.5	0.5	0.7	2	--
05/13/14[14]	28.05	9.41	18.64	--	--	2,400	0.8	<0.5	<0.5	<0.5	2	--
05/14/15[14]	28.05	9.85	18.20	--	--	2,400	0.7	<0.5	<0.5	<0.5	1	--
05/02/16[14]	28.05	9.01	19.04	--	--	3,000	0.5	<0.5	<0.5	<0.5	0.9	--
06/29/17[14]	**28.05**	**9.06**	**18.99**	**--**	**--**	**2,000**	**<3**	**<3**	**<3**	**<3**	**<3**	**--**
MW-3												
02/16/93	28.50	--	--	--	--	3,500	<0.5	8.1	4.6	7.7	--	--
03/26/93	28.50	7.18	21.32	--	--	--	--	--	--	--	--	--
05/27/93	28.50	9.33	19.17	--	--	4,200	580	84	150	100	--	--
08/18/93	28.50	12.00	16.50		1,400	910	12	3.7	6.2	3.8	--	<5,000
11/03/93	28.50	13.29	15.21	--	--	5,300	29	1.9	0.6	27	--	--
02/10/94	28.50	9.63	18.87	--	<50	63	<0.5	0.7	<0.5	<0.5	--	--
05/12/94	28.50	8.77	19.73	--	84	<50	<0.5	0.5	<0.5	<0.5	--	--
08/26/94	28.50	11.42	17.08	--	--	2,100	12	<0.5	5.0	0.5	--	--
11/14/94	28.50	10.07	18.43	--	--	140	0.78	<0.5	<0.5	<0.5	--	--
02/01/95	28.50	6.29	22.21	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/12/95	28.50	8.07	20.43	--	540[2]	330	13	1.1	1.9	0.69	--	--
08/22/95	28.50	9.95	18.55	--	550[2]	980	32	<1.0	<1.0	<1.0	--	--
12/19/95	28.50	9.40	19.10	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/31/96	28.50	5.05	23.45	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/30/96	28.50	8.40	20.10	--	240[2]	320	2.4	<0.5	0.75	<0.5	7.8	--
08/01/96	28.50	9.80	18.70	--	470[2]	980	9.6	<0.5	0.98	2.2	54	--
10/30/96	28.50	11.48	17.02	--	760[2]	2,000	14	<10	<10	<10	140	--
02/07/97	28.50	8.60	19.90	--	61[2]	200[2]	<0.5	<0.5	<0.5	<0.5	8.9	--
05/07/97	28.50	9.01	19.49	--	550[2]	3,500	14	3.9	3.6	8.0	160	--
07/22/97	28.50	11.12	17.38	--	800[2]	3,500	55	<10	<10	<10	150	--
11/03/97	28.50	11.51	16.99	--	910[2]	4,100	140	<5.0	<5.0	<5.0	380	--
01/28/98	28.50	7.34	21.16	--	--	1,100	24	<1.2	<1.2	2.8	33/6.1[12]	--
05/08/98	28.50	8.06	20.44	--	250[2]	990	3.6	7.7	0.7	2.2	37/7.5[12]	--
07/29/98	28.50	10.25	18.25	--	290[2]	1,200	13	<0.5	<0.5	1.4	11/28[12]	--
11/06/98	28.50	11.39	17.11	--	390[2]	2,600	5.3	<2.5	<2.5	3.0	91/41[12]	--
02/09/99[5]	28.50	6.10	22.40	--	184[2]	406	<1.0	4.03	<1.0	<1.0	17.7/1.97[12]	--

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MW-3 (cont)												
05/13/99	28.50	9.12	19.38	--	--	615	13.8	1.05	<0.5	<0.5	43.5/21.2[12]	--
09/07/99	28.50	10.73	17.77	--	528[2]	2,710	<5.0	<5.0	<5.0	<5.0	96.3/57.9[12]	--
11/24/99	28.50	11.13	17.37	--	1,070[2]	5,530	<5.0	<5.0	5.59	<5.0	66[1,12]	--
02/25/00	28.50	6.28	22.22	--	--	189	4.68	<0.5	<0.5	<0.5	11.9/<2.0[12]	--
03/01/00	28.50	6.70	21.80	--	380[2]	--	--	--	--	--	--	--
05/10/00	28.50	8.60	19.90	--	830[7]	1,600[6]	22	<10	<10	<10	100/51[12]	--
07/31/00[11]	28.50	10.07	18.43	--	490[7]	2,200[6]	76	10	<5.0	13	230/52[12]	--
10/30/00[11]	28.50	10.53	17.97	--	580[9]	3,320[10]	<5.00	<5.00	<5.00	<15.0	147/64[12]	--
02/05/01[11]	29.04	9.26	19.78	--	--	3,960	<5.00	6.02	<5.00	<5.00	159/70[12]	--
05/07/01[11]	29.04	8.75	20.29	--	--	2,800[6]	61	12	<10	20	230/49[12]	--
05/10/01[11]	29.04	8.83	20.21	--	390[13]	--	--	--	--	--	--	--
08/06/01[11]	29.04	10.45	18.59	--	870[7]	1,600[6]	39	14	1.3	5.6	130/43[12]	--
11/12/01[11]	29.04	11.22	17.82	--	1,400	3,100	3.6	23	2.3	5.6	40/46[12]	--
02/11/02[11]	29.04	8.38	20.66	--	700	4,000	10	<5.0	4.2	5.5	44/42[12]	--
05/13/02[11]	29.04	9.20	19.84	--	730	2,500	18	<5.0	<5.0	5.2	44/32[12]	--
08/09/02[11]	29.04	10.17	18.87	--	560	2,700	17	<5.0	<5.0	<10	45/33[12]	--
11/07/02[11]	29.04	11.13	17.91	--	660	2,600	24	<5.0	2.0	4.8	51/37[12]	--
02/04/03[11]	29.04	8.60	20.44	--	370	2,200	13	1.5	2.7	5.0	<50/24[12]	--
05/05/03[11]	29.04	7.82	21.22	--	580	2,100	14	1.8	2.0	3.9	<20/19[12]	--
09/06/03[11,14]	29.04	10.25	18.79	--	780	1,800	2	0.6	0.6	1	28	--
11/14/03[11,14]	29.04	10.52	18.52	--	860	2,000	1	0.6	0.6	0.9	30	--
02/13/04[14,15]	29.04	8.28	20.76	--	590	3,600	1	0.6	1	2	21	--
05/13/04[14]	29.04	9.17	19.87	--	670	1,600	1	<0.5	0.5	1	20	--
08/17/04[14]	29.04	10.25	18.79	--	900	2,500	1	<0.5	<0.5	0.7	25	--
11/10/04[14]	29.04	9.23	19.81	--	780	1,500	1	0.6	0.5	1	27	--
02/08/05[14]	29.04	8.12	20.92	--	530	2,500	1	0.6	2	3	11	--
06/03/05[14]	29.04	8.57	20.47	--	600	1,700	1	<0.5	0.7	1	9	--
08/05/05[14]	29.04	10.60	18.44	--	530[16]	980	0.6	<0.5	<0.5	0.8	9	--
12/02/05[14]	29.04	9.58	19.46	--	1,400[17]	2,400	1	2	0.8	1	7	--
03/03/06[14]	29.04	7.58	21.46	--	530	2,300	0.8	1	<0.5	1	4	--
05/31/06[14]	29.04	8.53	20.51	--	480	2,700	0.6	<0.5	<0.5	0.8	4	--
08/18/06[14]	29.04	9.71	19.33	--	410	2,700	<0.5	<0.5	<0.5	0.6	6	--
11/17/06[14]	29.04	9.81	19.23	--	390	2,600	<0.5	<0.5	<0.5	1	4	--
02/09/07[14]	29.04	8.88	20.16	--	640	2,100	<0.5	<0.5	<0.5	1	3	--
05/11/07[14]	29.04	8.71	20.33	--	350	1,400	<0.5	<0.5	<0.5	2	2	--
08/10/07[14]	29.04	9.98	19.06	--	340	1,300	<0.5	<0.5	<0.5	1	2	--
11/08/07[14]	29.04	10.11	18.93	--	440	1,400	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/07/08[14]	29.04	7.28	21.76	--	320	2,100	<0.5	0.7	1	2	0.7	--
05/02/08[14]	29.04	9.18	19.86	--	260	1,300	<0.5	<0.5	<0.5	<0.5	2	--

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MW-3 (cont)												
07/31/08[14]	29.04	10.13	18.91	--	500	2,900	<0.5	<0.5	<0.5	<0.5	1	--
11/13/08[14]	29.04	10.58	18.46	--	880	1,800	<0.5	<0.5	<0.5	<0.5	2	--
02/02/09[14]	29.04	9.58	19.46	--	310[19]	2,000	<0.5	<0.5	<0.5	<0.5	2	--
05/01/09[14]	29.04	9.40	19.64	--	51[20]	1,500	<0.5	<0.5	<0.5	<0.5	2	--
08/10/09[14]	29.04	10.21	18.83	--	470	1,300	<0.5	<0.5	<0.5	<0.5	3	--
01/29/10[14]	29.04	7.39	21.65	--	420	2,600	<0.5	<0.5	2	1	1	--
08/23/10[14]	29.04	9.70	19.34	--	410	2,000	<0.5	<0.5	<0.5	<0.5	2	--
08/22/11[14]	29.04	9.96	19.08	<41/<40[21]	500/250[21]	2,500	<0.5	<0.5	<0.5	<1	2	--
05/10/12[14]	29.04	8.50	20.54	--	350/160[21]	1,300	<0.5	<0.5	<0.5	<0.5	1	--
05/08/13[14]	29.04	9.40	19.64	--	460/140[21,22]	1,700	<0.5	<0.5	<0.5	<0.5	2	--
05/13/14[14]	29.04	9.03	20.01	--	200/140[21,22]	1,200	<0.5	<0.5	<0.5	<0.5	1	--
05/14/15[14]	29.04	9.53	19.51	--	260/120[21,22]	1,800	<0.5	<0.5	<0.5	<0.5	1	--
05/02/16[14]	29.04	8.55	20.49	--	160[21,22]	2,000	<0.5	<0.5	<0.5	<0.5	0.8	--
06/29/17[14]	**29.04**	**9.16**	**19.88**	**--**	**140[21,22]**	**1,400**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**1**	**--**
MW-4												
08/22/95	27.27	9.11	18.16	--	--	9,600	100	<10	<10	<10	--	--
12/19/95	27.27	8.30	18.97	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/31/96	27.27	5.60	21.67	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/30/96	27.27	7.00	20.27	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
08/01/96	27.27	9.15	18.12	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/30/96	27.27	10.74	16.53	--	--	110	<0.5	<0.5	<0.5	<0.5	<2.5	--
02/07/97	27.27	7.80	19.47	--	--	80	<0.5	<0.5	<0.5	<0.5	4.1	--
05/07/97	27.27	5.85	21.42	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/22/97	27.27	10.05	17.22	--	--	150	<0.5	<0.5	<0.5	<0.5	<2.5	--
11/03/97	27.27	10.72	16.55	--	--	52	0.9	<0.5	<0.5	<0.5	--[3]	--
01/28/98	27.27	6.51	20.76	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0[12]	--
05/08/98	27.27	7.02	20.25	--	--	56	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0[12]	--
07/29/98	27.27	8.95	18.32	--	--	<50	0.9	<0.5	<0.5	<0.5	<2.5/<2.0[12]	--
11/06/98	27.27	10.59	16.68	--	--	72	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0[12]	--
02/09/99	27.27	5.86	21.41	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0/<1.1[12]	--
05/13/99	27.27	7.95	19.32	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0/<2.0[12]	--
09/07/99	27.27	9.48	17.79	--	--	70.2	<0.5	<0.5	<0.5	<0.5	<2.0/<1.0[12]	--
11/24/99	27.27	10.05	17.22	--	--	227	<0.5	<0.5	<0.5	<0.5	<0.5[12]	--
02/25/00	27.27	INACCESSIBLE		--	--	--	--	--	--	--	--	--
03/01/00	27.27	6.17	21.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0[12]	--
05/10/00	27.27	INACCESSIBLE - CAR PARKED OVER WELL				--	--	--	--	--	--	--
07/31/00	27.27	9.37	17.90	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5/<2.0[12]	--

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Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-MO (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)	TOG (µg/L)
MW-4 (cont)												
10/30/00	27.27	9.47	17.80	--	--	54.0[10]	<0.500	<0.500	<0.500	<1.50	<2.50/<2.0[12]	--
02/05/01	27.27	INACCESSIBLE - CAR PARKED OVER WELL				--	--	--	--	--	--	--
05/07/01	27.27	7.81	19.46	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5/<2.0[12]	--
08/06/01	27.27	9.78	17.49	--	--	<50	1.1	0.52	<0.50	1.1	6.0/<2.0[12]	--
11/12/01	27.27	10.41	16.86	--	--	93	<0.50	<0.50	<0.50	<1.5	<2.5/<2[12]	--
02/11/02	27.27	7.64	19.63	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[12]	--
05/13/02	27.27	8.32	18.95	--	--	54	<0.50	0.84	<0.50	<1.5	<2.5/<2[12]	--
08/09/02	27.27	9.25	18.02	--	--	54	<0.50	<0.50	<0.50	<1.5	<2.5/<2[12]	--
11/07/02	27.27	10.42	16.85	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[12]	--
02/04/03	27.27	7.75	19.52	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5[12]	--
05/05/03	27.27	6.90	20.37	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5/<0.5[12]	--
09/06/03[14]	27.27	9.50	17.77	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/14/03[14]	27.27	9.80	17.47	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/13/04[14]	27.27	7.36	19.91	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/13/04[14]	27.27	8.28	18.99	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/17/04[14]	27.27	9.63	17.64	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/10/04[14]	27.27	8.46	18.81	--	--	52	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/08/05[14]	27.27	7.20	20.07	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/03/05[14]	27.27	7.61	19.66	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/05/05[14]	27.27	9.44	17.83	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/05[14]	27.27	8.35	18.92	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/03/06[14]	27.27	6.45	20.82	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/31/06[14]	27.27	7.51	19.76	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/18/06[14]	27.27	8.42	18.85	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/17/06[14]	27.27	8.96	18.31	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/09/07[14]	27.27	7.73	19.54	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/11/07[14]	27.27	7.60	19.67	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/10/07[14]	27.27	9.01	18.26	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/08/07[14]	27.27	9.26	18.01	--	--	<50	<0.5	<0.5	<0.5	1	1	--
02/07/08[14]	27.27	6.38	20.89	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/02/08[14]	27.27	8.12	19.15	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
07/31/08[14]	27.27	9.28	17.99	--	--	75	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/13/08[14]	27.27	9.93	17.34	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/02/09[14]	27.27	9.02	18.25	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/01/09[14]	27.27	8.29	18.98	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/10/09[14]	27.27	9.50	17.77	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
01/29/10[14]	27.27	6.57	20.70	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/23/10[14]	27.27	8.96	18.31	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/22/11[14]	27.27	8.85	18.42	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

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WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-MO (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)	TOG (µg/L)
MW-4 (cont)												
05/10/12[14]	27.27	7.55	19.72	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/08/13[14]	27.27	8.58	18.69	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/13/14[14]	27.27	8.29	18.98	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/14/15[14]	27.27	8.81	18.46	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/02/16[14]	27.27	7.64	19.63	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/29/17[14]	**27.27**	**8.42**	**18.85**	**--**	**--**	**79**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**--**
TRIP BLANK												
05/27/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
08/18/93	--	--	--	--	1,400	<50	<0.5	<0.5	<0.5	<1.5	--	<5,000
11/03/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
02/10/94	--	--	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/12/94	--	--	--	--	84	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/26/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/14/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
02/01/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/12/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/22/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/19/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/31/96	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/30/96	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
08/01/96	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/30/96	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
02/07/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/07/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/22/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/28/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0[12]	--
05/08/98	--	--	--	--	--	--	--	--	--	--	<2.0[12]	--
07/29/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0[12]	--
11/06/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
02/09/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
05/13/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0/<2.0[12]	--
09/07/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
11/24/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
02/25/00	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
03/01/00	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/10/00	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
07/31/00	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--

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TRIP BLANK (cont)				--								
10/30/00	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.50	<2.50	--
02/05/01	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--
05/07/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
05/10/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
08/06/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
QA				--								
11/12/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/11/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/13/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
08/09/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
11/07/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/04/03	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/05/03	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
09/06/03[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/14/03[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/13/04[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/13/04[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/17/04[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/10/04[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/08/05[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/03/05[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/05/05[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/05[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/03/06[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/31/06[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/18/06[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/17/06[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/09/07[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/11/07[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/10/07[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/08/07[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/07/08[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/02/08[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
07/31/08[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/13/08[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/02/09[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/01/09[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/10/09[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/08/13[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-MO (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)	TOG (µg/L)
QA (cont)												
05/13/14[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/14/15[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/02/16[14]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/29/17[14]	**--**	**--**	**--**	**--**	**--**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**--**

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to May 10, 2000 were compiled from reports prepared by Blaine Tech Services, Inc.
Groundwater monitoring data and laboratory analytical results from May 10, 2000 to May 10, 2012 were provided by Gettler-Ryan Inc.
Current groundwater monitoring data was provided by Gettler-Ryan Inc. Current laboratory analytical results were provided by Eurofins Lancaster Laboratories.

