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Report 0398.R6

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SUBJECT: SUBSURFACE INVESTIGATION REPORT
(B16 THROUGH B21 AND VP1)
County LOP Case Number RO 0002990
Auto Depot/Xtra Oil
4171 Broadway
Oakland, California

Gentlemen:

P&D Environmental, Inc. (P&D) has prepared this report documenting the further investigation of the presence and extent of subsurface petroleum hydrocarbons at the subject site. The work scope included drilling at six locations (boreholes B16 through B21) for soil and groundwater grab sample collection, and the installation and sampling of one Vapor Pin designated as VP1 for evaluation of subsurface soil gas. This work was performed in accordance with P&D's Subsurface Investigation Work Plan (document 0398.W3) dated December 15, 2016. The work plan was approved in an email from Ms. Karel Detterman of the Alameda County Department of Environmental Health (ACDEH) dated February 10, 2017. A Site Location Map (Figure 1) and a Site Map (Figure 2) showing sample collection locations are attached with this report.

Soil and groundwater samples were collected on March 13, 2017 and soil gas samples were collected on March 16, 2017. All work was performed under the supervision of a professional geologist.

BACKGROUND

The site is presently used for vehicle parking by the adjacent car dealership. The site was previously operated as a retail gasoline station. Review of available documents for the site obtained at the ACDEH Local Oversight Program website, at the GeoTracker website, and in response to a request to the property owner for available documents related to USTs and subsurface investigation has identified the following document related to sample collection following removal of the site USTs.

- December 31, 1986 Removal and Disposal of One Underground Diesel Tank, Five Underground Gasoline Tanks, and One Underground Waste Oil Tank Report prepared by Aqua Science Engineers, Inc. (the report is 3 pages in length, consisting of a narrative, a site map showing sample collection locations, and a laboratory report).

A complete copy of the report is attached with P&D's August 4, 2014 Data Gap Evaluation and Subsurface Investigation Work Plan. The 1986 underground storage tank closure report described soil sample collection from the bottom of each UST pit as follows: two soil samples were collected from both ends of each of the four gasoline and the one diesel UST at a depth of approximately 12.0 feet below the ground surface (bgs), and one soil sample was collected beneath the former waste oil UST at a depth of approximately 8.0 feet bgs. The report does not mention encountering groundwater in any of the excavations, and does not mention sample collection or analysis associated with the UST piping or dispensers, or if the UST piping was removed.

On August 19 and 20, 2014 IMX, Inc. of Oakland, California (IMX) personnel used a jackhammer to remove concrete surface cover material at the curbside fill ports, the dispenser islands, and at several areas identified during the UST piping survey in an effort to identify the locations of underground UST piping. An electrical signal was applied to the exposed piping and a magnetometer was used by to locate accessible UST system piping. In addition, in areas where the magnetometer was not successful in identifying the pipe trenches, exploratory excavation was performed to identify the locations of the UST piping trenches. The locations of subsurface piping identified during the investigation are shown on Figure 2.

On August 19, 2014 IMX personnel hand augered at locations F1 (located at the curbside UST fill ports) and D1 through D6 (located at each end of the former pump island dispensers). The hand augered boreholes at the former dispenser islands were at locations where dispensers were formerly located based on the presence of dispenser-sized rectangular penetrations in the dispenser islands and the presence of piping within the dispenser island penetrations. The results for the former fill port and former dispenser soil samples are summarized in Table 1, and the locations of the hand augered boreholes are shown on Figure 2.

On August 22, 2104 P&D personnel returned to the site and oversaw drilling at locations B1 through B7 (see Figure 2) by Vironex, Inc. of Concord, California (Vironex) using Geoprobe direct push technology. Based on the presence of free product on the water sample collected from borehole B1 in the former diesel UST pit, and based on the sample results, P&D recommended further subsurface investigation of the extent of petroleum at the site. Discussion of former fill port, fuel dispenser, and drilling activities and results for boreholes B1 through B7 is provided in P&D's Subsurface Investigation Report (document 0398.R1) dated September 30, 2014.

P&D's Subsurface Investigation Work Plan (document 0398.W2) dated May 22, 2015 proposed boreholes for subsurface evaluation at locations B4A and B8 through B15 to evaluate the extent of free product encountered in the former diesel UST pit in borehole B1, evaluate soil at the former waste oil UST pit, the extent of petroleum in the vicinity of the fuel dispensers, and for evaluation of offsite petroleum migration. The P&D May 22, 2015 work plan also proposed evaluation of the presence of petroleum soil vapor concentrations in soil gas at the site by constructing one soil gas well to a depth of 7.0 feet bgs at location SG1. The work plan was approved in an email from the ACDEH dated May 29, 2015. The ACDEH work plan approval requested that soil samples also be collected from the boreholes.

Documentation of the implementation of the P&D May 22, 2015 work plan for the drilling and sampling of boreholes B4A, B8 through B10, B10A, and B11 through B15 in June 2015 and for

the construction and sampling of soil gas well SG1 in June 2015 is provided in P&D's December 12, 2016 Subsurface Investigation Report (document 0398.R2). Based on the sample results P&D recommended that soil and groundwater samples be collected at six additional locations and the collection of a subslab soil gas sample at the adjacent Downtown Toyota facility to further evaluate the extent of subsurface petroleum hydrocarbons.

In response to an e-mail dated May 29, 2016 from Karel Detterman of the ACDEH P&D prepared the following documents:

- Preferential Pathway Survey Report for the site (document 0398.R3) dated December 15, 2016.
- Sensitive Receptor Survey Report for the site (document 0398.R4) dated December 15, 2016.
- Site Conceptual Model for the site (document 0398.R5) dated December 15, 2016.

The historical soil sample results associated with the 2014 investigation of the fill ports and dispenser islands are summarized in Table 1, and historical soil and groundwater analytical results associated with the drilling of boreholes B1 through B7 in 2014 and historical soil and groundwater analytical results associated with the drilling of boreholes B4A, B8 through B10, B10A, and B11 through B15 in June 2015 are summarized in Table 2 and Table 3, respectively. Historical soil gas results from soil gas well SG1 in June 2015 are summarized in Tables 4A, 4B and 4C.

The Downtown Toyota facility located at 4145 Broadway in Oakland borders the subject site on the west and south (see Figures 3 through 7). Aerial photographs of the Downtown Toyota facility show that there is car parking on the roof of the Downtown Toyota building. Subsurface investigation of a petroleum release at the Downtown Toyota facility was performed under the direction of the ACDEH (case number RO 509) and the case was closed by the ACDEH on September 24, 2014. The Downtown Toyota site investigation identified a petroleum release at the Downtown Toyota property at a location adjacent to Broadway approximately 50 feet to the southwest of the subject site.

The extent of the petroleum release in groundwater at the adjacent Downtown Toyota property is shown on Figures 3 through 7 attached with this report. Review of Figures 3 through 7 shows that the extent of petroleum hydrocarbons at the Downtown Toyota site was defined to the northeast between the Downtown Toyota release and the subject site.

FIELD ACTIVITIES

Prior to performing field activities, drilling permit W2017-0234 was obtained from the Alameda County Public Works Agency (ACPWA), excavation permits X1700164 and X1700165 and obstruction permit OB1700220 were obtained from the City of Oakland Department of Public Works (DPW), site access was scheduled with the property occupant, drilling locations were marked with white paint, Underground Service Alert was notified for underground utility location, and a health and safety plan was prepared. Notification of the drilling dates and sampling dates was also provided to the ACDEH.

Drilling Observation and Sample Collection

On March 13, 2017 P&D personnel oversaw drilling at locations B16 through B21 and VP1 (see Figure 2) by Cascade Drilling, L.P. of Richmond, California (Cascade) using Geoprobe direct push technology for boreholes B16 through B21 and a rotohammer at locations VP1. Continuous cores were collected from each of boreholes B16 through B21 using a Geoprobe DT22 soil sampling system lined with transparent PVC sleeves to the total depths of 22.0, 22.0, 20.0, 24.0, 26.0, and 24.0 feet bgs, respectively.

The soil from the continuously cored boreholes was logged in the field in accordance with the Unified Soil Classification System (USCS) and standard geologic field techniques, and was field screened with a Photoionization Detector (PID) equipped with a 10.6 eV bulb that was calibrated with a 100 ppm isobutylene standard. PID values were recorded on the boring logs. The soil from the continuous cores was also field screened for odors, staining, and discoloration. Elevated PID values were measured and strong petroleum hydrocarbon odors, staining, and discoloration were observed in the soil from continuously cored borehole B16, B17, B19, B20, and B21 as follows:

- B16: 3.5 to 7.0 feet bgs, discoloration, strong petroleum odor with PID values of 85 to 238 ppm.
- B17: 2.0 to 3.0 feet bgs, discoloration, strong petroleum odor with PID values of 8 to 269 ppm.
- B19: 12.0 to 13.0 feet bgs, discoloration, slight petroleum odor with PID values of 0 to 0.8 ppm.
- B20: 9.0 to 10.5 feet bgs, discoloration, strong petroleum odor with PID values of 3.1 to 767 ppm.
- B21: 6.5 to 9.5 feet bgs, discoloration, strong petroleum odor with PID values of 273 to 671 ppm.

In boreholes B16 through B21 soil samples were retained for laboratory analysis at depths of 4.0 and 9.0 feet bgs. The soil samples were retained for laboratory analysis by cutting a 6-inch long section of the transparent PVC sleeve containing core from the borehole, sequentially covering the ends of the cut section of sleeve containing the core with aluminum foil and plastic endcaps, labeling, and then storing each tube in a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling.

Groundwater was encountered during drilling on March 13, 2017 in continuously cored boreholes B16 through B21 at depths of 20.0, 20.0, 19.0, 22.0, 25.0, and 23.5 feet bgs, respectively. After the completion of drilling and following placement of temporary slotted 1-inch diameter PVC pipe into all of the continuously cored boreholes, groundwater levels were subsequently measured in boreholes B16 through B21 prior to groundwater sample collection at depths of 11.3, 13.1, 6.2, 6.8, 6.9, and 9.6 feet bgs, respectively and were subsequently measured again after groundwater sample collection prior to borehole grouting at depths of 6.1, 6.2, 6.4, 5.1, 5.9 and 9.5 feet bgs, respectively. Copies of the boring logs for the continuously cored boreholes are attached with this report as Appendix A.

One groundwater sample was collected from each of boreholes B16 through B21 on the day that the borehole was drilled. All of the groundwater samples were collected using a peristaltic pump

with new polyethylene tubing and silicone tubing for each borehole. Approximately 0.1 or 0.2 gallons of groundwater was purged from each borehole prior to sample collection. Each groundwater sample was transferred to 40-milliliter Volatile Organic Analysis (VOA) vials containing hydrochloric acid, 40-milliliter amber unpreserved VOA vials, and 1-liter amber unpreserved bottles directly from the discharge tubing. All of the VOA vials and bottles were supplied by the laboratory, and were sealed with screw caps containing Teflon-lined septa. The VOA vials were all overturned and tapped to ensure that no air bubbles were present. The sample bottles were labeled and placed in a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling.

All drilling and sampling equipment was cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. Following completion of logging and sample collection activities, the boreholes were filled with neat cement grout using a PVC pipe as a tremie pipe on March 13, 2017. All soil generated during subsurface investigation was stored at the site in a labeled 55-gallon drum pending characterization and proper disposal.

Vapor Pin Installation and Sample Collection

One flush-mounted Vapor Pin was installed at location VP1 on March 13, 2017 (see Figure 2) in accordance with manufacturer recommended methods, as described below.

A rotohammer was used to drill a 1.5-inch diameter hole to a depth of 1.75 inches below the surface of the concrete floor slab. A 5/8-inch diameter hole was then drilled through the center of the 1.5-inch diameter hole in the slab to a depth of two inches below the bottom of the concrete slab. The total concrete floor slab thickness was measured to be 4.0 inches at drilling location VP1. Once the desired depth was reached the hole was cleaned with a vacuum and a bottle brush. A new Vapor Pin with a new silicone sleeve was then installed in the 5/8-inch diameter hole in the concrete slab and covered with a flush-mounted stainless steel cover. Prior to placement of the flush-mounted stainless steel cover, a plastic cap was placed on the top of the Vapor Pin barb fitting.

A Vapor Pin subslab soil gas sample was collected by P&D personnel as described below from Vapor Pin VP1 on March 16, 2017. A soil gas sampling manifold with a 1-liter Summa canister as the sampling canister (see Figure 8) was assembled in a shroud consisting of a 35-gallon Rubbermaid bin that had been modified by cutting viewing ports into the sides of the shroud and covering the viewing ports with transparent polycarbonate sheets. A hole measuring approximately two inches square in the bottom of the shroud allowed the shroud to cover the Vapor Pin while still allowing access to the Vapor Pin through the bottom of the shroud. At the time that the sampling manifold was assembled, the vacuum for the sample canister was verified with a vacuum gauge and recorded.

Prior to sampling the Vapor Pin, a 10 minute shut-in test of the sampling manifold was performed by closing the valve located between the filter and the pressure gauge, opening the purge canister valve, and recording the manifold system vacuum (see Figure 8). In accordance with DTSC guidance, no purge testing for purge volume determination was performed. Following successful verification of the manifold shut-in test, a default of three purge volumes was extracted prior to sample collection. The purge volume was calculated based on the void

space below the Vapor Pin plus the volume of the tube that extends through the Vapor Pin and the volume of the 2.0-foot length of 0.187-inch inside diameter tubing that connected the Vapor Pin to the Summa canister. The purge time was calculated using a nominal flow rate provided by the flow controller of 150 cubic centimeters (cc) per minute. The Vapor Pin purge volume calculation is attached with this report as Appendix B.

Following completion of the purging of three volumes and opening the sample canister valve, a lid was placed onto the shroud and a tracer gas 1,1-Difluoroethane (DFA) was sprayed into the shroud interior for one second through a tube connected to a hole in the side of the shroud. After verifying that low flow conditions were not present associated with the subsurface soil gas sample, an air sample was collected from the shroud atmosphere to quantify the shroud tracer gas concentration while the soil gas sample was being collected. The shroud atmosphere sample was collected into a Tedlar bag that was placed into a vacuum chamber with the Tedlar bag inlet connected to a new piece of polyethylene tubing that was inserted into the shroud atmosphere through a hole in the side of the shroud.

Once the vacuum for the sample canister valve had decreased to 5 inches of mercury, the lid of the shroud was removed to close the sample canister valve. The pressure gage on the inlet side of the flow controller (see Figure 8) was monitored during sample collection to ensure that the vacuum applied to the Vapor Pin did not exceed 100 inches of water.

One duplicate soil gas sample was simultaneously collected into a Summa canister from Vapor Pin VP1 at the time that the VP1 soil gas sample was collected using a stainless steel sampling tee for the Summa canisters and using methods described above. The soil gas Summa canisters were stored in a box and promptly shipped to the laboratory for extraction and analysis.

In addition to collection of Summa canister samples as described above, a sorbent tube sample was collected as follows. The manifold was equipped with a tee located downstream from the flow controller. At the time that the manifold was assembled (prior to the shut-in test), a sorbent tube was connected to the tee that was located downstream from the flow controller using a valve located between the sorbent tube and the tee inside the shroud. The downstream side of the sorbent tube was connected with a polyethylene tube to a 60 cc syringe. Following Summa canister sample collection, a dish containing 2-Propanol was placed into the shroud to be used as a tracer gas for EPA Method TO-17 sample analysis.

The Summa canister was isolated from the manifold by closing a valve, and the valve between the manifold and the sorbent tube was opened. The 60 cc syringe was used to apply a vacuum to the sorbent tube for collection of a 10 cc sample. The sorbent tube was then replaced and the process repeated for collection of a 50 cc sample. This process was repeated for collection of a 10 cc replicate sorbent tube sample and the collection of a 50 cc replicate sample. Following collection of the each sorbent tube soil gas sample the ends of the sorbent tube were sealed with a Swagelok cap. During sorbent tube sample collection a Tedlar bag shroud atmosphere sample was collected using methods described above.

Before and after connection of each sorbent tube to the manifold each sorbent tube was stored in a cooler with ice. Following soil gas sample collection, a PID was connected to the Vapor Pin to obtain a preliminary field value for the sample collection location. Chain of custody procedures

were observed for all sample handling. Measurements of vacuums, purging and equilibration time intervals, and the PID reading were recorded on a Soil Gas Sampling Data Sheet (see Appendix B). Clean, unused vacuum gages and a stainless steel sampling manifold were used for Vapor Pin subslab soil gas sample collection.

WEATHER

Weather data, including precipitation and barometric pressure for the month of March 2016 including the day of soil gas sample collection (March 16, 2016) are provided in Appendix C. No precipitation occurred during the month of March 2016.

The weather station is shown to be located on the east side of Manilla Avenue north of the intersection of Manilla Avenue and 41st Street at an elevation of 78 feet above sea level, approximately 575 feet to the southwest of the subject site. The subject site is located at an elevation of approximately 103 feet above sea level. An internet link to the weather station information is provided in Appendix C.

GEOLOGY AND HYDROGEOLOGY

Based on review of regional geologic maps from U. S. Geological Survey Professional Paper 943, "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning," by E. J. Helley and K. R. Lajoie, 1979, the subject site is underlain by Late Pleistocene Alluvium (Qpa), which is described as weakly consolidated slightly weathered poorly sorted irregularly interbedded clay, silt, sand, and gravel.

Beneath the surface cover material in boreholes B16 through B21 the subsurface materials consisted almost entirely of clay, silty clay, or sandy clay, and silt to the total depths explored of 22.0, 22.0, 20.0, 24.0, 26.0, and 24.0 feet bgs, respectively, with coarse-grained material encountered in the boreholes as follows.

- B16: 20.0 to 22.0 feet bgs (the total depth explored) silty fine sand.
- B17: 20.0 to 22.0 feet bgs (the total depth explored) fine sand.
- B18: 19.0 to 20.0 feet bgs (the total depth explored) fine sand.
- B19: 12.0 and 13.0 feet bgs gravelly clayey sand, and 22.0 to 24.0 feet bgs silty fine sand between the depths of.
- B20: of 8.0 to 10.0 feet bgs gravelly clayey sand, and 24.0 and 25.0 feet bgs (the total depth explored) silty fine sand.
- B21: 8.0 to 10.0 feet bgs gravelly clayey sand, and 23.5 and 24.0 feet bgs (the total depth explored) fine sand.

The locations of geologic cross sections A-A' through I-I' are shown in Figure 2, and geologic cross sections A-A' through I-I' are shown in Figures 9 through 17. Review of the cross sections shows that a layer consisting of sand, silty sand, or silt is encountered at the site at depths of approximately 20 to 22 feet bgs with the exception of locations B4, B4A, B5 and B7.

Groundwater was encountered during drilling on March 13, 2017 in continuously cored boreholes B16 through B21 at depths of 20.0, 20.0, 19.0, 22.0, 25.0, and 23.5 feet bgs, respectively. After the

completion of drilling and following placement of temporary slotted 1-inch diameter PVC pipe into all of the continuously cored boreholes, groundwater levels were subsequently measured in boreholes B16 through B21 prior to groundwater sample collection at depths of 11.3, 13.1, 6.2, 6.8, 6.9, and 9.6 feet bgs, respectively and were subsequently measured again after groundwater sample collection prior to borehole grouting at depths of 6.1, 6.2, 6.4, 5.1, 5.9 and 9.5 feet bgs, respectively.

Review of the depth to groundwater on the geologic cross sections in Figures 9 through 17 shows that water levels appear to have not fully equilibrated in some of the boreholes prior to the boreholes being grouted. Additionally, water in the coarse-grained materials appears to be confined or semi-confined.

No groundwater monitoring wells are present at the site to provide historical static groundwater level measurements or groundwater flow direction.

No groundwater monitoring wells are or were present at the adjacent Downtown Toyota site located at 4145 Broadway to provide historical groundwater level measurements or groundwater flow direction. Historical depth to water information for an UST excavation and for soil borings at the adjacent Downtown Toyota property includes the following:

- In February 1992 groundwater was encountered in an UST pit in 1992 at a depth of 10 feet bgs.
- In February 1994 groundwater was reported to have been encountered at a depth of 11 feet bgs in 9 of the 14 boreholes. Groundwater was reported to not have been encountered in the remaining 5 boreholes. No boring logs were available for review for the 1994 investigation.
- In October 1999 groundwater was reported to have been encountered in 3 of 4 borings at depths ranging from 9.5 to 13.8 feet bgs, and was subsequently reported on the boring logs at depths ranging from 8.7 to 12.8 feet bgs.
- In September and October 2008 groundwater was encountered at the site during drilling of boreholes B5 and B7 at depths of 10.5 and 25.0 feet bgs, respectively, while groundwater was not encountered during drilling of borehole B6. Water levels were subsequently measured in B5 and B6 after completion of drilling at depths of 9.6 and 8.7 feet bgs, respectively. The depth to water was not subsequently measured in continuously cored borehole B7.

At a former Unocal gasoline station located at 3943 Broadway (approximately 1,000 feet south of the subject site) depth to water level measurements reported between November 2001 and June 2008 in 12 groundwater monitoring wells typically ranged between approximately 8 and 11 feet bgs, with most measurements between either 8 and 10 feet bgs or 9 and 11 feet bgs. Based on water level measurements in the groundwater monitoring wells at 3943 Broadway, the historical groundwater flow direction calculated by others for the 3943 Broadway site has ranged from the west-southwest to the southwest.

Review of Figure 1 shows that the south end of a southwesterly trending interfluvial ridge is located immediately to the east of the subject site, and also immediately to the east of the former Unocal gasoline station located at 3943 Broadway approximately 1,000 feet south of the subject

site. The interfluvial ridge is interpreted to prevent the easterly flow of groundwater and to result in a southwesterly groundwater flow at and near the subject site. Review of Figures 3 through 7 showing the extent of the petroleum release at the subject site and also at the adjacent Downtown Toyota property shows that the petroleum distribution in groundwater is consistent with a southwesterly groundwater flow direction at and near the subject site.

Nearby water surface bodies that are located downgradient from the subject property include Glen Echo Creek, located approximately 3,000 feet to the southeast of the site and Lake Merritt located approximately 7,200 feet to the south of the subject site.

LABORATORY ANALYSIS

All of the soil and groundwater samples were analyzed at McCampbell Analytical, Inc. (McCampbell) of Pittsburg, California.

All of the soil samples were analyzed for the following constituents:

- Total Petroleum Hydrocarbons as Gasoline (TPH-G) using EPA Method 5030B in conjunction with modified EPA Method 8015B.
- Total Petroleum Hydrocarbons as Diesel (TPH-D), Total Petroleum Hydrocarbons as Motor Oil (TPH-MO), and Total Petroleum Hydrocarbons as Bunker Oil (TPH-BO) using EPA Method 3550B in conjunction with EPA Method 8015B.
- Volatile Organic Compounds (VOCs), including methyl-tert-butyl ether (MTBE), benzene, toluene, ethylbenzene, and xylenes (MBTEX), naphthalene, and fuel oxygenates and lead scavengers, using EPA Method 8260B.

All of the groundwater samples were analyzed for the following constituents:

- TPH-G using EPA Method 5030B in conjunction with modified EPA Method 8015B
- TPH-D and TPH-MO using EPA Method 3510C in conjunction with EPA Method 8015B.
- VOCs (including MBTEX, naphthalene, and fuel oxygenates and lead scavengers) using EPA Method 8260B.

Subslab soil gas Vapor Pin sample VP1, the duplicate Summa soil gas sample VP1-DUP, and the replicate sorbent tube soil gas sample VP1-REP were analyzed at Eurofins Air Toxics, Inc. (Air Toxics) of Folsom, California. The sample and duplicate collected in Summa canisters were analyzed for TPH-G, BTEX, MTBE, and DFA (the tracer gas) using EPA Method TO-15, and for oxygen, nitrogen, carbon monoxide, methane, and carbon dioxide using method ASTM D-1946. The sample and replicate collected on sorbent tubes were analyzed for TPH-D, naphthalene, and 2-Propanol (the tracer gas) using EPA Method TO-17. The shroud air Tedlar bag sample that was collected during soil gas sample collection with Summa canisters was analyzed for the tracer gas DFA using EPA Method TO-15. The shroud air Tedlar bag sample that was collected during soil gas sorbent tube sample collection was analyzed for the tracer gas 2-Propanol using EPA Method TO-15.

The borehole soil sample results are summarized in Table 2, the borehole groundwater results are summarized in Table 3, and the soil gas sample results are summarized in Tables 4A, 4B, and 4C. Copies of the laboratory analytical reports are attached with this report as Appendix D.

DISCUSSION AND RECOMMENDATIONS

Review of available historical land use and investigation information for the site for compliance with State Water Resources Control Board Low Threat Case Closure Policy (LTCP) criteria shows the following:

General Criteria

Site conditions satisfy all of the LTCP general criteria with the following exceptions:

- d. Free product has been removed to the maximum extent practicable. – Based on the detected presence of free product observed on a water sample collected from borehole B1 in the former diesel UST pit, it is presently unknown if the detected free product has been removed to the maximum extent practicable. No free product was detected in boreholes B9, B10, and B11 that were drilled adjacent to the former diesel UST pit, indicating that the extent of free product detected in borehole B1 is limited to the UST pit backfill materials.
- f. Secondary source has been removed to the extent practicable. – Based on the detected presence of free product in the former diesel UST pit, it appears that the former diesel UST pit is a secondary source and the secondary source has not yet been removed to the extent practicable. The presence of free product in the UST pit backfill material is consistent with UST removal practices at the time of UST removal in 1986 where contaminated material surrounding USTs was not removed at the time of UST removal.

Soil

Review of the soil sample results in Tables 1 and 2 shows that MTBE was not detected in any of the soil samples. Comparison of soil sample results in Tables 1 and 2 with LTCP soil-specific criteria shows that none of the detected concentrations of benzene, ethylbenzene, or naphthalene exceed their respective LTCP Table 1 values for Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health for commercial/industrial land use or for utility workers.

Additionally, no polycyclic aromatic hydrocarbons (PAHs) were detected in soil samples collected at depths of 4.0 or 9.0 feet bgs in borehole B4A at the former waste oil UST location.

Groundwater

The extent of impact to groundwater for the site is defined as shown for TPH-D, TPH-G, benzene, ethylbenzene and naphthalene in first-encountered groundwater in Figures 3, 4, 5, 6 and 7, respectively. During the March 2017 subsurface investigation, no analytes were detected in any of the groundwater samples collected from site perimeter boreholes B16 through B21 (see Figures 3 through 7 and Table 3).

Comparison of groundwater sample results in Table 3 with LTCP groundwater-specific criteria shows that MTBE was not detected in any of the groundwater samples, and that no detected benzene concentrations exceed LTCP groundwater-specific criteria for scenarios 2 and 4 with the exception of 5,500 micrograms per liter (ug/L) benzene at location B6 which exceeds the LTCP groundwater-specific criteria of 3,000 ug/L benzene for scenario 2 and 1,000 ug/L benzene criteria for scenario 4.

Soil Gas

Review of Table 4A sample tracer gas concentrations as a percentage of shroud tracer gas concentrations (see Table 4B) for subslab soil gas samples collected from Vapor Pin VP1 on March 16, 2017 shows that less than 5 percent tracer gas was detected in the samples, indicating that atmospheric dilution of the samples is not a concern. Similarly, review of Table 4A sample tracer gas concentrations as a percentage of shroud tracer gas concentrations (see Table 4B) for soil gas samples collected from soil gas well SG1 on June 22, 2015 and July 7, 2015 shows that less than 5 percent tracer gas was detected in the samples, indicating that atmospheric dilution of the samples is not a concern.

Review of Table 4C shows that 9.4 percent oxygen was detected in Vapor Pin subslab soil gas sample VP1 on March 16, 2017, and that similarly 7.9 percent oxygen was detected in soil gas well soil gas sample SG1 on July 7, 2015. The 7.9 percent oxygen soil gas value indicates that LTCP soil gas criteria with a bioattenuation zone should be used for evaluation of soil gas sample results compliance with LTCP soil gas criteria.

The soil gas sample results from SG1 and VP1 are shown on Figure 18. Comparison of detected soil gas analytes in Table 4A with LTCP soil gas criteria for commercial land use with a bioattenuation zone shows that none of the soil gas well SG1 soil gas sample results exceed LTCP criteria. Similarly, comparison of San Francisco Bay Regional Water Quality Control Board (SFRWQCB) February 2016 (Revision 3) Table SG-1 Subslab/Soil Gas Vapor Intrusion Human Health Risk Screening Levels for commercial land use shows that none of the Vapor Pin VP1 subslab soil gas sample results exceed Table SG-1 ESL values. Based on the sample results, vapor intrusion at the site and adjacent to the site does not appear to be a concern.

Recommendations

To comply with LTCP general criteria d and f, P&D recommends that the diesel UST pit backfill and pit sidewalls be removed to a depth of 15 feet bgs and disposed of offsite to satisfy LTCP criteria for removal of free product and for secondary source removal (see Appendix E Figures E1 through E6).

To comply with LTCP media-specific criteria for groundwater, P&D recommends that benzene-impacted soil and groundwater in the vicinity of borehole B6 be excavated to a depth of approximately 15 feet bgs and disposed of offsite to remove groundwater with benzene concentrations exceeding LTCP groundwater criteria (see Appendix E Figures E7 through E12).

The locations of proposed excavation are shown on Figure 19.

DISTRIBUTION

A copy of this report will be uploaded to GeoTracker.

LIMITATIONS

This report was prepared solely for the use of the Xtra Oil Company. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between boreholes and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.



Paul H. King
Professional Geologist #5901
Expires: 12/31/19



Attachments:

Table 1 - Summary of Historical Former Fill Port and Former Dispenser Soil Sample Analytical Results

Table 2 - Summary of Borehole Soil Sample Analytical Results

Table 3 - Summary of Borehole Groundwater Sample Analytical Results

Table 4A - Summary of Soil Gas Sample Analytical Results - TPH and VOCs

Table 4B - Summary of Soil Gas Shroud Sample Analytical Results - 1,1-Difluoroethane and 2-Propanol

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Figure 2 - Site Map Showing Sample Collection and Geologic Cross Section Locations

Figure 3 - Site Vicinity Aerial Photograph Showing TPH-G Groundwater Concentrations

Figure 4 - Site Vicinity Aerial Photograph Showing TPH-D Groundwater Concentrations

Figure 5 - Site Vicinity Aerial Photograph Showing Benzene Groundwater Concentrations

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Figure 8 - Typical Soil Gas Sampling Manifold

Figure 9 - Geologic Cross Section A-A'

Figure 10 - Geologic Cross Section B-B'

Figure 11 - Geologic Cross Section C-C'

Figure 12 - Geologic Cross Section D-D'

Figure 13 - Geologic Cross Section E-E'

Figure 14 - Geologic Cross Section F-F'

Figure 15 - Geologic Cross Section G-G'

Figure 16 - Geologic Cross Section H-H'

Figure 17 - Geologic Cross Section I-I'

Figure 18 - Site Map Showing Vapor Pin Location and Petroleum and VOC Concentrations in Subslab Soil Gas

Figure 19 - Site Map Showing Benzene Groundwater Concentrations And Proposed Excavation Locations

Appendix A - Soil Boring Logs

Appendix B - Purge Volume Calculation and Soil Gas Sampling Data Sheet

Appendix C - Weather Information

Appendix D - Laboratory Analytical Reports and Chain of Custody Documentation

Appendix E - Geologic Cross Sections B-B', C-C', D-D', G-G', H-H', and I-I' Showing Concentrations of TPH-D and Benzene in Soil and Groundwater

PHK/sjc/mlbd
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TABLES

Table 1
Summary of Historical Former Fill Port and Former Dispenser Soil Sample Analytical Results

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	Total Lead
F1-4.5	8/19/2014	4.5	670, a,b	570, d	110, d	ND<1.0	ND<1.0	ND<1.0	3.8	3.4	ND except, Naphthalene = 7.0, Isopropylbenzene = 1.7, n-Propyl benzene = 5.9, 1,2,4-Trimethylbenzene = 2.2, 1,3,5-Trimethylbenzene = 3.7	13
DI-4.0	8/19/2014	4.0	14	11, e	ND<25	ND<0.0050	0.0064	ND<0.0050	0.029	ND<0.0050	ND except, Naphthalene = 0.056, PCE = 0.0081, n-Butyl benzene = 0.059, sec-Butyl benzene = 0.022, Isopropylbenzene = 0.035, n-Propyl benzene = 0.13	6.2
D2-4.0	8/19/2014	4.0	370	720	390	ND<0.10	ND<0.10	ND<0.10	0.39	ND<0.10	ND except, n-Butyl benzene = 0.75, sec-Butyl benzene = 0.55, Isopropylbenzene = 0.73, n-Propyl benzene = 2.3	6.1
D3-4.0	8/19/2014	4.0	20	12, d,e,f	8.5, d,e,f	ND<0.025	0.079	ND<0.025	0.23	ND<0.025	ND except, Naphthalene = 0.42, n-Butyl benzene = 0.095, sec-Butyl benzene = 0.030, Isopropylbenzene = 0.040, n-Propyl benzene = 0.16	8.3
D4-4.0	8/19/2014	4.0	190, b,c	700, g	440, g	ND<0.033	ND<0.033	ND<0.033	ND<0.033	ND<0.033	ND except, n-Butyl benzene = 0.30, sec-Butyl benzene = 0.16, Isopropylbenzene = 0.048, n-Propyl benzene = 0.078	8.5
D5-4.0	8/19/2014	4.0	4.8, b,c	12, e,f,h	9.4, e,f,h	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND except, n-Butyl benzene = 0.0097, sec-Butyl benzene = 0.0058, n-Propyl benzene = 0.0093	7.1
D6-4.0	8/19/2014	4.0	1.4, c	1.1, i	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All NID	9.0

Table 1
Summary of Historical Former Fill Port and Former Dispenser Soil Sample Analytical Results

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	Total Lead
LTCP	Commercial/Industrial Commercial/Industrial Utility Worker						0-5' = 8.2 5-10' = 12 0-10' = 14		0-5' = 89 5-10' = 134 0-10' = 314		Naphthalene 0-5' = 45 Naphthalene 5-10' = 45 Naphthalene 0-10' = 219	
ESL	Tier 1		100	230	5,100	0.023	0.044	2.9	1.4	2.3	Naphthalene = 0.033, PCE = 0.42, n-Butyl benzene = No Value, sec-Butyl benzene = No Value, Isopropylbenzene = No Value, n-Propyl benzene = No Value, 1,2,4-Trimethylbenzene = No Value, 1,3,5-Trimethylbenzene = No Value	80
NOTES:												
TPH-G = Total Petroleum Hydrocarbons as Gasoline.												
TPH-D = Total Petroleum Hydrocarbons as Diesel.												
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.												
MTBE = Methyl tertiary-butyl ether.												
VOCs = Volatile Organic Compounds.												
PCE = Tetrachloroethene.												
ft bgs = feet below ground surface.												
ND = Not detected.												
a = Laboratory Note: Heavier gasoline range compounds are significant (aged gasoline?).												
b = Laboratory Note: No recognizable pattern.												
c = Laboratory Note: Strongly aged gasoline or diesel range compounds are significant in the TPH-G chromatogram.												
d = Laboratory Note: Gasoline range compounds are significant.												
e = Laboratory Note: Diesel range compounds are significant; no recognizable pattern.												
f = Laboratory Note: Oil range compounds are significant.												
g = Laboratory Note: Aged diesel is significant.												
h = Laboratory Note: Stoddard solvent/mineral spirit(?).												
i = Laboratory Note: Diesel range compounds are significant; no recognizable pattern; and/or Stoddard solvent/mineral spirit(?).												
LTCP = Low Threat Closure Policy, by State Water Resources Control Board, effective August 17, 2012, from Table 1 - Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health, Commercial/Industrial and Utility Worker.												
ESL = Environmental Screening Level, by San Francisco Bay - Regional Water Quality Control Board, updated February 2016 (Revision 3), Soil Tier 1 ESL from Summary of Soil ESLs.												
Results in bold exceed their respective ESL values.												
Results, ESL values, and LTCP values reported in mg/kg (milligrams per kilogram), unless otherwise indicated.												

Table 2
Summary of Borehole Soil Sample Analytical Results

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	SVOCs by EPA Method 8270	Total Lead
B1-10.0	8/22/2014	10.0	560, b,c	3,700	2,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND except, n-Butyl benzene = 6.6, sec-Butyl benzene = 3.5, Isopropyl benzene = 4.8, n-Propyl benzene = 1.5	--	5.3
B1-12.0	8/22/2014	12.0	2.4, c	4.3, 1	ND>5.0	ND<0.0050	ND>0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND except, n-Butyl benzene = 0.016, 1,2,4-Trimethylbenzene = 0.060, 1,3,5-Trimethylbenzene = 0.014	--	5.0
B1-15.0	8/22/2014	15.0	2.8, c	3.3, 1	ND>5.0	ND<0.0050	ND>0.0050	ND<0.0050	0.0074	0.068	ND except, Naphthalene = 0.023, n-Butyl benzene = 0.021, n-Propyl benzene = 0.011, 1,2,4-Triethylbenzene = 0.12, 1,3,5-Trimethylbenzene = 0.024	--	ND<5.0
B2-10.0	8/22/2014	10.0	4.9, c	24, c,e	40, c,e	ND<0.0050	ND>0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	6.9
B2-15.0	8/22/2014	15.0	ND<1.0	ND<1.0	ND>5.0	ND<0.0050	ND>0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	10.4
B3-10.0	8/22/2014	10.0	99	160, c,e	120, c,e	ND<0.0050	ND>0.0050	ND<0.0050	ND>0.0050	ND<0.0050	ND except, n-Butyl benzene = 0.70, sec-Butyl benzene = 0.24, n-Propyl benzene = 1.2, Isopropylbenzene = 0.35	--	6.6
B3-15.0	8/22/2014	15.0	ND<1.0	1.5, c,e,i	6.2, c,e,i	ND<0.0050	ND>0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	10.3
B4-10.0	8/22/2014	10.0	6.5	22, b,e	94, b,e	ND<0.0050	ND>0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND except, n-Propyl benzene = 0.0663	--	17
B4-15.0	8/22/2014	15.0	ND<1.0	ND<1.0	ND>5.0	ND<0.0050	ND>0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	5.1
B4A-3.0	6/2/2015	3.0	15, a,b	11, e,f	110, c,f	ND<0.0050	ND>0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	All ND	--
B4A-4.0	6/2/2015	4.0	150, a,b	15, d	ND>5.0	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND except, Naphthalene = 0.49, n-Butyl benzene = 0.14, n-Propyl benzene = 0.22	All ND	--
B4A-9.0	6/2/2015	9.0	40, a,b	3.8, h	ND>5.0	ND<0.020	ND<0.020	ND<0.020	0.078	ND<0.020	ND except, n-Butyl benzene = 0.094, n-Propyl benzene = 0.12, Isopropylbenzene = 0.040	All ND	--
B4A-11.0	6/2/2015	11.0	ND<1.0	ND<1.0	ND>5.0	ND<0.0050	ND>0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	All ND	--
B5-5.0	8/22/2014	5.0	3.7	2.8, b,e	5.1, b,e	ND<0.0050	0.010	ND<0.0050	0.020	ND<0.0050	ND except, Naphthalene = 0.12, n-Butyl benzene = 0.0089, n-Propyl benzene = 0.015,	--	6.1
B5-10.0	8/22/2014	10.0	45	4.1, f	ND>5.0	ND<0.0050	0.13	0.0095	0.090	0.18	ND except, Naphthalene = 0.046, MEK = 0.023, n-Propyl benzene = 0.026, Isopropylbenzene = 0.011, 1,2,4-Trimethylbenzene = 0.15, 1,3,5-Trimethylbenzene = 0.036	--	5.9
B6-5.0	8/22/2014	5.0	81	17, k	ND>5.0	ND<0.0050	ND>0.0050	ND<0.0050	0.37	ND<0.0050	ND except, Naphthalene = 1.7, n-Butyl benzene = 0.19, sec-Butyl benzene = 0.053, n-Propyl benzene = 0.31, Isopropylbenzene = 0.077	--	8.9

Table 2
Summary of Borehole Soil Sample Analytical Results

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	SVOCs by EPA Method 8270	Total Lead
B6-10.0	8/22/2014	10.0	180	30, b,c,d	8.0, b,c,d	ND<0.20	ND<0.20	0.23	2.8	11	ND except. Naphthalene = 1.8, n-Butyl benzene = 0.46, n-Propyl benzene = 0.57, Isopropylbenzene = 0.25, 1,2,4-Trimethylbenzene = 4.3, 1,3,5-Trimethylbenzene = 1.2	--	7.6
B7-5.0	8/22/2014	5.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	7.9
B7-10.0	8/22/2014	10.0	120, b,c	31, k	ND<5.0	ND<0.20	ND<0.20	ND<0.20	0.029	ND<0.20	ND except. n-Butyl benzene = 0.13, sec-Butyl benzene = 0.030, n-Propyl benzene = 0.35, Isopropylbenzene = 0.12, 1,2,4-Trimethylbenzene = 0.12, 1,3,5-Trimethylbenzene = 0.031	--	7.1
B7-15.0	8/22/2014	15.0	ND<1.0	1.6, e	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	5.1
B8-4.0	6/2/2015	4.0	1.8, b	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B8-9.5	6/2/2015	9.5	45, a,b	1.3, l	ND<5.0	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.025	All ND	--	--
B8-11.5	6/2/2015	11.5	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B8-18.5	6/2/2015	18.5	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B9-4.0	6/2/2015	4.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B9-8.0	6/2/2015	8.0	310, a	270, d	17, d	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND except. n-Butyl benzene = 2.2, n-Propyl benzene = 1.4, Isopropylbenzene = 0.30, sec-Butyl benzene = 0.57	--	--
B9-12.0	6/2/2015	12.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B9-19.0	6/2/2015	19.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B10-3.0	6/2/2015	3.0	2.4, a,b	1.4, a,b	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND except. MEK = 0.025	--	--
B10-7.5	6/2/2015	7.5	420, a,b	92, d	5.7, d	ND<0.33	ND<0.33	ND<0.33	3.9	0.33	ND except. Naphthalene = 4.8, n-Butyl benzene = 1.5, n-Propyl benzene = 3.0, Isopropylbenzene = 0.73, sec-Butyl benzene = 0.43, 1,2,4-Trimethylbenzene = 0.77	--	--
B10-10.5	6/2/2015	10.5	14, b	2.7, l	ND<5.0	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND except. Naphthalene = 0.11	--	--

Table 2
Summary of Borehole Soil Sample Analytical Results

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	SVOCs by EPA Method 8270	Total Lead
B10A-4.0	6/2/2015	4.0	9.2, a	7.8, e,f	15, e,f	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND except. Naphthalene = 0.0085. n-Propyl benzene = 0.0075	--	--
B10A-8.0	6/2/2015	8.0	4.0, a,b	25, d	ND>5.0	ND<0.20	ND<0.20	ND<0.20	3.5	ND<0.20	ND except. Naphthalene = 2.3, n-Butyl benzene = 0.71, n-Propyl benzene = 1.7, Isopropylbenzene = 0.51, sec-Butyl benzene = 0.22, 1,2,4-Trimethylbenzene = 0.32	--	--
B10A-13.0	6/2/2015	13.0	ND<1.0	ND<1.0	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B10A-18.0	6/2/2015	18.0	ND<1.0	ND<1.0	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B11-4.0	6/2/2015	4.0	3.3, a,b	1.4, k	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	0.0081	ND<0.0050	ND except. Naphthalene = 0.011, MEK = 0.022, n-Butyl benzene = 0.0098, n-Propyl benzene = 0.024, Isopropylbenzene = 0.0058,	--	--
B11-8.5	6/2/2015	8.0	3.0, a,b	11, d	ND>5.0	ND<0.20	ND<0.20	ND<0.20	1.2	0.34	ND except. Naphthalene = 0.96, n-Butyl benzene = 0.31, n-Propyl benzene = 0.65, Isopropylbenzene = 0.20, 1,2,4-Trimethylbenzene = 1.8, 1,3,5-Trimethylbenzene = 0.29	--	--
B11-10.0	6/2/2015	10.0	1.5, b	ND<1.0	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B11-18.0	6/2/2015	18.0	ND<1.0	ND<1.0	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B12-4.0	6/3/2015	4.0	15, a,b	3.0, d	ND>5.0	ND<0.10	0.012	ND<0.10	ND<0.10	ND<0.10	ND except. n-Butyl benzene = 0.022, n-Propyl benzene = 0.014	--	--
B12-7.0	6/3/2015	7.0	2.0, a,b	12, d	ND>5.0	ND<0.50	ND<0.50	1.9	ND<0.50	ND<0.50	ND except. Naphthalene = 2.4, n-Propyl benzene = 1.1	--	--
B12-11.0	6/3/2015	11.0	1.3	ND<1.0	ND>5.0	ND<0.0050	0.047	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B12-19.0	6/3/2015	19.0	ND<1.0	ND<1.0	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B13-4.0	6/2/2015	4.0	2.4, a,b	ND<1.0	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B13-8.5	6/2/2015	8.5	150, a,b	8.6, d	ND>5.0	ND<0.025	ND<0.025	ND<0.025	0.28	0.19	ND except. Naphthalene = 0.51, n-Butyl benzene = 0.095, n-Propyl benzene = 0.18, Isopropylbenzene = 0.059, sec-Butyl benzene = 0.030, 1,2,4-Trimethylbenzene = 0.27, 1,3,5-Trimethylbenzene = 0.040	--	--
B13-10.0	6/2/2015	10.0	3.2, b	ND<1.0	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B13-19.0	6/2/2015	19.0	ND<1.0	ND<1.0	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B14-4.0	6/3/2015	4.0	ND<1.0	ND<1.0	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B14-9.0	6/3/2015	9.0	2,800, a,b	890, d	44, d	ND<2.0	ND<2.0	ND<2.0	13	27	ND except. Naphthalene = 10, n-Butyl benzene = 4.4, n-Propyl benzene = 7.7, Isopropylbenzene = 2.0, 1,2,4-Trimethylbenzene = 3.7, 1,3,5-Trimethylbenzene = 10	--	--
B14-14.0	6/3/2015	14.0	ND<1.0	ND<1.0	ND>5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--

Table 2
Summary of Borehole Soil Sample Analytical Results

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	SVOCs by EPA Method 8270	Total Lead
B15-4.0	6/3/2015	4.0	2.2, b	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B15-4.0	6/3/2015	8.0	39, a,b	2.3, d	ND<5.0	ND<0.025	ND<0.025	ND<0.025	0.07	ND<0.025	ND except, n-Butyl benzene = 0.11, n-Propyl benzene = 0.14, Isopropylbenzene = 0.034,	--	--
B15-11.0	6/3/2015	11.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B15-20.0	6/3/2015	20.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B16-4.0	3/13/2017	4.0	47, b,c	26, m,h	7.2, m,h	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND except, n-Propyl benzene = 0.11	--	--
B16-9.0	3/13/2017	9.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B17-4.0	3/13/2017	4.0	50, b,c	300, e,d	94, e,d	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND except, n-Butyl benzene = 0.054, sec-Butyl benzene = 0.053, n-Propyl benzene = 0.018	--	--
B17-9.0	3/13/2017	9.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B18-4.0	3/13/2017	4.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B18-9.0	3/13/2017	9.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B19-4.0	3/13/2017	4.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B19-9.0	3/13/2017	9.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B20-4.0	3/13/2017	4.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B20-9.0	3/13/2017	9.0	220, b	83, f,h,e	59, f,h,e	ND<0.33	ND<0.33	ND<0.33	ND<0.33	ND<0.33	ND except, n-Butyl benzene = 1.7, n-Propyl benzene = 1.1	--	--
B21-4.0	3/13/2017	4.0	2.5, b	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	--	--
B21-9.0	3/13/2017	9.0	300	30, d	ND<5.0	ND<0.33	ND<0.33	ND<0.33	3.0	ND<0.33	ND except, Naphthalene = 2.2, n-Butyl benzene = 0.97, Isopropylbenzene = 0.61, n-Propyl benzene = 2.0	--	--
L1CP	Commercial/Industrial Commercial/Industrial Utility Worker						0.5 = 8.2 5-10 = 12 0-10 = 14		0.5 = 89 5-10 = 134 0-10 = 314		Naphthalene 0.5 = 45 Naphthalene 5-10 = 45 Naphthalene 0-10 = 219		
ESL	Tier 1	100	230	5,100	0.023	0.044	2.9	1.4	2.3	Naphthalene = 0.033, MEK = 5.1, n-Butyl benzene = No Value, sec-Butyl benzene = No Value, Isopropylbenzene = No Value, n-Propyl benzene = No Value, 1,2,4-Trimethylbenzene = No Value, 1,3,5-Trimethylbenzene = No Value	Various	80	

Table 2
Summary of Borehole Soil Sample Analytical Results

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	SVOCs by EPA Method 8270	Total Lead
NOTES:													
TPH-G = Total Petroleum Hydrocarbons as Gasoline.													
TPH-D = Total Petroleum Hydrocarbons as Diesel.													
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.													
MTBE = Methyl tertiary-butyl ether.													
VOCs = Volatile Organic Compounds.													
MEK = Methyl ethyl ketone (2-Butanone).													
ft bgs = feet below ground surface.													
ND = Not detected.													
-- = Not analyzed.													
a = Laboratory Note: Heavier gasoline range compounds are significant (aged gasoline?).													
b = Laboratory Note: No recognizable pattern.													
c = Laboratory Note: Strongly aged gasoline or diesel range compounds are significant in the TPH-G chromatogram.													
d = Laboratory Note: Gasoline range compounds are significant.													
e = Laboratory Note: Diesel range compounds are significant; no recognizable pattern.													
f = Laboratory Note: Oil range compounds are significant.													
g = Laboratory Note: Aged diesel is significant.													
h = Laboratory Note: Stoddard solvent/mineral spirit(?).													
i = Laboratory Note: Diesel range compounds are significant; no recognizable pattern; and/or Stoddard solvent/mineral spirit(?).													
j = Laboratory Note: One to a few isolated peaks present in the TPH-D/TPH-MO chromatogram.													
k = Laboratory Note: Gasoline range compounds are significant; and/or Stoddard solvent/mineral spirit(?).													
l = Laboratory Note: kerosene/kerosene range/set fuel range.													
m = Laboratory Note: Aged diesel is significant; and/or diesel range compounds are significant; no recognizable pattern.													
LTCP = Low Threat Closure Policy, by State Water Resources Control Board, effective August 17, 2012, from Table 1 - Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health, Commercial/Industrial and Utility Worker.													
ESI = Environmental Screening Level, by San Francisco Bay - Regional Water Quality Control Board, updated February 2016 (Revision 3), Soil Tier 1 ESL from Summary of Soil ESLS.													
Results in bold exceed their respective ESI values.													
Highlighted depths include the interval 0.0-10.0 feet.													
Results, ESI values, and LTCP values reported in mg/kg (milligrams per kilogram), unless otherwise indicated.													

