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February 14, 2017

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By Alameda County Environmental Health 1:32 pm, Dec 14, 2017

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

SUBJECT: DATA GAP EVALUATION AND SUBSURFACE INVESTIGATION REPORT
CERTIFICATION
County File # RO 3160
Former Precision Cast Products Site (1549 32nd Street)
2868 Hannah Street
Oakland, CA

Dear Ms. Roe:

You will find enclosed one copy of the following document prepared by P&D Environmental, Inc. for the subject site:

- Data Gap Evaluation and Subsurface Investigation Report dated February 14, 2017 (document 0741.R2).

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

Should you have any questions, please do not hesitate to contact me at (510) 452-2944.

Sincerely,

2868 Hannah Street LLC

John Protopapas
Managing Member

0741.L7



P&D ENVIRONMENTAL, INC.

55 Santa Clara Avenue, Suite 240

Oakland, CA 94610

(510) 658-6916

February 14, 2017

Report 0741.R2

Mr. Bob Huff

2868 Hannah Street, LLC

155 Grand Avenue, Suite 1025

Oakland, CA 94612

SUBJECT: DATA GAP EVALUATION AND SUBSURFACE INVESTIGATION REPORT
County File # RO 3160
Former Precision Cast Products Site (1549 32nd Street)
2868 Hannah Street
Oakland, CA

Dear Mr. Huff:

P&D Environmental, Inc. (P&D) has prepared this data gap evaluation and subsurface investigation report for evaluation of data gaps associated with historical site investigations for residential use of the subject site, and for investigation of the extent of tetrachloroethene (PCE) in soil and groundwater at and near the subject site. The work was performed in accordance with P&D's Data Gap Evaluation and Subsurface Investigation Work Plan dated November 28, 2016 (document 0741.W2). The work plan was approved in a letter from the ACDEH dated December 8, 2016. Drilling and sample collection were performed on December 12 and 13, 2016.

All work was performed under the direct supervision of a California professional geologist. A Site Location Map is attached as Figure 1, a Site Map showing geologic cross section locations and historical and current investigation sample collection locations is attached as Figure 2, and a Site Vicinity Aerial Photograph showing PCE in groundwater is attached as Figure 3.

BACKGROUND

A detailed site history and summary of historical site investigations is provided in P&D's November 28, 2016 Data Gap Evaluation and Subsurface Investigation Work Plan. From the 1940's to 1983 the site heat-treated metal products, and from 1983 to 2002 operated as a steel foundry. A putty and paint factory also operated at the site until 1985. Review of historical aerial photographs from 1993 to present shows that at some time between February 2004 and September 2004 the putty and paint factory building was demolished. The remaining buildings at the site were demolished by the property owner in preparation for residential site development between June 1 and June 14, 2015.

Documentation of the removal of a 700-gallon capacity Underground Storage Tank (UST) from the Hannah Street side of the property on February 1, 2002 is provided in the October 9, 2002 ERAS Environmental Inc., (ERAS) Technical Summary Report. Based on the sample results at the time of UST removal, no further action was required by the City of Oakland.

A Soil Remediation report dated April 6, 2004 prepared by ERAS identified approximately 3,202 cubic yards of soil containing hydraulic oil as being excavated and disposed of off-site between September 2003 and January 2004. A November 17, 2004 Soil Disposal and Soil Import report prepared by Environmental Restoration Services (ERS) states that between October 2003 and January 2004 approximately 2,897.75 tons of non-hazardous petroleum contaminated soil was disposed of at the Forward Inc. landfill in Manteca, California and between October 2003 and November 2003 approximately 1,378.63 tons of non-hazardous petroleum-contaminated soil was disposed of at the Keller Canyon landfill in Pittsburg, California. Additionally the report states that in January 2004 approximately 4,000 tons of soil was imported to the subject site from a residential property located at 1719/1725 University Ave. in Berkeley that was generated during excavation of an underground parking garage.

Four composite soil samples were collected at the 1719/1725 University Ave. property on November 17, 2003 to characterize the material. In addition, on April 22, 2005 nine soil samples were collected from five random locations (Import-1 through Import-5) within the backfilled excavations at the subject site between depths of 4 and 8 feet to further characterize soil import. None of the detected analyte concentrations exceeded their respective RWQCB February 2016 Revision 3 Tier 1 soil ESL values with the exception of lead in one sample at a concentration of 84.8 mg/kg (the ESL value is 80 mg/kg).

Roux Associates, Inc. (Roux) installed three groundwater monitoring wells, designated as MW-1, MW-2, and MW-3 on September 24, 2015; the wells were developed on October 2, 2015; the wells were surveyed on October 5, 2015; and the wells were initially purged and sampled on October 6, 2015. Documentation of the installation, development, surveying, and initial monitoring and sampling of wells MW-1 through MW-3 was provided in P&D's Subsurface Investigation Documentation Transmittal dated October 20, 2016 (document 0741.R1). P&D personnel measured the wells for depth to water to the nearest 0.01 foot using an electric water level indicator on June 29, 2016 and monitored and purged the wells on July 18, 2016. Summary tables that include water levels measured by P&D in wells MW-1 through MW-3 on June 29, 2016 and July 18, 2016 and water quality data associated with collection of groundwater samples from the wells by P&D on July 18, 2016 were provided in Appendix F of P&D's November 28, 2016 work plan.

ACDEH staff Dilan Roe and caseworker Kit Soo met with P&D and property owner representatives on July 28, 2016 to review historical site investigations to identify data gaps and steps necessary for residential development of the subject site. Based on the meeting it was determined that a Data Gap and Subsurface Investigation Work Plan would be prepared to evaluate any data gaps associated with historical site investigation and future residential use of the property, and also to investigate PCE in the southern portion of the property for verification of the proposed remedial solution associated with the PCE.

Potential data gaps reviewed at the July 28, 2016 meeting at ACDEH offices included the following.

- Evidence of contamination caused by trespassers prior to demolition of the site buildings.
- Residual surface contamination associated with site building demolition.
- Onsite and offsite delineation of PCE horizontally and vertically in soil and groundwater.

- Potential offsite upgradient PCE impact to the subject site.
- Historical site evaluations for petroleum, VOCs including naphthalene, and metals.
- Quality of imported fill used to backfill excavated areas.
- Residual contaminant concentrations at neighboring properties located to the east of the subject site.
- Project elevator pit relative to residual contamination.
- Offsite Utility Survey
- Vapor Intrusion Risk and Hazard at Offsite Downgradient Property Boundary

Evidence of contamination caused by trespassers prior to building demolition and potential PCE and petroleum vapor intrusion from groundwater at the eastern property boundary for the downgradient property that is located on the west side of Hannah Street were addressed in P&D's November 28, 2016 work plan. The remaining data gaps were addressed during P&D's December 2016 subsurface investigation for the subject site with the exception of the offsite utility survey. In addition, one additional borehole designated as P11 was drilled at the subject site for soil and groundwater sample collection in accordance with comments provided by the ACDEH in the December 8, 2016 letter approving P&D's November 28, 2016 work plan.

FIELD ACTIVITIES

Prior to performing field activities, drilling permit W2016-0856 was obtained from the Alameda County Public Works Agency (ACPWA), site access was scheduled with the property owner, drilling locations were marked with white paint, Underground Service Alert was notified for underground utility location, a health and safety plan was prepared, and notification of the drilling dates and sampling dates was provided to the ACPWA and the ACDEH.

Drilling Observation and Sample Collection

On December 13 and 14, 2016 P&D personnel collected surface soil samples at locations S1 through S6, and oversaw drilling at locations C1 through C4 and P1 through P11 (see Figure 2) by Cascade Drilling, LP in Richmond, California (Cascade) using Geoprobe direct push technology. Surface soil samples were collected at each of locations S1 through S6 from the ground surface to a depth of 0.0 to 0.5 feet bgs into plastic ziplock baggies using a shovel. Continuous cores were collected at locations C1 through C4 using a Geoprobe Macrocore barrel sampler lined with transparent PVC sleeves to a total depth of 4.0, 5.0, 6.0 and 7.0 feet bgs, respectively. Continuous cores were collected at locations P1 through P11 using a Geoprobe dual tube (DT22) casing lined with transparent PVC sleeves to total depths of 25.0 feet bgs at locations P1 and P2 and 19.0 feet bgs at locations P3 through P11. Although the work plan proposed depth of drilling for boreholes P3 through P10 was 25 feet bgs, groundwater grab samples were able to be collected by drilling to 19 feet bgs, and for this reason it was not necessary to drill to the proposed depth of 25.0 feet bgs at these locations.

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 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 evaluated in the field for odors, staining, and discoloration. PID values were measured and slight to moderate unidentified chemical odors, staining, and discoloration were detected or observed in the soil from continuously cored boreholes P3, P8, P9 and P11 as follows:

- P3: Discoloration was observed and slight unidentified chemical odors with associated PID values of 1.2 to 4.9 ppm were encountered between the depths of 7.0 and 7.5 feet bgs.
- P8: Discoloration was observed and slight to moderate unidentified chemical odors with no PID values were detected between the depths of 5.0 to 8.0 feet bgs.
- P9: Discoloration was observed and moderate unidentified chemical odors with no detectable PID values were detected between the depths of 7.0 to 8.0 feet bgs.
- P11: Discoloration was observed and moderate unidentified chemical odors with no detectable PID values were detected between the depths of 6.5 to 8.5 feet bgs.

Soil samples were retained for laboratory analysis from the borehole continuous cores by cutting a 6-inch long section of the transparent PVC sleeve containing the desired section of core and sequentially covering the ends of the cut section of core with aluminum foil and plastic endcaps, and then labeling and storing each cut section of core in a cooler with ice pending delivery to the laboratory. Chain of custody procedures will be observed for all sample handling. One soil sample was collected from borehole P3 at a depth of 7.0 feet bgs based on the detected presence of odor and PID values in the borehole.

Groundwater was encountered during drilling on December 13 and 14, 2016 in continuously cored boreholes P1 through P11 at depths of 16.0, 16.0, 16.0, 16.0, 12.0, 12.0, 16.0, 16.0, 16.0, 15.0, and 16.0 feet bgs, respectively. After completion of drilling and following the placement of temporary slotted 1-inch diameter PVC pipe into all of the continuously cored boreholes, groundwater levels were subsequently measured prior to groundwater sample collection in boreholes P1 through P11 at depths of 17.8, 14.2, 5.1, 5.2, 5.6, 5.2, 12.1, 11.4, 13.6, 14.7, and 13.7 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 P1 through P11 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 0.2 gallons was purged from each borehole prior to sample collection. Each groundwater sample was transferred to 40-milliliter Volatile Organic Analysis (VOA) vials and 40-milliliter amber unpreserved VOA vials directly from the discharge tubing. All of the VOA vials were supplied by the laboratory, contained hydrochloric acid preservative, and were sealed with screw caps containing Teflon-lined septa. The sample bottles were all overturned and tapped to ensure that no air bubbles were present. The sample bottles were then 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 December 14 and 16, 2016. All soil and water generated during subsurface

investigation was stored at the site in labeled 55-gallon drums pending characterization and proper disposal.

Drum Disposal

On January 24, 2017 two 55-gallon drums of soil were removed from the site as non-hazardous waste by Big Sky Enterprises (Big Sky) of Benicia, California for disposal at the Potrero Hills landfill in Suisun City, California using non-hazardous waste manifest bse012417. A copy of the non-hazardous waste manifest is attached with this report as 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). The Late Pleistocene alluvium is described as weakly consolidated slightly weathered poorly sorted irregularly interbedded clay, silt, sand and gravel.

Based on review of the Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California (U.S. Geological Survey Miscellaneous Field Studies MF-2342, Version 1.0) by R.W Graymer, 2000, the site is underlain by Holocene alluvial fan and fluvial deposits (Qhaf). The alluvial fan and fluvial deposits are described as brown or tan, medium dense to dense, gravely sand or sandy gravel that generally grades upward to sandy or silty clay. Near the distal fan edges, the fluvial deposits are typically brown, never reddish, medium dense sand that fines upward to sandy or silty clay, with the best developed Holocene alluvial fans are on the San Francisco Bay plain.

Review of Geotracker for geology and hydrogeology information for nearby sites identified the former Zero Waste site located at 1450 32nd Street (located approximately 350 feet northeast and upgradient of the subject site). The local geology and hydrogeology are described in an August 4, 2016 report entitled Q3-2016 Groundwater Monitoring Report prepared for the 1450 32nd Street site by Stellar Environmental Solutions, Inc. (Stellar) as consisting of clay-rich material with some gravel fill and silty sand from the surface to a depth of approximately 8 to 10 feet bgs, underlain by moist, light brown-colored silt with intermittent brown to black sand layers to a depth of approximately 17 feet bgs. At depths between 17 feet bgs and 20 feet bgs site lithology becomes predominately clayey, with more gravelly layers in the clay encountered on the west side of the property.

The August 4, 2016 Stellar report identified groundwater in January 2015 in groundwater monitoring wells at 1450 32nd Street at depths of approximately 5 to 6 feet bgs, with a southwesterly groundwater flow direction and a relatively flat hydraulic gradient. Groundwater was first-encountered in exploratory boreholes at 1450 32nd Street at depths of approximately 15 to 17 feet bgs and was subsequently measured in the exploratory boreholes at depths of between 5 to 7 feet bgs after equilibrating. Figure 4 of Stellar's August 4, 2016 Q3-2016 Groundwater Monitoring Report for the 1450 32nd Street site shows a fence diagram identifying a coarse-grained layer at the site at a depth of approximately 15 to 20 feet bgs.

A May 27, 2003 Soil and Groundwater Investigation Report prepared by ERAS for the subject site identified soils at the site as consisting primarily of silt to 15 to 19 feet bgs with sand and gravel stringers encountered in a number of soil borings at a depth of 15 to 19 feet bgs. A December 14, 2005 Investigative Report prepared by ERS identified subsurface materials at the subject site as primarily consisting of medium plasticity silty clays and low plasticity sandy silts to 16 feet bgs. Logged soil borings advanced at the site did not depict any significantly thick zones of higher permeability to a depth of approximately 16.5 feet bgs.

An April 6, 2004 Soil Remediation report prepared by ERAS described native soils encountered beneath the vaults during remedial soil excavation activities as consisting of brown silty clays to approximately 10 feet bgs. Sand lenses were noted from 9 to 11 feet bgs and groundwater was generally encountered at 10 to 15 feet bgs. Some soils exhibited a characteristic blue-green color and mild to strong petroleum hydrocarbon odor. These field indications of petroleum impact were used to help determine the limits of remedial soil excavation.

An August 10, 2015 Phase II Environmental Site Assessment Results report prepared by Roux describes subsurface conditions at the subject site as consisting of medium plastic lean clay with first-encountered groundwater ranging in depth from between 7 and 14 ft bgs.

Review of the subsurface materials logged by P&D personnel in boreholes C1 through C4 and P1 through P11 on December 13 and 14, 2016 (see Appendix A) shows that coarse-grained materials were encountered in the boreholes in feet bgs as follows:

- C1: none.
- C2: none.
- C3: 1.5 to 2.0 silty fine sand.
- C4: none.
- P1: none.
- P2: 22.0 to 24.0 clayey gravelly sand.
- P3: none.
- P4: 18.5 to 19.0 clayey gravelly sand.
- P5: 0.0 to 5.0 fine sand, 12.0 to 19.0 silty fine sand.
- P6: 0.5 to 2.0 fine sand, 3.0 to 17.5 silty fine sand.
- P7: 3.0 to 4.0 and 18.0 to 19.0 fine sand.
- P8: 6.5 to 7.0 clayey gravelly sand, 10.0 to 11.0 and 15.5 to 16.5 silty fine sand.
- P9: 15.5 to 17.0 silty fine sand.
- P10: none.
- P11: 17.5 to 18.0 silty fine sand.

Review of boring logs for historical boreholes at the subject site shows that first-encountered groundwater has generally been observed at depths of approximately 10 to 15 feet bgs and 20 to 25 feet bgs. Groundwater was encountered during drilling on December 13 and 14, 2016 in continuously cored boreholes P1 through P11 at depths of 16.0, 16.0, 16.0, 16.0, 12.0, 12.0, 16.0, 16.0, 16.0, 15.0, and 16.0 feet bgs, respectively. After completion of drilling and following the placement of temporary slotted 1-inch diameter PVC pipe into all of the continuously cored boreholes, groundwater levels were subsequently measured prior to groundwater sample collection

in boreholes P1 through P11 at depths of 17.8, 14.2, 5.1, 5.2, 5.6, 5.2, 12.1, 11.4, 13.6, 14.7, and 13.7 feet bgs, respectively.

Review of available ground surface and top of well PVC pipe survey data for the three onsite groundwater monitoring wells shows that the tops of the wells are all between 3.48 and 3.65 feet above the ground surface. Based on the measured depth to water in the wells, the depth to water in the onsite wells is approximately 7 to 8 feet bgs.

Based on the measured groundwater levels in the three groundwater monitoring wells at the subject site in 2015 and 2016, the groundwater flow direction at the site was calculated to be westerly to southwesterly with a gradient of 0.009 to 0.011. The groundwater flow direction calculated for the subject site is consistent with the southwesterly groundwater flow direction identified at the nearby former Zero Waste site located at 1450 32nd Street.

The locations of geologic cross sections A-A' through G-G' at the subject site are shown on Figure 2. Copies of the geologic cross sections are provided in P&D's November 28, 2016 work plan.

San Francisco Bay is located approximately 3,200 feet to the northwest and also approximately 6,300 feet to the west of the subject site (see Figure 1).

LABORATORY ANALYSIS

All of the soil and groundwater samples were analyzed at McCampbell Analytical, Inc. in Pittsburg, California (McCampbell). McCampbell is a State-accredited hazardous waste testing laboratory.

Surface soil samples S1 through S6 were analyzed for total lead using EPA Method 6020.

The borehole soil samples collected from boreholes P1 through P11 were analyzed for the following analytes:

- Total Petroleum Hydrocarbons as Gasoline (TPH-G) using EPA Method 5030B in conjunction with EPA Method 8021B and 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.
- VOCs, including BTEX, naphthalene, fuel oxygenates including methyl-tert-butyl ether (MTBE), lead scavengers, and halogenated volatile organic compounds (HVOCs) including PCE and associated decomposition products using EPA Method 8260B.

The borehole groundwater samples collected from boreholes P1 through P11 were analyzed for the same analytes and using the same methods as the borehole soil samples with the following exception:

- TPH-D, TPH-MO, and TPH-BO were analyzed using EPA Method 3510C in conjunction with EPA Method 8015B.

The soil samples collected from boreholes C1 through C4 were analyzed for the following analytes:

- TPH-G, TPH-D, and TPH-MO using EPA Method 5030B in conjunction with EPA Method 8021B and modified EPA Method 8015B.
- VOCs by EPA Method 8260B.
- Semi-Volatile Organic Compounds (Semi-VOCs) by EPA Method 8270C.
- Polychlorinated Biphenyls (PCBs) by EPA Method 8082.
- CAM 17 metals

Additionally, the soil samples collected at locations C1 through C4 were also analyzed at Micro Analytical Laboratories, Inc. in Emeryville, California (Micro Analytical) for asbestos by CARB Method 435 (1,000 point count).

The surface soil sample results (S1-0.0 through S6-0.0) are summarized in Table 1. The borehole P1 through P11 soil sample results are summarized in Table 2, and the borehole P1 through P11 groundwater sample results are summarized in Table 3. The pit backfill soil sample (C1-4.0, C2-5.0, C3-6.0, and C4-7.0) analytical results for organic analytes (TPH, VOCs, SVOCs, and PCBs) are summarized in Table 4A, the analytical results for inorganic analytes (Metals and Asbestos) are summarized in Table 4B. Copies of the laboratory analytical reports and chain of custody documentation are provided in Appendix B attached with this report.

DISCUSSION AND RECOMMENDATIONS

Review of the surface soil sample results in Table 1 shows that all but one of the detected lead concentrations exceeds the San Francisco Bay Regional Water Quality Control Board (RWQCB) February 2016 (Revision 3) Tier 1 soil Environmental Screening Level (ESL) of 80 milligrams per kilogram (mg/kg). The sample results are shown in Figure 4. Based on the sample results P&D recommends that additional soil samples be collected to evaluate the vertical extent of lead concentrations exceeding the lead Tier 1 soil ESL value.

Review of the borehole P1 through P11 soil sample results in Table 2 shows the following:

- In soil sample P1-24.5 no analytes were detected, indicating that the vertical extent of PCE and petroleum in soil in the southern portion of the property has been vertically defined (see Figure 5, Geologic Cross Section A-A' Showing PCE in Soil).
- In soil samples P2-4.5, P2-9.5, P2-14.5, and P2-19.5 no analytes were detected, indicating that the extent of PCE and petroleum in the southern portion of the property has been defined to the south (see Figure 6, Geologic Cross Section C-C' Showing PCE in Soil).
- In soil sample P3 (located downgradient of the former UST located adjacent to Hannah Street) TPH-G, TPH-D, TPH-MO, TPH-BO, and tert-Butyl benzene were detected. No other analytes, including trichloroethene (TCE) or naphthalene were detected, and none of the detected concentrations exceed their respective RWQCB February 2016 (revision 3) Tier 1 soil ESL values. No ESL value has been established for tert-Butyl benzene. Review of the laboratory analytical report shows that the laboratory described the TPH-G results as consisting of strongly aged gasoline or diesel-range compounds and also

described the TPH-G results as having no recognizable pattern. The laboratory also described the TPH-D, TPH-MO, and TPH-BO results as consisting of strongly aged diesel-range compounds. The absence of VOCs, including PCE, naphthalene and BTEX indicate that residual petroleum concentrations in soil downgradient of the former Hannah Street UST do not pose a human health risk for potential vapor intrusion for the property located on the west side of Hannah Street. Based on the borehole soil sample results P&D recommends that no further investigation of soil be performed in the vicinity of borehole P3.

- In soil sample P11-7.5 (collected at a depth of 7.5 feet bgs to evaluate residual petroleum concentrations in the vicinity of borehole P11) TPH-G, TPH-D, TPH-MO, and TPH-BO were detected. No other analytes, including TCE or naphthalene were detected, and none of the detected concentrations exceed their respective RWQCB February 2016 (revision 3) Tier 1 soil ESL values with the exception of TPH-D. No analytes were detected in the soil sample collected from borehole P11 at a depth of 16.0 feet bgs, indicating that the vertical extent of petroleum detected in the soil sample collected at a depth of 7.5 feet bgs has been defined. Review of the laboratory analytical report shows that the laboratory described the soil sample P11-7.5 TPH-G results as consisting of strongly aged gasoline or diesel-range compounds and also described the TPH-D, TPH-MO, and TPH-BO results as consisting of both oil-range compounds and diesel-range compounds with no recognizable pattern. The absence of VOCs, including PCE, naphthalene and BTEX indicate that residual petroleum concentrations in soil in the vicinity do not pose a human health risk for potential vapor intrusion in the vicinity of borehole P11. Based on the borehole soil sample results P&D recommends that no further investigation of soil be performed in the vicinity of borehole P11.

Review of the borehole P1 through P11 groundwater sample results in Table 3 shows the following:

- In groundwater sample P1 the only analytes detected were TPH-G at a concentration of 7,800 ug/L, PCE at a concentration of 10,000 ug/L, and the PCE decomposition product cis-1,2-DCE at a concentration of 720 ug/L. Review of the laboratory analytical report shows that the laboratory described the groundwater sample P1 TPH-G results as consisting of one to a few isolated non-target peaks present in the TPH-G chromatogram. As discussed in P&D's November 28, 2016 work plan, TPH-G results in the southern portion of the property that are described by the laboratory as consisting of one to a few isolated non-target peaks are interpreted to be PCE. The detected TPH-G concentration identified as PCE is consistent with the 10,000 ug/L PCE result for the sample. The P1 PCE result is consistent with historical PCE concentrations detected in P1 (Figure 7, Geologic Cross Section A-A' Showing PCE in Groundwater).
- In groundwater sample P2 the only analytes detected were PCE at a concentration of 18 ug/L, and the PCE decomposition products TCE at a concentration of 1.1 ug/L and cis-1,2-DCE at a concentration of 1.7 ug/L. The only detected compound that exceeds the RWQCB February 2016 (Revision 3) Tier 1 groundwater ESL of 3.0 ug/L is PCE. Similarly, the only detected compound that exceeds the RWQCB February 2016 (Revision 3) Tier 1 Table GW-3 Groundwater Vapor Intrusion Human Health Risk Screening Levels for shallow groundwater and a residential exposure scenario value of

3.0 ug/L is PCE. P&D recommends that the extent of PCE in the vicinity of borehole P2 be addressed during remediation of PCE-impacted soil at the site (see Figure 8, Geologic Cross Section C-C' Showing PCE in Groundwater).

- In groundwater samples P3 and P4 none of the detected analytes exceed their respective RWQCB February 2016 (Revision 3) Tier 1 groundwater ESL values or Table GW-3 value for shallow groundwater and a residential exposure scenario. The absence of VOCs, including PCE, naphthalene and BTEX indicate that residual petroleum concentrations in groundwater downgradient of the former Hannah Street UST do not pose a human health risk for potential vapor intrusion for the property located on the west side of Hannah Street. Based on the borehole groundwater sample results P&D recommends that no further investigation of soil or groundwater be performed in the vicinity of borehole P3. In addition, PCE and associated decomposition products were not detected at concentrations exceeding their respective ESL groundwater values, indicating that the northern and southern extent of the groundwater PCE plume on the west side of Hannah Street has been defined.
- In groundwater samples P5, P6, and P7 PCE and associated decomposition products were not detected with the exception of 1.9 ug/L PCE in sample P7. The results indicate that the western extent of the groundwater PCE plume has been defined. No other analytes were detected in these samples at concentrations exceeding either their RWQCB February 2016 (Revision 3) Tier 1 groundwater ESL values or their respective RWQCB February 2016 (Revision 3) Tier 1 Table GW-3 Groundwater Vapor Intrusion Human Health Risk Screening Level value for shallow groundwater and a residential exposure scenario.
- In groundwater sample P8 the compounds detected at concentrations exceeding their respective RWQCB February 2016 (Revision 3) Tier 1 groundwater ESL values were TPH-D, PCE and vinyl chloride at concentrations of 16,000, 31 and 0.55 ug/L, respectively. The only detected compounds that exceed the RWQCB February 2016 (Revision 3) Tier 1 Table GW-3 Groundwater Vapor Intrusion Human Health Risk Screening Levels for shallow groundwater and a residential exposure scenario are PCE and vinyl chloride (there is no TPH-D Table GW-3 value). The laboratory described the detected TPH-D, TPH-MO, and TPH-BO results for groundwater sample P8 as consisting of diesel-range compounds with no recognizable pattern or aged diesel and oil-range compounds. The absence of naphthalene in sample P8 indicates that the detected TPH-D does not pose a vapor intrusion human health risk. Borehole B8 was drilled adjacent to historical borehole B4 (see Figure 2) to evaluate the presence of PCE historically detected in a groundwater sample collected from borehole B4. The PCE and associated decomposition products TCE and vinyl chloride detected in the borehole B8 groundwater sample are interpreted to originate from the offsite upgradient PCE release at the former Zero Waste site located at 1450 32nd Street (located approximately 350 feet northeast and upgradient of the subject site, see Figure 9). Based on the detected PCE, TCE, and vinyl chloride in groundwater at borehole B8 at the subject site and the historical offsite upgradient detection of PCE in borehole B4, P&D recommends that the RWQCB caseworker for the 1450 32nd Street site investigation be notified of the B4 and P8 sample results and that the origin of the detected PCE from the 1450 32nd Street site be verified.

- In groundwater samples P9, P10 and P11 the only compound detected at a concentration exceeding the RWQCB February 2016 (Revision 3) Tier 1 groundwater ESL value was TPH-D in sample P11. The detected TPH-D, TPH-MO, and TPH-BO results for sample P11 were described by the laboratory as consisting of oil-range compounds and diesel-range compounds with no recognizable pattern. No other analytes were detected in these samples at concentrations exceeding either their RWQCB February 2016 (Revision 3) Tier 1 groundwater ESL values or their respective RWQCB February 2016 (Revision 3) Tier 1 Table GW-3 Groundwater Vapor Intrusion Human Health Risk Screening Level value for shallow groundwater and a residential exposure scenario. The absence of VOCs, including PCE, naphthalene and BTEX indicate that residual petroleum concentrations in groundwater at the eastern property boundary in the vicinity of these boreholes do not pose a human health risk for potential vapor intrusion for development of the property or for the residential structures located to the east of the subject site. Geologic cross section E-E' showing TPH, benzene, and naphthalene in soil are attached as Figures Based on the borehole groundwater sample results P&D recommends that no further investigation of soil or groundwater be performed in the vicinity of boreholes P9, P10 or P11.
- Updated site maps showing PCE, TPH-G, TPH-D, TPH-MO/HO, benzene, and naphthalene in groundwater that include the December 2016 investigation results are attached with this report as Figures 16 through 20, respectively.

Review of the pit backfill soil sample results in Table 4A shows that all organic analytes were not detected with the exception of TPH-G in one sample and TPH-D and TPH-MO in all of the samples. Review of the laboratory analytical reports describe the TPH-D and TPH-MO as consisting of oil range and diesel range compounds with no recognizable pattern. None of the detected petroleum concentrations exceed their respective RWQCB February 2016 (revision 3) Tier 1 soil ESL values.

Review of the pit backfill soil sample results in Table 4B shows that none of the detected metal concentrations exceed the respective February 2016 Tier 1 ESLs with the exception of arsenic which was detected at concentrations ranging from 5.7 to 8.6 mg/kg. The subject property is located in Oakland, California where arsenic is a naturally occurring metal in the soil. In accordance with the December 2011 document 'Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region' an upper estimate for background arsenic concentrations within undifferentiated urbanized flatland soils in the San Francisco Bay Area was determined to be 11 mg/kg. This evaluation was conducted at the suggestion of the RWQCB in collaboration with San Francisco State University. Additionally, in accordance with the March 2008 'Determination of a Southern California Regional Background Arsenic Concentration in Soil' document produced by the California Department of Toxic Substances Control (DTSC), the upper-bound concentration of 12 mg/kg was established for arsenic in southern California. The DTSC currently uses this value for both Northern and Southern California. Although detected arsenic concentrations at the site exceed RWQCB soil ESL values, the detected arsenic concentrations are considered to be representative of background concentrations.

None of the detected metals concentrations in samples C1-4.0, C2-5.0, C3-6.0, and C4-7.0 were detected at hazardous waste concentrations or would require further evaluation to determine if

they are hazardous waste with the exceptions of chromium and mercury in sample C3-6.0 and lead in sample C4-7.0. Based on these detected metals concentrations P&D recommends that any soil excavated from the formerly backfilled excavations during future site development be characterized for disposal for these metals prior to removal of soil from the site.

DISTRIBUTION

A copy of this report will be uploaded to the GeoTracker and ACEH LOP databases.

LIMITATIONS

This report was prepared solely for the use of 2868 Hannah Street, LLC. 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.

February 14, 2017
Report 0741.R2

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

Sincerely,

P&D Environmental, Inc.