TOC = Top of Casing
(ft.) = Feet
GWE = Groundwater Elevation
(msl) = Mean sea level
DTW = Depth to Water
TPH = Total Petroleum Hydrocarbons
MO = Motor Oil
DRO = Diesel Range Organics
GRO = Gasoline Range Organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MtBE = Methyl tertiary-butyl ether
TOG = Total Oil and Grease
(µg/L) = Micrograms per liter
NP = No purge
-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank

* TOC elevations were re-surveyed on March 8, 2001, by Virgil Chavez Land Surveying. The benchmark for the survey was a City of Oakland benchmark, being a cut square top of curb at the centerline return at the northwest corner of East 14th and 37th Avenue, (Benchmark Elevation = 38.21 feet, NGVD 29).

[1] Lab could not get a good ion chromatogram match for MtBE. See laboratory report.

[2] Chromatogram pattern indicates an unidentified hydrocarbon.

[3] No value for MtBE could be determined; see lab report for analyses.

[4] Confirmation run.

[5] ORC was installed.

[6] Laboratory report indicates gasoline C6-C12.

[7] Laboratory report indicates unidentified hydrocarbons <C16.

[8] Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.

[9] Laboratory report indicates unidentified hydrocarbons >C16.

[10] Laboratory report indicates hydrocarbon pattern present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

[11] ORC in well.

[12] MtBE by EPA Method 8260.

[13] Laboratory report indicates unidentified hydrocarbons C9-C17.

[14] BTEX and MtBE by EPA Method 8260.

[15] ORC removed from well.

[16] Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It eludes in the TPH-DRO range earlier and later than #2 fuel.

[17] Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It eludes in the TPH-DRO range earlier than #2 fuel.

[18] No purge; unable to access well with truck.

[19] Laboratory report indicates the LCS/LCSD recovery for the TPH-DRO analysis is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction so all results are reported from the original extract. Similar results were obtained in both extracts.

[20] Laboratory report indicates the surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction. Therefore, all results are reported from the original extract. The TPH-DRO result for the reextraction was 190 ug/L.

[21] Analyzed with silica gel cleanup.

[22] Laboratory report indicates the reverse surrogate, capric acid, is present at <1%.

Table 3
Groundwater Analytical Results - Oxygenate Compounds
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

WELL ID	DATE	ETHANOL (µg/L)	TBA (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)
VH-1	02/05/01	<500	<50	<2.0	<2.0	<2.0
MW-2	02/05/01	<500	<50	<2.0	<2.0	<2.0
MW-3	02/05/01	<500	<50	<2.0	<2.0	<2.0
	08/22/11	<50	<5	<0.5	<0.5	<0.5

Table 3
Groundwater Analytical Results - Oxygenate Compounds
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

EXPLANATIONS:

TBA = Tertiary-Butyl Alcohol
DIPE = Di-Isopropyl Ether
EtBE = Ethyl Tertiary-Butyl Ether
TAME = Tertiary-Amyl Methyl Ether
(µg/L) = Micrograms per liter
-- = Not Analyzed

ANALYTICAL METHOD:
EPA Method 8260 for Oxygenate Compounds

Table 4
Groundwater Analytical Results - Metals and PPL Volatiles
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

WELL ID/ DATE	Cadmium (µg/L)	Chromium (µg/L)	Lead (µg/L)	Nickel (µg/L)	Zinc (µg/L)	n-Butylbenzene (µg/L)	sec-Butylbenzene (µg/L)	tert-Butylbenzene (µg/L)	Naphthalene (µg/L)
MW-3									
08/22/11	2.6	173	8.3	308	123	3	3	4	2

EXPLANATIONS:

(µg/L) = Micrograms per liter
PPL = priority pollutant list
Only metals and PPL volatiles with historically detected concentrations are shown.

ANALYTICAL METHODS:

PPL volatiles by EPA Method 8260B
Wear metals by EPA Method 6010B

Table 5
Groundwater Analytical Results - PCBs
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

WELL ID/ DATE	PCB- 1016 (µg/L)	PCB- 1221 (µg/L)	PCB- 1232 (µg/L)	PCB- 1242 (µg/L)	PCB- 1248 (µg/L)	PCB- 1254 (µg/L)	PCB- 1260 (µg/L)
MW-3							
08/22/11	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.15

EXPLANATIONS:

(µg/L) = Micrograms per liter
PCBs = Polychlorinated Biphenyls

ANALYTICAL METHODS:

PCBs by EPA Method 8082

Table 6
Grab Groundwater Analytical Results
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

Borehole/ Sample ID	Sample Depth (feet bgs)	Date Collected	TPH-GRO (µg/L)	TPH-DRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)	1,2-DCA (µg/L)	1,2-DBA (µg/L)
SB-1	18	08/15/95	**21,000**	--	**240**	**760**	**900**	**2,800**	--	--	--
HA-1	10	03/05/02	<50	--	<0.50	<0.50	<0.50	<1.5	<2.5	--	--
HA-2	9.5	03/05/02	<50	--	<0.50	<0.50	<0.50	<1.5	<2.5	--	--
HA-3	10	03/05/02	<50	--	<0.50	<0.50	<0.50	<1.5	<2.5	--	--
VP-3	10.5	05/29/08	**1,100**	**560**	**36**	**3**	**13**	**2**	**15**	<0.5	<0.5
VP-4	10.5	05/29/08	<50	<290	<0.5	<0.5	<0.5	<0.5	**5**	<0.5	<0.5
SB-2	10.5	05/28/08	<50	**350**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SB-3	10.5	05/29/08	**71**	<290	<0.5	<0.5	<0.5	<0.5	**11**	<0.5	<0.5
SB-4	10.5	05/29/08	<50	<290	<0.5	<0.5	<0.5	<0.5	**13**	<0.5	<0.5
ESLs [1]			**100**	**100**	**1**	**40**	**13**	**20**	**5**	**0.5**	**0.05**

Notes:
(1) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.
Bold text denotes detected concentrations. **Bold/blue** text denotes detected concentrations above Tier 1 ESLs.

Abbreviations:
feet bgs = feet below ground surface
µg/L = micrograms per liter
TPH-GRO = total petroleum hydrocarbons as gasoline range organics
TPH-DRO = total petroleum hydrocarbons as diesel range organics
MtBE = methyl *tertiary* -butyl ether
1,2-DCA = 1,2-dichloroethane
1,2-DBA = 1,2-dibromoethane
-- = not analyzed
ESL = Environmental Screening Level

Table 7
Soil Analytical Results
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

Borehole/ Sample ID	Sample Depth (feet bgs)	Date Collected	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	1,2-DCA (mg/kg)	1,2-DBA (mg/kg)	Total Lead (mg/kg)
VH-1	20.5	08/10/88	<0.5	--	**0.042**	<0.005	<0.005	<0.005	--	--	--	**6**
VH-1	25.5	08/10/88	<0.5	--	**0.036**	<0.005	<0.005	<0.005	--	--	--	**6**
MW-2	5	02/01/93	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--
MW-2	10	02/01/93	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--
MW-3	5	02/01/93	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--
MW-3	10	02/01/93	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--
MW-4	16.5	08/15/95	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--
MW-4	21.5	08/15/95	**2**	--	<0.005	**0.014**	**0.007**	**0.010**	--	--	--	--
SB-1	21.5	08/15/95	**16**	--	<0.005	**0.12**	**0.21**	**1.1**	--	--	--	--
GP-1	6	07/03/01	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.20	--	--	--
GP-1	9	07/03/01	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.20	--	--	--
GP-2	6	07/03/01	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.20	--	--	--
GP-2	8.5	07/03/01	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.20	--	--	--
GP-3	5.5	07/03/01	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.20	--	--	--
GP-3	8.5	07/03/01	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.20	--	--	--
HA-1	5	03/05/02	<1.0	--	<0.0050	**0.0098**	**0.016**	**0.089**	<0.050	--	--	--
HA-2	5	03/05/02	<1.0	--	<0.0050	<0.0050	<0.0050	<0.015	<0.050	--	--	--
HA-3	5	03/05/02	<1.0	--	<0.0050	<0.0050	<0.0050	<0.015	<0.050	--	--	--
VP-1	4	05/28/08	<1.0	<4.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
VP-2	4	05/28/08	<1.0	<4.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
VP-3	4	05/29/08	<1.0	<4.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
VP-3	8	05/29/08	<1.0	<4.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
VP-3	12	05/29/08	<1.0	<4.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
VP-4	4	05/29/08	<1.0	<4.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
VP-4	8	05/29/08	<1.0	<4.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	--
VP-4	11.5	05/29/08	<1.0	<4.0	<0.0005	<0.0009	<0.0009	<0.0009	**0.0005**	<0.0009	<0.0009	--
SB-2	4	05/28/08	<1.0	<4.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
SB-2	8	05/28/08	<1.0	<4.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
SB-2	12	05/28/08	<1.0	<4.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
SB-3	4	05/29/08	<1.0	<4.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
SB-3	8	05/29/08	<1.0	<4.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
SB-3	12	05/29/08	<1.0	<4.0	<0.0005	<0.001	<0.001	<0.001	**0.0007**	<0.001	<0.001	--
SB-4	4	05/29/08	<1.0	<4.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
SB-4	8	05/29/08	<1.0	<4.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
SB-4	12	05/29/08	<1.0	<4.0	<0.0005	<0.001	<0.001	<0.001	**0.001**	<0.001	<0.001	--
ESLs [(1)]			**100**	**240**	**0.044**	**2.9**	**1.4**	**2.3**	**0.023**	**0.0045**	**0.00033**	**80**

Notes:
(1) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.
Bold text denotes detected concentrations. **Bold/blue** text denotes detected concentrations above Tier 1 ESLs.

Abbreviations:
feet bgs = feet below ground surface
mg/kg = milligrams per kilogram
TPH-GRO = total petroleum hydrocarbons as gasoline range organics
TPH-DRO = total petroleum hydrocarbons as diesel range organics
MtBE = methyl *tertiary* -butyl ether
1,2-DCA = 1,2-dichloroethane
1,2-DBA = 1,2-dibromoethane
-- = not analyzed
ESL = Environmental Screening Level

Table 8
Soil Vapor Analytical Results - 1999 Soil Vapor Survey
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

Borehole/ Sample ID	Date Collected	Benzene (µg/m^3)	Toluene (µg/m^3)	Total Xylenes (µg/m^3)	Ethanol (µg/m^3)	Acetone (µg/m^3)	2-Propanol (µg/m^3)	Chloromethane (µg/m^3)	Methylene Chloride (µg/m^3)	TCE (µg/m^3)	Styrene (µg/m^3)	1,2,4-TMB (µg/m^3)	Freon 12 (µg/m^3)
VB-1	02/16/99	**9**	**200**	**15**	**33**	**215**	**924**	<1	**2**	**4**	**5**	**4**	**22**
VB-2	02/16/99	**6**	**22**	**8**	**36**	**29**	**95**	**2**	<3	<4	<3	<4	**24**
ESLs (1)		**48**	**160,000**	**52,000**	**NE**	**15,000,000**	**NE**	**47,000**	**1,400**	**340**	**470,000**	**NE**	**NE**

Notes:
(1) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.
Bold text denotes detected concentrations. **Bold/blue** text denotes detected concentrations above Tier 1 ESLs.
Only compounds that were detected in one or more soil vapor samples collected during the soil vapor survey in 1999 are included in this table.

Abbreviations:
µg/m^3 = micrograms per cubic meter
TCE = trichloroethene
1,2,4-TMB = 1,2,4-trimethylbenzene
ESL = Environmental Screening Level
NE = ESL not established

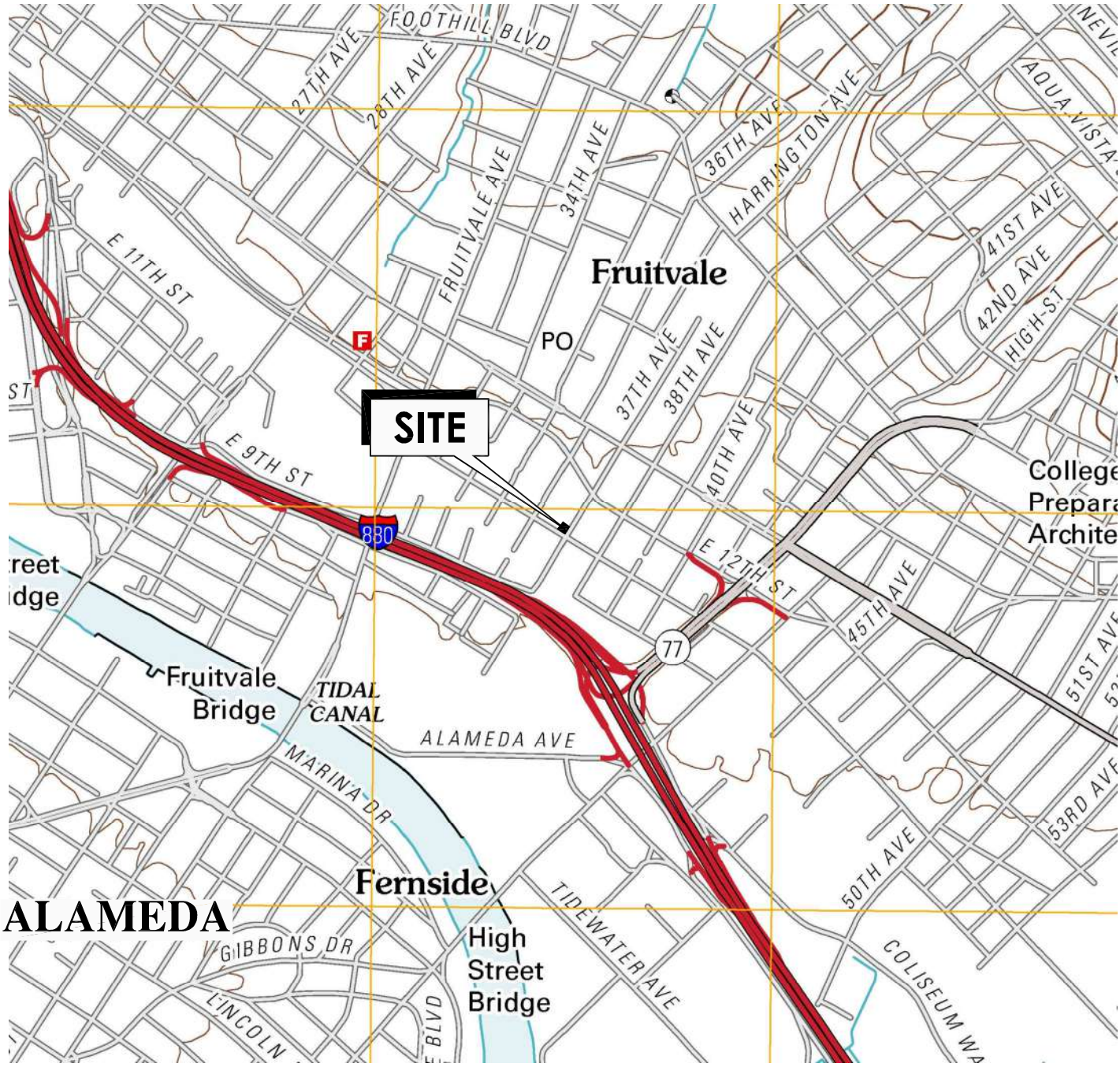
Table 9
Soil Vapor Analytical Results - 2008 Soil Vapor Investigation
Former Chevron-branded Service Station 94612
3616 San Leandro Street
Oakland, California

Borehole/ Sample ID	Date Collected	TPH-GRO (µg/m^3)	TPH-DRO (µg/m^3)	Benzene (µg/m^3)	Toluene (µg/m^3)	Ethylbenzene (µg/m^3)	Total Xylenes[1] (µg/m^3)	MtBE (µg/m^3)	1,2-DCA (µg/m^3)	1,2-DBA (µg/m^3)	Oxygen (%)	Carbon Dioxide (%)	Helium (%)
VP-1	06/18/08	**2.6**	**950**	**8.2**	**5.5**	<5.6	**20**	<4.6	<5.2	<9.9	**7.5**	**5.8**	<0.13
VP-2	06/18/08	**2.6**	**1,000**	<3.8	<4.5	<5.2	<5.2	<4.3	<4.8	<9.1	**2.5**	**6.1**	<0.012
VP-3	06/18/08	**2.2**	**1,100**	<3.8	<4.5	<5.2	**8.4**	<4.3	<4.8	<9.1	**9.4**	**7.5**	<0.12
VP-4	06/18/08	**4.5**	**1,200**	<3.7	<4.4	<5.0	<5.0	<4.2	<4.7	<9.0	**12**	**6.6**	<0.12
ESLs [2]		**50,000**	**68,000**	**48**	**160,000**	**560**	**52,000**	**5,400**	**54**	**2.3**	**NE**	**NE**	**NE**

Notes:
(1) Total xylenes is the sum of m,p-xylene and o-xylene. If either m,p-xylene and o-xylene was non-detect, the detected value was used. If both were non-detect, the highest detection limit was used.
(2) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.
Bold text denotes detected concentrations. **Bold/blue** text denotes detected concentrations above Tier 1 ESLs.