Table 3
Summary of Borehole Groundwater Sample Analytical Results

Sample ID	Sample Collection Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	SVOCs by EPA Method 8270
B1-W	8/22/2014	170,000, a,b	1,600,000, b,c,d	79,000, b,c,d	ND<500	ND<500	2,900	2,000	14,000	ND, except Naphthalene = 4,000, n-Propyl benzene = 740, 1,2,4-Trimethylbenzene = 6,700, 1,3,5-Trimethylbenzene = 1,500	--
B2-W	8/22/2014	870	810, c,d,e	800, c,d,e	ND<5.0	ND<5.0	5.1	12	110	ND, except Naphthalene = 210, n-Propyl benzene = 17, 1,2,4-Trimethylbenzene = 210, 1,3,5-Trimethylbenzene = 42	--
B3-W	8/22/2014	13,000	9,100, c	840, c	ND<17	450	ND<17	140	ND<17	ND, except Naphthalene = 380, n-Butyl benzene = 50, sec-Butyl benzene = 17, Isopropyl benzene = 120, n-Propyl benzene = 300	--
B4-W	8/23/2014	480	63, d	ND<250	ND<0.50	15	ND<0.50	3.0	ND<0.50	ND, except Naphthalene = 1.6, Acetone = 46, MEK = 14, TBA = 5.0, MBK = 1.5, Isopropyl benzene = 1.1, n-Propyl benzene = 2.3	--
B4A-W	6/3/2015	ND<50	64, c,d	ND<250	ND<0.50	1.2	ND<0.50	1.3	1.2	ND, except Naphthalene = 1.3, Acetone = 50, MEK = 13, MBK = 0.85, MIBK = 0.99, Carbon disulfide = 8.0, n-Propyl benzene = 1.3, Isopropyl benzene = 0.51	All ND
B5-W	8/22/2014	1,900	400, c	ND<500	ND<5.0	88	ND<5.0	58	53	ND, except Naphthalene = 18, n-Propyl benzene = 11, 1,2,4-Trimethylbenzene = 37, 1,3,5-Trimethylbenzene = 8.5	--
B6-W	8/22/2014	33,000	3,100, c	ND<250	ND<100	5,500	200	1,700	2,400	ND, except Naphthalene = 630, MEK = 440, n-Propyl benzene = 180, 1,2,4-Trimethylbenzene = 610, 1,3,5-Trimethylbenzene = 140	--
B7-W	8/22/2014	6,100	4,100, c	ND<250	ND<2.5	8.4	ND<2.5	30	7.1	ND, except Naphthalene = 19, sec-Butyl benzene = 2.9, Isopropyl benzene = 25, n-Propyl benzene = 58, 1,2,4-Trimethylbenzene = 17, 1,3,5-Trimethylbenzene = 4.3	--
B8-W	6/2/2015	120, a	250, e	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND, except n-Butyl benzene = 2.9,	--

Table 3
Summary of Borehole Groundwater Sample Analytical Results

Sample ID	Sample Collection Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	SVOCs by EPA Method 8270
										sec-Butyl benzene = 1.2 n-Propyl benzene = 3.1, Isopropylbenzene = 1.0,	
B9-W	6/2/2015	89, a,b	72, e	ND<250	ND<0.50	ND<0.50	ND<0.50	0.91	5.7	ND, except Acetone = 28, n-Butyl benzene = 6.0, sec-Butyl benzene = 2.87, Isopropylbenzene = 4.0, n-Propyl benzene = 13, 4-Isopropyl toluene = 0.60	--
B12-W	6/3/2015	4,000	1,700, c,e,f	380, c,e,f	ND<25	130	ND<25	250	36	ND, except Naphthalene = 130, n-Propyl benzene = 61, 1,2,4-Trimethylbenzene = 92	--
B13-W	6/2/2015	1,800	910, e	ND<250	ND<25	29	ND<25	130	98	ND, except Naphthalene = 100, n-Propyl benzene = 46, 1,2,4-Trimethylbenzene = 110,	--
B14-W	6/3/2015	5,600	5,200, g	ND<250	ND<25	40	ND<25	69	110	ND, except Naphthalene = 68, n-Propyl benzene = 66, 1,2,4-Trimethylbenzene = 660,	--
B15-W	6/3/2015	110, a,b	51, h	ND<250	ND<0.50	ND<0.50	ND<0.50	1.3	ND<0.50	ND, except 1,2-DCA = 5.1, n-Butyl benzene = 0.70, n-Propyl benzene = 1.3	--
B16-W	3/13/2017	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND	--
B17-W	3/13/2017	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND	--
B18-W	3/13/2017	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND	--
B19-W	3/13/2017	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND	--
B20-W	3/13/2017	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND	--
B21-W	3/13/2017	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND	--

Table 3
Summary of Borehole Groundwater Sample Analytical Results

Sample ID	Sample Collection Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	SVOCs by EPA Method 8270
L/TCP Groundwater Specific Criteria	Scenario 2 Scenario 4	None None	None None	None None	1,000 1,000	3,000 1,000	None None	None None	None None	None None	
ESL ¹		100	100	50,000	5.0	1.0	40	13	20	Naphthalene = 0.17, Acetone = 1,500, MEK = 5,600, TBA = 12, MBK = No Value, 1,2-DCA = 5.0, n-Butyl benzene = No Value, sec-Butyl benzene = No Value, Isopropylbenzene = No Value, n-Propyl benzene = No Value, 1,2,4-Trimethylbenzene = No Value, 1,3,5-Trimethylbenzene = No Value	
ESL ²		No Value	No Value	No Value	11,000	9.7	30,000	110	11,000	Naphthalene = 170, Acetone = 290,000,000, MEK = 36,000,000, TBA = No Value, MBK = No Value, 1,2-DCA = 180, n-Butyl benzene = No Value, sec-Butyl benzene = No Value, Isopropylbenzene = No Value, n-Propyl benzene = No Value, 1,2,4-Trimethylbenzene = No Value, 1,2,4-Trimethylbenzene = No Value	
ESL ³		No Value	No Value	No Value	130,000	260	No Value	3,300	No Value	Naphthalene = 1,600, Acetone = No Value, MEK = 180,000,000, TBA = No Value, MBK = No Value, 1,2-DCA = 4,800, n-Butyl benzene = No Value, sec-Butyl benzene = No Value, Isopropylbenzene = No Value, n-Propyl benzene = No Value, 1,2,4-Trimethylbenzene = No Value, 1,2,4-Trimethylbenzene = No Value	

Table 3
Summary of Borehole Groundwater Sample Analytical Results

Sample ID	Sample Collection Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B	SVOCs by EPA Method 8270
NOTES: TPH-G = Total Petroleum Hydrocarbons as Gasoline. TPH-D = Total Petroleum Hydrocarbons as Diesel. TPH-MO = Total Petroleum Hydrocarbons as Motor Oil. MTBE = Methyl tertiary-butyl ether. VOCs = Volatile Organic Compounds. MEK = Methyl Ethyl Ketone (2-Butanone). TBA = tert-Butyl alcohol. MBK = Methyl Butyl Ketone (2-hexanone). 1,2-DCA = 1,2-Dichloroethane. ND = Not detected. -- = Not analyzed.											
a = Laboratory Note: Heavier gasoline range compounds are significant (aged gasoline?). b = Laboratory Note: Lighter than water immiscible sheen/product present. c = Laboratory Note: Gasoline range compounds are significant. d = Laboratory Note: Diesel range compounds are significant; no recognizable pattern. e = Laboratory Note: Oil range compounds are significant.											
LTCP = Low Threat Closure Policy, developed by State Water Resources Control Board, effective August 17, 2012, from Groundwater Specific Criteria Scenarios 2 and 4. ESL ¹ = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 2016 (Revision 3), Groundwater Tier 1 ESL from Summary of Groundwater ESLs. ESL ² = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 2016 (Revision 3), from Table GW-3 – Groundwater Vapor Intrusion Human Health Risk Screening Levels, Shallow Groundwater. Commercial/Industrial Land Use. ESL ³ = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 2016 (Revision 3), from Table GW-3 – Groundwater Vapor Intrusion Human Health Risk Screening Levels, Deep Groundwater. Fine-Coarse Scenario. Commercial/Industrial Land Use.											
Results in bold exceed their respective ESL¹ values. Underlined results exceed their respective ESL ² values. Double underlined results exceed their respective ESL ³ values. Italicised results exceed their respective LTCP values.											
Results, ESL values, and LTCP values reported in µg/L (micrograms per Liter), unless otherwise indicated.											

Table 4A
Summary of Soil Gas and Sub-Slab Soil Gas Sample Analytical Results - TPH and VOCs

Sample ID	Sample Date	Land Use Scenario	TPH-G	TPH-D	MTBE	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylenes	Other Detected Compounds by EPA TO15	Naphthalene	1,1-DFA	Percent Shroud	2-Propanol	Percent Shroud
SG1	6/22/2015	Commercial	140,000,000	2,400,000,000	ND<4,400	19,000	ND<4,600	ND<5,300	ND<5,300	ND<5,300	ND, except Hexane = 3,500,000, Cyclohexane = 1,900,000, 2,2,4-Trimethylpentane = 5,700,000, Heptane = 890,000, Cumene = 8,000, Propylbenzene = 13,000	ND<10	33,000	0	ND<12,000	0
SG1	7/7/2015	Commercial	--	--	--	--	--	--	--	--	--	--	ND<14,000	0	--	--
SG1-DUP	6/22/2015	Commercial	140,000,000	--	ND<4,400	18,000	ND<4,600	ND<5,300	ND<5,300	ND<5,300	ND, except Hexane = 3,500,000, Cyclohexane = 1,900,000, 2,2,4-Trimethylpentane = 5,600,000, Heptane = 880,000, Cumene = 6,700, Propylbenzene = 10,000	--	ND<6,600	0	ND<12,000	0
VP1	3/16/2017	Commercial	ND<470	ND<20,000	ND<16	ND<3.6	8.3	ND<4.9	6.9	ND<5.0	--	ND<20	830, a	0	ND<980	0
VP1-DUP	3/16/2017	Commercial	ND<460	--	ND<16	ND<3.6	7.8	ND<4.9	6.9	ND<4.9	--	--	730, a	0	--	--
VP1-DUP	3/16/2017	Commercial	--	ND<20,000	--	--	--	--	--	--	--	ND<20	--	--	ND<980	0
LTCP																
with No Bioattenuation Zone (commercial)																
with Bioattenuation Zone (commercial)																
ESL			2,500,000	570,000	47,000	420	1,300,000	4,900	Combined = 440,000	Hexane = None, Cyclohexane = None, 2,2,4-Trimethylpentane = None, Heptane = None, Cumene = None, Propylbenzene = None	360	No Value	No Value	No Value	No Value	No Value
Notes:																
TPH-G = Total Petroleum Hydrocarbons as Gasoline.																
TPH-D = Total Petroleum Hydrocarbons as Diesel.																
MTBE = Methyl-tert-Butyl Ether.																
1,1-DFA = 1,1-Difluoroethane.																
ND = Not Detected.																
a = Not Analyzed.																
Laboratory Note: Exceeds instrument calibration range.																
Percent Shroud = The ratio of tracer gas concentration detected in the soil gas sample to the tracer gas concentration detected in the shroud air sample, expressed as a percentage.																
LTCP = Low Threat Closure Policy, developed by State Water Resources Control Board, effective August 17, 2012, from Appendix 4 Direct Measurement of Soil Gas Concentrations, Soil Gas																
Criteria with no bioattenuation zone.																
ESL = Environmental Screening Level, by San Francisco Bay Regional Water Quality Control Board, updated February 2016 (Revision 3) from Table SG-1 - Subslab/Soil Gas Vapor Intrusion Human Health Risk Screening Levels, Commercial/Industrial Land Use.																
Italicized values exceed their respective LTCP values.																
Values in bold exceed their respective ESL values.																
Hi-lited results indicate a screening level was exceeded.																
Results, ESL values, and LTCP values reported in micrograms per cubic meter (µg/m³), unless otherwise indicated.																

Summary of Soil Gas and Sub-Slab Soil Gas Shroud Sample Analytical Results - 1,1-Difluoroethane and 2-Propanol

Sample ID	Sample Date	1,1-DFA, #	2-Propanol, ##
SG1 DFA	6/22/2015	8,900,000	--
SG1 DFA	7/7/2015	22,000,000	--
SG1 2-Propanol	6/22/2015	--	800,000
VP1 DFA	3/16/2017	18,000,000	--
VP1 2-Propanol	3/16/2017	--	28,000
Notes:			
ND = Not Detected.			
-- = Not Analyzed.			
# = 1,1-DFA used as leak detection compound for TO-15 analysis.			
## = 2-Propanol used as leak detection compound for TO-17 analysis.			
Results in micrograms per cubic meter (µg/m3), unless otherwise indicated.			

Summary of Soil Gas and Sub-Slab Soil Gas Analytical Results - Oxygen, Methane, and Carbon Dioxide

Sample ID	Sample Date	Oxygen (%)	Methane (%)	Carbon Dioxide (%)
SG1	7/7/2015	7.9	24	8.9
VP1	3/16/2017	9.4	ND<0.00023	10
VP1-DUP	3/16/2017	9.4	ND<0.00023	10
NOTES:				
ND = Not Detected.				
Results in percentage (%), unless otherwise indicated.				

FIGURES

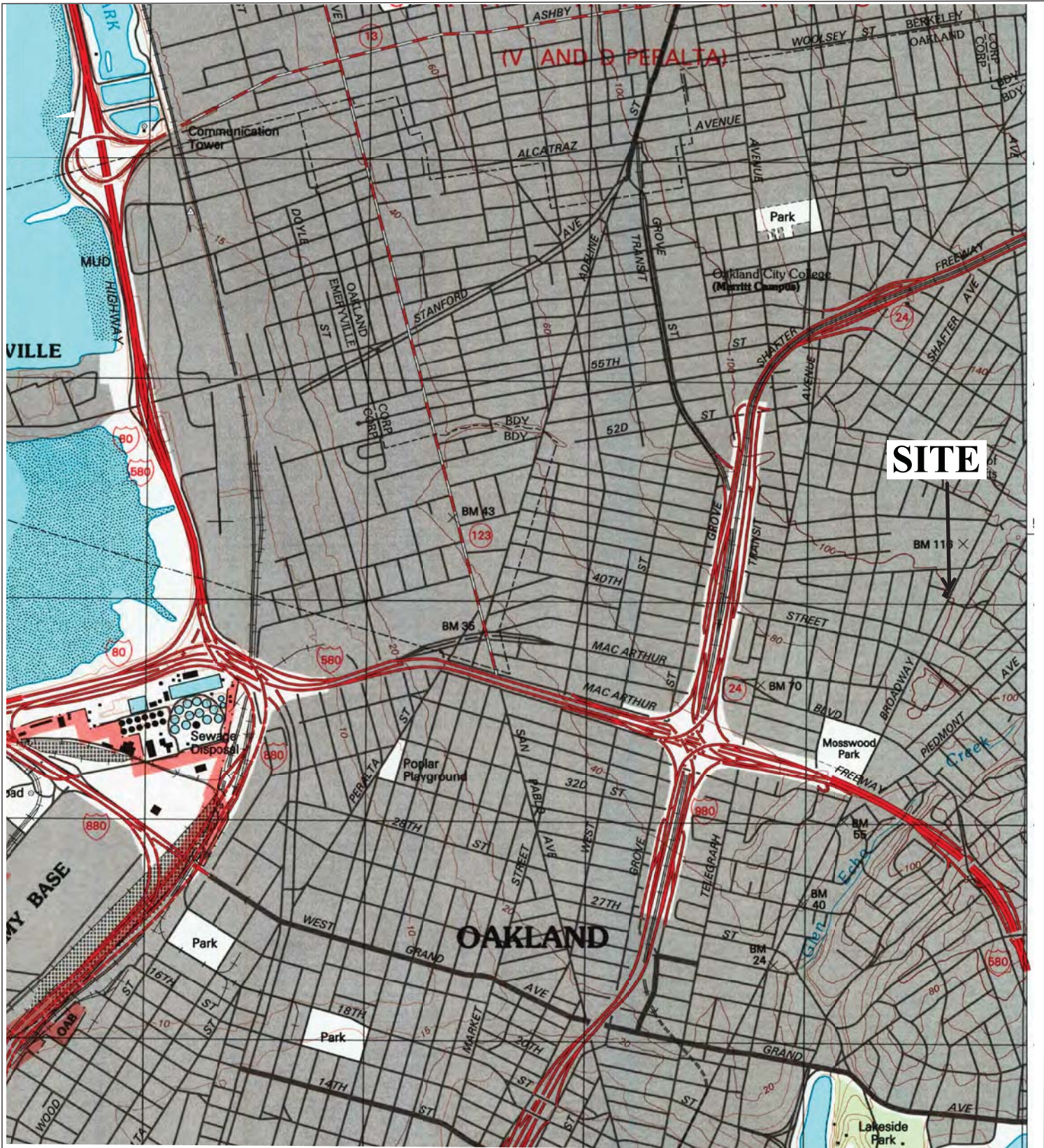
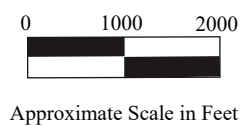


Figure 1
 Site Location Map
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map From:
 US Geological Survey Oakland West,
 California 7.5-Minute Quadrangles
 Map updated 1996

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610



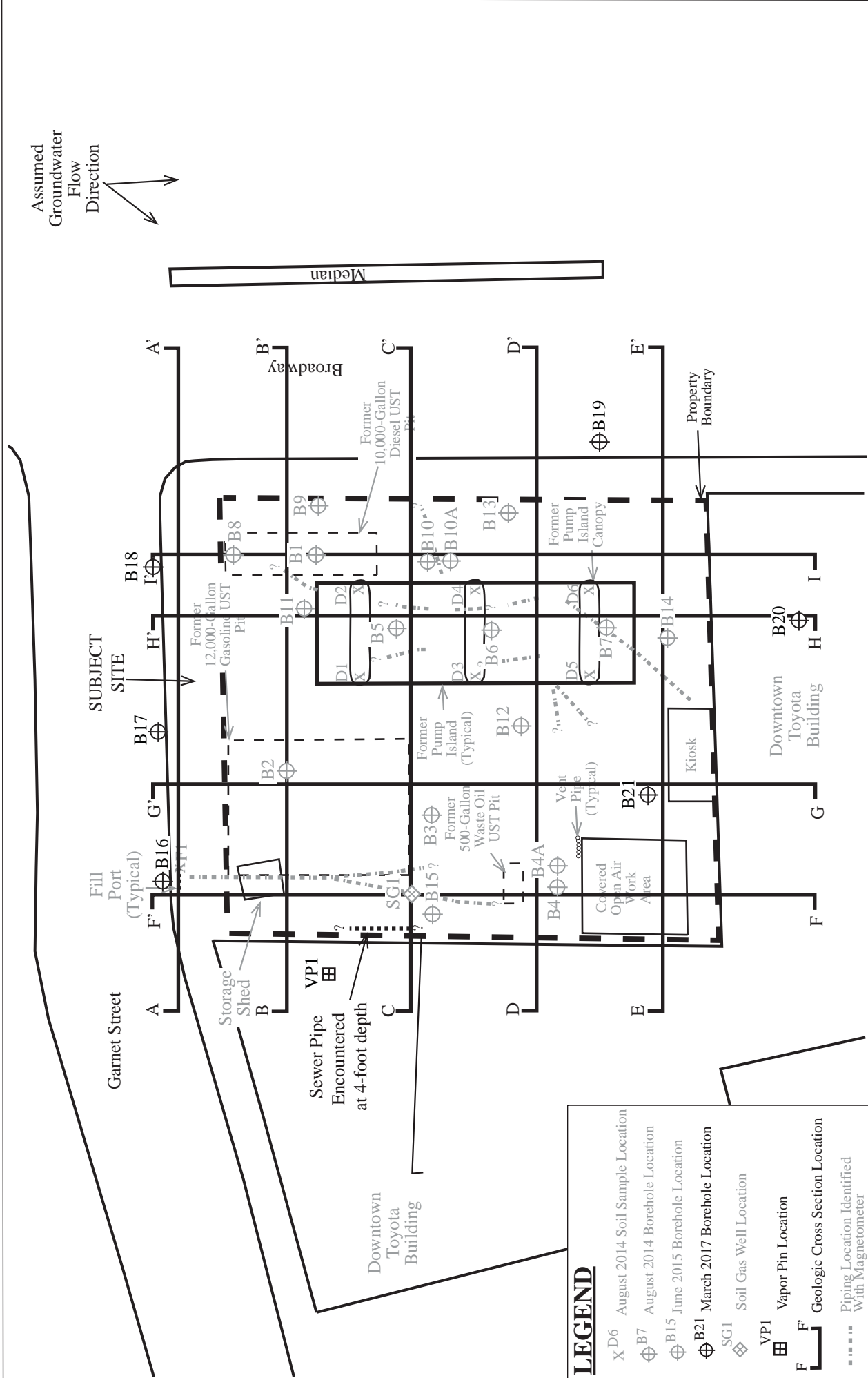


Figure 2
Site Map Showing Sample Collection and Geologic Cross Section Locations
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map from:
 Aqua Science Engineers, Inc., dated 12/31/1986,
 Google Earth, 2014

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610



Assumed
 Groundwater
 Flow
 Direction

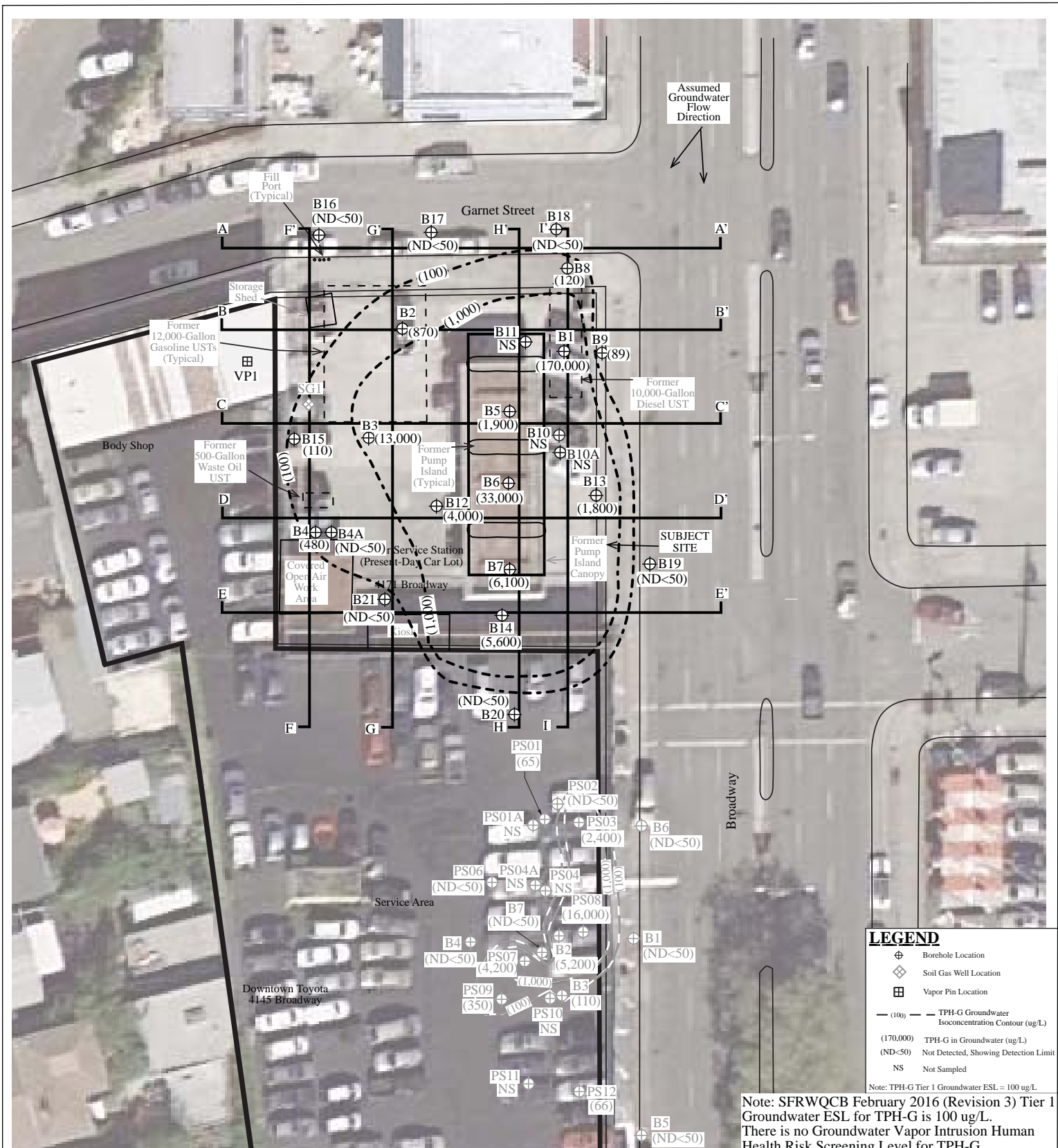
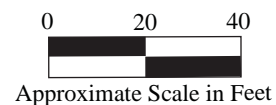


Figure 3
 Site Vicinity Aerial Photograph Showing TPH-G Groundwater Concentrations
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map From:
 Andrew P. Anderson, Architect
 Doten Pontiac Site Plan, June 1966, and
 Google Earth, image dated October 2009

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610



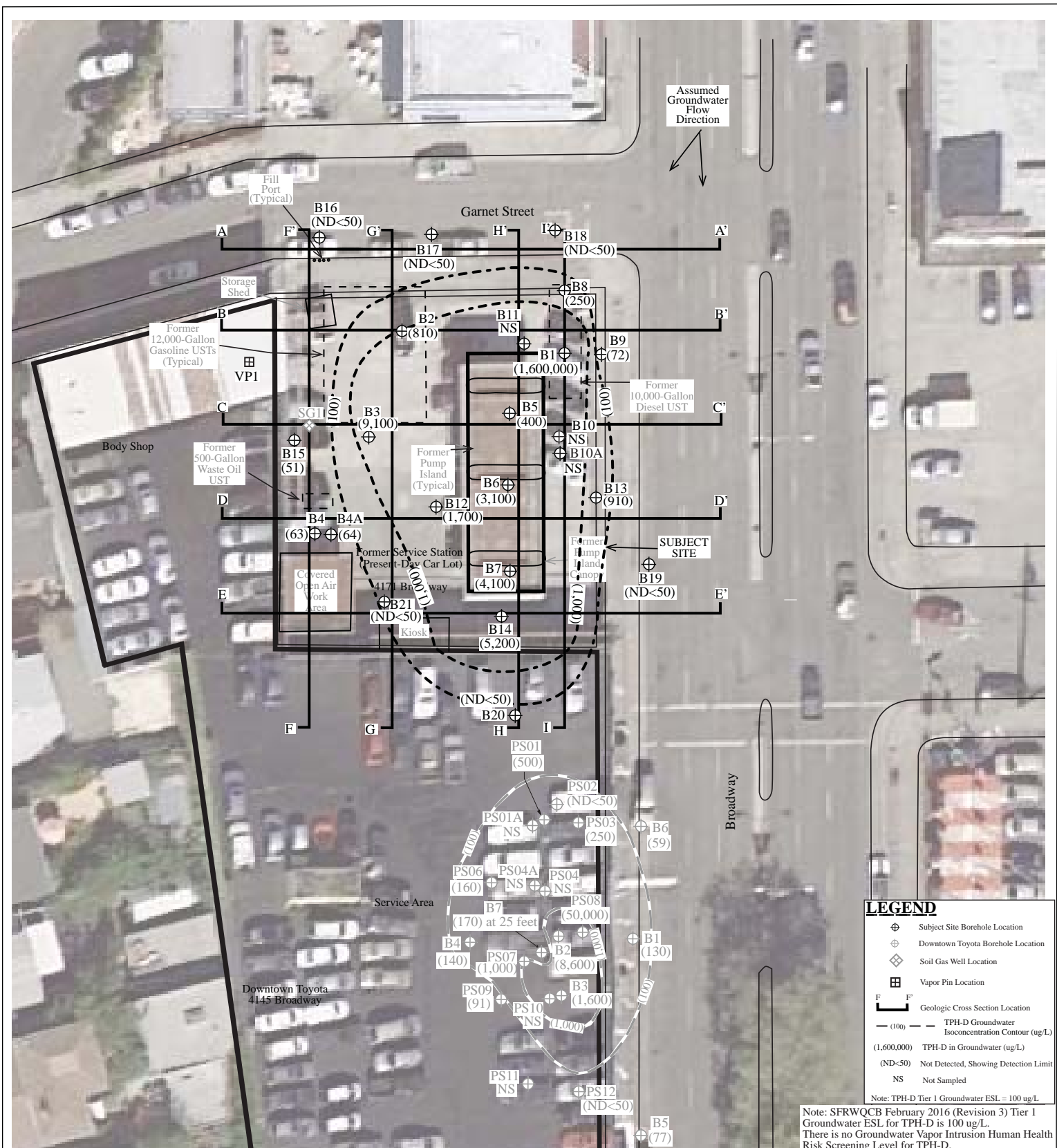
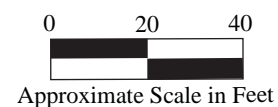


Figure 4
 Site Vicinity Aerial Photograph Showing TPH-D Groundwater Concentrations
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map From:
 Andrew P. Anderson, Architect
 Doten Pontiac Site Plan, June 1966, and
 Google Earth, image dated October 2009

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610



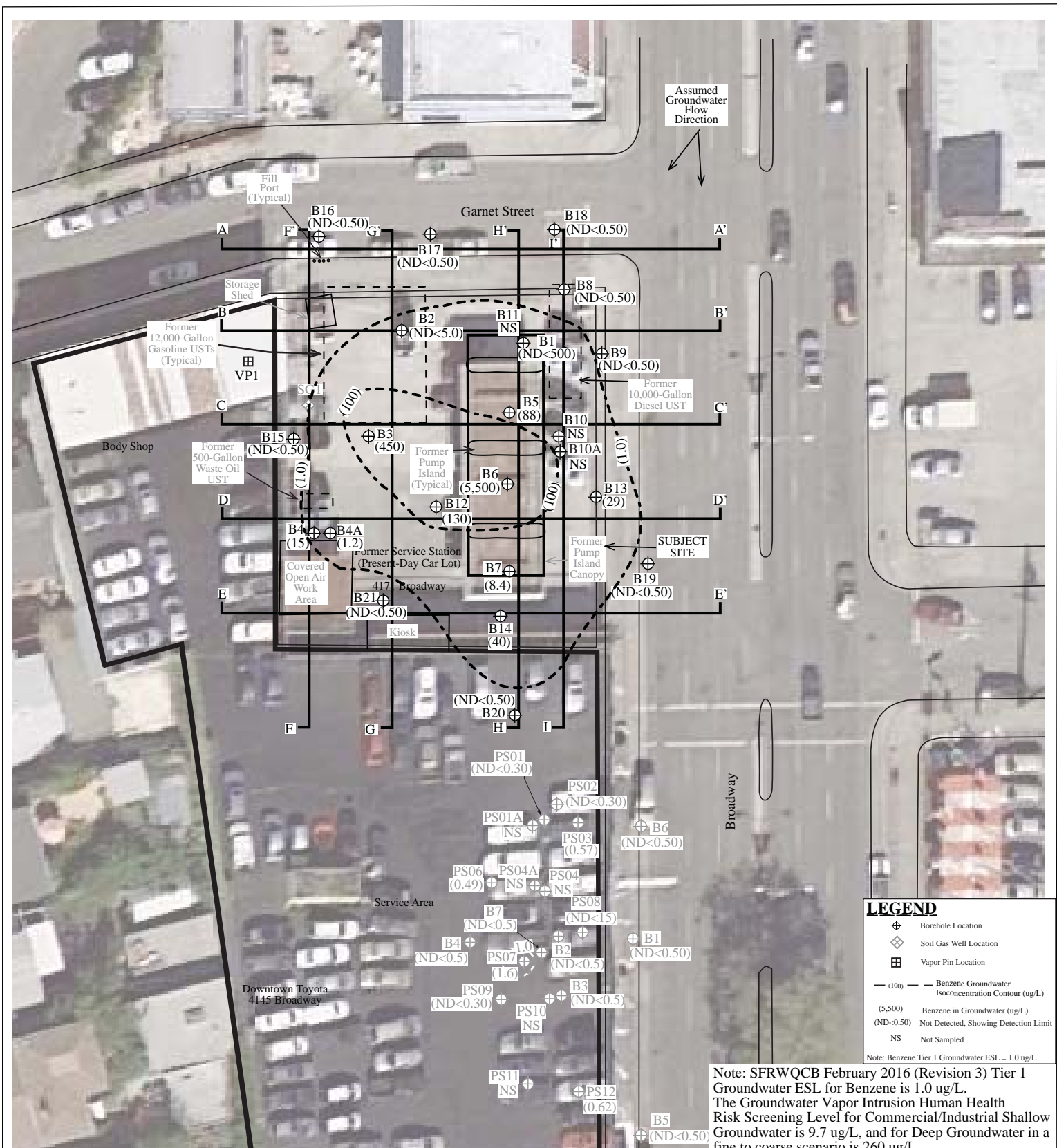
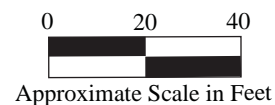


Figure 5
 Site Vicinity Aerial Photograph Showing Benzene Groundwater Concentrations
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map From:
 Andrew P. Anderson, Architect
 Doten Pontiac Site Plan, June 1966, and
 Google Earth, image dated October 2009

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610



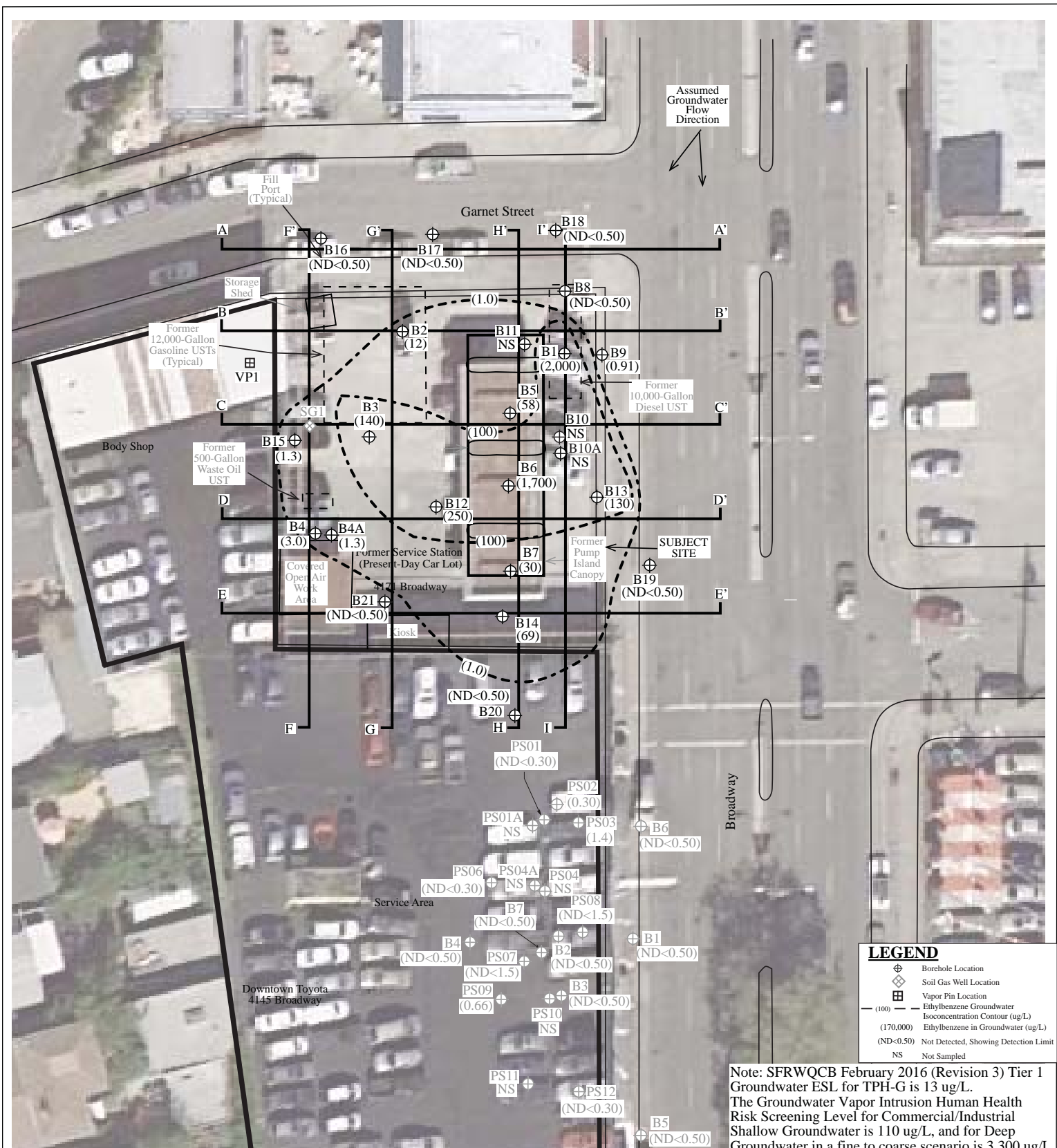


Figure 6
 Site Vicinity Aerial Photograph Showing Ethylbenzene Groundwater Concentrations
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map From:
 Andrew P. Anderson, Architect
 Doten Pontiac Site Plan, June 1966, and
 Google Earth, image dated October 2009

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610

0 20 40
 Approximate Scale in Feet



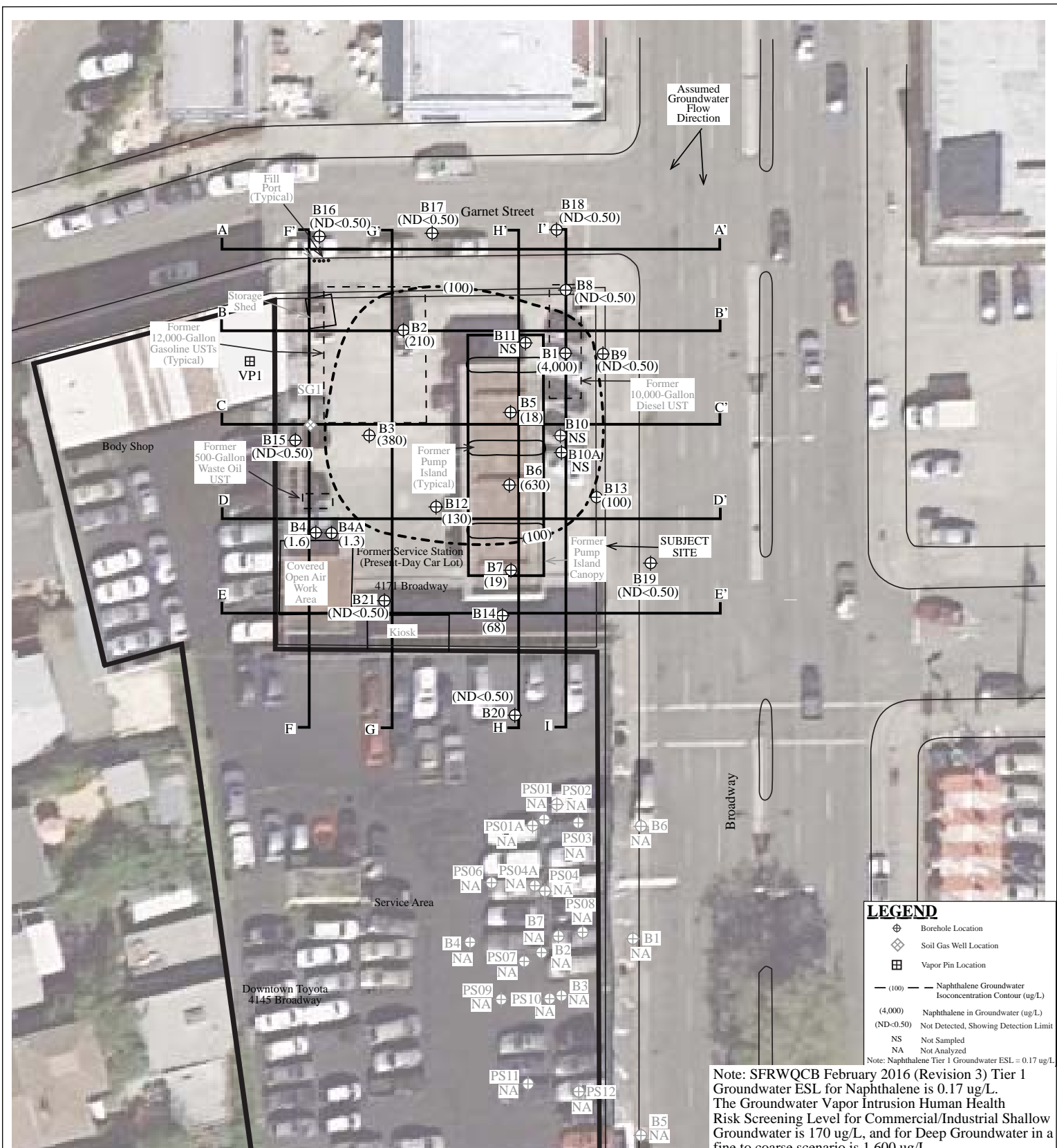


Figure 7
Site Vicinity Aerial Photograph Showing Naphthalene Groundwater Concentrations
Auto Depot
4171 Broadway
Oakland, California

Base Map From:
 Andrew P. Anderson, Architect
 Doten Pontiac Site Plan, June 1966, and
 Google Earth, image dated October 2009

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610

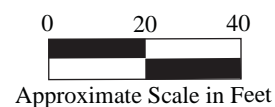




Figure 8
Typical Soil Gas Sampling Manifold
Auto Depot
4171 Broadway
Oakland, California