Paul H. King
Professional Geologist #5901
Expires 12/31/17



Attachments:

- Table 1 - Summary of Surface 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 Pit Backfill Soil Sample Analytical Results - Organic Compounds
- Table 4B - Summary of Pit Backfill Soil Sample Analytical Results - Inorganic Compounds

- Figure 1 - Site Location Map
- Figure 2 - Site Map Showing Geologic Cross Section Locations
- Figure 3 - Site Vicinity Aerial Photograph Detail Showing PCE in Groundwater
- Figure 4 - Site Map Showing Lead Concentrations in Soil
- Figure 5 - Geologic Cross Section A-A' Showing PCE in Soil
- Figure 6 - Geologic Cross Section C-C' Showing PCE in Soil
- Figure 7 - Geologic Cross Section A-A' Showing PCE in Groundwater
- Figure 8 - Geologic Cross Section C-C' Showing PCE in Groundwater
- Figure 9 - Site Vicinity Aerial Photograph Showing Upgradient PCE-Impacted Site Location
- Figure 10 - Geologic Cross Section E-E' Showing TPH in Soil
- Figure 11 - Geologic Cross Section E-E' Showing Benzene in Soil
- Figure 12 - Geologic Cross Section E-E' Showing Naphthalene in Soil
- Figure 13 - Geologic Cross Section E-E' Showing TPH in Groundwater
- Figure 14 - Geologic Cross Section E-E' Showing Benzene in Groundwater
- Figure 15 - Geologic Cross Section E-E' Showing Naphthalene in Groundwater
- Figure 16 - Site Map Showing PCE Concentrations in Groundwater
- Figure 17 - Site Map Showing TPH-G Concentrations in Groundwater
- Figure 18 - Site Map Showing TPH-D Concentrations in Groundwater
- Figure 19 - Site Map Showing Benzene Concentrations in Groundwater
- Figure 20 - Site Map Showing Naphthalene Concentrations in Groundwater

February 14, 2017
Report 0741.R2

Appendix A - Boring Logs
Appendix B - Laboratory Analytical Reports and Chain of Custody Documentation
Appendix C - Drum Disposal Non-Hazardous Waste Manifest

cc: Mr. Bob Huff, 2868 Hannah Street, LLC

PHK/mlbd/sjc
0741.R2

TABLES

Table 1
Summary of Surface Soil Sample Analytical Results

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	Total Lead
S1-0.0	12/13/2016	0.0	1,300
S2-0.0	12/13/2016	0.0	53
S3-0.0	12/13/2016	0.0	440
S4-0.0	12/13/2016	0.0	340
S5-0.0	12/13/2016	0.0	240
S6-0.0	12/13/2016	0.0	88
ESL	Soil Tier 1 ESL		80
NOTES:			
ft bgs = feet below ground surface.			
ND = Not detected.			
ESL = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 2016 (Revision 3), from Summary of Soil ESLs, Soil Tier 1 ESL.			
Results in bold exceed their respective ESL values.			
Results and ESL values reported in milligrams per kilogram (mg/kg),			

Table 2
Summary of Borehole Soil Sample Analytical Results

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	PCE	TPH-G	TPH-D	TPH-MO	TPH-BO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B
P1-24.5	12/13/2016	24.5	ND<0.0050	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
P2-4.5	12/13/2016	4.5	ND<0.0050	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
P2-9.5	12/13/2016	9.5	ND<0.0050	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
P2-14.5	12/13/2016	14.5	ND<0.0050	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
P2-19.5	12/13/2016	19.5	ND<0.0050	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
P3-7.0	12/14/2016	7.0	ND<0.0050	7.8, a,b	43, c	74, c	74, c	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND, except tert-Butyl benzene = 0.0050
P11-7.5	12/13/2016	7.5	ND<0.0050	1.7, a	1,000, d,e	1,300, d,e	1,500, d,e	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
P11-16.0	12/13/2016	16.0	ND<0.0050	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
LTCP									0-5' = 1.9 5-10' = 2.8		0-5' = 21 5-10' = 32		
LTCP									0-5' = 8.2 5-10' = 12 0-10' = 14		0-5' = 89 5-10' = 134 0-10' = 314		
ESL				100	230	5,100	5,100	0.023	0.044	2.9	1.4	2.3	tert-Butyl benzene = No Value
NOTES:													
PCE = Tetrachloroethene													
TPH-G = Total Petroleum Hydrocarbons as Gasoline.													
TPH-D = Total Petroleum Hydrocarbons as Diesel.													
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.													
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.													
MTBE = Methyl tertiary-butyl ether.													
VOCs = Volatile Organic Compounds.													
ft bgs = feet below ground surface.													
ND = Not detected.													
a = Laboratory Note: strongly aged gasoline or diesel range compounds are significant in the TPH-G chromatogram.													
b = Laboratory Note: no recognizable pattern.													
c = Laboratory Note: aged diesel is significant													
d = Laboratory Note: oil range compounds are significant.													
e = Laboratory Note: 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.													
ESL = Environmental Screening Level, by San Francisco Bay - Regional Water Quality Control Board, updated February 2016 (Revision 3), from Summary of Soil ESLs, Soil Tier 1 ESL.													
Hi-lighted depths include the interval 0 -10.0 feet.													
Results in bold exceed their respective ESL values.													
Results, LTCP values, and ESL values, reported in milligrams per kilogram (mg/kg), unless otherwise indicated.													

Table 3
Summary of Borehole Groundwater Sample Analytical Results

Sample ID	Sample Collection Date	PCE	TPH-G	TPH-D	TPH-MO	TPH-BO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B
P1-W	12/13/2016	10,000	7,800, a	ND<50	ND<250	ND<100	ND<500	ND<500	ND<500	ND<500	ND<500	All ND, except cis-1,2-DCE = 720
P2-W	12/13/2016	18	ND<50	ND<50	ND<250	ND<100	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND, except TCE = 1.1, cis-1,2-DCE = 1.7
P3-W	12/14/2016	ND<0.50	ND<50	61, b	ND<250	ND<100	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND, except cis-1,2-DCE = 1.7
P4-W	12/14/2016	ND<0.50	ND<50	ND<50	270, c	260, c	1.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND, except Freon 113 = 6.4
P5-W	12/14/2016	ND<0.50	ND<50	ND<50	ND<250	ND<100	0.95	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
P6-W	12/14/2016	ND<0.50	ND<50	55, b	ND<250	ND<100	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
P7-W	12/14/2016	1.9	ND<50	ND<50	ND<250	ND<100	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
P8-W	12/13/2016	31	ND<50	16,000, d,c	20,000, d,c	22,000, d,c	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND, except TCE = 2.4, cis-1,2-DCE = 4.5, Vinyl chloride = 0.55 , 1,1-DCA = 1.8, 1,1-DCE = 1.1, 1,1,1-TCA = 1.0
P9-W	12/13/2016	ND<0.50	ND<50	ND<50	ND<250	ND<100	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
P10-W	12/13/2016	ND<0.50	ND<50	ND<50	ND<250	ND<100	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
P11-W	12/13/2016	ND<0.50	ND<50	700, c,b	1,000, c,b	1,100, c,b	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.61	All ND, except Acetone = 25

Table 3
Summary of Borehole Groundwater Sample Analytical Results

Sample ID	Sample Collection Date	PCE	TPH-G	TPH-D	TPH-MO	TPH-BO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B
LTCP	Scenario 2						1,000	3,000				
Groundwater	Scenario 4						1,000	1,000				
Specific Criteria												
ESL ¹		3.0	100	100	50,000	50,000	5.0	1.0	40	13	20	TCE = 5.0, cis-1,2-DCE = 6.0, Vinyl chloride = 0.061, 1,1-DCA = 5.0, 1,1-DCE = 3.2, 1,1,1-TCA = 62, Acetone = 1,500, Freon 113 = No Value
ESL ²		3.0	No Value	No Value	No Value	No Value	1,200	1.1	3,600	13	1,300	TCE = 5.6, cis-1,2-DCE = 110, Vinyl chloride = 0.061, 1,1-DCA = 20, 1,1-DCE = 170, 1,1,1-TCA = 4,900, Acetone = 34,000,000, Freon 113 = No Value
NOTES:												
PCE = Tetrachloroethene.												
TPH-G = Total Petroleum Hydrocarbons as Gasoline.												
TPH-D = Total Petroleum Hydrocarbons as Diesel.												
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.												
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.												
MTBE = Methyl tertiary-butyl ether.												
VOCs = Volatile Organic Compounds.												
PCE = Tetrachloroethene.												
TCE = Trichloroethene.												
cis-1,2-DCE = cis-1,2-Dichloroethene.												
1,1-DCA = 1,1-Dichloroethane.												
1,1-DCE = 1,1-Dichloroethene.												
1,1,1-TCA = 1,1,1-Trichloroethane.												
ft bgs = feet below ground surface.												
ND = Not detected.												
a = Laboratory Note: One to a few isolated non-target peaks present in the TPH-G chromatogram.												
b = Laboratory Note: diesel range compounds are significant; no recognizable pattern.												
c = Laboratory Note: oil range compounds are significant.												
d = Laboratory Note: diesel range compounds are significant; no recognizable pattern; and/or aged diesel is significant.												
LTCP = Low Threat Closure Policy, 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), from Summary of Groundwater ESLs, GW Tier 1 ESL.												
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 for Shallow Groundwater, Residential Land Use.												
Results in bold exceed their respective ESL¹ values.												
<u>Underlined results exceed their respective ESL² values.</u>												
Results, LTCP values, and ESL values, reported in micrograms per Liter (µg/L), unless otherwise indicated.												

Table 4A
Summary of Pit Backfill Soil Sample Analytical Results - Organic Compounds

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	PCBs by EPA Method 8082
C1-4.0	12/13/2016	4.0	1.3, a	6.8, b,c	130, b,c	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	All ND	All ND<0.25
C2-5.0	12/13/2016	5.0	ND<1.0	2.2, b,c	19, b,c	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	All ND	All ND<0.050
C3-6.0	12/13/2016	6.0	ND<1.0	14, b,c	120, b,c	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	All ND	All ND<0.25
C4-7.0	12/13/2016	7.0	ND<1.0	67, b,c	270, b,c	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	All ND	All ND<0.25
LTCP	Residential						0-5' = 1.9		0-5' = 21				
	Residential						5-10' = 2.8		5-10' = 32				
LTCP	Commercial/Industrial						0-5' = 8.2		0-5' = 89				
	Commercial/Industrial						5-10' = 12		5-10' = 134				
	Utility Worker						0-10' = 14		0-10' = 314				
ESL	Soil Tier 1 ESL		100	230	5,100	0.023	0.044	2.9	1.4	2.3	Various	Various	0.25
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.													
SVOCs = Semi-Volatile Organic Compounds.													
PCBs = Polychlorinated Biphenyls.													
ft bgs = feet below ground surface.													
ND = Not detected.													
-- = Not analyzed.													
a = Laboratory Note: strongly aged gasoline or diesel range compounds are significant in the TPH-G chromatogram.													
b = Laboratory Note: oil range compounds are significant.													
c = Laboratory Note: 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.													
ESL = Environmental Screening Level, by San Francisco Bay - Regional Water Quality Control Board, updated February 2016 (Revision 3), from Summary of Soil ESLs, Soil Tier 1 ESL.													
Hi-lighted depths include the interval 0 - 10.0 feet.													
Results, LTCP values, and ESL values, reported in milligrams per kilogram (mg/kg), unless otherwise indicated.													

Table 4B
Summary of Pit Backfill Soil Sample Analytical Results - Inorganic Compounds

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn	Asbestos
C1-3.5	12/13/2016	3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
C2-4.5	12/13/2016	4.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
C3-5.5	12/13/2016	5.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
C4-6.5	12/13/2016	6.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
C1-4.0	12/13/2016	4.0	0.56	5.7	120	ND<0.50	1.7	44	10	20	40	0.0690	0.82	30	0.98	0.62	0.58	48	49	--
C2-5.0	12/13/2016	5.0	0.58	7.3	140	ND<0.50	ND<0.25	46	13	26	13	0.12	0.73	59	ND<0.50	ND<0.50	ND<0.50	56	60	--
C3-6.0	12/13/2016	6.0	0.93	6.9	150	0.51	ND<0.25	55	13	27	31	3.2	0.71	65	ND<0.50	ND<0.50	ND<0.50	57	88	--
C4-7.0	12/13/2016	7.0	0.68	8.6	160	ND<0.50	0.26	42	15	21	63	0.24	0.83	58	ND<0.50	ND<0.50	ND<0.50	43	75	--
ESL	Soil Tier 1 ESL		31	0.067	3,000	42	39	No Value	23	3,100	80	13	390	86	390	390	0.78	390	23,000	0.25
NOTES:																				
Sb = Antimony; As = Arsenic; Ba = Barium; Be = Beryllium; Cd = Cadmium; Cr = Chromium; Co = Cobalt; Cu = Copper; Pb = Lead; Hg = Mercury; Mo = Molybdenum;																				
Ni = Nickel; Se = Selenium; Ag = Silver; Tl = Thallium; V = Vanadium; Zn = Zinc																				
ft bgs = feet below ground surface.																				
ND = Not detected.																				
-- = Not analyzed.																				
ESL = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 2016 (Revision 3), from Summary of Soil ESLs, Soil Tier 1 ESL.																				
Results in bold exceed their respective ESL values.																				
Results and ESL values reported in milligrams per kilogram (mg/kg), unless otherwise indicated.																				

FIGURES

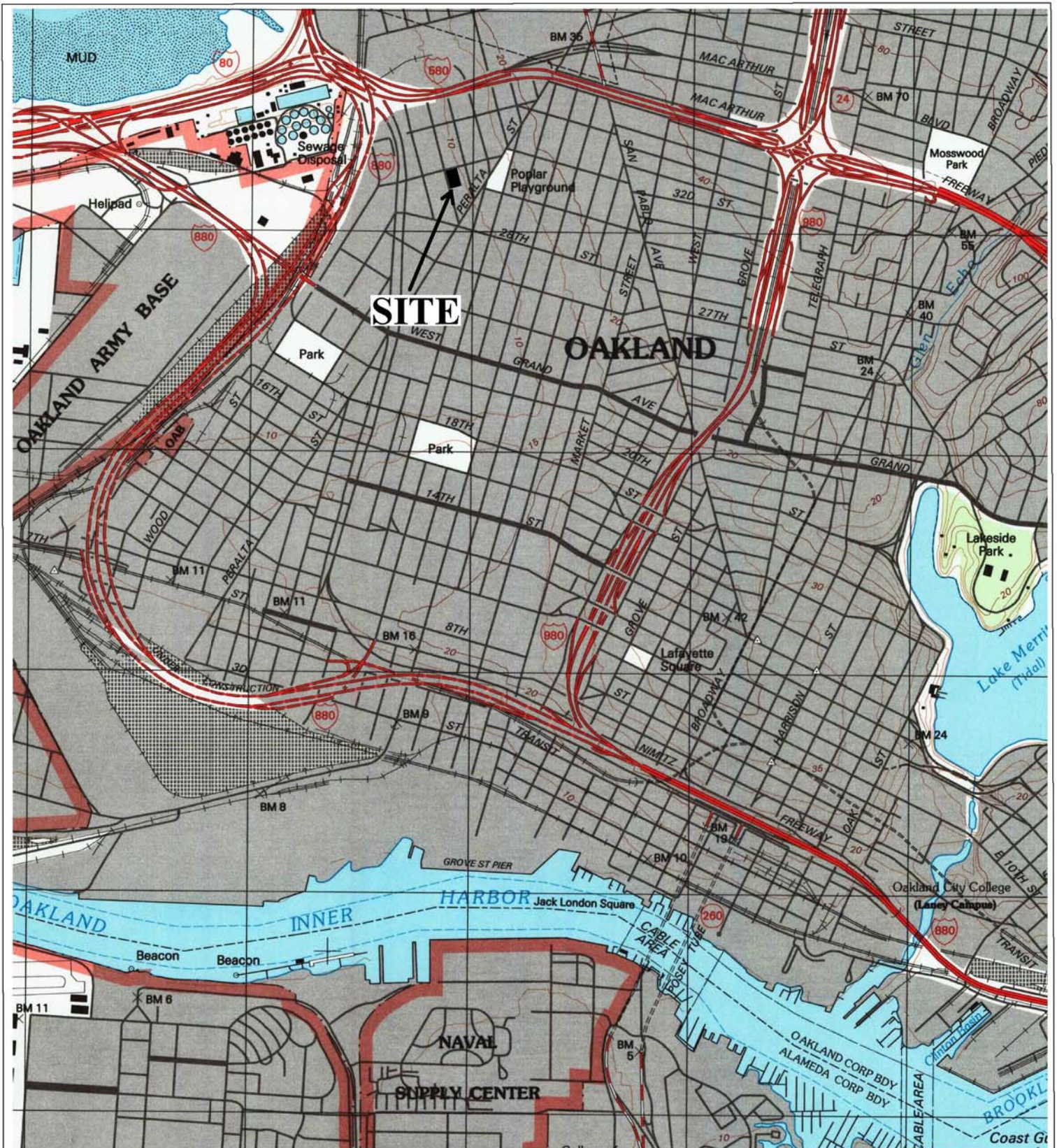


Figure 1
 Site Location Map
 2868 Hannah Street
 Oakland, California

Basemap from:
 U.S. Geological Survey 7.5-Minute Quadrangle,
 Oakland East, California Map edited 1996, and
 U.S. Geological Survey 7.5-Minute Quadrangle,
 Oakland West, California, Map edited 1996

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

0 1,000 2,000
 Approximate Scale in Feet



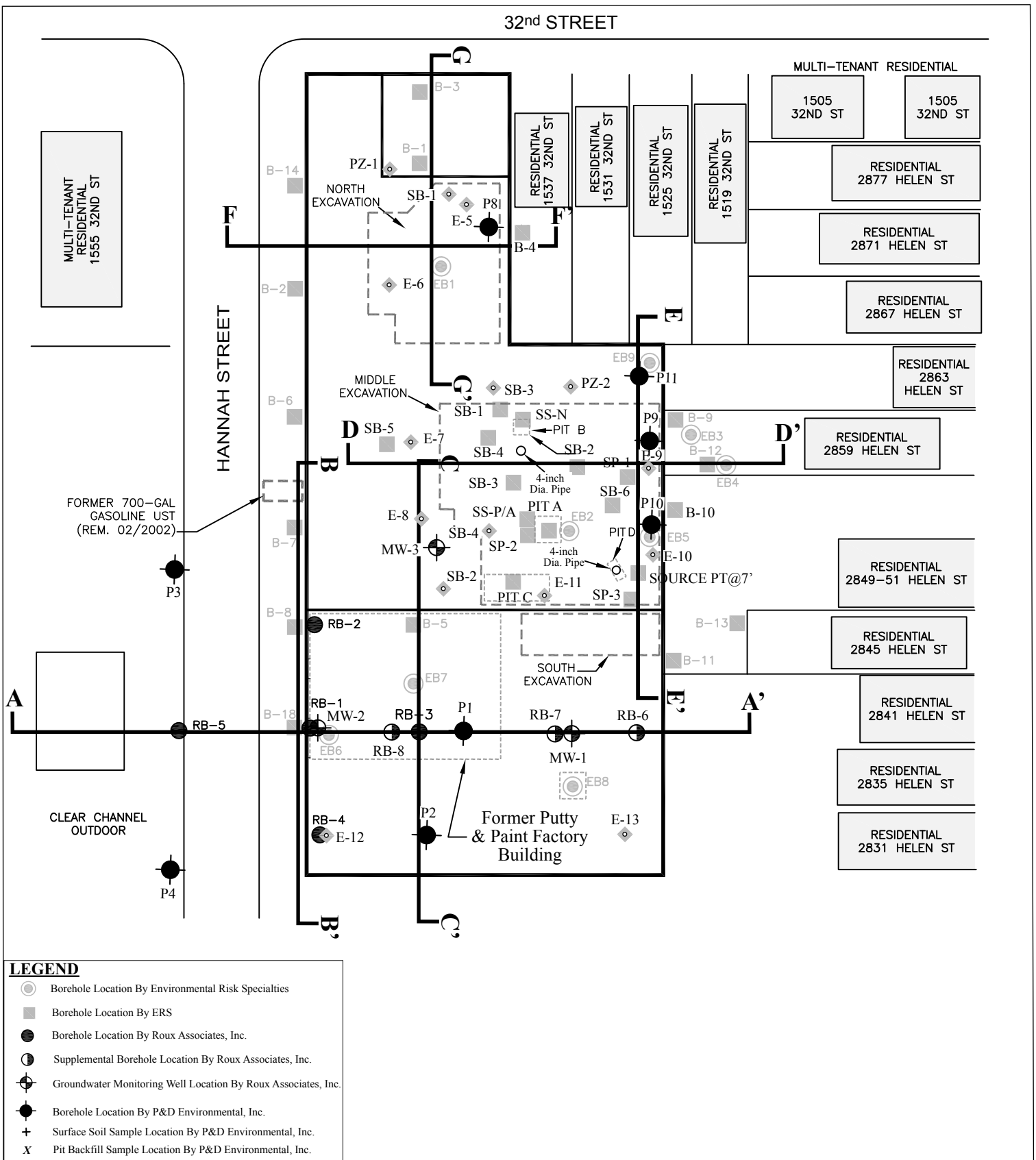
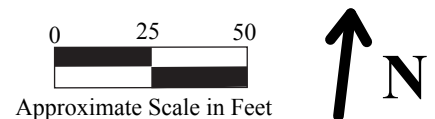


Figure 2
 Site Map Showing Geologic Cross Section Locations
 2868 Hannah Street
 Oakland, California

Basemap from:
 Roux Associates, Inc., dated October 23, 2015

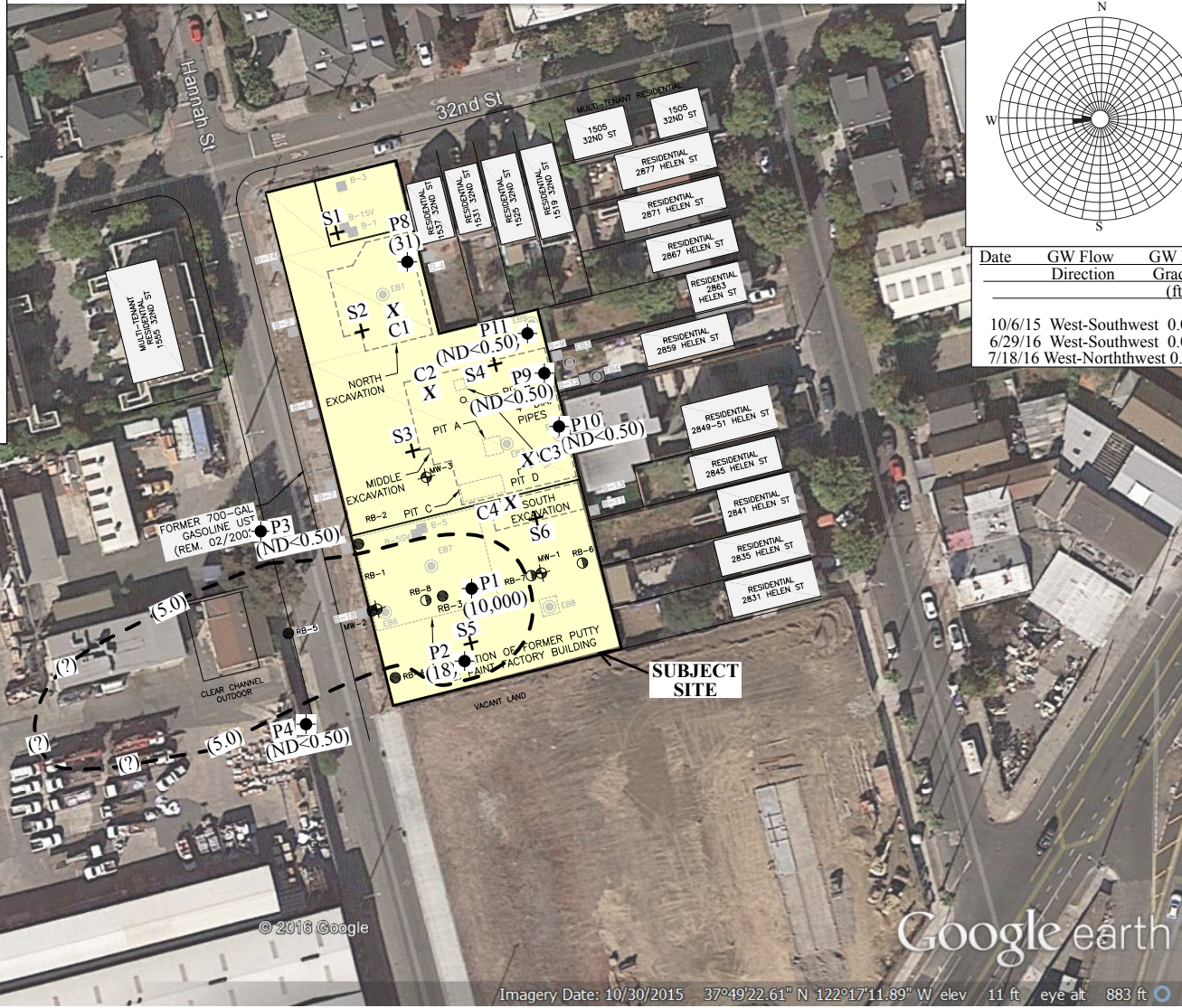
P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610



LEGEND

- Borehole Location By Environmental Risk Specialties
 - Borehole Location By ERS
 - Borehole Location By Roux Associates, Inc.
 - ◐ Supplemental Borehole Location By Roux Associates, Inc.
 - ⊕ Groundwater Monitoring Well Location By Roux Associates, Inc.
 - Borehole Location By P&D Environmental, Inc.
 - + Surface Soil Sample Location By P&D Environmental, Inc.
 - X Pit Backfill Sample Location By P&D Environmental, Inc.
- (10,000) PCE Groundwater Concentration (ug/L)
- (ND) Not Detected
- PCE Groundwater Isoconcentration Contour (5.0 ug/L)

Note: RB- and P-series samples are groundwater grab samples, which can result in elevated concentrations based on sediments in the water samples.



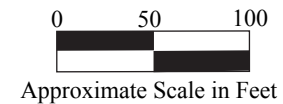
2868 Hannah Street
GROUNDWATER
FLOW DIRECTIONS
October 6, 2015 Through July 18, 2016

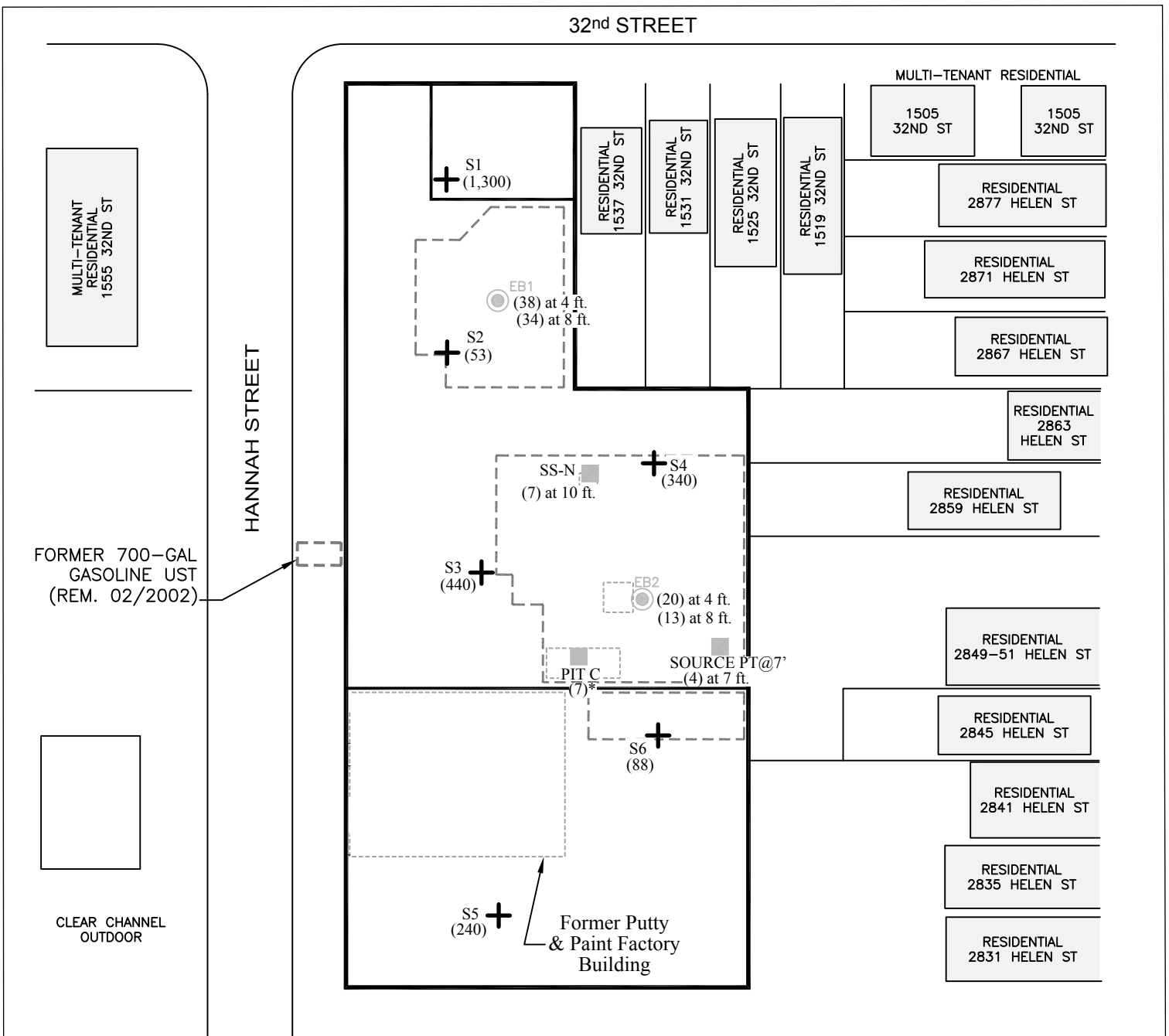
Date	GW Flow Direction	GW Flow Gradient (ft/ft)
10/6/15	West-Southwest	0.009
6/29/16	West-Southwest	0.009
7/18/16	West-Northwest	0.011

Figure 3
Site Vicinity Aerial Photograph Detail Showing PCE in Groundwater
2868 Hannah Street
Oakland, California

Base Map from:
Roux Associates, Inc., dated October 23, 2015,
and Google Earth, image dated October 2015

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





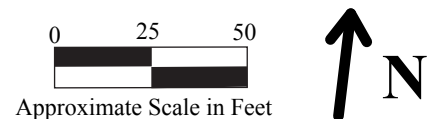
LEGEND

- Borehole Location By Environmental Risk Specialties
 - Borehole Location By ERS
 - ⊕ Surface Soil Sample Location By P&D Environmental, Inc.
- (1,300) Lead Soil Concentration (mg/kg)
- * Collection Depth Unknown
- Note: All Sample Collection Depths Are Given in Feet, Except PIT C Which Is Unknown, And S1-S6 Which Are Surface Samples

Figure 4
 Site Map Showing Lead Concentrations in Soil
 2868 Hannah Street
 Oakland, California