Abbreviations:
µg/m^3 = micrograms per cubic meter
TPH-GRO = total petroleum hydrocarbons as gasoline range organics
TPH-DRO = total petroleum hydrocarbons as diesel range organics
MtBE = methyl *tertiary* -butyl ether
1,2-DCA = 1,2-dichloroethane
1,2-DBA = 1,2-dibromoethane
ESL = Environmental Screening Level
NE = ESL not established

FIGURES



REFERENCE: USGS 7.5 MINUTE QUADRANGLE; OAKLAND EAST, CALIFORNIA; 2012

Stantec 15575 Los Gatos Blvd, Building C Los Gatos, CA 95032 PHONE: (408)356-6124 FAX: (408)356-6138	FOR: FORMER CHEVRON-BRANDED SERVICE STATION 94612 3616 SAN LEANDRO STREET OAKLAND, CALIFORNIA	SITE LOCATION MAP		FIGURE: 1
	JOB NUMBER: 211602402	DRAWN BY: JRO	CHECKED BY: EEO/MRK	APPROVED BY: TLF	DATE: 07/17/17

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LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- UST — UNDERGROUND STORAGE TANK
- GROUNDWATER MONITORING WELL
- SOIL BORING (APPROXIMATE LOCATION)
- SOIL VAPOR SAMPLE (APPROXIMATE LOCATION)
- SOIL VAPOR PROBE (APPROXIMATE LOCATION)
- E — UNDERGROUND ELECTRICAL LINE
- F — UNDERGROUND SHELL FUEL PIPELINE
- G — UNDERGROUND NATURAL GAS LINE
- S — UNDERGROUND SANITARY SEWER LINE
- W — UNDERGROUND WATER LINE

B.A.R.T. PARKING

B.A.R.T. PARKING

B.A.R.T. RAILROAD

ASCEND ELEMENTARY SCHOOL PLAYGROUND

COMMERCIAL BUILDING

RESIDENTIAL

WAREHOUSE

B-1

VP-2

FORMER WASTE OIL UST

FORMER STATION BUILDING

FORMER HYDRAULIC HOISTS

FORMER USTs

SB-3

VP-3

GP-3

MW-3

B-2

VP-1

VB-2

VB-1

VH-1

SB-4

B-3

VP-4

FORMER DISPENSER ISLANDS

PARKING

HA-3

GP-1

GP-2

SB-1

SB-2

MW-2

SIDEWALK

37TH AVENUE

HA-2

HA-1

SAN LEANDRO STREET

MW-4

SIDEWALK

RESIDENTIAL

COMMERCIAL AREA

COMMERCIAL BUILDING

N

0 40 80

APPROXIMATE SCALE IN FEET

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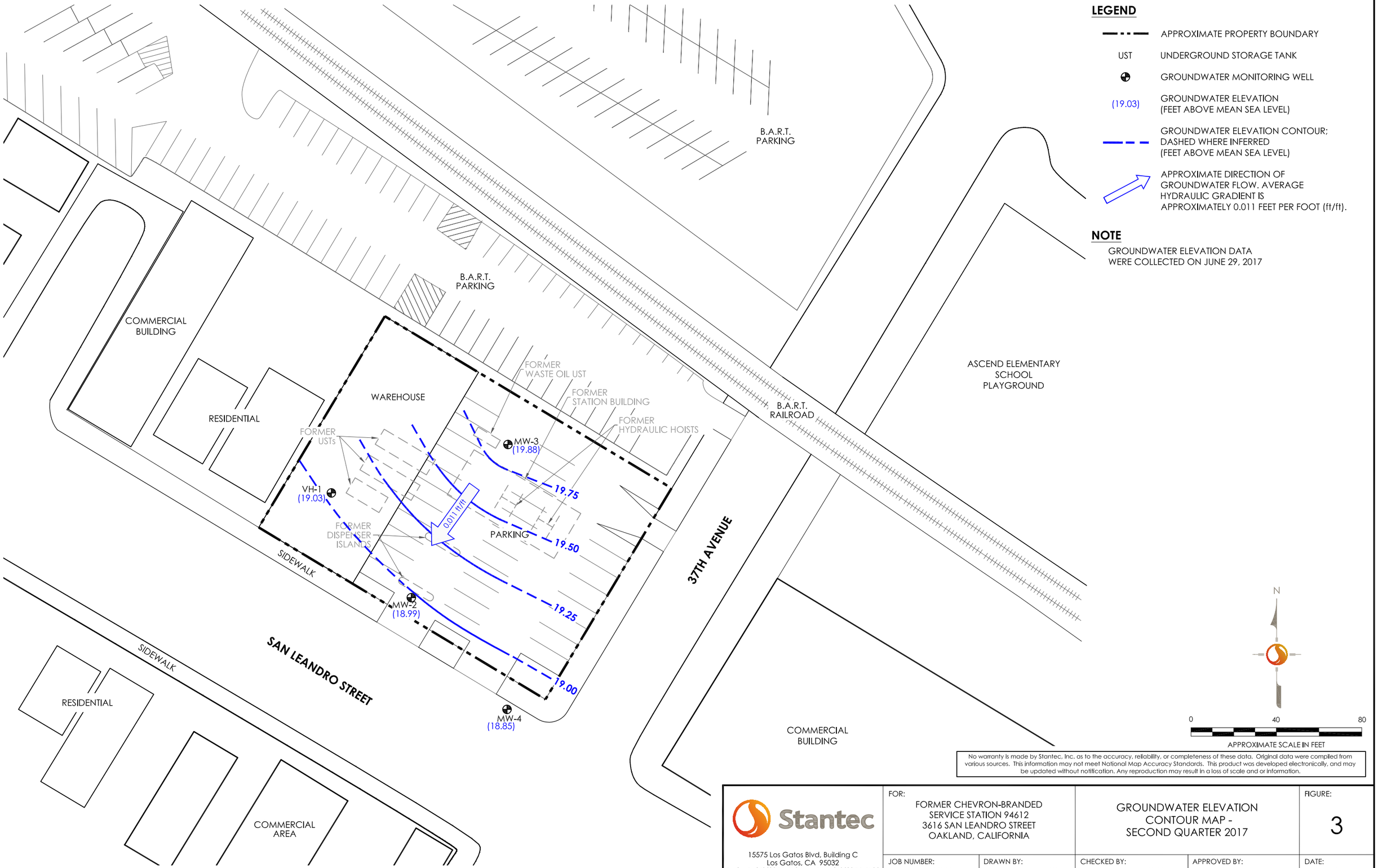
FOR:
FORMER CHEVRON-BRANDED SERVICE STATION 94612
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

SITE PLAN

FIGURE: 2

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602402	JRO	EEO	TLF	02/10/14

FILEPATH:P:\Chevron\N. CA Marketing Sites\Carryl MacLeod Portfolio\94612\SCM\Figures\CAD\94612_2Q13.dwg|jopalekopsahl|Feb 12, 2014 at 14:30|Layout: Fig 2_SP



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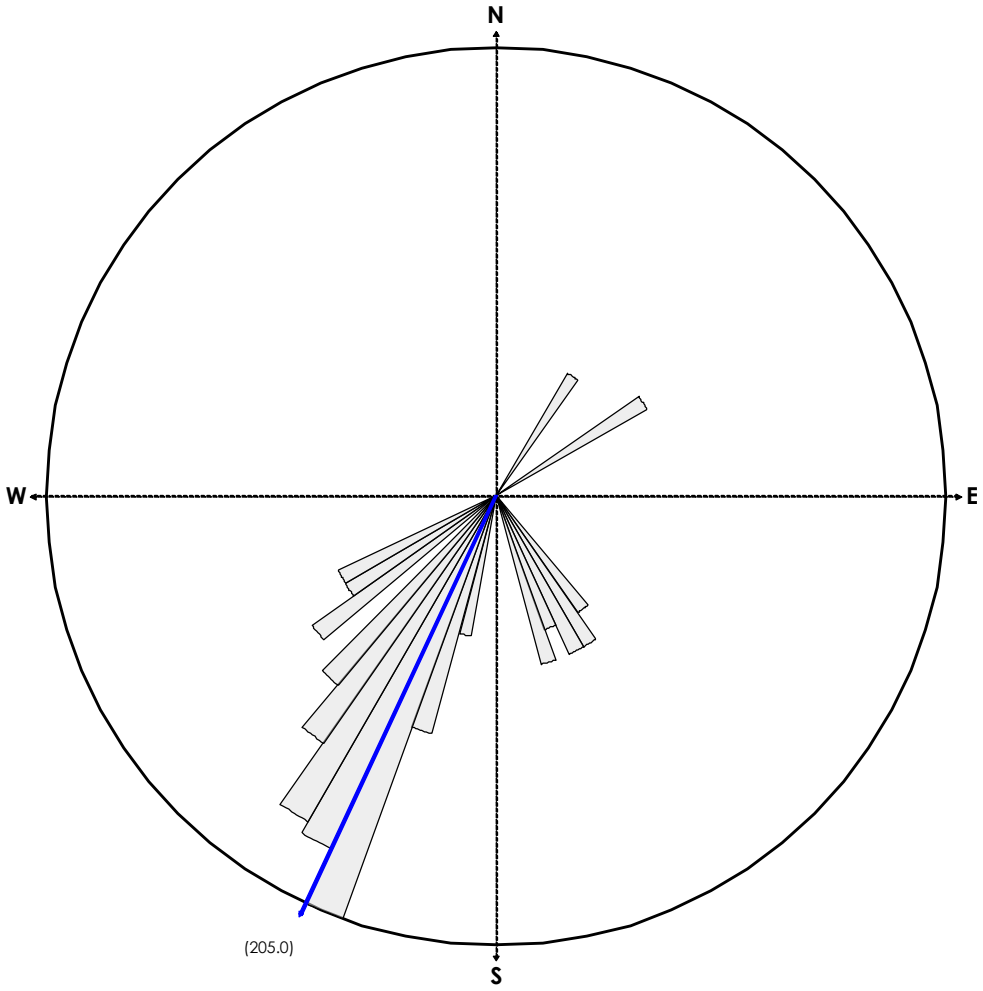
FOR:
FORMER CHEVRON-BRANDED SERVICE STATION 94612
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP - SECOND QUARTER 2017

FIGURE: 3

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602402	JRO	EEO/MRK	TLF	07/17/17

FILEPATH:U:\211602402\05_report_deliv\deliverables\reports\2017_ltcr\figures\dwg_21162402_94612_2q17.dwg | Jopalekopsahl | Aug 07, 2017 at 10:31 | Layout: fig3_gwe



EQUAL AREA PLOT

Number of Points	65
Class Size	5
Vector Mean	205.02
Vector Magnitude	54.61
Consistency Ratio	0.84

NOTE: ROSE DIAGRAM IS BASED ON THE DIRECTION OF GROUNDWATER FLOW BEGINNING FIRST QUARTER 1993.

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SERVICE STATION 94612
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

GROUNDWATER FLOW DIRECTION
ROSE DIAGRAM -
SECOND QUARTER 2017

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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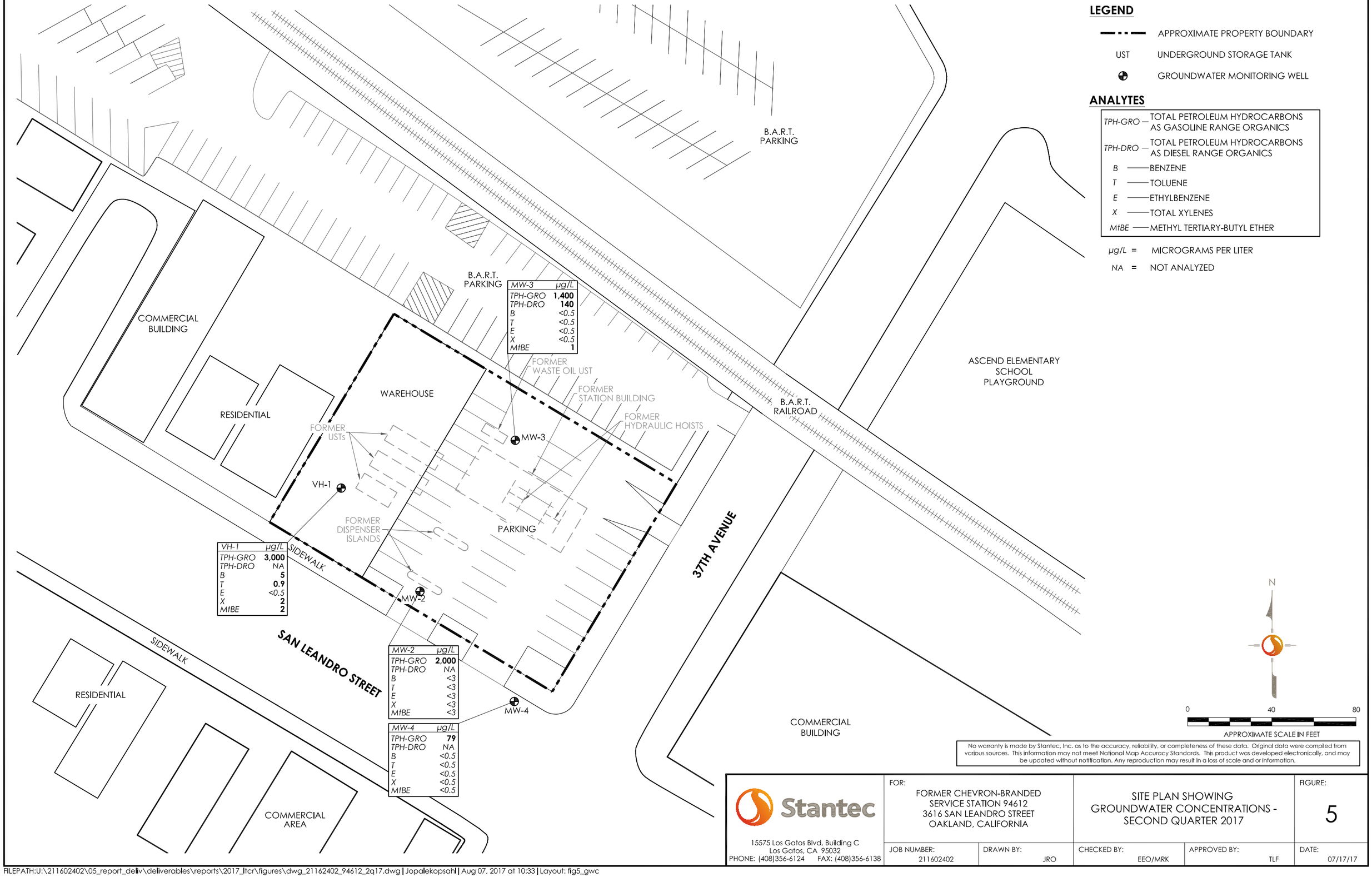
FILEPATH:U:\211602402\05_report_deliv\deliverables\reports\2017_ltcr\figures\dwg_21162402_94612_2q17.dwg | Jopalekopsahl | Aug 07, 2017 at 10:32 | Layout: fig4_rose