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

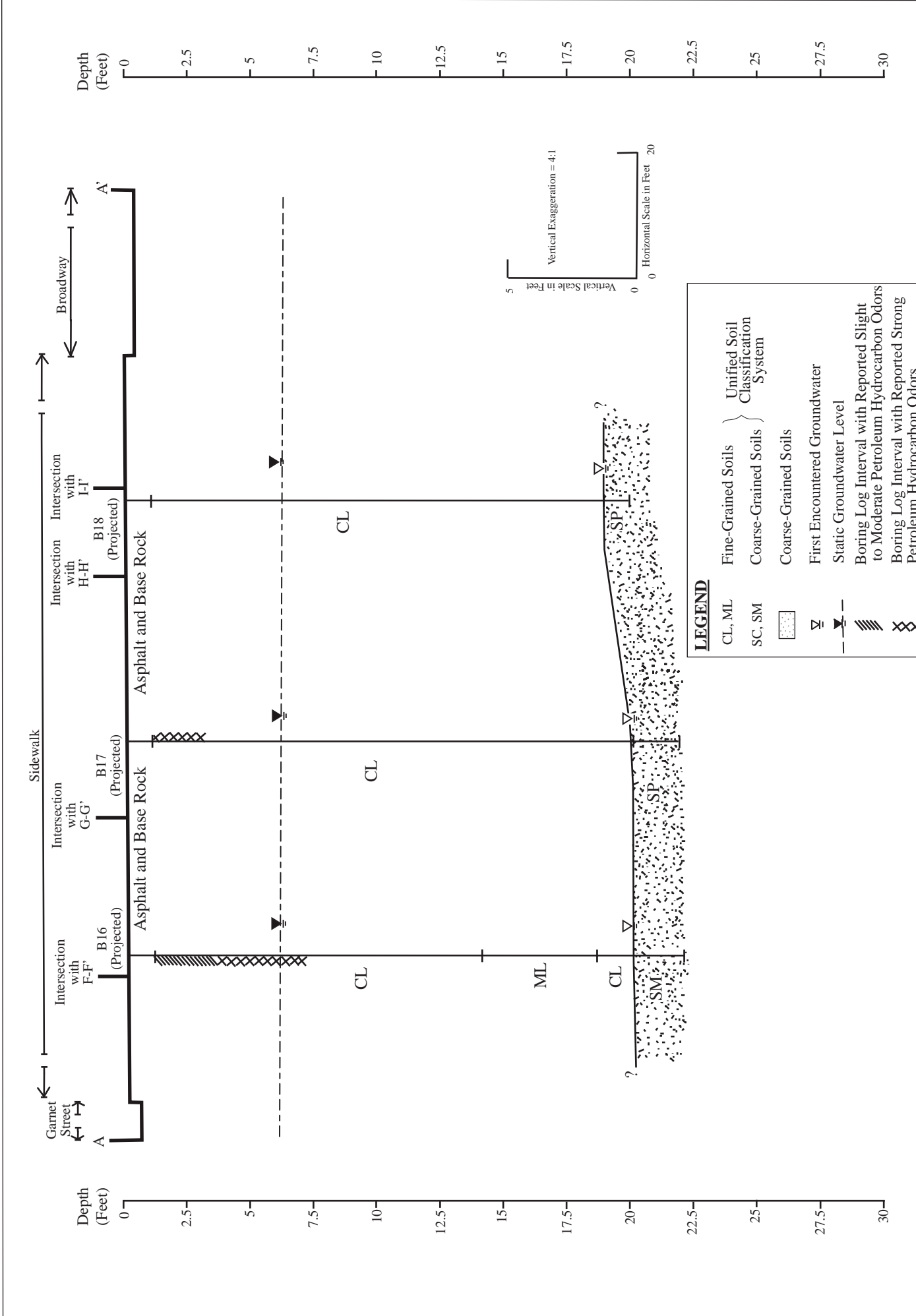
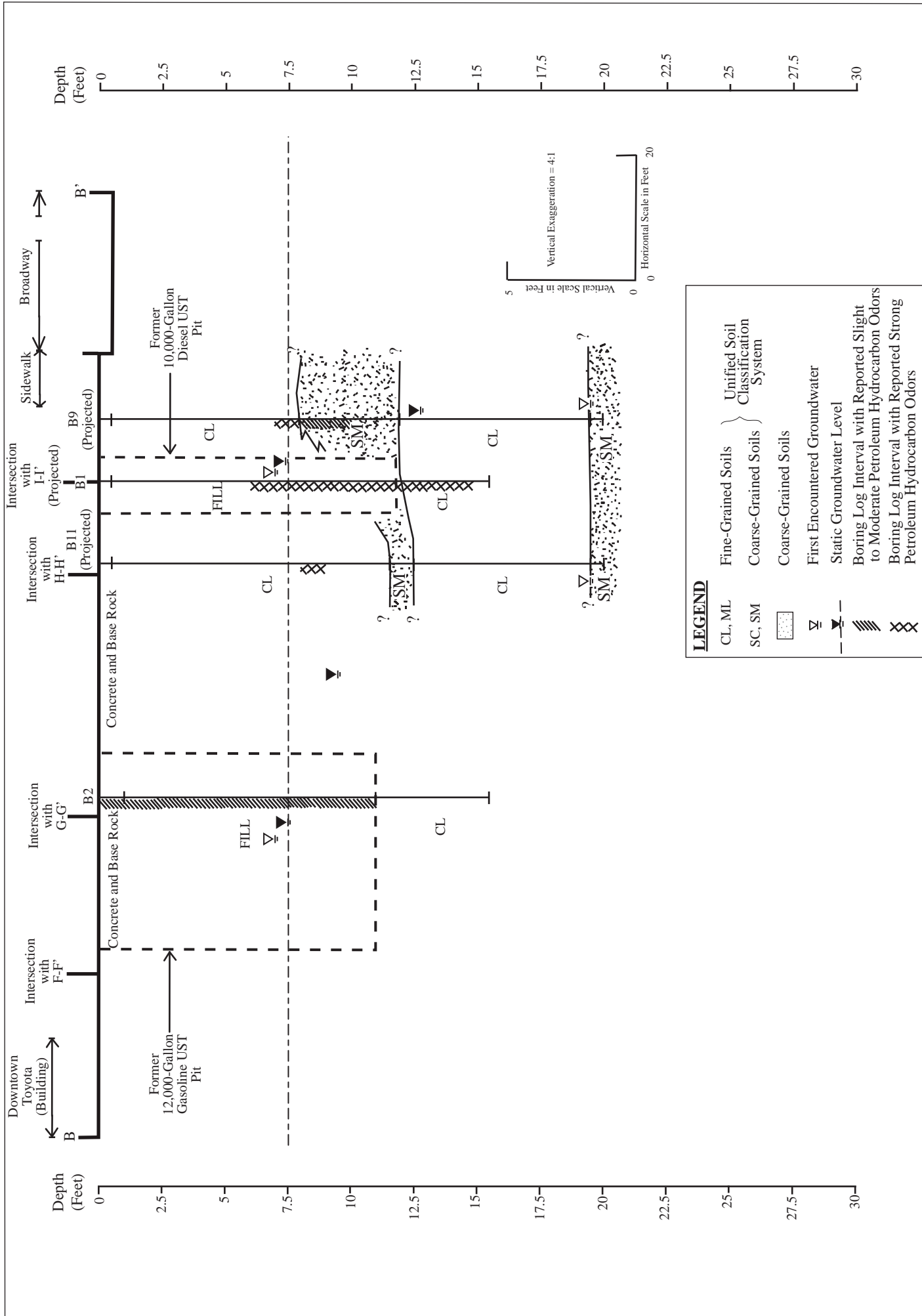


Figure 9
Geologic Cross Section A-A'
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610



P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

Figure 10
Geologic Cross Section B-B'
 4171 Broadway
 Oakland, California

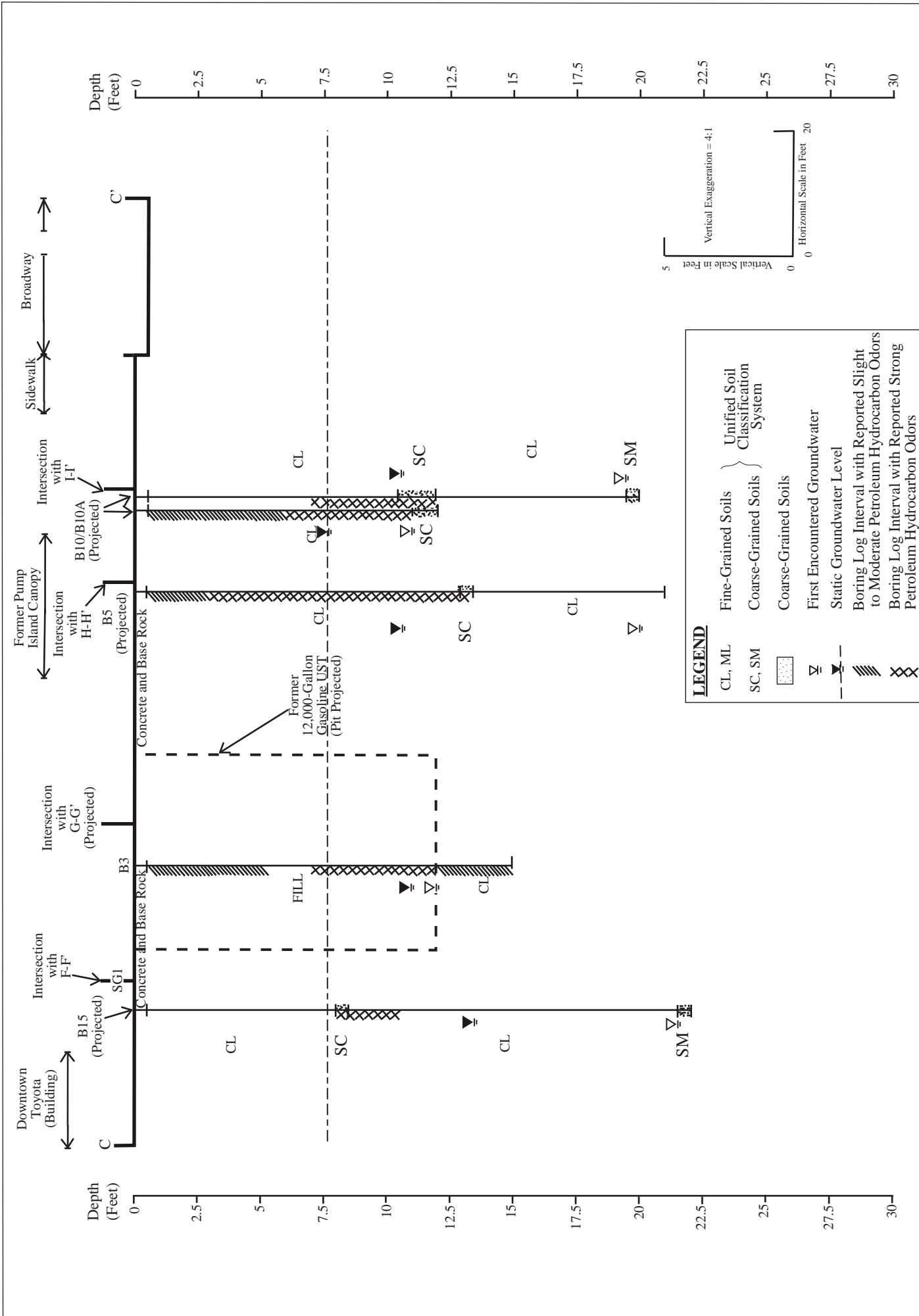


Figure 11
 Geologic Cross Section C-C'
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

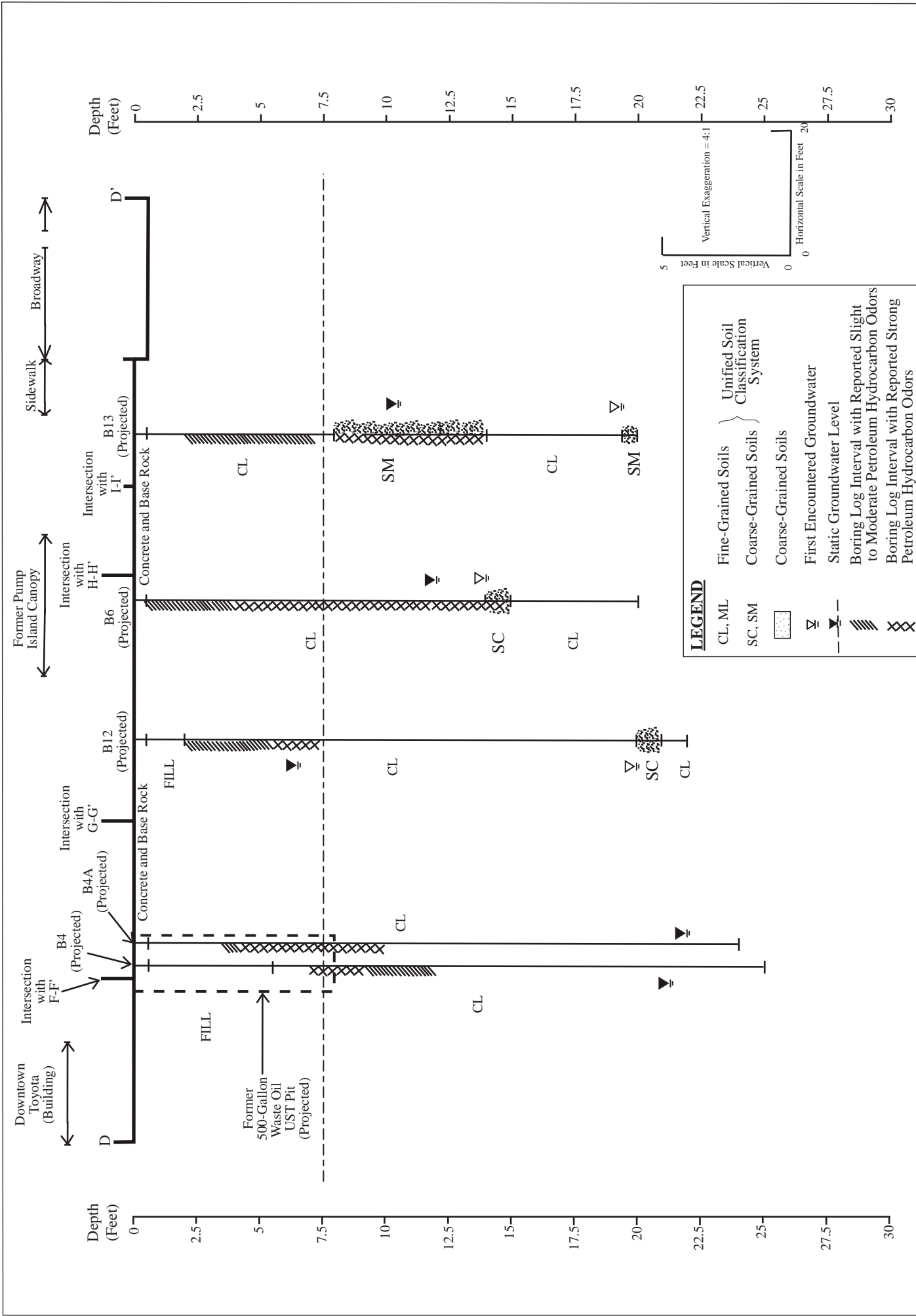
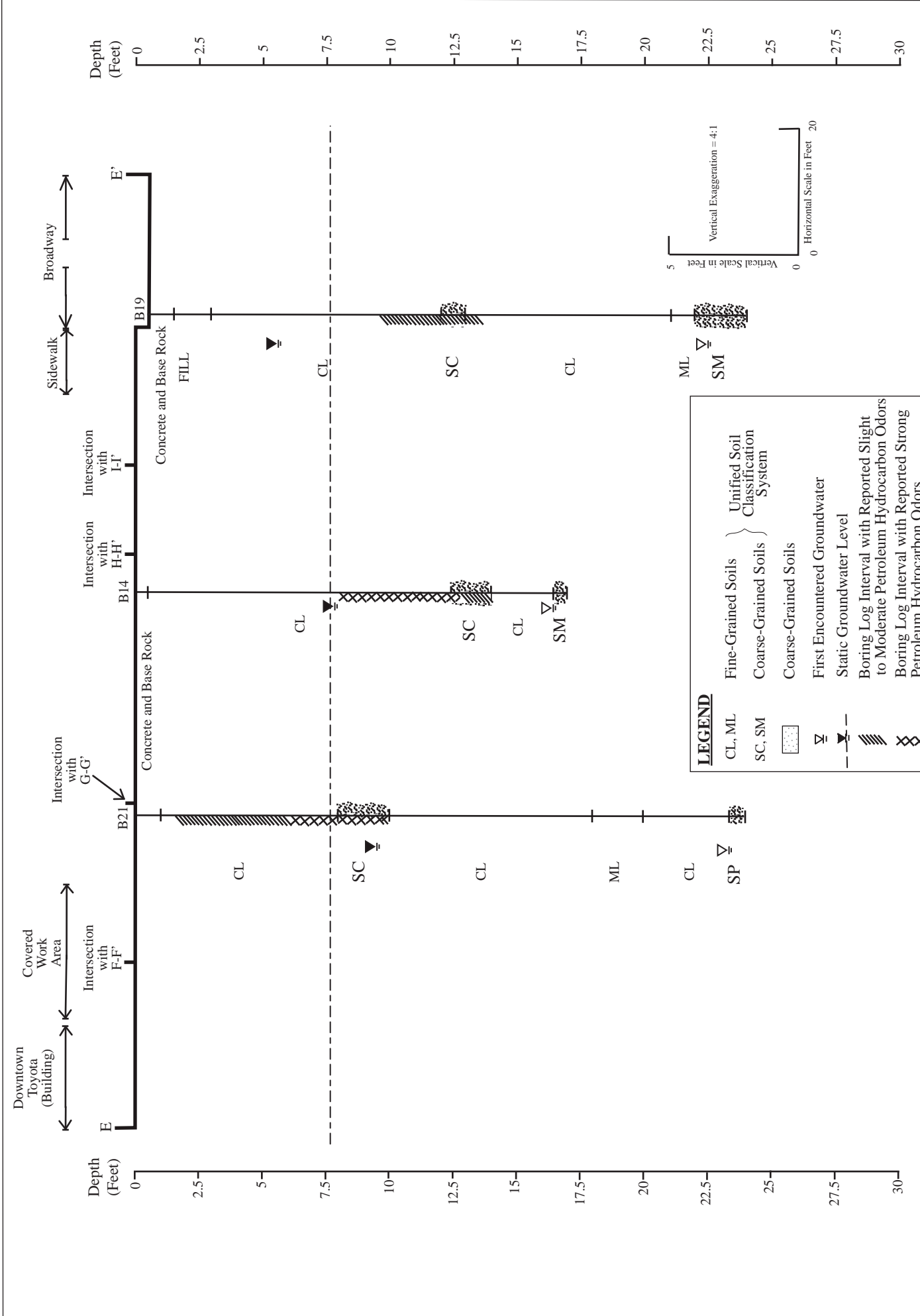


Figure 12
 Geologic Cross Section D-D'
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

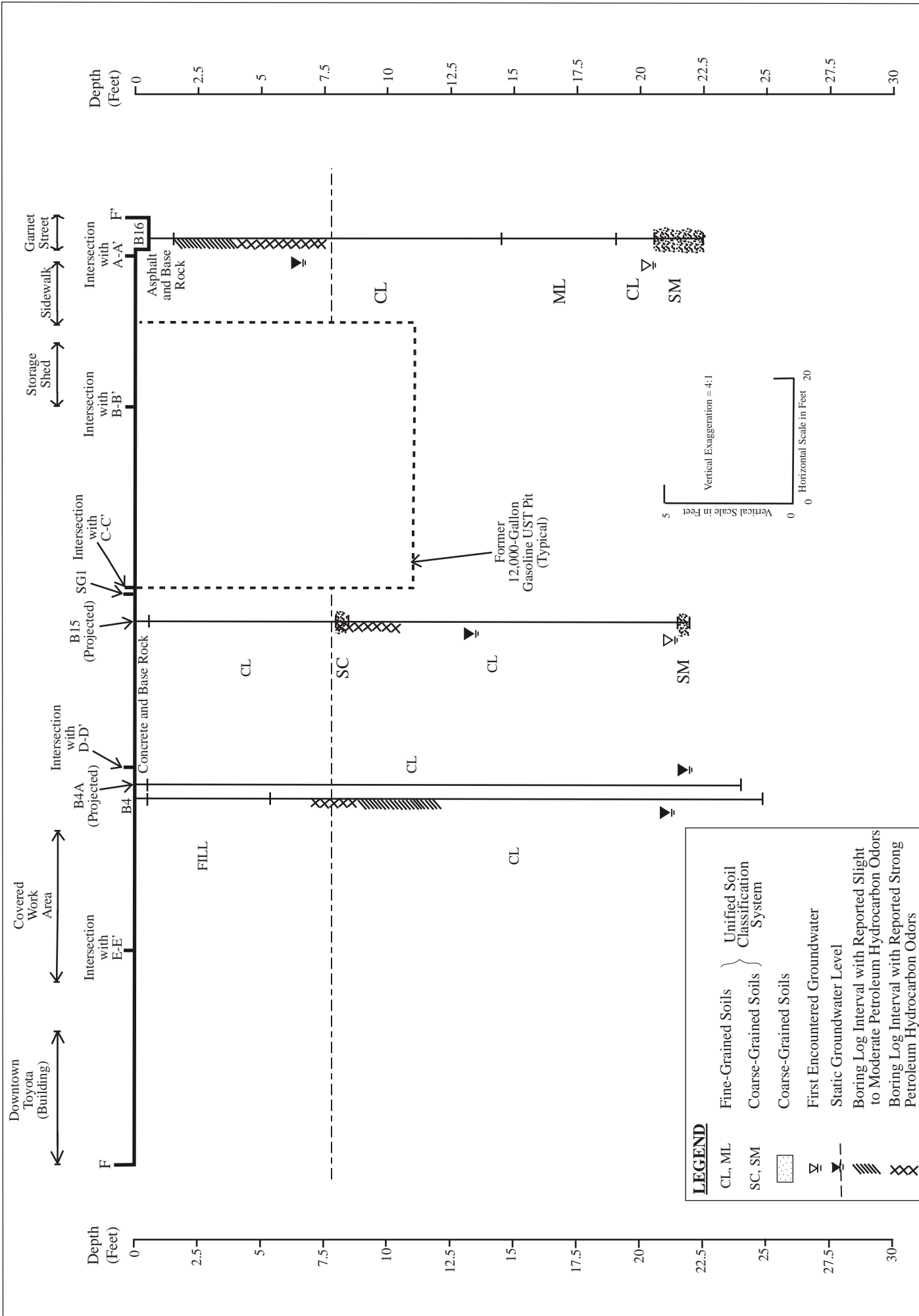


LEGEND

- CL, ML } Fine-Grained Soils
- SC, SM } Coarse-Grained Soils
- Coarse-Grained Soils
- First Encountered Groundwater
- Static Groundwater Level
- Boring Log Interval with Reported Slight to Moderate Petroleum Hydrocarbon Odors
- Boring Log Interval with Reported Strong Petroleum Hydrocarbon Odors

Figure 13
 Geologic Cross Section E-E'
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610



LEGEND

CL, ML	} Unified Soil Classification System
SC, SM	
	Fine-Grained Soils
	Coarse-Grained Soils
	Coarse-Grained Soils
	First Encountered Groundwater
	Static Groundwater Level
	Boring Log Interval with Reported Slight to Moderate Petroleum Hydrocarbon Odors
	Boring Log Interval with Reported Strong Petroleum Hydrocarbon Odors

Figure 14
 Geologic Cross Section F-F'
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

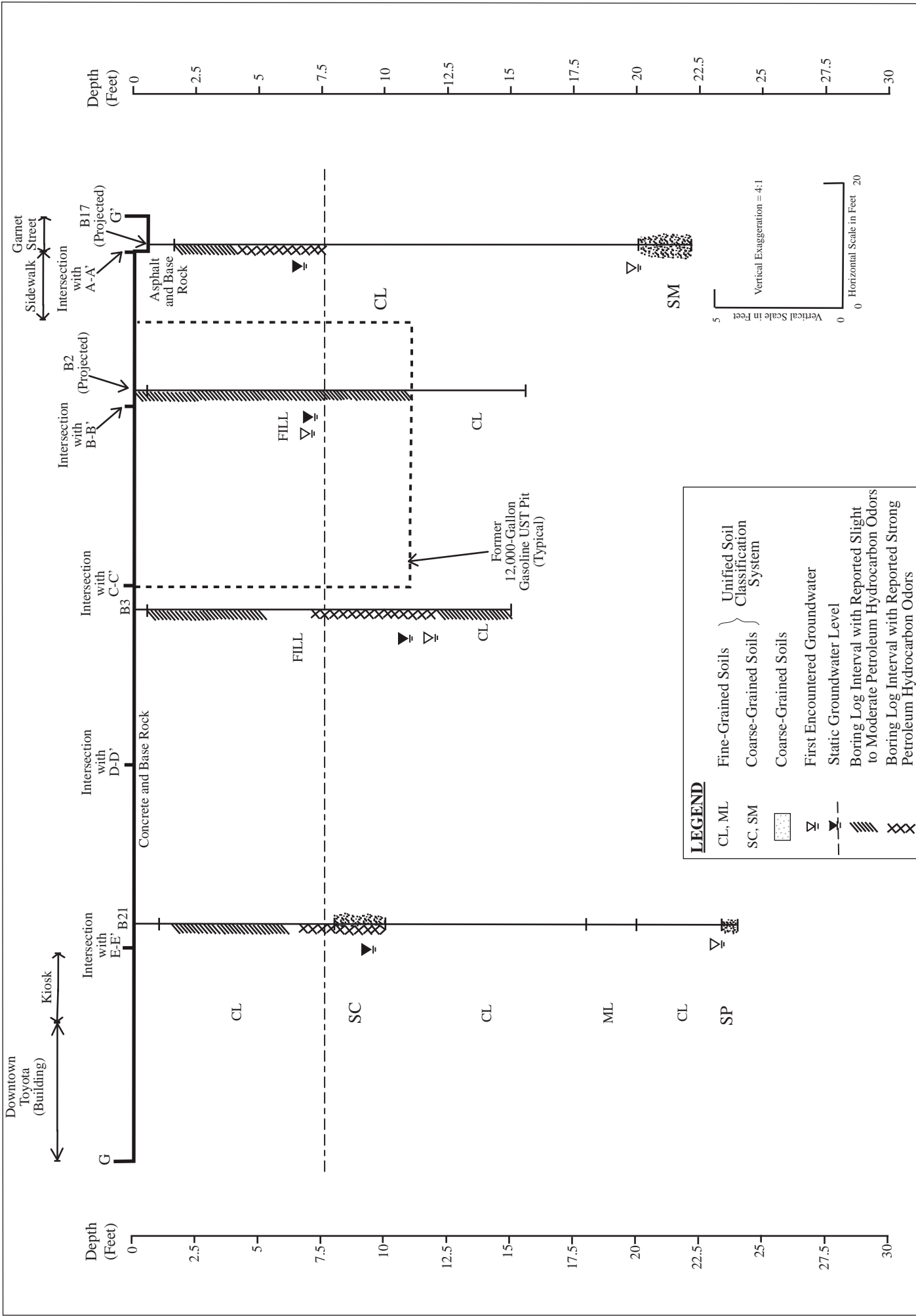
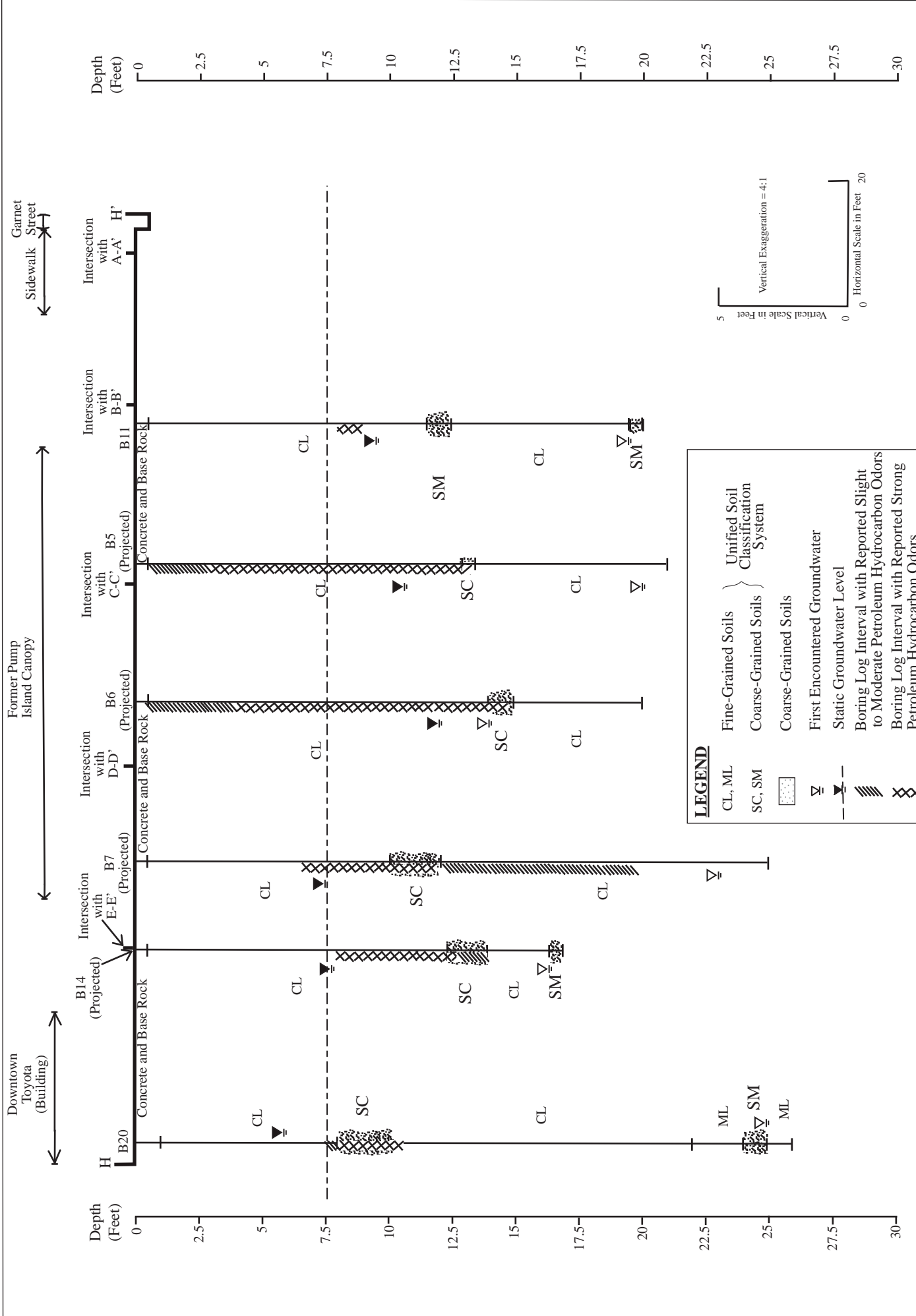


Figure 15
Geologic Cross Section G-G'
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610



LEGEND

- CL, ML: Fine-Grained Soils
- SC, SM: Coarse-Grained Soils
- ML, SM: Unified Soil Classification System
- ▽: First Encountered Groundwater
- ▽---: Static Groundwater Level
- : Boring Log Interval with Reported Slight to Moderate Petroleum Hydrocarbon Odors
- : Boring Log Interval with Reported Strong Petroleum Hydrocarbon Odors

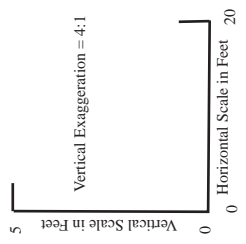


Figure 16
Geologic Cross Section H-H'
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

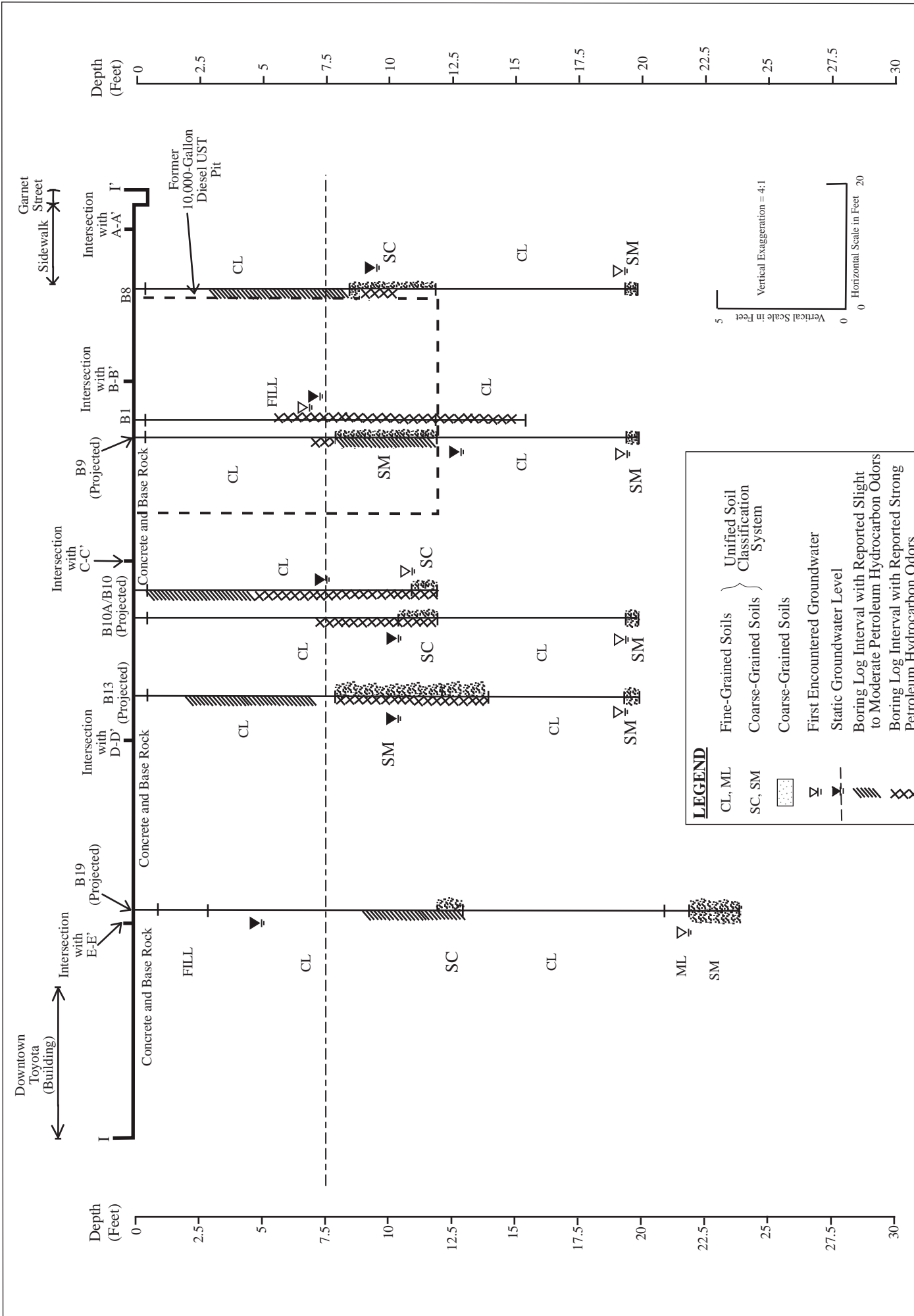


Figure 17
 Geologic Cross Section I-I'
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

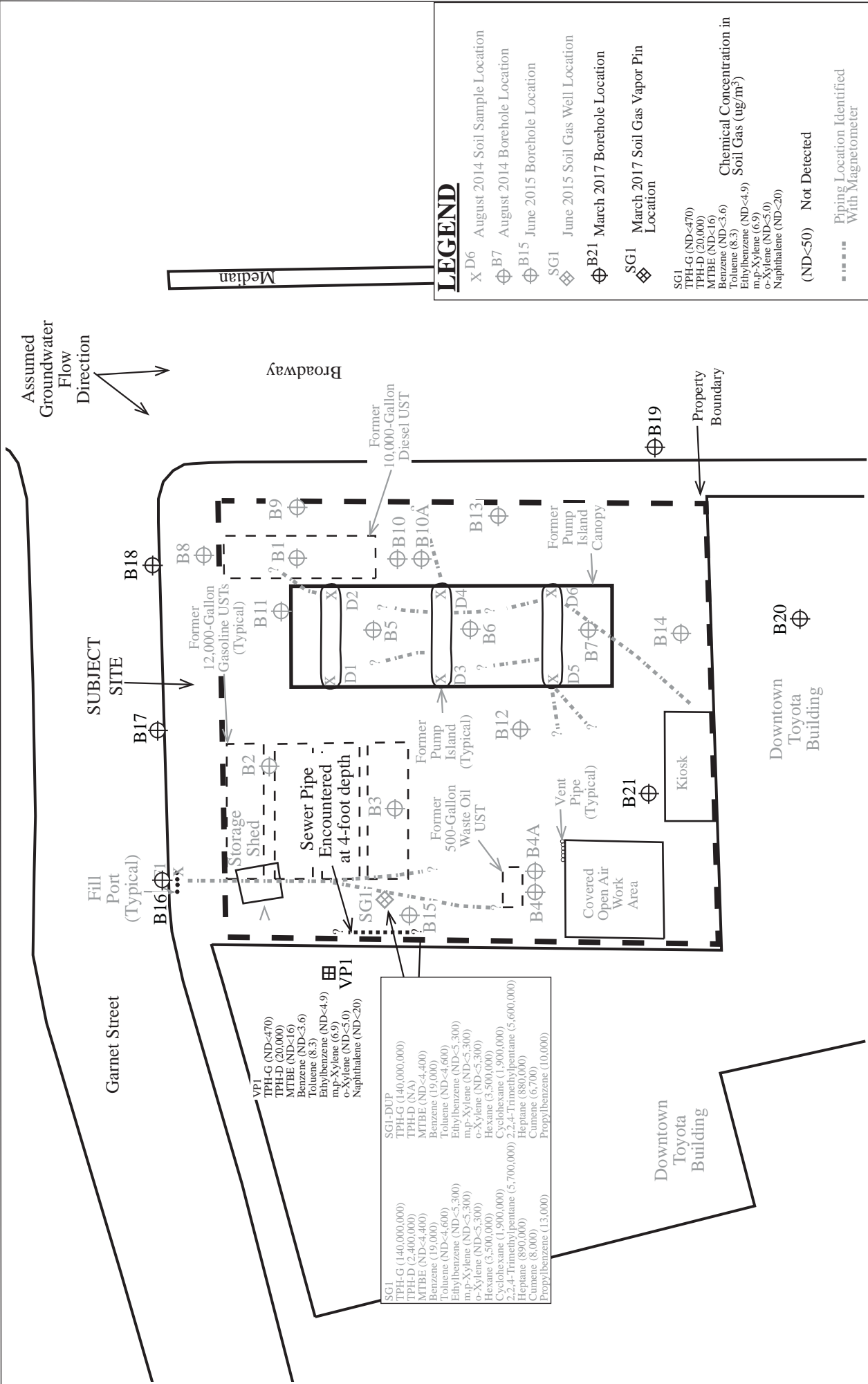
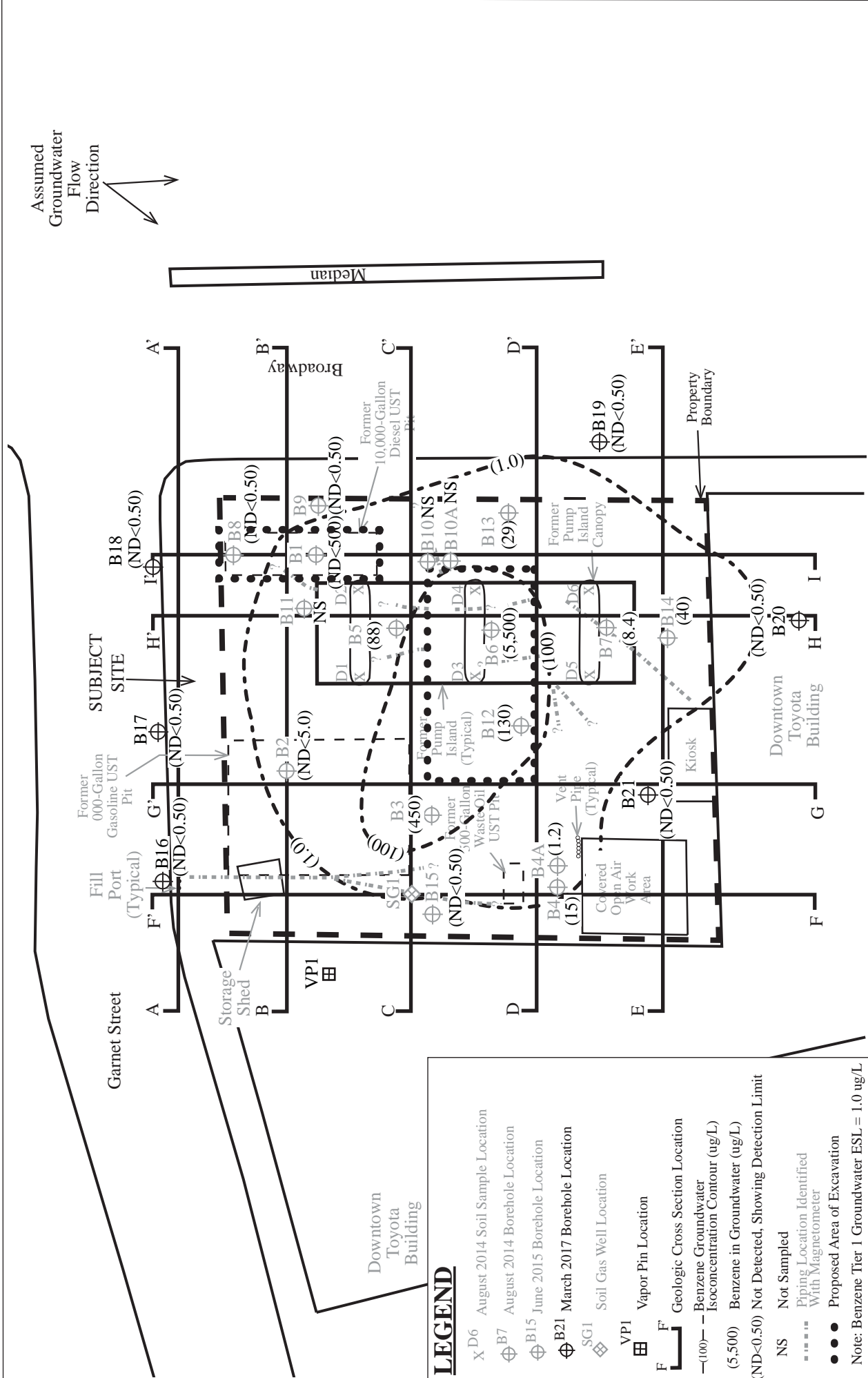


Figure 18
Site Map Showing Vapor Pin Location and Petroleum and VOC Concentrations in Soil Gas
 Auto Depot
 4171 Broadway
 Oakland, California



P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610

Base Map from:
 Aqua Science Engineers, Inc., dated 12/31/1986,
 Google Earth, 2014



LEGEND

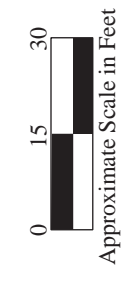
- X D6 August 2014 Soil Sample Location
- ⊕ B7 August 2014 Borehole Location
- ⊕ B15 June 2015 Borehole Location
- ⊕ B21 March 2017 Borehole Location
- ◇ SG1 Soil Gas Well Location
- ⊞ VP1 Vapor Pin Location
- F F' Geologic Cross Section Location
- (100) - Benzene Groundwater Isoconcentration Contour (ug/L)
- (5,500) Benzene in Groundwater (ug/L)
- (ND<0.50) Not Detected, Showing Detection Limit
- NS Not Sampled
- - - - Piping Location Identified With Magnetometer
- Proposed Area of Excavation

Note: Benzene Tier 1 Groundwater ESL = 1.0 ug/L

Figure 19
 Site Map Showing Benzene in Groundwater and Proposed Excavation Locations
 Auto Depot
 4171 Broadway
 Oakland, California

Base Map from:
 Aqua Science Engineers, Inc., dated 12/31/1986,
 Google Earth, 2014

P&D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610




APPENDIX A
Soil Boring Logs

BORING NO.: B16		PROJECT NO.: 0398		PROJECT NAME: Auto Depot/Xtra Oil 4171 Broadway, Oakland		
BORING LOCATION: Approximately 13 ft. east of northwest corner of property and 0.5 ft. from Garnet St. curb ELEVATION AND DATUM: None						
DRILLING AGENCY: Cascade Drilling		DRILLER: Artemio		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: Geoprobe 6600				03/13/17 0850	03/13/17 1510	
COMPLETION DEPTH: 22.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 20.0 Feet		NO. OF SAMPLES: 2 Soil, 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 1.0 ft. Asphalt and base rock.			No Well Constructed	7.2	Borehole hand augered from 0.5 to 4.0 ft. using a 3.0-inch O.D. hand auger. Borehole continuously cored from 4.0 to 22.0 ft. using a Geoprobe DT22 soil sampling system
5	1.0 to 9.0 ft. Dark brown sandy clay (CL); medium stiff, moist. Slight to moderate Petroleum Hydrocarbon (PHC) odor from 1.0 to 3.5 ft. Strong PHC odor from 3.5 to 7.0 ft. with bluish-gray staining. (5,15,80)	X B16-4.0 CL		▼	14.1 28 238 170	where the smaller 4.0-foot long 1.25-inch O.D. probe rods are placed inside the 4.0-foot long 2.25-inch O.D. outer casing. The smaller rod was lined with 3.8-foot long 1.75-inch O.D. transparent PVC tube.
	8.0 to 9.0 ft. Abundant coarse angular chert. (35,10,55)				85	4.0 to 8.0 ft. 3.6 ft. recovery 8.0 to 12.0 ft. 3.6 ft. recovery 12.0 to 14.0 ft. 2.0 ft. recovery 14.0 to 16.0 ft. 2.0 ft. recovery 16.0 to 18.0 ft. 2.0 ft. recovery 18.0 to 22.0 ft. 3.6 ft. recovery
10	9.0 to 14.0 ft. Brown silty clay (CL); medium stiff, moist, with orange mottling. No PHC odor. (0,0,100)	X B16-9.0			0	Expansive clays from 12.0 to 20.0 ft. Water encountered during drilling at 20.0 ft. at 0925.
15	14.0 to 18.5 ft. Grayish-brown silt (ML); medium stiff, moist, with black mottling. No PHC odor. (0,0,100)	ML			0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 12.3 ft. at 0940, and at 11.3 ft. at 0950.
20	18.5 to 20.0 ft. Brown silty clay (CL); soft, wet. No PHC odor. (0,0,100)	CL			0	Approximately 0.2-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample B16-W collected at 1400 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 6.1 ft. at 1417.
	20.0 to 22.0 ft. Brown silty fine sand (SM); loose, saturated. No PHC odor. (0,80,20) Wet at 19.5 ft. Saturated at 20.0 ft.	SM		▽	0	Borehole grouted on 03/13/17 using neat cement grout and a tremie pipe.
25						Ms. Lindsay Furuyama with Alameda County Public Works Agency onsite to observe and document grouting of the borehole. <u>Drilling Notes:</u> 1) Field estimates of percent gravel, sand, and fines are shown in parentheses. 2) Density determinations are qualitative and are not based on quantitative evaluation.
30						

BORING NO.: B17		PROJECT NO.: 0398		PROJECT NAME: Auto Depot/Xtra Oil 4171 Broadway, Oakland		
BORING LOCATION: Approximately 40 ft. east of northwest corner of property and 0.5 ft. from Garnet St. curb ELEVATION AND DATUM: None						
DRILLING AGENCY: Cascade Drilling		DRILLER: Artemio		DATE & TIME STARTED: 03/13/17 1000	DATE & TIME FINISHED: 03/13/17 1515	
DRILLING EQUIPMENT: Geoprobe 6600		COMPLETION DEPTH: 22.0 Feet		LOGGED BY: MLBD	CHECKED BY: 	
FIRST WATER DEPTH: 20.0 Feet		BEDROCK DEPTH: Not Encountered				
		NO. OF SAMPLES: 2 Soil, 1 Water				
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 1.0 ft. Asphalt and base rock.			No Well Constructed	119	Borehole hand augered from 0.5 to 4.0 ft. using a 3.0-inch O.D. hand auger. Borehole continuously cored from 4.0 to 22.0 ft. using a Geoprobe DT22 soil sampling system
	1.0 to 2.0 ft. Black clay (CL); medium stiff, moist. Strong Petroleum Hydrocarbon (PHC) odor. (0.5,95)				142	where the smaller 4.0-foot long 1.25-inch O.D. probe rods are placed inside the 4.0-foot long 2.25-inch O.D. outer casing. The smaller rod was lined with 3.8-foot long 1.75-inch O.D. transparent PVC tube.
5	2.0 to 8.0 ft. Dark brown sandy clay (CL); medium stiff, moist, with abundant coarse angular chert from 7.0 to 8.0 ft. (35,10,55)	X B17-4.0		▼	269 8 0	4.0 to 8.0 ft. 3.6 ft. recovery 8.0 to 10.0 ft. 2.0 ft. recovery 10.0 to 12.0 ft. 2.0 ft. recovery 12.0 to 14.0 ft. 2.0 ft. recovery 14.0 to 16.0 ft. 2.0 ft. recovery 16.0 to 18.0 ft. 2.0 ft. recovery 18.0 to 20.0 ft. 2.0 ft. recovery 20.0 to 22.0 ft. 2.0 ft. recovery
10	8.0 to 20.0 ft. Brown silty clay (CL); medium stiff, moist to wet. No PHC odor. (0,0,100)	X B17-9.0 CL			0	Expansive clays from 10.0 to 20.0 ft. Water encountered during drilling at 20.0 ft. at 1015.
15					0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 15.8 ft. at 1020, and at 13.1 ft. at 1030.
20	Wet at 19.5 ft. Saturated at 20.0 ft.				0	Approximately 0.1-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample B17-W collected at 1350 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 6.2 ft. at 1416.
20	20.0 to 22.0 ft. Brown fine sand (SP); loose, saturated. No PHC odor. (0,95,5)	SP		▽	0	
25						Borehole grouted on 03/13/17 using neat cement grout and a tremie pipe. Ms. Lindsay Furuyama with Alameda County Public Works Agency gave verbal authorization to grout the borehole without her presence.
30						<u>Drilling Notes:</u> 1) Field estimates of percent gravel, sand, and fines are shown in parentheses. 2) Density determinations are qualitative and are not based on quantitative evaluation.