Basemap from:
 Roux Associates, Inc., dated October 23, 2015

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



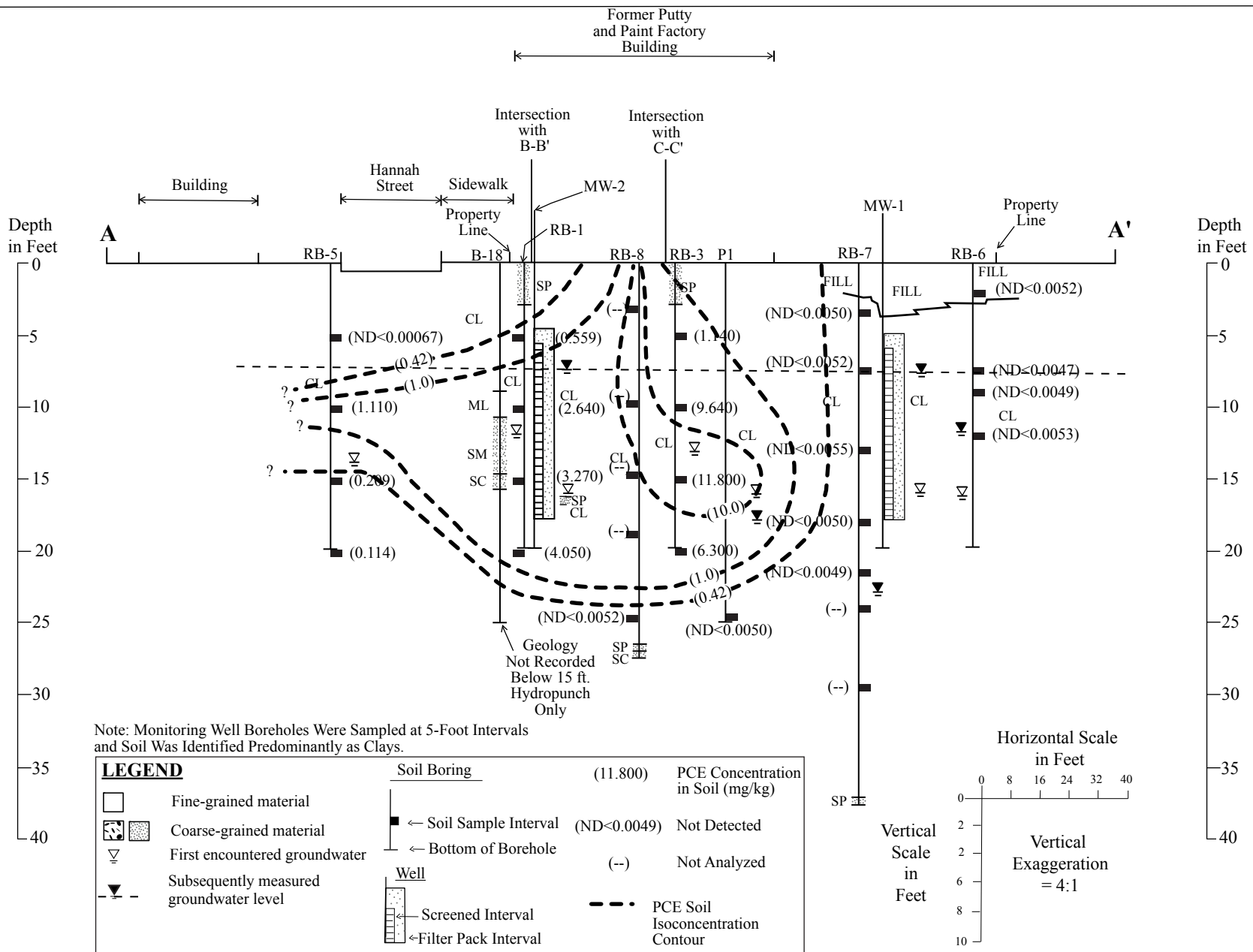
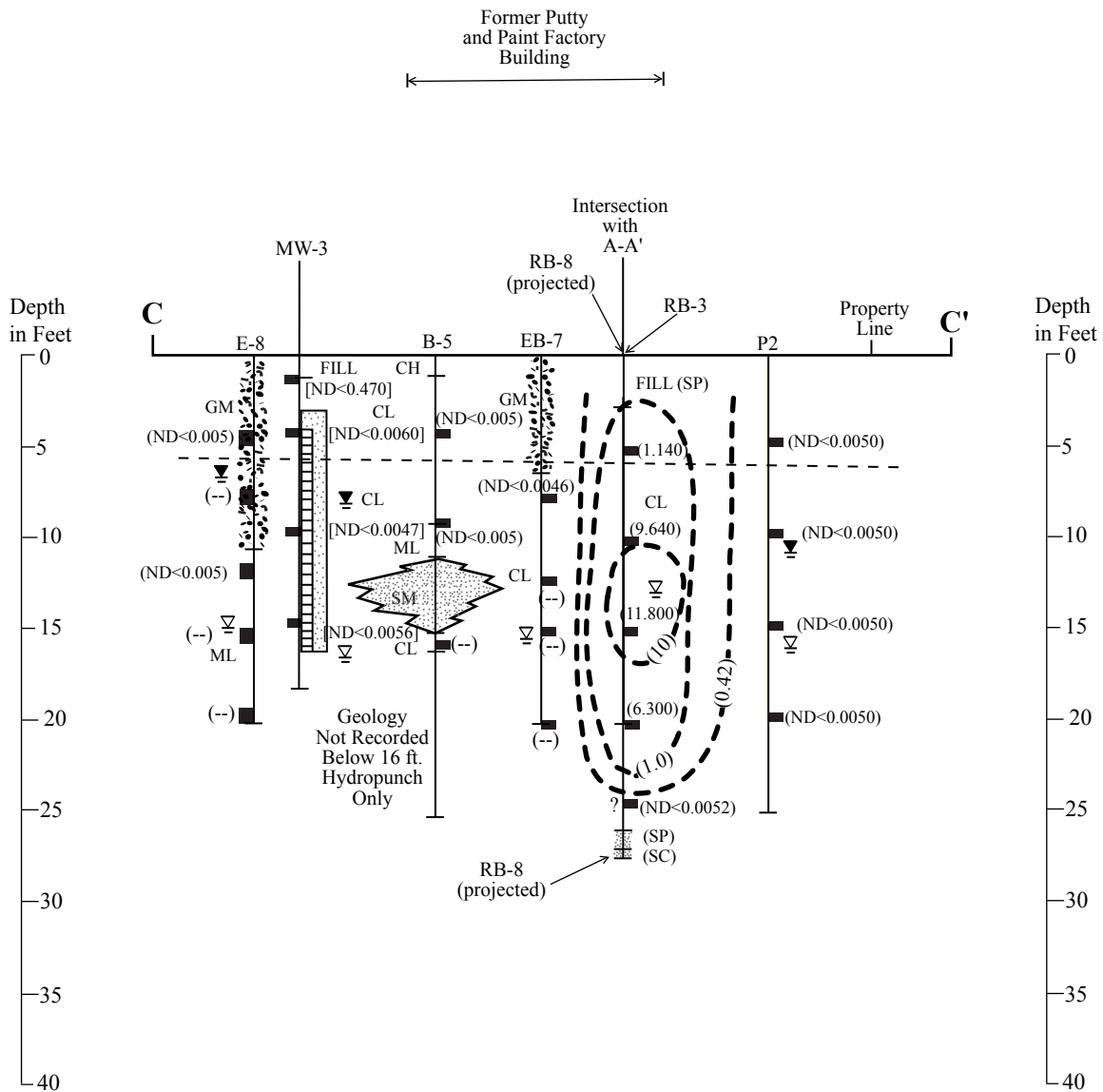


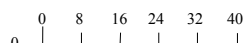
Figure 5
 Geologic Cross Section A-A' Showing PCE in Soil
 2868 Hannah Street
 Oakland, California



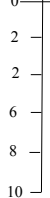
Note: Monitoring Well Boreholes Were Sampled at 5-Foot Intervals and Showed Predominantly clays.

LEGEND		Soil Boring	(11.800)	PCE Concentration in Soil (mg/kg)	
	Fine-grained material		← Soil Sample Interval	(ND<0.0049) Not Detected	
	Coarse-grained material		← Bottom of Borehole	(--) Not Analyzed	
	First encountered groundwater		← Screened Interval		
	Subsequently measured groundwater level		← Filter Pack Interval		
					PCE Soil Isoconcentration Contour

Horizontal Scale in Feet



Vertical Scale in Feet



Vertical Exaggeration = 4:1

Figure 6
Geologic Cross Section C-C' Showing PCE in Soil
2868 Hannah Street
Oakland, California

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

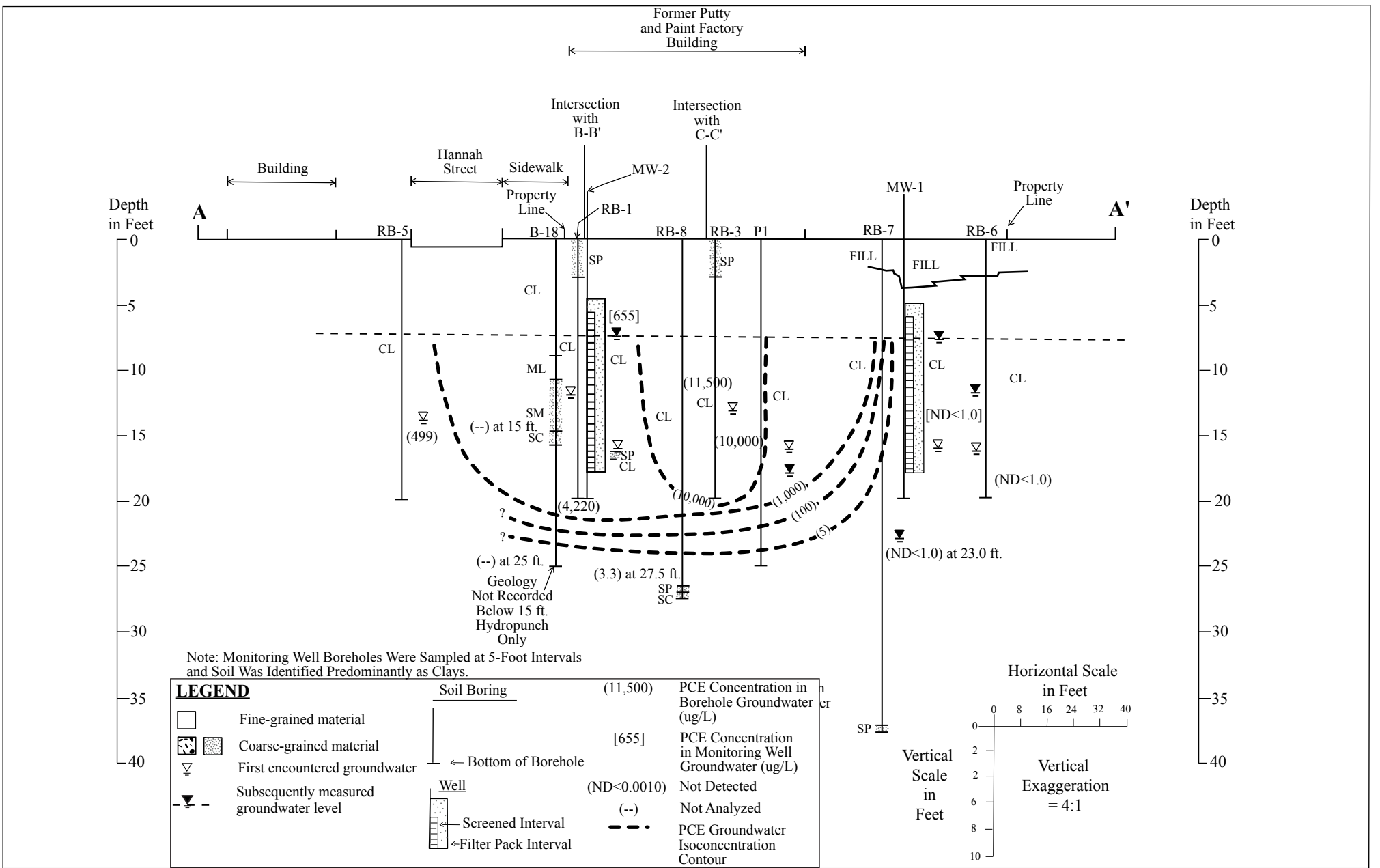
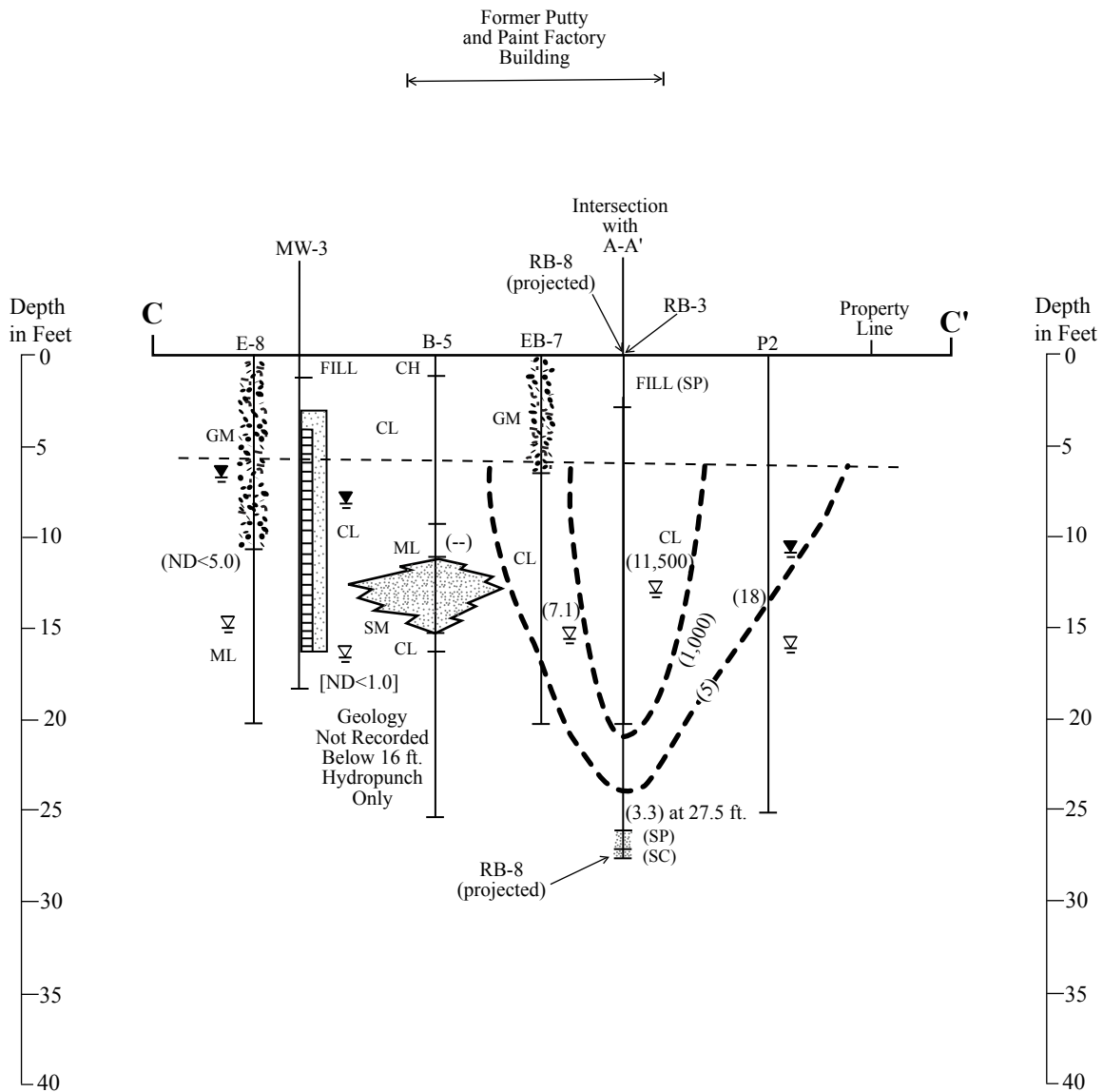


Figure 7
Geologic Cross Section A-A' Showing PCE in Groundwater
2868 Hannah Street
Oakland, California

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



Note: Monitoring Well Boreholes Were Sampled at 5-Foot Intervals and Soil Was Identified Predominantly as Clays.

LEGEND		Soil Boring	(11,500)	PCE Concentration in Borehole Groundwater (ug/L)
	Fine-grained material		[655]	PCE Concentration in Monitoring Well Groundwater (ug/L)
	Coarse-grained material		(ND<0.0010)	Not Detected
	First encountered groundwater	← Bottom of Borehole	(--)	Not Analyzed
	Subsequently measured groundwater level	Well	- - -	PCE Groundwater Isoconcentration Contour
		← Screened Interval		
		← Filter Pack Interval		

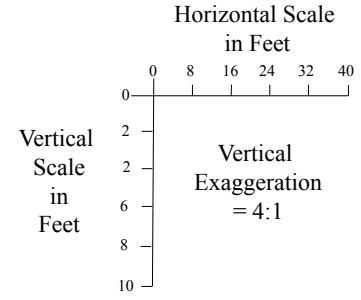


Figure 8
Geologic Cross Section C-C' Showing PCE in Groundwater
2868 Hannah Street
Oakland, California

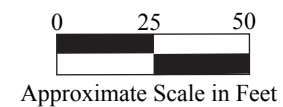
P&D Environmental, Inc.
 55 Santa Clara Ave., Suite 240
 Oakland, CA 94610



Figure 9
Site Vicinity Aerial Photograph Showing Upgradient PCE-Impacted Site Location
2868 Hannah Street
Oakland, California

Base Map from:
Roux Associates, Inc., dated October 23, 2015,
and Google Earth, image dated October 2015

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



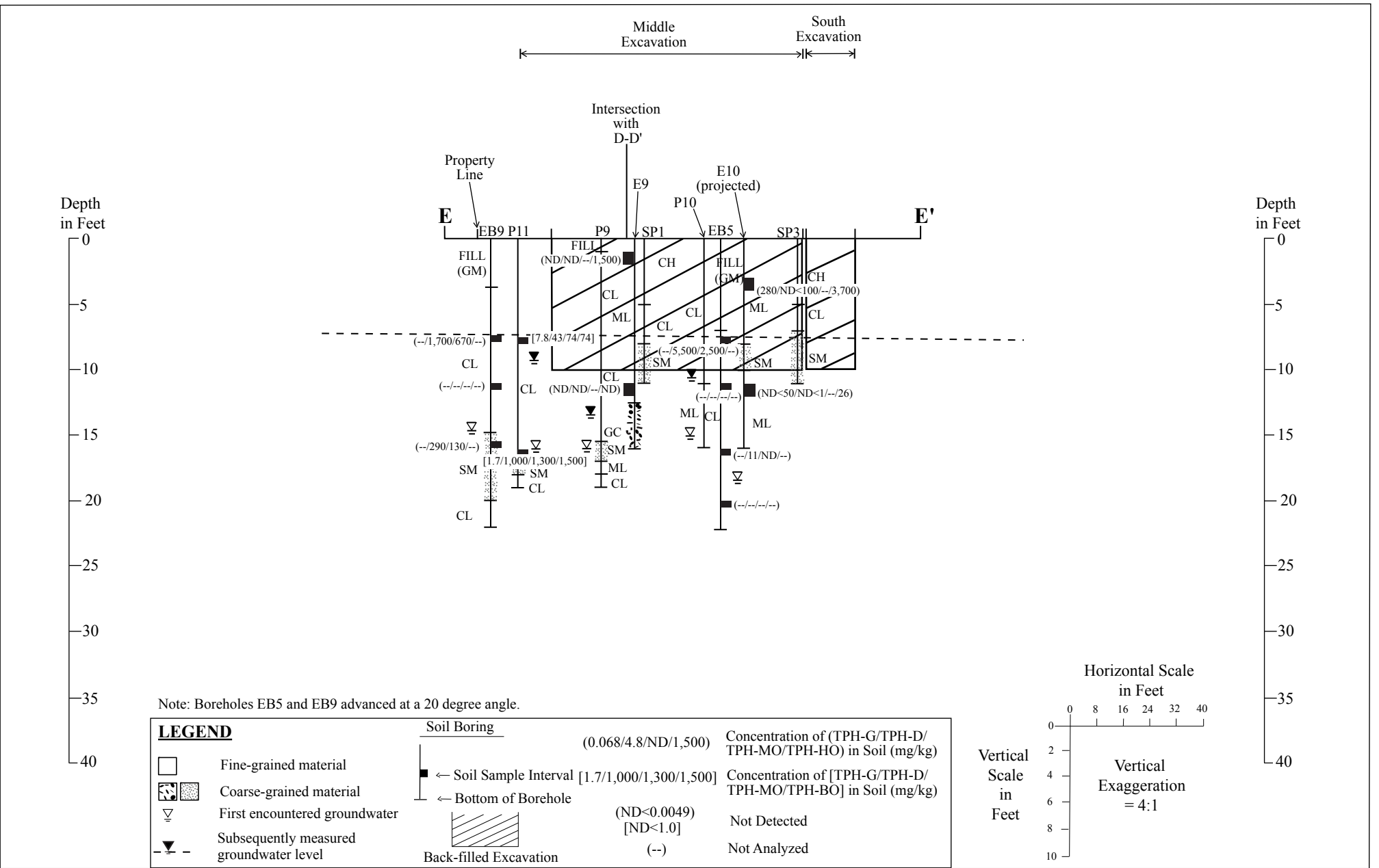


Figure 10
Geologic Cross Section E-E' Showing TPH in Soil
2868 Hannah Street
Oakland, California

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

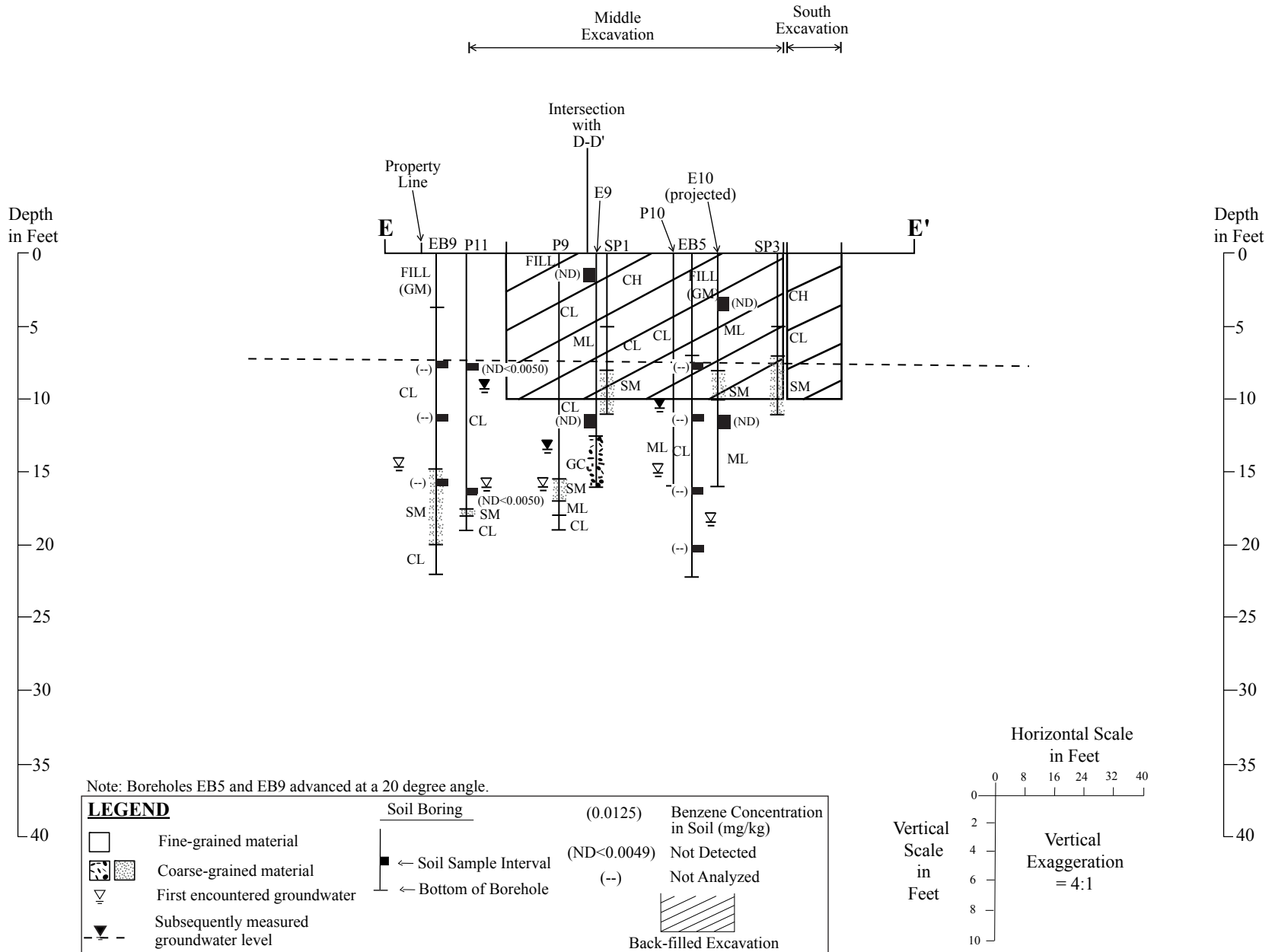


Figure 11
Geologic Cross Section E-E' Showing Benzene in Soil
2868 Hannah Street
Oakland, California

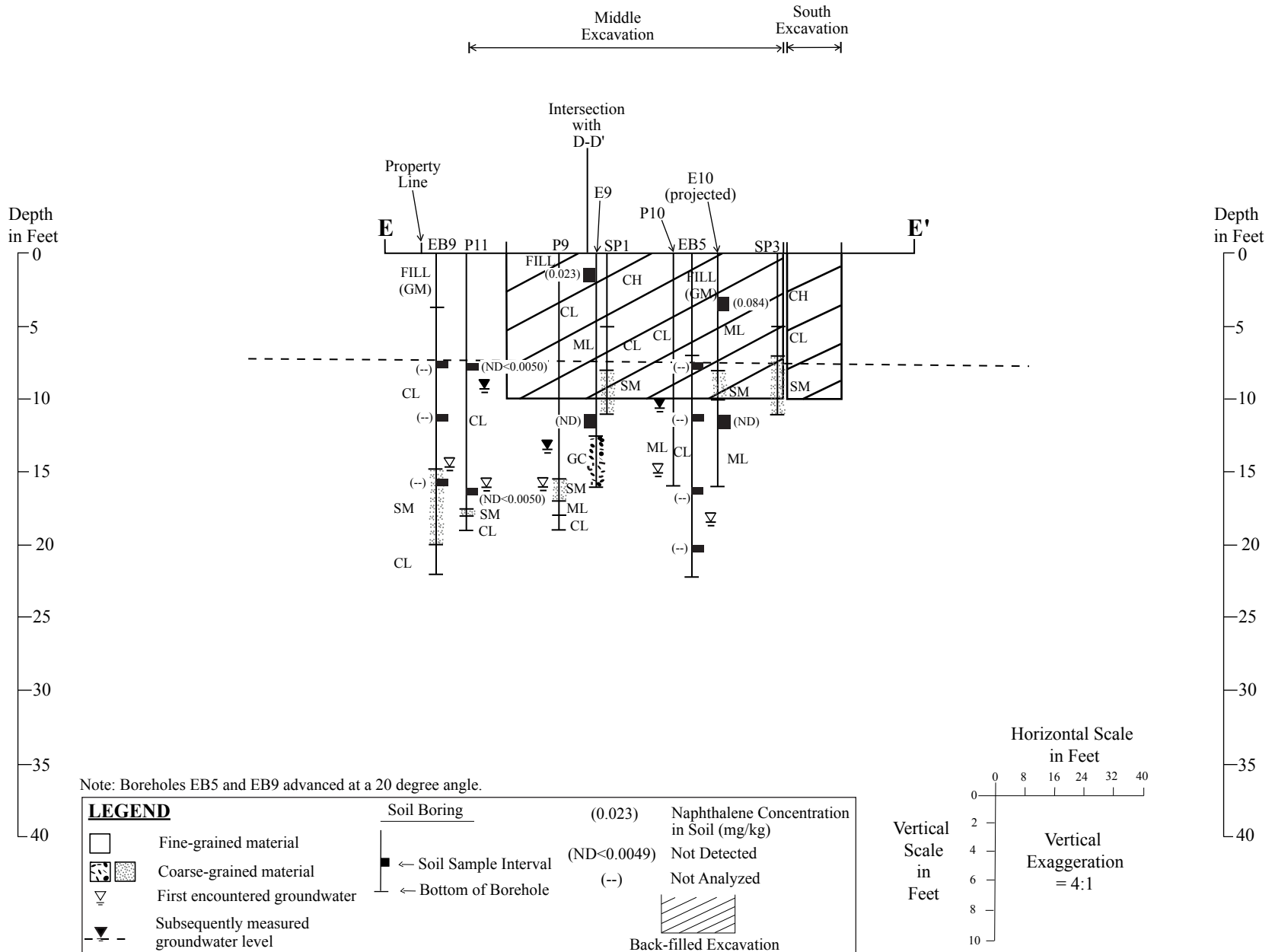


Figure 12
 Geologic Cross Section E-E' Showing Naphthalene in Soil
 2868 Hannah Street
 Oakland, California

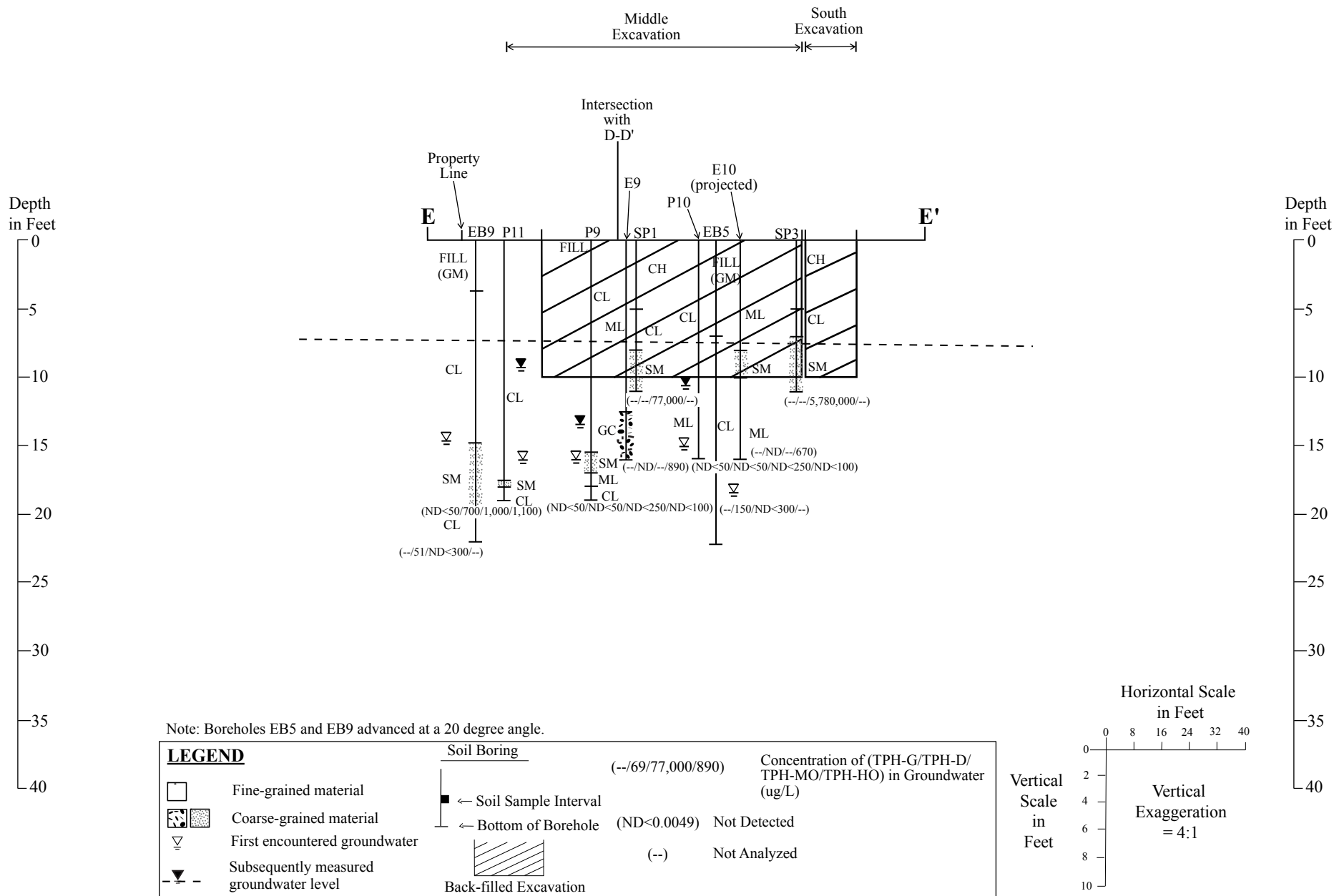


Figure 13
Geologic Cross Section E-E' Showing TPH in Groundwater
2868 Hannah Street
Oakland, California