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- UST — UNDERGROUND STORAGE TANK
- GROUNDWATER MONITORING WELL

ANALYTES

- *TPH-GRO* — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS
- *TPH-DRO* — TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS
- *B* — BENZENE
- *T* — TOLUENE
- *E* — ETHYLBENZENE
- *X* — TOTAL XYLENES
- *MtBE* — METHYL TERTIARY-BUTYL ETHER

µg/L = MICROGRAMS PER LITER

NA = NOT ANALYZED

N

0 40 80

APPROXIMATE SCALE IN FEET

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FOR:
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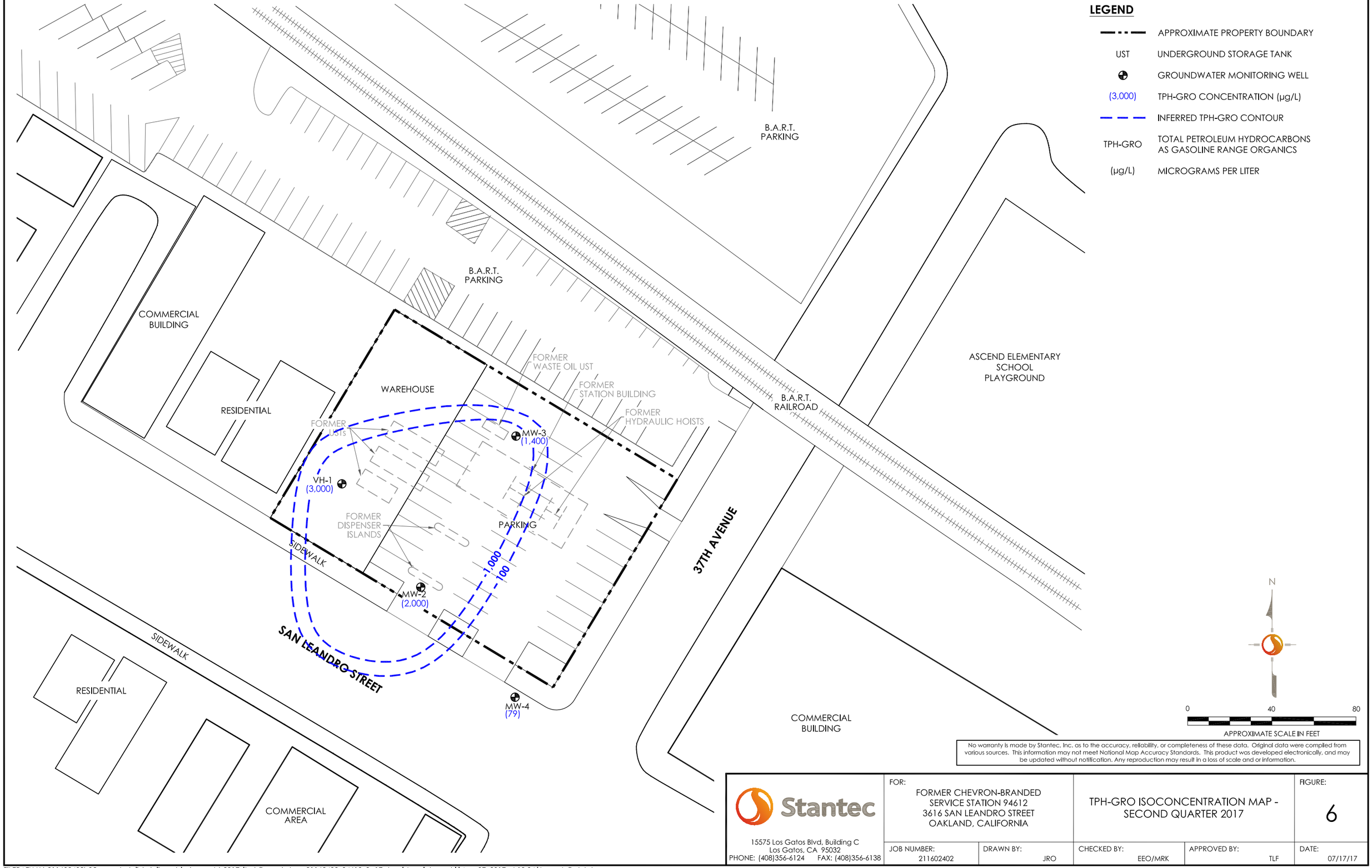
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

SITE PLAN SHOWING GROUNDWATER CONCENTRATIONS - SECOND QUARTER 2017

FIGURE: 5

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602402	JRO	EEO/MRK	TLF	07/17/17

FILEPATH:U:\211602402\05_report_deliv\deliverables\reports\2017_ltcr\figures\dwg_21162402_94612_2q17.dwg | Jopalekopsahl | Aug 07, 2017 at 10:33 | Layout: fig5_gwc



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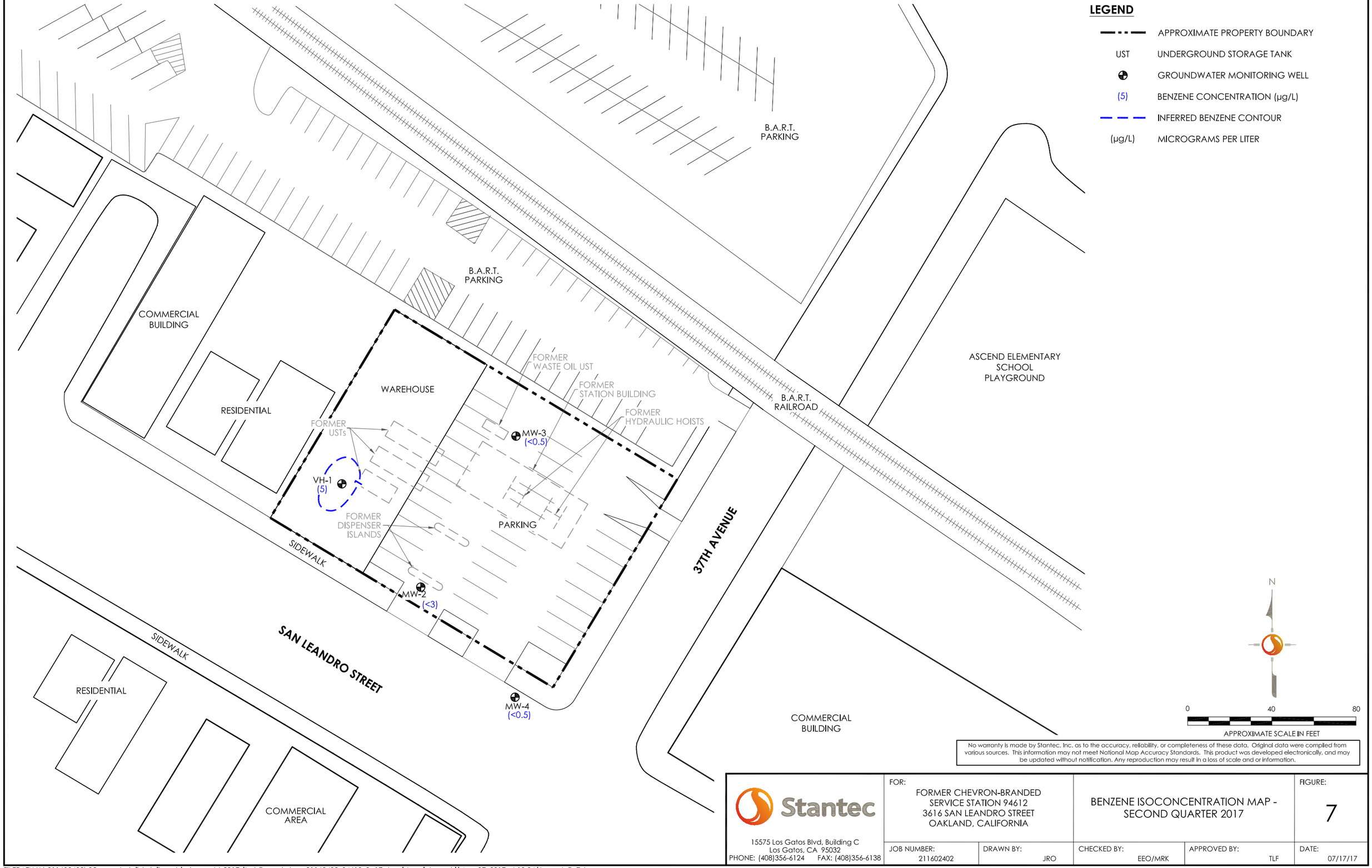
FOR:		FIGURE:
FORMER CHEVRON-BRANDED SERVICE STATION 94612 3616 SAN LEANDRO STREET OAKLAND, CALIFORNIA	TPH-GRO ISOCONCENTRATION MAP - SECOND QUARTER 2017	6

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602402	JRO	EEO/MRK	TLF	07/17/17

FILEPATH:U:\211602402\05_report_deliv\deliverables\reports\2017_ltcr\figures\dwg_21162402_94612_2q17.dwg | Jopalekopsahl | Aug 07, 2017 at 10:34 | Layout: fig6_tphg



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FOR:
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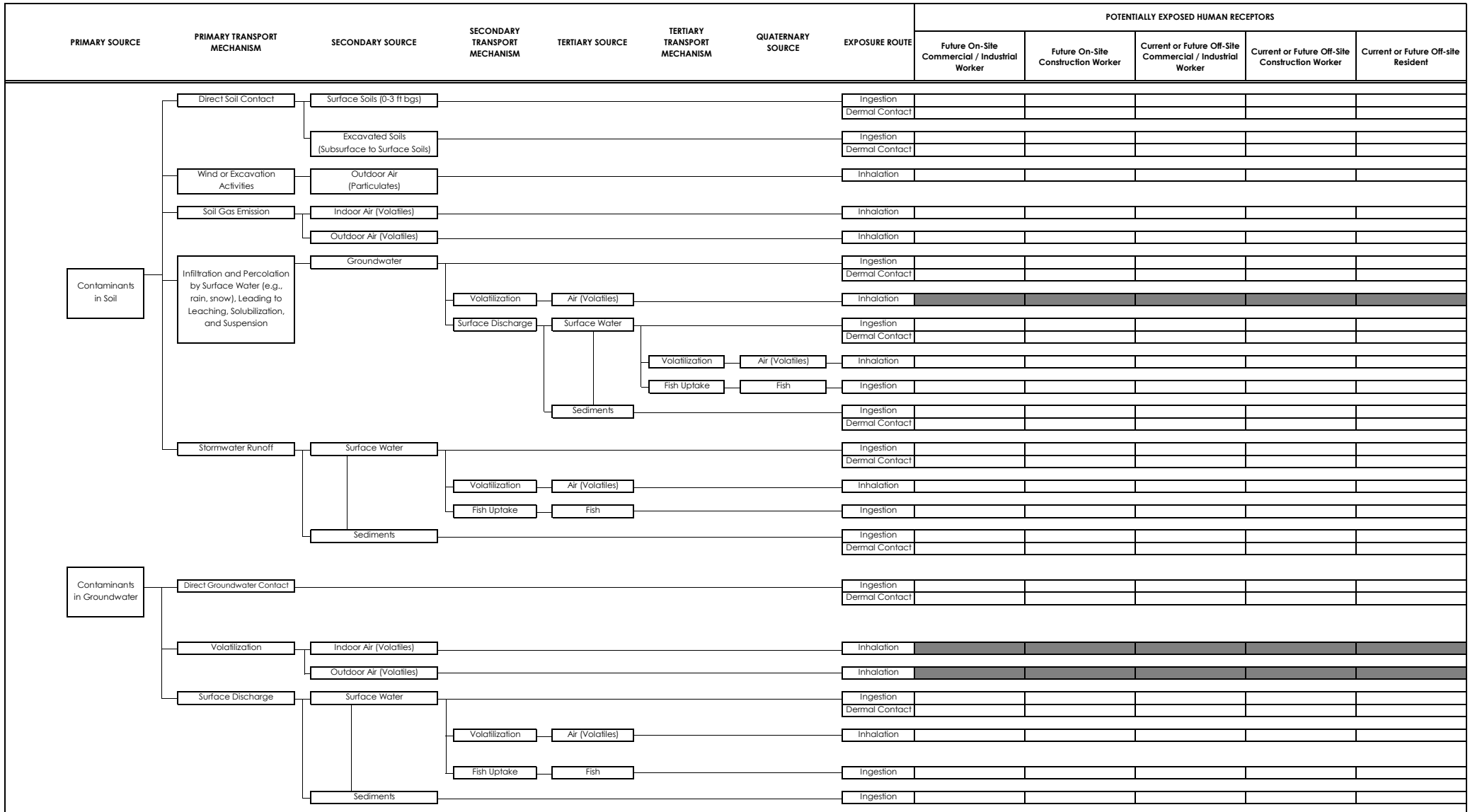
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

BENZENE ISOCONCENTRATION MAP - SECOND QUARTER 2017

FIGURE: 7

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602402	JRO	EEO/MRK	TLF	07/17/17

FILEPATH:U:\211602402\05_report_deliv\deliverables\reports\2017_ltcr\figures\dwg_21162402_94612_2q17.dwg | Jopalekopsahl | Aug 07, 2017 at 10:34 | Layout: fig7_benz


PRIMARY SOURCE
PRIMARY TRANSPORT MECHANISM
SECONDARY SOURCE
SECONDARY TRANSPORT MECHANISM
TERTIARY SOURCE
TERTIARY TRANSPORT MECHANISM
QUATERNARY SOURCE
EXPOSURE ROUTE
POTENTIALLY EXPOSED HUMAN RECEPTORS
Future On-Site Commercial / Industrial Worker
Future On-Site Construction Worker
Current or Future Off-Site Commercial / Industrial Worker
Current or Future Off-Site Construction Worker
Current or Future Off-site Resident
Contaminants in Soil
Direct Soil Contact
Surface Soils (0-3 ft bgs)
Ingestion
Dermal Contact
Excavated Soils (Subsurface to Surface Soils)
Wind or Excavation Activities
Outdoor Air (Particulates)
Inhalation
Soil Gas Emission
Indoor Air (Volatiles)
Outdoor Air (Volatiles)
Infiltration and Percolation by Surface Water (e.g., rain, snow), Leading to Leaching, Solubilization, and Suspension
Groundwater
Volatilization
Air (Volatiles)
Surface Discharge
Surface Water
Fish Uptake
Fish
Sediments
Stormwater Runoff
Contaminants in Groundwater
Direct Groundwater Contact
Volatilization
Indoor Air (Volatiles)
Outdoor Air (Volatiles)
Surface Discharge
Surface Water
Volatilization
Air (Volatiles)
Fish Uptake
Fish
Sediments
LEGEND
Exposure pathway is complete or potentially complete.
Exposure pathway is incomplete.
DATE: 08/01/13
DRAWN BY: EEO
APPROVED BY: TLF
Former Chevron-Branded Service Station 94612
3616 San Leandro Street
Oakland, California
FIGURE 8
EXPOSURE PATHWAY FLOW CHART