P&D ENVIRONMENTAL, INC.

BORING NO.: B18		PROJECT NO.: 0398		PROJECT NAME: Auto Depot/Xtra Oil 4171 Broadway, Oakland		
BORING LOCATION: Approximately 84 ft. east of northwest corner of property and 0.5 ft. from Garnet St. curb ELEVATION AND DATUM: None						
DRILLING AGENCY: Cascade Drilling			DRILLER: Artemio		DATE & TIME STARTED: 03/13/17 1030	
DRILLING EQUIPMENT: Geoprobe 6600					DATE & TIME FINISHED: 03/13/17 1500	
COMPLETION DEPTH: 20.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY: MLBD		
FIRST WATER DEPTH: 19.0 Feet		NO. OF SAMPLES: 2 Soil, 1 Water		CHECKED BY: 		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 1.0 ft. Asphalt and base rock.			No Well Constructed	0	Borehole hand augered from 0.5 to 4.0 ft. using a 3.0-inch O.D. hand auger. Borehole continuously cored from 4.0 to 20.0 ft. using a Geoprobe DT22 soil sampling system where the smaller 4.0-foot long 1.25-inch O.D. probe rods are placed inside the 4.0-foot long 2.25-inch O.D. outer casing. The smaller rod was lined with 3.8-foot long 1.75-inch O.D. transparent PVC tube. Perched water encountered from 7.5 to 11.0 ft.
5	1.0 to 8.0 ft. Dark grayish-brown sandy clay (CL); medium stiff, moist. No Petroleum Hydrocarbon (PHC) odor. (0,20,80)	X B18-4.0 CL		▼	0	
10	8.0 to 11.0 ft. Increase in coarse angular chert. No PHC odor. (20,25,55)	X B18-9.0			0	4.0 to 8.0 ft. 3.6 ft. recovery 8.0 to 10.0 ft. 2.0 ft. recovery 10.0 to 12.0 ft. 2.0 ft. recovery 12.0 to 14.0 ft. 2.0 ft. recovery 14.0 to 18.0 ft. 3.8 ft. recovery 18.0 to 20.0 ft. 2.0 ft. recovery
15	11.0 to 19.0 ft. Brown silty clay (CL); medium stiff, moist to wet. No PHC odor. (0,0,100)	CL			0	Expansive clays from 11.0 to 19.0 ft. Water encountered during drilling at 19.0 ft. at 1050. Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 9.4 ft. at 1055, and at 6.2 ft. at 1105.
	Wet at 18.5 ft. Saturated at 19.0 ft.				0	Approximately 0.1-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample B18-W collected at 1340 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 6.4 ft. at 1415.
20	19.0 to 20.0 ft. Brown fine sand (SP); loose, saturated. No PHC odor. (0,95,5)	SP		▽	0	Borehole grouted on 03/13/17 using neat cement grout and a tremie pipe.
25						Ms. Lindsay Furuyama with Alameda County Public Works Agency gave verbal authorization to grout the borehole without her presence.
30						<u>Drilling Notes:</u> 1) Field estimates of percent gravel, sand, and fines are shown in parentheses. 2) Density determinations are qualitative and are not based on quantitative evaluation.

BORING NO.: B19		PROJECT NO.: 0398		PROJECT NAME: Auto Depot/Xtra Oil 4171 Broadway, Oakland		
BORING LOCATION: Approx. 13 ft. north of southeast corner of property and 1.0 ft. from Broadway street curb ELEVATION AND DATUM: None						
DRILLING AGENCY: Cascade Drilling		DRILLER: Artemio		DATE & TIME STARTED: 03/13/17 0730	DATE & TIME FINISHED: 03/13/17 1445	
DRILLING EQUIPMENT: Geoprobe 6600		COMPLETION DEPTH: 24.0 Feet		LOGGED BY: MLBD	CHECKED BY: 	
FIRST WATER DEPTH: 22.0 Feet		BEDROCK DEPTH: Not Encountered				
		NO. OF SAMPLES: 2 Soil, 1 Water				
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 1.0 ft. Concrete (4-inches) and base rock.			No Well Constructed		
	1.0 to 3.0 ft. Dark brown gravelly clayey sand (FILL); with brick fragments. No Petroleum Hydrocarbon (PHC) odor. (15,65,20)	FILL			0	Borehole hand augered from 0.5 to 4.0 ft. using a 3.0-inch O.D. hand auger. Borehole continuously cored from 4.0 to 24.0 ft. using a Geoprobe DT22 soil sampling system where the smaller 4.0-foot long 1.25-inch O.D. probe rods are placed inside the 4.0-foot long 2.25-inch O.D. outer casing. The smaller rod was lined with 3.8-foot long 1.75-inch O.D. transparent PVC tube.
5	3.0 to 12.0 ft. Dark brown clay (CL); medium stiff, moist. (0,0,100)	X B19-4.0		▼	0	
	6.0 to 12.0 ft. Color change to olive-gray.	CL			0	4.0 to 8.0 ft. 3.6 ft. recovery 8.0 to 12.0 ft. 3.8 ft. recovery 12.0 to 16.0 ft. 3.8 ft. recovery 16.0 to 18.0 ft. 2.0 ft. recovery 18.0 to 20.0 ft. 2.0 ft. recovery 20.0 to 22.0 ft. 2.0 ft. recovery 22.0 to 24.0 ft. 2.0 ft. recovery
10	Slight PHC odor from 9.0 to 13.0 ft.	X B19-9.0			1.2	
	12.0 to 13.0 ft. Olive-gray gravelly clayey sand (SC); medium dense, moist, with abundant coarse angular chert. Slight PHC odor and bluish-green staining. (20,50,30)	SC			2.6	
15	13.0 to 21.0 ft. Brown silty clay (CL); medium stiff to soft, with gray mottling. No PHC odor. (0,0,100)	CL			2.1	Expansive clays from 13.0 to 22.0 ft.
	21.0 to 22.0 ft. Brown silt (ML); soft, wet. No PHC odor. (0,0,100) Wet at 21.5 ft. Saturated at 22.0 ft.	ML			1.7	Water encountered during drilling at 22.0 ft. at 0820.
	22.0 to 24.0 ft. Brown silty fine sand (SM); loose, saturated. No PHC odor. (0,80,20)	SM		▽	0.8	Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 8.2 ft. at 0840, and at 6.8 ft. at 0850.
25					0	Approximately 0.2-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample B19-W collected at 1335 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 5.1 ft. at 1413.
						Borehole grouted on 03/13/17 using neat cement grout and a tremie pipe.
						Ms. Lindsay Furuyama with Alameda County Public Works Agency gave verbal authorization to grout the borehole without her presence.
30						<u>Drilling Notes:</u> 1) Field estimates of percent gravel, sand, and fines are shown in parentheses. 2) Density determinations are qualitative and are not based on quantitative evaluation.

BORING NO.: B20		PROJECT NO.: 0398		PROJECT NAME: Auto Depot/Xtra Oil 4171 Broadway, Oakland		
BORING LOCATION: Approx. 20 ft. south and 25 ft. west of northeast corner of 4145 Broadway				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Artemio		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: Geoprobe 6600				03/13/17 1230	03/13/17 1545	
COMPLETION DEPTH: 26.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 25.0 Feet		NO. OF SAMPLES: 2 Soil, 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 1.0 ft. Concrete (4-inches) and base rock.			No Well Constructed	0	Borehole hand augered from 0.5 to 4.0 ft. using a 3.0-inch O.D. hand auger. Borehole continuously cored from 4.0 to 25.0 ft. using a Geoprobe DT22 soil sampling system where the smaller 4.0-foot long 1.25-inch O.D. probe rods are placed inside the 4.0-foot long 2.25-inch O.D. outer casing. The smaller rod was lined with 3.8-foot long 1.75-inch O.D. transparent PVC tube.
	1.0 to 2.5 ft. Black sandy clay (CL); medium stiff, moist. No Petroleum Hydrocarbon (PHC) odor. (0,20,80)					
5	2.5 to 8.0 ft. Dark brown silty clay (CL); medium stiff, moist.	X B20-4.0 CL			0	
	Slight PHC odor at 7.5 ft.					
	8.0 to 10.0 ft. Bluish-gray gravelly clayey sand (SC); medium dense, moist, with abundant coarse angular chert, strong PHC odor, and bluish-green staining from 9.0 to 10.5 ft.	X B20-9.0 SC			6.2 767 407 301 3.1	4.0 to 8.0 ft. 3.8 ft. recovery 8.0 to 10.0 ft. 2.0 ft. recovery 10.0 to 14.0 ft. 3.8 ft. recovery 14.0 to 16.0 ft. 2.0 ft. recovery 16.0 to 18.0 ft. 2.0 ft. recovery 18.0 to 20.0 ft. 2.0 ft. recovery 20.0 to 22.0 ft. 2.0 ft. recovery 22.0 to 24.0 ft. 2.0 ft. recovery 24.0 to 26.0 ft. 2.0 ft. recovery
10						
	10.0 to 22.0 ft. Brown silty clay (CL); medium stiff, moist to wet, with black mottling. No PHC odor. (0,0,100)	CL			0	Expansive clays from 14.0 to 21.0 ft. Water encountered during drilling at 25.0 ft. at 1310. Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 11.3 ft. at 1320, and at 6.9 ft. at 1330.
15						
	22.0 to 24.0 ft. Olive-brown silt (ML); medium stiff, moist to wet. No PHC odor. (0,0,100)	ML			0	Approximately 0.2-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample B20-W collected at 1420 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 5.9 ft. at 1430.
	24.0 to 25.0 ft. Brown silty fine sand (SM); loose, saturated. No PHC odor. (0,80,20) Wet at 24.5 ft. Saturated at 25.0 ft.	SM				
25	25.0 to 26.0 ft. Olive-brown silt (ML); soft, wet, with gray mottling. No PHC odor. (0,0,1000)	ML			0	Borehole grouted on 03/13/17 using neat cement grout and a tremie pipe. Ms. Lindsay Furuyama with Alameda County Public Works Agency gave verbal authorization to grout the borehole without her presence.
30						<u>Drilling Notes:</u> 1) Field estimates of percent gravel, sand, and fines are shown in parentheses. 2) Density determinations are qualitative and are not based on quantitative evaluation.

BORING NO.: B21		PROJECT NO.: 0398		PROJECT NAME: Auto Depot/Xtra Oil 4171 Broadway, Oakland		
BORING LOCATION: Approx. 12 ft. north and 30 ft. east of southwest corner of property				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Artemio		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: Geoprobe 6600				03/13/17 1110	03/13/17 1530	
COMPLETION DEPTH: 24.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 23.5 Feet		NO. OF SAMPLES: 2 Soil, 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 1.0 ft. Concrete (4-inches) and base rock.			No Well Constructed	0	Borehole hand augered from 0.5 to 4.0 ft. using a 3.0-inch O.D. hand auger. Borehole continuously cored from 4.0 to 24.0 ft. using a Geoprobe DT22 soil sampling system where the smaller 4.0-foot long 1.25-inch O.D. probe rods are placed inside the 4.0-foot long 2.25-inch O.D. outer casing. The smaller rod was lined with 3.8-foot long 1.75-inch O.D. transparent PVC tube.
5	1.0 to 8.0 ft. Black sandy clay (CL); medium stiff, moist. Slight Petroleum Hydrocarbon (PHC) odor from 1.5 to 6.0 ft. (0,20,80) Strong PHC odor and bluish-green staining from 6.5 to 8.0 ft.	X B21-4.0 CL			1.6 3.1 4.2 6.5 8.4	
10	8.0 to 10.0 ft. Dark gray gravelly clayey sand (SC); medium dense, moist, with bluish-green staining and strong PHC odor from 8.0 to 9.5 ft. (30,45,25)	X B21-9.0 SC		▼	273 469 671 2.1	4.0 to 8.0 ft. 3.6 ft. recovery 8.0 to 10.0 ft. 2.0 ft. recovery 10.0 to 12.0 ft. 2.0 ft. recovery 12.0 to 14.0 ft. 2.0 ft. recovery 14.0 to 16.0 ft. 2.0 ft. recovery 16.0 to 18.0 ft. 2.0 ft. recovery 18.0 to 20.0 ft. 2.0 ft. recovery 20.0 to 22.0 ft. 2.0 ft. recovery 22.0 to 24.0 ft. 2.0 ft. recovery
15	10.0 to 18.0 ft. Brown silty clay (CL); medium stiff, moist, with black mottling. No PHC odor. (0,0,100)	CL			0	Expansive clays from 10.0 to 23.5 ft. Water encountered during drilling at 23.5 ft. at 1135. Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 10.8 ft. at 1155, and at 9.6 ft. at 1205.
20	18.0 to 20.0 ft. Grayish-brown silt (ML); medium stiff, moist. No PHC odor. (0,0,100)	ML			0	Approximately 0.2-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample B21-W collected at 1410 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 9.5 ft. at 1419.
	20.0 to 23.5 ft. Brown silty clay (CL); medium stiff to soft, moist to wet, with black mottling. No PHC odor. (0,0,100) Wet at 23.0 ft. Saturated at 23.5 ft.	CL			0	Borehole grouted on 03/13/17 using neat cement grout and a tremie pipe. Ms. Lindsay Furuyama with Alameda
	23.5 to 24.0 ft. Fine sand (SP); loose, saturated. No PHC odor. (0,85,15)	SP		▽		
25						County Public Works Agency gave verbal authorization to grout the borehole without her presence. <u>Drilling Notes:</u>
						1) Field estimates of percent gravel, sand, and fines are shown in parentheses. 2) Density determinations are qualitative and are not based on quantitative evaluation.
30						

APPENDIX B

Purge Volume Calculations and Soil Gas Sampling Data Sheet

Soil Gas Purge Volume Calculations

One Purge Volume is calculated as

- 1 The volume of the hole through the slab,
- 2 Plus the volume of the hole beneath the slab,
- 3 Plus the volume of the tube in the Vapor Pin,
- 4 Plus the volume of the tube connecting the Vapor Pin to the sample container,
- 5 Less the volume of the hole through the slab for any drilling for recessed Vapor Pin placement
- 6 Less the volume of the Vapor Pin

1 The slab borehole volume is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)

Slab Thickness = 4.5 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 4.0 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (4.0 in.) = 1.23 cubic inches.

2 The sub-slab borehole volume is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)

Depth below slab = 2 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 2.0 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (2.0 in.) = 0.61 cubic inches.

3 The Vapor Pin tube volume is calculated as follows:

Tubing diameter = 0.125 inches

Tubing Length = 2 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.125 in./2, and h = 2.0 in.

V borehole = 3.14 x (0.0625 x 0.0625) x (2.0 in.) = 0.02 cubic inches.

4 The tube volume connecting the Vapor Pin to the sample container is calculated as follows:

Tubing diameter = 0.187 inches

Tubing Length = 24 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.187 in./2, and h = 24.0 in.

V borehole = 3.14 x (0.0935 x 0.0935) x (24.0 in.) = 0.66 cubic inches.

5 The slab borehole volume that is removed for the recessed Vapor Pin is calculated as follows:

Borehole slab dia. = 0.625 inches (this is 5/8 inch diameter)

Slab Thickness = 1.75 inches (if Vapor Pin is recessed this is 1.75 inches)

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 1.8 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (1.8 in.) = 0.54 cubic inches.

6 The Vapor Pin volume is calculated as follows:

Vapor Pin diameter = 0.625 inches (this is 5/8 inch diameter)

Vapor Pin Length = 2 inches

V borehole = pi x (r x r) x h, where pi = 3.14, r = 0.625 in./2, and h = 2.0 in.

V borehole = 3.14 x (0.3125 x 0.3125) x (2.0 in.) = 0.61 cubic inches.

The total volume for one purge volume is V slab borehole + V sub-slab borehole + V vapor pin tube + V tubing connecting vapor pin to sample container

- V slab borehole for recessed vapor pin - V vapor pin

V total = 1.23 cubic inches + 0.61 cubic inches + 0.02 cubic inches + 0.66 cubic inches - 0.54 cubic inches - 0.61 cubic inches = 1.37 cubic inches.

To convert to cubic centimeters:

V total = 1.37 cubic inches x 16.39 cubic centimeters/cubic inches = 22.5 cubic centimeters.

The total volume for 3 purge volume(s) is calculated as follows:

V purge total = 22.5 cubic centimeters x 3 = 67.5 cubic centimeters.

The flow controller has a nominal flow rate of 150 cubic centimeters per minute.

The purge time is calculated as follows:

T purge = 68 cubic centimeters/ 150 cubic centimeters per minute = 0.45 minutes.

Converting the purge time to seconds, 0.45 minutes x 60 seconds/ minute = 27 seconds.

Notes:

- Yellow hi-lite indicates data entry required.
- Blue hi-lite indicates values are calculated or automatically updated.

SOIL GAS SAMPLING DATA SHEET

Address: *1171 Broadway, Cape Cod*
 Job #: *371617*
 Date: *02/16/17*
 Sampler Name: *MSBP*
 Drilling Company: *Casualty Drilling, L.L.C.*

Probe Method (check one)
 PRT
 Temp Well
 Permanent Well
 Vapor Pin

Soil Gas Location Designation	Probe Depth (ft)	Time Probe Installation Completed	Canister #	Sample Canister Initial Vacuum Check (in. Hg) and time	Start leak check vacuum (in. Hg) and time	End leak check vacuum (in. Hg) and time	ADDITIONAL leak check vacuum (in. Hg) and time	Start PURGE time	End PURGE time	Start of tracer gas injection time	Begin sample collection vacuum (in. Hg) and time	End sample collection vacuum (in. Hg) and time	PID value in Teflon tube after sample collection	NOTES
SG I	0.25		112461	vac -30 time 1605	vac -30 time 1615	vac -30 time 1625		time 162000	time 162017	time 160017	vac -30 time 164700	vac -5 time 162255	ppm 0	DFA 1449 R-IRVADOL 1738
SG II	0.25		110867	vac -30 time 1610	vac -30 time 1615	vac -30 time 1625		time 163000	time 163017	time 164700	vac -30 time 164700	vac time 162255	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	
SG				vac time	vac time	vac time					vac time	vac time	ppm	

VPI DUMP

APPENDIX C

Weather Information

APPENDIX D

Laboratory Analytical Reports and Chain of Custody Documentation

- **McC Campbell Work Order # 1703713: Soil Samples Collected from Boreholes B16 Through B21 Results**
- **McC Campbell Work Order # 1703712: Groundwater Samples Collected from Boreholes B16 Through B21 Results**
- **Air Toxics Work Order # 1703337: Soil Gas Samples VP1 and VP1-DUP TO15 Results**
- **Air Toxics Work Order # 1703305: Soil Gas Samples VP1 10CC, VP1 50CC, VP1-REP 10CC and VP1-REP 50CC TO17 Results**
- **Air Toxics Work Order # 1703300: Sample Shroud Samples VP1-DFA TO15 Results**
- **Air Toxics Work Order # 1703301: Sample Shroud Samples VP1-2-Propanol TO15 Results**
- **Air Toxics Work Order # 1703337B: Soil Gas Sample VP1 and VP1-DUP ASTM D-1946 Results**



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1703713

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Paul King

Project P.O.:

Project Name: 0398; Auto Depot/Xtra Oil Co.

Project Received: 03/14/2017

Analytical Report reviewed & approved for release on 03/21/2017 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0398; Auto Depot/Xtra Oil Co.
WorkOrder: 1703713

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0398; Auto Depot/Xtra Oil Co.
WorkOrder: 1703713

Analytical Qualifiers

S	surrogate spike recovery outside accepted recovery limits
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
c7	surrogate value diluted out of range
d1	weakly modified or unmodified gasoline is significant
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9	no recognizable pattern
e2	diesel range compounds are significant; no recognizable pattern
e3/e2	aged diesel is significant; and/or diesel range compounds are significant; no recognizable pattern
e4	gasoline range compounds are significant.
e7	oil range compounds are significant
e11	stoddard solvent/mineral spirit (?)

Quality Control Qualifiers

F2	LCS/LCSD recovery and/or RPD is out of acceptance criteria.
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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-4.0	1703713-001A	Soil	03/13/2017 09:10	GC18	135554

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	2.0	20	03/18/2017 23:54
tert-Amyl methyl ether (TAME)	ND	0.10	20	03/18/2017 23:54
Benzene	ND	0.10	20	03/18/2017 23:54
Bromobenzene	ND	0.10	20	03/18/2017 23:54
Bromochloromethane	ND	0.10	20	03/18/2017 23:54
Bromodichloromethane	ND	0.10	20	03/18/2017 23:54
Bromoform	ND	0.10	20	03/18/2017 23:54
Bromomethane	ND	0.10	20	03/18/2017 23:54
2-Butanone (MEK)	ND	0.40	20	03/18/2017 23:54
t-Butyl alcohol (TBA)	ND	1.0	20	03/18/2017 23:54
n-Butyl benzene	ND	0.10	20	03/18/2017 23:54
sec-Butyl benzene	ND	0.10	20	03/18/2017 23:54
tert-Butyl benzene	ND	0.10	20	03/18/2017 23:54
Carbon Disulfide	ND	0.10	20	03/18/2017 23:54
Carbon Tetrachloride	ND	0.10	20	03/18/2017 23:54
Chlorobenzene	ND	0.10	20	03/18/2017 23:54
Chloroethane	ND	0.10	20	03/18/2017 23:54
Chloroform	ND	0.10	20	03/18/2017 23:54
Chloromethane	ND	0.10	20	03/18/2017 23:54
2-Chlorotoluene	ND	0.10	20	03/18/2017 23:54
4-Chlorotoluene	ND	0.10	20	03/18/2017 23:54
Dibromochloromethane	ND	0.10	20	03/18/2017 23:54
1,2-Dibromo-3-chloropropane	ND	0.080	20	03/18/2017 23:54
1,2-Dibromoethane (EDB)	ND	0.080	20	03/18/2017 23:54
Dibromomethane	ND	0.10	20	03/18/2017 23:54
1,2-Dichlorobenzene	ND	0.10	20	03/18/2017 23:54
1,3-Dichlorobenzene	ND	0.10	20	03/18/2017 23:54
1,4-Dichlorobenzene	ND	0.10	20	03/18/2017 23:54
Dichlorodifluoromethane	ND	0.10	20	03/18/2017 23:54
1,1-Dichloroethane	ND	0.10	20	03/18/2017 23:54
1,2-Dichloroethane (1,2-DCA)	ND	0.080	20	03/18/2017 23:54
1,1-Dichloroethene	ND	0.10	20	03/18/2017 23:54
cis-1,2-Dichloroethene	ND	0.10	20	03/18/2017 23:54
trans-1,2-Dichloroethene	ND	0.10	20	03/18/2017 23:54
1,2-Dichloropropane	ND	0.10	20	03/18/2017 23:54
1,3-Dichloropropane	ND	0.10	20	03/18/2017 23:54
2,2-Dichloropropane	ND	0.10	20	03/18/2017 23:54

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-4.0	1703713-001A	Soil	03/13/2017 09:10	GC18	135554

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.10	20	03/18/2017 23:54
cis-1,3-Dichloropropene	ND	0.10	20	03/18/2017 23:54
trans-1,3-Dichloropropene	ND	0.10	20	03/18/2017 23:54
Diisopropyl ether (DIPE)	ND	0.10	20	03/18/2017 23:54
Ethylbenzene	ND	0.10	20	03/18/2017 23:54
Ethyl tert-butyl ether (ETBE)	ND	0.10	20	03/18/2017 23:54
Freon 113	ND	0.10	20	03/18/2017 23:54
Hexachlorobutadiene	ND	0.10	20	03/18/2017 23:54
Hexachloroethane	ND	0.10	20	03/18/2017 23:54
2-Hexanone	ND	0.10	20	03/18/2017 23:54
Isopropylbenzene	ND	0.10	20	03/18/2017 23:54
4-Isopropyl toluene	ND	0.10	20	03/18/2017 23:54
Methyl-t-butyl ether (MTBE)	ND	0.10	20	03/18/2017 23:54
Methylene chloride	ND	0.10	20	03/18/2017 23:54
4-Methyl-2-pentanone (MIBK)	ND	0.10	20	03/18/2017 23:54
Naphthalene	ND	0.10	20	03/18/2017 23:54
n-Propyl benzene	0.11	0.10	20	03/18/2017 23:54
Styrene	ND	0.10	20	03/18/2017 23:54
1,1,1,2-Tetrachloroethane	ND	0.10	20	03/18/2017 23:54
1,1,2,2-Tetrachloroethane	ND	0.10	20	03/18/2017 23:54
Tetrachloroethene	ND	0.10	20	03/18/2017 23:54
Toluene	ND	0.10	20	03/18/2017 23:54
1,2,3-Trichlorobenzene	ND	0.10	20	03/18/2017 23:54
1,2,4-Trichlorobenzene	ND	0.10	20	03/18/2017 23:54
1,1,1-Trichloroethane	ND	0.10	20	03/18/2017 23:54
1,1,2-Trichloroethane	ND	0.10	20	03/18/2017 23:54
Trichloroethene	ND	0.10	20	03/18/2017 23:54
Trichlorofluoromethane	ND	0.10	20	03/18/2017 23:54
1,2,3-Trichloropropane	ND	0.10	20	03/18/2017 23:54
1,2,4-Trimethylbenzene	ND	0.10	20	03/18/2017 23:54
1,3,5-Trimethylbenzene	ND	0.10	20	03/18/2017 23:54
Vinyl Chloride	ND	0.10	20	03/18/2017 23:54
Xylenes, Total	ND	0.10	20	03/18/2017 23:54

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-4.0	1703713-001A	Soil	03/13/2017 09:10	GC18	135554

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	107	70-130		03/18/2017 23:54
Toluene-d8	96	70-130		03/18/2017 23:54
4-BFB	89	70-130		03/18/2017 23:54
Benzene-d6	90	60-140		03/18/2017 23:54
Ethylbenzene-d10	84	60-140		03/18/2017 23:54
1,2-DCB-d4	86	60-140		03/18/2017 23:54

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-9.0	1703713-002A	Soil	03/13/2017 09:15	GC16	135554

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/17/2017 06:03
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/17/2017 06:03
Benzene	ND	0.0050	1	03/17/2017 06:03
Bromobenzene	ND	0.0050	1	03/17/2017 06:03
Bromochloromethane	ND	0.0050	1	03/17/2017 06:03
Bromodichloromethane	ND	0.0050	1	03/17/2017 06:03
Bromoform	ND	0.0050	1	03/17/2017 06:03
Bromomethane	ND	0.0050	1	03/17/2017 06:03
2-Butanone (MEK)	ND	0.020	1	03/17/2017 06:03
t-Butyl alcohol (TBA)	ND	0.050	1	03/17/2017 06:03
n-Butyl benzene	ND	0.0050	1	03/17/2017 06:03
sec-Butyl benzene	ND	0.0050	1	03/17/2017 06:03
tert-Butyl benzene	ND	0.0050	1	03/17/2017 06:03
Carbon Disulfide	ND	0.0050	1	03/17/2017 06:03
Carbon Tetrachloride	ND	0.0050	1	03/17/2017 06:03
Chlorobenzene	ND	0.0050	1	03/17/2017 06:03
Chloroethane	ND	0.0050	1	03/17/2017 06:03
Chloroform	ND	0.0050	1	03/17/2017 06:03
Chloromethane	ND	0.0050	1	03/17/2017 06:03
2-Chlorotoluene	ND	0.0050	1	03/17/2017 06:03
4-Chlorotoluene	ND	0.0050	1	03/17/2017 06:03
Dibromochloromethane	ND	0.0050	1	03/17/2017 06:03
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/17/2017 06:03
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/17/2017 06:03
Dibromomethane	ND	0.0050	1	03/17/2017 06:03
1,2-Dichlorobenzene	ND	0.0050	1	03/17/2017 06:03
1,3-Dichlorobenzene	ND	0.0050	1	03/17/2017 06:03
1,4-Dichlorobenzene	ND	0.0050	1	03/17/2017 06:03
Dichlorodifluoromethane	ND	0.0050	1	03/17/2017 06:03
1,1-Dichloroethane	ND	0.0050	1	03/17/2017 06:03
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/17/2017 06:03
1,1-Dichloroethene	ND	0.0050	1	03/17/2017 06:03
cis-1,2-Dichloroethene	ND	0.0050	1	03/17/2017 06:03
trans-1,2-Dichloroethene	ND	0.0050	1	03/17/2017 06:03
1,2-Dichloropropane	ND	0.0050	1	03/17/2017 06:03
1,3-Dichloropropane	ND	0.0050	1	03/17/2017 06:03
2,2-Dichloropropane	ND	0.0050	1	03/17/2017 06:03

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-9.0	1703713-002A	Soil	03/13/2017 09:15	GC16	135554

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/17/2017 06:03
cis-1,3-Dichloropropene	ND	0.0050	1	03/17/2017 06:03
trans-1,3-Dichloropropene	ND	0.0050	1	03/17/2017 06:03
Diisopropyl ether (DIPE)	ND	0.0050	1	03/17/2017 06:03
Ethylbenzene	ND	0.0050	1	03/17/2017 06:03
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/17/2017 06:03
Freon 113	ND	0.0050	1	03/17/2017 06:03
Hexachlorobutadiene	ND	0.0050	1	03/17/2017 06:03
Hexachloroethane	ND	0.0050	1	03/17/2017 06:03
2-Hexanone	ND	0.0050	1	03/17/2017 06:03
Isopropylbenzene	ND	0.0050	1	03/17/2017 06:03
4-Isopropyl toluene	ND	0.0050	1	03/17/2017 06:03
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/17/2017 06:03
Methylene chloride	ND	0.0050	1	03/17/2017 06:03
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/17/2017 06:03
Naphthalene	ND	0.0050	1	03/17/2017 06:03
n-Propyl benzene	ND	0.0050	1	03/17/2017 06:03
Styrene	ND	0.0050	1	03/17/2017 06:03
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/17/2017 06:03
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/17/2017 06:03
Tetrachloroethene	ND	0.0050	1	03/17/2017 06:03
Toluene	ND	0.0050	1	03/17/2017 06:03
1,2,3-Trichlorobenzene	ND	0.0050	1	03/17/2017 06:03
1,2,4-Trichlorobenzene	ND	0.0050	1	03/17/2017 06:03
1,1,1-Trichloroethane	ND	0.0050	1	03/17/2017 06:03
1,1,2-Trichloroethane	ND	0.0050	1	03/17/2017 06:03
Trichloroethene	ND	0.0050	1	03/17/2017 06:03
Trichlorofluoromethane	ND	0.0050	1	03/17/2017 06:03
1,2,3-Trichloropropane	ND	0.0050	1	03/17/2017 06:03
1,2,4-Trimethylbenzene	ND	0.0050	1	03/17/2017 06:03
1,3,5-Trimethylbenzene	ND	0.0050	1	03/17/2017 06:03
Vinyl Chloride	ND	0.0050	1	03/17/2017 06:03
Xylenes, Total	ND	0.0050	1	03/17/2017 06:03

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-9.0	1703713-002A	Soil	03/13/2017 09:15	GC16	135554

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	96	70-130		03/17/2017 06:03
Toluene-d8	105	70-130		03/17/2017 06:03
4-BFB	111	70-130		03/17/2017 06:03
Benzene-d6	95	60-140		03/17/2017 06:03
Ethylbenzene-d10	111	60-140		03/17/2017 06:03
1,2-DCB-d4	79	60-140		03/17/2017 06:03

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4.0	1703713-003A	Soil	03/13/2017 10:05	GC10	135554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.20	2	03/19/2017 03:47
tert-Amyl methyl ether (TAME)	ND		0.010	2	03/19/2017 03:47
Benzene	ND		0.010	2	03/19/2017 03:47
Bromobenzene	ND		0.010	2	03/19/2017 03:47
Bromochloromethane	ND		0.010	2	03/19/2017 03:47
Bromodichloromethane	ND		0.010	2	03/19/2017 03:47
Bromoform	ND		0.010	2	03/19/2017 03:47
Bromomethane	ND		0.010	2	03/19/2017 03:47
2-Butanone (MEK)	ND		0.040	2	03/19/2017 03:47
t-Butyl alcohol (TBA)	ND		0.10	2	03/19/2017 03:47
n-Butyl benzene	0.054		0.010	2	03/19/2017 03:47
sec-Butyl benzene	0.053		0.010	2	03/19/2017 03:47
tert-Butyl benzene	ND		0.010	2	03/19/2017 03:47
Carbon Disulfide	ND		0.010	2	03/19/2017 03:47
Carbon Tetrachloride	ND		0.010	2	03/19/2017 03:47
Chlorobenzene	ND		0.010	2	03/19/2017 03:47
Chloroethane	ND		0.010	2	03/19/2017 03:47
Chloroform	ND		0.010	2	03/19/2017 03:47
Chloromethane	ND		0.010	2	03/19/2017 03:47
2-Chlorotoluene	ND		0.010	2	03/19/2017 03:47
4-Chlorotoluene	ND		0.010	2	03/19/2017 03:47
Dibromochloromethane	ND		0.010	2	03/19/2017 03:47
1,2-Dibromo-3-chloropropane	ND		0.0080	2	03/19/2017 03:47
1,2-Dibromoethane (EDB)	ND		0.0080	2	03/19/2017 03:47
Dibromomethane	ND		0.010	2	03/19/2017 03:47
1,2-Dichlorobenzene	ND		0.010	2	03/19/2017 03:47
1,3-Dichlorobenzene	ND		0.010	2	03/19/2017 03:47
1,4-Dichlorobenzene	ND		0.010	2	03/19/2017 03:47
Dichlorodifluoromethane	ND		0.010	2	03/19/2017 03:47
1,1-Dichloroethane	ND		0.010	2	03/19/2017 03:47
1,2-Dichloroethane (1,2-DCA)	ND		0.0080	2	03/19/2017 03:47
1,1-Dichloroethene	ND		0.010	2	03/19/2017 03:47
cis-1,2-Dichloroethene	ND		0.010	2	03/19/2017 03:47
trans-1,2-Dichloroethene	ND		0.010	2	03/19/2017 03:47
1,2-Dichloropropane	ND		0.010	2	03/19/2017 03:47
1,3-Dichloropropane	ND		0.010	2	03/19/2017 03:47
2,2-Dichloropropane	ND		0.010	2	03/19/2017 03:47

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4.0	1703713-003A	Soil	03/13/2017 10:05	GC10	135554

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.010	2	03/19/2017 03:47
cis-1,3-Dichloropropene	ND	0.010	2	03/19/2017 03:47
trans-1,3-Dichloropropene	ND	0.010	2	03/19/2017 03:47
Diisopropyl ether (DIPE)	ND	0.010	2	03/19/2017 03:47
Ethylbenzene	ND	0.010	2	03/19/2017 03:47
Ethyl tert-butyl ether (ETBE)	ND	0.010	2	03/19/2017 03:47
Freon 113	ND	0.010	2	03/19/2017 03:47
Hexachlorobutadiene	ND	0.010	2	03/19/2017 03:47
Hexachloroethane	ND	0.010	2	03/19/2017 03:47
2-Hexanone	ND	0.010	2	03/19/2017 03:47
Isopropylbenzene	ND	0.010	2	03/19/2017 03:47
4-Isopropyl toluene	ND	0.010	2	03/19/2017 03:47
Methyl-t-butyl ether (MTBE)	ND	0.010	2	03/19/2017 03:47
Methylene chloride	ND	0.010	2	03/19/2017 03:47
4-Methyl-2-pentanone (MIBK)	ND	0.010	2	03/19/2017 03:47
Naphthalene	ND	0.010	2	03/19/2017 03:47
n-Propyl benzene	0.018	0.010	2	03/19/2017 03:47
Styrene	ND	0.010	2	03/19/2017 03:47
1,1,1,2-Tetrachloroethane	ND	0.010	2	03/19/2017 03:47
1,1,2,2-Tetrachloroethane	ND	0.010	2	03/19/2017 03:47
Tetrachloroethene	ND	0.010	2	03/19/2017 03:47
Toluene	ND	0.010	2	03/19/2017 03:47
1,2,3-Trichlorobenzene	ND	0.010	2	03/19/2017 03:47
1,2,4-Trichlorobenzene	ND	0.010	2	03/19/2017 03:47
1,1,1-Trichloroethane	ND	0.010	2	03/19/2017 03:47
1,1,2-Trichloroethane	ND	0.010	2	03/19/2017 03:47
Trichloroethene	ND	0.010	2	03/19/2017 03:47
Trichlorofluoromethane	ND	0.010	2	03/19/2017 03:47
1,2,3-Trichloropropane	ND	0.010	2	03/19/2017 03:47
1,2,4-Trimethylbenzene	ND	0.010	2	03/19/2017 03:47
1,3,5-Trimethylbenzene	ND	0.010	2	03/19/2017 03:47
Vinyl Chloride	ND	0.010	2	03/19/2017 03:47
Xylenes, Total	ND	0.010	2	03/19/2017 03:47

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4.0	1703713-003A	Soil	03/13/2017 10:05	GC10	135554

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
Dibromofluoromethane	94		70-130	03/19/2017 03:47
Toluene-d8	93		70-130	03/19/2017 03:47
4-BFB	342	S	70-130	03/19/2017 03:47
Benzene-d6	96		60-140	03/19/2017 03:47
Ethylbenzene-d10	101		60-140	03/19/2017 03:47
1,2-DCB-d4	107		60-140	03/19/2017 03:47

Analyst(s): KF

Analytical Comments: c7



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-9.0	1703713-004A	Soil	03/13/2017 10:10	GC16	135554

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/17/2017 03:25
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/17/2017 03:25
Benzene	ND	0.0050	1	03/17/2017 03:25
Bromobenzene	ND	0.0050	1	03/17/2017 03:25
Bromochloromethane	ND	0.0050	1	03/17/2017 03:25
Bromodichloromethane	ND	0.0050	1	03/17/2017 03:25
Bromoform	ND	0.0050	1	03/17/2017 03:25
Bromomethane	ND	0.0050	1	03/17/2017 03:25
2-Butanone (MEK)	ND	0.020	1	03/17/2017 03:25
t-Butyl alcohol (TBA)	ND	0.050	1	03/17/2017 03:25
n-Butyl benzene	ND	0.0050	1	03/17/2017 03:25
sec-Butyl benzene	ND	0.0050	1	03/17/2017 03:25
tert-Butyl benzene	ND	0.0050	1	03/17/2017 03:25
Carbon Disulfide	ND	0.0050	1	03/17/2017 03:25
Carbon Tetrachloride	ND	0.0050	1	03/17/2017 03:25
Chlorobenzene	ND	0.0050	1	03/17/2017 03:25
Chloroethane	ND	0.0050	1	03/17/2017 03:25
Chloroform	ND	0.0050	1	03/17/2017 03:25
Chloromethane	ND	0.0050	1	03/17/2017 03:25
2-Chlorotoluene	ND	0.0050	1	03/17/2017 03:25
4-Chlorotoluene	ND	0.0050	1	03/17/2017 03:25
Dibromochloromethane	ND	0.0050	1	03/17/2017 03:25
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/17/2017 03:25
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/17/2017 03:25
Dibromomethane	ND	0.0050	1	03/17/2017 03:25
1,2-Dichlorobenzene	ND	0.0050	1	03/17/2017 03:25
1,3-Dichlorobenzene	ND	0.0050	1	03/17/2017 03:25
1,4-Dichlorobenzene	ND	0.0050	1	03/17/2017 03:25
Dichlorodifluoromethane	ND	0.0050	1	03/17/2017 03:25
1,1-Dichloroethane	ND	0.0050	1	03/17/2017 03:25
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/17/2017 03:25
1,1-Dichloroethene	ND	0.0050	1	03/17/2017 03:25
cis-1,2-Dichloroethene	ND	0.0050	1	03/17/2017 03:25
trans-1,2-Dichloroethene	ND	0.0050	1	03/17/2017 03:25
1,2-Dichloropropane	ND	0.0050	1	03/17/2017 03:25
1,3-Dichloropropane	ND	0.0050	1	03/17/2017 03:25
2,2-Dichloropropane	ND	0.0050	1	03/17/2017 03:25

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-9.0	1703713-004A	Soil	03/13/2017 10:10	GC16	135554

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/17/2017 03:25
cis-1,3-Dichloropropene	ND	0.0050	1	03/17/2017 03:25
trans-1,3-Dichloropropene	ND	0.0050	1	03/17/2017 03:25
Diisopropyl ether (DIPE)	ND	0.0050	1	03/17/2017 03:25
Ethylbenzene	ND	0.0050	1	03/17/2017 03:25
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/17/2017 03:25
Freon 113	ND	0.0050	1	03/17/2017 03:25
Hexachlorobutadiene	ND	0.0050	1	03/17/2017 03:25
Hexachloroethane	ND	0.0050	1	03/17/2017 03:25
2-Hexanone	ND	0.0050	1	03/17/2017 03:25
Isopropylbenzene	ND	0.0050	1	03/17/2017 03:25
4-Isopropyl toluene	ND	0.0050	1	03/17/2017 03:25
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/17/2017 03:25
Methylene chloride	ND	0.0050	1	03/17/2017 03:25
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/17/2017 03:25
Naphthalene	ND	0.0050	1	03/17/2017 03:25
n-Propyl benzene	ND	0.0050	1	03/17/2017 03:25
Styrene	ND	0.0050	1	03/17/2017 03:25
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/17/2017 03:25
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/17/2017 03:25
Tetrachloroethene	ND	0.0050	1	03/17/2017 03:25
Toluene	ND	0.0050	1	03/17/2017 03:25
1,2,3-Trichlorobenzene	ND	0.0050	1	03/17/2017 03:25
1,2,4-Trichlorobenzene	ND	0.0050	1	03/17/2017 03:25
1,1,1-Trichloroethane	ND	0.0050	1	03/17/2017 03:25
1,1,2-Trichloroethane	ND	0.0050	1	03/17/2017 03:25
Trichloroethene	ND	0.0050	1	03/17/2017 03:25
Trichlorofluoromethane	ND	0.0050	1	03/17/2017 03:25
1,2,3-Trichloropropane	ND	0.0050	1	03/17/2017 03:25
1,2,4-Trimethylbenzene	ND	0.0050	1	03/17/2017 03:25
1,3,5-Trimethylbenzene	ND	0.0050	1	03/17/2017 03:25
Vinyl Chloride	ND	0.0050	1	03/17/2017 03:25
Xylenes, Total	ND	0.0050	1	03/17/2017 03:25

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-9.0	1703713-004A	Soil	03/13/2017 10:10	GC16	135554

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	95	70-130		03/17/2017 03:25
Toluene-d8	104	70-130		03/17/2017 03:25
4-BFB	109	70-130		03/17/2017 03:25
Benzene-d6	98	60-140		03/17/2017 03:25
Ethylbenzene-d10	113	60-140		03/17/2017 03:25
1,2-DCB-d4	79	60-140		03/17/2017 03:25