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

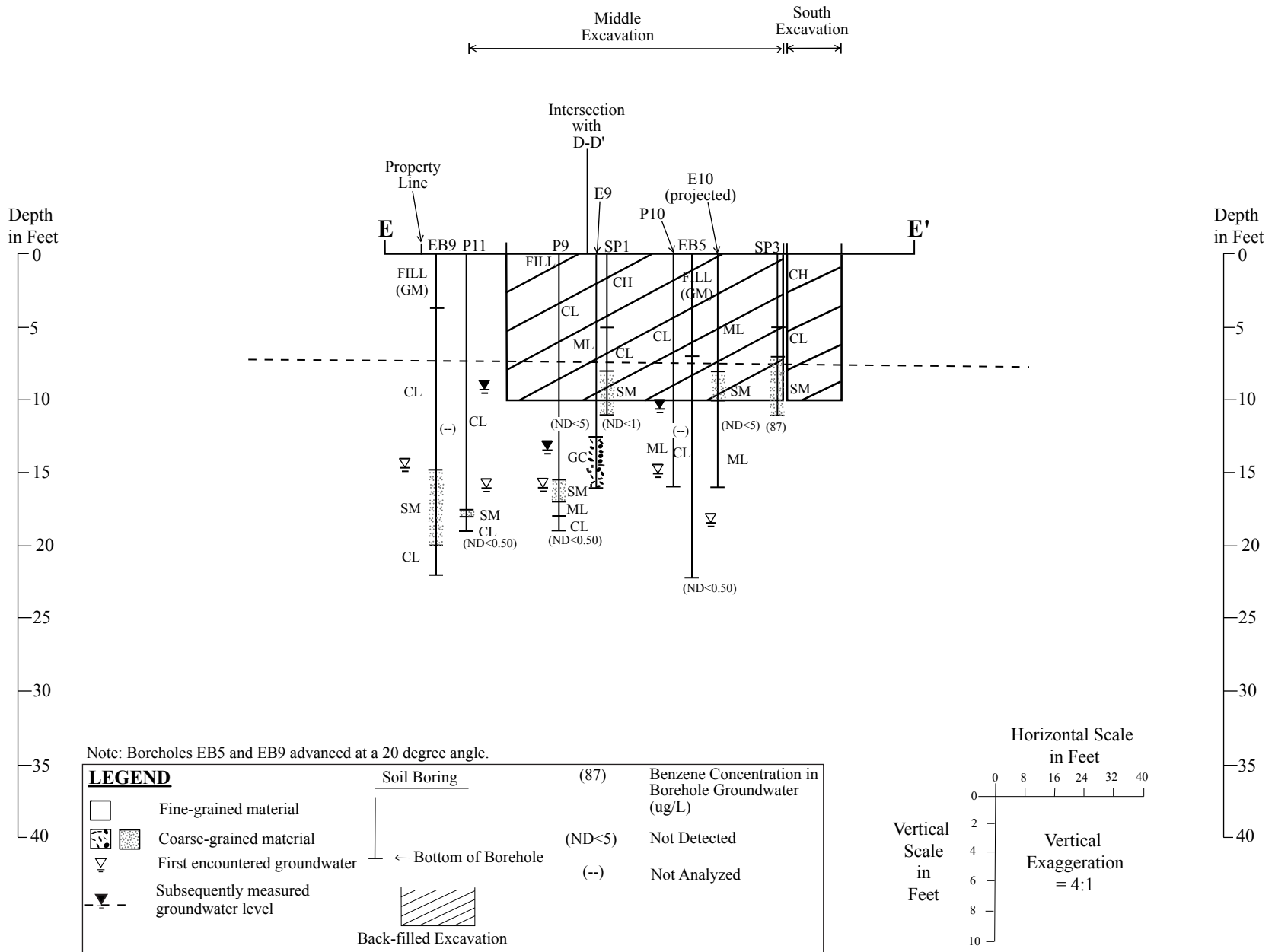


Figure 14
 Geologic Cross Section E-E' Showing Benzene in Groundwater
 2868 Hannah Street
 Oakland, California

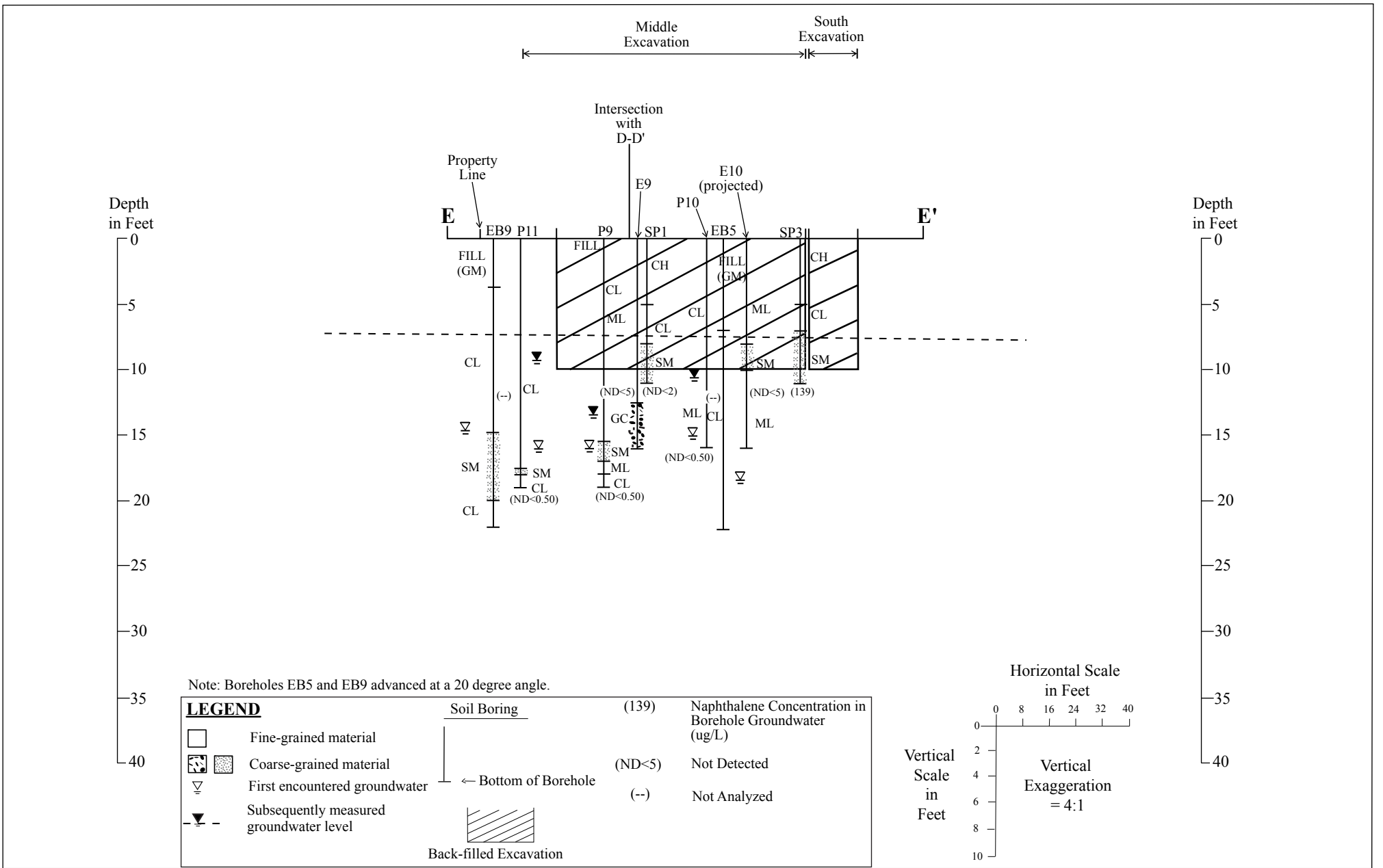
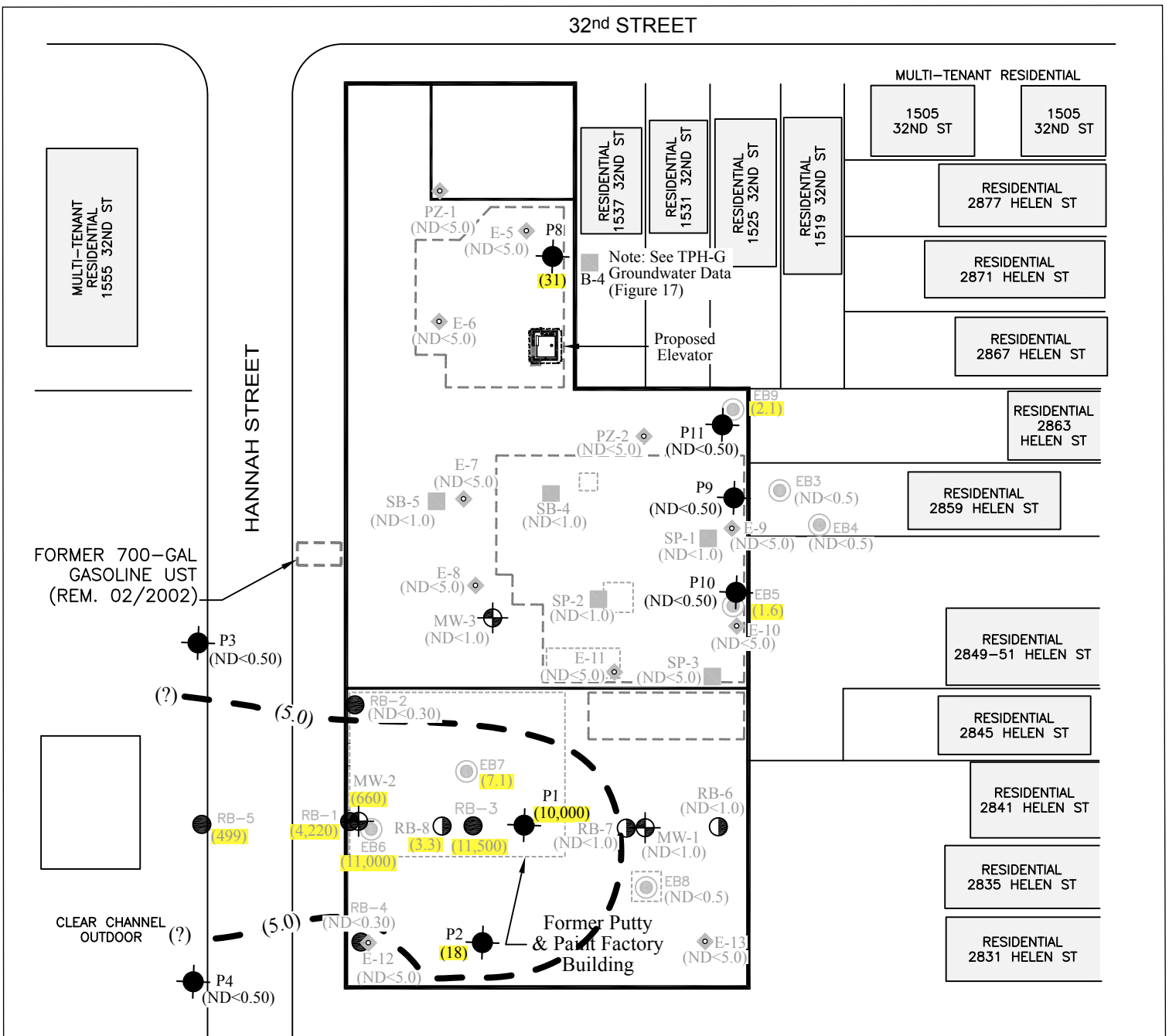


Figure 15
Geologic Cross Section E-E' Showing Naphthalene in Groundwater
2868 Hannah Street
Oakland, California

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

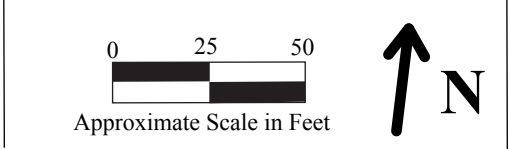


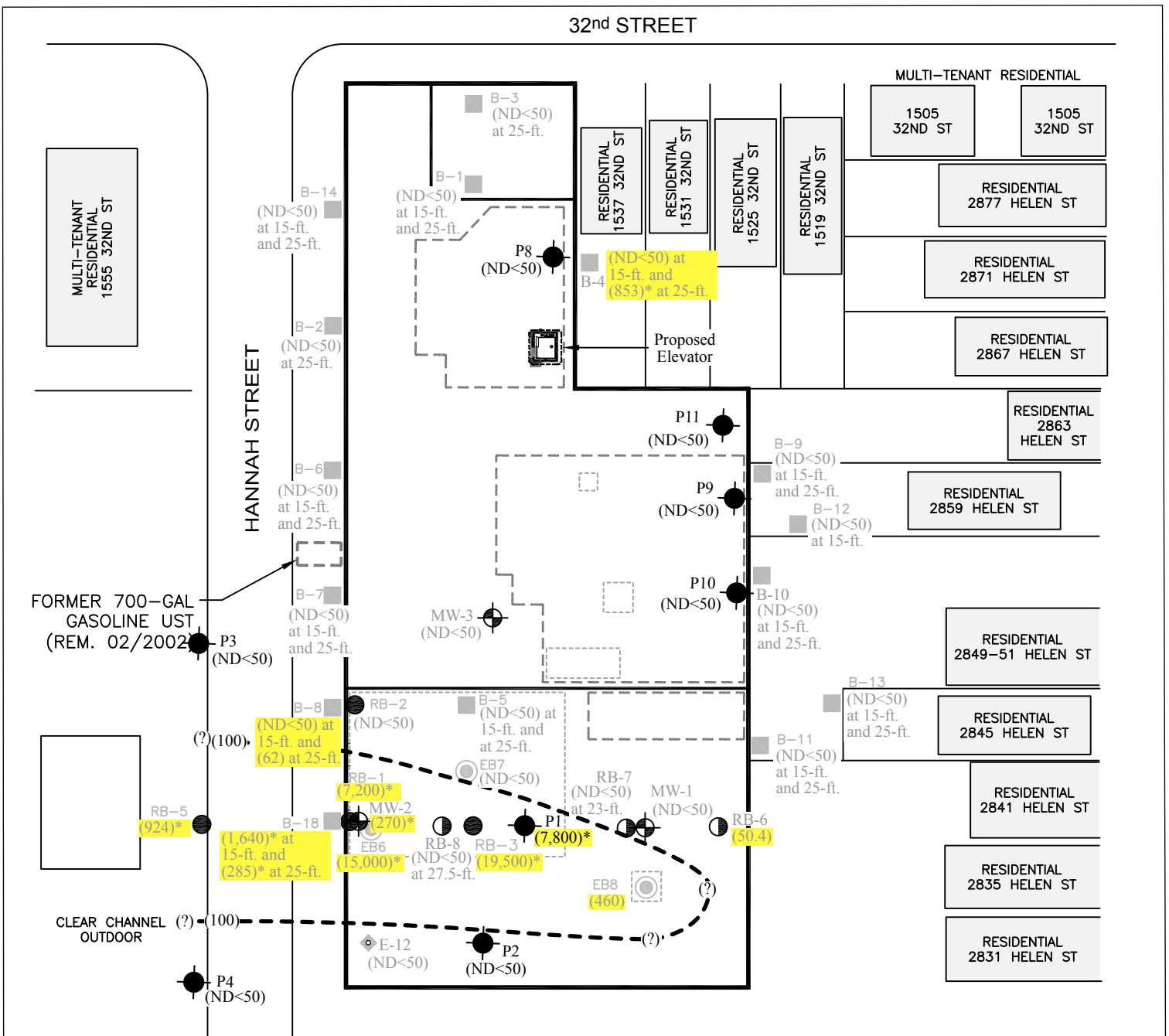
LEGEND	
	Borehole Location By Environmental Risk Specialties
	Borehole Location By ERS
	Borehole Location By ERAS Environmental, Inc.
	Borehole Location By Roux Associates, Inc.
	Supplemental Borehole Location By Roux Associates, Inc.
	Groundwater Monitoring Well Location By Roux Associates, Inc.
	Borehole Location By P&D Environmental, Inc.
(11,500)	PCE Concentration in Groundwater (ug/L)
(ND)	Not Detected
---	PCE Groundwater Isoconcentration Contour
Note: RB samples are groundwater grab samples, which can result in elevated concentrations based on sediments in the water samples.	
RWQCB February 2016 (Revision 3)	
Tier 1 ESL for PCE in groundwater = 3.0 ug/L	

Figure 16
Site Map Showing PCE Concentrations in Groundwater
2868 Hannah Street
Oakland, California

Basemap from:
 Roux Associates, Inc., dated October 23, 2015

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



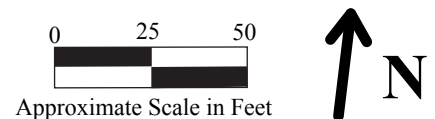


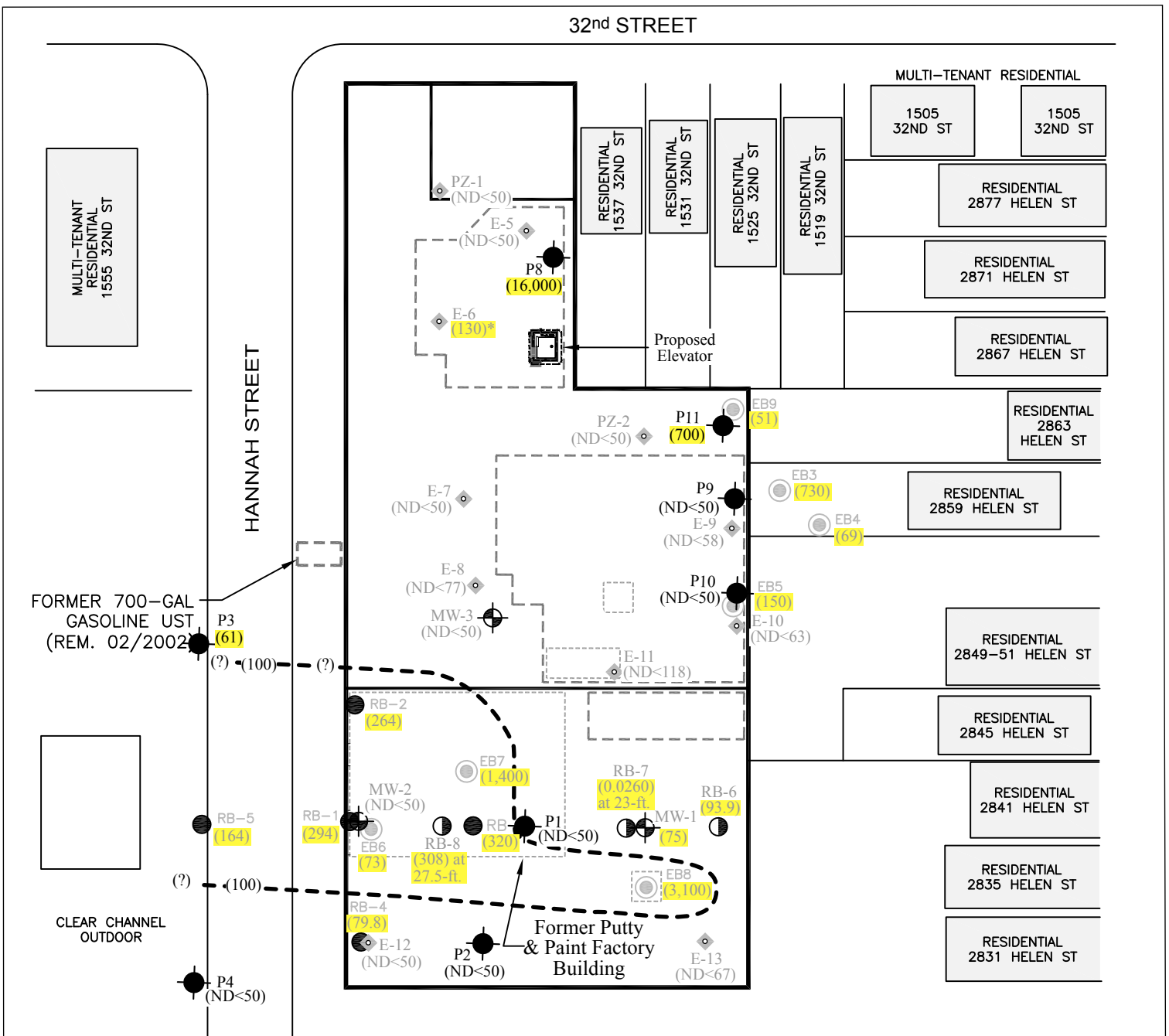
LEGEND	
	Borehole Location By Environmental Risk Specialties
	Borehole Location By ERS
	Borehole Location By ERAS Environmental, Inc.
	Borehole Location By Roux Associates, Inc.
	Supplemental Borehole Location By Roux Associates, Inc.
	Groundwater Monitoring Well Location By Roux Associates, Inc.
	Borehole Location By P&D Environmental, Inc.
	(19,500) TPH-G Concentration in Groundwater (ug/L)
	(ND) Not Detected
	* Sample exhibits atypical pattern.
	- - - - TPH-G Groundwater Isoconcentration Contour
	Note: RB samples are groundwater grab samples, which can result in elevated concentrations based on sediments in the water samples.
	RWQCB February 2016 (Revision 3)
	Tier 1 ESL for TPH-G in groundwater = 100 ug/L

Figure 17
Site Map Showing TPH-G Concentrations in Groundwater
2868 Hannah Street
Oakland, California

Basemap from:
 Roux Associates, Inc., dated October 23, 2015

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





LEGEND

- Borehole Location By Environmental Risk Specialties
- Borehole Location By ERS
- ◇ Borehole Location By ERAS Environmental, Inc.
- Borehole Location By Roux Associates, Inc.
- ◐ Supplemental Borehole Location By Roux Associates, Inc.
- ⊕ Groundwater Monitoring Well Location By Roux Associates, Inc.
- Borehole Location By P&D Environmental, Inc.

(3,100) TPH-D Groundwater Concentration (ug/L)

(ND) Not Detected

--- TPH-D Groundwater Isoconcentration Contour

* Sample Collected Pre-Excavation.

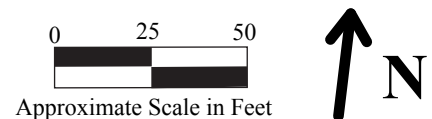
Note: RB samples are groundwater grab samples, which can result in elevated concentrations based on sediments in the water samples.

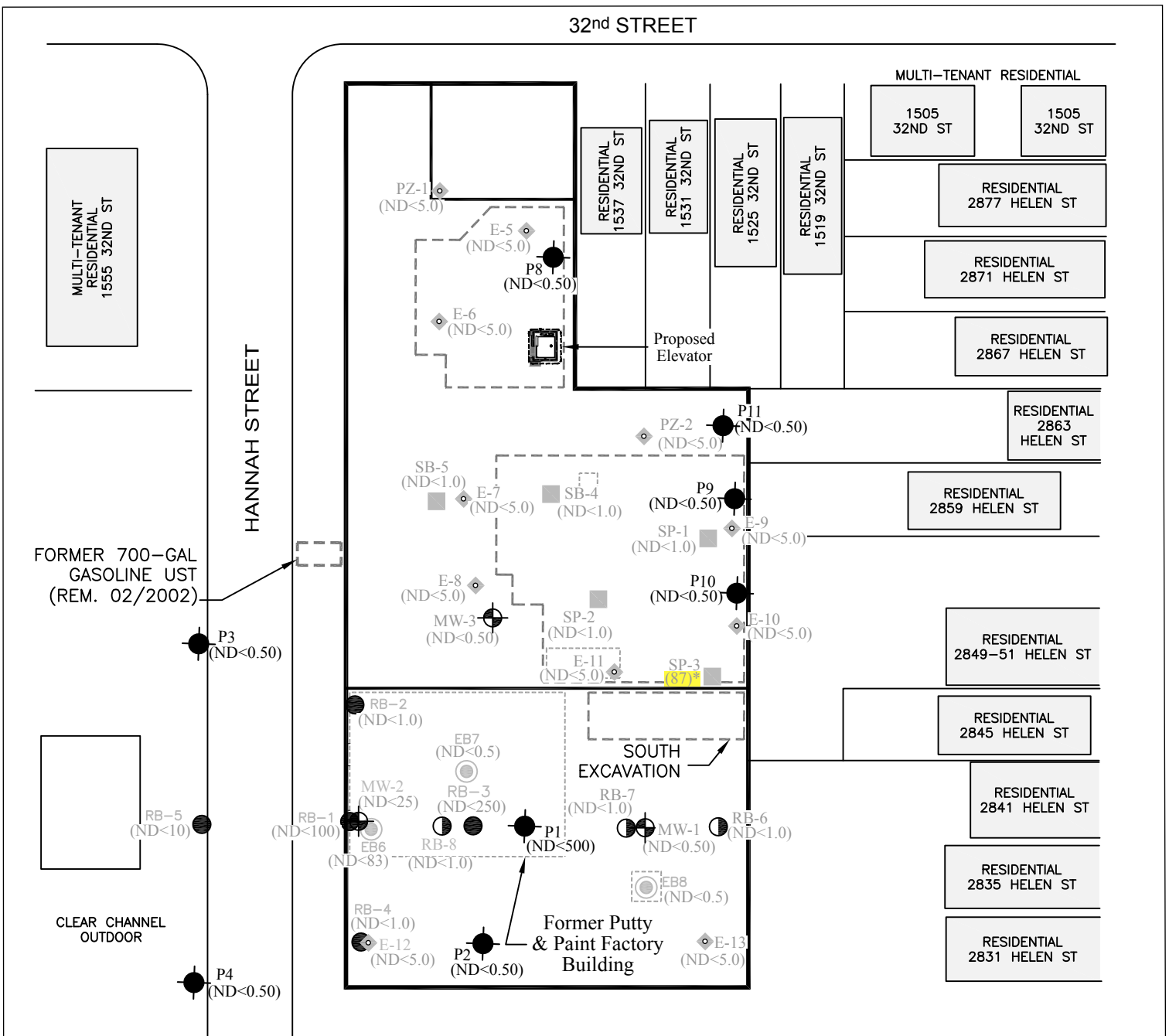
RWQCB February 2016 (Revision 3)
Tier 1 ESL for TPH-D in groundwater = 100 ug/L

Figure 18
Site Map Showing TPH-D Concentrations in Groundwater
2868 Hannah Street
Oakland, California

Basemap from:
 Roux Associates, Inc., dated October 23, 2015

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



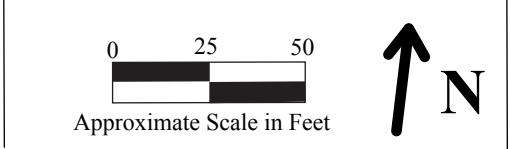


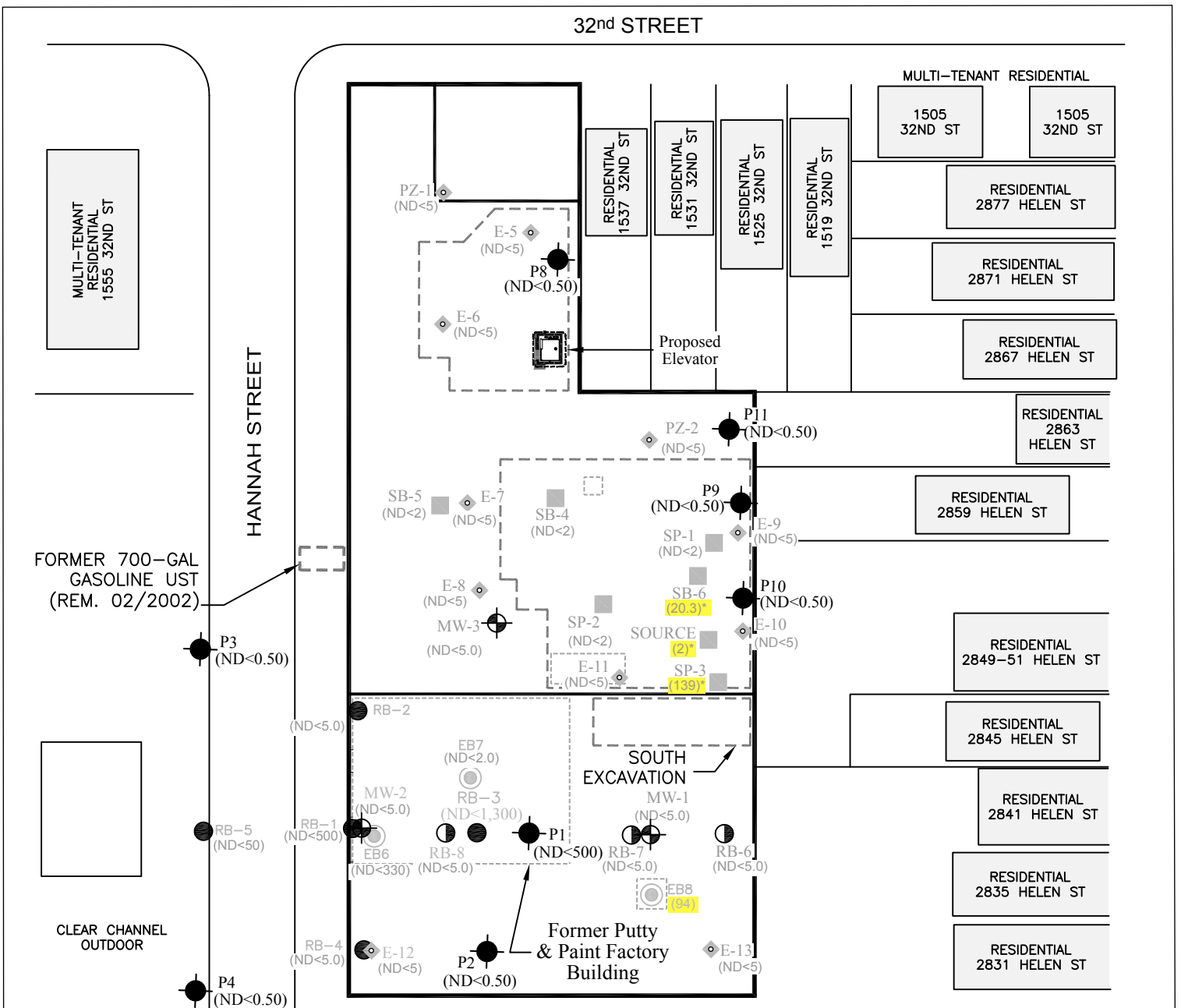
LEGEND	
	Borehole Location By Environmental Risk Specialties
	Borehole Location By ERS
	Borehole Location By ERAS Environmental, Inc.
	Borehole Location By Roux Associates, Inc.
	Supplemental Borehole Location By Roux Associates, Inc.
	Groundwater Monitoring Well Location By Roux Associates, Inc.
	Borehole Location By P&D Environmental, Inc.
(87)	Benzene Concentration in Groundwater (ug/L)
(ND<1.0)	Not Detected
*	Sample Collected Pre-Excavation.
RWQCB February 2016 (Revision 3) Tier 1 ESL for Benzene in groundwater = 1.0 ug/L	

Figure 19
Site Map Showing Benzene Concentrations in Groundwater
2868 Hannah Street
Oakland, California

Basemap from:
 Roux Associates, Inc., dated October 23, 2015

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





LEGEND

- Borehole Location By Environmental Risk Specialties
- ◆ Borehole Location By ERAS Environmental, Inc.
- Borehole Location By Roux Associates, Inc.
- Borehole Location By ERS
- Supplemental Borehole Location By Roux Associates, Inc.
- ⊕ Groundwater Monitoring Well Location By Roux Associates, Inc.

(139) Naphthalene Concentration in Groundwater (ug/L)

(ND<5.0) Not Detected

* Sample Collected Pre-Excavation.

Note: Sample Collected From Borehole Was a Free Product Sample.

RWQCB February 2016 (Revision 3)

Tier 1 ESL for Naphthalene in soil = 0.17 ug/L;

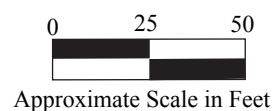
Table GW-3 ESL for Naphthalene (sand scenario; residential land use) = 20 ug/L

Note: ERS report dated 12/14/05 states that the groundwater samples collected from boreholes B-1, B-2, B-4, B-5, and B-10 were analyzed for VOC's by EPA 8260, but no naphthalene results reported. Also, the Environmental Risk Specialties 10/16/08 report tables say EB-3 through EB-9 says all VOCs were not detected, but no lab results were included with the report.