APPENDIX A
Soil Boring and Well Construction Logs

DRILL RIG Continuous Flight Auger	SURFACE ELEVATION 30 feet	LOGGED BY KS
DEPTH TO GROUNDWATER 14 feet ATOD	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE	DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT %	DRY DENSITY PCF	% COMPACTION
CLAY, homogeneous, less than 2% of sample is comprised of charred fragments	Dusky yellowish brown			1 2 3 4					
CLAY, silty, charred fragments common Plasticity Data: depth 5'-6" L.L.= 55 P.I.= 37	Light olive gray	STIFF	CH	5 6 7 8 9	X	15*	15 15	111 108	
CLAY, sandy, mottled, increasing number of clasts with depth, transition zone	Dark yellowish brown			10					
CONGLOMERATE, 20-30% of matrix is very coarse grain, subangular to rounded fragments of quartzite, chert and greenstone. < 5% of sample is comprised of ½-1½" dia. angular quartzite.		VERY STIFF		11 12 13 14 15	X	19*	12 ATOD	108	
CLAY, silty, fine sand with occasional clast, homogeneous.	Moderate yellowish brown	FIRM		16 17 18 19	X	5*	27	104	
strong gasoline odor		STIFF		20	X	8*	23	100	

ROGERS/PACIFIC

EXPLORATORY BORING LOG

Lot 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING

DRILL RIG Continuous Flight Auger	SURFACE ELEVATION	LOGGED BY KS
DEPTH TO GROUNDWATER 14 feet ATOD	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY PCF	% COMPACTION
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
CLAY, sandy, silty, occasionally	Moderate yellowish brown			21	X	8*	23	100	
Bottom of borring 21.5 feet				22					
				23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
				31					
				32					
				33					
				34					
				35					
				36					
				37					
				38					
				39					
				40					

ROGERS/PACIFIC
PROFESSIONAL ENGINEERING CONSULTANTS

EXPLORATORY BORING LOG

Lots 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING B-1 (cont

DRILL RIG Continuous flight Auger	SURFACE ELEVATION 30 feet	LOGGED BY KS
DEPTH TO GROUNDWATER 14 feet ATOD	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE	DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY PCF	% COMPACTION
SAND, angular gravels, increases clay content with depth, fill material sieve data: % passing #200: 21%	Dark yellowish brown		SC	1–10			9		
CLAY, silty, occasional angular clasts, 20-30% of sample is comprised of subangular to rounded pebble size clasts composed of quartzite sandstone and weathered feldspars	Dark yellowish brown	STIFF		11	⊠	10*	11	109	
				12–13			21		
				14				▽	
transition into conglomerate population of clasts, clast size, consistency, and roundness increases with depth		VERY STIFF		15					
				16	⊠	20*	15	110	
				17–18					
				19			31		
very strong gasoline odor				20					

ROGERS/PACIFIC

EXPLORATORY BORING LOG

Lot 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING

DRILL RIG Continuous Flight Auger	SURFACE ELEVATION	LOGGED BY KS
DEPTH TO GROUNDWATER 14 feet ATOD	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT %	DRY DENSITY PCF	% COM-
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
CONGLOMERATE, approximately 85% of sample is comprised of greater than 1/8" rounded clasts, composed of chert, quartzite, and greenstone	Moderate yellowish brown	VERY STIFF		26	☒	20*	13	114	
Bottom of borring 26.5 feet									

ROGERS/PACIFIC

EXPLORATORY BORING LOG

Lots 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING

DRILL RIG Continuous Flight Auger	SURFACE ELEVATION 30 Feet	LOGGED BY KS
DEPTH TO GROUNDWATER 9 feet	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT %	DRY DENSITY PCF	% COMPACTION
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
CLAY, very plastic, minor abundance of roots	Brownish black	STIFF	CH	1					
				2					
		STIFF	CH	3	X	12*	23	101	84
				4					
		VERY STIFF		5	X	18*	12	109	
CLAY, silty, sandy	Moderate yellowish brown			6					
				7					
				8					
				9			▽		
				10					
CLAY, sandy, abundant course grain size, rounded clasts of quartzite and greenstone. ½-2" dia. clasts of angular greenstone, comprise 20% of a given sample	Moderate yellowish brown	STIFF		11	X	12*	17	113	
				12					
				13					
				14					
CLAY, silty, slightly mottled, occasional charred fragments, homogeneous	Moderate yellowish brown	STIFF		15					
				16	X	10*	22	104	
				17					
				18					
				19			31		
				20					

ROGERS/PACIFIC

EXPLORATORY BORING LOG

Lot 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING B-2

DRILL RIG Continuous Flight Auger	SURFACE ELEVATION 30 feet	LOGGED BY KS
DEPTH TO GROUNDWATER 9 feet ATOD	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY PCF	% COM-
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
CLAY, silty, sandy, subangular gravels, strong gasoline odor	Moderate yellowish brown	VERY STIFF		21	☒	24*	17	112	
BOTTOM OF BORRING 21.5 FEET				22					
				23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
				31					
				32					
				33					
				34					
				35					
				36					
				37					
				38					
				39					
				40					

ROGERS/PACIFIC
PROFESSIONAL ENGINEERING CONSULTANTS

EXPLORATORY BORING LOG

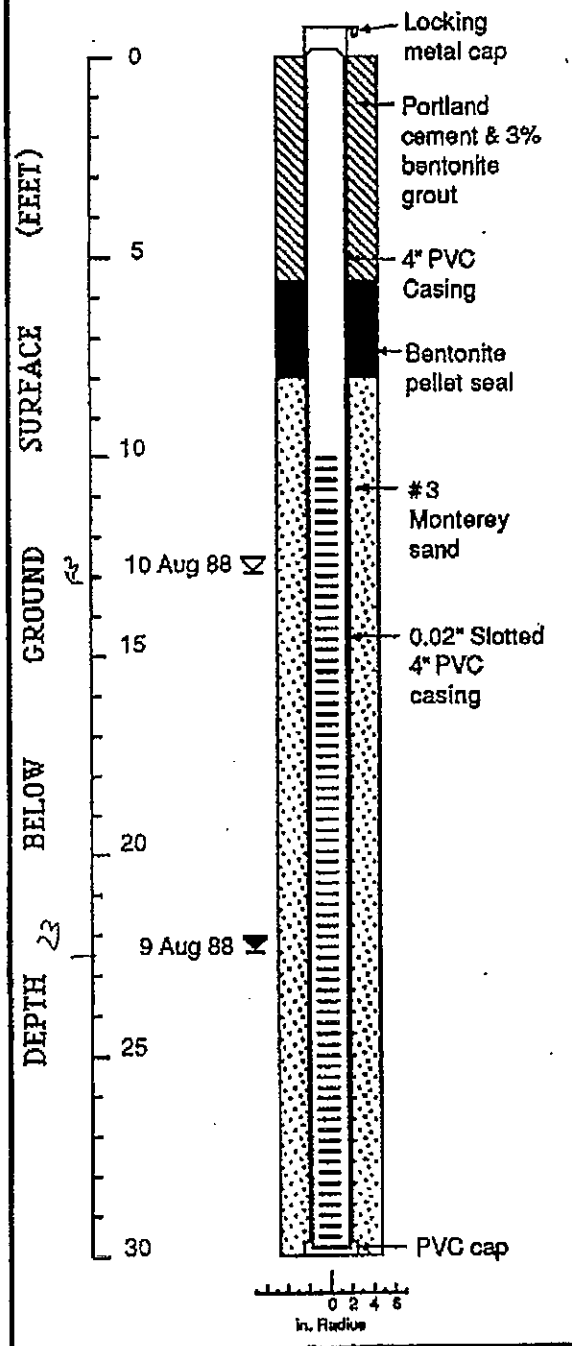
Lots 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING

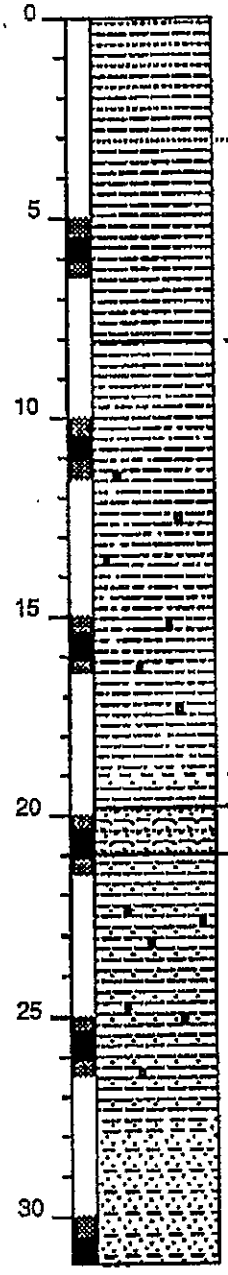
Confined aquifer

Vonder Haar Hydrogeology

WELL VH-1



GRAPHIC LOG



DESCRIPTION

Silty CLAY (CL); dark brown; stiff; dry to moist; no odor; 20-30% silt; 5-10% fine sand

CLAY (CL); to silty clay; light brown to yellow brown; no odor

TR rounded pebbles; TR sand; no odor

CLAY (CL); to silty clay; medium to dark brown; occasional rounded pebbles

Moist to very moist CLAY (CL); no odor

Very plastic clay; some gravel

Sandy CLAY (CL); moist

Clayey silty SAND (SM)

Gravelly sandy CLAY (CL)

No odor

Sandy CLAY (CL); to clayey SAND (SM); with occasional rounded pebbles; no odor

Increase sand content to 30 ft

Clayey SAND (SM); no odor

EXPLANATION

- Water level during drilling (date)
- Water Level (date)
- Contact (dashed where approx.)
- Gradational Contact
- Location of recovered drive sample
- Location of drive sample collected for chemical analysis

Logged by: Stephen Vonder Haar
Drilling Company: Datum Drilling, Long Beach, CA
Driller: Anthony Randy
Drilling Method: Hollow stem auger
Dates Drilled: 8-9-88
Type of sampler: Split Barrel (2.0" ID)

Boring Log and Well Construction Details - Well VH-1

Chevron Facility #4612
3614 San Leandro St. Oakland, CA

Drilling Log

GROUNDWATER TECHNOLOGY

Monitoring Well MW-2

Project Chev/3816 San Leandro Street Owner Chevron U.S.A. Products Co.
Location Oakland, California Project No. 02020 2892 Date drilled 02/01/93
Surface Elev. 28.80 ft. Total Hole Depth 20.5 ft. Diameter 8.5 in.
Top of Casing 28.5 ft. Water Level Initial 8.5 ft. Static 03/26/93 7.62 ft.
Screen: Dia 2 in. Length 15 ft. Type/Size 0.020 in.
Casing: Dia 2 in. Length 5 ft. Type SCH 40 PVC
Filter Pack Material #3 sand Rig/Core Type Mobile B-53/Split Spoon
Drilling Company Kvilhaug Well Drilling Method Hollow Stem Auger Permit # 92366
Driller Rod Furlow Log By S.C. Hurley
Checked By David Kleesattel License No. RG# 5136

See Site Map For Boring Location

COMMENTS:

The well was set at approximately 20.5 feet below grade. the soil cuttings were placed on plastic and was left on site until it could be analyzed and disposed of properly.

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / Blow Count / % Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2						
0					CL	Surface material-grass and soil Brown silty CLAY
2						
4		146	16 35 50		ML	Light brown clayey SILT (10% silt, slightly moist)
6						
8						Static water level - 3/26/93 *Encountered groundwater at 12:30PM 02/01/93*
10		9.1	16 20 23		CL	
12						
14		2800	22 28 45			Greenish silty SAND (about 50% sand, about 35% silt, about 15% clay (saturated, strong hydrocarbon odor)
16					SM	
18						
20		1050	13 25 48		ML	Light brown sandy SILT (10% clay, saturated, slight petroleum hydrocarbon odor)
22						End of boring at 20.5 feet. Installed groundwater monitoring well.
24						

Drilling Log

GROUNDWATER TECHNOLOGY

Monitoring Well MW-3

Project Chev/3616 San Leandro St. Owner Chevron U.S.A. Products Co.
Location Oakland, California Project No. 02020 2892 Date drilled 02/01/93
Surface Elev. 28.30 ft. Total Hole Depth 20.5 ft. Diameter 8.5 in.
Top of Casing 27.51 ft. Water Level Initial 8.5 ft. Static 03/26/93 7.18 ft.
Screen: Dia 2 in. Length 15 ft. Type/Size 0.020 in.
Casing: Dia 2 in. Length 5 ft. Type SCH 40 PVC
Filter Pack Material #3 sand Rig/Core Type Mobile B-53/Split Spoon
Drilling Company Kvilhaug Well Drilling Method Hollow Stem Auger Permit # 92383
Driller Rod Furlow Log By S.C. Hurley
Checked By David Kleesattel License No. RG# 5136

See Site Map For Boring Location

COMMENTS:

The well wa set at approximately 20.5 feet below grade. The soil cuttingswere placed on plastic and was left on site until it could be analyzed and disposed of properly.

Depth (ft.)	Well Completion	PID (ppm)	Sample ID Blow Count/ % Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2						
0						Surface material- grass and soil
2					CL	Brown silty CLAY (moist)
4						
6		12.3	35 50		ML	Brown clayey SILT (10% fine sand, slightly moist)
8						Static level - 3/26/93
						Encountered groundwater at 9:30AM 02/01/93
10		8.6	38 50		GP	Brown sandy GRAVEL (about 75% gravel, about 20% course sand, about 5% silt, water saturated, no hydrocarbon odor).
12						
14						
16		186	25 38 45		SW	Brown silty SAND (50% coarse sand, 30% fine sand, 20% silt, saturated)
18						
20			22 25 45			No recovery
						End of boring at 20.5 feet. Installed groundwater monitoring well.
22						
24						

Drilling Log

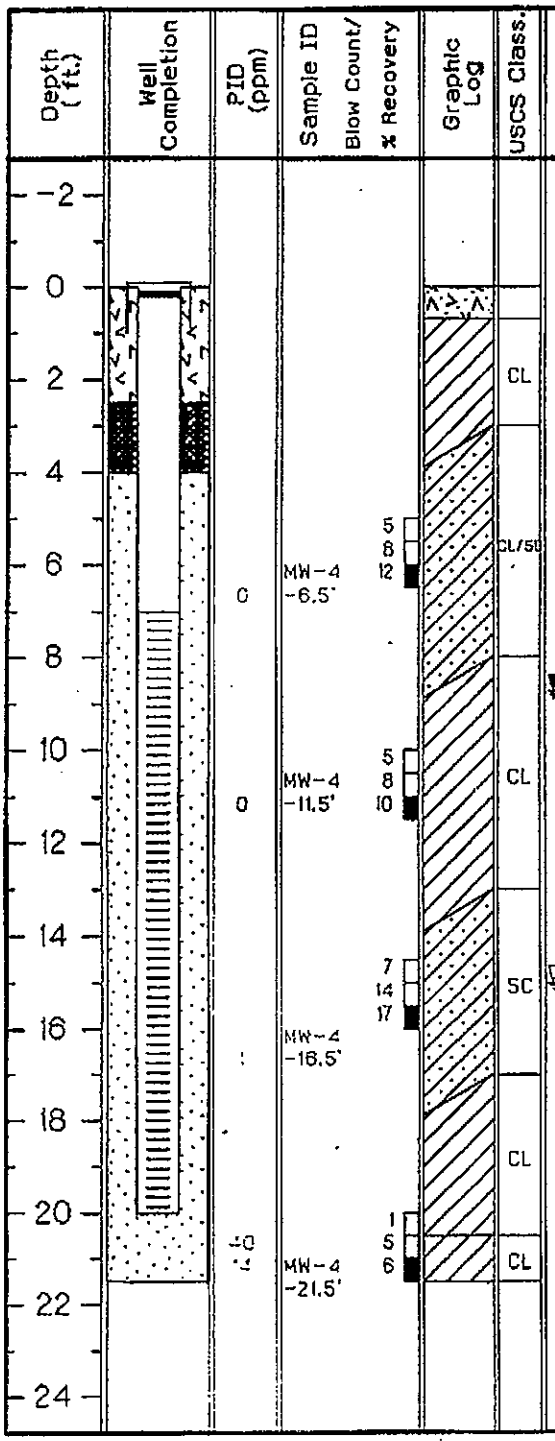
GROUNDWATER TECHNOLOGY

Monitoring Well **MW-4**

Project *Chevron - Oakland* Owner *Chevron USA Products Company*
Location *3616 San Leandro Street, Oakland, CA* Proj. No. *02020 4530*
Surface Elev. *27.68 ft.* Total Hole Depth *21.5 ft.* Diameter *8 in.*
Top of Casing *27.27 ft.* Water Level Initial *15 ft.* Static *8.76 ft.*
Screen: Dia *2 in.* Length *13 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2 in.* Length *7 ft.* Type *Sch 40 PVC*
Fill Material *Neat Cement* Rig/Core *CME-55/Modified Split-Spoon*
Drill Co. *SES, Inc.* Method *Hollow Stem Auger/PID*
Driller *Morris Peterson* Log By *Brian McAloon* Date *08/15/95* Permit # *95503*
Checked By *Ed Simonis* License No. *RG#4422* Ed

See Site Map For Boring Location

COMMENTS:



Description

(Color, Texture, Structure)
Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%

8" concrete.