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-4.0	1703713-005A	Soil	03/13/2017 10:40	GC10	135554
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/18/2017 09:03	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/18/2017 09:03	
Benzene	ND	0.0050	1	03/18/2017 09:03	
Bromobenzene	ND	0.0050	1	03/18/2017 09:03	
Bromochloromethane	ND	0.0050	1	03/18/2017 09:03	
Bromodichloromethane	ND	0.0050	1	03/18/2017 09:03	
Bromoform	ND	0.0050	1	03/18/2017 09:03	
Bromomethane	ND	0.0050	1	03/18/2017 09:03	
2-Butanone (MEK)	ND	0.020	1	03/18/2017 09:03	
t-Butyl alcohol (TBA)	ND	0.050	1	03/18/2017 09:03	
n-Butyl benzene	ND	0.0050	1	03/18/2017 09:03	
sec-Butyl benzene	ND	0.0050	1	03/18/2017 09:03	
tert-Butyl benzene	ND	0.0050	1	03/18/2017 09:03	
Carbon Disulfide	ND	0.0050	1	03/18/2017 09:03	
Carbon Tetrachloride	ND	0.0050	1	03/18/2017 09:03	
Chlorobenzene	ND	0.0050	1	03/18/2017 09:03	
Chloroethane	ND	0.0050	1	03/18/2017 09:03	
Chloroform	ND	0.0050	1	03/18/2017 09:03	
Chloromethane	ND	0.0050	1	03/18/2017 09:03	
2-Chlorotoluene	ND	0.0050	1	03/18/2017 09:03	
4-Chlorotoluene	ND	0.0050	1	03/18/2017 09:03	
Dibromochloromethane	ND	0.0050	1	03/18/2017 09:03	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/18/2017 09:03	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/18/2017 09:03	
Dibromomethane	ND	0.0050	1	03/18/2017 09:03	
1,2-Dichlorobenzene	ND	0.0050	1	03/18/2017 09:03	
1,3-Dichlorobenzene	ND	0.0050	1	03/18/2017 09:03	
1,4-Dichlorobenzene	ND	0.0050	1	03/18/2017 09:03	
Dichlorodifluoromethane	ND	0.0050	1	03/18/2017 09:03	
1,1-Dichloroethane	ND	0.0050	1	03/18/2017 09:03	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/18/2017 09:03	
1,1-Dichloroethene	ND	0.0050	1	03/18/2017 09:03	
cis-1,2-Dichloroethene	ND	0.0050	1	03/18/2017 09:03	
trans-1,2-Dichloroethene	ND	0.0050	1	03/18/2017 09:03	
1,2-Dichloropropane	ND	0.0050	1	03/18/2017 09:03	
1,3-Dichloropropane	ND	0.0050	1	03/18/2017 09:03	
2,2-Dichloropropane	ND	0.0050	1	03/18/2017 09:03	

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-4.0	1703713-005A	Soil	03/13/2017 10:40	GC10	135554

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/18/2017 09:03
cis-1,3-Dichloropropene	ND	0.0050	1	03/18/2017 09:03
trans-1,3-Dichloropropene	ND	0.0050	1	03/18/2017 09:03
Diisopropyl ether (DIPE)	ND	0.0050	1	03/18/2017 09:03
Ethylbenzene	ND	0.0050	1	03/18/2017 09:03
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/18/2017 09:03
Freon 113	ND	0.0050	1	03/18/2017 09:03
Hexachlorobutadiene	ND	0.0050	1	03/18/2017 09:03
Hexachloroethane	ND	0.0050	1	03/18/2017 09:03
2-Hexanone	ND	0.0050	1	03/18/2017 09:03
Isopropylbenzene	ND	0.0050	1	03/18/2017 09:03
4-Isopropyl toluene	ND	0.0050	1	03/18/2017 09:03
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/18/2017 09:03
Methylene chloride	ND	0.025	1	03/18/2017 09:03
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/18/2017 09:03
Naphthalene	ND	0.0050	1	03/18/2017 09:03
n-Propyl benzene	ND	0.0050	1	03/18/2017 09:03
Styrene	ND	0.0050	1	03/18/2017 09:03
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/18/2017 09:03
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/18/2017 09:03
Tetrachloroethene	ND	0.0050	1	03/18/2017 09:03
Toluene	ND	0.0050	1	03/18/2017 09:03
1,2,3-Trichlorobenzene	ND	0.0050	1	03/18/2017 09:03
1,2,4-Trichlorobenzene	ND	0.0050	1	03/18/2017 09:03
1,1,1-Trichloroethane	ND	0.0050	1	03/18/2017 09:03
1,1,2-Trichloroethane	ND	0.0050	1	03/18/2017 09:03
Trichloroethene	ND	0.0050	1	03/18/2017 09:03
Trichlorofluoromethane	ND	0.0050	1	03/18/2017 09:03
1,2,3-Trichloropropane	ND	0.0050	1	03/18/2017 09:03
1,2,4-Trimethylbenzene	ND	0.0050	1	03/18/2017 09:03
1,3,5-Trimethylbenzene	ND	0.0050	1	03/18/2017 09:03
Vinyl Chloride	ND	0.0050	1	03/18/2017 09:03
Xylenes, Total	ND	0.0050	1	03/18/2017 09:03

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-4.0	1703713-005A	Soil	03/13/2017 10:40	GC10	135554

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	88	70-130		03/18/2017 09:03
Toluene-d8	110	70-130		03/18/2017 09:03
4-BFB	93	70-130		03/18/2017 09:03
Benzene-d6	85	60-140		03/18/2017 09:03
Ethylbenzene-d10	105	60-140		03/18/2017 09:03
1,2-DCB-d4	78	60-140		03/18/2017 09:03

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-9.0	1703713-006A	Soil	03/13/2017 10:45	GC10	135554

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/18/2017 09:45
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/18/2017 09:45
Benzene	ND	0.0050	1	03/18/2017 09:45
Bromobenzene	ND	0.0050	1	03/18/2017 09:45
Bromochloromethane	ND	0.0050	1	03/18/2017 09:45
Bromodichloromethane	ND	0.0050	1	03/18/2017 09:45
Bromoform	ND	0.0050	1	03/18/2017 09:45
Bromomethane	ND	0.0050	1	03/18/2017 09:45
2-Butanone (MEK)	ND	0.020	1	03/18/2017 09:45
t-Butyl alcohol (TBA)	ND	0.050	1	03/18/2017 09:45
n-Butyl benzene	ND	0.0050	1	03/18/2017 09:45
sec-Butyl benzene	ND	0.0050	1	03/18/2017 09:45
tert-Butyl benzene	ND	0.0050	1	03/18/2017 09:45
Carbon Disulfide	ND	0.0050	1	03/18/2017 09:45
Carbon Tetrachloride	ND	0.0050	1	03/18/2017 09:45
Chlorobenzene	ND	0.0050	1	03/18/2017 09:45
Chloroethane	ND	0.0050	1	03/18/2017 09:45
Chloroform	ND	0.0050	1	03/18/2017 09:45
Chloromethane	ND	0.0050	1	03/18/2017 09:45
2-Chlorotoluene	ND	0.0050	1	03/18/2017 09:45
4-Chlorotoluene	ND	0.0050	1	03/18/2017 09:45
Dibromochloromethane	ND	0.0050	1	03/18/2017 09:45
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/18/2017 09:45
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/18/2017 09:45
Dibromomethane	ND	0.0050	1	03/18/2017 09:45
1,2-Dichlorobenzene	ND	0.0050	1	03/18/2017 09:45
1,3-Dichlorobenzene	ND	0.0050	1	03/18/2017 09:45
1,4-Dichlorobenzene	ND	0.0050	1	03/18/2017 09:45
Dichlorodifluoromethane	ND	0.0050	1	03/18/2017 09:45
1,1-Dichloroethane	ND	0.0050	1	03/18/2017 09:45
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/18/2017 09:45
1,1-Dichloroethene	ND	0.0050	1	03/18/2017 09:45
cis-1,2-Dichloroethene	ND	0.0050	1	03/18/2017 09:45
trans-1,2-Dichloroethene	ND	0.0050	1	03/18/2017 09:45
1,2-Dichloropropane	ND	0.0050	1	03/18/2017 09:45
1,3-Dichloropropane	ND	0.0050	1	03/18/2017 09:45
2,2-Dichloropropane	ND	0.0050	1	03/18/2017 09:45

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-9.0	1703713-006A	Soil	03/13/2017 10:45	GC10	135554

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/18/2017 09:45
cis-1,3-Dichloropropene	ND	0.0050	1	03/18/2017 09:45
trans-1,3-Dichloropropene	ND	0.0050	1	03/18/2017 09:45
Diisopropyl ether (DIPE)	ND	0.0050	1	03/18/2017 09:45
Ethylbenzene	ND	0.0050	1	03/18/2017 09:45
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/18/2017 09:45
Freon 113	ND	0.0050	1	03/18/2017 09:45
Hexachlorobutadiene	ND	0.0050	1	03/18/2017 09:45
Hexachloroethane	ND	0.0050	1	03/18/2017 09:45
2-Hexanone	ND	0.0050	1	03/18/2017 09:45
Isopropylbenzene	ND	0.0050	1	03/18/2017 09:45
4-Isopropyl toluene	ND	0.0050	1	03/18/2017 09:45
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/18/2017 09:45
Methylene chloride	ND	0.025	1	03/18/2017 09:45
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/18/2017 09:45
Naphthalene	ND	0.0050	1	03/18/2017 09:45
n-Propyl benzene	ND	0.0050	1	03/18/2017 09:45
Styrene	ND	0.0050	1	03/18/2017 09:45
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/18/2017 09:45
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/18/2017 09:45
Tetrachloroethene	ND	0.0050	1	03/18/2017 09:45
Toluene	ND	0.0050	1	03/18/2017 09:45
1,2,3-Trichlorobenzene	ND	0.0050	1	03/18/2017 09:45
1,2,4-Trichlorobenzene	ND	0.0050	1	03/18/2017 09:45
1,1,1-Trichloroethane	ND	0.0050	1	03/18/2017 09:45
1,1,2-Trichloroethane	ND	0.0050	1	03/18/2017 09:45
Trichloroethene	ND	0.0050	1	03/18/2017 09:45
Trichlorofluoromethane	ND	0.0050	1	03/18/2017 09:45
1,2,3-Trichloropropane	ND	0.0050	1	03/18/2017 09:45
1,2,4-Trimethylbenzene	ND	0.0050	1	03/18/2017 09:45
1,3,5-Trimethylbenzene	ND	0.0050	1	03/18/2017 09:45
Vinyl Chloride	ND	0.0050	1	03/18/2017 09:45
Xylenes, Total	ND	0.0050	1	03/18/2017 09:45

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-9.0	1703713-006A	Soil	03/13/2017 10:45	GC10	135554

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	91	70-130		03/18/2017 09:45
Toluene-d8	108	70-130		03/18/2017 09:45
4-BFB	90	70-130		03/18/2017 09:45
Benzene-d6	75	60-140		03/18/2017 09:45
Ethylbenzene-d10	92	60-140		03/18/2017 09:45
1,2-DCB-d4	74	60-140		03/18/2017 09:45

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-4.0	1703713-007A	Soil	03/13/2017 07:50	GC18	135554

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/18/2017 21:20
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/18/2017 21:20
Benzene	ND	0.0050	1	03/18/2017 21:20
Bromobenzene	ND	0.0050	1	03/18/2017 21:20
Bromochloromethane	ND	0.0050	1	03/18/2017 21:20
Bromodichloromethane	ND	0.0050	1	03/18/2017 21:20
Bromoform	ND	0.0050	1	03/18/2017 21:20
Bromomethane	ND	0.0050	1	03/18/2017 21:20
2-Butanone (MEK)	ND	0.020	1	03/18/2017 21:20
t-Butyl alcohol (TBA)	ND	0.050	1	03/18/2017 21:20
n-Butyl benzene	ND	0.0050	1	03/18/2017 21:20
sec-Butyl benzene	ND	0.0050	1	03/18/2017 21:20
tert-Butyl benzene	ND	0.0050	1	03/18/2017 21:20
Carbon Disulfide	ND	0.0050	1	03/18/2017 21:20
Carbon Tetrachloride	ND	0.0050	1	03/18/2017 21:20
Chlorobenzene	ND	0.0050	1	03/18/2017 21:20
Chloroethane	ND	0.0050	1	03/18/2017 21:20
Chloroform	ND	0.0050	1	03/18/2017 21:20
Chloromethane	ND	0.0050	1	03/18/2017 21:20
2-Chlorotoluene	ND	0.0050	1	03/18/2017 21:20
4-Chlorotoluene	ND	0.0050	1	03/18/2017 21:20
Dibromochloromethane	ND	0.0050	1	03/18/2017 21:20
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/18/2017 21:20
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/18/2017 21:20
Dibromomethane	ND	0.0050	1	03/18/2017 21:20
1,2-Dichlorobenzene	ND	0.0050	1	03/18/2017 21:20
1,3-Dichlorobenzene	ND	0.0050	1	03/18/2017 21:20
1,4-Dichlorobenzene	ND	0.0050	1	03/18/2017 21:20
Dichlorodifluoromethane	ND	0.0050	1	03/18/2017 21:20
1,1-Dichloroethane	ND	0.0050	1	03/18/2017 21:20
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/18/2017 21:20
1,1-Dichloroethene	ND	0.0050	1	03/18/2017 21:20
cis-1,2-Dichloroethene	ND	0.0050	1	03/18/2017 21:20
trans-1,2-Dichloroethene	ND	0.0050	1	03/18/2017 21:20
1,2-Dichloropropane	ND	0.0050	1	03/18/2017 21:20
1,3-Dichloropropane	ND	0.0050	1	03/18/2017 21:20
2,2-Dichloropropane	ND	0.0050	1	03/18/2017 21:20

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-4.0	1703713-007A	Soil	03/13/2017 07:50	GC18	135554

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/18/2017 21:20
cis-1,3-Dichloropropene	ND	0.0050	1	03/18/2017 21:20
trans-1,3-Dichloropropene	ND	0.0050	1	03/18/2017 21:20
Diisopropyl ether (DIPE)	ND	0.0050	1	03/18/2017 21:20
Ethylbenzene	ND	0.0050	1	03/18/2017 21:20
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/18/2017 21:20
Freon 113	ND	0.0050	1	03/18/2017 21:20
Hexachlorobutadiene	ND	0.0050	1	03/18/2017 21:20
Hexachloroethane	ND	0.0050	1	03/18/2017 21:20
2-Hexanone	ND	0.0050	1	03/18/2017 21:20
Isopropylbenzene	ND	0.0050	1	03/18/2017 21:20
4-Isopropyl toluene	ND	0.0050	1	03/18/2017 21:20
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/18/2017 21:20
Methylene chloride	ND	0.0050	1	03/18/2017 21:20
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/18/2017 21:20
Naphthalene	ND	0.0050	1	03/18/2017 21:20
n-Propyl benzene	ND	0.0050	1	03/18/2017 21:20
Styrene	ND	0.0050	1	03/18/2017 21:20
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/18/2017 21:20
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/18/2017 21:20
Tetrachloroethene	ND	0.0050	1	03/18/2017 21:20
Toluene	ND	0.0050	1	03/18/2017 21:20
1,2,3-Trichlorobenzene	ND	0.0050	1	03/18/2017 21:20
1,2,4-Trichlorobenzene	ND	0.0050	1	03/18/2017 21:20
1,1,1-Trichloroethane	ND	0.0050	1	03/18/2017 21:20
1,1,2-Trichloroethane	ND	0.0050	1	03/18/2017 21:20
Trichloroethene	ND	0.0050	1	03/18/2017 21:20
Trichlorofluoromethane	ND	0.0050	1	03/18/2017 21:20
1,2,3-Trichloropropane	ND	0.0050	1	03/18/2017 21:20
1,2,4-Trimethylbenzene	ND	0.0050	1	03/18/2017 21:20
1,3,5-Trimethylbenzene	ND	0.0050	1	03/18/2017 21:20
Vinyl Chloride	ND	0.0050	1	03/18/2017 21:20
Xylenes, Total	ND	0.0050	1	03/18/2017 21:20

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-4.0	1703713-007A	Soil	03/13/2017 07:50	GC18	135554

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	104	70-130		03/18/2017 21:20
Toluene-d8	103	70-130		03/18/2017 21:20
4-BFB	98	70-130		03/18/2017 21:20
Benzene-d6	97	60-140		03/18/2017 21:20
Ethylbenzene-d10	104	60-140		03/18/2017 21:20
1,2-DCB-d4	79	60-140		03/18/2017 21:20

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-9.0	1703713-008A	Soil	03/13/2017 07:55	GC18	135554

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/19/2017 00:33
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/19/2017 00:33
Benzene	ND	0.0050	1	03/19/2017 00:33
Bromobenzene	ND	0.0050	1	03/19/2017 00:33
Bromochloromethane	ND	0.0050	1	03/19/2017 00:33
Bromodichloromethane	ND	0.0050	1	03/19/2017 00:33
Bromoform	ND	0.0050	1	03/19/2017 00:33
Bromomethane	ND	0.0050	1	03/19/2017 00:33
2-Butanone (MEK)	ND	0.020	1	03/19/2017 00:33
t-Butyl alcohol (TBA)	ND	0.050	1	03/19/2017 00:33
n-Butyl benzene	ND	0.0050	1	03/19/2017 00:33
sec-Butyl benzene	ND	0.0050	1	03/19/2017 00:33
tert-Butyl benzene	ND	0.0050	1	03/19/2017 00:33
Carbon Disulfide	ND	0.0050	1	03/19/2017 00:33
Carbon Tetrachloride	ND	0.0050	1	03/19/2017 00:33
Chlorobenzene	ND	0.0050	1	03/19/2017 00:33
Chloroethane	ND	0.0050	1	03/19/2017 00:33
Chloroform	ND	0.0050	1	03/19/2017 00:33
Chloromethane	ND	0.0050	1	03/19/2017 00:33
2-Chlorotoluene	ND	0.0050	1	03/19/2017 00:33
4-Chlorotoluene	ND	0.0050	1	03/19/2017 00:33
Dibromochloromethane	ND	0.0050	1	03/19/2017 00:33
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/19/2017 00:33
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/19/2017 00:33
Dibromomethane	ND	0.0050	1	03/19/2017 00:33
1,2-Dichlorobenzene	ND	0.0050	1	03/19/2017 00:33
1,3-Dichlorobenzene	ND	0.0050	1	03/19/2017 00:33
1,4-Dichlorobenzene	ND	0.0050	1	03/19/2017 00:33
Dichlorodifluoromethane	ND	0.0050	1	03/19/2017 00:33
1,1-Dichloroethane	ND	0.0050	1	03/19/2017 00:33
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/19/2017 00:33
1,1-Dichloroethene	ND	0.0050	1	03/19/2017 00:33
cis-1,2-Dichloroethene	ND	0.0050	1	03/19/2017 00:33
trans-1,2-Dichloroethene	ND	0.0050	1	03/19/2017 00:33
1,2-Dichloropropane	ND	0.0050	1	03/19/2017 00:33
1,3-Dichloropropane	ND	0.0050	1	03/19/2017 00:33
2,2-Dichloropropane	ND	0.0050	1	03/19/2017 00:33

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-9.0	1703713-008A	Soil	03/13/2017 07:55	GC18	135554

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/19/2017 00:33
cis-1,3-Dichloropropene	ND	0.0050	1	03/19/2017 00:33
trans-1,3-Dichloropropene	ND	0.0050	1	03/19/2017 00:33
Diisopropyl ether (DIPE)	ND	0.0050	1	03/19/2017 00:33
Ethylbenzene	ND	0.0050	1	03/19/2017 00:33
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/19/2017 00:33
Freon 113	ND	0.0050	1	03/19/2017 00:33
Hexachlorobutadiene	ND	0.0050	1	03/19/2017 00:33
Hexachloroethane	ND	0.0050	1	03/19/2017 00:33
2-Hexanone	ND	0.0050	1	03/19/2017 00:33
Isopropylbenzene	ND	0.0050	1	03/19/2017 00:33
4-Isopropyl toluene	ND	0.0050	1	03/19/2017 00:33
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/19/2017 00:33
Methylene chloride	ND	0.0050	1	03/19/2017 00:33
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/19/2017 00:33
Naphthalene	ND	0.0050	1	03/19/2017 00:33
n-Propyl benzene	ND	0.0050	1	03/19/2017 00:33
Styrene	ND	0.0050	1	03/19/2017 00:33
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/19/2017 00:33
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/19/2017 00:33
Tetrachloroethene	ND	0.0050	1	03/19/2017 00:33
Toluene	ND	0.0050	1	03/19/2017 00:33
1,2,3-Trichlorobenzene	ND	0.0050	1	03/19/2017 00:33
1,2,4-Trichlorobenzene	ND	0.0050	1	03/19/2017 00:33
1,1,1-Trichloroethane	ND	0.0050	1	03/19/2017 00:33
1,1,2-Trichloroethane	ND	0.0050	1	03/19/2017 00:33
Trichloroethene	ND	0.0050	1	03/19/2017 00:33
Trichlorofluoromethane	ND	0.0050	1	03/19/2017 00:33
1,2,3-Trichloropropane	ND	0.0050	1	03/19/2017 00:33
1,2,4-Trimethylbenzene	ND	0.0050	1	03/19/2017 00:33
1,3,5-Trimethylbenzene	ND	0.0050	1	03/19/2017 00:33
Vinyl Chloride	ND	0.0050	1	03/19/2017 00:33
Xylenes, Total	ND	0.0050	1	03/19/2017 00:33

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-9.0	1703713-008A	Soil	03/13/2017 07:55	GC18	135554

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	105	70-130		03/19/2017 00:33
Toluene-d8	102	70-130		03/19/2017 00:33
4-BFB	105	70-130		03/19/2017 00:33
Benzene-d6	95	60-140		03/19/2017 00:33
Ethylbenzene-d10	101	60-140		03/19/2017 00:33
1,2-DCB-d4	77	60-140		03/19/2017 00:33

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-4.0	1703713-009A	Soil	03/13/2017 12:40	GC18	135581

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/16/2017 00:24
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/16/2017 00:24
Benzene	ND	0.0050	1	03/16/2017 00:24
Bromobenzene	ND	0.0050	1	03/16/2017 00:24
Bromochloromethane	ND	0.0050	1	03/16/2017 00:24
Bromodichloromethane	ND	0.0050	1	03/16/2017 00:24
Bromoform	ND	0.0050	1	03/16/2017 00:24
Bromomethane	ND	0.0050	1	03/16/2017 00:24
2-Butanone (MEK)	ND	0.020	1	03/16/2017 00:24
t-Butyl alcohol (TBA)	ND	0.050	1	03/16/2017 00:24
n-Butyl benzene	ND	0.0050	1	03/16/2017 00:24
sec-Butyl benzene	ND	0.0050	1	03/16/2017 00:24
tert-Butyl benzene	ND	0.0050	1	03/16/2017 00:24
Carbon Disulfide	ND	0.0050	1	03/16/2017 00:24
Carbon Tetrachloride	ND	0.0050	1	03/16/2017 00:24
Chlorobenzene	ND	0.0050	1	03/16/2017 00:24
Chloroethane	ND	0.0050	1	03/16/2017 00:24
Chloroform	ND	0.0050	1	03/16/2017 00:24
Chloromethane	ND	0.0050	1	03/16/2017 00:24
2-Chlorotoluene	ND	0.0050	1	03/16/2017 00:24
4-Chlorotoluene	ND	0.0050	1	03/16/2017 00:24
Dibromochloromethane	ND	0.0050	1	03/16/2017 00:24
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/16/2017 00:24
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/16/2017 00:24
Dibromomethane	ND	0.0050	1	03/16/2017 00:24
1,2-Dichlorobenzene	ND	0.0050	1	03/16/2017 00:24
1,3-Dichlorobenzene	ND	0.0050	1	03/16/2017 00:24
1,4-Dichlorobenzene	ND	0.0050	1	03/16/2017 00:24
Dichlorodifluoromethane	ND	0.0050	1	03/16/2017 00:24
1,1-Dichloroethane	ND	0.0050	1	03/16/2017 00:24
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/16/2017 00:24
1,1-Dichloroethene	ND	0.0050	1	03/16/2017 00:24
cis-1,2-Dichloroethene	ND	0.0050	1	03/16/2017 00:24
trans-1,2-Dichloroethene	ND	0.0050	1	03/16/2017 00:24
1,2-Dichloropropane	ND	0.0050	1	03/16/2017 00:24
1,3-Dichloropropane	ND	0.0050	1	03/16/2017 00:24
2,2-Dichloropropane	ND	0.0050	1	03/16/2017 00:24

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-4.0	1703713-009A	Soil	03/13/2017 12:40	GC18	135581

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/16/2017 00:24
cis-1,3-Dichloropropene	ND	0.0050	1	03/16/2017 00:24
trans-1,3-Dichloropropene	ND	0.0050	1	03/16/2017 00:24
Diisopropyl ether (DIPE)	ND	0.0050	1	03/16/2017 00:24
Ethylbenzene	ND	0.0050	1	03/16/2017 00:24
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/16/2017 00:24
Freon 113	ND	0.0050	1	03/16/2017 00:24
Hexachlorobutadiene	ND	0.0050	1	03/16/2017 00:24
Hexachloroethane	ND	0.0050	1	03/16/2017 00:24
2-Hexanone	ND	0.0050	1	03/16/2017 00:24
Isopropylbenzene	ND	0.0050	1	03/16/2017 00:24
4-Isopropyl toluene	ND	0.0050	1	03/16/2017 00:24
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/16/2017 00:24
Methylene chloride	ND	0.0050	1	03/16/2017 00:24
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/16/2017 00:24
Naphthalene	ND	0.0050	1	03/16/2017 00:24
n-Propyl benzene	ND	0.0050	1	03/16/2017 00:24
Styrene	ND	0.0050	1	03/16/2017 00:24
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/16/2017 00:24
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/16/2017 00:24
Tetrachloroethene	ND	0.0050	1	03/16/2017 00:24
Toluene	ND	0.0050	1	03/16/2017 00:24
1,2,3-Trichlorobenzene	ND	0.0050	1	03/16/2017 00:24
1,2,4-Trichlorobenzene	ND	0.0050	1	03/16/2017 00:24
1,1,1-Trichloroethane	ND	0.0050	1	03/16/2017 00:24
1,1,2-Trichloroethane	ND	0.0050	1	03/16/2017 00:24
Trichloroethene	ND	0.0050	1	03/16/2017 00:24
Trichlorofluoromethane	ND	0.0050	1	03/16/2017 00:24
1,2,3-Trichloropropane	ND	0.0050	1	03/16/2017 00:24
1,2,4-Trimethylbenzene	ND	0.0050	1	03/16/2017 00:24
1,3,5-Trimethylbenzene	ND	0.0050	1	03/16/2017 00:24
Vinyl Chloride	ND	0.0050	1	03/16/2017 00:24
Xylenes, Total	ND	0.0050	1	03/16/2017 00:24

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-4.0	1703713-009A	Soil	03/13/2017 12:40	GC18	135581

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	102	70-130		03/16/2017 00:24
Toluene-d8	107	70-130		03/16/2017 00:24
4-BFB	98	70-130		03/16/2017 00:24
Benzene-d6	91	60-140		03/16/2017 00:24
Ethylbenzene-d10	101	60-140		03/16/2017 00:24
1,2-DCB-d4	77	60-140		03/16/2017 00:24

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-9.0	1703713-010A	Soil	03/13/2017 12:45	GC18	135581

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	6.7	67	03/19/2017 01:12
tert-Amyl methyl ether (TAME)	ND	0.33	67	03/19/2017 01:12
Benzene	ND	0.33	67	03/19/2017 01:12
Bromobenzene	ND	0.33	67	03/19/2017 01:12
Bromochloromethane	ND	0.33	67	03/19/2017 01:12
Bromodichloromethane	ND	0.33	67	03/19/2017 01:12
Bromoform	ND	0.33	67	03/19/2017 01:12
Bromomethane	ND	0.33	67	03/19/2017 01:12
2-Butanone (MEK)	ND	1.3	67	03/19/2017 01:12
t-Butyl alcohol (TBA)	ND	3.3	67	03/19/2017 01:12
n-Butyl benzene	1.7	0.33	67	03/19/2017 01:12
sec-Butyl benzene	ND	0.33	67	03/19/2017 01:12
tert-Butyl benzene	ND	0.33	67	03/19/2017 01:12
Carbon Disulfide	ND	0.33	67	03/19/2017 01:12
Carbon Tetrachloride	ND	0.33	67	03/19/2017 01:12
Chlorobenzene	ND	0.33	67	03/19/2017 01:12
Chloroethane	ND	0.33	67	03/19/2017 01:12
Chloroform	ND	0.33	67	03/19/2017 01:12
Chloromethane	ND	0.33	67	03/19/2017 01:12
2-Chlorotoluene	ND	0.33	67	03/19/2017 01:12
4-Chlorotoluene	ND	0.33	67	03/19/2017 01:12
Dibromochloromethane	ND	0.33	67	03/19/2017 01:12
1,2-Dibromo-3-chloropropane	ND	0.27	67	03/19/2017 01:12
1,2-Dibromoethane (EDB)	ND	0.27	67	03/19/2017 01:12
Dibromomethane	ND	0.33	67	03/19/2017 01:12
1,2-Dichlorobenzene	ND	0.33	67	03/19/2017 01:12
1,3-Dichlorobenzene	ND	0.33	67	03/19/2017 01:12
1,4-Dichlorobenzene	ND	0.33	67	03/19/2017 01:12
Dichlorodifluoromethane	ND	0.33	67	03/19/2017 01:12
1,1-Dichloroethane	ND	0.33	67	03/19/2017 01:12
1,2-Dichloroethane (1,2-DCA)	ND	0.27	67	03/19/2017 01:12
1,1-Dichloroethene	ND	0.33	67	03/19/2017 01:12
cis-1,2-Dichloroethene	ND	0.33	67	03/19/2017 01:12
trans-1,2-Dichloroethene	ND	0.33	67	03/19/2017 01:12
1,2-Dichloropropane	ND	0.33	67	03/19/2017 01:12
1,3-Dichloropropane	ND	0.33	67	03/19/2017 01:12
2,2-Dichloropropane	ND	0.33	67	03/19/2017 01:12

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-9.0	1703713-010A	Soil	03/13/2017 12:45	GC18	135581

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.33	67	03/19/2017 01:12
cis-1,3-Dichloropropene	ND	0.33	67	03/19/2017 01:12
trans-1,3-Dichloropropene	ND	0.33	67	03/19/2017 01:12
Diisopropyl ether (DIPE)	ND	0.33	67	03/19/2017 01:12
Ethylbenzene	ND	0.33	67	03/19/2017 01:12
Ethyl tert-butyl ether (ETBE)	ND	0.33	67	03/19/2017 01:12
Freon 113	ND	0.33	67	03/19/2017 01:12
Hexachlorobutadiene	ND	0.33	67	03/19/2017 01:12
Hexachloroethane	ND	0.33	67	03/19/2017 01:12
2-Hexanone	ND	0.33	67	03/19/2017 01:12
Isopropylbenzene	ND	0.33	67	03/19/2017 01:12
4-Isopropyl toluene	ND	0.33	67	03/19/2017 01:12
Methyl-t-butyl ether (MTBE)	ND	0.33	67	03/19/2017 01:12
Methylene chloride	ND	0.33	67	03/19/2017 01:12
4-Methyl-2-pentanone (MIBK)	ND	0.33	67	03/19/2017 01:12
Naphthalene	ND	0.33	67	03/19/2017 01:12
n-Propyl benzene	1.1	0.33	67	03/19/2017 01:12
Styrene	ND	0.33	67	03/19/2017 01:12
1,1,1,2-Tetrachloroethane	ND	0.33	67	03/19/2017 01:12
1,1,2,2-Tetrachloroethane	ND	0.33	67	03/19/2017 01:12
Tetrachloroethene	ND	0.33	67	03/19/2017 01:12
Toluene	ND	0.33	67	03/19/2017 01:12
1,2,3-Trichlorobenzene	ND	0.33	67	03/19/2017 01:12
1,2,4-Trichlorobenzene	ND	0.33	67	03/19/2017 01:12
1,1,1-Trichloroethane	ND	0.33	67	03/19/2017 01:12
1,1,2-Trichloroethane	ND	0.33	67	03/19/2017 01:12
Trichloroethene	ND	0.33	67	03/19/2017 01:12
Trichlorofluoromethane	ND	0.33	67	03/19/2017 01:12
1,2,3-Trichloropropane	ND	0.33	67	03/19/2017 01:12
1,2,4-Trimethylbenzene	ND	0.33	67	03/19/2017 01:12
1,3,5-Trimethylbenzene	ND	0.33	67	03/19/2017 01:12
Vinyl Chloride	ND	0.33	67	03/19/2017 01:12
Xylenes, Total	ND	0.33	67	03/19/2017 01:12

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-9.0	1703713-010A	Soil	03/13/2017 12:45	GC18	135581

Analytes	Result		RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	108		70-130		03/19/2017 01:12
Toluene-d8	97		70-130		03/19/2017 01:12
4-BFB	73		70-130		03/19/2017 01:12
Benzene-d6	91		60-140		03/19/2017 01:12
Ethylbenzene-d10	153	S	60-140		03/19/2017 01:12
1,2-DCB-d4	104		60-140		03/19/2017 01:12

Analyst(s): HK

Analytical Comments: c7



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-4.0	1703713-011A	Soil	03/13/2017 11:15	GC18	135581

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/18/2017 21:58
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/18/2017 21:58
Benzene	ND	0.0050	1	03/18/2017 21:58
Bromobenzene	ND	0.0050	1	03/18/2017 21:58
Bromochloromethane	ND	0.0050	1	03/18/2017 21:58
Bromodichloromethane	ND	0.0050	1	03/18/2017 21:58
Bromoform	ND	0.0050	1	03/18/2017 21:58
Bromomethane	ND	0.0050	1	03/18/2017 21:58
2-Butanone (MEK)	ND	0.020	1	03/18/2017 21:58
t-Butyl alcohol (TBA)	ND	0.050	1	03/18/2017 21:58
n-Butyl benzene	ND	0.0050	1	03/18/2017 21:58
sec-Butyl benzene	ND	0.0050	1	03/18/2017 21:58
tert-Butyl benzene	ND	0.0050	1	03/18/2017 21:58
Carbon Disulfide	ND	0.0050	1	03/18/2017 21:58
Carbon Tetrachloride	ND	0.0050	1	03/18/2017 21:58
Chlorobenzene	ND	0.0050	1	03/18/2017 21:58
Chloroethane	ND	0.0050	1	03/18/2017 21:58
Chloroform	ND	0.0050	1	03/18/2017 21:58
Chloromethane	ND	0.0050	1	03/18/2017 21:58
2-Chlorotoluene	ND	0.0050	1	03/18/2017 21:58
4-Chlorotoluene	ND	0.0050	1	03/18/2017 21:58
Dibromochloromethane	ND	0.0050	1	03/18/2017 21:58
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/18/2017 21:58
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/18/2017 21:58
Dibromomethane	ND	0.0050	1	03/18/2017 21:58
1,2-Dichlorobenzene	ND	0.0050	1	03/18/2017 21:58
1,3-Dichlorobenzene	ND	0.0050	1	03/18/2017 21:58
1,4-Dichlorobenzene	ND	0.0050	1	03/18/2017 21:58
Dichlorodifluoromethane	ND	0.0050	1	03/18/2017 21:58
1,1-Dichloroethane	ND	0.0050	1	03/18/2017 21:58
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/18/2017 21:58
1,1-Dichloroethene	ND	0.0050	1	03/18/2017 21:58
cis-1,2-Dichloroethene	ND	0.0050	1	03/18/2017 21:58
trans-1,2-Dichloroethene	ND	0.0050	1	03/18/2017 21:58
1,2-Dichloropropane	ND	0.0050	1	03/18/2017 21:58
1,3-Dichloropropane	ND	0.0050	1	03/18/2017 21:58
2,2-Dichloropropane	ND	0.0050	1	03/18/2017 21:58

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-4.0	1703713-011A	Soil	03/13/2017 11:15	GC18	135581

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/18/2017 21:58
cis-1,3-Dichloropropene	ND	0.0050	1	03/18/2017 21:58
trans-1,3-Dichloropropene	ND	0.0050	1	03/18/2017 21:58
Diisopropyl ether (DIPE)	ND	0.0050	1	03/18/2017 21:58
Ethylbenzene	ND	0.0050	1	03/18/2017 21:58
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/18/2017 21:58
Freon 113	ND	0.0050	1	03/18/2017 21:58
Hexachlorobutadiene	ND	0.0050	1	03/18/2017 21:58
Hexachloroethane	ND	0.0050	1	03/18/2017 21:58
2-Hexanone	ND	0.0050	1	03/18/2017 21:58
Isopropylbenzene	ND	0.0050	1	03/18/2017 21:58
4-Isopropyl toluene	ND	0.0050	1	03/18/2017 21:58
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/18/2017 21:58
Methylene chloride	ND	0.0050	1	03/18/2017 21:58
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/18/2017 21:58
Naphthalene	ND	0.0050	1	03/18/2017 21:58
n-Propyl benzene	ND	0.0050	1	03/18/2017 21:58
Styrene	ND	0.0050	1	03/18/2017 21:58
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/18/2017 21:58
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/18/2017 21:58
Tetrachloroethene	ND	0.0050	1	03/18/2017 21:58
Toluene	ND	0.0050	1	03/18/2017 21:58
1,2,3-Trichlorobenzene	ND	0.0050	1	03/18/2017 21:58
1,2,4-Trichlorobenzene	ND	0.0050	1	03/18/2017 21:58
1,1,1-Trichloroethane	ND	0.0050	1	03/18/2017 21:58
1,1,2-Trichloroethane	ND	0.0050	1	03/18/2017 21:58
Trichloroethene	ND	0.0050	1	03/18/2017 21:58
Trichlorofluoromethane	ND	0.0050	1	03/18/2017 21:58
1,2,3-Trichloropropane	ND	0.0050	1	03/18/2017 21:58
1,2,4-Trimethylbenzene	ND	0.0050	1	03/18/2017 21:58
1,3,5-Trimethylbenzene	ND	0.0050	1	03/18/2017 21:58
Vinyl Chloride	ND	0.0050	1	03/18/2017 21:58
Xylenes, Total	ND	0.0050	1	03/18/2017 21:58

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-4.0	1703713-011A	Soil	03/13/2017 11:15	GC18	135581

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	104	70-130		03/18/2017 21:58
Toluene-d8	103	70-130		03/18/2017 21:58
4-BFB	99	70-130		03/18/2017 21:58
Benzene-d6	95	60-140		03/18/2017 21:58
Ethylbenzene-d10	101	60-140		03/18/2017 21:58
1,2-DCB-d4	76	60-140		03/18/2017 21:58

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-9.0	1703713-012A	Soil	03/13/2017 11:20	GC18	135581
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		6.7	67	03/19/2017 01:51
tert-Amyl methyl ether (TAME)	ND		0.33	67	03/19/2017 01:51
Benzene	ND		0.33	67	03/19/2017 01:51
Bromobenzene	ND		0.33	67	03/19/2017 01:51
Bromochloromethane	ND		0.33	67	03/19/2017 01:51
Bromodichloromethane	ND		0.33	67	03/19/2017 01:51
Bromoform	ND		0.33	67	03/19/2017 01:51
Bromomethane	ND		0.33	67	03/19/2017 01:51
2-Butanone (MEK)	ND		1.3	67	03/19/2017 01:51
t-Butyl alcohol (TBA)	ND		3.3	67	03/19/2017 01:51
n-Butyl benzene	0.97		0.33	67	03/19/2017 01:51
sec-Butyl benzene	ND		0.33	67	03/19/2017 01:51
tert-Butyl benzene	ND		0.33	67	03/19/2017 01:51
Carbon Disulfide	ND		0.33	67	03/19/2017 01:51
Carbon Tetrachloride	ND		0.33	67	03/19/2017 01:51
Chlorobenzene	ND		0.33	67	03/19/2017 01:51
Chloroethane	ND		0.33	67	03/19/2017 01:51
Chloroform	ND		0.33	67	03/19/2017 01:51
Chloromethane	ND		0.33	67	03/19/2017 01:51
2-Chlorotoluene	ND		0.33	67	03/19/2017 01:51
4-Chlorotoluene	ND		0.33	67	03/19/2017 01:51
Dibromochloromethane	ND		0.33	67	03/19/2017 01:51
1,2-Dibromo-3-chloropropane	ND		0.27	67	03/19/2017 01:51
1,2-Dibromoethane (EDB)	ND		0.27	67	03/19/2017 01:51
Dibromomethane	ND		0.33	67	03/19/2017 01:51
1,2-Dichlorobenzene	ND		0.33	67	03/19/2017 01:51
1,3-Dichlorobenzene	ND		0.33	67	03/19/2017 01:51
1,4-Dichlorobenzene	ND		0.33	67	03/19/2017 01:51
Dichlorodifluoromethane	ND		0.33	67	03/19/2017 01:51
1,1-Dichloroethane	ND		0.33	67	03/19/2017 01:51
1,2-Dichloroethane (1,2-DCA)	ND		0.27	67	03/19/2017 01:51
1,1-Dichloroethene	ND		0.33	67	03/19/2017 01:51
cis-1,2-Dichloroethene	ND		0.33	67	03/19/2017 01:51
trans-1,2-Dichloroethene	ND		0.33	67	03/19/2017 01:51
1,2-Dichloropropane	ND		0.33	67	03/19/2017 01:51
1,3-Dichloropropane	ND		0.33	67	03/19/2017 01:51
2,2-Dichloropropane	ND		0.33	67	03/19/2017 01:51

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-9.0	1703713-012A	Soil	03/13/2017 11:20	GC18	135581

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.33	67	03/19/2017 01:51
cis-1,3-Dichloropropene	ND	0.33	67	03/19/2017 01:51
trans-1,3-Dichloropropene	ND	0.33	67	03/19/2017 01:51
Diisopropyl ether (DIPE)	ND	0.33	67	03/19/2017 01:51
Ethylbenzene	3.0	0.33	67	03/19/2017 01:51
Ethyl tert-butyl ether (ETBE)	ND	0.33	67	03/19/2017 01:51
Freon 113	ND	0.33	67	03/19/2017 01:51
Hexachlorobutadiene	ND	0.33	67	03/19/2017 01:51
Hexachloroethane	ND	0.33	67	03/19/2017 01:51
2-Hexanone	ND	0.33	67	03/19/2017 01:51
Isopropylbenzene	0.61	0.33	67	03/19/2017 01:51
4-Isopropyl toluene	ND	0.33	67	03/19/2017 01:51
Methyl-t-butyl ether (MTBE)	ND	0.33	67	03/19/2017 01:51
Methylene chloride	ND	0.33	67	03/19/2017 01:51
4-Methyl-2-pentanone (MIBK)	ND	0.33	67	03/19/2017 01:51
Naphthalene	2.2	0.33	67	03/19/2017 01:51
n-Propyl benzene	2.0	0.33	67	03/19/2017 01:51
Styrene	ND	0.33	67	03/19/2017 01:51
1,1,1,2-Tetrachloroethane	ND	0.33	67	03/19/2017 01:51
1,1,2,2-Tetrachloroethane	ND	0.33	67	03/19/2017 01:51
Tetrachloroethene	ND	0.33	67	03/19/2017 01:51
Toluene	ND	0.33	67	03/19/2017 01:51
1,2,3-Trichlorobenzene	ND	0.33	67	03/19/2017 01:51
1,2,4-Trichlorobenzene	ND	0.33	67	03/19/2017 01:51
1,1,1-Trichloroethane	ND	0.33	67	03/19/2017 01:51
1,1,2-Trichloroethane	ND	0.33	67	03/19/2017 01:51
Trichloroethene	ND	0.33	67	03/19/2017 01:51
Trichlorofluoromethane	ND	0.33	67	03/19/2017 01:51
1,2,3-Trichloropropane	ND	0.33	67	03/19/2017 01:51
1,2,4-Trimethylbenzene	ND	0.33	67	03/19/2017 01:51
1,3,5-Trimethylbenzene	ND	0.33	67	03/19/2017 01:51
Vinyl Chloride	ND	0.33	67	03/19/2017 01:51
Xylenes, Total	ND	0.33	67	03/19/2017 01:51

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-9.0	1703713-012A	Soil	03/13/2017 11:20	GC18	135581

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	109	70-130		03/19/2017 01:51
Toluene-d8	95	70-130		03/19/2017 01:51
4-BFB	95	70-130		03/19/2017 01:51
Benzene-d6	94	60-140		03/19/2017 01:51
Ethylbenzene-d10	125	60-140		03/19/2017 01:51
1,2-DCB-d4	91	60-140		03/19/2017 01:51

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-4.0	1703713-001A	Soil	03/13/2017 09:10	GC19	135573

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	47	1.0	1	03/18/2017 14:43
MTBE	---	0.050	1	03/18/2017 14:43
Benzene	---	0.0050	1	03/18/2017 14:43
Toluene	---	0.0050	1	03/18/2017 14:43
Ethylbenzene	---	0.0050	1	03/18/2017 14:43
Xylenes	---	0.015	1	03/18/2017 14:43

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	105	62-126	03/18/2017 14:43

Analyst(s): LT

Analytical Comments: d7,d9,c4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-9.0	1703713-002A	Soil	03/13/2017 09:15	GC19	135573

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/16/2017 22:29
MTBE	---	0.050	1	03/16/2017 22:29
Benzene	---	0.0050	1	03/16/2017 22:29
Toluene	---	0.0050	1	03/16/2017 22:29
Ethylbenzene	---	0.0050	1	03/16/2017 22:29
Xylenes	---	0.015	1	03/16/2017 22:29

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	87	62-126	03/16/2017 22:29

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4.0	1703713-003A	Soil	03/13/2017 10:05	GC19	135573

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	50	1.0	1	03/17/2017 02:30
MTBE	---	0.050	1	03/17/2017 02:30
Benzene	---	0.0050	1	03/17/2017 02:30
Toluene	---	0.0050	1	03/17/2017 02:30
Ethylbenzene	---	0.0050	1	03/17/2017 02:30
Xylenes	---	0.015	1	03/17/2017 02:30

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	94	62-126	03/17/2017 02:30

Analyst(s): IA

Analytical Comments: d7,d9

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-9.0	1703713-004A	Soil	03/13/2017 10:10	GC19	135573

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/16/2017 23:30
MTBE	---	0.050	1	03/16/2017 23:30
Benzene	---	0.0050	1	03/16/2017 23:30
Toluene	---	0.0050	1	03/16/2017 23:30
Ethylbenzene	---	0.0050	1	03/16/2017 23:30
Xylenes	---	0.015	1	03/16/2017 23:30

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	91	62-126	03/16/2017 23:30

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-4.0	1703713-005A	Soil	03/13/2017 10:40	GC19	135573

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/17/2017 03:00
MTBE	---	0.050	1	03/17/2017 03:00
Benzene	---	0.0050	1	03/17/2017 03:00
Toluene	---	0.0050	1	03/17/2017 03:00
Ethylbenzene	---	0.0050	1	03/17/2017 03:00
Xylenes	---	0.015	1	03/17/2017 03:00