Figure 20
Site Map Showing Naphthalene Concentrations in Groundwater
2868 Hannah Street
Oakland, California

Basemap from:
Roux Associates, Inc., dated October 23, 2015

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



APPENDIX A

Boring Logs


P&D ENVIRONMENTAL, INC.

BORING NO.: P1		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approximately 250 ft. north and 60 ft. east of southwest corner of property				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Juan		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 6620 DT Track Rig				12/13/16 1400	12/16/16 0830	
COMPLETION DEPTH: 25.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 16.0 Feet		NO. OF SAMPLES: 1 Soil, 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 4.5 ft. Olive-gray gravelly sandy clay (CL); medium stiff, moist, with few coarse angular gravel to 0.5-inch diameter. No Petroleum Hydrocarbon (PHC) or solvent odors. (10,15,75)			No Well Constructed	0	Borehole continuously cored from 0.0 to 25.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.
5	4.5 to 6.0 ft. Black clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)				0	Water encountered during drilling at 16.0 ft. at 1415.
10	6.0 to 13.0 ft. Olive-gray silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)				0	0-4 ft. 2.8 ft. recovery 4-8 ft. 3.4 ft. recovery 8-12 ft. 3.8 ft. recovery 12-16 ft. 3.8 ft. recovery 16-19 ft. 1.0 ft. recovery 19-20 ft. 1.0 ft. recovery 20-24 ft. 3.8 ft. recovery 24-25 ft. 1.0 ft. recovery Expansive clays from 13.0 to 25.0 ft.
15	13.0 to 24.0 ft. Brown silty clay (CL); medium stiff to soft, moist to saturated, with gray and black mottling. No PHC or solvent odors. (0,0,100) Wet at 15.5 ft. Saturated at 16.0 ft.	CL			0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole at 19.0 ft. Water level was measured at 18.3 ft. at 1430 and at 17.8 ft. at 1440. Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P1-W collected at 1450 directly from the discharge tubing. No odor or sheen on sample.
20					0	Water level was subsequently measured at 18.4 ft. at 1516. Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe.
25	24.0 to 25.0 ft. Bluish-gray silty clay (CL); medium stiff, wet. No PHC or solvent odors. (0,0,100)	X	P1-24.5		0	Mr. Marcelino Vialpando with Alameda County Public Works Agency gave verbal authorization to grout the borehole prior to his arrival.
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.: P2		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approximately 15 ft. north and 45 ft. east of southwest corner of property				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Juan		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 6620 DT Track Rig				12/13/16 1430	12/16/16 0840	
COMPLETION DEPTH: 25.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 16.0 Feet		NO. OF SAMPLES: 5 Soil, 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 4.0 ft. Black clay (CL); medium stiff, moist. No Petroleum Hydrocarbon (PHC) or solvent odors. (0,0,100)			No Well Constructed	0	Borehole continuously cored from 0.0 to 25.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.
5		X P2-4.5			0	Water encountered during drilling at 16.0 ft. at 1445.
	4.0 to 12.0 ft. Olive-gray silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)				0	0-4 ft. 1.0 ft. recovery 4-8 ft. 3.1 ft. recovery 8-12 ft. 3.8 ft. recovery 12-16 ft. 3.8 ft. recovery 16-19 ft. 3.8 ft. recovery 19-21 ft. 2.5 ft. recovery 21-24 ft. 3.6 ft. recovery 24-25 ft. 1.0 ft. recovery
10		X P2-9.5		▼	0	Expansive clays from 12.0 to 25.0 ft.
	12.0 to 22.0 ft. Brown silty clay (CL); medium stiff to soft, moist to saturated, with orange and black mottling. No PHC or solvent odors. (0,0,100)	CL			0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole at 19.0 ft. Water level was measured at 16.9 ft. at 1505 and at 14.2 ft. at 1515.
15		X P2-14.5		▽	0	Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P2-W collected at 1545 directly from the discharge tubing. No odor or sheen on sample.
20		X P2-19.5			0	Water level was subsequently measured at 10.8 ft. at 1601.
	22.0 to 24.0 ft. Brown clayey gravelly sand (SC); medium dense, wet, some coarse angular gravel to 0.5-inch diameter. No PHC or solvent odors. (20,65,15)	SC			0	Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe.
25		X P2-24.5			0	Mr. Marcelino Vialpando with Alameda County Public Works Agency gave verbal authorization to grout the borehole prior to his arrival.
	24.0 to 25.0 ft. Bluish-gray silty clay (CL); medium stiff, wet. No PHC or solvent odors. (0,0,100)	CL				<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						


P&D ENVIRONMENTAL, INC.


BORING NO.: P3		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approx. 1 ft. east of curb on west side of Hannah Street 200 ft. south from 32nd Street ELEVATION AND DATUM: None						
DRILLING AGENCY: Cascade Drilling		DRILLER: Jimmy		DATE & TIME STARTED: 12/14/16 1430	DATE & TIME FINISHED: 12/14/16 1630	
DRILLING EQUIPMENT: 6620 DT Track Rig				LOGGED BY: MLBD	CHECKED BY: 	
COMPLETION DEPTH: 19.0 Feet		BEDROCK DEPTH: Not Encountered				
FIRST WATER DEPTH: 16.0 Feet		NO. OF SAMPLES: 1 Soil, 1 Water				
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 0.5 ft. Asphalt and base rock.	FILL		No Well Constructed	0	Borehole hand augered from 0.0 to 5.0 ft. using 3.0-inch O.D. hand auger. Borehole continuously cored from 5.0 to 19.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.
5	0.5 to 5.0 ft. Black clay (CL); medium stiff, moist. No Petroleum Hydrocarbon (PHC) or solvent odors. (0,0,100) Color change to dark gray from 4.0 to 5.0 ft.				0	
	5.0 to 9.0 ft. Bluish-gray silty clay (CL); medium stiff, moist. Slight unidentifiable chemical odor from 7.0 to 7.5 ft. (0,0,100)	X P3-7.0			4.9 1.2	Water encountered during drilling at 16.0 ft. at 1520. 5-8 ft. 3.8 ft. recovery 8-12 ft. 3.8 ft. recovery 12-16 ft. 3.8 ft. recovery 16-19 ft. 3.8 ft. recovery
10	9.0 to 11.5 ft. Olive-brown silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)				0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 9.3 ft. at 1550 and at 5.1 ft. at 1600.
15	11.5 to 19.0 ft. Brown silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100) Increase in sand content from 14.0 to 14.5 ft. Wet at 15.5 ft. Saturated at 16.0 ft. Color change to olive-brown from 18.0 to 19.0 ft.	CL			0	Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P3-W collected at 1645 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 15.8 ft. at 1722.
20						Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe. Mr. Marcelino Vialpando with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
25						<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						

P&D ENVIRONMENTAL, INC.

BORING NO.: P4		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approx. 1 ft. east of curb on west side of Hannah Street 315 ft. south from 32nd Street ELEVATION AND DATUM: None						
DRILLING AGENCY: Cascade Drilling		DRILLER: Jimmy		DATE & TIME STARTED: 12/14/16 1600	DATE & TIME FINISHED: 12/14/16 1615	
DRILLING EQUIPMENT: 6620 DT Track Rig		COMPLETION DEPTH: 19.0 Feet		LOGGED BY: MLBD	CHECKED BY: 	
FIRST WATER DEPTH: 16.0 Feet		BEDROCK DEPTH: Not Encountered				
NO. OF SAMPLES: 1 Water						
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 0.5 ft. Asphalt and base rock.	FILL		No Well Constructed	0	Borehole hand augered from 0.0 to 5.0 ft. using 3.0-inch O.D. hand auger. Borehole continuously cored from 5.0 to 19.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.
5	0.5 to 4.0 ft. Black clay (CL); medium stiff, moist. No Petroleum Hydrocarbon (PHC) or solvent odors. (0,0,100)	CL		▼	0	Water encountered during drilling at 16.0 ft. at 1645. 5-8 ft. 3.2 ft. recovery 8-12 ft. 3.8 ft. recovery 12-16 ft. 3.8 ft. recovery 16-19 ft. 3.6 ft. recovery
	4.0 to 6.0 ft. Dark gray silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)					
	6.0 to 8.5 ft. Bluish-gray silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)					
10	8.5 to 12.0 ft. Olive-brown silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)					
15	12.0 to 18.5 ft. Brown silty clay (CL); medium stiff to soft, moist to wet, with orange and black mottling. No PHC or solvent odors. Wet at 15.5 ft. Saturated at 16.0 ft.	SC		▽	0	Expansive clays from 8.0 to 18.5 ft. Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 5.4 ft. at 1655 and at 5.2 ft. at 1705. Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P4-W collected at 1730 directly from the discharge tubing. No odor or sheen on sample.
	18.5 to 19.0 ft. Brown clayey gravelly sand (SC); medium dense, wet, with coarse angular gravel to 0.5-inch diameter. No PHC or solvent odors. (25,60,15)					
20						Water level was subsequently measured at 4.3 ft. at 1750. Borehole grouted on 12/14/16 using neat cement grout and a tremie pipe.
25						Mr. Marcelino Vialpando 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.
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P&D ENVIRONMENTAL, INC.

BORING NO.: P5		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approx. 2 ft. west of curb on east side of Ettie Street 190 ft. south from 32nd Street ELEVATION AND DATUM: None						
DRILLING AGENCY: Cascade Drilling			DRILLER: Jimmy		DATE & TIME STARTED: 12/14/16 1115	
DRILLING EQUIPMENT: 6620 DT Track Rig					DATE & TIME FINISHED: 12/14/16 1640	
COMPLETION DEPTH: 19.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY: MLBD		
FIRST WATER DEPTH: 12.0 Feet		NO. OF SAMPLES: 1 Water		CHECKED BY: 		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 0.5 ft. Concrete (3-inches) and base rock.	FILL		No Well Constructed	0	Borehole hand augered from 0.0 to 5.0 ft. using 3.0-inch O.D. hand auger. Borehole continuously cored from 5.0 to 19.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.
5	0.5 to 5.0 ft. Brown fine sand (SP); loose, moist. No Petroleum Hydrocarbon (PHC) or solvent odors. (0,95,5)	SP			0	
10	5.0 to 12.0 ft. Olive-brown silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)	CL		▽	0	Water encountered during drilling at 12.0 ft. at 1340. 5-8 ft. 2.4 ft. recovery 8-12 ft. 3.6 ft. recovery 12-16 ft. 2.6 ft. recovery 16-19 ft. 1.6 ft. recovery Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 9.5 ft. at 1345 and at 5.6 ft. at 1355.
15	Wet at 11.5 ft. Saturated at 12.0 ft.			▼	0	Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P5-W collected at 1605 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 9.0 ft. at 1630.
20	12.0 to 19.0 ft. Gray silty fine sand (SM); loose, saturated. No PHC or solvent odors. (0,80,20)	SM			0	Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe. Mr. Marcelino Vialpando with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
25						<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.: P6		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland			
BORING LOCATION: Approx. 2 ft. west of curb on east side of Ettie Street 260 ft. south from 32nd Street						ELEVATION AND DATUM: None	
DRILLING AGENCY: Cascade Drilling		DRILLER: Jimmy		DATE & TIME STARTED: 12/14/16 0945		DATE & TIME FINISHED: 12/14/16 1645	
DRILLING EQUIPMENT: 6620 DT Track Rig				LOGGED BY: MLBD		CHECKED BY: 	
COMPLETION DEPTH: 19.0 Feet		BEDROCK DEPTH: Not Encountered					
FIRST WATER DEPTH: 12.0 Feet		NO. OF SAMPLES: 1 Water					
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS	
	0.0 to 0.5 ft. Concrete (3-inches) and base rock.	FILL		No Well Constructed	0	Borehole hand augered from 0.0 to 5.0 ft. using 3.0-inch O.D. hand auger. Borehole continuously cored from 5.0 to 19.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.	
	0.5 to 2.0 ft. Brown fine sand (SP); loose, dry. No Petroleum Hydrocarbon (PHC) or solvent odors. (0,95,5)	SP			0		
	2.0 to 3.0 ft. Black clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)	CL			0		
5	3.0 to 17.5 ft. Brown silty fine sand (SM); loose, moist. No PHC or solvent odors. (0,75,25)			▼	0	Water encountered during drilling at 12.0 ft. at 1038. 5-8 ft. 2.0 ft. recovery 8-12 ft. 2.1 ft. recovery 12-16 ft. 1.8 ft. recovery	
10	Wet at 11.5 ft. Saturated at 12.0 ft.	SM		▽	0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 5.4 ft. at 1050 and at 5.2 ft. at 1100.	
15	Color change to gray from 15.5 to 17.5 ft.				0	Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P6-W collected at 1110 directly from the discharge tubing.	
					0	No odor or sheen on sample.	
	17.5 to 19.0 ft. Bluish-gray clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)	CL			0	Water level was subsequently measured at 5.4 ft. at 1200.	
20						Borehole grouted on 12/14/16 using neat cement grout and a tremie pipe.	
						Mr. Marcelino Vialpando with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.	
25						<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							

P&D ENVIRONMENTAL, INC.

BORING NO.: P7		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approx. 2 ft. west of curb on east side of Ettie Street 340 ft. south from 32nd Street				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Jimmy		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 6620 DT Track Rig				12/14/16 0730	12/14/16 1650	
COMPLETION DEPTH: 19.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 16.0 Feet		NO. OF SAMPLES: 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 0.5 ft. Concrete (3-inches) and base rock.			No Well Constructed	0	Borehole hand augered from 0.0 to 5.0 ft. using 3.0-inch O.D. hand auger. Borehole continuously cored from 5.0 to 19.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.
	0.5 to 3.0 ft. Grayish-brown gravelly clayey sand (FILL); with brick fragments.	FILL			0	
	3.0 to 4.0 ft. Brown fine sand (SP); loose, saturated. No Petroleum Hydrocarbon (PHC) or solvent odors. (0,90,10)	SP			0	
5	4.0 to 5.0 ft. Black clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)				0	
	5.0 to 10.0 ft. Dark gray silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)				0	Perched water encountered at 3.0 ft. Water encountered during drilling at 16.0 ft. at 0900.
10	10.0 to 18.0 ft. Olive-gray silty clay (CL); medium stiff to soft, moist to saturated, with orange mottling. No PHC or solvent odors. (0,0,100) Expansive clays from 10.0 to 19.0 ft.	CL		▼	0	5-8 ft. 2.8 ft. recovery 8-12 ft. 3.8 ft. recovery 12-16 ft. 3.2 ft. recovery 16-19 ft. 3.0 ft. recovery Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 12.6 ft. at 0905 and at 12.1 ft. at 0915.
15	Wet at 15.5 ft. Saturated at 16.0 ft.			▽	0	Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P7-W collected at 0930 directly from the discharge tubing. No odor or sheen on sample.
	18.0 to 19.0 ft. Dark brown fine sand (SP); loose, saturated. No PHC or solvent odors. (0,95,5)	SP			0	Water level was subsequently measured at 9.1 ft. at 0950.
20						Borehole grouted on 12/14/16 using neat cement grout and a tremie pipe. Mr. Marcelino Vialpando with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
25						<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						

P&D ENVIRONMENTAL, INC.

BORING NO.: P8		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approx. 60 ft. south and 5 ft. west from northeast corner of property				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Juan		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 6620 DT Track Rig				12/13/16 1315	12/16/16 0845	
COMPLETION DEPTH: 19.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 16.0 Feet		NO. OF SAMPLES: 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
5	0.0 to 3.5 ft. Black silty clay (CL); medium stiff, moist. No Petroleum Hydrocarbon (PHC) or solvent odors. (0,0,100)	CL		No Well Constructed	0	Borehole continuously cored from 0.0 to 19.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.
	3.5 to 5.0 ft. Olive-gray silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)					
	5.0 to 6.5 ft. Bluish-gray sandy silty clay (CL); medium stiff, moist. Moderate unidentifiable chemical odors. (0,20,80)					
	6.5 to 7.0 ft. Bluish-gray clayey gravelly sand (SC); medium dense, moist, with few coarse angular gravel to 0.25-inch diameter. Moderate unidentifiable chemical odors. (15,70,15)					
	7.0 to 8.0 ft. Bluish-gray silty clay (CL); medium stiff, moist. Moderate to slight unidentifiable chemical odors to 7.0 ft. (0,0,100)					
10	8.0 to 10.0 ft. Olive-gray silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)	CL			0	3.2 ft. recovery
	10.0 to 11.0 ft. Brown silty fine sand (SM); medium dense, moist. No PHC or solvent odors. (0,75,25)	SM			0	3.8 ft. recovery
	11.0 to 15.5 ft. Olive-gray silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)	CL			0	3.8 ft. recovery
15	15.5 to 16.5 ft. Brown silty fine sand (SM); medium dense to loose, wet to saturated. No PHC or solvent odors. (0,80,20) Wet at 15.5 ft. Saturated at 16.0 ft.	SM			0	3.8 ft. recovery
	16.5 to 19.5 ft. Olive-gray silty clay (CL); medium stiff, moist, with orange mottling. No PHC or solvent odors. (0,0,100)	CL			0	3.4 ft. recovery
20						Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 18.2 ft. at 1340 and at 11.4 ft. at 1405.
						Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P8-W collected at 1525 directly from the discharge tubing.
25						No odor or sheen on sample.
						Water level was subsequently measured at 16.4 ft. at 1539.
30						Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe.
						Mr. Marcelino Vialpando with Alameda County Public Works Agency gave verbal authorization to grout borehole without his 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.

P&D ENVIRONMENTAL, INC.

BORING NO.: P9		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approx. 165 ft. north and 5 ft. west from southeast corner of property				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Juan		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 6620 DT Track Rig				12/13/16 1200	12/16/16 0910	
COMPLETION DEPTH: 19.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 16.0 Feet		NO. OF SAMPLES: 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
5	0.0 to 1.0 ft. Dark brown gravelly clay (FILL); medium stiff, moist, with few coarse angular gravel to 0.5-inch diameter and brick fragments. No Petroleum Hydrocarbon (PHC) or solvent odors. (15,0,85)	FILL		No Well Constructed	0	Borehole continuously cored from 0.0 to 19.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.
	1.0 to 7.0 ft. Dark brown gravelly clay (CL); medium stiff, moist, with few coarse angular gravel to 0.5-inch diameter. No PHC or solvent odors. (10,5,85)				0	Water encountered during drilling at 16.0 ft. at 1215.
	7.0 to 8.0 ft. Bluish-gray gravelly sandy clay (CL); medium stiff, moist, with few gravel to 0.5-inch diameter. Moderate unidentifiable chemical odors. (10,15,75)	CL			0	0-4 ft. 1.2 ft. recovery 4-8 ft. 3.4 ft. recovery 8-12 ft. 3.8 ft. recovery 12-16 ft. 3.8 ft. recovery 16-19 ft. 3.3 ft. recovery
	8.0 to 12.5 ft. Olive-brown silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)				0	Expansive clays from 10.0 to 15.0 ft.
	12.5 to 15.5 ft. Brown silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)			▼	0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 17.1 ft. at 1225 and at 13.6 ft. at 1235.
	15.5 to 17.0 ft. Brown silty fine sand (SM); loose, saturated. No PHC or solvent odors. (0,90,10) Wet at 15.5 ft. Saturated at 16.0 ft.	SM		▽	0	Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P9-W collected at 1404 directly from the discharge tubing.
	17.0 to 18.0 ft. Brown silt (ML); soft, saturated. No PHC or solvent odors. (0,0,100)	ML			0	No odor or sheen on sample.
	18.0 to 19.0 ft. Gray silty clay (CL); soft, wet. No PHC or solvent odors. (0,0,100)	CL				
20						Water level was subsequently measured at 13.4 ft. at 1427.
						Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe.
25						Mr. Marcelino Vialpando with Alameda County Public Works Agency gave verbal authorization to grout borehole without his 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						


P&D ENVIRONMENTAL, INC.

BORING NO.: P10		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approximately 130 ft. north and 5 ft. west of southeast corner of property				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Juan		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 6620 DT Track Rig				12/13/16 0955	12/16/16 0915	
COMPLETION DEPTH: 19.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 15.0 Feet		NO. OF SAMPLES: 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
5	0.0 to 7.5 ft. Dark brown gravelly sandy clay (CL); medium stiff, moist to wet , with few coarse angular gravel to 0.75-inch diameter. No Petroleum Hydrocarbon (PHC) or solvent odors. (10,15,75)	CL		No Well Constructed	0	Borehole continuously cored from 0.0 to 25.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.
10	7.5 to 11.0 ft. Bluish-gray sandy clay (CL); medium stiff, moist. No PHC or solvent odors. (0,20,80)			▼	0	Water encountered during drilling at 15.0 ft. at 1050. 0-4 ft. 1.3 ft. recovery 4-8 ft. 3.6 ft. recovery 8-12 ft. 3.8 ft. recovery 12-16 ft. 3.8 ft. recovery 16-19 ft. 3.6 ft. recovery
15	11.0 to 17.5 ft. Brown silt (ML); medium stiff to soft, moist to saturated. No PHC or solvent odors. (0,0,100) Wet at 14.5 ft. Saturated at 15.0 ft.	ML		▽	0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 16.9 ft. at 1123 and at 14.7 ft. at 1133. Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P10-W collected at 1345 directly from the discharge tubing. No odor or sheen on sample.
20	17.5 to 19.0 ft. Gray silt (ML); soft, wet. No PHC or solvent odors. (0,0,100)				0	Water level was subsequently measured at 10.6 ft. at 1359.
25					0	Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe. Mr. Marcelino Vialpando with Alameda County Public Works Agency gave verbal authorization to grout the borehole prior to his arrival.
30					0	<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.: P11		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approximately 193 ft. north and 5 ft. west of southeast corner of property			ELEVATION AND DATUM: None			
DRILLING AGENCY: Cascade Drilling		DRILLER: Juan		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 6620 DT Track Rig				12/13/16 1230	12/16/16 0900	
COMPLETION DEPTH: 19.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 16.0 Feet		NO. OF SAMPLES: 2 Soil, 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
5	0.0 to 4.0 ft. Black clay (CL); medium stiff, moist. No Petroleum Hydrocarbon (PHC) or solvent odors.			No Well Constructed	0	Borehole continuously cored from 0.0 to 25.0 ft. using 4.0-foot long 2.25-inch O.D. outer dual tube (DT22) lined with a 4.0-foot long 1.5-inch O.D. transparent PVC tube held by a 1.25-inch O.D. center rod as the outer casing is driven one sampling interval.
	4.0 to 6.0 ft. Olive-gray sandy silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,20,80)				0	Water encountered during drilling at 16.0 ft. at 1250.
	6.0 to 8.5 ft. Bluish-gray sandy silty clay (CL); medium stiff, moist. Moderate unidentifiable chemical odor. (0,10,90)	X			P11-7.5	0
10	8.5 to 12.5 ft. Olive-gray silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)	CL		▼	0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 18.6 ft. at 1300 and at 13.7 ft. at 1310.
15	12.5 to 17.5 ft. Brown silty clay (CL); medium stiff to soft, moist to saturated, with gray and orange mottling. No PHC or solvent odors. (0,0,100)				0	Approximately 0.2-gallon of water purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample P11-W collected at 1430 directly from the discharge tubing. No odor or sheen on sample.
	Wet at 15.5 ft. Saturated at 16.0 ft.	X			P11-16.0	▼
20	17.5 to 18.0 ft. Brown silty fine sand (SM); loose, saturated. No PHC or solvent odors. (0,80,20)					
	18.0 to 18.5 ft. Brown silty clay (CL); medium stiff, moist, with gray and orange mottling. No PHC or solvent odors. (0,0,100)	SM				
	18.5 to 19.0 ft. Bluish-gray silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)	CL				
25					0	Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe.
					0	Mr. Marcelino Vialpando with Alameda County Public Works Agency gave verbal authorization to grout the borehole prior to his arrival.
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.: C1		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approximately 80 ft. south and 55 ft. east of northwest corner of property				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Juan		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 6620 DT Track Rig				12/13/16 0815	12/16/16 0730	
COMPLETION DEPTH: 4.5 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: Not Encountered		NO. OF SAMPLES: 2 Soil		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 1.0 ft. Dark brown clay (FILL); soft, wet, with brick fragments. No Petroleum Hydrocarbon (PHC) or solvent odors.	FILL		No Well Constructed	0	Borehole continuously cored from 0.0 to 4.5 ft. using 5.0-foot long 2.0-inch O.D. Geoprobe Macrocore barrel sampler.
	1.0 to 2.0 ft. Yellowish-brown sandy silt (ML); medium stiff, moist, with few angular gravel to 0.5-inch diameter. No PHC or solvent odors. (10,30,60)	ML			0	The barrel sampler was lined with a 4.8-foot long 1.5-inch O.D. transparent PVC tube.
	2.0 to 4.5 ft. Brown gravelly silt (ML); stiff, moist, with few angular gravel to 0.5-inch diameter. No PHC or solvent odors. (10,5,85)	X C1-3.5 X C1-4.0			0	Water not encountered during drilling.
5						Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe.
10						Mr. Marcelino Vialpando with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
15						<u>Drilling Notes:</u>
20						1) Field estimates of percent gravel, sand, and fines are shown in parentheses.
25						2) Density determinations are qualitative and are not based on quantitative evaluation.
30						


P&D ENVIRONMENTAL, INC.

BORING NO.: C2		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approximately 135 ft. south and 60 ft. east of northwest corner of property				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Juan		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 6620 DT Track Rig				12/13/16 0830	12/16/16 0730	
COMPLETION DEPTH: 5.5 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: Not Encountered		NO. OF SAMPLES: 2 Soil		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 1.0 ft. Dark brown gravelly sandy clay (FILL); medium stiff, wet, with brick fragments. No Petroleum Hydrocarbon (PHC) or solvent odors.	FILL		No Well Constructed	0	Borehole continuously cored from 0.0 to 5.5 ft. using 5.0-foot long 2.0-inch O.D. Geoprobe Macrocore barrel sampler.
	1.0 to 5.5 ft. Yellowish-brown gravelly sandy clay (CL); medium stiff, moist, with few coarse angular gravel to 0.5-inch diameter. No PHC or solvent odors. (10,30,60)	CL			0	The barrel sampler was lined with a 4.8-foot long 1.5-inch O.D. transparent PVC tube.
5	Color change to gray from 5.0 to 5.5 ft.	X C2-4.5 X C2-5.0			0	Water not encountered during drilling.
10						Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe.
15						Mr. Marcelino Vialpando with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
20						<u>Drilling Notes:</u>
25						1) Field estimates of percent gravel, sand, and fines are shown in parentheses.
30						2) Density determinations are qualitative and are not based on quantitative evaluation.

P&D ENVIRONMENTAL, INC.

BORING NO.: C3		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approximately 188 ft. south and 110 ft. east of northwest corner of property				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Juan		DATE & TIME STARTED: 12/13/16 0850	DATE & TIME FINISHED: 12/16/16 0730	
DRILLING EQUIPMENT: 6620 DT Track Rig				LOGGED BY: MLBD		
COMPLETION DEPTH: 6.5 Feet		BEDROCK DEPTH: Not Encountered		CHECKED BY: 		
FIRST WATER DEPTH: Not Encountered		NO. OF SAMPLES: 2 Soil				
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
0	0.0 to 1.5 ft. Dark brown gravelly sandy clay (CL); medium stiff, moist, with few coarse angular gravel to 0.75-inch diameter. No Petroleum Hydrocarbon (PHC) or solvent odors. (10,15,75)	CL		No Well Constructed	0	Borehole continuously cored from 0.0 to 6.5 ft. using 5.0-foot long 2.0-inch O.D. Geoprobe Macrocore barrel sampler. The barrel sampler was lined with a 4.8-foot long 1.5-inch O.D. transparent PVC tube. Water not encountered during drilling.
1	1.5 to 2.0 ft. Brown silty fine sand (SM); medium dense, moist. No PHC or solvent odors. (0,75,25)	SM			0	
5	2.0 to 6.0 ft. Dark brown gravelly sandy clay (CL); medium stiff, moist, with few coarse angular gravel to 0.5-inch diameter. No PHC or solvent odors. (10,15,75)	CL			0	
10		X C3-5.5 X C3-6.0			0	Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe. Mr. Marcelino Vialpando 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.
15						
20						
25						
30						

P&D ENVIRONMENTAL, INC.

BORING NO.: C4		PROJECT NO.: 0741		PROJECT NAME: 2868 Hannah Street, Oakland		
BORING LOCATION: Approximately 205 ft. south and 92 ft. east of northwest corner of property				ELEVATION AND DATUM: None		
DRILLING AGENCY: Cascade Drilling		DRILLER: Juan		DATE & TIME STARTED: 12/13/16 0915	DATE & TIME FINISHED: 12/16/16 0730	
DRILLING EQUIPMENT: 6620 DT Track Rig				LOGGED BY: MLBD		
COMPLETION DEPTH: 7.5 Feet		BEDROCK DEPTH: Not Encountered		CHECKED BY: 		
FIRST WATER DEPTH: Not Encountered		NO. OF SAMPLES: 2 Soil				
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
5	0.0 to 5.5 ft. Dark brown gravelly sandy clay (CL); medium stiff, moist, with few coarse angular gravel to 0.75-inch diameter. No Petroleum Hydrocarbon (PHC) or solvent odors. (10,10,80)	CL		No Well Constructed	0	Borehole continuously cored from 0.0 to 7.5 ft. using 5.0-foot long 2.0-inch O.D. Geoprobe Macrocore barrel sampler. The barrel sampler was lined with a 4.8-foot long 1.5-inch O.D. transparent PVC tube.
	5.5 to 7.5 ft. Grayish-brown silty clay (CL); medium stiff, moist. No PHC or solvent odors. (0,0,100)	X X	C4-6.5 C4-7.0		0	Water not encountered during drilling.
10						Borehole grouted on 12/16/16 using neat cement grout and a tremie pipe.
15						Mr. Marcelino Vialpando with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
20						<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.
25						
30						

APPENDIX B

Laboratory Analytical Reports and Chain of Custody Documentation

- **McC Campbell Workorder #1612795 - Soil Samples S1-0.0 Through S6-0.0 Total Lead Results**
- **McC Campbell Workorder #1612784 - Soil Samples C1-4.0, C2-5.0, C3-6.0, and C4-7.0 TPH, VOCs, SVOCs, PCBs, and CAM 17 Metals Results**
- **Micro Analytical Laboratories Workorder # 1242-227273 Soil Samples C1-3.5, C2-4.5, C3-5.5, and C4-6.5 Asbestos Results**
- **McC Campbell Workorder #1612781 - Soil Samples P1-24.5, P2-4.5, P2-9.5, P2-14.5, P2-19.5, P2-24.5, P11-7.5, and P11-16.0 TPH, VOCs, SVOCs, PCBs, and TPH and VOCs Results**
- **McC Campbell Workorder #1612926 - Soil Sample P3-7.0 TPH and VOCs Results**
- **McC Campbell Workorder #1612793 - Soil Sample P1-W Through P11-W TPH and VOCs Results**



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1612795

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Jay H. Miller

Project P.O.:

Project Name: 0741; 2868 Hannah St. Oakland CA

Project Received: 12/15/2016

Analytical Report reviewed & approved for release on 12/21/2016 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: 0741; 2868 Hannah St. Oakland CA
WorkOrder: 1612795

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)

Quality Control Qualifiers

F10 MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612795
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S1-0.0	1612795-001A	Soil	12/13/2016 09:24	ICP-MS2	131369

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	1300	5.0	10	12/19/2016 22:20

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>
Terbium	96	70-130

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S2-0.0	1612795-002A	Soil	12/13/2016 09:26	ICP-MS2	131369

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	53	0.50	1	12/17/2016 01:00

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>
Terbium	100	70-130

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S3-0.0	1612795-003A	Soil	12/13/2016 09:29	ICP-MS2	131369

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	440	5.0	10	12/19/2016 22:26

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>
Terbium	101	70-130

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S4-0.0	1612795-004A	Soil	12/13/2016 09:35	ICP-MS2	131369

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	340	0.50	1	12/17/2016 01:12

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>
Terbium	98	70-130

Analyst(s): DVH

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612795
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S5-0.0	1612795-005A	Soil	12/13/2016 09:42	ICP-MS2	131369

Analytes	Result	RL	DF	Date Analyzed
Lead	240	0.50	1	12/17/2016 01:19

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	97	70-130	12/17/2016 01:19

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S6-0.0	1612795-006A	Soil	12/13/2016 09:45	ICP-MS2	131369

Analytes	Result	RL	DF	Date Analyzed
Lead	88	0.50	1	12/17/2016 01:25

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	99	70-130	12/17/2016 01:25

Analyst(s): DVH



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/16/16
Instrument: ICP-MS2
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612795
BatchID: 131369
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-131369
 1612784-004AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	50.2	0.50	50	-	100	75-125
Surrogate Recovery							
Terbium	507	517		500	101	103	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	88.0	106	50	62.96	50,F10	87	75-125	18.8	20
Surrogate Recovery									
Terbium	516	524	500		103	105	70-130	1.48	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	62.0	62.96	1.52	20

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262



CHAIN-OF-CUSTODY RECORD

WorkOrder: 1612795

ClientCode: PDEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Jay H. Miller
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0741; 2868 Hannah St. Oakland CA

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days;

Date Received: 12/15/2016

Date Logged: 12/16/2016

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	
1612795-001	S1-0.0	Soil	12/13/2016 09:24	<input type="checkbox"/>	A												
1612795-002	S2-0.0	Soil	12/13/2016 09:26	<input type="checkbox"/>	A												
1612795-003	S3-0.0	Soil	12/13/2016 09:29	<input type="checkbox"/>	A												
1612795-004	S4-0.0	Soil	12/13/2016 09:35	<input type="checkbox"/>	A												
1612795-005	S5-0.0	Soil	12/13/2016 09:42	<input type="checkbox"/>	A												
1612795-006	S6-0.0	Soil	12/13/2016 09:45	<input type="checkbox"/>	A												

Test Legend:

1	PBMS_TTLC_S	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Maria Venegas

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

Project: 0741; 2868 Hannah St. Oakland CA

Work Order: 1612795

Client Contact: Jay H. Miller

QC Level: LEVEL 2

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

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

Date Logged: 12/16/2016

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
1612795-001A	S1-0.0	Soil	SW6020 (Lead)	1	Bag	<input type="checkbox"/>	12/13/2016 9:24	5 days		<input type="checkbox"/>	
1612795-002A	S2-0.0	Soil	SW6020 (Lead)	1	Bag	<input type="checkbox"/>	12/13/2016 9:26	5 days		<input type="checkbox"/>	
1612795-003A	S3-0.0	Soil	SW6020 (Lead)	1	Bag	<input type="checkbox"/>	12/13/2016 9:29	5 days		<input type="checkbox"/>	
1612795-004A	S4-0.0	Soil	SW6020 (Lead)	1	Bag	<input type="checkbox"/>	12/13/2016 9:35	5 days		<input type="checkbox"/>	
1612795-005A	S5-0.0	Soil	SW6020 (Lead)	1	Bag	<input type="checkbox"/>	12/13/2016 9:42	5 days		<input type="checkbox"/>	
1612795-006A	S6-0.0	Soil	SW6020 (Lead)	1	Bag	<input type="checkbox"/>	12/13/2016 9:45	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.