Silty CLAY (15,85): brown, dry.

Pebbly sandy CLAY (20,30,50): brown, dry, no hydrocarbon odor.

Static water, 08/15/95, 1400 hrs.

Pebbly sandy CLAY (10,40,50): brown, dry, no hydrocarbon odor.

Pebbly silty clayey SAND (15,25,30,30): brown, moist, no hydrocarbon odor.

Encountered water (driller's call), 08/15/95, 1255 hrs.

Silty CLAY (40,60): brown, moist, slight hydrocarbon odor.

Pebbly sandy silty CLAY (10,20,20,50): brown with orange and gray mottling, moist, hydrocarbon odor.

End of boring. Installed groundwater monitoring well.

Drilling Log

GROUNDWATER TECHNOLOGY

Soil Boring SB-1

Project Chevron - Oakland — Owner Chevron USA Products Company
Location 3616 San Leandro Street, Oakland, CA — Proj. No. 02020 4530
Surface Elev. ____ Total Hole Depth 21.5 ft. Diameter 8 in.
Top of Casing ____ Water Level Initial 15 ft. Static 18.35 ft.
Screen: Dia ____ Length ____ Type/Size ____
Casing: Dia ____ Length ____ Type ____
Fill Material Neat Cement — Rig/Core CME-55/Modified Split-Spoon
Drill Co. SES, Inc. — Method Hollow Stem Auger/PID
Driller Morris Peterson — Log By Brian McAloon — Date 08/15/95 — Permit # 95503
Checked By Ed Simonis — License No. RG#4422 EK

See Site Map For Boring Location

COMMENTS:

"GRAB" groundwater samples collected.

Depth (ft.)	PID (ppm)	Sample ID	Blow Count / % Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
0					CL	Top soil and weeds. Sandy CLAY (20,80): brown.
2						
4					CL	Pebbly sandy CLAY (5,20,75): brown, dry, no hydrocarbon odor.
6	0	SB-1 -6.5'	8 8 12			
8					SM	Clayey silty pebbly SAND (10,10,20,60): brown, damp, no hydrocarbon odor, grading to clayey sandy pebbly (up to 30mm) SILT (10,10,30,50): brown, dry to damp, no hydrocarbon odor.
10	0	SB-1 -11.5'	8 11 14			
12					ML	
14						
16	9	SB-1 -16.5'	3 4 9		SC	*Encountered water (driller's call), 08/15/95* Pebbly clayey SAND (10,30,60): brown with 5% gray staining along rootlet casts, damp to moist, no hydrocarbon odor.
18						*Static water, 08/15/95, 0953 hrs.*
20					CL	Sandy silty CLAY (10,30,60): light brown with 5% light gray mottling, moist to wet, slight hydrocarbon odor.
22	3.75 170	SB-1 -21.5'	2 4 5			End of boring. Backfilled with grout 08/15/95.
24						

Gettler-Ryan, Inc.

Log of Boring GP-1

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG94612C.4C02*	SURFACE ELEVATION:
DATE STARTED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe (direct push)*	TOTAL DEPTH: *16 feet*
DRILLING COMPANY: *Gregg Drilling*	GEOLOGIST: *Geoff Risse*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Topsoil and coarse gravel – 6 inches thick.	Hand augered to 5 feet.
					CL	CLAY (CL) – dark brown (7.5YR 3/3), moist; 90% clay, 5% sand, 5% gravel.	
3							Boring backfilled with neat cement from the bottom to the ground surface.
6	30	GP1-6 GP1-6G					
						Becomes 95% clay, 5% gravel.	
9	0	GP1-9			SP	POORLY GRADED SAND (SP) – dark brown (7.5YR 3/3), moist; 95% fine to medium sand, 5% silt.	
	0	GP1-11					
12							
15	1413	GP1-15.5 GP1-15.5G				Refusal at 16 feet.	
						Bottom of boring at 16 feet bgs.	
18							
21							

JOB NUMBER: *DG94612C.4C02*

Gettler-Ryan, Inc.

Log of Boring GP-2

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG94612C.4C02*	SURFACE ELEVATION:
DATE STARTED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe (direct push)*	TOTAL DEPTH: *15 feet*
DRILLING COMPANY: *Gregg Drilling*	GEOLOGIST: *Geoff Risse*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Topsoil and coarse gravel – 6 inches thick.	Hand augered to 5 feet.
					CL	CLAY (CL) – dark brown (7.5YR 3/3), moist; 100% clay.	
3					SP	POORLY GRADED SAND (SP) – dark brown (7.5YR 3/3), moist; 90% fine to medium sand, 5% clay, 5% gravel.	Boring backfilled with neat cement from the bottom to the ground surface.
6	0	GP2-6					
					CL	CLAY (CL) – dark brown (7.5YR 3/3), moist; 95% clay, 5% sand.	
9	0	GP2-8.5 GP2-8.5G					
12	20	GP2-12.5 GP2-12.5G				Becomes saturated; 90% clay, 5% sand, 5% gravel.	
15	0	GP2-14.5				Refusal at 15 feet. Bottom of boring at 15 feet bgs.	
18							
21							

JOB NUMBER: *DG94612C.4C02*

Gettler-Ryan, Inc.

Log of Boring GP-3

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG94612C.4C02*	SURFACE ELEVATION:
DATE STARTED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe (direct push)*	TOTAL DEPTH: *15 feet*
DRILLING COMPANY: *Gregg Drilling*	GEOLOGIST: *Geoff Risse*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Topsoil and coarse gravel – 8 inches thick.	Hand augered to 5 feet.
					SP	POORLY GRADED SAND (SP) – dark brown (7.5YR 3/3), moist; 95% fine to medium sand, 5% silt.	Boring backfilled with neat cement from the bottom to the ground surface.
3							
6	11	GP3-5.5					
9	0	GP3-8.5 GP3-8.5G					
12	0	GP3-12.5					
					CL	CLAY (CL) – dark reddish brown (2.5YR 3/4), saturated; 95% clay, 5% sand.	
15	0	GP3-14.5				Refusal at 15 feet. Bottom of boring at 15 feet bgs.	
18							
21							

JOB NUMBER: *DG94612C.4C02*

Gettler-Ryan, Inc.

Log of Boring HA-1

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG946126.4C01*	SURFACE ELEVATION:
DATE STARTED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *3 in. Hand Auger*	TOTAL DEPTH: *10 feet*
DRILLING COMPANY: *Gettler-Ryan*	GEOLOGIST: *Geoff Risse*

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Concrete over baserock – 11 inches thick.	
2				CL	CLAY (CL) – dark brown (7.5YR 3/2), moist; 90% clay, 10% fine to medium sand.	Boring backfilled with neat cement from the bottom to ground surface.
4						
6	HA1-5					
8					CLAY WITH SAND (CL) – dark brown (7.5YR 3/2), saturated; 85% clay, 15% sand.	
10	HA1				Bottom of boring at 10 feet bgs.	Grab groundwater sample HA1.
12						
14						

JOB NUMBER: *DG946126.4C01*

Gettler-Ryan, Inc.

Log of Boring HA-2

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG94612G.4C01*	SURFACE ELEVATION:
DATE STARTED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *3 in. Hand Auger*	TOTAL DEPTH: *9.5 feet*
DRILLING COMPANY: *Gettler-Ryan*	GEOLOGIST: *Geoff Risse*

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Concrete over baserock – 11 inches thick.	
2				CL	CLAY (CL) – dark brown (7.5YR 3/2), saturated, low plasticity; 90% clay, 10% fine sand.	Boring backfilled with neat cement from the bottom to ground surface.
4						
	HA2-5					
6						
				SC	CLAYEY SAND (SC) – dark brown (7.5YR 3/2), saturated; 85% fine to medium sand, 15% clay.	
8						
	HA2					Grab groundwater sample HA2.
					Bottom of boring at 9.5 feet bgs.	
10						
12						
14						

JOB NUMBER: *DG94612G.4C01*

Gettler-Ryan, Inc.

Log of Boring HA-3

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3816 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG94612G.4C01*	SURFACE ELEVATION:
DATE STARTED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *3 in. Hand Auger*	TOTAL DEPTH: *10 feet*
DRILLING COMPANY: *Gettler-Ryan*	GEOLOGIST: *Geoff Risse*

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Concrete over base rock – 11 inches thick.	
				CL	CLAY (CL) – light brown (7.5YR 6/3), saturated, low plasticity; 90% clay, 10% fine to medium sand.	
2						Boring backfilled with neat cement from the bottom to ground surface.
4						
	HA3-5					
6						
				SP-SC	SAND WITH CLAY (SP-SC) – light brown (7.5YR 6/3), saturated; 90% fine to medium sand, 10% clay.	
8						
	HA3					Grab groundwater sample HA3
10					Bottom of boring at 10 feet bgs.	
12						
14						

JOB NUMBER: *DG94612G.4C01*

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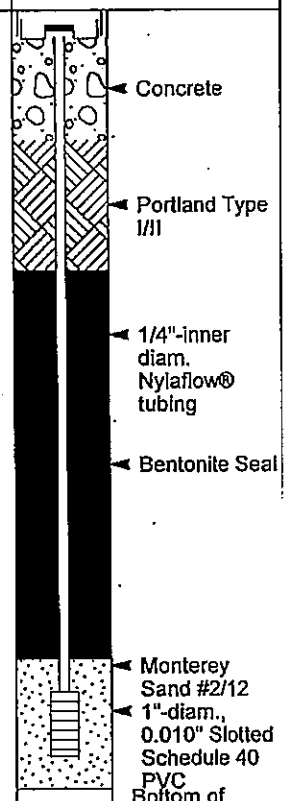
BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	VP-1
JOB/SITE NAME	9-4612	DRILLING STARTED	28-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	28-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							Concrete	1.0
					GC		Clayey GRAVEL with sand: Brown; moist; 45% gravel, 30% sand, 15% clay, 10% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5
					CL		CLAY with sand: Dark grey; moist; 60% clay, 20% sand, 20% silt; medium plasticity; moderate esimated permeability.	
								3.0
0		VP-1-4			CL		Sandy CLAY: Brown; moist; 40% sand, 30% clay, 30% silt; medium plasticity; moderate estimated permeability.	
				5				6.0



WELL LOG (PID) \\SAC-S11\SHARED\ROCKL~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

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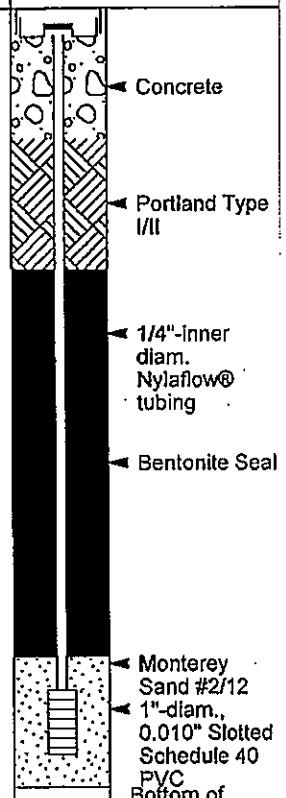
BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	VP-2
JOB/SITE NAME	9-4612	DRILLING STARTED	28-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	28-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							Concrete	1.0
					GC		Clayey GRAVEL with sand: Brown; moist; 40% gravel, 30% sand, 15% clay, 15% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5
					CL		CLAY : Dark grey; moist; 60% clay, 25% silt, 15% sand; medium plasticity; moderate estimated permeability.	
							Sandy CLAY: Brown; moist; 45% clay, 30% sand, 25% silt; medium plasticity; moderate estimated permeability.	3.0
0		VP-2-4						
				5				6.0



WELL LOG (PID) \\SAC-S1\SHARED\ROCKLI~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	VP-3
JOB/SITE NAME	9-4612	DRILLING STARTED	29-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	29-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	10.5 fbg (29-May-08)
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							Concrete	1.0
					GC		Clayey GRAVEL with sand: Brown; moist; 40% gravel, 30% sand, 15% clay, 15% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5
					CL		CLAY with sand: Dark grey; moist; 70% clay, 20% sand, 10% silt; medium plasticity; moderate estimated permeability.	
0		VP-3-4						
								4.0
							CLAY with sand: Brown; moist; 60% clay, 25% sand, 15% silt; medium plasticity; moderate estimated permeability.	
				5				
					CL			
0		VP-3-8						
				10				
								▽ 10.5
					GC		Clayey GRAVEL with sand: Brown; wet; 40% gravel, 20% sand, 25% clay, 15% silt; low plasticity; high estimated permeability; 1/4 inch diameter angular gravel.	
0		VP-3-12						12.0

WELL DIAGRAM

- Concrete
- Portland Type I/II
- 1/4"-inner diam. Nylaflow® tubing
- Bentonite Seal
- Monterey Sand #2/12
- 1"-diam., 0.010" Slotted Schedule 40 PVC
- Bentonite Seal
- Bottom of Boring @ 12 fbg

WELL LOG (PID) \\SAC-S1\SHARED\ROCKLI~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	VP-4
JOB/SITE NAME	9-4612	DRILLING STARTED	29-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	29-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	10.5 fbg (29-May-08)
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							Concrete	1.0
					GC		Clayey GRAVEL with sand: Brown; moist; 40% gravel, 30% sand, 15% clay, 15% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5
							CLAY: Brown; moist; 70% clay, 20% silt, 10% sand; high plasticity; low estimated permeability.	
0		VP-4-4			CL			
				5				
							Sandy CLAY: Brown; moist; 45% clay, 30% sand, 25% silt; medium plasticity; moderate estimated permeability.	7.0
0		VP-4-8			CL			
							Rocks encountered- difficult hand-augering.	
				10			▽	10.5
					GC		Clayey GRAVEL with sand: Brown; wet; 40% gravel, 20% sand, 25% clay, 15% silt; low plasticity; high estimated permeability; 1/4 inch diameter angular gravel.	
0		VP-4-11.5						11.5

WELL DIAGRAM

- Concrete
- Portland Type I/II
- 1/4"-inner diam. Nylaflow® tubing
- Bentonite Seal
- Monterey Sand #2/12
- 1"-diam., 0.010" Slotted Schedule 40 PVC
- Bentonite Seal
- Bottom of Boring @ 11.5 fbg

WELL LOG (PID) \\SAC-S1\SHARED\ROCKLI~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	SB-2
JOB/SITE NAME	9-4612	DRILLING STARTED	28-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	28-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	NA
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	10.5 fbg (28-May-08) ▽
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Asphalt	0.5	Concrete
					GC		Clayey GRAVEL with sand: Brown; moist; 45% gravel, 30% sand, 15% clay, 10% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5	
							CLAY with sand: Dark grey; moist; 70% clay, 20% sand, 10% silt; high plasticity; low estimated permeabilty; fine-medium grained sand.		
0		SB-2-4			CL				
				5					
								6.0	Portland Type I/II
							Sandy CLAY: Brown; moist; 50% clay, 40% sand, 10% silt; medium plasticity; moderate estimated permeability; firm; coarse grained sand.		
0		SB-2-8			CL				
				10				10.0	
					SC		Sandy CLAY: Light brown; moist; 60% clay, 35% sand, 5% gravel; medium plasticity; moderate estimated permeability; fine grained sand; 1/2-1 inch diameter gravel. ▽	11.0	
0		SB-2-12			GC		Clayey GRAVEL with sand: Brown; wet; 40% gravel, 20% sand, 20% clay, 20% silt; low plasticity; high estimated permeability; 1/4 inch diameter angular gravel.	12.0	Bottom of Boring @ 12 fbg