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	91	62-126	03/17/2017 03:00

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-9.0	1703713-006A	Soil	03/13/2017 10:45	GC19	135573

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/16/2017 18:57
MTBE	---	0.050	1	03/16/2017 18:57
Benzene	---	0.0050	1	03/16/2017 18:57
Toluene	---	0.0050	1	03/16/2017 18:57
Ethylbenzene	---	0.0050	1	03/16/2017 18:57
Xylenes	---	0.015	1	03/16/2017 18:57

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	89	62-126	03/16/2017 18:57

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-4.0	1703713-007A	Soil	03/13/2017 07:50	GC19	135573

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/16/2017 19:27
MTBE	---	0.050	1	03/16/2017 19:27
Benzene	---	0.0050	1	03/16/2017 19:27
Toluene	---	0.0050	1	03/16/2017 19:27
Ethylbenzene	---	0.0050	1	03/16/2017 19:27
Xylenes	---	0.015	1	03/16/2017 19:27

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	82	62-126	03/16/2017 19:27

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-9.0	1703713-008A	Soil	03/13/2017 07:55	GC19	135573

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/18/2017 15:13
MTBE	---	0.050	1	03/18/2017 15:13
Benzene	---	0.0050	1	03/18/2017 15:13
Toluene	---	0.0050	1	03/18/2017 15:13
Ethylbenzene	---	0.0050	1	03/18/2017 15:13
Xylenes	---	0.015	1	03/18/2017 15:13

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	80	62-126	03/18/2017 15:13

Analyst(s): LT



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-4.0	1703713-009A	Soil	03/13/2017 12:40	GC19	135573

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/16/2017 20:28
MTBE	---	0.050	1	03/16/2017 20:28
Benzene	---	0.0050	1	03/16/2017 20:28
Toluene	---	0.0050	1	03/16/2017 20:28
Ethylbenzene	---	0.0050	1	03/16/2017 20:28
Xylenes	---	0.015	1	03/16/2017 20:28

Surrogates	REC (%)	Limits
2-Fluorotoluene	87	62-126

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-9.0	1703713-010A	Soil	03/13/2017 12:45	GC19	135573

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	220	50	50	03/16/2017 21:29
MTBE	---	2.5	50	03/16/2017 21:29
Benzene	---	0.25	50	03/16/2017 21:29
Toluene	---	0.25	50	03/16/2017 21:29
Ethylbenzene	---	0.25	50	03/16/2017 21:29
Xylenes	---	0.75	50	03/16/2017 21:29

Surrogates	REC (%)	Qualifiers	Limits
2-Fluorotoluene	170	S	62-126

Analyst(s): IA

Analytical Comments: d9,c4



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-4.0	1703713-011A	Soil	03/13/2017 11:15	GC19	135573

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	2.5	1.0	1	03/17/2017 09:59
MTBE	---	0.050	1	03/17/2017 09:59
Benzene	---	0.0050	1	03/17/2017 09:59
Toluene	---	0.0050	1	03/17/2017 09:59
Ethylbenzene	---	0.0050	1	03/17/2017 09:59
Xylenes	---	0.015	1	03/17/2017 09:59

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
2-Fluorotoluene	88	62-126	03/17/2017 09:59

Analyst(s): IA Analytical Comments: d9

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-9.0	1703713-012A	Soil	03/13/2017 11:20	GC19	135573

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	300	50	50	03/17/2017 03:59
MTBE	---	2.5	50	03/17/2017 03:59
Benzene	---	0.25	50	03/17/2017 03:59
Toluene	---	0.25	50	03/17/2017 03:59
Ethylbenzene	---	0.25	50	03/17/2017 03:59
Xylenes	---	0.75	50	03/17/2017 03:59

<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	<u>Date Analyzed</u>
2-Fluorotoluene	225	S	62-126	03/17/2017 03:59

Analyst(s): IA Analytical Comments: d1,c4



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-4.0	1703713-001A	Soil	03/13/2017 09:10	GC11B	135572

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	26	1.0	1	03/15/2017 22:10
TPH-Motor Oil (C18-C36)	7.2	5.0	1	03/15/2017 22:10
TPH-Bunker Oil (C10-C36)	24	5.0	1	03/15/2017 22:10

Surrogates	REC (%)	Limits	Date Analyzed
C9	90	78-109	03/15/2017 22:10

Analyst(s): TK

Analytical Comments: e3/e2,e11

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-9.0	1703713-002A	Soil	03/13/2017 09:15	GC11A	135572

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/15/2017 19:35
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/15/2017 19:35
TPH-Bunker Oil (C10-C36)	ND	5.0	1	03/15/2017 19:35

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/15/2017 19:35

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4.0	1703713-003A	Soil	03/13/2017 10:05	GC11A	135572

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	300	1.0	1	03/15/2017 20:14
TPH-Motor Oil (C18-C36)	94	5.0	1	03/15/2017 20:14
TPH-Bunker Oil (C10-C36)	290	5.0	1	03/15/2017 20:14

Surrogates	REC (%)	Limits	Date Analyzed
C9	102	78-109	03/15/2017 20:14

Analyst(s): TK

Analytical Comments: e2,e4

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-9.0	1703713-004A	Soil	03/13/2017 10:10	GC11A	135572

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	03/15/2017 20:53
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/15/2017 20:53
TPH-Bunker Oil (C10-C36)	ND	5.0	1	03/15/2017 20:53

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	99	78-109	03/15/2017 20:53

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-4.0	1703713-005A	Soil	03/13/2017 10:40	GC11A	135572

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	03/15/2017 21:31
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/15/2017 21:31
TPH-Bunker Oil (C10-C36)	ND	5.0	1	03/15/2017 21:31

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	98	78-109	03/15/2017 21:31

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-9.0	1703713-006A	Soil	03/13/2017 10:45	GC11A	135572

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	03/15/2017 22:49
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/15/2017 22:49
TPH-Bunker Oil (C10-C36)	ND	5.0	1	03/15/2017 22:49

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	96	78-109	03/15/2017 22:49

Analyst(s): TK

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NELAP 4033ORELAP

Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-4.0	1703713-007A	Soil	03/13/2017 07:50	GC11A	135572

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	03/15/2017 23:29
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/15/2017 23:29
TPH-Bunker Oil (C10-C36)	ND	5.0	1	03/15/2017 23:29

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	98	78-109	03/15/2017 23:29

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-9.0	1703713-008A	Soil	03/13/2017 07:55	GC11A	135572

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	03/16/2017 00:07
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/16/2017 00:07
TPH-Bunker Oil (C10-C36)	ND	5.0	1	03/16/2017 00:07

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	96	78-109	03/16/2017 00:07

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-4.0	1703713-009A	Soil	03/13/2017 12:40	GC11A	135572

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	03/16/2017 00:46
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/16/2017 00:46
TPH-Bunker Oil (C10-C36)	ND	5.0	1	03/16/2017 00:46

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	98	78-109	03/16/2017 00:46

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-9.0	1703713-010A	Soil	03/13/2017 12:45	GC11B	135572

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	83	5.0	5	03/15/2017 20:53
TPH-Motor Oil (C18-C36)	59	25	5	03/15/2017 20:53
TPH-Bunker Oil (C10-C36)	110	25	5	03/15/2017 20:53

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	94	78-109	03/15/2017 20:53

Analyst(s): TK Analytical Comments: e7,e11,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-4.0	1703713-011A	Soil	03/13/2017 11:15	GC11A	135572

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	03/16/2017 01:25
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/16/2017 01:25
TPH-Bunker Oil (C10-C36)	ND	5.0	1	03/16/2017 01:25

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	99	78-109	03/16/2017 01:25

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-9.0	1703713-012A	Soil	03/13/2017 11:20	GC11B	135572

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	30	1.0	1	03/16/2017 12:28
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/16/2017 12:28
TPH-Bunker Oil (C10-C36)	28	5.0	1	03/16/2017 12:28

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	92	78-109	03/16/2017 12:28

Analyst(s): TK Analytical Comments: e4



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/14/17
Date Analyzed: 3/14/17 - 3/15/17
Instrument: GC16
Matrix: Soil
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
BatchID: 135554
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-135554
 1703682-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0438	0.0050	0.050	-	88	53-116
Benzene	ND	0.0505	0.0050	0.050	-	101	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.180	0.050	0.20	-	90	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0500	0.0050	0.050	-	100	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0476	0.0040	0.050	-	95	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0462	0.0040	0.050	-	92	58-135
1,1-Dichloroethene	ND	0.0494	0.0050	0.050	-	99	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

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NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/14/17
Date Analyzed: 3/14/17 - 3/15/17
Instrument: GC16
Matrix: Soil
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
BatchID: 135554
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-135554
 1703682-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0506	0.0050	0.050	-	101	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0489	0.0050	0.050	-	98	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0491	0.0050	0.050	-	98	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0534	0.0050	0.050	-	107	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0505	0.0050	0.050	-	101	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/14/17
Date Analyzed: 3/14/17 - 3/15/17
Instrument: GC16
Matrix: Soil
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
BatchID: 135554
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-135554
 1703682-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.1193	0.120		0.12	95	96	70-130
Toluene-d8	0.1321	0.131		0.12	106	105	70-130
4-BFB	0.01398	0.0137		0.012	112	110	70-130
Benzene-d6	0.103	0.102		0.10	103	102	60-140
Ethylbenzene-d10	0.1199	0.115		0.10	120	115	60-140
1,2-DCB-d4	0.07926	0.0832		0.10	79	83	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0358	0.0368	0.050	ND	72	74	53-116	2.76	20
Benzene	0.0413	0.0422	0.050	ND	83	85	63-137	2.25	20
t-Butyl alcohol (TBA)	0.134	0.135	0.20	ND	67	67	41-135	0	20
Chlorobenzene	0.0430	0.0430	0.050	ND	86	86	77-121	0	20
1,2-Dibromoethane (EDB)	0.0399	0.0411	0.050	ND	80	82	67-119	2.86	20
1,2-Dichloroethane (1,2-DCA)	0.0407	0.0415	0.050	ND	81	83	58-135	2.06	20
1,1-Dichloroethene	0.0390	0.0402	0.050	ND	78	80	42-145	3.15	20
Diisopropyl ether (DIPE)	0.0403	0.0410	0.050	ND	81	82	52-129	1.69	20
Ethyl tert-butyl ether (ETBE)	0.0391	0.0402	0.050	ND	78	80	53-125	2.71	20
Methyl-t-butyl ether (MTBE)	0.0384	0.0399	0.050	ND	77	80	58-122	3.84	20
Toluene	0.0437	0.0446	0.050	ND	87	89	76-130	1.98	20
Trichloroethene	0.0430	0.0442	0.050	ND	86	88	72-132	2.79	20
Surrogate Recovery									
Dibromofluoromethane	0.122	0.121	0.12		97	97	70-130	0	20
Toluene-d8	0.128	0.127	0.12		102	102	70-130	0	20
4-BFB	0.0131	0.0131	0.012		105	105	70-130	0	20
Benzene-d6	0.0902	0.0871	0.10		90	87	60-140	3.53	20
Ethylbenzene-d10	0.101	0.0978	0.10		101	98	60-140	3.01	20
1,2-DCB-d4	0.0780	0.0774	0.10		78	77	60-140	0.777	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/14/17
Date Analyzed: 3/15/17 - 3/16/17
Instrument: GC18
Matrix: Soil
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
BatchID: 135581
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-135581
 1703713-009AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0442	0.0050	0.050	-	88	53-116
Benzene	ND	0.0532	0.0050	0.050	-	106	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.179	0.050	0.20	-	89	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0528	0.0050	0.050	-	106	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0482	0.0040	0.050	-	96	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0501	0.0040	0.050	-	100	58-135
1,1-Dichloroethene	ND	0.0515	0.0050	0.050	-	103	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

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NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/14/17
Date Analyzed: 3/15/17 - 3/16/17
Instrument: GC18
Matrix: Soil
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
BatchID: 135581
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-135581
 1703713-009AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0511	0.0050	0.050	-	102	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0498	0.0050	0.050	-	100	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0479	0.0050	0.050	-	96	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0548	0.0050	0.050	-	110	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0616	0.0050	0.050	-	123	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/14/17
Date Analyzed: 3/15/17 - 3/16/17
Instrument: GC18
Matrix: Soil
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
BatchID: 135581
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-135581
 1703713-009AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.126	0.128		0.12	101	102	70-130
Toluene-d8	0.1364	0.136		0.12	109	109	70-130
4-BFB	0.0128	0.0129		0.012	102	103	70-130
Benzene-d6	0.09837	0.0970		0.10	98	97	60-140
Ethylbenzene-d10	0.1129	0.111		0.10	113	111	60-140
1,2-DCB-d4	0.08215	0.0867		0.10	82	87	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0410	0.0426	0.050	ND	82	85	53-116	3.65	20
Benzene	0.0486	0.0500	0.050	ND	97	100	63-137	2.89	20
t-Butyl alcohol (TBA)	0.153	0.158	0.20	ND	77	79	41-135	2.87	20
Chlorobenzene	0.0487	0.0505	0.050	ND	97	101	77-121	3.62	20
1,2-Dibromoethane (EDB)	0.0444	0.0466	0.050	ND	89	93	67-119	4.85	20
1,2-Dichloroethane (1,2-DCA)	0.0467	0.0481	0.050	ND	93	96	58-135	2.95	20
1,1-Dichloroethene	0.0450	0.0467	0.050	ND	90	93	42-145	3.72	20
Diisopropyl ether (DIPE)	0.0468	0.0482	0.050	ND	94	96	52-129	3.04	20
Ethyl tert-butyl ether (ETBE)	0.0455	0.0472	0.050	ND	91	94	53-125	3.61	20
Methyl-t-butyl ether (MTBE)	0.0439	0.0458	0.050	ND	88	92	58-122	4.37	20
Toluene	0.0489	0.0510	0.050	ND	98	102	76-130	4.21	20
Trichloroethene	0.0497	0.0512	0.050	ND	99	102	72-132	3.09	20
Surrogate Recovery									
Dibromofluoromethane	0.129	0.129	0.12		103	103	70-130	0	20
Toluene-d8	0.132	0.134	0.12		106	107	70-130	1.20	20
4-BFB	0.0132	0.0130	0.012		106	104	70-130	1.68	20
Benzene-d6	0.0895	0.0906	0.10		89	91	60-140	1.31	20
Ethylbenzene-d10	0.101	0.103	0.10		101	103	60-140	1.74	20
1,2-DCB-d4	0.0820	0.0849	0.10		82	85	60-140	3.46	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/14/17
Date Analyzed: 3/15/17
Instrument: GC11A, GC9a
Matrix: Soil
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
BatchID: 135572
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-135572
 1703711-001AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	50.3	1.0	40	-	126	79-133
TPH-Motor Oil (C18-C36)	ND		5.0	0	-	F2	-
Surrogate Recovery							
C9	22.37	26.3		25	89	105	77-109

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	29.4	33.8	40	2.469	67	78	59-150	14.0	30
TPH-Motor Oil (C18-C36)	15.8	15.8	40	7.306	21	21	2-69	0	30
Surrogate Recovery									
C9	22.9	23.0	25		92	92	78-109	0	30



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/14/17
Date Analyzed: 3/15/17
Instrument: GC19
Matrix: Soil
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703713
BatchID: 135573
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-135573
 1703700-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.582	0.40	0.60	-	97	82-118
MTBE	ND	0.102	0.050	0.10	-	102	61-119
Benzene	ND	0.117	0.0050	0.10	-	117	77-128
Toluene	ND	0.112	0.0050	0.10	-	112	74-132
Ethylbenzene	ND	0.118	0.0050	0.10	-	118	84-127
Xylenes	ND	0.343	0.015	0.30	-	114	86-129
Surrogate Recovery							
2-Fluorotoluene	0.09532	0.108		0.10	95	108	75-134

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.581	0.574	0.60	ND	97	96	58-129	1.16	20
MTBE	0.0971	0.103	0.10	ND	94	100	47-118	5.86	20
Benzene	0.110	0.113	0.10	ND	111	113	55-129	1.91	20
Toluene	0.112	0.115	0.10	ND	111	114	56-130	2.65	20
Ethylbenzene	0.111	0.114	0.10	ND	111	114	63-129	3.25	20
Xylenes	0.317	0.326	0.30	ND	106	109	64-131	2.63	20
Surrogate Recovery									
2-Fluorotoluene	0.0944	0.0955	0.10		94	96	62-126	1.20	20

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1703713 ClientCode: PDEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to: Paul King **Bill to:** Accounts Payable
 P & D Environmental Xtra Oil Company
 55 Santa Clara, Ste.240 2307 Pacific Avenue
 Oakland, CA 94610 Alameda, CA 94501
 (510) 658-6916 FAX: 510-834-0152 xtraoil@sbcglobal.net

Requested TAT: 5 days;

Date Received: 03/14/2017
 Date Logged: 03/14/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12

1703713-001	B16-4.0	Soil	3/13/2017 09:10	<input type="checkbox"/>	A	A	A	A											
1703713-002	B16-9.0	Soil	3/13/2017 09:15	<input type="checkbox"/>	A	A	A	A											
1703713-003	B17-4.0	Soil	3/13/2017 10:05	<input type="checkbox"/>	A	A	A	A											
1703713-004	B17-9.0	Soil	3/13/2017 10:10	<input type="checkbox"/>	A	A	A	A											
1703713-005	B18-4.0	Soil	3/13/2017 10:40	<input type="checkbox"/>	A	A	A	A											
1703713-006	B18-9.0	Soil	3/13/2017 10:45	<input type="checkbox"/>	A	A	A	A											
1703713-007	B19-4.0	Soil	3/13/2017 07:50	<input type="checkbox"/>	A	A	A	A											
1703713-008	B19-9.0	Soil	3/13/2017 07:55	<input type="checkbox"/>	A	A	A	A											
1703713-009	B20-4.0	Soil	3/13/2017 12:40	<input type="checkbox"/>	A	A	A	A											
1703713-010	B20-9.0	Soil	3/13/2017 12:45	<input type="checkbox"/>	A	A	A	A											
1703713-011	B21-4.0	Soil	3/13/2017 11:15	<input type="checkbox"/>	A	A	A	A											
1703713-012	B21-9.0	Soil	3/13/2017 11:20	<input type="checkbox"/>	A	A	A	A											

Test Legend:

1	8260B_S	2	G-MBTX_S	3	TPH_S
5		6		7	
9		10		11	
				12	

Prepared by: Jena Alfaro

The following SampleIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A contain testgroup Multi Range_S.

Comments: Always send reports to: lab@pdenviro.com; Paul.King@pdenviro.com; pdking000@aol.com

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Client Contact: Paul King
Contact's Email: lab@pdenviro.com; Paul.King@pdenviro.com;
pdking0000@aol.com

Project: 0398; Auto Depot/Xtra Oil Co.

Work Order: 1703713
QC Level: LEVEL 2
Date Logged: 3/14/2017

Comments: Always send reports to: lab@pdenviro.com;
Paul.King@pdenviro.com; pdking0000@aol.com

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703713-001A	B16-4.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 9:10	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1703713-002A	B16-9.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 9:15	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1703713-003A	B17-4.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 10:05	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1703713-004A	B17-9.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 10:10	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1703713-005A	B18-4.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 10:40	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1703713-006A	B18-9.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 10:45	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1703713-007A	B19-4.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 7:50	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL

Project: 0398; Auto Depot/Xtra Oil Co.

Work Order: 1703713

Client Contact: Paul King

Comments: Always send reports to: lab@pdenviro.com;
Paul.King@pdenviro.com; pdking0000@aol.com

QC Level: LEVEL 2
Date Logged: 3/14/2017

Contact's Email: lab@pdenviro.com; Paul.King@pdenviro.com;
pdking0000@aol.com

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703713-008A	B19-9.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 7:55	5 days	<input type="checkbox"/>		
1703713-009A	B20-4.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 12:40	5 days	<input type="checkbox"/>		
1703713-010A	B20-9.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 12:45	5 days	<input type="checkbox"/>		
1703713-011A	B21-4.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 11:15	5 days	<input type="checkbox"/>		
1703713-012A	B21-9.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/13/2017 11:20	5 days	<input type="checkbox"/>		

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **P & D Environmental**
 Project Name: **0398; Auto Depot/Xtra Oil Co.**
 WorkOrder No: **1703713** Matrix: Soil
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **3/14/2017 15:15**
 Date Logged: **3/14/2017**
 Received by: **Jena Alfaro**
 Logged by: **Jena Alfaro**

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
 Shipping container/cooler in good condition? Yes No
 Samples in proper containers/bottles? Yes No
 Sample containers intact? Yes No
 Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No NA
 Sample/Temp Blank temperature Temp: 4.5°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No
 (Ice Type: WET ICE)

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1703712

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Paul King

Project P.O.:

Project Name: 0398; Auto Depot/Xtra Oil Co.

Project Received: 03/14/2017

Analytical Report reviewed & approved for release on 03/20/2017 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0398; Auto Depot/Xtra Oil Co.
WorkOrder: 1703712

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

b1 aqueous sample that contains greater than ~1 vol. % sediment



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-W	1703712-001B	Water	03/13/2017 14:00	GC10	135646
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	10	1	03/16/2017 00:03	
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/16/2017 00:03	
Benzene	ND	0.50	1	03/16/2017 00:03	
Bromobenzene	ND	0.50	1	03/16/2017 00:03	
Bromochloromethane	ND	0.50	1	03/16/2017 00:03	
Bromodichloromethane	ND	0.50	1	03/16/2017 00:03	
Bromoform	ND	0.50	1	03/16/2017 00:03	
Bromomethane	ND	0.50	1	03/16/2017 00:03	
2-Butanone (MEK)	ND	2.0	1	03/16/2017 00:03	
t-Butyl alcohol (TBA)	ND	2.0	1	03/16/2017 00:03	
n-Butyl benzene	ND	0.50	1	03/16/2017 00:03	
sec-Butyl benzene	ND	0.50	1	03/16/2017 00:03	
tert-Butyl benzene	ND	0.50	1	03/16/2017 00:03	
Carbon Disulfide	ND	0.50	1	03/16/2017 00:03	
Carbon Tetrachloride	ND	0.50	1	03/16/2017 00:03	
Chlorobenzene	ND	0.50	1	03/16/2017 00:03	
Chloroethane	ND	0.50	1	03/16/2017 00:03	
Chloroform	ND	0.50	1	03/16/2017 00:03	
Chloromethane	ND	0.50	1	03/16/2017 00:03	
2-Chlorotoluene	ND	0.50	1	03/16/2017 00:03	
4-Chlorotoluene	ND	0.50	1	03/16/2017 00:03	
Dibromochloromethane	ND	0.50	1	03/16/2017 00:03	
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/16/2017 00:03	
1,2-Dibromoethane (EDB)	ND	0.50	1	03/16/2017 00:03	
Dibromomethane	ND	0.50	1	03/16/2017 00:03	
1,2-Dichlorobenzene	ND	0.50	1	03/16/2017 00:03	
1,3-Dichlorobenzene	ND	0.50	1	03/16/2017 00:03	
1,4-Dichlorobenzene	ND	0.50	1	03/16/2017 00:03	
Dichlorodifluoromethane	ND	0.50	1	03/16/2017 00:03	
1,1-Dichloroethane	ND	0.50	1	03/16/2017 00:03	
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/16/2017 00:03	
1,1-Dichloroethene	ND	0.50	1	03/16/2017 00:03	
cis-1,2-Dichloroethene	ND	0.50	1	03/16/2017 00:03	
trans-1,2-Dichloroethene	ND	0.50	1	03/16/2017 00:03	
1,2-Dichloropropane	ND	0.50	1	03/16/2017 00:03	
1,3-Dichloropropane	ND	0.50	1	03/16/2017 00:03	
2,2-Dichloropropane	ND	0.50	1	03/16/2017 00:03	

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-W	1703712-001B	Water	03/13/2017 14:00	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/16/2017 00:03
cis-1,3-Dichloropropene	ND	0.50	1	03/16/2017 00:03
trans-1,3-Dichloropropene	ND	0.50	1	03/16/2017 00:03
Diisopropyl ether (DIPE)	ND	0.50	1	03/16/2017 00:03
Ethylbenzene	ND	0.50	1	03/16/2017 00:03
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/16/2017 00:03
Freon 113	ND	0.50	1	03/16/2017 00:03
Hexachlorobutadiene	ND	0.50	1	03/16/2017 00:03
Hexachloroethane	ND	0.50	1	03/16/2017 00:03
2-Hexanone	ND	0.50	1	03/16/2017 00:03
Isopropylbenzene	ND	0.50	1	03/16/2017 00:03
4-Isopropyl toluene	ND	0.50	1	03/16/2017 00:03
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/16/2017 00:03
Methylene chloride	ND	0.50	1	03/16/2017 00:03
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/16/2017 00:03
Naphthalene	ND	0.50	1	03/16/2017 00:03
n-Propyl benzene	ND	0.50	1	03/16/2017 00:03
Styrene	ND	0.50	1	03/16/2017 00:03
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/16/2017 00:03
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/16/2017 00:03
Tetrachloroethene	ND	0.50	1	03/16/2017 00:03
Toluene	ND	0.50	1	03/16/2017 00:03
1,2,3-Trichlorobenzene	ND	0.50	1	03/16/2017 00:03
1,2,4-Trichlorobenzene	ND	0.50	1	03/16/2017 00:03
1,1,1-Trichloroethane	ND	0.50	1	03/16/2017 00:03
1,1,2-Trichloroethane	ND	0.50	1	03/16/2017 00:03
Trichloroethene	ND	0.50	1	03/16/2017 00:03
Trichlorofluoromethane	ND	0.50	1	03/16/2017 00:03
1,2,3-Trichloropropane	ND	0.50	1	03/16/2017 00:03
1,2,4-Trimethylbenzene	ND	0.50	1	03/16/2017 00:03
1,3,5-Trimethylbenzene	ND	0.50	1	03/16/2017 00:03
Vinyl Chloride	ND	0.50	1	03/16/2017 00:03
Xylenes, Total	ND	0.50	1	03/16/2017 00:03

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-W	1703712-001B	Water	03/13/2017 14:00	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	98	70-130		03/16/2017 00:03
Toluene-d8	102	70-130		03/16/2017 00:03
4-BFB	77	70-130		03/16/2017 00:03

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-W	1703712-002B	Water	03/13/2017 13:50	GC10	135646
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	03/16/2017 00:42
tert-Amyl methyl ether (TAME)	ND		0.50	1	03/16/2017 00:42
Benzene	ND		0.50	1	03/16/2017 00:42
Bromobenzene	ND		0.50	1	03/16/2017 00:42
Bromochloromethane	ND		0.50	1	03/16/2017 00:42
Bromodichloromethane	ND		0.50	1	03/16/2017 00:42
Bromoform	ND		0.50	1	03/16/2017 00:42
Bromomethane	ND		0.50	1	03/16/2017 00:42
2-Butanone (MEK)	ND		2.0	1	03/16/2017 00:42
t-Butyl alcohol (TBA)	ND		2.0	1	03/16/2017 00:42
n-Butyl benzene	ND		0.50	1	03/16/2017 00:42
sec-Butyl benzene	ND		0.50	1	03/16/2017 00:42
tert-Butyl benzene	ND		0.50	1	03/16/2017 00:42
Carbon Disulfide	ND		0.50	1	03/16/2017 00:42
Carbon Tetrachloride	ND		0.50	1	03/16/2017 00:42
Chlorobenzene	ND		0.50	1	03/16/2017 00:42
Chloroethane	ND		0.50	1	03/16/2017 00:42
Chloroform	ND		0.50	1	03/16/2017 00:42
Chloromethane	ND		0.50	1	03/16/2017 00:42
2-Chlorotoluene	ND		0.50	1	03/16/2017 00:42
4-Chlorotoluene	ND		0.50	1	03/16/2017 00:42
Dibromochloromethane	ND		0.50	1	03/16/2017 00:42
1,2-Dibromo-3-chloropropane	ND		0.20	1	03/16/2017 00:42
1,2-Dibromoethane (EDB)	ND		0.50	1	03/16/2017 00:42
Dibromomethane	ND		0.50	1	03/16/2017 00:42
1,2-Dichlorobenzene	ND		0.50	1	03/16/2017 00:42
1,3-Dichlorobenzene	ND		0.50	1	03/16/2017 00:42
1,4-Dichlorobenzene	ND		0.50	1	03/16/2017 00:42
Dichlorodifluoromethane	ND		0.50	1	03/16/2017 00:42
1,1-Dichloroethane	ND		0.50	1	03/16/2017 00:42
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	03/16/2017 00:42
1,1-Dichloroethene	ND		0.50	1	03/16/2017 00:42
cis-1,2-Dichloroethene	ND		0.50	1	03/16/2017 00:42
trans-1,2-Dichloroethene	ND		0.50	1	03/16/2017 00:42
1,2-Dichloropropane	ND		0.50	1	03/16/2017 00:42
1,3-Dichloropropane	ND		0.50	1	03/16/2017 00:42
2,2-Dichloropropane	ND		0.50	1	03/16/2017 00:42

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-W	1703712-002B	Water	03/13/2017 13:50	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/16/2017 00:42
cis-1,3-Dichloropropene	ND	0.50	1	03/16/2017 00:42
trans-1,3-Dichloropropene	ND	0.50	1	03/16/2017 00:42
Diisopropyl ether (DIPE)	ND	0.50	1	03/16/2017 00:42
Ethylbenzene	ND	0.50	1	03/16/2017 00:42
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/16/2017 00:42
Freon 113	ND	0.50	1	03/16/2017 00:42
Hexachlorobutadiene	ND	0.50	1	03/16/2017 00:42
Hexachloroethane	ND	0.50	1	03/16/2017 00:42
2-Hexanone	ND	0.50	1	03/16/2017 00:42
Isopropylbenzene	ND	0.50	1	03/16/2017 00:42
4-Isopropyl toluene	ND	0.50	1	03/16/2017 00:42
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/16/2017 00:42
Methylene chloride	ND	0.50	1	03/16/2017 00:42
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/16/2017 00:42
Naphthalene	ND	0.50	1	03/16/2017 00:42
n-Propyl benzene	ND	0.50	1	03/16/2017 00:42
Styrene	ND	0.50	1	03/16/2017 00:42
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/16/2017 00:42
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/16/2017 00:42
Tetrachloroethene	ND	0.50	1	03/16/2017 00:42
Toluene	ND	0.50	1	03/16/2017 00:42
1,2,3-Trichlorobenzene	ND	0.50	1	03/16/2017 00:42
1,2,4-Trichlorobenzene	ND	0.50	1	03/16/2017 00:42
1,1,1-Trichloroethane	ND	0.50	1	03/16/2017 00:42
1,1,2-Trichloroethane	ND	0.50	1	03/16/2017 00:42
Trichloroethene	ND	0.50	1	03/16/2017 00:42
Trichlorofluoromethane	ND	0.50	1	03/16/2017 00:42
1,2,3-Trichloropropane	ND	0.50	1	03/16/2017 00:42
1,2,4-Trimethylbenzene	ND	0.50	1	03/16/2017 00:42
1,3,5-Trimethylbenzene	ND	0.50	1	03/16/2017 00:42
Vinyl Chloride	ND	0.50	1	03/16/2017 00:42
Xylenes, Total	ND	0.50	1	03/16/2017 00:42

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-W	1703712-002B	Water	03/13/2017 13:50	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	97	70-130		03/16/2017 00:42
Toluene-d8	101	70-130		03/16/2017 00:42
4-BFB	76	70-130		03/16/2017 00:42

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-W	1703712-003B	Water	03/13/2017 13:40	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/16/2017 01:21
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/16/2017 01:21
Benzene	ND	0.50	1	03/16/2017 01:21
Bromobenzene	ND	0.50	1	03/16/2017 01:21
Bromochloromethane	ND	0.50	1	03/16/2017 01:21
Bromodichloromethane	ND	0.50	1	03/16/2017 01:21
Bromoform	ND	0.50	1	03/16/2017 01:21
Bromomethane	ND	0.50	1	03/16/2017 01:21
2-Butanone (MEK)	ND	2.0	1	03/16/2017 01:21
t-Butyl alcohol (TBA)	ND	2.0	1	03/16/2017 01:21
n-Butyl benzene	ND	0.50	1	03/16/2017 01:21
sec-Butyl benzene	ND	0.50	1	03/16/2017 01:21
tert-Butyl benzene	ND	0.50	1	03/16/2017 01:21
Carbon Disulfide	ND	0.50	1	03/16/2017 01:21
Carbon Tetrachloride	ND	0.50	1	03/16/2017 01:21
Chlorobenzene	ND	0.50	1	03/16/2017 01:21
Chloroethane	ND	0.50	1	03/16/2017 01:21
Chloroform	ND	0.50	1	03/16/2017 01:21
Chloromethane	ND	0.50	1	03/16/2017 01:21
2-Chlorotoluene	ND	0.50	1	03/16/2017 01:21
4-Chlorotoluene	ND	0.50	1	03/16/2017 01:21
Dibromochloromethane	ND	0.50	1	03/16/2017 01:21
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/16/2017 01:21
1,2-Dibromoethane (EDB)	ND	0.50	1	03/16/2017 01:21
Dibromomethane	ND	0.50	1	03/16/2017 01:21
1,2-Dichlorobenzene	ND	0.50	1	03/16/2017 01:21
1,3-Dichlorobenzene	ND	0.50	1	03/16/2017 01:21
1,4-Dichlorobenzene	ND	0.50	1	03/16/2017 01:21
Dichlorodifluoromethane	ND	0.50	1	03/16/2017 01:21
1,1-Dichloroethane	ND	0.50	1	03/16/2017 01:21
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/16/2017 01:21
1,1-Dichloroethene	ND	0.50	1	03/16/2017 01:21
cis-1,2-Dichloroethene	ND	0.50	1	03/16/2017 01:21
trans-1,2-Dichloroethene	ND	0.50	1	03/16/2017 01:21
1,2-Dichloropropane	ND	0.50	1	03/16/2017 01:21
1,3-Dichloropropane	ND	0.50	1	03/16/2017 01:21
2,2-Dichloropropane	ND	0.50	1	03/16/2017 01:21

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-W	1703712-003B	Water	03/13/2017 13:40	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/16/2017 01:21
cis-1,3-Dichloropropene	ND	0.50	1	03/16/2017 01:21
trans-1,3-Dichloropropene	ND	0.50	1	03/16/2017 01:21
Diisopropyl ether (DIPE)	ND	0.50	1	03/16/2017 01:21
Ethylbenzene	ND	0.50	1	03/16/2017 01:21
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/16/2017 01:21
Freon 113	ND	0.50	1	03/16/2017 01:21
Hexachlorobutadiene	ND	0.50	1	03/16/2017 01:21
Hexachloroethane	ND	0.50	1	03/16/2017 01:21
2-Hexanone	ND	0.50	1	03/16/2017 01:21
Isopropylbenzene	ND	0.50	1	03/16/2017 01:21
4-Isopropyl toluene	ND	0.50	1	03/16/2017 01:21
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/16/2017 01:21
Methylene chloride	ND	0.50	1	03/16/2017 01:21
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/16/2017 01:21
Naphthalene	ND	0.50	1	03/16/2017 01:21
n-Propyl benzene	ND	0.50	1	03/16/2017 01:21
Styrene	ND	0.50	1	03/16/2017 01:21
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/16/2017 01:21
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/16/2017 01:21
Tetrachloroethene	ND	0.50	1	03/16/2017 01:21
Toluene	ND	0.50	1	03/16/2017 01:21
1,2,3-Trichlorobenzene	ND	0.50	1	03/16/2017 01:21
1,2,4-Trichlorobenzene	ND	0.50	1	03/16/2017 01:21
1,1,1-Trichloroethane	ND	0.50	1	03/16/2017 01:21
1,1,2-Trichloroethane	ND	0.50	1	03/16/2017 01:21
Trichloroethene	ND	0.50	1	03/16/2017 01:21
Trichlorofluoromethane	ND	0.50	1	03/16/2017 01:21
1,2,3-Trichloropropane	ND	0.50	1	03/16/2017 01:21
1,2,4-Trimethylbenzene	ND	0.50	1	03/16/2017 01:21
1,3,5-Trimethylbenzene	ND	0.50	1	03/16/2017 01:21
Vinyl Chloride	ND	0.50	1	03/16/2017 01:21
Xylenes, Total	ND	0.50	1	03/16/2017 01:21

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-W	1703712-003B	Water	03/13/2017 13:40	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	97	70-130		03/16/2017 01:21
Toluene-d8	100	70-130		03/16/2017 01:21
4-BFB	75	70-130		03/16/2017 01:21

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-W	1703712-004B	Water	03/13/2017 13:35	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/16/2017 02:00
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/16/2017 02:00
Benzene	ND	0.50	1	03/16/2017 02:00
Bromobenzene	ND	0.50	1	03/16/2017 02:00
Bromochloromethane	ND	0.50	1	03/16/2017 02:00
Bromodichloromethane	ND	0.50	1	03/16/2017 02:00
Bromoform	ND	0.50	1	03/16/2017 02:00
Bromomethane	ND	0.50	1	03/16/2017 02:00
2-Butanone (MEK)	ND	2.0	1	03/16/2017 02:00
t-Butyl alcohol (TBA)	ND	2.0	1	03/16/2017 02:00
n-Butyl benzene	ND	0.50	1	03/16/2017 02:00
sec-Butyl benzene	ND	0.50	1	03/16/2017 02:00
tert-Butyl benzene	ND	0.50	1	03/16/2017 02:00
Carbon Disulfide	ND	0.50	1	03/16/2017 02:00
Carbon Tetrachloride	ND	0.50	1	03/16/2017 02:00
Chlorobenzene	ND	0.50	1	03/16/2017 02:00
Chloroethane	ND	0.50	1	03/16/2017 02:00
Chloroform	ND	0.50	1	03/16/2017 02:00
Chloromethane	ND	0.50	1	03/16/2017 02:00
2-Chlorotoluene	ND	0.50	1	03/16/2017 02:00
4-Chlorotoluene	ND	0.50	1	03/16/2017 02:00
Dibromochloromethane	ND	0.50	1	03/16/2017 02:00
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/16/2017 02:00
1,2-Dibromoethane (EDB)	ND	0.50	1	03/16/2017 02:00
Dibromomethane	ND	0.50	1	03/16/2017 02:00
1,2-Dichlorobenzene	ND	0.50	1	03/16/2017 02:00
1,3-Dichlorobenzene	ND	0.50	1	03/16/2017 02:00
1,4-Dichlorobenzene	ND	0.50	1	03/16/2017 02:00
Dichlorodifluoromethane	ND	0.50	1	03/16/2017 02:00
1,1-Dichloroethane	ND	0.50	1	03/16/2017 02:00
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/16/2017 02:00
1,1-Dichloroethene	ND	0.50	1	03/16/2017 02:00
cis-1,2-Dichloroethene	ND	0.50	1	03/16/2017 02:00
trans-1,2-Dichloroethene	ND	0.50	1	03/16/2017 02:00
1,2-Dichloropropane	ND	0.50	1	03/16/2017 02:00
1,3-Dichloropropane	ND	0.50	1	03/16/2017 02:00
2,2-Dichloropropane	ND	0.50	1	03/16/2017 02:00

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-W	1703712-004B	Water	03/13/2017 13:35	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/16/2017 02:00
cis-1,3-Dichloropropene	ND	0.50	1	03/16/2017 02:00
trans-1,3-Dichloropropene	ND	0.50	1	03/16/2017 02:00
Diisopropyl ether (DIPE)	ND	0.50	1	03/16/2017 02:00
Ethylbenzene	ND	0.50	1	03/16/2017 02:00
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/16/2017 02:00
Freon 113	ND	0.50	1	03/16/2017 02:00
Hexachlorobutadiene	ND	0.50	1	03/16/2017 02:00
Hexachloroethane	ND	0.50	1	03/16/2017 02:00
2-Hexanone	ND	0.50	1	03/16/2017 02:00
Isopropylbenzene	ND	0.50	1	03/16/2017 02:00
4-Isopropyl toluene	ND	0.50	1	03/16/2017 02:00
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/16/2017 02:00
Methylene chloride	ND	0.50	1	03/16/2017 02:00
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/16/2017 02:00
Naphthalene	ND	0.50	1	03/16/2017 02:00
n-Propyl benzene	ND	0.50	1	03/16/2017 02:00
Styrene	ND	0.50	1	03/16/2017 02:00
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/16/2017 02:00
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/16/2017 02:00
Tetrachloroethene	ND	0.50	1	03/16/2017 02:00
Toluene	ND	0.50	1	03/16/2017 02:00
1,2,3-Trichlorobenzene	ND	0.50	1	03/16/2017 02:00
1,2,4-Trichlorobenzene	ND	0.50	1	03/16/2017 02:00
1,1,1-Trichloroethane	ND	0.50	1	03/16/2017 02:00
1,1,2-Trichloroethane	ND	0.50	1	03/16/2017 02:00
Trichloroethene	ND	0.50	1	03/16/2017 02:00
Trichlorofluoromethane	ND	0.50	1	03/16/2017 02:00
1,2,3-Trichloropropane	ND	0.50	1	03/16/2017 02:00
1,2,4-Trimethylbenzene	ND	0.50	1	03/16/2017 02:00
1,3,5-Trimethylbenzene	ND	0.50	1	03/16/2017 02:00
Vinyl Chloride	ND	0.50	1	03/16/2017 02:00
Xylenes, Total	ND	0.50	1	03/16/2017 02:00

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-W	1703712-004B	Water	03/13/2017 13:35	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	96	70-130		03/16/2017 02:00
Toluene-d8	100	70-130		03/16/2017 02:00
4-BFB	77	70-130		03/16/2017 02:00

Analyst(s): KF

Analytical Comments: b1



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-W	1703712-005B	Water	03/13/2017 14:20	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/16/2017 02:40
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/16/2017 02:40
Benzene	ND	0.50	1	03/16/2017 02:40
Bromobenzene	ND	0.50	1	03/16/2017 02:40
Bromochloromethane	ND	0.50	1	03/16/2017 02:40
Bromodichloromethane	ND	0.50	1	03/16/2017 02:40
Bromoform	ND	0.50	1	03/16/2017 02:40
Bromomethane	ND	0.50	1	03/16/2017 02:40
2-Butanone (MEK)	ND	2.0	1	03/16/2017 02:40
t-Butyl alcohol (TBA)	ND	2.0	1	03/16/2017 02:40
n-Butyl benzene	ND	0.50	1	03/16/2017 02:40
sec-Butyl benzene	ND	0.50	1	03/16/2017 02:40
tert-Butyl benzene	ND	0.50	1	03/16/2017 02:40
Carbon Disulfide	ND	0.50	1	03/16/2017 02:40
Carbon Tetrachloride	ND	0.50	1	03/16/2017 02:40
Chlorobenzene	ND	0.50	1	03/16/2017 02:40
Chloroethane	ND	0.50	1	03/16/2017 02:40
Chloroform	ND	0.50	1	03/16/2017 02:40
Chloromethane	ND	0.50	1	03/16/2017 02:40
2-Chlorotoluene	ND	0.50	1	03/16/2017 02:40
4-Chlorotoluene	ND	0.50	1	03/16/2017 02:40
Dibromochloromethane	ND	0.50	1	03/16/2017 02:40
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/16/2017 02:40
1,2-Dibromoethane (EDB)	ND	0.50	1	03/16/2017 02:40
Dibromomethane	ND	0.50	1	03/16/2017 02:40
1,2-Dichlorobenzene	ND	0.50	1	03/16/2017 02:40
1,3-Dichlorobenzene	ND	0.50	1	03/16/2017 02:40
1,4-Dichlorobenzene	ND	0.50	1	03/16/2017 02:40
Dichlorodifluoromethane	ND	0.50	1	03/16/2017 02:40
1,1-Dichloroethane	ND	0.50	1	03/16/2017 02:40
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/16/2017 02:40
1,1-Dichloroethene	ND	0.50	1	03/16/2017 02:40
cis-1,2-Dichloroethene	ND	0.50	1	03/16/2017 02:40
trans-1,2-Dichloroethene	ND	0.50	1	03/16/2017 02:40
1,2-Dichloropropane	ND	0.50	1	03/16/2017 02:40
1,3-Dichloropropane	ND	0.50	1	03/16/2017 02:40
2,2-Dichloropropane	ND	0.50	1	03/16/2017 02:40

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-W	1703712-005B	Water	03/13/2017 14:20	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/16/2017 02:40
cis-1,3-Dichloropropene	ND	0.50	1	03/16/2017 02:40
trans-1,3-Dichloropropene	ND	0.50	1	03/16/2017 02:40
Diisopropyl ether (DIPE)	ND	0.50	1	03/16/2017 02:40
Ethylbenzene	ND	0.50	1	03/16/2017 02:40
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/16/2017 02:40
Freon 113	ND	0.50	1	03/16/2017 02:40
Hexachlorobutadiene	ND	0.50	1	03/16/2017 02:40
Hexachloroethane	ND	0.50	1	03/16/2017 02:40
2-Hexanone	ND	0.50	1	03/16/2017 02:40
Isopropylbenzene	ND	0.50	1	03/16/2017 02:40
4-Isopropyl toluene	ND	0.50	1	03/16/2017 02:40
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/16/2017 02:40
Methylene chloride	ND	0.50	1	03/16/2017 02:40
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/16/2017 02:40
Naphthalene	ND	0.50	1	03/16/2017 02:40
n-Propyl benzene	ND	0.50	1	03/16/2017 02:40
Styrene	ND	0.50	1	03/16/2017 02:40
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/16/2017 02:40
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/16/2017 02:40
Tetrachloroethene	ND	0.50	1	03/16/2017 02:40
Toluene	ND	0.50	1	03/16/2017 02:40
1,2,3-Trichlorobenzene	ND	0.50	1	03/16/2017 02:40
1,2,4-Trichlorobenzene	ND	0.50	1	03/16/2017 02:40
1,1,1-Trichloroethane	ND	0.50	1	03/16/2017 02:40
1,1,2-Trichloroethane	ND	0.50	1	03/16/2017 02:40
Trichloroethene	ND	0.50	1	03/16/2017 02:40
Trichlorofluoromethane	ND	0.50	1	03/16/2017 02:40
1,2,3-Trichloropropane	ND	0.50	1	03/16/2017 02:40
1,2,4-Trimethylbenzene	ND	0.50	1	03/16/2017 02:40
1,3,5-Trimethylbenzene	ND	0.50	1	03/16/2017 02:40
Vinyl Chloride	ND	0.50	1	03/16/2017 02:40
Xylenes, Total	ND	0.50	1	03/16/2017 02:40

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-W	1703712-005B	Water	03/13/2017 14:20	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	96	70-130		03/16/2017 02:40
Toluene-d8	99	70-130		03/16/2017 02:40
4-BFB	75	70-130		03/16/2017 02:40