1612795

CHAIN OF CUSTODY RECORD

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

PROJECT NUMBER:

0741

PROJECT NAME:

2868 HAWAII ST
OAKLAND, CA

SAMPLED BY: (PRINTED & SIGNATURE)

JAY MILLER 

NUMBER OF CONTAINERS

ANALYSIS(ES):
TOTAL LEAD

PRESERVATIVE

REMARKS

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION
S1-0.0	12/13/16	0924	SOIL	
S2-0.0		0926		
S3-0.0		0929		
S4-0.0		0935		
S5-0.0		0942		
S6-0.0	↓	0945	↓	

RELINQUISHED BY: (SIGNATURE)



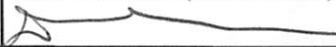
DATE

12-5-16

TIME

1005

RECEIVED BY: (SIGNATURE)



Total No. of Samples (This Shipment)

6

LABORATORY:

Total No. of Containers (This Shipment)

6

MC CAMPBELL ANALYTICAL INC

RELINQUISHED BY: (SIGNATURE)



DATE

12-15-16

TIME

1530

RECEIVED BY: (SIGNATURE)



LABORATORY CONTACT:

ANGELA RYDELIUS

LABORATORY PHONE NUMBER:

(925) 252-9262

RELINQUISHED BY: (SIGNATURE)

DATE

TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE)

SAMPLE ANALYSIS REQUEST SHEET

ATTACHED: () YES (X) NO

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

REMARKS:

5.2



Sample Receipt Checklist

Client Name: **P & D Environmental**
 Project Name: **0741; 2868 Hannah St. Oakland CA**
 WorkOrder No: **1612795** Matrix: Soil
 Carrier: David Shaver (MAI Courier)

Date and Time Received: **12/15/2016 15:30**
 Date Logged: **12/16/2016**
 Received by: **Maria Venegas**
 Logged by: **Maria Venegas**

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: 5.2°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

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: 1612784

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Michael Deschenes

Project P.O.:

Project Name: 0741; 2868 Hannah St. Oakland CA

Project Received: 12/15/2016

Analytical Report reviewed & approved for release on 12/22/2016 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: 0741; 2868 Hannah St. Oakland CA
WorkOrder: 1612784

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: 0741; 2868 Hannah St. Oakland CA
WorkOrder: 1612784

Analytical Qualifiers

S surrogate spike recovery outside accepted recovery limits
a3 sample diluted due to high organic content.
a4 reporting limits raised due to the sample's matrix prohibiting a full volume extraction.
c2 surrogate recovery outside of the control limits due to matrix interference.
c11 The surrogate recovery is above the upper control limit. The target analyte(s) were Not Detected (ND); therefore, the data has been reported.
d7 strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2 diesel range compounds are significant; no recognizable pattern
e7 oil range compounds are significant
h4 sulfuric acid permanganate (EPA 3665) cleanup

Quality Control Qualifiers

F2 LCS/LCSD recovery and/or RPD is out of acceptance criteria.
F10 MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8082
Unit: mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C1-4.0	1612784-001A	Soil	12/13/2016 08:25	GC23	131331

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.25	5	12/16/2016 21:20
Aroclor1221	ND	0.25	5	12/16/2016 21:20
Aroclor1232	ND	0.25	5	12/16/2016 21:20
Aroclor1242	ND	0.25	5	12/16/2016 21:20
Aroclor1248	ND	0.25	5	12/16/2016 21:20
Aroclor1254	ND	0.25	5	12/16/2016 21:20
Aroclor1260	ND	0.25	5	12/16/2016 21:20
PCBs, total	ND	0.25	5	12/16/2016 21:20

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	99	70-130	12/16/2016 21:20

Analyst(s): SS Analytical Comments: a3,h4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C2-5.0	1612784-002A	Soil	12/13/2016 08:45	GC23	131331

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.050	1	12/16/2016 21:33
Aroclor1221	ND	0.050	1	12/16/2016 21:33
Aroclor1232	ND	0.050	1	12/16/2016 21:33
Aroclor1242	ND	0.050	1	12/16/2016 21:33
Aroclor1248	ND	0.050	1	12/16/2016 21:33
Aroclor1254	ND	0.050	1	12/16/2016 21:33
Aroclor1260	ND	0.050	1	12/16/2016 21:33
PCBs, total	ND	0.050	1	12/16/2016 21:33

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	85	70-130	12/16/2016 21:33

Analyst(s): SS Analytical Comments: h4



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8082
Unit: mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C3-6.0	1612784-003A	Soil	12/13/2016 09:00	GC23	131331

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.25	5	12/16/2016 21:47
Aroclor1221	ND	0.25	5	12/16/2016 21:47
Aroclor1232	ND	0.25	5	12/16/2016 21:47
Aroclor1242	ND	0.25	5	12/16/2016 21:47
Aroclor1248	ND	0.25	5	12/16/2016 21:47
Aroclor1254	ND	0.25	5	12/16/2016 21:47
Aroclor1260	ND	0.25	5	12/16/2016 21:47
PCBs, total	ND	0.25	5	12/16/2016 21:47

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	97	70-130	12/16/2016 21:47

Analyst(s): SS

Analytical Comments: a3,h4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C4-7.0	1612784-004A	Soil	12/13/2016 09:25	GC23	131331

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.25	5	12/16/2016 22:28
Aroclor1221	ND	0.25	5	12/16/2016 22:28
Aroclor1232	ND	0.25	5	12/16/2016 22:28
Aroclor1242	ND	0.25	5	12/16/2016 22:28
Aroclor1248	ND	0.25	5	12/16/2016 22:28
Aroclor1254	ND	0.25	5	12/16/2016 22:28
Aroclor1260	ND	0.25	5	12/16/2016 22:28
PCBs, total	ND	0.25	5	12/16/2016 22:28

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	96	70-130	12/16/2016 22:28

Analyst(s): SS

Analytical Comments: a3,h4



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C1-4.0	1612784-001A	Soil	12/13/2016 08:25	GC10	131367
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	12/21/2016 04:44	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	12/21/2016 04:44	
Benzene	ND	0.0050	1	12/21/2016 04:44	
Bromobenzene	ND	0.0050	1	12/21/2016 04:44	
Bromochloromethane	ND	0.0050	1	12/21/2016 04:44	
Bromodichloromethane	ND	0.0050	1	12/21/2016 04:44	
Bromoform	ND	0.0050	1	12/21/2016 04:44	
Bromomethane	ND	0.0050	1	12/21/2016 04:44	
2-Butanone (MEK)	ND	0.020	1	12/21/2016 04:44	
t-Butyl alcohol (TBA)	ND	0.050	1	12/21/2016 04:44	
n-Butyl benzene	ND	0.0050	1	12/21/2016 04:44	
sec-Butyl benzene	ND	0.0050	1	12/21/2016 04:44	
tert-Butyl benzene	ND	0.0050	1	12/21/2016 04:44	
Carbon Disulfide	ND	0.0050	1	12/21/2016 04:44	
Carbon Tetrachloride	ND	0.0050	1	12/21/2016 04:44	
Chlorobenzene	ND	0.0050	1	12/21/2016 04:44	
Chloroethane	ND	0.0050	1	12/21/2016 04:44	
Chloroform	ND	0.0050	1	12/21/2016 04:44	
Chloromethane	ND	0.0050	1	12/21/2016 04:44	
2-Chlorotoluene	ND	0.0050	1	12/21/2016 04:44	
4-Chlorotoluene	ND	0.0050	1	12/21/2016 04:44	
Dibromochloromethane	ND	0.0050	1	12/21/2016 04:44	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	12/21/2016 04:44	
1,2-Dibromoethane (EDB)	ND	0.0040	1	12/21/2016 04:44	
Dibromomethane	ND	0.0050	1	12/21/2016 04:44	
1,2-Dichlorobenzene	ND	0.0050	1	12/21/2016 04:44	
1,3-Dichlorobenzene	ND	0.0050	1	12/21/2016 04:44	
1,4-Dichlorobenzene	ND	0.0050	1	12/21/2016 04:44	
Dichlorodifluoromethane	ND	0.0050	1	12/21/2016 04:44	
1,1-Dichloroethane	ND	0.0050	1	12/21/2016 04:44	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	12/21/2016 04:44	
1,1-Dichloroethene	ND	0.0050	1	12/21/2016 04:44	
cis-1,2-Dichloroethene	ND	0.0050	1	12/21/2016 04:44	
trans-1,2-Dichloroethene	ND	0.0050	1	12/21/2016 04:44	
1,2-Dichloropropane	ND	0.0050	1	12/21/2016 04:44	
1,3-Dichloropropane	ND	0.0050	1	12/21/2016 04:44	
2,2-Dichloropropane	ND	0.0050	1	12/21/2016 04:44	

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C1-4.0	1612784-001A	Soil	12/13/2016 08:25	GC10	131367

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/21/2016 04:44
cis-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 04:44
trans-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 04:44
Diisopropyl ether (DIPE)	ND	0.0050	1	12/21/2016 04:44
Ethylbenzene	ND	0.0050	1	12/21/2016 04:44
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/21/2016 04:44
Freon 113	ND	0.0050	1	12/21/2016 04:44
Hexachlorobutadiene	ND	0.0050	1	12/21/2016 04:44
Hexachloroethane	ND	0.0050	1	12/21/2016 04:44
2-Hexanone	ND	0.0050	1	12/21/2016 04:44
Isopropylbenzene	ND	0.0050	1	12/21/2016 04:44
4-Isopropyl toluene	ND	0.0050	1	12/21/2016 04:44
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/21/2016 04:44
Methylene chloride	ND	0.0050	1	12/21/2016 04:44
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/21/2016 04:44
Naphthalene	ND	0.0050	1	12/21/2016 04:44
n-Propyl benzene	ND	0.0050	1	12/21/2016 04:44
Styrene	ND	0.0050	1	12/21/2016 04:44
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 04:44
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 04:44
Tetrachloroethene	ND	0.0050	1	12/21/2016 04:44
Toluene	ND	0.0050	1	12/21/2016 04:44
1,2,3-Trichlorobenzene	ND	0.0050	1	12/21/2016 04:44
1,2,4-Trichlorobenzene	ND	0.0050	1	12/21/2016 04:44
1,1,1-Trichloroethane	ND	0.0050	1	12/21/2016 04:44
1,1,2-Trichloroethane	ND	0.0050	1	12/21/2016 04:44
Trichloroethene	ND	0.0050	1	12/21/2016 04:44
Trichlorofluoromethane	ND	0.0050	1	12/21/2016 04:44
1,2,3-Trichloropropane	ND	0.0050	1	12/21/2016 04:44
1,2,4-Trimethylbenzene	ND	0.0050	1	12/21/2016 04:44
1,3,5-Trimethylbenzene	ND	0.0050	1	12/21/2016 04:44
Vinyl Chloride	ND	0.0050	1	12/21/2016 04:44
Xylenes, Total	ND	0.0050	1	12/21/2016 04:44

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C1-4.0	1612784-001A	Soil	12/13/2016 08:25	GC10	131367

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	105	70-130		12/21/2016 04:44
Toluene-d8	112	70-130		12/21/2016 04:44
4-BFB	83	70-130		12/21/2016 04:44
Benzene-d6	74	60-140		12/21/2016 04:44
Ethylbenzene-d10	90	60-140		12/21/2016 04:44
1,2-DCB-d4	80	60-140		12/21/2016 04:44

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C2-5.0	1612784-002A	Soil	12/13/2016 08:45	GC10	131367

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	12/21/2016 05:26
tert-Amyl methyl ether (TAME)	ND	0.0050	1	12/21/2016 05:26
Benzene	ND	0.0050	1	12/21/2016 05:26
Bromobenzene	ND	0.0050	1	12/21/2016 05:26
Bromochloromethane	ND	0.0050	1	12/21/2016 05:26
Bromodichloromethane	ND	0.0050	1	12/21/2016 05:26
Bromoform	ND	0.0050	1	12/21/2016 05:26
Bromomethane	ND	0.0050	1	12/21/2016 05:26
2-Butanone (MEK)	ND	0.020	1	12/21/2016 05:26
t-Butyl alcohol (TBA)	ND	0.050	1	12/21/2016 05:26
n-Butyl benzene	ND	0.0050	1	12/21/2016 05:26
sec-Butyl benzene	ND	0.0050	1	12/21/2016 05:26
tert-Butyl benzene	ND	0.0050	1	12/21/2016 05:26
Carbon Disulfide	ND	0.0050	1	12/21/2016 05:26
Carbon Tetrachloride	ND	0.0050	1	12/21/2016 05:26
Chlorobenzene	ND	0.0050	1	12/21/2016 05:26
Chloroethane	ND	0.0050	1	12/21/2016 05:26
Chloroform	ND	0.0050	1	12/21/2016 05:26
Chloromethane	ND	0.0050	1	12/21/2016 05:26
2-Chlorotoluene	ND	0.0050	1	12/21/2016 05:26
4-Chlorotoluene	ND	0.0050	1	12/21/2016 05:26
Dibromochloromethane	ND	0.0050	1	12/21/2016 05:26
1,2-Dibromo-3-chloropropane	ND	0.0040	1	12/21/2016 05:26
1,2-Dibromoethane (EDB)	ND	0.0040	1	12/21/2016 05:26
Dibromomethane	ND	0.0050	1	12/21/2016 05:26
1,2-Dichlorobenzene	ND	0.0050	1	12/21/2016 05:26
1,3-Dichlorobenzene	ND	0.0050	1	12/21/2016 05:26
1,4-Dichlorobenzene	ND	0.0050	1	12/21/2016 05:26
Dichlorodifluoromethane	ND	0.0050	1	12/21/2016 05:26
1,1-Dichloroethane	ND	0.0050	1	12/21/2016 05:26
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	12/21/2016 05:26
1,1-Dichloroethene	ND	0.0050	1	12/21/2016 05:26
cis-1,2-Dichloroethene	ND	0.0050	1	12/21/2016 05:26
trans-1,2-Dichloroethene	ND	0.0050	1	12/21/2016 05:26
1,2-Dichloropropane	ND	0.0050	1	12/21/2016 05:26
1,3-Dichloropropane	ND	0.0050	1	12/21/2016 05:26
2,2-Dichloropropane	ND	0.0050	1	12/21/2016 05:26

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C2-5.0	1612784-002A	Soil	12/13/2016 08:45	GC10	131367

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/21/2016 05:26
cis-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 05:26
trans-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 05:26
Diisopropyl ether (DIPE)	ND	0.0050	1	12/21/2016 05:26
Ethylbenzene	ND	0.0050	1	12/21/2016 05:26
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/21/2016 05:26
Freon 113	ND	0.0050	1	12/21/2016 05:26
Hexachlorobutadiene	ND	0.0050	1	12/21/2016 05:26
Hexachloroethane	ND	0.0050	1	12/21/2016 05:26
2-Hexanone	ND	0.0050	1	12/21/2016 05:26
Isopropylbenzene	ND	0.0050	1	12/21/2016 05:26
4-Isopropyl toluene	ND	0.0050	1	12/21/2016 05:26
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/21/2016 05:26
Methylene chloride	ND	0.0050	1	12/21/2016 05:26
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/21/2016 05:26
Naphthalene	ND	0.0050	1	12/21/2016 05:26
n-Propyl benzene	ND	0.0050	1	12/21/2016 05:26
Styrene	ND	0.0050	1	12/21/2016 05:26
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 05:26
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 05:26
Tetrachloroethene	ND	0.0050	1	12/21/2016 05:26
Toluene	ND	0.0050	1	12/21/2016 05:26
1,2,3-Trichlorobenzene	ND	0.0050	1	12/21/2016 05:26
1,2,4-Trichlorobenzene	ND	0.0050	1	12/21/2016 05:26
1,1,1-Trichloroethane	ND	0.0050	1	12/21/2016 05:26
1,1,2-Trichloroethane	ND	0.0050	1	12/21/2016 05:26
Trichloroethene	ND	0.0050	1	12/21/2016 05:26
Trichlorofluoromethane	ND	0.0050	1	12/21/2016 05:26
1,2,3-Trichloropropane	ND	0.0050	1	12/21/2016 05:26
1,2,4-Trimethylbenzene	ND	0.0050	1	12/21/2016 05:26
1,3,5-Trimethylbenzene	ND	0.0050	1	12/21/2016 05:26
Vinyl Chloride	ND	0.0050	1	12/21/2016 05:26
Xylenes, Total	ND	0.0050	1	12/21/2016 05:26

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C2-5.0	1612784-002A	Soil	12/13/2016 08:45	GC10	131367

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	106	70-130		12/21/2016 05:26
Toluene-d8	114	70-130		12/21/2016 05:26
4-BFB	83	70-130		12/21/2016 05:26
Benzene-d6	79	60-140		12/21/2016 05:26
Ethylbenzene-d10	99	60-140		12/21/2016 05:26
1,2-DCB-d4	87	60-140		12/21/2016 05:26

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C3-6.0	1612784-003A	Soil	12/13/2016 09:00	GC10	131367
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	12/21/2016 13:29	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	12/21/2016 13:29	
Benzene	ND	0.0050	1	12/21/2016 13:29	
Bromobenzene	ND	0.0050	1	12/21/2016 13:29	
Bromochloromethane	ND	0.0050	1	12/21/2016 13:29	
Bromodichloromethane	ND	0.0050	1	12/21/2016 13:29	
Bromoform	ND	0.0050	1	12/21/2016 13:29	
Bromomethane	ND	0.0050	1	12/21/2016 13:29	
2-Butanone (MEK)	ND	0.020	1	12/21/2016 13:29	
t-Butyl alcohol (TBA)	ND	0.050	1	12/21/2016 13:29	
n-Butyl benzene	ND	0.0050	1	12/21/2016 13:29	
sec-Butyl benzene	ND	0.0050	1	12/21/2016 13:29	
tert-Butyl benzene	ND	0.0050	1	12/21/2016 13:29	
Carbon Disulfide	ND	0.0050	1	12/21/2016 13:29	
Carbon Tetrachloride	ND	0.0050	1	12/21/2016 13:29	
Chlorobenzene	ND	0.0050	1	12/21/2016 13:29	
Chloroethane	ND	0.0050	1	12/21/2016 13:29	
Chloroform	ND	0.0050	1	12/21/2016 13:29	
Chloromethane	ND	0.0050	1	12/21/2016 13:29	
2-Chlorotoluene	ND	0.0050	1	12/21/2016 13:29	
4-Chlorotoluene	ND	0.0050	1	12/21/2016 13:29	
Dibromochloromethane	ND	0.0050	1	12/21/2016 13:29	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	12/21/2016 13:29	
1,2-Dibromoethane (EDB)	ND	0.0040	1	12/21/2016 13:29	
Dibromomethane	ND	0.0050	1	12/21/2016 13:29	
1,2-Dichlorobenzene	ND	0.0050	1	12/21/2016 13:29	
1,3-Dichlorobenzene	ND	0.0050	1	12/21/2016 13:29	
1,4-Dichlorobenzene	ND	0.0050	1	12/21/2016 13:29	
Dichlorodifluoromethane	ND	0.0050	1	12/21/2016 13:29	
1,1-Dichloroethane	ND	0.0050	1	12/21/2016 13:29	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	12/21/2016 13:29	
1,1-Dichloroethene	ND	0.0050	1	12/21/2016 13:29	
cis-1,2-Dichloroethene	ND	0.0050	1	12/21/2016 13:29	
trans-1,2-Dichloroethene	ND	0.0050	1	12/21/2016 13:29	
1,2-Dichloropropane	ND	0.0050	1	12/21/2016 13:29	
1,3-Dichloropropane	ND	0.0050	1	12/21/2016 13:29	
2,2-Dichloropropane	ND	0.0050	1	12/21/2016 13:29	

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C3-6.0	1612784-003A	Soil	12/13/2016 09:00	GC10	131367

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/21/2016 13:29
cis-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 13:29
trans-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 13:29
Diisopropyl ether (DIPE)	ND	0.0050	1	12/21/2016 13:29
Ethylbenzene	ND	0.0050	1	12/21/2016 13:29
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/21/2016 13:29
Freon 113	ND	0.0050	1	12/21/2016 13:29
Hexachlorobutadiene	ND	0.0050	1	12/21/2016 13:29
Hexachloroethane	ND	0.0050	1	12/21/2016 13:29
2-Hexanone	ND	0.0050	1	12/21/2016 13:29
Isopropylbenzene	ND	0.0050	1	12/21/2016 13:29
4-Isopropyl toluene	ND	0.0050	1	12/21/2016 13:29
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/21/2016 13:29
Methylene chloride	ND	0.0050	1	12/21/2016 13:29
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/21/2016 13:29
Naphthalene	ND	0.0050	1	12/21/2016 13:29
n-Propyl benzene	ND	0.0050	1	12/21/2016 13:29
Styrene	ND	0.0050	1	12/21/2016 13:29
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 13:29
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 13:29
Tetrachloroethene	ND	0.0050	1	12/21/2016 13:29
Toluene	ND	0.0050	1	12/21/2016 13:29
1,2,3-Trichlorobenzene	ND	0.0050	1	12/21/2016 13:29
1,2,4-Trichlorobenzene	ND	0.0050	1	12/21/2016 13:29
1,1,1-Trichloroethane	ND	0.0050	1	12/21/2016 13:29
1,1,2-Trichloroethane	ND	0.0050	1	12/21/2016 13:29
Trichloroethene	ND	0.0050	1	12/21/2016 13:29
Trichlorofluoromethane	ND	0.0050	1	12/21/2016 13:29
1,2,3-Trichloropropane	ND	0.0050	1	12/21/2016 13:29
1,2,4-Trimethylbenzene	ND	0.0050	1	12/21/2016 13:29
1,3,5-Trimethylbenzene	ND	0.0050	1	12/21/2016 13:29
Vinyl Chloride	ND	0.0050	1	12/21/2016 13:29
Xylenes, Total	ND	0.0050	1	12/21/2016 13:29

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C3-6.0	1612784-003A	Soil	12/13/2016 09:00	GC10	131367

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	103	70-130		12/21/2016 13:29
Toluene-d8	113	70-130		12/21/2016 13:29
4-BFB	77	70-130		12/21/2016 13:29
Benzene-d6	84	60-140		12/21/2016 13:29
Ethylbenzene-d10	110	60-140		12/21/2016 13:29
1,2-DCB-d4	88	60-140		12/21/2016 13:29

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C4-7.0	1612784-004A	Soil	12/13/2016 09:25	GC10	131367

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	12/21/2016 14:09
tert-Amyl methyl ether (TAME)	ND	0.0050	1	12/21/2016 14:09
Benzene	ND	0.0050	1	12/21/2016 14:09
Bromobenzene	ND	0.0050	1	12/21/2016 14:09
Bromochloromethane	ND	0.0050	1	12/21/2016 14:09
Bromodichloromethane	ND	0.0050	1	12/21/2016 14:09
Bromoform	ND	0.0050	1	12/21/2016 14:09
Bromomethane	ND	0.0050	1	12/21/2016 14:09
2-Butanone (MEK)	ND	0.020	1	12/21/2016 14:09
t-Butyl alcohol (TBA)	ND	0.050	1	12/21/2016 14:09
n-Butyl benzene	ND	0.0050	1	12/21/2016 14:09
sec-Butyl benzene	ND	0.0050	1	12/21/2016 14:09
tert-Butyl benzene	ND	0.0050	1	12/21/2016 14:09
Carbon Disulfide	ND	0.0050	1	12/21/2016 14:09
Carbon Tetrachloride	ND	0.0050	1	12/21/2016 14:09
Chlorobenzene	ND	0.0050	1	12/21/2016 14:09
Chloroethane	ND	0.0050	1	12/21/2016 14:09
Chloroform	ND	0.0050	1	12/21/2016 14:09
Chloromethane	ND	0.0050	1	12/21/2016 14:09
2-Chlorotoluene	ND	0.0050	1	12/21/2016 14:09
4-Chlorotoluene	ND	0.0050	1	12/21/2016 14:09
Dibromochloromethane	ND	0.0050	1	12/21/2016 14:09
1,2-Dibromo-3-chloropropane	ND	0.0040	1	12/21/2016 14:09
1,2-Dibromoethane (EDB)	ND	0.0040	1	12/21/2016 14:09
Dibromomethane	ND	0.0050	1	12/21/2016 14:09
1,2-Dichlorobenzene	ND	0.0050	1	12/21/2016 14:09
1,3-Dichlorobenzene	ND	0.0050	1	12/21/2016 14:09
1,4-Dichlorobenzene	ND	0.0050	1	12/21/2016 14:09
Dichlorodifluoromethane	ND	0.0050	1	12/21/2016 14:09
1,1-Dichloroethane	ND	0.0050	1	12/21/2016 14:09
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	12/21/2016 14:09
1,1-Dichloroethene	ND	0.0050	1	12/21/2016 14:09
cis-1,2-Dichloroethene	ND	0.0050	1	12/21/2016 14:09
trans-1,2-Dichloroethene	ND	0.0050	1	12/21/2016 14:09
1,2-Dichloropropane	ND	0.0050	1	12/21/2016 14:09
1,3-Dichloropropane	ND	0.0050	1	12/21/2016 14:09
2,2-Dichloropropane	ND	0.0050	1	12/21/2016 14:09

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C4-7.0	1612784-004A	Soil	12/13/2016 09:25	GC10	131367

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/21/2016 14:09
cis-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 14:09
trans-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 14:09
Diisopropyl ether (DIPE)	ND	0.0050	1	12/21/2016 14:09
Ethylbenzene	ND	0.0050	1	12/21/2016 14:09
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/21/2016 14:09
Freon 113	ND	0.0050	1	12/21/2016 14:09
Hexachlorobutadiene	ND	0.0050	1	12/21/2016 14:09
Hexachloroethane	ND	0.0050	1	12/21/2016 14:09
2-Hexanone	ND	0.0050	1	12/21/2016 14:09
Isopropylbenzene	ND	0.0050	1	12/21/2016 14:09
4-Isopropyl toluene	ND	0.0050	1	12/21/2016 14:09
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/21/2016 14:09
Methylene chloride	ND	0.0050	1	12/21/2016 14:09
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/21/2016 14:09
Naphthalene	ND	0.0050	1	12/21/2016 14:09
n-Propyl benzene	ND	0.0050	1	12/21/2016 14:09
Styrene	ND	0.0050	1	12/21/2016 14:09
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 14:09
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 14:09
Tetrachloroethene	ND	0.0050	1	12/21/2016 14:09
Toluene	ND	0.0050	1	12/21/2016 14:09
1,2,3-Trichlorobenzene	ND	0.0050	1	12/21/2016 14:09
1,2,4-Trichlorobenzene	ND	0.0050	1	12/21/2016 14:09
1,1,1-Trichloroethane	ND	0.0050	1	12/21/2016 14:09
1,1,2-Trichloroethane	ND	0.0050	1	12/21/2016 14:09
Trichloroethene	ND	0.0050	1	12/21/2016 14:09
Trichlorofluoromethane	ND	0.0050	1	12/21/2016 14:09
1,2,3-Trichloropropane	ND	0.0050	1	12/21/2016 14:09
1,2,4-Trimethylbenzene	ND	0.0050	1	12/21/2016 14:09
1,3,5-Trimethylbenzene	ND	0.0050	1	12/21/2016 14:09
Vinyl Chloride	ND	0.0050	1	12/21/2016 14:09
Xylenes, Total	ND	0.0050	1	12/21/2016 14:09

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C4-7.0	1612784-004A	Soil	12/13/2016 09:25	GC10	131367

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	104	70-130		12/21/2016 14:09
Toluene-d8	113	70-130		12/21/2016 14:09
4-BFB	83	70-130		12/21/2016 14:09
Benzene-d6	82	60-140		12/21/2016 14:09
Ethylbenzene-d10	101	60-140		12/21/2016 14:09
1,2-DCB-d4	85	60-140		12/21/2016 14:09

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C1-4.0	1612784-001A	Soil	12/13/2016 08:25	GC21	131311