WELL LOG (PID) 1:\SAC-S1\SHARED\ROCKLI~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	SB-3
JOB/SITE NAME	9-4612	DRILLING STARTED	29-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	29-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	NA
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	10.5 fbg (29-May-08) ▽
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Concrete	1.0	Concrete
					GC		Clayey GRAVEL with sand: Dark grey; moist; 45% gravel, 30% sand, 15% clay, 10% silt; low plasticitiy; high estimated permeability; 3/4 inch diameter angular gravel.	1.5	
							CLAY with sand: Dark grey; moist; 70% clay, 20% sand, 10% silt; medium plasticity; low estimated permeability..		
0		SB-3-4			CL				
				5			Sandy CLAY: Brown; moist; 50% clay, 40% sand, 10% silt; medium plasticity; moderate estimated permeability.	5.0	
0		SB-3-8			CL				Portland Type I/II
								9.5	
				10	SC		Clayey SAND: Brown; moist; 45% sand, 30% clay, 15% silt, 10% gravel; low plasticity; high estimated permeability.		
							▽	10.5	
					GC		Clayey GRAVEL with sand: Light brown; wet; 40% gravel, 20% sand, 20% clay, 20% silt; low plasticity; high estimated permeability; 1/4 inch diameter angular gravel.		
0		SB-3-12						12.0	Bottom of Boring @ 12 fbg

WELL LOG (PID) \\SAC-S1\SHAREDROCKLI~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	SB-4
JOB/SITE NAME	9-4612	DRILLING STARTED	29-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	29-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	NA
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	10.5 fbg (29-May-08) ▽
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA ▼
REMARKS			

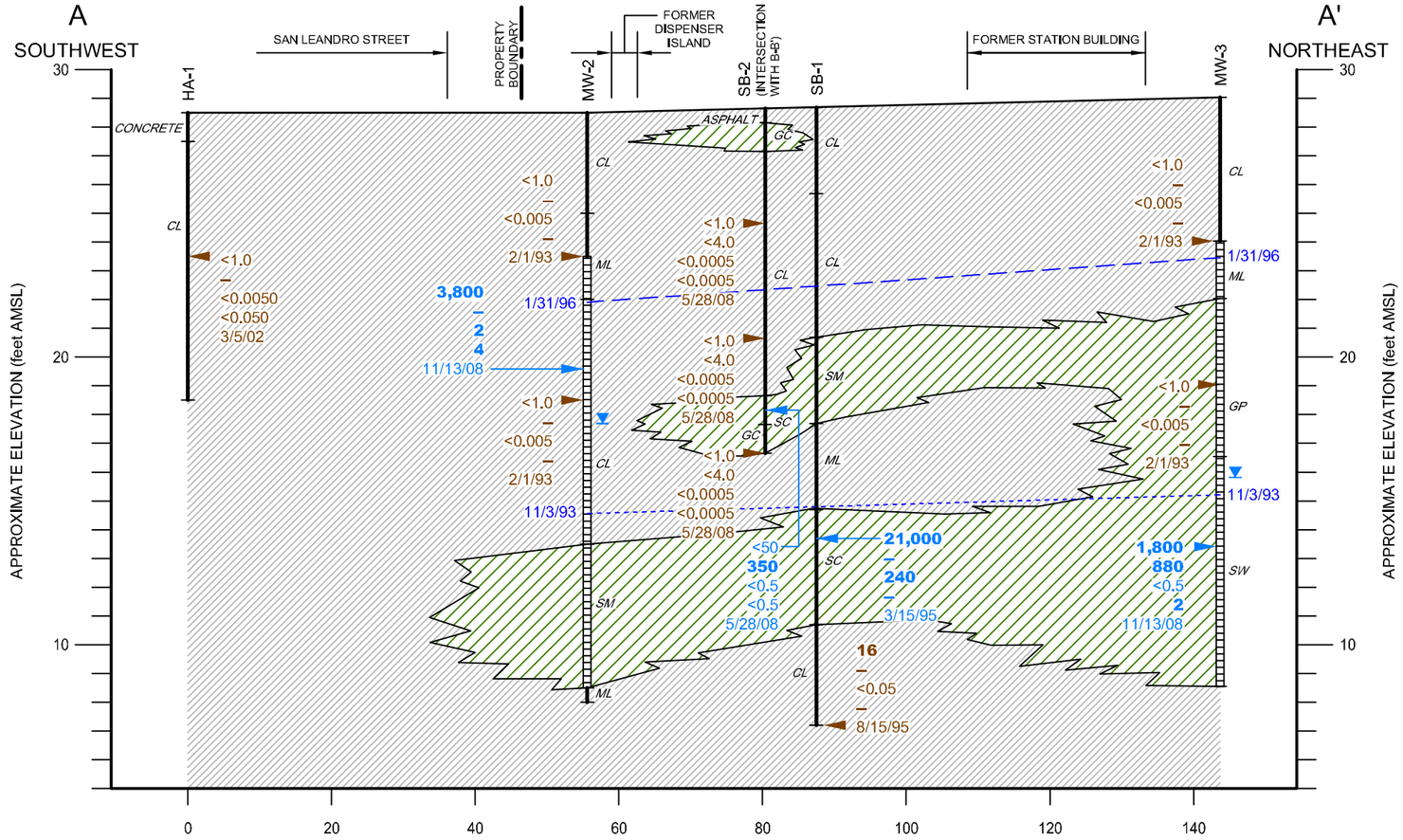
PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							Concrete	1.0
					GC		Clayey GRAVEL with sand: Brown; moist; 40% gravel, 30% sand, 15% clay, 15% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5
					CL		CLAY with sand: Dark grey; moist; 70% clay, 20% sand, 10% silt; medium plasticity; moderate estimated permeability.	
0		SB-4-4						4.0
							Sandy CLAY: Brown; moist; 45% clay, 30% sand, 25% silt; medium plasticity; moderate estimated permeability.	
				5				
					CL			
0		SB-4-8						
				10				▽ 10.5
					GC		Clayey GRAVEL with sand: Brown; wet; 40% gravel, 20% sand, 20% clay, 20% silt; low plasticity; high estimated permeability; 1/4 inch diameter angular gravel.	
0		SB-4-11.5						12.0

WELL DIAGRAM: Bottom of Boring @ 12 fbg

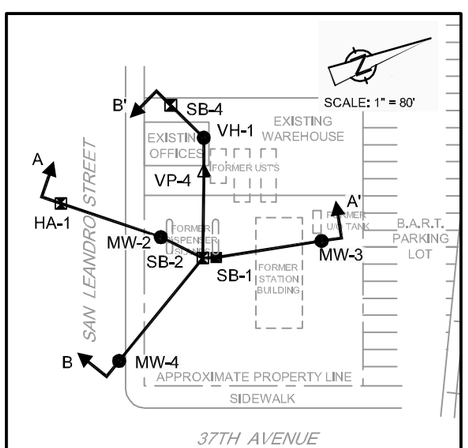
WELL LOG (PID) \\SAC-S1\SHAREDROCKL\-1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

APPENDIX B
Historical Geologic Cross-Sections A-A' and B-B'

Stantec



SCALE: HORZ. 1" = 20'
VERT. 1" = 5'



LEGEND

- MW-2 — WELL / BORING DESIGNATION
- GROUND SURFACE
- OBSERVATION WELL INSTALLATION
- STRATIGRAPHIC BOUNDARY
- CL — TYPICAL SOIL CLASSIFICATION
- SCREENED INTERVAL
- BOTTOM OF BORING
- TPHg / TPHd / BENZENE / MTBE / DATE — APPROXIMATE SOIL SAMPLE LOCATION HYDROCARBON CONCENTRATIONS IN SOIL (mg/kg)
- TPHg / TPHd / BENZENE / MTBE / DATE — APPROXIMATE GROUNDWATER SAMPLE LOCATION HYDROCARBON CONCENTRATIONS IN GROUNDWATER (µg/L)

- COARSE GRAINED SOILS : GRAVELS, SANDY GRAVELS, SANDS, GRAVELY SANDS, SILTY CLAYEY GRAVELS AND SANDS (SP/SW/SC/GL/CM/GW)
- FINE GRAINED SOILS : SILTS, CLAYS AND SILTY CLAYS (ML/CL)
- – NOT ANALYZED
- GROUNDWATER DEPTH
- LOWEST GROUNDWATER ELEVATION
- HIGHEST GROUNDWATER ELEVATION
- < NOT DETECTED AT OR ABOVE REPORTING LIMIT

figure 3

CROSS SECTION A-A'
FORMER CHEVRON SERVICE STATION 9-4612
3616 SAN LEANDRO STREET
Oakland, California

LEGEND

MW-4 — WELL / BORING DESIGNATION

GROUND SURFACE

OBSERVATION WELL INSTALLATION

STRATIGRAPHIC BOUNDARY

CL — TYPICAL SOIL CLASSIFICATION

SCREENED INTERVAL

BOTTOM OF BORING

TPHg, TPHd, BENZENE, MTBE, DATE — APPROXIMATE SOIL SAMPLE LOCATION; HYDROCARBON CONCENTRATIONS IN SOIL (mg/kg)

TPHg, TPHd, BENZENE, MTBE, DATE — APPROXIMATE GROUNDWATER SAMPLE LOCATION; HYDROCARBON CONCENTRATIONS IN GROUNDWATER (µg/L)

COARSE GRAINED SOILS : GRAVELS, SANDY GRAVELS, SANDS, GRAVELY SANDS, SILTY CLAYEY GRAVELS AND SANDS (SP/SW/SC/GL/CM/GW)

FINE GRAINED SOILS : SILTS, CLAYS AND SILTY CLAYS (ML/CL)

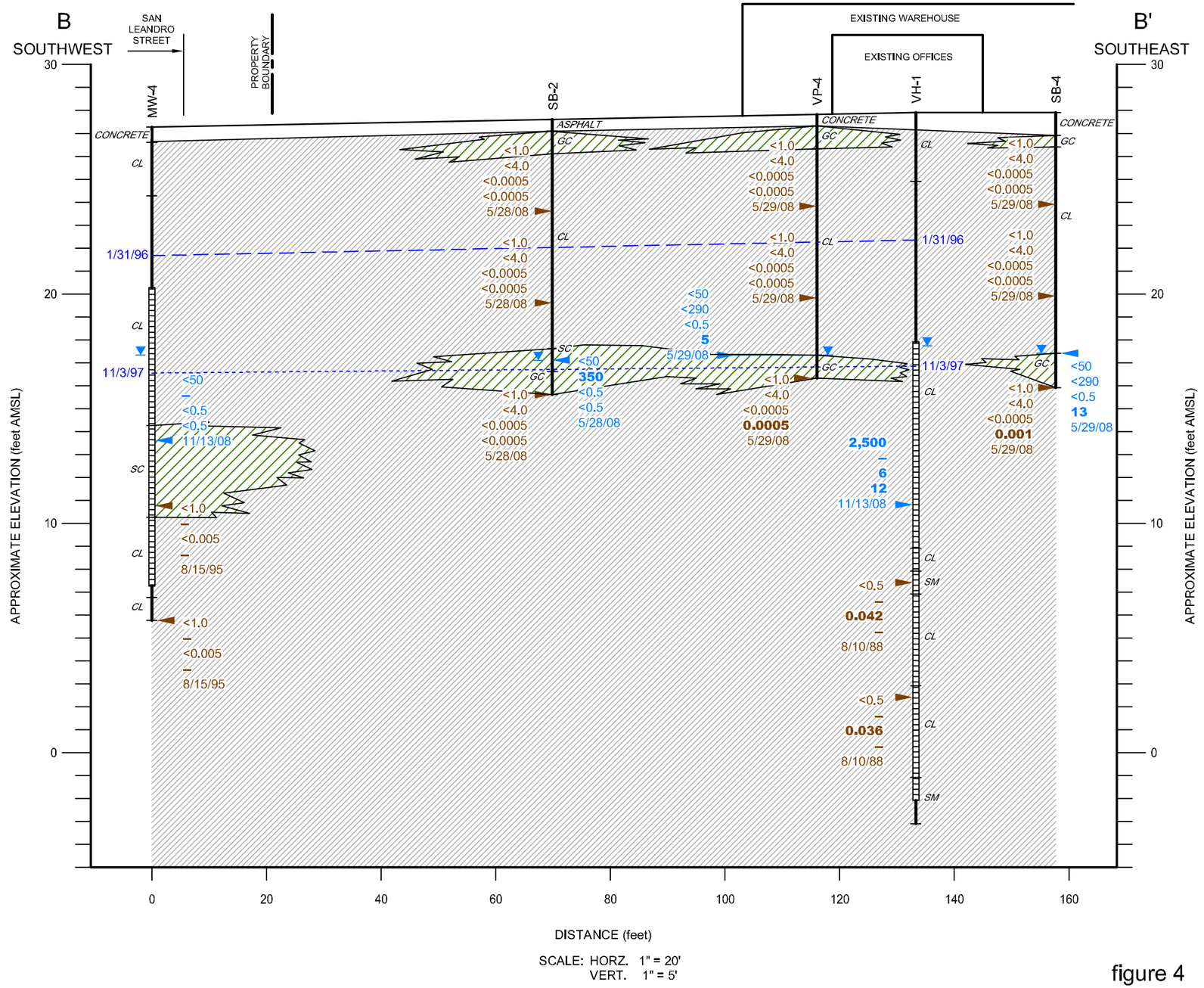
– NOT ANALYZED

GROUNDWATER DEPTH

LOWEST GROUNDWATER ELEVATION

HIGHEST GROUNDWATER ELEVATION

< NOT DETECTED AT OR ABOVE REPORTING LIMIT



SCALE: HORZ. 1" = 20'
VERT. 1" = 5'

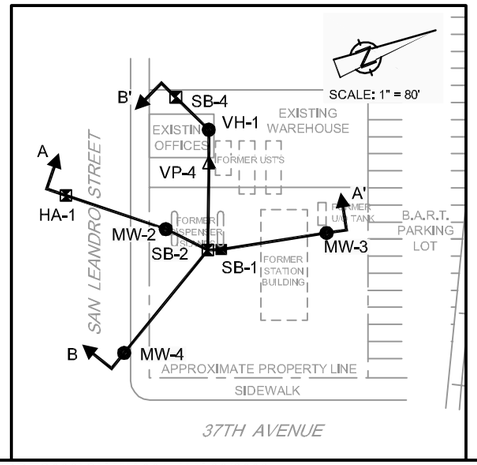


figure 4

CROSS SECTION B-B'
FORMER CHEVRON SERVICE STATION 9-4612
3616 SAN LEANDRO STREET
Oakland, California