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-W	1703712-006B	Water	03/13/2017 14:10	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/16/2017 03:18
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/16/2017 03:18
Benzene	ND	0.50	1	03/16/2017 03:18
Bromobenzene	ND	0.50	1	03/16/2017 03:18
Bromochloromethane	ND	0.50	1	03/16/2017 03:18
Bromodichloromethane	ND	0.50	1	03/16/2017 03:18
Bromoform	ND	0.50	1	03/16/2017 03:18
Bromomethane	ND	0.50	1	03/16/2017 03:18
2-Butanone (MEK)	ND	2.0	1	03/16/2017 03:18
t-Butyl alcohol (TBA)	ND	2.0	1	03/16/2017 03:18
n-Butyl benzene	ND	0.50	1	03/16/2017 03:18
sec-Butyl benzene	ND	0.50	1	03/16/2017 03:18
tert-Butyl benzene	ND	0.50	1	03/16/2017 03:18
Carbon Disulfide	ND	0.50	1	03/16/2017 03:18
Carbon Tetrachloride	ND	0.50	1	03/16/2017 03:18
Chlorobenzene	ND	0.50	1	03/16/2017 03:18
Chloroethane	ND	0.50	1	03/16/2017 03:18
Chloroform	ND	0.50	1	03/16/2017 03:18
Chloromethane	ND	0.50	1	03/16/2017 03:18
2-Chlorotoluene	ND	0.50	1	03/16/2017 03:18
4-Chlorotoluene	ND	0.50	1	03/16/2017 03:18
Dibromochloromethane	ND	0.50	1	03/16/2017 03:18
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/16/2017 03:18
1,2-Dibromoethane (EDB)	ND	0.50	1	03/16/2017 03:18
Dibromomethane	ND	0.50	1	03/16/2017 03:18
1,2-Dichlorobenzene	ND	0.50	1	03/16/2017 03:18
1,3-Dichlorobenzene	ND	0.50	1	03/16/2017 03:18
1,4-Dichlorobenzene	ND	0.50	1	03/16/2017 03:18
Dichlorodifluoromethane	ND	0.50	1	03/16/2017 03:18
1,1-Dichloroethane	ND	0.50	1	03/16/2017 03:18
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/16/2017 03:18
1,1-Dichloroethene	ND	0.50	1	03/16/2017 03:18
cis-1,2-Dichloroethene	ND	0.50	1	03/16/2017 03:18
trans-1,2-Dichloroethene	ND	0.50	1	03/16/2017 03:18
1,2-Dichloropropane	ND	0.50	1	03/16/2017 03:18
1,3-Dichloropropane	ND	0.50	1	03/16/2017 03:18
2,2-Dichloropropane	ND	0.50	1	03/16/2017 03:18

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Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-W	1703712-006B	Water	03/13/2017 14:10	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/16/2017 03:18
cis-1,3-Dichloropropene	ND	0.50	1	03/16/2017 03:18
trans-1,3-Dichloropropene	ND	0.50	1	03/16/2017 03:18
Diisopropyl ether (DIPE)	ND	0.50	1	03/16/2017 03:18
Ethylbenzene	ND	0.50	1	03/16/2017 03:18
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/16/2017 03:18
Freon 113	ND	0.50	1	03/16/2017 03:18
Hexachlorobutadiene	ND	0.50	1	03/16/2017 03:18
Hexachloroethane	ND	0.50	1	03/16/2017 03:18
2-Hexanone	ND	0.50	1	03/16/2017 03:18
Isopropylbenzene	ND	0.50	1	03/16/2017 03:18
4-Isopropyl toluene	ND	0.50	1	03/16/2017 03:18
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/16/2017 03:18
Methylene chloride	ND	0.50	1	03/16/2017 03:18
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/16/2017 03:18
Naphthalene	ND	0.50	1	03/16/2017 03:18
n-Propyl benzene	ND	0.50	1	03/16/2017 03:18
Styrene	ND	0.50	1	03/16/2017 03:18
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/16/2017 03:18
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/16/2017 03:18
Tetrachloroethene	ND	0.50	1	03/16/2017 03:18
Toluene	ND	0.50	1	03/16/2017 03:18
1,2,3-Trichlorobenzene	ND	0.50	1	03/16/2017 03:18
1,2,4-Trichlorobenzene	ND	0.50	1	03/16/2017 03:18
1,1,1-Trichloroethane	ND	0.50	1	03/16/2017 03:18
1,1,2-Trichloroethane	ND	0.50	1	03/16/2017 03:18
Trichloroethene	ND	0.50	1	03/16/2017 03:18
Trichlorofluoromethane	ND	0.50	1	03/16/2017 03:18
1,2,3-Trichloropropane	ND	0.50	1	03/16/2017 03:18
1,2,4-Trimethylbenzene	ND	0.50	1	03/16/2017 03:18
1,3,5-Trimethylbenzene	ND	0.50	1	03/16/2017 03:18
Vinyl Chloride	ND	0.50	1	03/16/2017 03:18
Xylenes, Total	ND	0.50	1	03/16/2017 03:18

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-W	1703712-006B	Water	03/13/2017 14:10	GC10	135646

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	96	70-130		03/16/2017 03:18
Toluene-d8	101	70-130		03/16/2017 03:18
4-BFB	77	70-130		03/16/2017 03:18

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/15/17-3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-W	1703712-001A	Water	03/13/2017 14:00	GC3	135695

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/15/2017 22:35
MTBE	---	5.0	1	03/15/2017 22:35
Benzene	---	0.50	1	03/15/2017 22:35
Toluene	---	0.50	1	03/15/2017 22:35
Ethylbenzene	---	0.50	1	03/15/2017 22:35
Xylenes	---	1.5	1	03/15/2017 22:35
Surrogates	REC (%)	Limits		
aaa-TFT	101	89-115		03/15/2017 22:35

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-W	1703712-002A	Water	03/13/2017 13:50	GC3	135695

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/16/2017 00:35
MTBE	---	5.0	1	03/16/2017 00:35
Benzene	---	0.50	1	03/16/2017 00:35
Toluene	---	0.50	1	03/16/2017 00:35
Ethylbenzene	---	0.50	1	03/16/2017 00:35
Xylenes	---	1.5	1	03/16/2017 00:35
Surrogates	REC (%)	Limits		
aaa-TFT	101	89-115		03/16/2017 00:35

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/15/17-3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-W	1703712-003A	Water	03/13/2017 13:40	GC3	135695

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/16/2017 01:05
MTBE	---	5.0	1	03/16/2017 01:05
Benzene	---	0.50	1	03/16/2017 01:05
Toluene	---	0.50	1	03/16/2017 01:05
Ethylbenzene	---	0.50	1	03/16/2017 01:05
Xylenes	---	1.5	1	03/16/2017 01:05
Surrogates	REC (%)	Limits		
aaa-TFT	104	89-115		03/16/2017 01:05

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-W	1703712-004A	Water	03/13/2017 13:35	GC3	135695

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/16/2017 01:35
MTBE	---	5.0	1	03/16/2017 01:35
Benzene	---	0.50	1	03/16/2017 01:35
Toluene	---	0.50	1	03/16/2017 01:35
Ethylbenzene	---	0.50	1	03/16/2017 01:35
Xylenes	---	1.5	1	03/16/2017 01:35
Surrogates	REC (%)	Limits		
aaa-TFT	109	89-115		03/16/2017 01:35

Analyst(s): IA

Analytical Comments: b1



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/15/17-3/16/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-W	1703712-005A	Water	03/13/2017 14:20	GC3	135695

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/16/2017 02:05
MTBE	---	5.0	1	03/16/2017 02:05
Benzene	---	0.50	1	03/16/2017 02:05
Toluene	---	0.50	1	03/16/2017 02:05
Ethylbenzene	---	0.50	1	03/16/2017 02:05
Xylenes	---	1.5	1	03/16/2017 02:05
Surrogates	REC (%)	Limits		
aaa-TFT	112	89-115		03/16/2017 02:05

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-W	1703712-006A	Water	03/13/2017 14:10	GC3	135695

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/16/2017 02:35
MTBE	---	5.0	1	03/16/2017 02:35
Benzene	---	0.50	1	03/16/2017 02:35
Toluene	---	0.50	1	03/16/2017 02:35
Ethylbenzene	---	0.50	1	03/16/2017 02:35
Xylenes	---	1.5	1	03/16/2017 02:35
Surrogates	REC (%)	Limits		
aaa-TFT	106	89-115		03/16/2017 02:35

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-W	1703712-001A	Water	03/13/2017 14:00	GC11B	135533

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/15/2017 11:55
TPH-Motor Oil (C18-C36)	ND	250	1	03/15/2017 11:55
TPH-Bunker Oil (C10-C36)	ND	250	1	03/15/2017 11:55

Surrogates	REC (%)	Limits	Date Analyzed
C9	86	66-138	03/15/2017 11:55

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-W	1703712-002A	Water	03/13/2017 13:50	GC11B	135578

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/15/2017 12:34
TPH-Motor Oil (C18-C36)	ND	250	1	03/15/2017 12:34
TPH-Bunker Oil (C10-C36)	ND	250	1	03/15/2017 12:34

Surrogates	REC (%)	Limits	Date Analyzed
C9	86	66-138	03/15/2017 12:34

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-W	1703712-003A	Water	03/13/2017 13:40	GC11B	135578

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/15/2017 13:13
TPH-Motor Oil (C18-C36)	ND	250	1	03/15/2017 13:13
TPH-Bunker Oil (C10-C36)	ND	250	1	03/15/2017 13:13

Surrogates	REC (%)	Limits	Date Analyzed
C9	87	66-138	03/15/2017 13:13

Analyst(s): TK

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 3/14/17 15:15
Date Prepared: 3/14/17
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-W	1703712-004A	Water	03/13/2017 13:35	GC11B	135578

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/15/2017 13:52
TPH-Motor Oil (C18-C36)	ND	250	1	03/15/2017 13:52
TPH-Bunker Oil (C10-C36)	ND	250	1	03/15/2017 13:52

Surrogates	REC (%)	Limits	Date Analyzed
C9	89	66-138	03/15/2017 13:52

Analyst(s): TK

Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-W	1703712-005A	Water	03/13/2017 14:20	GC11B	135578

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/15/2017 14:31
TPH-Motor Oil (C18-C36)	ND	250	1	03/15/2017 14:31
TPH-Bunker Oil (C10-C36)	ND	250	1	03/15/2017 14:31

Surrogates	REC (%)	Limits	Date Analyzed
C9	86	66-138	03/15/2017 14:31

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B21-W	1703712-006A	Water	03/13/2017 14:10	GC11B	135578

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/15/2017 15:10
TPH-Motor Oil (C18-C36)	ND	250	1	03/15/2017 15:10
TPH-Bunker Oil (C10-C36)	ND	250	1	03/15/2017 15:10

Surrogates	REC (%)	Limits	Date Analyzed
C9	89	66-138	03/15/2017 15:10

Analyst(s): TK



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/15/17
Date Analyzed: 3/15/17
Instrument: GC10
Matrix: Water
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
BatchID: 135646
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-135646

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	7.95	0.50	10	-	79	54-140
Benzene	ND	9.54	0.50	10	-	95	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	29.3	2.0	40	-	73	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	9.01	0.50	10	-	90	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	8.23	0.50	10	-	82	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	10.1	0.50	10	-	101	66-125
1,1-Dichloroethene	ND	9.24	0.50	10	-	92	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-

(Cont.)

NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/15/17
Date Analyzed: 3/15/17
Instrument: GC10
Matrix: Water
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
BatchID: 135646
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-135646

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	9.22	0.50	10	-	92	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.27	0.50	10	-	93	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	9.00	0.50	10	-	90	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	8.89	0.50	10	-	89	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	8.79	0.50	10	-	88	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/15/17
Date Analyzed: 3/15/17
Instrument: GC10
Matrix: Water
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
BatchID: 135646
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-135646

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	24.03	24.1		25	96	97	70-130
Toluene-d8	25.58	25.9		25	102	104	70-130
4-BFB	1.954	2.17		2.5	78	87	70-130



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/15/17 - 3/16/17
Date Analyzed: 3/15/17 - 3/16/17
Instrument: GC3
Matrix: Water
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
BatchID: 135695
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-135695
 1703658-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	54.1	40	60	-	90	78-116
MTBE	ND	8.77	5.0	10	-	88	72-122
Benzene	ND	8.95	0.50	10	-	89	81-123
Toluene	ND	9.46	0.50	10	-	95	83-129
Ethylbenzene	ND	9.86	0.50	10	-	99	88-126
Xylenes	ND	30.8	1.5	30	-	103	87-131
Surrogate Recovery							
aaa-TFT	10.37	9.97		10	104	100	89-116

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	63.8	63.1	60	ND	106	105	63-133	1.14	20
MTBE	8.98	9.40	10	ND	90	94	69-122	4.56	20
Benzene	8.83	9.05	10	ND	88	91	84-125	2.44	20
Toluene	9.34	9.51	10	ND	93	95	87-131	1.84	20
Ethylbenzene	9.84	9.83	10	ND	98	98	92-126	0	20
Xylenes	30.7	30.8	30	ND	102	103	88-132	0.380	20
Surrogate Recovery									
aaa-TFT	9.82	10.0	10		98	100	90-117	1.89	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/13/17
Date Analyzed: 3/14/17 - 3/15/17
Instrument: GC11A, GC6A
Matrix: Water
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
BatchID: 135533
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L
Sample ID: MB/LCS/LCSD-135533

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	50	-	-	-
TPH-Motor Oil (C18-C36)	ND	250	-	-	-
Surrogate Recovery					
C9	589.5		625	94	79-111

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1110	1090	1000	111	109	88-134	1.26	30
Surrogate Recovery								
C9	636	632	625	102	101	79-111	0.589	30



Quality Control Report

Client: P & D Environmental
Date Prepared: 3/14/17
Date Analyzed: 3/15/17
Instrument: GC11A, GC9a
Matrix: Water
Project: 0398; Auto Depot/Xtra Oil Co.

WorkOrder: 1703712
BatchID: 135578
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L
Sample ID: MB/LCS/LCSD-135578

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	50	-	-	-
TPH-Motor Oil (C18-C36)	ND	250	-	-	-
Surrogate Recovery					
C9	599.1		625	96	79-111

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1170	1190	1000	117	119	88-134	1.98	30
Surrogate Recovery								
C9	619	644	625	99	103	79-111	3.98	30

WorkOrder: 1703712 ClientCode: PDEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to: Paul King **Bill to:** Accounts Payable
 P & D Environmental Xtra Oil Company
 55 Santa Clara, Ste.240 2307 Pacific Avenue
 Oakland, CA 94610 Alameda, CA 94501
 (510) 658-6916 FAX: 510-834-0152 xtraoil@sbcglobal.net

Requested TAT: 5 days;

Date Received: 03/14/2017
 Date Logged: 03/14/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12

1703712-001	B16-W	Water	3/13/2017 14:00	<input type="checkbox"/>	B	A	A											
1703712-002	B17-W	Water	3/13/2017 13:50	<input type="checkbox"/>	B	A	A											
1703712-003	B18-W	Water	3/13/2017 13:40	<input type="checkbox"/>	B	A	A											
1703712-004	B19-W	Water	3/13/2017 13:35	<input type="checkbox"/>	B	A	A											
1703712-005	B20-W	Water	3/13/2017 14:20	<input type="checkbox"/>	B	A	A											
1703712-006	B21-W	Water	3/13/2017 14:10	<input type="checkbox"/>	B	A	A											

Test Legend:

1	8260B_W	2	G-MBTEX_W	3	TPH_W
5		6		7	
9		10		11	
					12

Prepared by: Jena Alfaro

The following SampleIDs: 001A, 002A, 003A, 004A, 005A, 006A contain testgroup Multi Range_W.

Comments: Always send reports to: lab@pdenviro.com; Paul.King@pdenviro.com; pdking000@aol.com

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Client Contact: Paul King
Contact's Email: lab@pdenviron.com; Paul.King@pdenviron.com;
 pdking0000@aol.com

Project: 0398; Auto Depot/Xtra Oil Co.

Work Order: 1703712
QC Level: LEVEL 2
Date Logged: 3/14/2017

Comments: Always send reports to: lab@pdenviron.com;
 Paul.King@pdenviron.com; pdking0000@aol.com

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703712-001A	B16-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	3/13/2017 14:00	5 days	Present	<input type="checkbox"/>	
1703712-001B	B16-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/13/2017 14:00	5 days	Present	<input type="checkbox"/>	
1703712-002A	B17-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	3/13/2017 13:50	5 days	Present	<input type="checkbox"/>	
1703712-002B	B17-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/13/2017 13:50	5 days	Present	<input type="checkbox"/>	
1703712-003A	B18-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	3/13/2017 13:40	5 days	Present	<input type="checkbox"/>	
1703712-003B	B18-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/13/2017 13:40	5 days	Present	<input type="checkbox"/>	
1703712-004A	B19-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	3/13/2017 13:35	5 days	2%+	<input type="checkbox"/>	
1703712-004B	B19-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/13/2017 13:35	5 days	2%+	<input type="checkbox"/>	
1703712-005A	B20-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	3/13/2017 14:20	5 days	Present	<input type="checkbox"/>	
1703712-005B	B20-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/13/2017 14:20	5 days	Present	<input type="checkbox"/>	
				1	1LA	<input type="checkbox"/>			Present	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL **Project:** 0398; Auto Depot/Xtra Oil Co. **Work Order:** 1703712
Client Contact: Paul King **Comments:** Always send reports to: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com **QC Level:** LEVEL 2
Contact's Email: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com **Date Logged:** 3/14/2017

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703712-006A	B21-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	3/13/2017 14:10	5 days	Present	<input type="checkbox"/>	
1703712-006B	B21-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/13/2017 14:10	5 days	Present	<input type="checkbox"/>	
				1	1LA	<input type="checkbox"/>			Present	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

CHAIN OF CUSTODY RECORD

1703712

PAGE 1 OF 1

P&D ENVIRONMENTAL, INC.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610
 (510) 658-6916

PROJECT NUMBER: 0398
 PROJECT NAME: Auto Dept / The Oil Co.
 4171 Broadway
 Oakland, CA

SAMPLED BY: (PRINTED & SIGNATURE)
 MICHAEL BASS-DESCHENES Michael Bass-Deschener

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	ANALYSIS(ES)	NUMBER OF CONTAINERS	PRESERVATIVE	REMARKS
B16-w	3/13/17	1400	↓	A20	TPH (G.D.B.C. MO) VOCs BY EPA 8260B	6	ICE	NORMAL TAT
B17-w	↓	1350	↓	↓		6	↓	↓
B18-w	↓	1340	↓	↓		6	↓	↓
B19-w	↓	1335	↓	↓		6	↓	↓
B20-w	↓	1420	↓	↓		6	↓	↓
B21-w	↓	1410	↓	↓		6	↓	↓

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	Total No. of Samples (This Shipment)	Total No. of Containers (This Shipment)	LABORATORY:
Michael Bass-Deschener	3-14-17	400	[Signature]			6	6	McGABRELL ANALYTICAL, INC.
[Signature]	3-14-17	195	[Signature]					LABORATORY CONTACT: ANGELA RADELINS (877) 252-9262
[Signature]			RECEIVED FOR LABORATORY BY: (SIGNATURE)					LABORATORY PHONE NUMBER:

RESULTS AND BILLING TO:
 P&D Environmental, Inc.
 lab@pdenviro.com

REMARKS: 3 VOCs with TCL
 2 AMBER VOCs (UNPRESERVED)
 1 LITER AMBER (UNPRESERVED) 405

ATTACHED: () YES (X) NO



Sample Receipt Checklist

Client Name: **P & D Environmental**
 Project Name: **0398; Auto Depot/Xtra Oil Co.**
 WorkOrder No: **1703712** Matrix: Water
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **3/14/2017 15:15**
 Date Logged: **3/14/2017**
 Received by: **Jena Alfaro**
 Logged by: **Jena Alfaro**

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
 Shipping container/cooler in good condition? Yes No
 Samples in proper containers/bottles? Yes No
 Sample containers intact? Yes No
 Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No NA
 Sample/Temp Blank temperature Temp: 4.5°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No
 (Ice Type: WET ICE)

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

Comments:

3/30/2017

Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: auto Depot 4171 BROADWAY OAKLAND, CA

Project #: 0398

Workorder #: 1703337A

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 3/17/2017 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis
Project Manager

WORK ORDER #: 1703337A

Work Order Summary

CLIENT: Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland, CA 94610

BILL TO: Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland, CA 94610

PHONE: 510-658-6916

P.O. #

FAX: 510-834-0772

PROJECT # 0398 auto Depot 4171 BROADWAY

DATE RECEIVED: 03/17/2017

CONTACT: OAKLAND, CA
Rachel Selenis

DATE COMPLETED: 03/30/2017

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP1	TO-15	3.7 "Hg	14.7 psi
02A	VP1-DUP	TO-15	3.5 "Hg	14.8 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY:



Technical Director

DATE: 03/30/17

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
P & D Environmental
Workorder# 1703337A

Two 1 Liter Summa Canister samples were received on March 17, 2017. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds. Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

A single point calibration for TPH referenced to Gasoline was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN**

Client Sample ID: VP1

Lab ID#: 1703337A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.1	2.2	4.3	8.3
m,p-Xylene	1.1	1.6	5.0	6.9
1,1-Difluoroethane	4.6	310 E	12	830 E

Client Sample ID: VP1-DUP

Lab ID#: 1703337A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.1	2.1	4.3	7.8
m,p-Xylene	1.1	1.6	4.9	6.9
1,1-Difluoroethane	4.5	270 E	12	730 E



Client Sample ID: VP1

Lab ID#: 1703337A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a032813	Date of Collection:	3/16/17 5:02:00 PM
Dil. Factor:	2.28	Date of Analysis:	3/28/17 06:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	4.6	Not Detected	16	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
Toluene	1.1	2.2	4.3	8.3
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	1.6	5.0	6.9
o-Xylene	1.1	Not Detected	5.0	Not Detected
TPH ref. to Gasoline (MW=100)	110	Not Detected	470	Not Detected
1,1-Difluoroethane	4.6	310 E	12	830 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: VP1-DUP

Lab ID#: 1703337A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a032814	Date of Collection:	3/16/17 5:02:00 PM
Dil. Factor:	2.27	Date of Analysis:	3/28/17 06:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	4.5	Not Detected	16	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
Toluene	1.1	2.1	4.3	7.8
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	1.6	4.9	6.9
o-Xylene	1.1	Not Detected	4.9	Not Detected
TPH ref. to Gasoline (MW=100)	110	Not Detected	460	Not Detected
1,1-Difluoroethane	4.5	270 E	12	730 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: Lab Blank

Lab ID#: 1703337A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a032810c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/28/17 04:08 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TPH ref. to Gasoline (MW=100)	50	Not Detected	200	Not Detected
1,1-Difluoroethane	2.0	Not Detected	5.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: CCV

Lab ID#: 1703337A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a032806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/28/17 01:05 PM

Compound	%Recovery
Methyl tert-butyl ether	78
Benzene	70
Toluene	70
Ethyl Benzene	76
m,p-Xylene	78
o-Xylene	81
TPH ref. to Gasoline (MW=100)	100
1,1-Difluoroethane	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	111	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1703337A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a032804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/28/17 10:31 AM

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	77	70-130
Benzene	71	70-130
Toluene	73	70-130
Ethyl Benzene	77	70-130
m,p-Xylene	79	70-130
o-Xylene	84	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1703337A-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a032805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/28/17 12:40 PM

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	73	70-130
Benzene	63 Q	70-130
Toluene	66 Q	70-130
Ethyl Benzene	71	70-130
m,p-Xylene	73	70-130
o-Xylene	77	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	
1,1-Difluoroethane	Not Spiked	

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	103	70-130

CHAIN OF CUSTODY RECORD

P&D ENVIRONMENTAL, INC.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610
 (510) 658-6916

PROJECT NUMBER:

0398

PROJECT NAME:

Auto Depot
4171 BROADWAY
OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE)

MICHAEL BASS-DESCHERES *Michael Bass-Descheres*

SAMPLE NUMBER	DATE	TIME	TYPE	INITIALS	TIME	TYPE	SAMPLE LOCATION: INCL. FUEL SYSTEM P.I.D.
<u>VPI</u>	<u>3/16/17</u>	<u>164706</u>	<u>SLV</u>	<u>666</u>	<u>-30</u>	<u>IL-2461</u>	<u>0</u>
		<u>170355</u>	<u>"</u>		<u>-5</u>		
<u>VPI-DNF</u>	<u>3/16/17</u>	<u>164706</u>	<u>"</u>		<u>-30</u>	<u>40867</u>	<u>0</u>
		<u>170355</u>	<u>"</u>		<u>-5</u>		

01A

02A

NUMBER OF CONTAINERS

ANALYSIS(ES):

TR-15 WITH EXTRA (2)
ASTM D-1946 (Oxygen Method)
(2)

PRESERVATIVE

REMARKS

NONE USUAL TAT

" " "

Courier
Custody Seal Intact?
Y N None Temp NA

RECEIVED BY (SIGNATURE)

DATE

TIME

RELINQUISHED BY: (SIGNATURE)

DATE

TIME

RECEIVED BY (SIGNATURE)

DATE

TIME

RECEIVED BY (SIGNATURE)

DATE

TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE)

DATE

TIME

REMARKS:

1-LITER SAMPLE

1703287

LABORATORY: ALRO ENVIRONMENTAL TOXICS LTD.

LABORATORY CONTACT: KELLY BAETNER (916) 665-3378

SAMPLE ANALYSIS REQUEST SHEET

ATTACHED: () YES (X) NO

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 2

TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 2

3/30/2017

Mr. Paul King

P & D Environmental

55 Santa Clara

Suite 240

Oakland CA 94610

Project Name: Auto Depot 4171 Broadway Oakland, CA

Project #: 0398

Workorder #: 1703305

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 3/17/2017 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-17 VI are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis

Project Manager

WORK ORDER #: 1703305

Work Order Summary

CLIENT: Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland, CA 94610

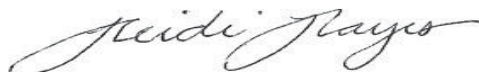
PHONE: 510-658-6916
FAX: 510-834-0772
DATE RECEIVED: 03/17/2017
DATE COMPLETED: 03/30/2017

BILL TO: Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland, CA 94610

P.O. #
PROJECT # 0398 Auto Depot 4171 Broadway
CONTACT: Oakland, CA.
Rachel Selenis

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A(cancelled)	VP1 10CC	Modified TO-17 VI
02A	VP1 50CC	Modified TO-17 VI
03A(cancelled)	VP1-REP 10CC	Modified TO-17 VI
04A	VP1-REP 50CC	Modified TO-17 VI
05A	Lab Blank	Modified TO-17 VI
05B	Lab Blank	Modified TO-17 VI
06A	CCV	Modified TO-17 VI
06B	CCV	Modified TO-17 VI
07A	LCS	Modified TO-17 VI
07AA	LCSD	Modified TO-17 VI
07B	LCS	Modified TO-17 VI
07BB	LCSD	Modified TO-17 VI

CERTIFIED BY: _____



Technical Director

DATE: 03/30/17 _____

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards
Accreditation Body: ANAB (DoD-ELAP Testing). Accreditation#: ADE-1451, Eff. date: 11/11/2016, Exp. date: 04/27/2018.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.



180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
Modified EPA Method TO-17 (VI Tubes)
P & D Environmental
Workorder# 1703305**

Four TO-17 VI Tube samples were received on March 17, 2017. The laboratory performed the analysis via modified EPA Method TO-17 using GC/MS in the full scan mode. TO-17 'VI' sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

A modification that may be applied to EPA Method TO-17 at the client's discretion is the requirement to transport sorbent tubes at 4 deg C. Laboratory studies demonstrate a high level of stability for VOCs on the TO-17 'VI' tube at room temperature for periods of up to 14 days. Tubes can be shipped to and from the field site at ambient conditions as long as the 14-day sample hold time is upheld. Trip blanks and field surrogate spikes are used as additional control measures to monitor recovery and background contribution during tube transport.

Since the TO-17 VI application significantly extends the scope of target compounds addressed in EPA Method TO-15 and TO-17, the laboratory has implemented several method modifications outlined in the table below. Specific project requirements may over-ride the laboratory modifications.

<i>Requirement</i>	<i>TO-17</i>	<i>ATL Modifications</i>
Distributed Volume Pairs	Collection of distributed volume pairs required for monitoring ambient air to insure high quality.	If site is well-characterized or performance previously verified, single tube sampling may be appropriate. Distributed pairs may be impractical for soil gas collection due to configuration and volume constraints.

Receiving Notes

The Chain of Custody (COC) information for sample VP1-REP 50CC did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

Sample VP1 10CC and VP1-REP 10CC were cancelled on 3/28/17 per client's request.

Analytical Notes

A sampling volume of 0.050 L was used to convert ng to ug/m3 for the associated Lab Blanks.

The reported CCV and LCS for each daily batch may be derived from more than one analytical file.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B - Compound present in blank (subtraction not performed).
- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See

data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
EPA METHOD TO-17**

Client Sample ID: VP1 50CC

Lab ID#: 1703305-02A

No Detections Were Found.

Client Sample ID: VP1-REP 50CC

Lab ID#: 1703305-04A

No Detections Were Found.



Air Toxics

Client Sample ID: VP1 50CC

Lab ID#: 1703305-02A

EPA METHOD TO-17

File Name:	6032808	Date of Extraction:	NADate of Collection:	3/16/17
Dil. Factor:	1.00		Date of Analysis:	3/28/17 02:36 PM

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	980	Not Detected	Not Detected
Naphthalene	1.0	20	Not Detected	Not Detected
TPH (Diesel Range C10-C22)	1000	20000	Not Detected	Not Detected

Air Sample Volume(L): 0.0500
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	74	50-150
Toluene-d8	90	50-150
Naphthalene-d8	109	50-150



Air Toxics

Client Sample ID: VP1-REP 50CC

Lab ID#: 1703305-04A

EPA METHOD TO-17

File Name:	6032711	Date of Extraction:	NADate of Collection:	3/16/17
Dil. Factor:	1.00		Date of Analysis:	3/27/17 03:39 PM

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	980	Not Detected	Not Detected
Naphthalene	1.0	20	Not Detected	Not Detected
TPH (Diesel Range C10-C22)	1000	20000	Not Detected	Not Detected

Air Sample Volume(L): 0.0500

Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	79	50-150
Toluene-d8	96	50-150
Naphthalene-d8	99	50-150



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1703305-05A

EPA METHOD TO-17

File Name:	6032709	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/27/17 01:50 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	49	Not Detected	Not Detected
Naphthalene	1.0	1.0	Not Detected	Not Detected
TPH (Diesel Range C10-C22)	1000	1000	Not Detected	Not Detected

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	50-150
Toluene-d8	104	50-150
Naphthalene-d8	115	50-150



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1703305-05B

EPA METHOD TO-17

File Name:	6032807	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/28/17 01:23 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	49	Not Detected	Not Detected
Naphthalene	1.0	1.0	Not Detected	Not Detected
TPH (Diesel Range C10-C22)	1000	1000	Not Detected	Not Detected

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	50-150
Toluene-d8	97	50-150
Naphthalene-d8	107	50-150

Client Sample ID: CCV

Lab ID#: 1703305-06A

EPA METHOD TO-17

File Name:	6032703	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/27/17 09:49 AM	

Compound	%Recovery
2-Propanol	81
Naphthalene	127
TPH (Diesel Range C10-C22)	98

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	50-150
Toluene-d8	104	50-150
Naphthalene-d8	107	50-150



Air Toxics

Client Sample ID: CCV

Lab ID#: 1703305-06B

EPA METHOD TO-17

File Name:	6032805	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/28/17 12:02 PM	

Compound	%Recovery
2-Propanol	100
Naphthalene	122
TPH (Diesel Range C10-C22)	97

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	50-150
Toluene-d8	113	50-150
Naphthalene-d8	116	50-150



Air Toxics

Client Sample ID: LCS

Lab ID#: 1703305-07A

EPA METHOD TO-17

File Name:	6032706	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/27/17 11:49 AM	

Compound	%Recovery	Method Limits
2-Propanol	75	70-130
Naphthalene	128	70-130
TPH (Diesel Range C10-C22)	Not Spiked	60-140

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	50-150
Toluene-d8	112	50-150
Naphthalene-d8	118	50-150

Client Sample ID: LCSD

Lab ID#: 1703305-07AA

EPA METHOD TO-17

File Name:	6032707	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/27/17 12:29 PM	

Compound	%Recovery	Method Limits
2-Propanol	74	70-130
Naphthalene	126	70-130
TPH (Diesel Range C10-C22)	Not Spiked	60-140

Air Sample Volume(L): 1.00
 Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	50-150
Toluene-d8	111	50-150
Naphthalene-d8	115	50-150



Air Toxics

Client Sample ID: LCS

Lab ID#: 1703305-07B

EPA METHOD TO-17

File Name:	6032803	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/28/17 10:42 AM	

Compound	%Recovery	Method Limits
2-Propanol	91	70-130
Naphthalene	119	70-130
TPH (Diesel Range C10-C22)	Not Spiked	60-140

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	50-150
Toluene-d8	99	50-150
Naphthalene-d8	98	50-150



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1703305-07BB

EPA METHOD TO-17

File Name:	6032804	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/28/17 11:22 AM	

Compound	%Recovery	Method Limits
2-Propanol	87	70-130
Naphthalene	121	70-130
TPH (Diesel Range C10-C22)	Not Spiked	60-140

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	50-150
Toluene-d8	99	50-150
Naphthalene-d8	94	50-150

CHAIN OF CUSTODY RECORD

P&D ENVIRONMENTAL, INC.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610
 (510) 658-6916

PROJECT NUMBER: 0398

PROJECT NAME:
Auto Depot
4171 Broadway
Oakland, CA

SAMPLED BY: (PRINTED & SIGNATURE)
Michael Pass-Deschamps Michael Pass-Deschamps

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION
<u>VP1 10cc</u>	<u>3/16/17</u>		<u>SOL</u>	
<u>VP1 50cc</u>	<u>"</u>		<u>"</u>	
<u>VP1-REP 10cc</u>	<u>"</u>		<u>"</u>	
<u>VP1-REP 50cc</u>	<u>"</u>		<u>"</u>	

ANALYSIS(ES):	NUMBER OF CONTAINERS	PRESERVATIVE	REMARKS
<u>10-17 TFLD MATHIENGE AND 2-PROXIML.</u>	<u>1</u>	<u>ICE</u>	<u>UNUSUAL TAT</u>
<u>X</u>	<u>1</u>	<u>"</u>	<u>"</u>
<u>X</u>	<u>1</u>	<u>"</u>	<u>"</u>
<u>X</u>	<u>1</u>	<u>"</u>	<u>"</u>

LABORATORY: ESOFISLABORATORY US LTD.

LABORATORY CONTACT: KELLY BUETTNER (916) 605-3378

LABORATORY PHONE NUMBER: 916) 605-3378

RECEIVED BY: (SIGNATURE) [Signature] DATE: 3-17-17 TIME: 1316

RECEIVED BY: (SIGNATURE) [Signature] DATE: " TIME: "

RECEIVED FOR LABORATORY BY: (SIGNATURE) [Signature] DATE: " TIME: "

REMARKS: SAMPLE = 10CC AND 50CC USING A GOML SYRINGE.

1703305

Results and billing to:
 P&D Environmental, Inc.
 lab@pdenviro.com

3/24/2017

Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: Auto Depot, 4171 Broadway, Oakland

Project #: 0398

Workorder #: 1703300

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 3/17/2017 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis
Project Manager

WORK ORDER #: 1703300

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	BILL TO:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	P.O. #	
FAX:	510-834-0772	PROJECT #	0398 Auto Depot, 4171 Broadway,
DATE RECEIVED:	03/17/2017	CONTACT:	Oakland Rachel Selenis
DATE COMPLETED:	03/24/2017		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP1 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
02A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
03A	CCV	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: 

Technical Director

DATE: 03/24/17

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15 Soil Gas
P & D Environmental
Workorder# 1703300

One 1 Liter Tedlar Bag sample was received on March 17, 2017. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on sample VP1 DFA due to the presence of high level target species.

Sample VP1 DFA was transferred from Tedlar bag into a summa canister to extend the hold time from 72 hours to 30 days. Canister pressurization resulted in a dilution factor which was applied to all analytical results.

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
EPA METHOD TO-15 GC/MS**

Client Sample ID: VP1 DFA

Lab ID#: 1703300-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	200000	6500000	550000	18000000



Air Toxics

Client Sample ID: VPI DFA

Lab ID#: 1703300-01A

EPA METHOD TO-15 GC/MS

File Name:	14032223	Date of Collection:	3/16/17 2:49:00 PM	
Dil. Factor:	10200	Date of Analysis:	3/22/17 07:46 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	200000	6500000	550000	18000000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1703300-02A

EPA METHOD TO-15 GC/MS

File Name:	14032209c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/22/17 01:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	20	Not Detected	54	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1703300-03A

EPA METHOD TO-15 GC/MS

File Name:	14032203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/22/17 09:31 AM

Compound	%Recovery
1,1-Difluoroethane	79

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	108	70-130

3/22/2017

Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: Auto Depot, 4171 Broadway, Oakland

Project #: 0398

Workorder #: 1703301

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 3/17/2017 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis
Project Manager

WORK ORDER #: 1703301

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	BILL TO:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	P.O. #	
FAX:	510-834-0772	PROJECT #	0398 Auto Depot, 4171 Broadway,
DATE RECEIVED:	03/17/2017	CONTACT:	Oakland Rachel Selenis
DATE COMPLETED:	03/22/2017		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP1 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
02A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
03A	CCV	Modified TO-15 (5&20 ppbv	NA	NA
04A	LCS	Modified TO-15 (5&20 ppbv	NA	NA
04AA	LCSD	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 03/22/17

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15 Soil Gas
P & D Environmental
Workorder# 1703301

One 1 Liter Tedlar Bag sample was received on March 17, 2017. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on sample VP1 2-PROPANOL due to the presence of high level target species.

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: VP1 2-PROPANOL

Lab ID#: 1703301-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	2000	11000	4900	28000



Air Toxics

Client Sample ID: VP1 2-PROPANOL

Lab ID#: 1703301-01A

EPA METHOD TO-15 GC/MS

File Name:	14031731	Date of Collection:	3/16/17 5:38:00 PM	
Dil. Factor:	100	Date of Analysis:	3/17/17 10:05 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	2000	11000	4900	28000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1703301-02A

EPA METHOD TO-15 GC/MS

File Name:	14031707	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/17/17 11:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20	Not Detected	49	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1703301-03A

EPA METHOD TO-15 GC/MS

File Name:	14031703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/17/17 09:13 AM

Compound	%Recovery
----------	-----------

2-Propanol	96
------------	----

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1703301-04A

EPA METHOD TO-15 GC/MS

File Name:	14031704	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/17/17 09:38 AM

Compound	%Recovery	Method Limits
2-Propanol	96	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1703301-04AA

EPA METHOD TO-15 GC/MS

File Name:	14031705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/17/17 10:10 AM

Compound	%Recovery	Method Limits
2-Propanol	94	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	106	70-130

CHAIN OF CUSTODY RECORD

P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

PROJECT NUMBER:
0398

PROJECT NAME:

*Auto Depot
4171 Broadway
Oakland, CA*

SAMPLED BY: (PRINTED & SIGNATURE)

NICHOLAS - DESCHENES Michael Ramon

SAMPLE NUMBER DATE TIME TYPE SAMPLE LOCATION

VP1 2-PROPANE 2/16/17 1738 AIR

NUMBER OF CONTAINERS

1

ANALYSIS(ES):

2-PROPANE

PRESERVATIVE

REMARKS

DATE VERIFIED TEST

*Cowien
Custody Seal Intact?
Y N Node Temp/°F*

RELINQUISHED BY: (SIGNATURE) DATE TIME RECEIVED BY: (SIGNATURE)

3-17-17 13:16

RECEIVED BY: (SIGNATURE)

RECEIVED FOR LABORATORY BY: (SIGNATURE)

SAMPLE ANALYSIS REQUEST SHEET

ATTACHED: () YES (X) NO

Results and billing to:
P&D Environmental, Inc.
lab@pdenviron.com

REMARKS:

1-LITER TEDLAR

1703301

3/30/2017

Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: auto Depot 4171 BROADWAY OAKLAND, CA

Project #: 0398

Workorder #: 1703337B

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 3/17/2017 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis
Project Manager

WORK ORDER #: 1703337B

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	BILL TO:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	P.O. #	
FAX:	510-834-0772	PROJECT #	0398 auto Depot 4171 BROADWAY
DATE RECEIVED:	03/17/2017	CONTACT:	OAKLAND, CA Rachel Selenis
DATE COMPLETED:	03/30/2017		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP1	Modified ASTM D-1946	3.7 "Hg	14.7 psi
02A	VP1-DUP	Modified ASTM D-1946	3.5 "Hg	14.8 psi
03A	Lab Blank	Modified ASTM D-1946	NA	NA
04A	LCS	Modified ASTM D-1946	NA	NA
04AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

Technical Director

DATE: 03/30/17

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards
Accreditation Body: ANAB (DoD-ELAP Testing). Accreditation#: ADE-1451, Eff. date: 11/11/2016, Exp. date: 04/27/2018.