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	2.0	1	12/20/2016 17:45
Acenaphthylene	ND	2.0	1	12/20/2016 17:45
Acetochlor	ND	2.0	1	12/20/2016 17:45
Anthracene	ND	2.0	1	12/20/2016 17:45
Benzidine	ND	10	1	12/20/2016 17:45
Benzo (a) anthracene	ND	2.0	1	12/20/2016 17:45
Benzo (a) pyrene	ND	2.0	1	12/20/2016 17:45
Benzo (b) fluoranthene	ND	2.0	1	12/20/2016 17:45
Benzo (g,h,i) perylene	ND	2.0	1	12/20/2016 17:45
Benzo (k) fluoranthene	ND	2.0	1	12/20/2016 17:45
Benzyl Alcohol	ND	10	1	12/20/2016 17:45
1,1-Biphenyl	ND	2.0	1	12/20/2016 17:45
Bis (2-chloroethoxy) Methane	ND	2.0	1	12/20/2016 17:45
Bis (2-chloroethyl) Ether	ND	2.0	1	12/20/2016 17:45
Bis (2-chloroisopropyl) Ether	ND	2.0	1	12/20/2016 17:45
Bis (2-ethylhexyl) Adipate	ND	2.0	1	12/20/2016 17:45
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	12/20/2016 17:45
4-Bromophenyl Phenyl Ether	ND	2.0	1	12/20/2016 17:45
Butylbenzyl Phthalate	ND	2.0	1	12/20/2016 17:45
4-Chloroaniline	ND	4.0	1	12/20/2016 17:45
4-Chloro-3-methylphenol	ND	2.0	1	12/20/2016 17:45
2-Chloronaphthalene	ND	2.0	1	12/20/2016 17:45
2-Chlorophenol	ND	2.0	1	12/20/2016 17:45
4-Chlorophenyl Phenyl Ether	ND	2.0	1	12/20/2016 17:45
Chrysene	ND	2.0	1	12/20/2016 17:45
Dibenzo (a,h) anthracene	ND	2.0	1	12/20/2016 17:45
Dibenzofuran	ND	2.0	1	12/20/2016 17:45
Di-n-butyl Phthalate	ND	2.0	1	12/20/2016 17:45
1,2-Dichlorobenzene	ND	2.0	1	12/20/2016 17:45
1,3-Dichlorobenzene	ND	2.0	1	12/20/2016 17:45
1,4-Dichlorobenzene	ND	2.0	1	12/20/2016 17:45
3,3-Dichlorobenzidine	ND	4.0	1	12/20/2016 17:45
2,4-Dichlorophenol	ND	2.0	1	12/20/2016 17:45
Diethyl Phthalate	ND	2.0	1	12/20/2016 17:45
2,4-Dimethylphenol	ND	2.0	1	12/20/2016 17:45
Dimethyl Phthalate	ND	2.0	1	12/20/2016 17:45
4,6-Dinitro-2-methylphenol	ND	10	1	12/20/2016 17:45

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C1-4.0	1612784-001A	Soil	12/13/2016 08:25	GC21	131311

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrophenol	ND	50	1	12/20/2016 17:45
2,4-Dinitrotoluene	ND	2.0	1	12/20/2016 17:45
2,6-Dinitrotoluene	ND	2.0	1	12/20/2016 17:45
Di-n-octyl Phthalate	ND	4.0	1	12/20/2016 17:45
1,2-Diphenylhydrazine	ND	2.0	1	12/20/2016 17:45
Fluoranthene	ND	2.0	1	12/20/2016 17:45
Fluorene	ND	2.0	1	12/20/2016 17:45
Hexachlorobenzene	ND	2.0	1	12/20/2016 17:45
Hexachlorobutadiene	ND	2.0	1	12/20/2016 17:45
Hexachlorocyclopentadiene	ND	10	1	12/20/2016 17:45
Hexachloroethane	ND	2.0	1	12/20/2016 17:45
Indeno (1,2,3-cd) pyrene	ND	2.0	1	12/20/2016 17:45
Isophorone	ND	2.0	1	12/20/2016 17:45
2-Methylnaphthalene	ND	2.0	1	12/20/2016 17:45
2-Methylphenol (o-Cresol)	ND	2.0	1	12/20/2016 17:45
3 & 4-Methylphenol (m,p-Cresol)	ND	2.0	1	12/20/2016 17:45
Naphthalene	ND	2.0	1	12/20/2016 17:45
2-Nitroaniline	ND	10	1	12/20/2016 17:45
3-Nitroaniline	ND	10	1	12/20/2016 17:45
4-Nitroaniline	ND	10	1	12/20/2016 17:45
Nitrobenzene	ND	2.0	1	12/20/2016 17:45
2-Nitrophenol	ND	10	1	12/20/2016 17:45
4-Nitrophenol	ND	10	1	12/20/2016 17:45
N-Nitrosodiphenylamine	ND	2.0	1	12/20/2016 17:45
N-Nitrosodi-n-propylamine	ND	2.0	1	12/20/2016 17:45
Pentachlorophenol	ND	10	1	12/20/2016 17:45
Phenanthrene	ND	2.0	1	12/20/2016 17:45
Phenol	ND	2.0	1	12/20/2016 17:45
Pyrene	ND	2.0	1	12/20/2016 17:45
1,2,4-Trichlorobenzene	ND	2.0	1	12/20/2016 17:45
2,4,5-Trichlorophenol	ND	2.0	1	12/20/2016 17:45
2,4,6-Trichlorophenol	ND	2.0	1	12/20/2016 17:45

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C1-4.0	1612784-001A	Soil	12/13/2016 08:25	GC21	131311

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
2-Fluorophenol	69		30-130	12/20/2016 17:45
Phenol-d5	67		30-130	12/20/2016 17:45
Nitrobenzene-d5	72		30-130	12/20/2016 17:45
2-Fluorobiphenyl	62		30-130	12/20/2016 17:45
2,4,6-Tribromophenol	13	S	16-130	12/20/2016 17:45
4-Terphenyl-d14	62		30-130	12/20/2016 17:45

Analyst(s): REB

Analytical Comments: a4,c2



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C2-5.0	1612784-002A	Soil	12/13/2016 08:45	GC21	131311

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	4.0	2	12/20/2016 18:12
Acenaphthylene	ND	4.0	2	12/20/2016 18:12
Acetochlor	ND	4.0	2	12/20/2016 18:12
Anthracene	ND	4.0	2	12/20/2016 18:12
Benzidine	ND	21	2	12/20/2016 18:12
Benzo (a) anthracene	ND	4.0	2	12/20/2016 18:12
Benzo (a) pyrene	ND	4.0	2	12/20/2016 18:12
Benzo (b) fluoranthene	ND	4.0	2	12/20/2016 18:12
Benzo (g,h,i) perylene	ND	4.0	2	12/20/2016 18:12
Benzo (k) fluoranthene	ND	4.0	2	12/20/2016 18:12
Benzyl Alcohol	ND	21	2	12/20/2016 18:12
1,1-Biphenyl	ND	4.0	2	12/20/2016 18:12
Bis (2-chloroethoxy) Methane	ND	4.0	2	12/20/2016 18:12
Bis (2-chloroethyl) Ether	ND	4.0	2	12/20/2016 18:12
Bis (2-chloroisopropyl) Ether	ND	4.0	2	12/20/2016 18:12
Bis (2-ethylhexyl) Adipate	ND	4.0	2	12/20/2016 18:12
Bis (2-ethylhexyl) Phthalate	ND	4.0	2	12/20/2016 18:12
4-Bromophenyl Phenyl Ether	ND	4.0	2	12/20/2016 18:12
Butylbenzyl Phthalate	ND	4.0	2	12/20/2016 18:12
4-Chloroaniline	ND	8.0	2	12/20/2016 18:12
4-Chloro-3-methylphenol	ND	4.0	2	12/20/2016 18:12
2-Chloronaphthalene	ND	4.0	2	12/20/2016 18:12
2-Chlorophenol	ND	4.0	2	12/20/2016 18:12
4-Chlorophenyl Phenyl Ether	ND	4.0	2	12/20/2016 18:12
Chrysene	ND	4.0	2	12/20/2016 18:12
Dibenzo (a,h) anthracene	ND	4.0	2	12/20/2016 18:12
Dibenzofuran	ND	4.0	2	12/20/2016 18:12
Di-n-butyl Phthalate	ND	4.0	2	12/20/2016 18:12
1,2-Dichlorobenzene	ND	4.0	2	12/20/2016 18:12
1,3-Dichlorobenzene	ND	4.0	2	12/20/2016 18:12
1,4-Dichlorobenzene	ND	4.0	2	12/20/2016 18:12
3,3-Dichlorobenzidine	ND	8.0	2	12/20/2016 18:12
2,4-Dichlorophenol	ND	4.0	2	12/20/2016 18:12
Diethyl Phthalate	ND	4.0	2	12/20/2016 18:12
2,4-Dimethylphenol	ND	4.0	2	12/20/2016 18:12
Dimethyl Phthalate	ND	4.0	2	12/20/2016 18:12
4,6-Dinitro-2-methylphenol	ND	21	2	12/20/2016 18:12

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C2-5.0	1612784-002A	Soil	12/13/2016 08:45	GC21	131311

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrophenol	ND	100	2	12/20/2016 18:12
2,4-Dinitrotoluene	ND	4.0	2	12/20/2016 18:12
2,6-Dinitrotoluene	ND	4.0	2	12/20/2016 18:12
Di-n-octyl Phthalate	ND	8.0	2	12/20/2016 18:12
1,2-Diphenylhydrazine	ND	4.0	2	12/20/2016 18:12
Fluoranthene	ND	4.0	2	12/20/2016 18:12
Fluorene	ND	4.0	2	12/20/2016 18:12
Hexachlorobenzene	ND	4.0	2	12/20/2016 18:12
Hexachlorobutadiene	ND	4.0	2	12/20/2016 18:12
Hexachlorocyclopentadiene	ND	21	2	12/20/2016 18:12
Hexachloroethane	ND	4.0	2	12/20/2016 18:12
Indeno (1,2,3-cd) pyrene	ND	4.0	2	12/20/2016 18:12
Isophorone	ND	4.0	2	12/20/2016 18:12
2-Methylnaphthalene	ND	4.0	2	12/20/2016 18:12
2-Methylphenol (o-Cresol)	ND	4.0	2	12/20/2016 18:12
3 & 4-Methylphenol (m,p-Cresol)	ND	4.0	2	12/20/2016 18:12
Naphthalene	ND	4.0	2	12/20/2016 18:12
2-Nitroaniline	ND	21	2	12/20/2016 18:12
3-Nitroaniline	ND	21	2	12/20/2016 18:12
4-Nitroaniline	ND	21	2	12/20/2016 18:12
Nitrobenzene	ND	4.0	2	12/20/2016 18:12
2-Nitrophenol	ND	21	2	12/20/2016 18:12
4-Nitrophenol	ND	21	2	12/20/2016 18:12
N-Nitrosodiphenylamine	ND	4.0	2	12/20/2016 18:12
N-Nitrosodi-n-propylamine	ND	4.0	2	12/20/2016 18:12
Pentachlorophenol	ND	21	2	12/20/2016 18:12
Phenanthrene	ND	4.0	2	12/20/2016 18:12
Phenol	ND	4.0	2	12/20/2016 18:12
Pyrene	ND	4.0	2	12/20/2016 18:12
1,2,4-Trichlorobenzene	ND	4.0	2	12/20/2016 18:12
2,4,5-Trichlorophenol	ND	4.0	2	12/20/2016 18:12
2,4,6-Trichlorophenol	ND	4.0	2	12/20/2016 18:12

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C2-5.0	1612784-002A	Soil	12/13/2016 08:45	GC21	131311

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
2-Fluorophenol	66		30-130	12/20/2016 18:12
Phenol-d5	62		30-130	12/20/2016 18:12
Nitrobenzene-d5	67		30-130	12/20/2016 18:12
2-Fluorobiphenyl	58		30-130	12/20/2016 18:12
2,4,6-Tribromophenol	15	S	16-130	12/20/2016 18:12
4-Terphenyl-d14	60		30-130	12/20/2016 18:12

Analyst(s): REB

Analytical Comments: a3,a4,c2



Analytical Report

Client: P & D Environmental
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Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C3-6.0	1612784-003A	Soil	12/13/2016 09:00	GC21	131311

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	4.0	2	12/20/2016 18:40
Acenaphthylene	ND	4.0	2	12/20/2016 18:40
Acetochlor	ND	4.0	2	12/20/2016 18:40
Anthracene	ND	4.0	2	12/20/2016 18:40
Benzidine	ND	21	2	12/20/2016 18:40
Benzo (a) anthracene	ND	4.0	2	12/20/2016 18:40
Benzo (a) pyrene	ND	4.0	2	12/20/2016 18:40
Benzo (b) fluoranthene	ND	4.0	2	12/20/2016 18:40
Benzo (g,h,i) perylene	ND	4.0	2	12/20/2016 18:40
Benzo (k) fluoranthene	ND	4.0	2	12/20/2016 18:40
Benzyl Alcohol	ND	21	2	12/20/2016 18:40
1,1-Biphenyl	ND	4.0	2	12/20/2016 18:40
Bis (2-chloroethoxy) Methane	ND	4.0	2	12/20/2016 18:40
Bis (2-chloroethyl) Ether	ND	4.0	2	12/20/2016 18:40
Bis (2-chloroisopropyl) Ether	ND	4.0	2	12/20/2016 18:40
Bis (2-ethylhexyl) Adipate	ND	4.0	2	12/20/2016 18:40
Bis (2-ethylhexyl) Phthalate	ND	4.0	2	12/20/2016 18:40
4-Bromophenyl Phenyl Ether	ND	4.0	2	12/20/2016 18:40
Butylbenzyl Phthalate	ND	4.0	2	12/20/2016 18:40
4-Chloroaniline	ND	8.0	2	12/20/2016 18:40
4-Chloro-3-methylphenol	ND	4.0	2	12/20/2016 18:40
2-Chloronaphthalene	ND	4.0	2	12/20/2016 18:40
2-Chlorophenol	ND	4.0	2	12/20/2016 18:40
4-Chlorophenyl Phenyl Ether	ND	4.0	2	12/20/2016 18:40
Chrysene	ND	4.0	2	12/20/2016 18:40
Dibenzo (a,h) anthracene	ND	4.0	2	12/20/2016 18:40
Dibenzofuran	ND	4.0	2	12/20/2016 18:40
Di-n-butyl Phthalate	ND	4.0	2	12/20/2016 18:40
1,2-Dichlorobenzene	ND	4.0	2	12/20/2016 18:40
1,3-Dichlorobenzene	ND	4.0	2	12/20/2016 18:40
1,4-Dichlorobenzene	ND	4.0	2	12/20/2016 18:40
3,3-Dichlorobenzidine	ND	8.0	2	12/20/2016 18:40
2,4-Dichlorophenol	ND	4.0	2	12/20/2016 18:40
Diethyl Phthalate	ND	4.0	2	12/20/2016 18:40
2,4-Dimethylphenol	ND	4.0	2	12/20/2016 18:40
Dimethyl Phthalate	ND	4.0	2	12/20/2016 18:40
4,6-Dinitro-2-methylphenol	ND	21	2	12/20/2016 18:40

(Cont.)



Analytical Report

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Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C3-6.0	1612784-003A	Soil	12/13/2016 09:00	GC21	131311

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrophenol	ND	100	2	12/20/2016 18:40
2,4-Dinitrotoluene	ND	4.0	2	12/20/2016 18:40
2,6-Dinitrotoluene	ND	4.0	2	12/20/2016 18:40
Di-n-octyl Phthalate	ND	8.0	2	12/20/2016 18:40
1,2-Diphenylhydrazine	ND	4.0	2	12/20/2016 18:40
Fluoranthene	ND	4.0	2	12/20/2016 18:40
Fluorene	ND	4.0	2	12/20/2016 18:40
Hexachlorobenzene	ND	4.0	2	12/20/2016 18:40
Hexachlorobutadiene	ND	4.0	2	12/20/2016 18:40
Hexachlorocyclopentadiene	ND	21	2	12/20/2016 18:40
Hexachloroethane	ND	4.0	2	12/20/2016 18:40
Indeno (1,2,3-cd) pyrene	ND	4.0	2	12/20/2016 18:40
Isophorone	ND	4.0	2	12/20/2016 18:40
2-Methylnaphthalene	ND	4.0	2	12/20/2016 18:40
2-Methylphenol (o-Cresol)	ND	4.0	2	12/20/2016 18:40
3 & 4-Methylphenol (m,p-Cresol)	ND	4.0	2	12/20/2016 18:40
Naphthalene	ND	4.0	2	12/20/2016 18:40
2-Nitroaniline	ND	21	2	12/20/2016 18:40
3-Nitroaniline	ND	21	2	12/20/2016 18:40
4-Nitroaniline	ND	21	2	12/20/2016 18:40
Nitrobenzene	ND	4.0	2	12/20/2016 18:40
2-Nitrophenol	ND	21	2	12/20/2016 18:40
4-Nitrophenol	ND	21	2	12/20/2016 18:40
N-Nitrosodiphenylamine	ND	4.0	2	12/20/2016 18:40
N-Nitrosodi-n-propylamine	ND	4.0	2	12/20/2016 18:40
Pentachlorophenol	ND	21	2	12/20/2016 18:40
Phenanthrene	ND	4.0	2	12/20/2016 18:40
Phenol	ND	4.0	2	12/20/2016 18:40
Pyrene	ND	4.0	2	12/20/2016 18:40
1,2,4-Trichlorobenzene	ND	4.0	2	12/20/2016 18:40
2,4,5-Trichlorophenol	ND	4.0	2	12/20/2016 18:40
2,4,6-Trichlorophenol	ND	4.0	2	12/20/2016 18:40

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C3-6.0	1612784-003A	Soil	12/13/2016 09:00	GC21	131311

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
2-Fluorophenol	65		30-130	12/20/2016 18:40
Phenol-d5	60		30-130	12/20/2016 18:40
Nitrobenzene-d5	65		30-130	12/20/2016 18:40
2-Fluorobiphenyl	59		30-130	12/20/2016 18:40
2,4,6-Tribromophenol	15	S	16-130	12/20/2016 18:40
4-Terphenyl-d14	58		30-130	12/20/2016 18:40

Analyst(s): REB

Analytical Comments: a3,a4,c2



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C4-7.0	1612784-004A	Soil	12/13/2016 09:25	GC17	131311
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		4.0	2	12/21/2016 22:26
Acenaphthylene	ND		4.0	2	12/21/2016 22:26
Acetochlor	ND		4.0	2	12/21/2016 22:26
Anthracene	ND		4.0	2	12/21/2016 22:26
Benzidine	ND		21	2	12/21/2016 22:26
Benzo (a) anthracene	ND		4.0	2	12/21/2016 22:26
Benzo (a) pyrene	ND		4.0	2	12/21/2016 22:26
Benzo (b) fluoranthene	ND		4.0	2	12/21/2016 22:26
Benzo (g,h,i) perylene	ND		4.0	2	12/21/2016 22:26
Benzo (k) fluoranthene	ND		4.0	2	12/21/2016 22:26
Benzyl Alcohol	ND		21	2	12/21/2016 22:26
1,1-Biphenyl	ND		4.0	2	12/21/2016 22:26
Bis (2-chloroethoxy) Methane	ND		4.0	2	12/21/2016 22:26
Bis (2-chloroethyl) Ether	ND		4.0	2	12/21/2016 22:26
Bis (2-chloroisopropyl) Ether	ND		4.0	2	12/21/2016 22:26
Bis (2-ethylhexyl) Adipate	ND		4.0	2	12/21/2016 22:26
Bis (2-ethylhexyl) Phthalate	ND		4.0	2	12/21/2016 22:26
4-Bromophenyl Phenyl Ether	ND		4.0	2	12/21/2016 22:26
Butylbenzyl Phthalate	ND		4.0	2	12/21/2016 22:26
4-Chloroaniline	ND		8.0	2	12/21/2016 22:26
4-Chloro-3-methylphenol	ND		4.0	2	12/21/2016 22:26
2-Chloronaphthalene	ND		4.0	2	12/21/2016 22:26
2-Chlorophenol	ND		4.0	2	12/21/2016 22:26
4-Chlorophenyl Phenyl Ether	ND		4.0	2	12/21/2016 22:26
Chrysene	ND		4.0	2	12/21/2016 22:26
Dibenzo (a,h) anthracene	ND		4.0	2	12/21/2016 22:26
Dibenzofuran	ND		4.0	2	12/21/2016 22:26
Di-n-butyl Phthalate	ND		4.0	2	12/21/2016 22:26
1,2-Dichlorobenzene	ND		4.0	2	12/21/2016 22:26
1,3-Dichlorobenzene	ND		4.0	2	12/21/2016 22:26
1,4-Dichlorobenzene	ND		4.0	2	12/21/2016 22:26
3,3-Dichlorobenzidine	ND		8.0	2	12/21/2016 22:26
2,4-Dichlorophenol	ND		4.0	2	12/21/2016 22:26
Diethyl Phthalate	ND		4.0	2	12/21/2016 22:26
2,4-Dimethylphenol	ND		4.0	2	12/21/2016 22:26
Dimethyl Phthalate	ND		4.0	2	12/21/2016 22:26
4,6-Dinitro-2-methylphenol	ND		21	2	12/21/2016 22:26

(Cont.)



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Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C4-7.0	1612784-004A	Soil	12/13/2016 09:25	GC17	131311

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrophenol	ND	100	2	12/21/2016 22:26
2,4-Dinitrotoluene	ND	4.0	2	12/21/2016 22:26
2,6-Dinitrotoluene	ND	4.0	2	12/21/2016 22:26
Di-n-octyl Phthalate	ND	8.0	2	12/21/2016 22:26
1,2-Diphenylhydrazine	ND	4.0	2	12/21/2016 22:26
Fluoranthene	ND	4.0	2	12/21/2016 22:26
Fluorene	ND	4.0	2	12/21/2016 22:26
Hexachlorobenzene	ND	4.0	2	12/21/2016 22:26
Hexachlorobutadiene	ND	4.0	2	12/21/2016 22:26
Hexachlorocyclopentadiene	ND	21	2	12/21/2016 22:26
Hexachloroethane	ND	4.0	2	12/21/2016 22:26
Indeno (1,2,3-cd) pyrene	ND	4.0	2	12/21/2016 22:26
Isophorone	ND	4.0	2	12/21/2016 22:26
2-Methylnaphthalene	ND	4.0	2	12/21/2016 22:26
2-Methylphenol (o-Cresol)	ND	4.0	2	12/21/2016 22:26
3 & 4-Methylphenol (m,p-Cresol)	ND	4.0	2	12/21/2016 22:26
Naphthalene	ND	4.0	2	12/21/2016 22:26
2-Nitroaniline	ND	21	2	12/21/2016 22:26
3-Nitroaniline	ND	21	2	12/21/2016 22:26
4-Nitroaniline	ND	21	2	12/21/2016 22:26
Nitrobenzene	ND	4.0	2	12/21/2016 22:26
2-Nitrophenol	ND	21	2	12/21/2016 22:26
4-Nitrophenol	ND	21	2	12/21/2016 22:26
N-Nitrosodiphenylamine	ND	4.0	2	12/21/2016 22:26
N-Nitrosodi-n-propylamine	ND	4.0	2	12/21/2016 22:26
Pentachlorophenol	ND	21	2	12/21/2016 22:26
Phenanthrene	ND	4.0	2	12/21/2016 22:26
Phenol	ND	4.0	2	12/21/2016 22:26
Pyrene	ND	4.0	2	12/21/2016 22:26
1,2,4-Trichlorobenzene	ND	4.0	2	12/21/2016 22:26
2,4,5-Trichlorophenol	ND	4.0	2	12/21/2016 22:26
2,4,6-Trichlorophenol	ND	4.0	2	12/21/2016 22:26

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Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C4-7.0	1612784-004A	Soil	12/13/2016 09:25	GC17	131311

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	73	30-130		12/21/2016 22:26
Phenol-d5	65	30-130		12/21/2016 22:26
Nitrobenzene-d5	64	30-130		12/21/2016 22:26
2-Fluorobiphenyl	57	30-130		12/21/2016 22:26
2,4,6-Tribromophenol	24	16-130		12/21/2016 22:26
4-Terphenyl-d14	59	30-130		12/21/2016 22:26

Analyst(s): REB

Analytical Comments: a3,a4



Analytical Report

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Date Received: 12/15/16 15:36
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Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C1-4.0	1612784-001A	Soil	12/13/2016 08:25	ICP-MS2	131350

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.56	0.50	1	12/17/2016 00:05
Arsenic	5.7	0.50	1	12/17/2016 00:05
Barium	120	5.0	1	12/17/2016 00:05
Beryllium	ND	0.50	1	12/17/2016 00:05
Cadmium	1.7	0.25	1	12/17/2016 00:05
Chromium	44	0.50	1	12/17/2016 00:05
Cobalt	10	0.50	1	12/17/2016 00:05
Copper	20	0.50	1	12/17/2016 00:05
Lead	40	0.50	1	12/17/2016 00:05
Mercury	0.069	0.050	1	12/17/2016 00:05
Molybdenum	0.82	0.50	1	12/17/2016 00:05
Nickel	30	0.50	1	12/17/2016 00:05
Selenium	0.98	0.50	1	12/17/2016 00:05
Silver	0.62	0.50	1	12/17/2016 00:05
Thallium	0.58	0.50	1	12/17/2016 00:05
Vanadium	48	0.50	1	12/17/2016 00:05
Zinc	49	5.0	1	12/17/2016 00:05

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	100	70-130	12/17/2016 00:05

Analyst(s): DVH



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C2-5.0	1612784-002A	Soil	12/13/2016 08:45	ICP-MS2	131350

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.58	0.50	1	12/17/2016 00:11
Arsenic	7.3	0.50	1	12/17/2016 00:11
Barium	140	5.0	1	12/17/2016 00:11
Beryllium	ND	0.50	1	12/17/2016 00:11
Cadmium	ND	0.25	1	12/17/2016 00:11
Chromium	46	0.50	1	12/17/2016 00:11
Cobalt	13	0.50	1	12/17/2016 00:11
Copper	26	0.50	1	12/17/2016 00:11
Lead	13	0.50	1	12/17/2016 00:11
Mercury	0.12	0.050	1	12/17/2016 00:11
Molybdenum	0.73	0.50	1	12/17/2016 00:11
Nickel	59	0.50	1	12/17/2016 00:11
Selenium	ND	0.50	1	12/17/2016 00:11
Silver	ND	0.50	1	12/17/2016 00:11
Thallium	ND	0.50	1	12/17/2016 00:11
Vanadium	56	0.50	1	12/17/2016 00:11
Zinc	60	5.0	1	12/17/2016 00:11

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	100	70-130	12/17/2016 00:11

Analyst(s): DVH



Analytical Report

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Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C3-6.0	1612784-003A	Soil	12/13/2016 09:00	ICP-MS2	131350

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.93	0.50	1	12/17/2016 00:17
Arsenic	6.9	0.50	1	12/17/2016 00:17
Barium	150	5.0	1	12/17/2016 00:17
Beryllium	0.51	0.50	1	12/17/2016 00:17
Cadmium	ND	0.25	1	12/17/2016 00:17
Chromium	55	0.50	1	12/17/2016 00:17
Cobalt	13	0.50	1	12/17/2016 00:17
Copper	27	0.50	1	12/17/2016 00:17
Lead	31	0.50	1	12/17/2016 00:17
Mercury	3.2	0.050	1	12/17/2016 00:17
Molybdenum	0.71	0.50	1	12/17/2016 00:17
Nickel	65	0.50	1	12/17/2016 00:17
Selenium	ND	0.50	1	12/17/2016 00:17
Silver	ND	0.50	1	12/17/2016 00:17
Thallium	ND	0.50	1	12/17/2016 00:17
Vanadium	57	0.50	1	12/17/2016 00:17
Zinc	88	5.0	1	12/17/2016 00:17

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	102	70-130	12/17/2016 00:17

Analyst(s): DVH



Analytical Report

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Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C4-7.0	1612784-004A	Soil	12/13/2016 09:25	ICP-MS2	131369

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.68	0.50	1	12/16/2016 22:39
Arsenic	8.6	0.50	1	12/16/2016 22:39
Barium	160	5.0	1	12/16/2016 22:39
Beryllium	ND	0.50	1	12/16/2016 22:39
Cadmium	0.26	0.25	1	12/16/2016 22:39
Chromium	42	0.50	1	12/16/2016 22:39
Cobalt	15	0.50	1	12/16/2016 22:39
Copper	21	0.50	1	12/16/2016 22:39
Lead	63	0.50	1	12/16/2016 22:39
Mercury	0.24	0.050	1	12/16/2016 22:39
Molybdenum	0.83	0.50	1	12/16/2016 22:39
Nickel	58	0.50	1	12/16/2016 22:39
Selenium	ND	0.50	1	12/16/2016 22:39
Silver	ND	0.50	1	12/16/2016 22:39
Thallium	ND	0.50	1	12/16/2016 22:39
Vanadium	43	0.50	1	12/16/2016 22:39
Zinc	75	5.0	1	12/16/2016 22:39

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	102	70-130	12/16/2016 22:39

Analyst(s): DVH



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16-12/20/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
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
C1-4.0	1612784-001A	Soil	12/13/2016 08:25	GC12	131554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	1.3		1.0	1	12/21/2016 02:47
MTBE	---		0.050	1	12/21/2016 02:47
Benzene	---		0.0050	1	12/21/2016 02:47
Toluene	---		0.0050	1	12/21/2016 02:47
Ethylbenzene	---		0.0050	1	12/21/2016 02:47
Xylenes	---		0.015	1	12/21/2016 02:47
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	81		69-117		12/21/2016 02:47
<u>Analyst(s):</u> IA			<u>Analytical Comments:</u> d7		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C2-5.0	1612784-002A	Soil	12/13/2016 08:45	GC19	131352
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	12/18/2016 08:03
MTBE	---		0.050	1	12/18/2016 08:03
Benzene	---		0.0050	1	12/18/2016 08:03
Toluene	---		0.0050	1	12/18/2016 08:03
Ethylbenzene	---		0.0050	1	12/18/2016 08:03
Xylenes	---		0.015	1	12/18/2016 08:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	103		69-117		12/18/2016 08:03
<u>Analyst(s):</u> IA					

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental	WorkOrder: 1612784
Date Received: 12/15/16 15:36	Extraction Method: SW5030B
Date Prepared: 12/15/16-12/20/16	Analytical Method: SW8021B/8015Bm
Project: 0741; 2868 Hannah St. Oakland CA	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
C3-6.0	1612784-003A	Soil	12/13/2016 09:00	GC19	131352

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	12/18/2016 07:34
MTBE	---	0.050	1	12/18/2016 07:34
Benzene	---	0.0050	1	12/18/2016 07:34
Toluene	---	0.0050	1	12/18/2016 07:34
Ethylbenzene	---	0.0050	1	12/18/2016 07:34
Xylenes	---	0.015	1	12/18/2016 07:34

Surrogates	REC (%)	Limits
2-Fluorotoluene	107	69-117

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C4-7.0	1612784-004A	Soil	12/13/2016 09:25	GC19	131352

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	12/18/2016 07:05
MTBE	---	0.050	1	12/18/2016 07:05
Benzene	---	0.0050	1	12/18/2016 07:05
Toluene	---	0.0050	1	12/18/2016 07:05
Ethylbenzene	---	0.0050	1	12/18/2016 07:05
Xylenes	---	0.015	1	12/18/2016 07:05

Surrogates	REC (%)	Qualifiers	Limits
2-Fluorotoluene	118	S	69-117

Analyst(s): IA

Analytical Comments: c11



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
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
C1-4.0	1612784-001A	Soil	12/13/2016 08:25	GC11B	131363
<u>Analytes</u>					
	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	6.8		5.0	5	12/16/2016 14:25
TPH-Motor Oil (C18-C36)	130		25	5	12/16/2016 14:25
<u>Surrogates</u>					
	<u>REC (%)</u>		<u>Limits</u>		
C9	97		72-114		12/16/2016 14:25
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C2-5.0	1612784-002A	Soil	12/13/2016 08:45	GC11B	131363
<u>Analytes</u>					
	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	2.2		1.0	1	12/16/2016 12:59
TPH-Motor Oil (C18-C36)	19		5.0	1	12/16/2016 12:59
<u>Surrogates</u>					
	<u>REC (%)</u>		<u>Limits</u>		
C9	96		72-114		12/16/2016 12:59
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
C3-6.0	1612784-003A	Soil	12/13/2016 09:00	GC11A	131363
<u>Analytes</u>					
	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	14		2.0	2	12/16/2016 13:46
TPH-Motor Oil (C18-C36)	120		10	2	12/16/2016 13:46
<u>Surrogates</u>					
	<u>REC (%)</u>		<u>Limits</u>		
C9	97		72-114		12/16/2016 13:46
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2		