611996-400(PRES003)GN-WA001 JAN 30/2009

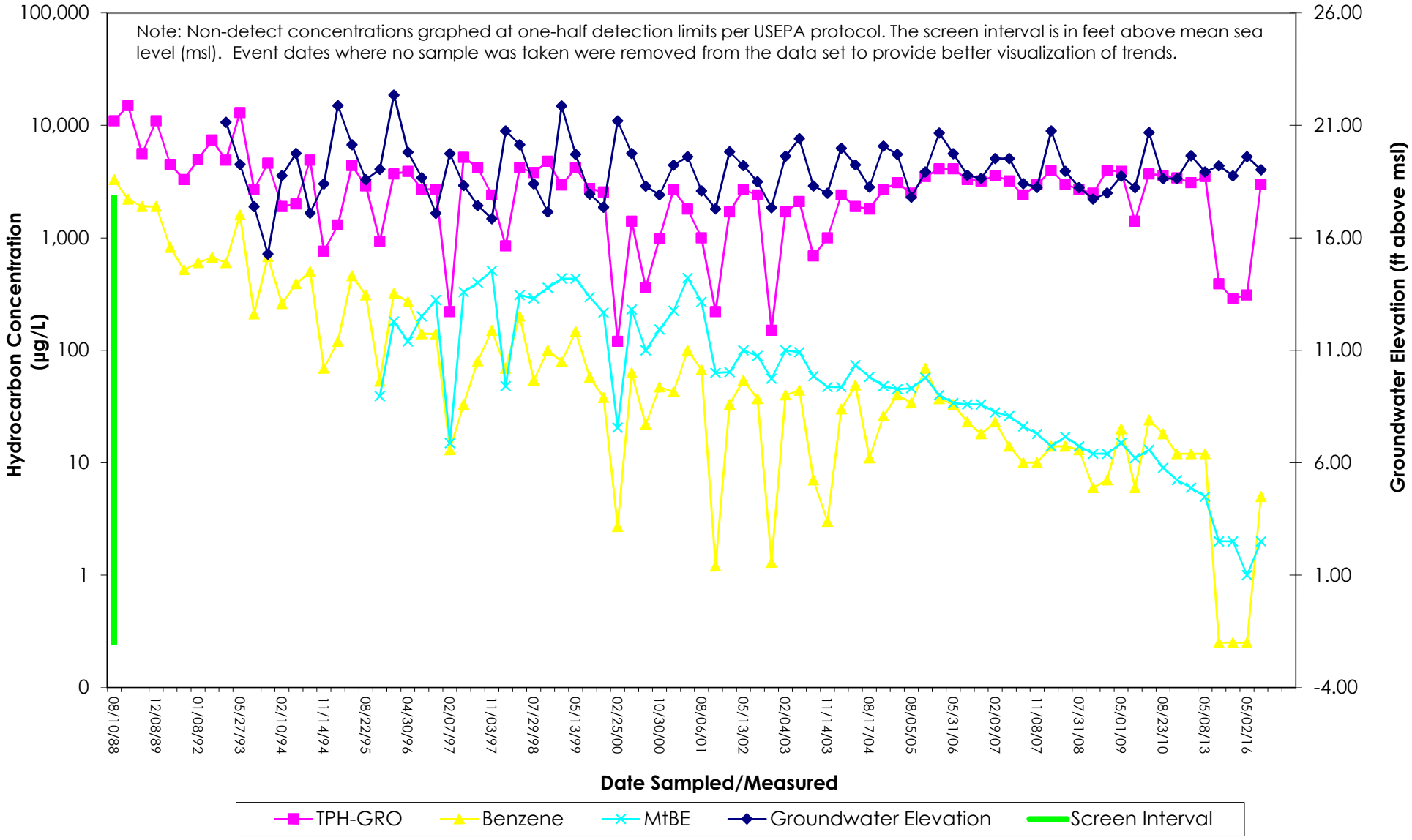
APPENDIX C
Hydrographs

VH-1 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

Former Chevron-branded Service Station 94612

3616 San Leandro Street

Oakland, California

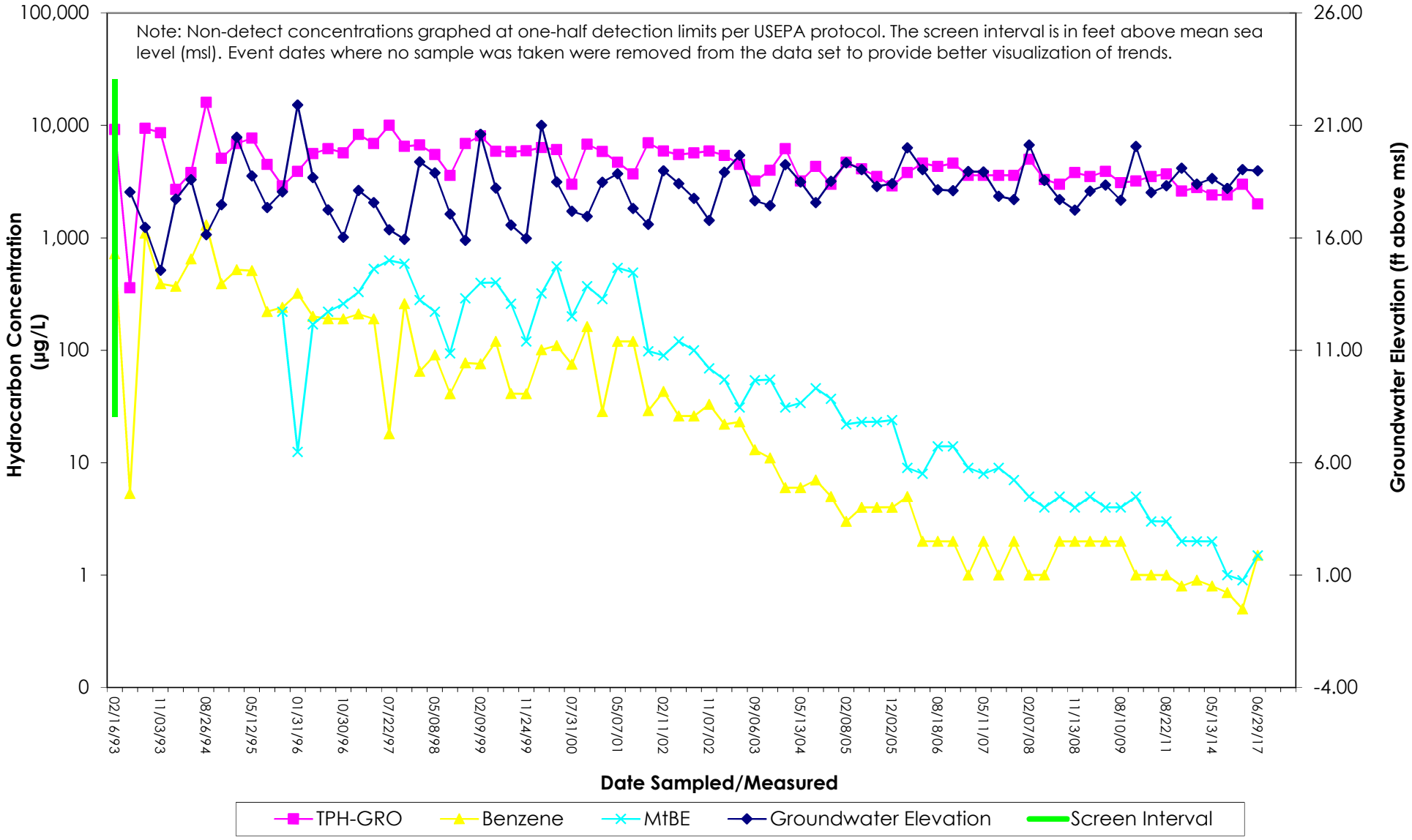


MW-2 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

Former Chevron-branded Service Station 94612

3616 San Leandro Street

Oakland, California

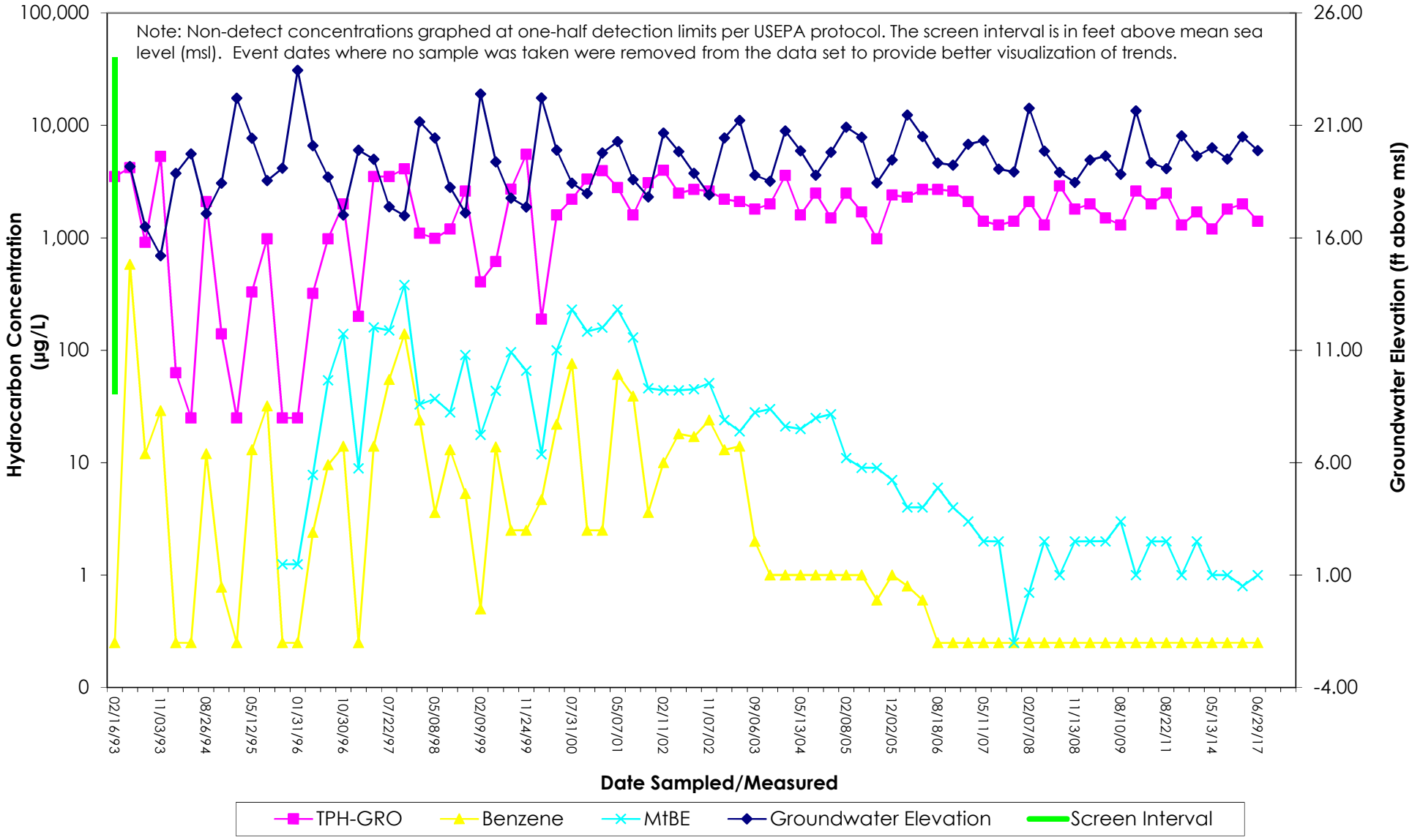


MW-3 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

Former Chevron-branded Service Station 94612

3616 San Leandro Street

Oakland, California

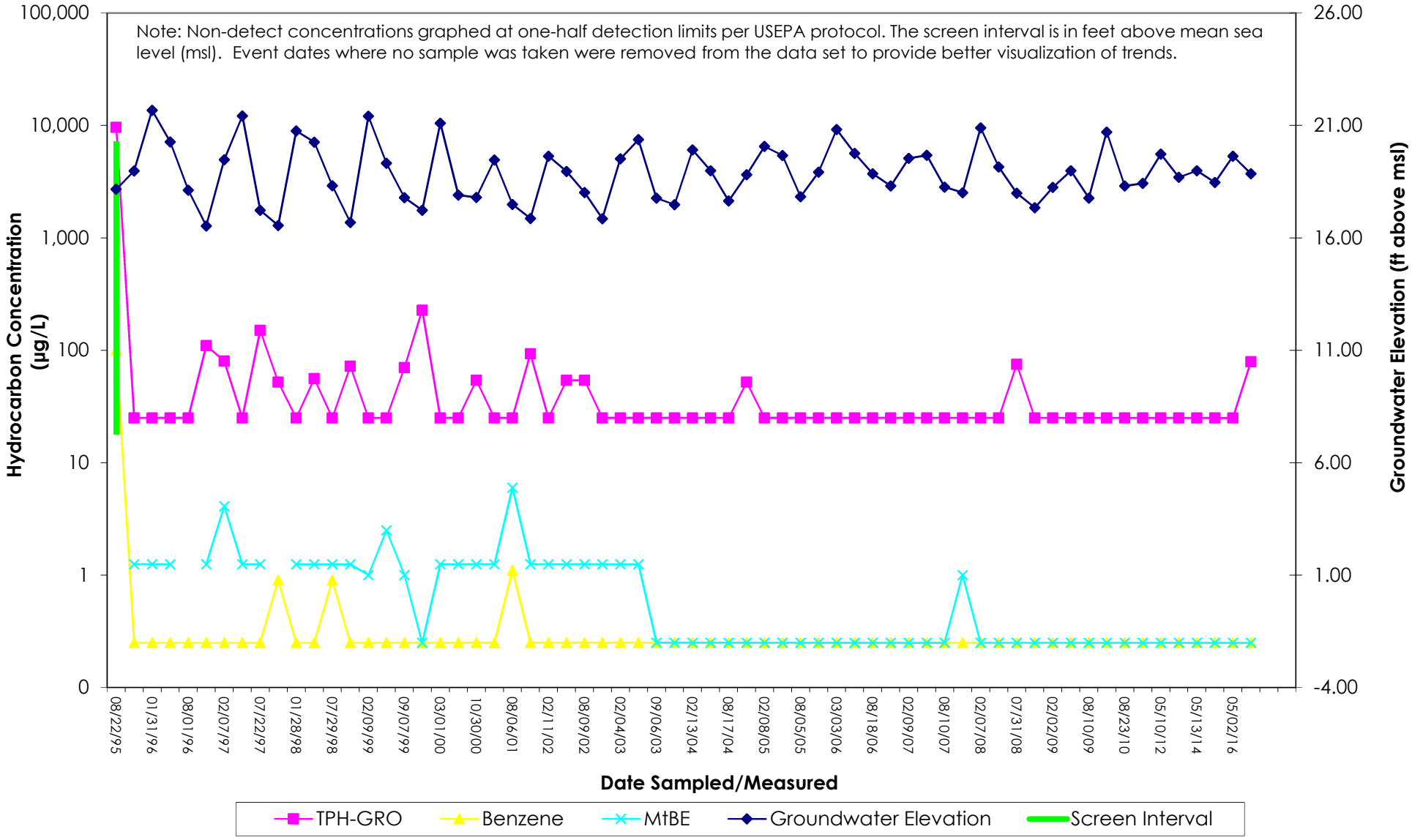


MW-4 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

Former Chevron-branded Service Station 94612

3616 San Leandro Street

Oakland, California



APPENDIX D
SWRCB LTCP Checklist

Stantec

Site Name: Former Chevron-branded Service Station 94612
Site Address: 3616 San Leandro Street, Oakland, California

Site meets the criteria of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.[1]

General Criteria General criteria that must be satisfied by all candidate sites:	
Is the unauthorized release located within the service area of a public water system?	☒ Yes ☐ No
Does the unauthorized release consist only of petroleum?	☒ Yes ☐ No
Has the unauthorized ("primary") release from the UST system been stopped?	☒ Yes ☐ No
Has free product been removed to the maximum extent practicable?	☐ Yes ☐ No ☒ NA
Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?	☒ Yes ☐ No
Has secondary source been removed to the extent practicable?	☒ Yes ☐ No
Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?	☒ Yes ☐ No
Does nuisance as defined by Water Code section 13050 exist at the site?	☐ Yes ☒ No
Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?	☐ Yes ☒ No
Media-Specific Criteria Candidate sites must satisfy all three of these media-specific criteria: **1. Groundwater:** To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites:	
Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?	☒ Yes ☐ No ☐ NA
Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?	☒ Yes ☐ No ☐ NA
If YES, check applicable class: ☐ **1** ☒ **2** ☐ **3** ☐ **4** ☐ **5**	

[1] Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.

For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?	☐ Yes ☐ No ☒ NA
2. Petroleum Vapor Intrusion to Indoor Air: The site is considered low-threat for vapor intrusion to indoor air if site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies. **Is the site an active commercial petroleum fueling facility?** Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk. **a. Do site-specific conditions at the release site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4?** If YES, check applicable scenarios: ☐ **1** ☐ **2** ☐ **3** ☒ **4** **b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?** **c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?**	☐ Yes ☒ No ☒Yes ☐ No ☐ NA ☐ Yes ☒ No ☐ NA ☐ Yes ☒ No ☐ NA
3. Direct Contact and Outdoor Air Exposure: The site is considered low-threat for direct contact and outdoor air exposure if site-specific conditions satisfy one of the three classes of sites (a through c). **a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?** **b. Are maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?** **c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?**	☒ Yes ☐ No ☐ NA ☐ Yes ☐ No ☒ NA ☐ Yes ☐ No ☒ NA