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



LABORATORY NARRATIVE
Modified ASTM D-1946
P & D Environmental
Workorder# 1703337B

Two 1 Liter Summa Canister samples were received on March 17, 2017. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections $> 5 X$'s the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VP1

Lab ID#: 1703337B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	9.4
Nitrogen	0.23	81
Carbon Dioxide	0.023	10

Client Sample ID: VP1-DUP

Lab ID#: 1703337B-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	9.4
Nitrogen	0.23	81
Carbon Dioxide	0.023	10



Air Toxics

Client Sample ID: VP1

Lab ID#: 1703337B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10032323	Date of Collection:	3/16/17 5:02:00 PM
Dil. Factor:	2.28	Date of Analysis:	3/23/17 07:24 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	9.4
Nitrogen	0.23	81
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	Not Detected
Carbon Dioxide	0.023	10

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: VP1-DUP

Lab ID#: 1703337B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10032324	Date of Collection:	3/16/17 5:02:00 PM
Dil. Factor:	2.27	Date of Analysis:	3/23/17 07:47 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	9.4
Nitrogen	0.23	81
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	Not Detected
Carbon Dioxide	0.023	10

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1703337B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10032304	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/23/17 09:10 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Nitrogen	0.10	Not Detected
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 1703337B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10032302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/23/17 08:16 AM

Compound	%Recovery	Method Limits
Oxygen	98	85-115
Nitrogen	95	85-115
Carbon Monoxide	94	85-115
Methane	102	85-115
Carbon Dioxide	103	85-115

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1703337B-04AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10032325	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/23/17 08:11 PM

Compound	%Recovery	Method Limits
Oxygen	98	85-115
Nitrogen	95	85-115
Carbon Monoxide	92	85-115
Methane	103	85-115
Carbon Dioxide	104	85-115

Container Type: NA - Not Applicable

CHAIN OF CUSTODY RECORD

P&D ENVIRONMENTAL, INC.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

PROJECT NUMBER:
0398

PROJECT NAME:
Auto Depot

4171 BROADWAY
OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE)
MICHAEL BASS-DESCHAMPS

Michael Bass-Deschamps

SAMPLE NUMBER	DATE	TIME	TYPE	INSTRUMENT	SAMPLE LOCATION:		ANALYSIS(ES)	NUMBER OF CONTAINERS	PRESERVATIVE	REMARKS
					INITIALS	FINAL SURVEY P.I.D.				
VPI	3/16/17	164706	5-4	604	-30	11-2461	TR-15 WITH PPM TAP (ASTM D-1946) (Oxygen Method) (2)	1	NONE	USUAL TAP
VPI-DUP	3/16/17	164706	11	170355	-5	40867		1	"	"

RELINQUISHED BY: (SIGNATURE) *Michael Bass-Deschamps* DATE 3-17-17 TIME 1346 RECEIVED BY: (SIGNATURE) *[Signature]*

RELINQUISHED BY: (SIGNATURE) *[Signature]* DATE TIME RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE) DATE TIME RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 2
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 2
LABORATORY: AIRBORNE ANALYTICALS LTD.
LABORATORY CONTACT: KELLY BUEITNER (916) 665-3378
LABORATORY PHONE NUMBER: SAMPLE ANALYSIS REQUEST SHEET
ATTACHED: () YES (X) NO
REMARKS: 1-LITER SUMMA
1703387

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

APPENDIX E

Geologic Cross Sections B-B', C-C', D-D', G-G', H-H', and I-I' Showing Concentrations of TPH-D and Benzene in Soil and Groundwater

- **Figure E1 - Geologic Cross Section B-B' Showing TPH-D in Soil and Groundwater**
- **Figure E2 - Geologic Cross Section C-C' Showing TPH-D in Soil and Groundwater**
- **Figure E3 - Geologic Cross Section D-D' Showing TPH-D in Soil and Groundwater**
- **Figure E4 - Geologic Cross Section G-G' Showing TPH-D in Soil and Groundwater**
- **Figure E5 - Geologic Cross Section H-H' Showing TPH-D in Soil and Groundwater**
- **Figure E6 - Geologic Cross Section I-I' Showing TPH-D in Soil and Groundwater**

- **Figure E7 - Geologic Cross Section B-B' Showing Benzene in Soil and Groundwater**
- **Figure E8 - Geologic Cross Section C-C' Showing Benzene in Soil and Groundwater**
- **Figure E9 - Geologic Cross Section D-D' Showing Benzene in Soil and Groundwater**
- **Figure E10 - Geologic Cross Section G-G' Showing Benzene in Soil and Groundwater**
- **Figure E11 - Geologic Cross Section H-H' Showing Benzene in Soil and Groundwater**
- **Figure E12 - Geologic Cross Section I-I' Showing Benzene in Soil and Groundwater**

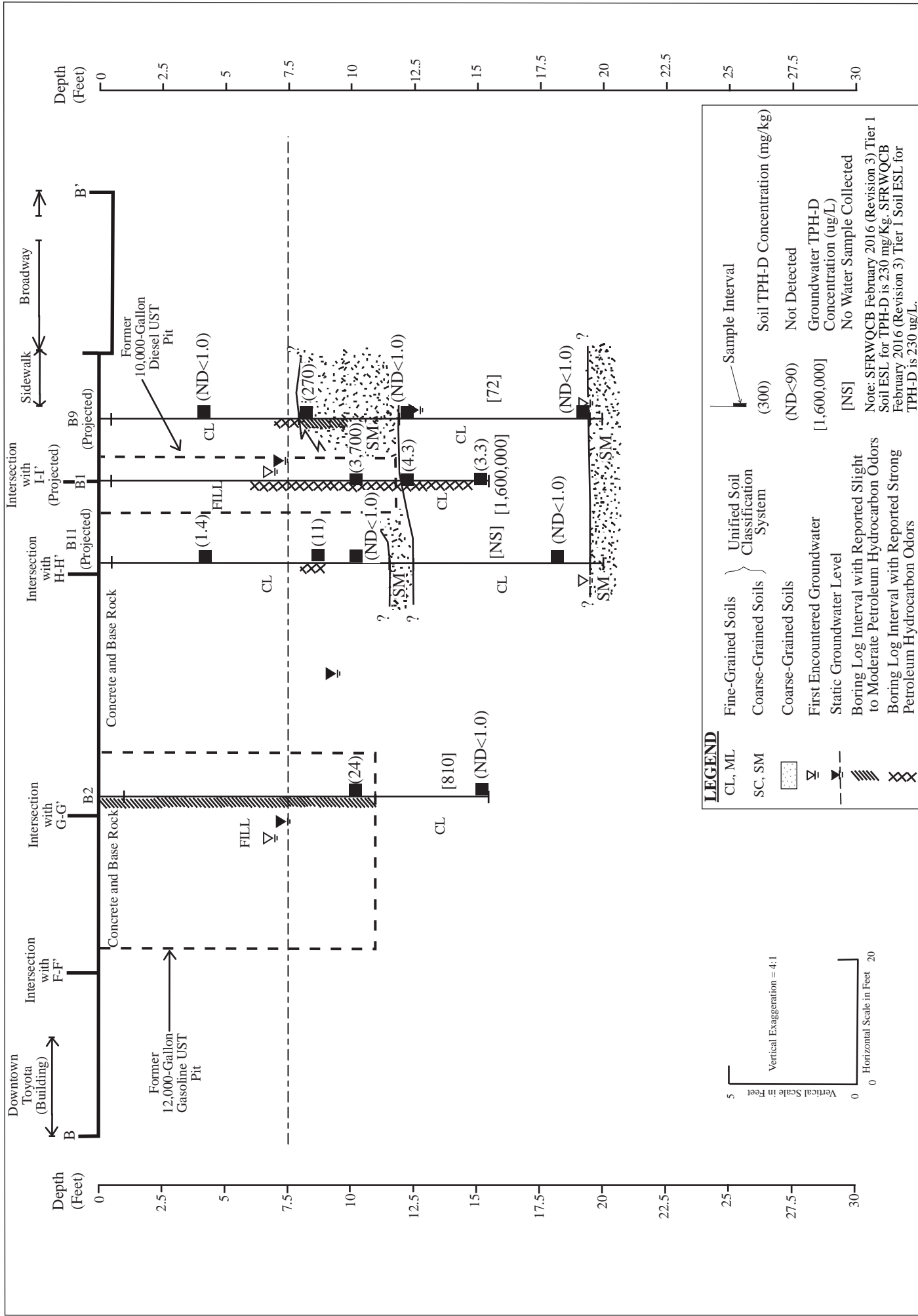


Figure E1

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

Geologic Cross Section B-B' Showing TPH-D in Soil and Groundwater
 4171 Broadway
 Oakland, California

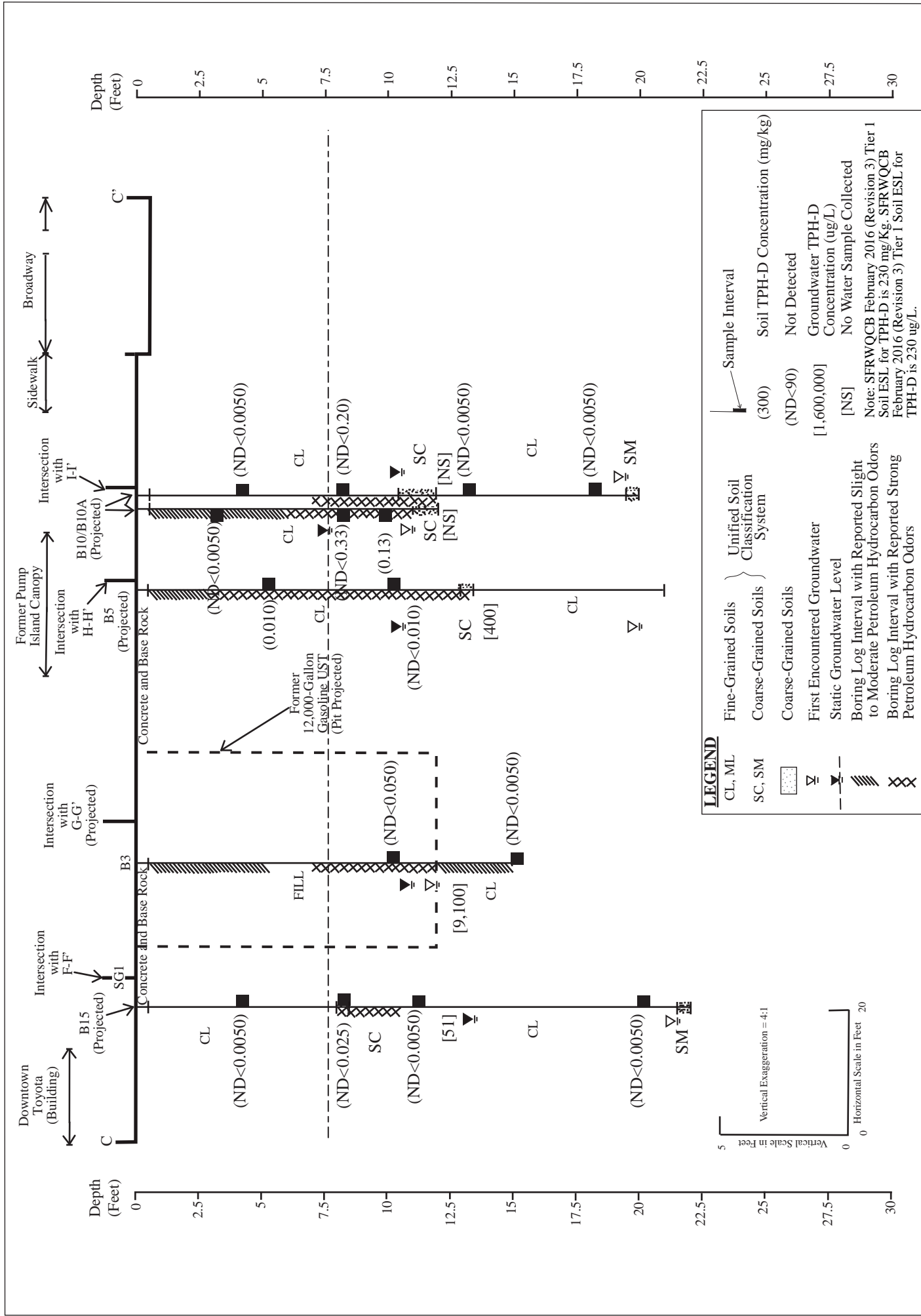


Figure E2

Geologic Cross Section C-C' Showing TPH-D in Soil and Groundwater
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

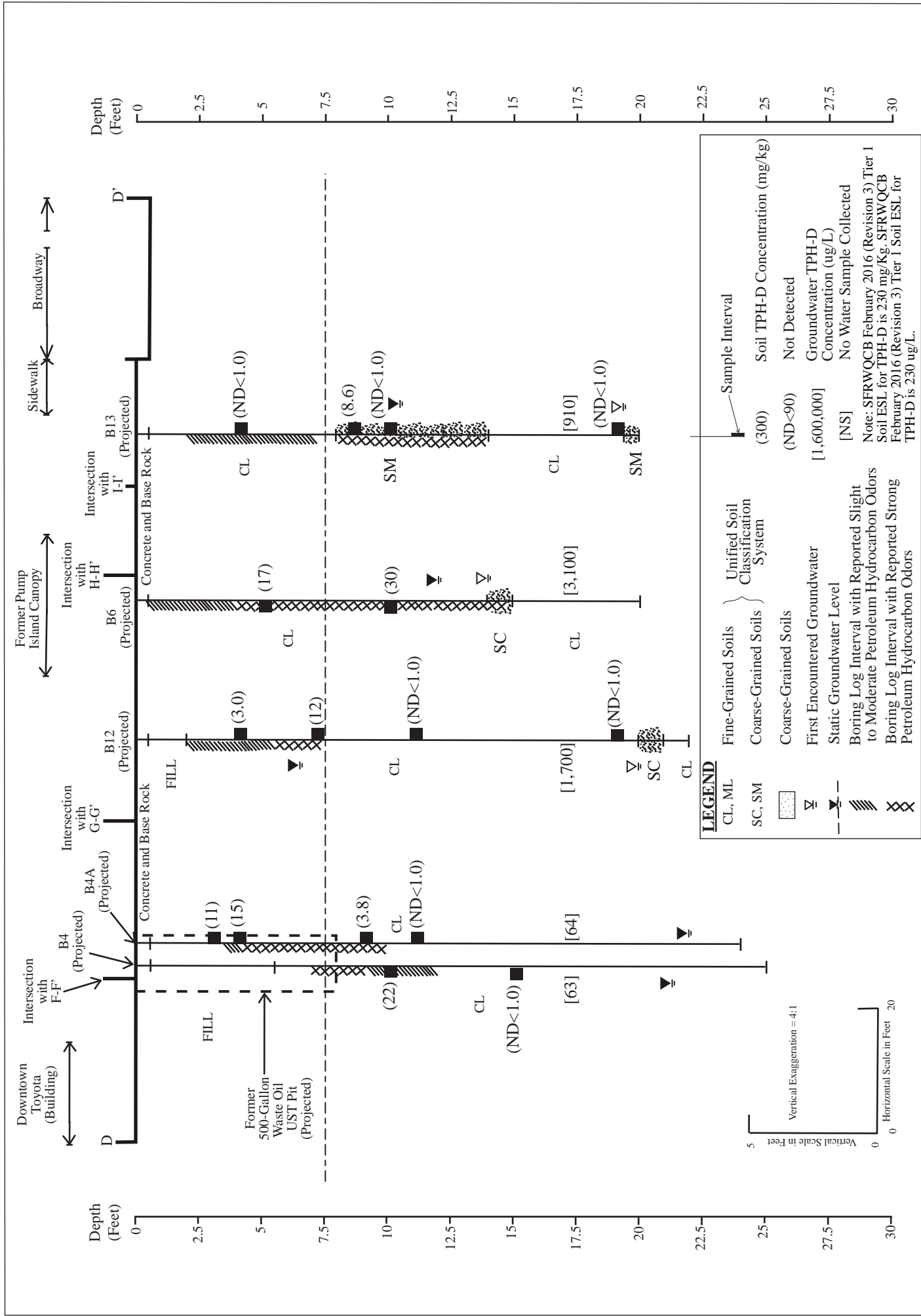


Figure E3

Geologic Cross Section D-D' Showing TPH-D in Soil and Groundwater
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

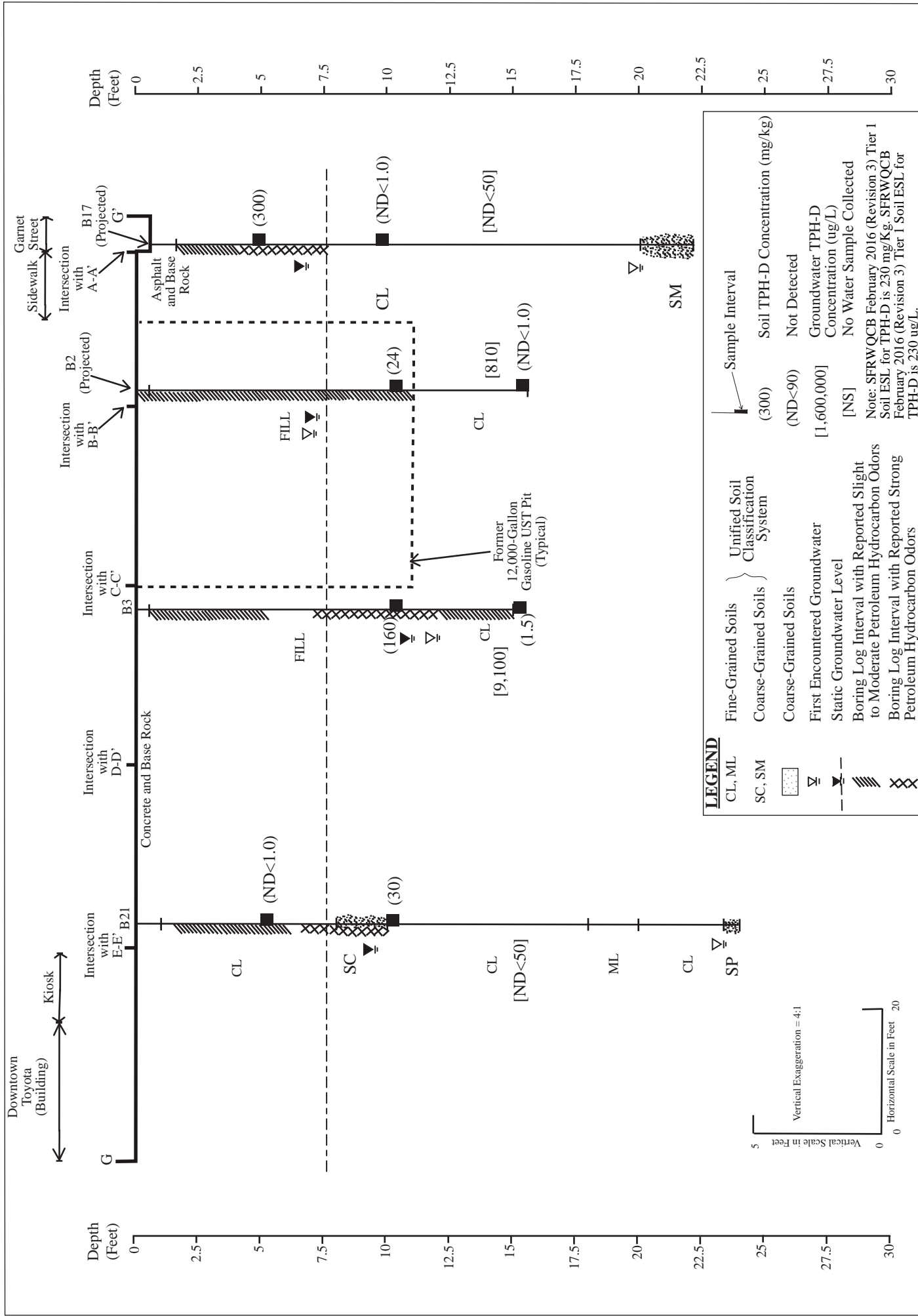


Figure E4

Geologic Cross Section G-G' Showing TPH-D in Soil and Groundwater
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

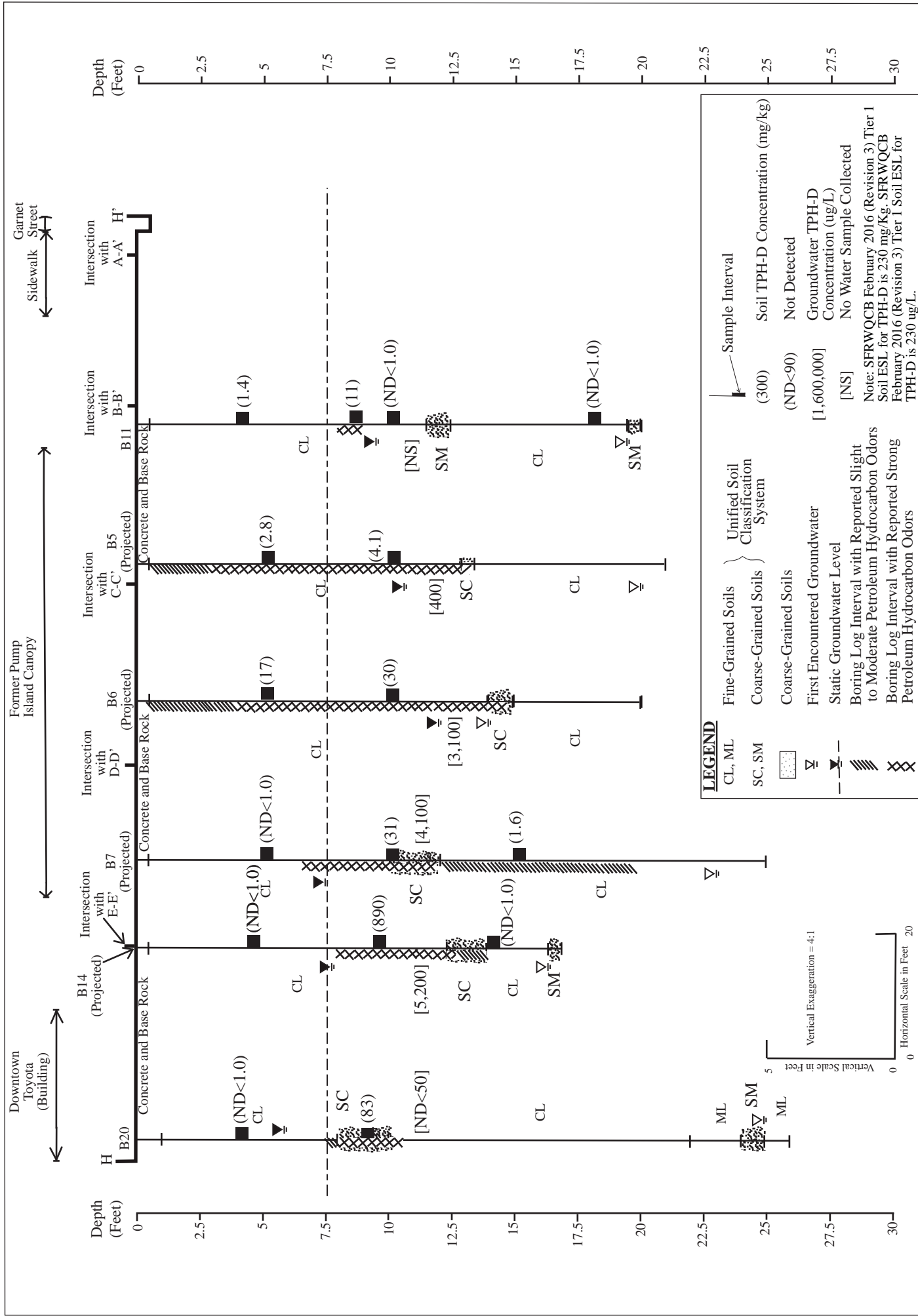
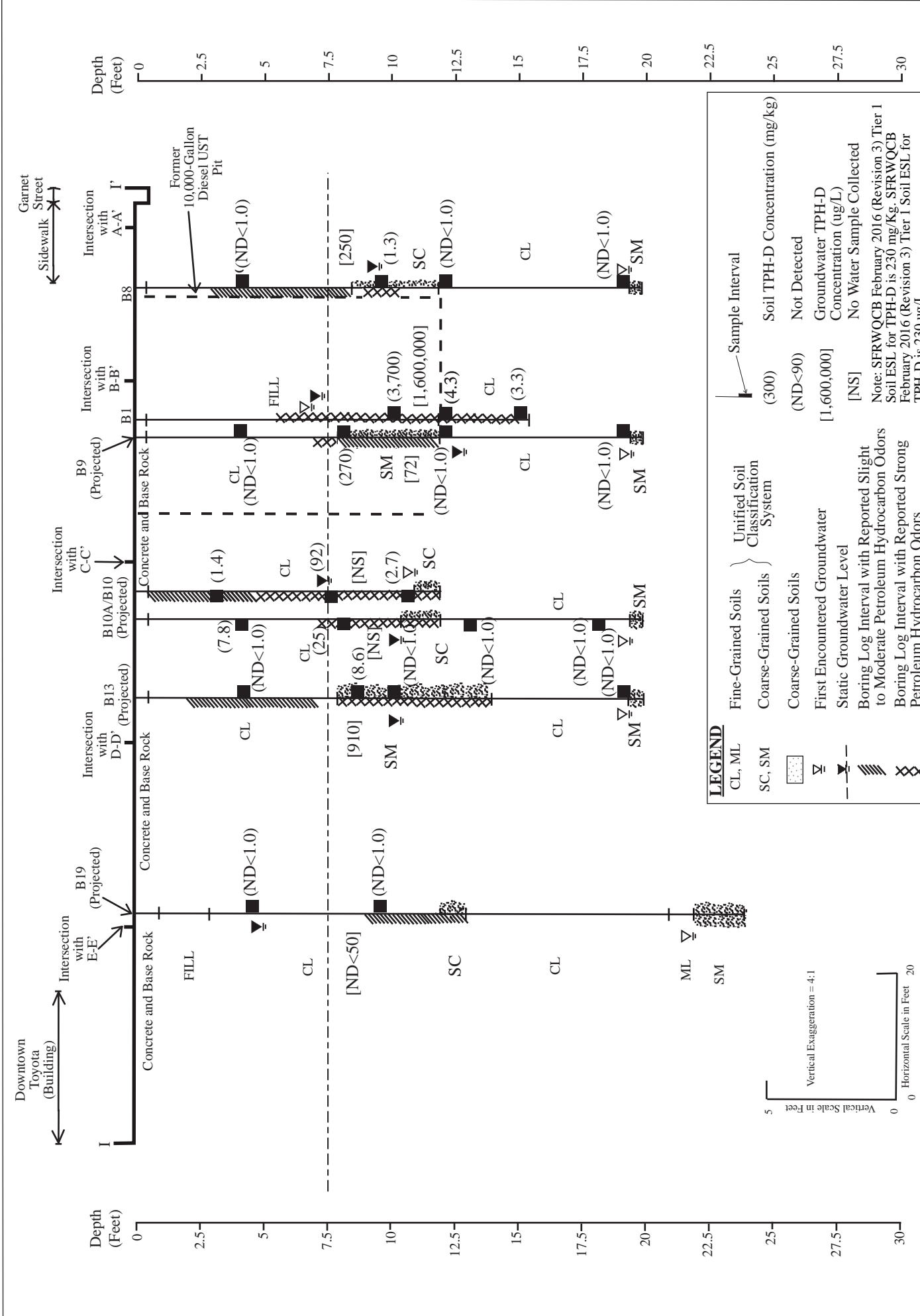


Figure E5

Geologic Cross Section H-H' Showing TPH-D in Soil and Groundwater
4171 Broadway
Oakland, California

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610



LEGEND

- CL, ML: Fine-Grained Soils
- SC, SM: Coarse-Grained Soils
- Coarse-Grained Soils
- First Encountered Groundwater
- Static Groundwater Level
- Boring Log Interval with Reported Slight to Moderate Petroleum Hydrocarbon Odors
- Boring Log Interval with Reported Strong Petroleum Hydrocarbon Odors

Sample Interval

- (300): Soil TPH-D Concentration (mg/kg)
- (ND<90): Not Detected
- [1,600,000]: Groundwater TPH-D Concentration (ug/L)
- [NS]: No Water Sample Collected

Note: SFRWQCB February 2016 (Revision 3) Tier 1 Soil ESL for TPH-D is 230 mg/Kg. SFRWQCB February 2016 (Revision 3) Tier 1 Soil ESL for TPH-D is 230 ug/L.

Figure E6

Geologic Cross Section I-I' Showing TPH-D in Soil and Groundwater

4171 Broadway
Oakland, California

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

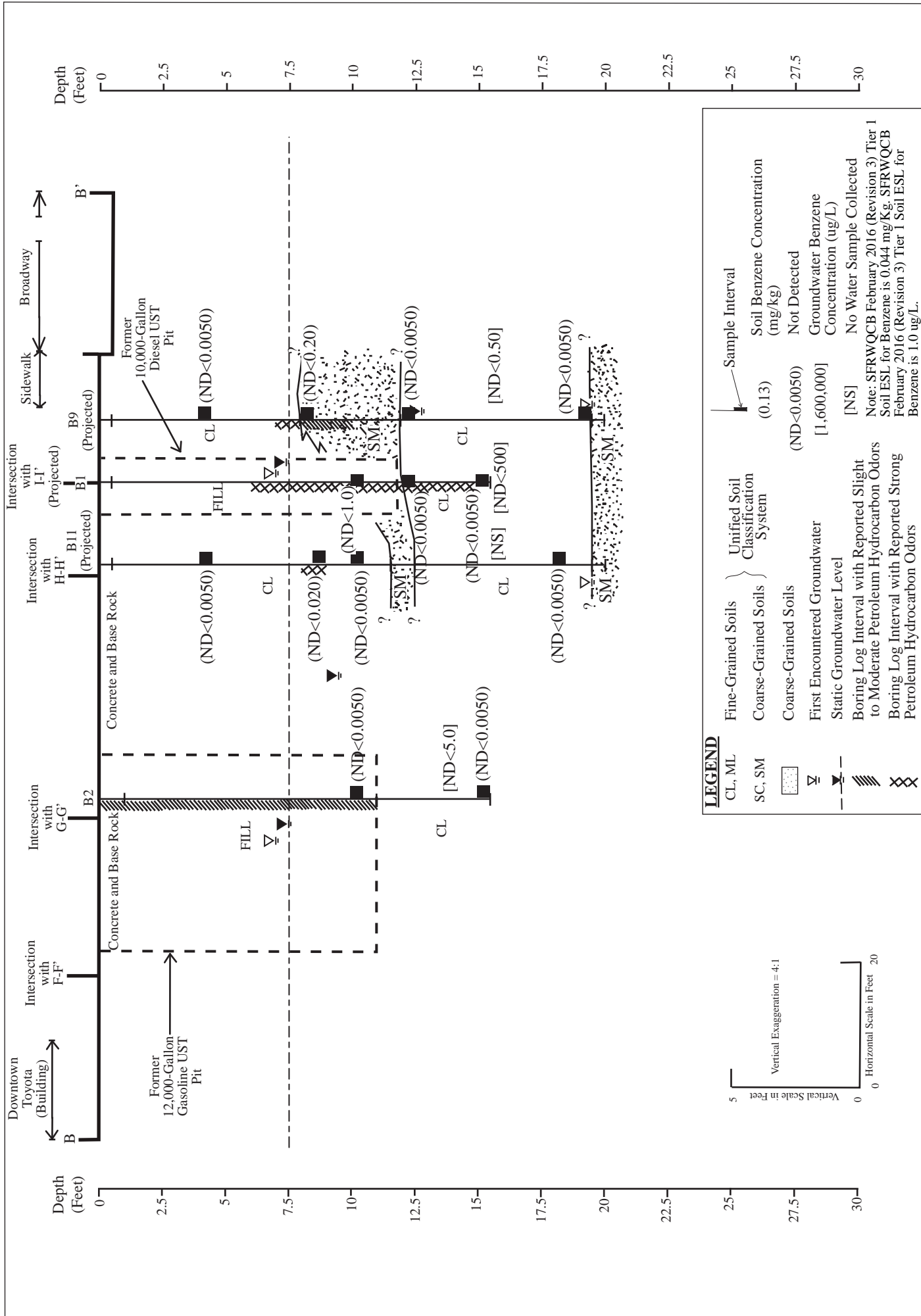


Figure E7

Geologic Cross Section B-B' Showing Benzene in Soil and Groundwater
4171 Broadway
Oakland, California

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

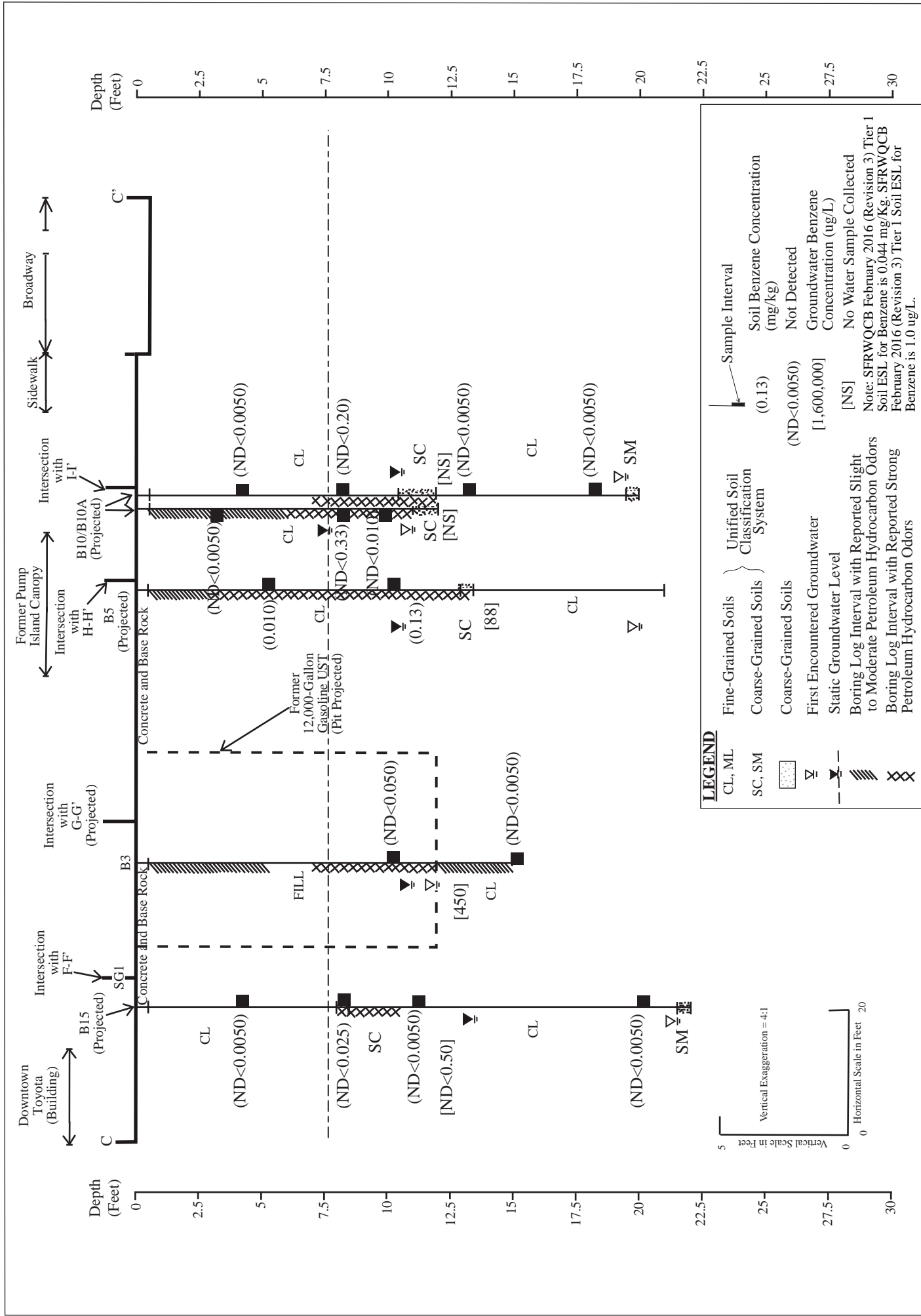


Figure E8

Geologic Cross Section C-C' Showing Benzene in Soil and Groundwater
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

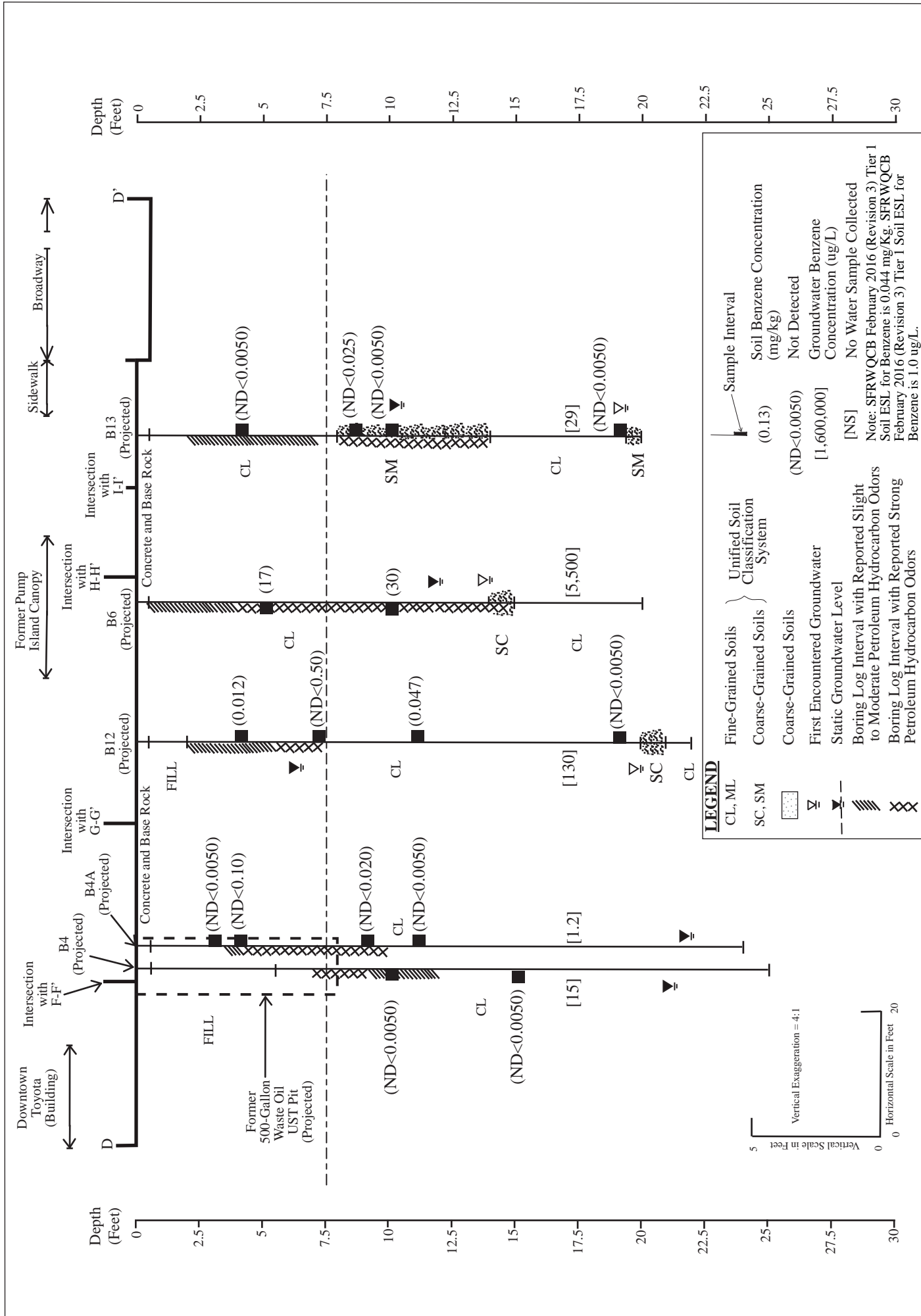


Figure E9
 Geologic Cross Section D-D' Showing Benzene in Soil and Groundwater
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

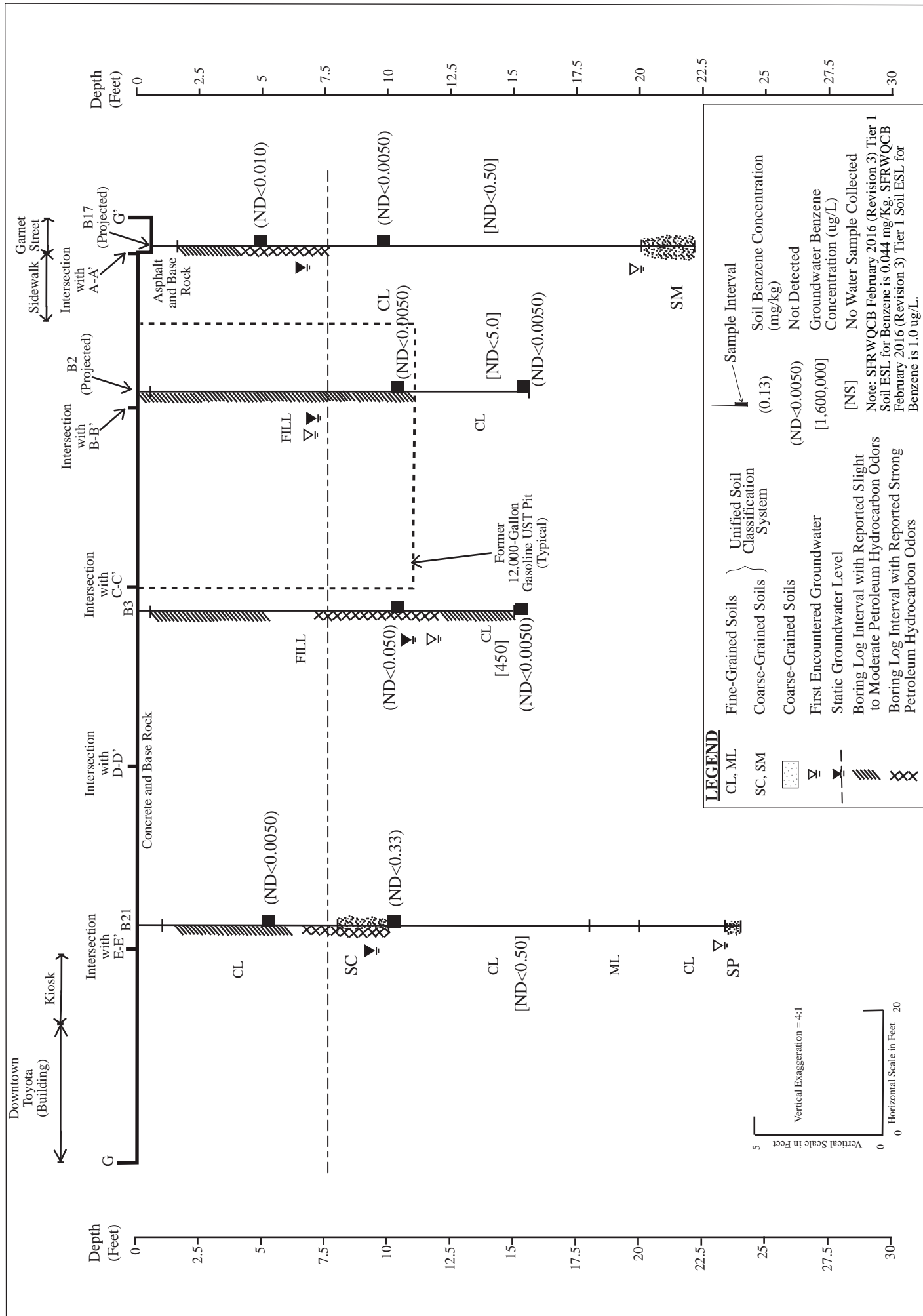


Figure E10

Geologic Cross Section G-G' Showing Benzene in Soil and Groundwater
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

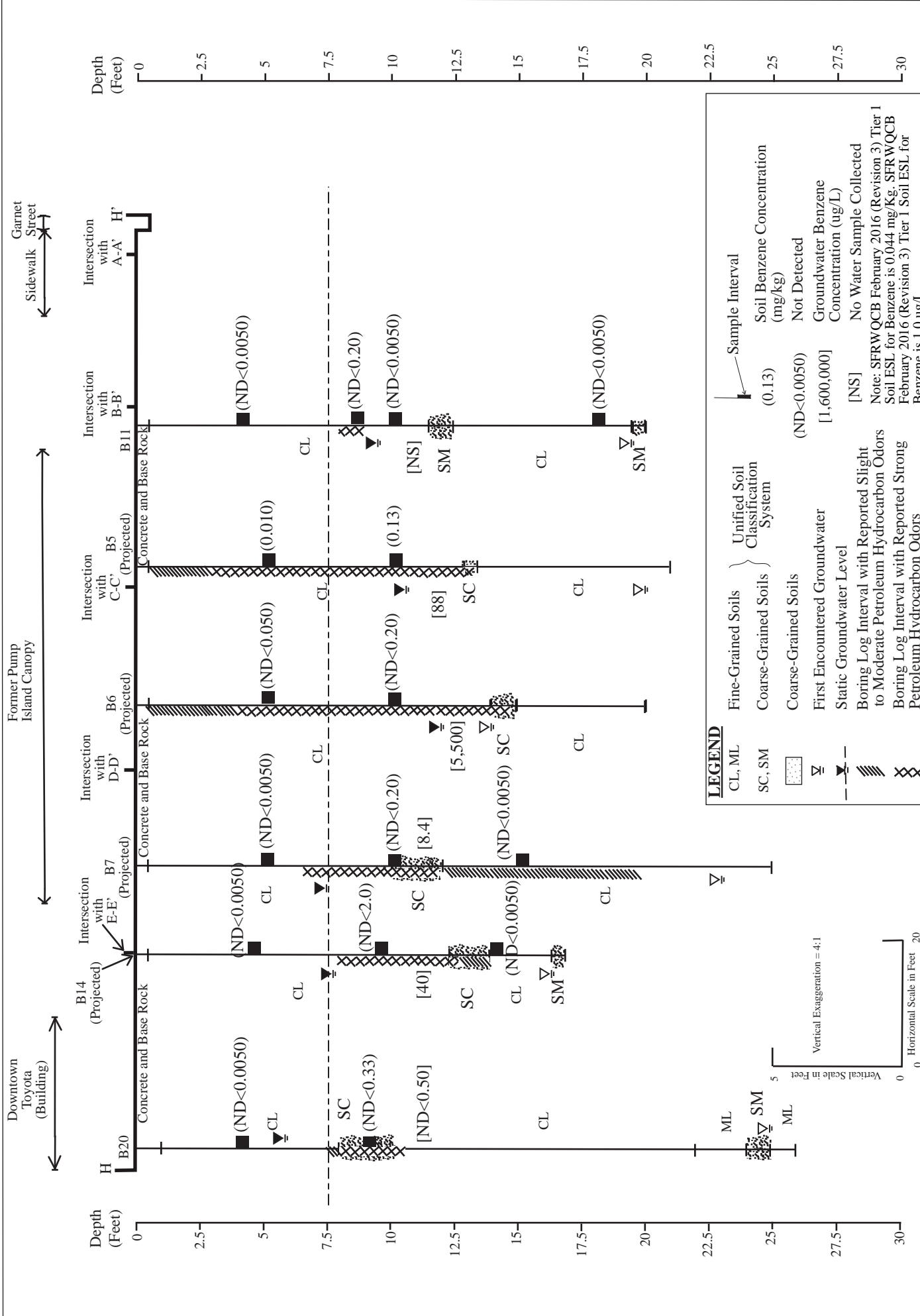


Figure E11
Geologic Cross Section H-H' Showing Benzene in Soil and Groundwater
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

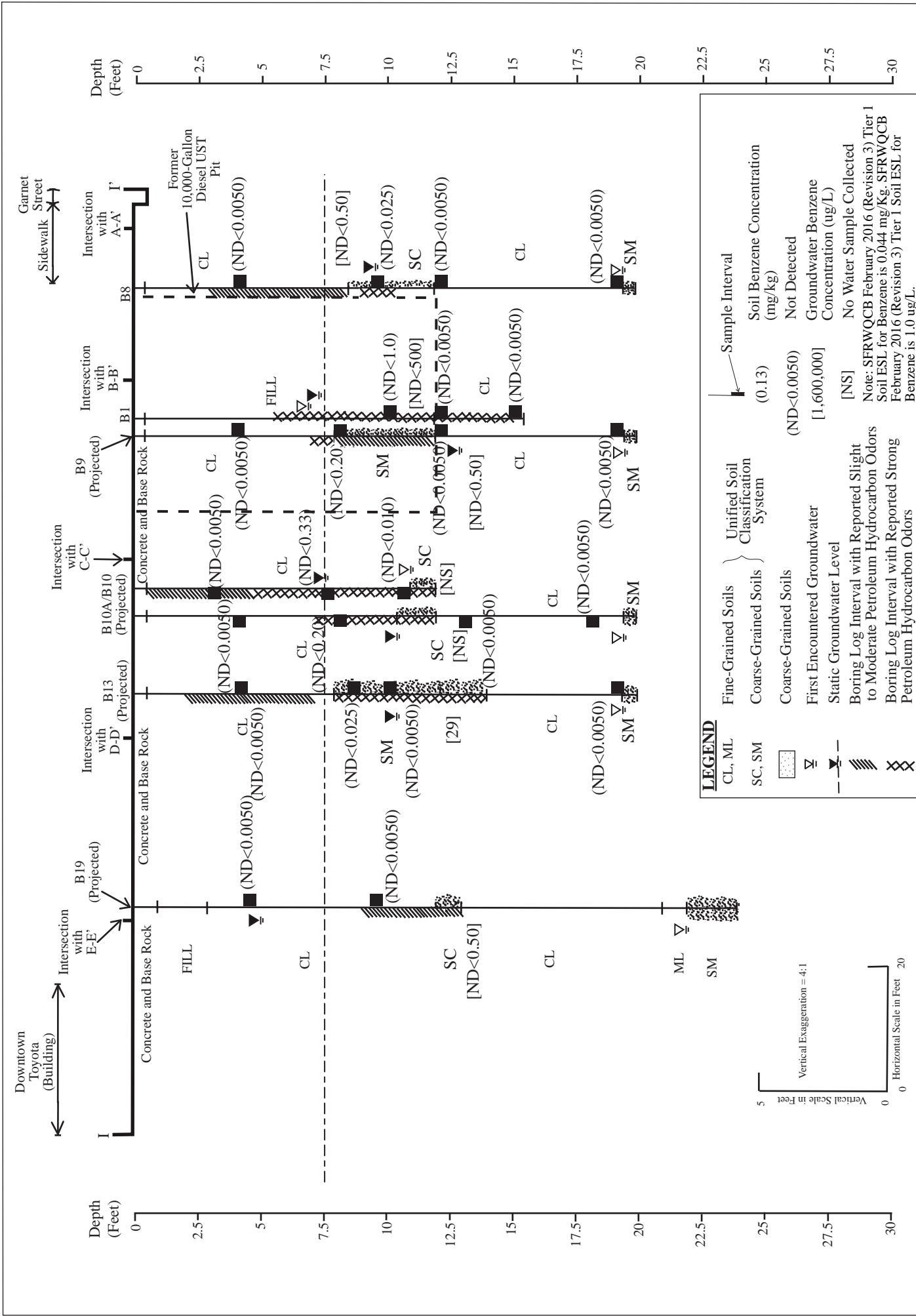


Figure E12
Geologic Cross Section I-I' Showing Benzene in Soil and Groundwater
 4171 Broadway
 Oakland, California

P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610

Soil Benzene Concentration (mg/kg): (0.13)
 Groundwater Benzene Concentration (ug/L): [1,600,000]
 No Water Sample Collected
 Note: SFRWQCB February 2016 (Revision 3) Tier 1 Soil ESL for Benzene is 0.044 mg/Kg. SFRWQCB February 2016 (Revision 3) Tier 1 Soil ESL for Benzene is 1.0 ug/L.