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:36
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
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
C4-7.0	1612784-004A	Soil	12/13/2016 09:25	GC6B	131363

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	67	2.0	2	12/16/2016 15:31
TPH-Motor Oil (C18-C36)	270	10	2	12/16/2016 15:31

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	72-114	12/16/2016 15:31

Analyst(s): TK

Analytical Comments: e7,e2



Quality Control Report

Client: P & D Environmental	WorkOrder: 1612784
Date Prepared: 12/15/16	BatchID: 131331
Date Analyzed: 12/15/16	Extraction Method: SW3550B
Instrument: GC40	Analytical Method: SW8082
Matrix: Soil	Unit: mg/kg
Project: 0741; 2868 Hannah St. Oakland CA	Sample ID: MB/LCS/LCSD-131331

QC Summary Report for SW8082

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Aroclor1016	ND	0.050	-	-	-
Aroclor1221	ND	0.050	-	-	-
Aroclor1232	ND	0.050	-	-	-
Aroclor1242	ND	0.050	-	-	-
Aroclor1248	ND	0.050	-	-	-
Aroclor1254	ND	0.050	-	-	-
Aroclor1260	ND	0.050	-	-	-
PCBs, total	ND	0.050	-	-	-

Surrogate Recovery

Decachlorobiphenyl	0.0371	0.050	74	70-130
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Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aroclor1016	0.137	0.138	0.15	91	92	70-130	0.503	20
Aroclor1260	0.136	0.136	0.15	91	91	70-130	0	20

Surrogate Recovery

Decachlorobiphenyl	0.0374	0.0380	0.050	75	76	70-130	1.40	20
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Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/17/16 - 12/19/16
Instrument: GC10
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131367
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131367
 1612782-001AMS/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	0.0384	0.0050	0.050	-	77	53-116
Benzene	ND	0.0488	0.0050	0.050	-	98	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	0.166	0.050	0.20	-	83	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	0.0507	0.0050	0.050	-	101	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	0.0425	0.0040	0.050	-	85	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	0.0417	0.0040	0.050	-	83	58-135
1,1-Dichloroethene	ND	0.0555	0.0050	0.050	-	111	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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 QA/QC Officer



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/17/16 - 12/19/16
Instrument: GC10
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131367
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131367
 1612782-001AMS/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	0.0419	0.0050	0.050	-	84	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0418	0.0050	0.050	-	84	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	0.0401	0.0050	0.050	-	80	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	0.0541	0.0050	0.050	-	108	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	0.0512	0.0050	0.050	-	102	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: 12/15/16
Date Analyzed: 12/17/16 - 12/19/16
Instrument: GC10
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131367
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131367
 1612782-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.125	0.128		0.12	100	102	70-130
Toluene-d8	0.152	0.149		0.12	121	120	70-130
4-BFB	0.0101	0.0123		0.012	81	99	70-130
Benzene-d6	0.0872	0.0882		0.10	87	88	60-140
Ethylbenzene-d10	0.119	0.122		0.10	119	122	60-140
1,2-DCB-d4	0.0946	0.0933		0.10	95	93	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)	0.0354	0.0380	0.050	ND	71	76	53-116	7.19	20
Benzene	0.0474	0.0466	0.050	ND	95	93	63-137	1.73	20
t-Butyl alcohol (TBA)	0.138	0.148	0.20	ND	69	74	41-135	7.05	20
Chlorobenzene	0.0470	0.0471	0.050	ND	94	94	77-121	0	20
1,2-Dibromoethane (EDB)	0.0392	0.0400	0.050	ND	78	80	67-119	2.08	20
1,2-Dichloroethane (1,2-DCA)	0.0395	0.0396	0.050	ND	79	79	58-135	0	20
1,1-Dichloroethene	0.0474	0.0462	0.050	ND	95	92	42-145	2.49	20
Diisopropyl ether (DIPE)	0.0410	0.0419	0.050	ND	82	84	52-129	2.34	20
Ethyl tert-butyl ether (ETBE)	0.0391	0.0411	0.050	ND	78	82	53-125	4.80	20
Methyl-t-butyl ether (MTBE)	0.0365	0.0386	0.050	ND	73	77	58-122	5.72	20
Toluene	0.0523	0.0502	0.050	ND	105	100	76-130	4.01	20
Trichloroethene	0.0485	0.0478	0.050	ND	97	96	72-132	1.48	20
Surrogate Recovery									
Dibromofluoromethane	0.128	0.131	0.12		103	105	70-130	1.76	20
Toluene-d8	0.152	0.148	0.12		121	118	70-130	2.38	20
4-BFB	0.0126	0.0125	0.012		101	100	70-130	1.03	20
Benzene-d6	0.0844	0.0832	0.10		84	83	60-140	1.40	20
Ethylbenzene-d10	0.111	0.106	0.10		111	106	60-140	4.21	20
1,2-DCB-d4	0.0852	0.0865	0.10		85	86	60-140	1.45	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/15/16
Instrument: GC17, GC21
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA


WorkOrder: 1612784
BatchID: 131311
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-131311

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	4.67	0.25	5	-	93	46-118
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.50	-	-	-	-
4-Chloro-3-methylphenol	ND	6.19	0.25	5	-	124, F2	49-123
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	5.56	0.25	5	-	111	55-116
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	4.34	0.25	5	-	87	50-102
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-

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NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/15/16
Instrument: GC17, GC21
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131311
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-131311

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	5.14	0.25	5	-	103	47-117
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 & 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	4.74	1.3	5	-	95	40-102
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	6.33	0.25	5	-	127, F2	47-108
Pentachlorophenol	ND	4.98	1.3	5	-	100	39-134
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	5.31	0.25	5	-	106	49-107
Pyrene	ND	4.72	0.25	5	-	94	55-124
1,2,4-Trichlorobenzene	ND	4.78	0.25	5	-	96	51-121
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-



Quality Control Report

Client: P & D Environmental	WorkOrder: 1612784
Date Prepared: 12/15/16	BatchID: 131311
Date Analyzed: 12/15/16	Extraction Method: SW3550B
Instrument: GC17, GC21	Analytical Method: SW8270C
Matrix: Soil	Unit: mg/Kg
Project: 0741; 2868 Hannah St. Oakland CA	Sample ID: MB/LCS-131311

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
2-Fluorophenol	4.03	3.84		5	81	77	47-125
Phenol-d5	3.86	3.94		5	77	79	45-117
Nitrobenzene-d5	3.41	3.84		5	68	77	39-121
2-Fluorobiphenyl	3.32	3.12		5	66	63	35-120
2,4,6-Tribromophenol	3.04	3.22		5	61	64	32-111
4-Terphenyl-d14	4.35	3.18		5	87	64	32-128



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/16/16
Instrument: ICP-MS2
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131350
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-131350
 1612743-001AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	49.4	0.50	50	-	99	75-125
Arsenic	ND	51.0	0.50	50	-	102	75-125
Barium	ND	512	5.0	500	-	102	75-125
Beryllium	ND	52.7	0.50	50	-	105	75-125
Cadmium	ND	51.4	0.25	50	-	103	75-125
Chromium	ND	53.2	0.50	50	-	106	75-125
Cobalt	ND	45.9	0.50	50	-	92	75-125
Copper	ND	52.7	0.50	50	-	105	75-125
Lead	ND	49.1	0.50	50	-	98	75-125
Mercury	ND	1.27	0.050	1.25	-	101	75-125
Molybdenum	ND	48.5	0.50	50	-	97	75-125
Nickel	ND	52.6	0.50	50	-	105	75-125
Selenium	ND	52.9	0.50	50	-	106	75-125
Silver	ND	48.9	0.50	50	-	98	75-125
Thallium	ND	45.4	0.50	50	-	91	75-125
Vanadium	ND	51.7	0.50	50	-	103	75-125
Zinc	ND	505	5.0	500	-	101	75-125
Surrogate Recovery							
Terbium	511	513		500	102	103	70-130



Quality Control Report

Client: P & D Environmental	WorkOrder: 1612784
Date Prepared: 12/15/16	BatchID: 131350
Date Analyzed: 12/16/16	Extraction Method: SW3050B
Instrument: ICP-MS2	Analytical Method: SW6020
Matrix: Soil	Unit: mg/Kg
Project: 0741; 2868 Hannah St. Oakland CA	Sample ID: MB/LCS-131350 1612743-001AMS/MSD

QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	50.0	48.1	50	ND	99	96	75-125	3.83	20
Arsenic	54.8	53.8	50	3.848	102	100	75-125	1.90	20
Barium	629	617	500	106.1	105	102	75-125	1.86	20
Beryllium	49.0	50.0	50	ND	97	99	75-125	2.02	20
Cadmium	50.4	49.1	50	ND	101	98	75-125	2.53	20
Chromium	101	100	50	41.36	119	118	75-125	0.597	20
Cobalt	50.0	50.8	50	6.859	86	88	75-125	1.71	20
Copper	69.4	69.0	50	15.75	107	107	75-125	0	20
Lead	55.2	57.2	50	6.257	98	102	75-125	3.68	20
Mercury	1.42	1.36	1.25	0.1230	104	99	75-125	4.89	20
Molybdenum	48.9	47.5	50	ND	97	94	75-125	2.93	20
Nickel	107	105	50	48.71	117	113	75-125	2.16	20
Selenium	46.0	48.5	50	ND	92	97	75-125	5.12	20
Silver	47.0	47.0	50	ND	94	94	75-125	0	20
Thallium	44.1	44.8	50	ND	88	90	75-125	1.60	20
Vanadium	86.8	86.8	50	29.68	114	114	75-125	0	20
Zinc	530	537	500	38.69	98	100	75-125	1.33	20

Surrogate Recovery

Terbium	516	496	500		103	99	70-130	4.07	20
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Analyte	DLT Result	DLTRef Val	%D	%D Limit
Antimony	ND<2.5	ND	-	-
Arsenic	4.58	3.848	19.0	-
Barium	107	106.1	0.848	-
Beryllium	ND<2.5	ND	-	-
Cadmium	ND<1.2	ND	-	-
Chromium	43.6	41.36	5.42	20
Cobalt	7.32	6.859	6.72	-
Copper	16.4	15.75	4.13	20
Lead	6.54	6.257	4.52	-
Mercury	ND<0.25	0.1230	-	-
Molybdenum	ND<2.5	ND	-	-
Nickel	49.3	48.71	1.21	20
Selenium	ND<2.5	ND	-	-

(Cont.)



Quality Control Report

Client: P & D Environmental	WorkOrder: 1612784
Date Prepared: 12/15/16	BatchID: 131350
Date Analyzed: 12/16/16	Extraction Method: SW3050B
Instrument: ICP-MS2	Analytical Method: SW6020
Matrix: Soil	Unit: mg/Kg
Project: 0741; 2868 Hannah St. Oakland CA	Sample ID: MB/LCS-131350 1612743-001AMS/MSD

QC Summary Report for Metals

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Silver	ND<2.5	ND	-	-
Thallium	ND<2.5	ND	-	-
Vanadium	30.8	29.68	3.77	20
Zinc	43.4	38.69	12.2	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/16/16
Instrument: GC11A, GC9a
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131363
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-131363
 1612780-001AMS/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	38.1	1.0	40	-	95	91-127
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	23.5	23.6		25	94	94	74-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	54.8	55.2	40	13.28	104	105	74-143	0.713	30
Surrogate Recovery									
C9	24.9	24.9	25		100	100	72-114	0	30



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/16/16
Instrument: ICP-MS2
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131369
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-131369
 1612784-004AMS/MSD
 1612784-004APDS

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	51.8	0.50	50	-	104	75-125
Arsenic	ND	50.7	0.50	50	-	101	75-125
Barium	ND	507	5.0	500	-	101	75-125
Beryllium	ND	51.3	0.50	50	-	103	75-125
Cadmium	ND	50.2	0.25	50	-	100	75-125
Chromium	ND	50.6	0.50	50	-	101	75-125
Cobalt	ND	46.7	0.50	50	-	93	75-125
Copper	ND	51.2	0.50	50	-	102	75-125
Lead	ND	50.2	0.50	50	-	100	75-125
Mercury	ND	1.27	0.050	1.25	-	102	75-125
Molybdenum	ND	50.1	0.50	50	-	100	75-125
Nickel	ND	50.8	0.50	50	-	102	75-125
Selenium	ND	49.4	0.50	50	-	99	75-125
Silver	ND	49.2	0.50	50	-	98	75-125
Thallium	ND	46.4	0.50	50	-	93	75-125
Vanadium	ND	50.3	0.50	50	-	101	75-125
Zinc	ND	509	5.0	500	-	102	75-125
Surrogate Recovery							
Terbium	507	517		500	101	103	70-130



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/16/16
Instrument: ICP-MS2
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131369
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-131369
 1612784-004AMS/MSD
 1612784-004APDS

QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	51.8	52.6	50	0.6753	102	104	75-125	1.61	20
Arsenic	57.8	57.1	50	8.621	98	97	75-125	1.18	20
Barium	667	656	500	158.4	102	100	75-125	1.57	20
Beryllium	48.7	50.0	50	ND	96	99	75-125	2.66	20
Cadmium	50.1	51.2	50	0.2616	100	102	75-125	2.03	20
Chromium	100	97.9	50	42.21	116	111	75-125	2.51	20
Cobalt	54.0	54.2	50	14.73	79	79	75-125	0	20
Copper	74.4	69.2	50	20.83	107	97	75-125	7.25	20
Lead	88.0	106	50	62.96	50,F10	87	75-125	18.8	20
Mercury	2.03	1.55	1.25	0.2422	143,F10	104	75-125	27.2,F10	20
Molybdenum	50.2	50.7	50	0.8265	99	100	75-125	0.872	20
Nickel	104	106	50	57.84	93	96	75-125	1.33	20
Selenium	48.6	49.9	50	ND	97	99	75-125	2.58	20
Silver	49.5	50.3	50	ND	99	100	75-125	1.50	20
Thallium	46.2	47.4	50	ND	92	95	75-125	2.52	20
Vanadium	102	90.1	50	42.89	119	94	75-125	12.9	20
Zinc	575	584	500	74.96	100	102	75-125	1.54	20

Surrogate Recovery

Terbium	516	524	500		103	105	70-130	1.48	20
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Analyte	PDS Result	SPK Val	SPKRef Val	PDS %REC	PDS Limits
Mercury	1.57	1.25	0.2422	106	75-125

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Antimony	ND<2.5	0.6753	-	-
Arsenic	8.67	8.621	0.568	-
Barium	156	158.4	1.52	20
Beryllium	ND<2.5	ND	-	-
Cadmium	ND<1.2	0.2616	-	-
Chromium	43.7	42.21	3.53	20
Cobalt	15.4	14.73	4.55	20
Copper	20.9	20.83	0.336	20

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/16/16
Instrument: ICP-MS2
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131369
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-131369
 1612784-004AMS/MSD
 1612784-004APDS

QC Summary Report for Metals

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	62.0	62.96	1.52	20
Mercury	ND<0.25	0.2422	-	-
Molybdenum	ND<2.5	0.8265	-	-
Nickel	57.8	57.84	0.0692	20
Selenium	ND<2.5	ND	-	-
Silver	ND<2.5	ND	-	-
Thallium	ND<2.5	ND	-	-
Vanadium	43.4	42.89	1.19	20
Zinc	79.5	74.96	6.06	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/16/16 - 12/17/16
Instrument: GC19
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131352
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-131352
 1612736-001AMS/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	0.577	0.40	0.60	-	96	89-118
MTBE	ND	0.0989	0.050	0.10	-	99	68-116
Benzene	ND	0.106	0.0050	0.10	-	106	85-118
Toluene	ND	0.105	0.0050	0.10	-	105	87-121
Ethylbenzene	ND	0.105	0.0050	0.10	-	105	91-124
Xylenes	ND	0.311	0.015	0.30	-	104	92-126
Surrogate Recovery							
2-Fluorotoluene	0.114	0.105		0.10	114	105	88-119

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.544	0.543	0.60	ND	91	90	66-122	0.210	20
MTBE	0.0790	0.0796	0.10	ND	79	80	58-106	0.691	20
Benzene	0.0949	0.0999	0.10	ND	95	100	63-116	5.11	20
Toluene	0.0948	0.0996	0.10	ND	93	98	66-118	4.98	20
Ethylbenzene	0.0968	0.0991	0.10	ND	97	99	69-121	2.37	20
Xylenes	0.288	0.295	0.30	ND	96	98	70-125	2.23	20
Surrogate Recovery									
2-Fluorotoluene	0.0968	0.100	0.10		97	100	69-117	3.66	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/20/16
Date Analyzed: 12/21/16
Instrument: GC19
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612784
BatchID: 131554
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-131554
 1612982-002AMS/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	0.608	0.40	0.60	-	101	89-118
MTBE	ND	0.0933	0.050	0.10	-	93	68-116
Benzene	ND	0.107	0.0050	0.10	-	107	85-118
Toluene	ND	0.106	0.0050	0.10	-	106	87-121
Ethylbenzene	ND	0.106	0.0050	0.10	-	107	91-124
Xylenes	ND	0.317	0.015	0.30	-	106	92-126
Surrogate Recovery							
2-Fluorotoluene	0.102	0.106		0.10	102	106	88-119

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR		7.8	NR	NR	-	NR	
MTBE	NR	NR		ND<0.5	NR	NR	-	NR	
Benzene	NR	NR		ND<0.05	NR	NR	-	NR	
Toluene	NR	NR		ND<0.05	NR	NR	-	NR	
Ethylbenzene	NR	NR		0.061	NR	NR	-	NR	
Xylenes	NR	NR		ND<0.15	NR	NR	-	NR	
Surrogate Recovery									
2-Fluorotoluene	NR	NR			NR	NR	-	NR	



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1612784

ClientCode: PDEO

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 Email
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 ThirdParty
 J-flag

Report to:

Michael Deschenes
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0741; 2868 Hannah St. Oakland CA

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days;

Date Received: 12/15/2016

Date Logged: 12/15/2016

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	
1612784-001	C1-4.0	Soil	12/13/2016 08:25	<input type="checkbox"/>	A	A	A	A	A	A	A						
1612784-002	C2-5.0	Soil	12/13/2016 08:45	<input type="checkbox"/>	A	A	A	A	A	A	A						
1612784-003	C3-6.0	Soil	12/13/2016 09:00	<input type="checkbox"/>	A	A	A	A	A	A	A						
1612784-004	C4-7.0	Soil	12/13/2016 09:25	<input type="checkbox"/>	A	A	A	A	A	A	A						

Test Legend:

1	8082_PCB_S	2	8260B_S	3	8270_S	4	CAM17MS_TTLC_S
5	G-MBTEX_S	6	TPH(DMO)_S	7		8	
9		10		11		12	

Prepared by: Alexandra Iniguez

The following SampIDs: 001A, 002A, 003A, 004A contain testgroup Multi Range_S.

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

Project: 0741; 2868 Hannah St. Oakland CA

Work Order: 1612784

Client Contact: Michael Deschenes

QC Level: LEVEL 2

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

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

Date Logged: 12/15/2016

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
1612784-001A	C1-4.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 8:25	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days			
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
			SW8082 (PCBs Only)			<input type="checkbox"/>		5 days			
1612784-002A	C2-5.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 8:45	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days			
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
			SW8082 (PCBs Only)			<input type="checkbox"/>		5 days			
1612784-003A	C3-6.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 9:00	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days			
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
			SW8082 (PCBs Only)			<input type="checkbox"/>		5 days			

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: 0741; 2868 Hannah St. Oakland CA

Work Order: 1612784

Client Contact: Michael Deschenes

QC Level: LEVEL 2

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

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

Date Logged: 12/15/2016

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
1612784-004A	C4-7.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 9:25	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8082 (PCBs Only)			<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.

CHAIN OF CUSTODY RECORD

14/27/82 #1

1012784
PAGE 1 OF 1

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

PROJECT NUMBER: <div style="font-size: 1.5em; font-family: cursive;">0741</div>	PROJECT NAME: <div style="font-size: 1.2em; font-family: cursive;">2868 HANNAH ST OAKLAND, CA</div>
--	--

SAMPLED BY: (PRINTED & SIGNATURE)

MICHAEL BASS-DESCHENES

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION
C1 - 4.0	12-13-16	0825	Soil	
C2 - 5.0	"	0845	"	
C3 - 6.0	"	0900	"	
C4 - 7.0	"	0925	"	

NUMBER OF CONTAINERS	ANALYSIS(ES):										PRESERVATIVE	REMARKS	
	1	X	X	X	X	X	X	X	X	X			X
1	X	X	X	X	X	X	X	X	X	X	X	"	"
1	X	X	X	X	X	X	X	X	X	X	X	"	"
1	X	X	X	X	X	X	X	X	X	X	X	"	"

RELINQUISHED BY: (SIGNATURE) 	DATE	TIME	RECEIVED BY: (SIGNATURE) 	Total No. of Samples (This Shipment)	4	LABORATORY: McCAMPBELL ANALYTICAL, INC.
RELINQUISHED BY: (SIGNATURE) 	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment)	4	LABORATORY CONTACT: ANGELA RYDELIUS (877) 252-9262
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE) 	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: () YES (X) NO		
Results and billing to: P&D Environmental, Inc. lab@pdenviro.com			REMARKS: <div style="text-align: right; font-size: 1.5em; font-family: cursive;">S. 2</div>			



Sample Receipt Checklist

Client Name: **P & D Environmental**
 Project Name: **0741; 2868 Hannah St. Oakland CA**
 WorkOrder No: **1612784** Matrix: Soil
 Carrier: David Shaver (MAI Courier)

Date and Time Received: **12/15/2016 15:36**
 Date Logged: **12/15/2016**
 Received by: Agustina Venegas
 Logged by: Alexandra Iniguez

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: 5.2°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:

MICRO ANALYTICAL LABORATORIES, INC.
BULK ASBESTOS ANALYSIS - PLM ARB 435

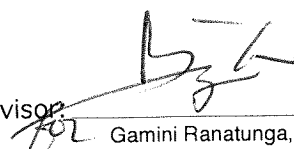


1242
 Paul King
 P & D Environmental, Inc.
 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610

PROJECT:
PROJECT NO. 0741
2868 HANNAH STREET
OAKLAND, CA

Micro Log In **227273**
 Total Samples 4
 Date Sampled 12/13/2016
 Date Received 12/13/2016
 Date Analyzed 12/14/2016

SAMPLE INFORMATION	ASBESTOS INFORMATION QUANTITY (AREA %) / TYPES / LAYERS / DISTINCT SAMPLES	DOMINANT OTHER MATERIALS
Client #: C1-3.5 Micro #: 227273-01 Analyst: EK BK SOIL Asb. / Total Pts. Matrix Removed Sensitivity 0 / 1200 0.000%	ND	Matrix: SOIL Type: ROCK FRAGMENTS
Client #: C2-4.5 Micro #: 227273-02 Analyst: EK SOIL Asb. / Total Pts. Matrix Removed Sensitivity 0 / 1200 0.000%	ND	Matrix: SOIL Type: ROCK FRAGMENTS
Client #: C3-5.5 Micro #: 227273-03 Analyst: EK SOIL Asb. / Total Pts. Matrix Removed Sensitivity 0 / 1200 0.000%	ND	Matrix: SOIL Type: ROCK FRAGMENTS
Client #: C4-6.5 Micro #: 227273-04 Analyst: EK SOIL Asb. / Total Pts. Matrix Removed Sensitivity 0 / 1200 0.000%	ND	Matrix: SOIL Type: ROCK FRAGMENTS

Technical Supervisor 

Gamini Ranatunga, Ph.D.

12/14/2016

Date Reported

Analyses use Polarized Light Microscopy (PLM), Micro Analytical SOP PLM-101, Rev. 1/4/2013 for building materials (based on EPA-600/R93-116 (1993)), and California ARB 435 (1991) for applicable soil, rock, or aggregate samples. NOTES: Weight % cannot be determined by PLM estimation or point counts. Asbestos fibers with diameter below ~1 µm may not be detected by PLM. The absence of asbestos in dust or debris (including wipe or microvacuum), and in some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Only dominant non-asbestos materials are indicated. This report must not be interpreted as a conclusive identification of non-asbestos (fibrous or not). Quantities of non-asbestos fibers are estimated, not point counted. Preparation (all samples): grinding, milling; teasing bundles apart; drying, if needed, by hotplate. Acid dissolution, ashing, or other matrix reduction techniques may be applied to some samples; residue asbestos % is corrected for amount of matrix removed. Various sample interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Notes are made if point counting is used; otherwise, asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (<<1%) may not be reliable or reproducible by PLM. Lower quantitation limit (reporting limit) of PLM estimation is 1%. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos by weight; however, reliable determination of asbestos weight percent at this level cannot be done by PLM, and TEM is recommended. Sample heterogeneity is indicated by listing more than one distinct layer or material on the report. Composite asbestos percentages on multilayered samples are applicable only to layered wall systems (wallboard, joint compound, and related materials); compositing is based on clients' descriptions of a material as "joint compound". Clients are solely responsible for identification and description of bulk materials listed on field forms. Laboratory sample descriptions may differ from descriptions given by the client. Quality Control (QC): all results have been determined to be within acceptance limits prior to reporting. Samples that were reanalyzed are denoted by two sets of analyst initials. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report shall not be reproduced except in full, without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed. ND = NO ASBESTOS DETECTED.

P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

PROJECT NUMBER:

0741

PROJECT NAME:

2868 Hannah St
Oakland, CA

SAMPLED BY: (PRINTED & SIGNATURE)

MICHAEL BASS-DESCHENES *Michael Bass-Deschenes*

NUMBER OF CONTAINERS

ANALYSIS(ES):

ASBESTOS BY CARB #35
(1000 BUNT COUNT)

PRESERVATIVE

227273

REMARKS

SAMPLE NUMBER

DATE

TIME

TYPE

SAMPLE LOCATION

C1-3.5

12/13/16

0830

Soil

C2-4.5

"

0840

"

C3-5.5

"

0855

"

C4-6.5

"

0920

"

1 X
1 X
1 X
1 X

NONE
"
"
"

NORMAL TAT
"
"
"

RELINQUISHED BY: (SIGNATURE)

Michael Bass-Deschenes

DATE

12/13/16

TIME

0951

RECEIVED BY: (SIGNATURE)

J. Miller

Total No. of Samples (This Shipment)

4

LABORATORY:

MICRO ANALYTICAL INC.

RELINQUISHED BY: (SIGNATURE)

J. Miller

DATE

12/13/16

TIME

1020

RECEIVED BY: (SIGNATURE)

John A. Holl

LABORATORY CONTACT:

John A. Holl

LABORATORY PHONE NUMBER:

(510) 653-0824

RELINQUISHED BY: (SIGNATURE)

[Signature]

DATE

12/13/16

TIME

10:20

RECEIVED FOR LABORATORY BY: (SIGNATURE)

[Signature]

SAMPLE ANALYSIS REQUEST SHEET

ATTACHED: () YES (x) NO

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

REMARKS:

[Signature]

1
2
3
4



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1612781

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Paul King

Project P.O.:

Project Name: 0741; 2868 Hannah St. Oakland, CA

Project Received: 12/15/2016

Analytical Report reviewed & approved for release on 12/22/2016 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: 0741; 2868 Hannah St. Oakland, CA
WorkOrder: 1612781

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: 0741; 2868 Hannah St. Oakland, CA
WorkOrder: 1612781

Analytical Qualifiers

d7 strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2 diesel range compounds are significant; no recognizable pattern
e7 oil range compounds are significant

Quality Control Qualifiers

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



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P1-24.5	1612781-001A	Soil	12/13/2016 15:50	GC10	131454
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	12/19/2016 16:54
tert-Amyl methyl ether (TAME)	ND		0.0050	1	12/19/2016 16:54
Benzene	ND		0.0050	1	12/19/2016 16:54
Bromobenzene	ND		0.0050	1	12/19/2016 16:54
Bromochloromethane	ND		0.0050	1	12/19/2016 16:54
Bromodichloromethane	ND		0.0050	1	12/19/2016 16:54
Bromoform	ND		0.0050	1	12/19/2016 16:54
Bromomethane	ND		0.0050	1	12/19/2016 16:54
2-Butanone (MEK)	ND		0.020	1	12/19/2016 16:54
t-Butyl alcohol (TBA)	ND		0.050	1	12/19/2016 16:54
n-Butyl benzene	ND		0.0050	1	12/19/2016 16:54
sec-Butyl benzene	ND		0.0050	1	12/19/2016 16:54
tert-Butyl benzene	ND		0.0050	1	12/19/2016 16:54
Carbon Disulfide	ND		0.0050	1	12/19/2016 16:54
Carbon Tetrachloride	ND		0.0050	1	12/19/2016 16:54
Chlorobenzene	ND		0.0050	1	12/19/2016 16:54
Chloroethane	ND		0.0050	1	12/19/2016 16:54
Chloroform	ND		0.0050	1	12/19/2016 16:54
Chloromethane	ND		0.0050	1	12/19/2016 16:54
2-Chlorotoluene	ND		0.0050	1	12/19/2016 16:54
4-Chlorotoluene	ND		0.0050	1	12/19/2016 16:54
Dibromochloromethane	ND		0.0050	1	12/19/2016 16:54
1,2-Dibromo-3-chloropropane	ND		0.0040	1	12/19/2016 16:54
1,2-Dibromoethane (EDB)	ND		0.0040	1	12/19/2016 16:54
Dibromomethane	ND		0.0050	1	12/19/2016 16:54
1,2-Dichlorobenzene	ND		0.0050	1	12/19/2016 16:54
1,3-Dichlorobenzene	ND		0.0050	1	12/19/2016 16:54
1,4-Dichlorobenzene	ND		0.0050	1	12/19/2016 16:54
Dichlorodifluoromethane	ND		0.0050	1	12/19/2016 16:54
1,1-Dichloroethane	ND		0.0050	1	12/19/2016 16:54
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	12/19/2016 16:54
1,1-Dichloroethene	ND		0.0050	1	12/19/2016 16:54
cis-1,2-Dichloroethene	ND		0.0050	1	12/19/2016 16:54
trans-1,2-Dichloroethene	ND		0.0050	1	12/19/2016 16:54
1,2-Dichloropropane	ND		0.0050	1	12/19/2016 16:54
1,3-Dichloropropane	ND		0.0050	1	12/19/2016 16:54
2,2-Dichloropropane	ND		0.0050	1	12/19/2016 16:54

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P1-24.5	1612781-001A	Soil	12/13/2016 15:50	GC10	131454

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/19/2016 16:54
cis-1,3-Dichloropropene	ND	0.0050	1	12/19/2016 16:54
trans-1,3-Dichloropropene	ND	0.0050	1	12/19/2016 16:54
Diisopropyl ether (DIPE)	ND	0.0050	1	12/19/2016 16:54
Ethylbenzene	ND	0.0050	1	12/19/2016 16:54
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/19/2016 16:54
Freon 113	ND	0.0050	1	12/19/2016 16:54
Hexachlorobutadiene	ND	0.0050	1	12/19/2016 16:54
Hexachloroethane	ND	0.0050	1	12/19/2016 16:54
2-Hexanone	ND	0.0050	1	12/19/2016 16:54
Isopropylbenzene	ND	0.0050	1	12/19/2016 16:54
4-Isopropyl toluene	ND	0.0050	1	12/19/2016 16:54
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/19/2016 16:54
Methylene chloride	ND	0.0050	1	12/19/2016 16:54
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/19/2016 16:54
Naphthalene	ND	0.0050	1	12/19/2016 16:54
n-Propyl benzene	ND	0.0050	1	12/19/2016 16:54
Styrene	ND	0.0050	1	12/19/2016 16:54
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/19/2016 16:54
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/19/2016 16:54
Tetrachloroethene	ND	0.0050	1	12/19/2016 16:54
Toluene	ND	0.0050	1	12/19/2016 16:54
1,2,3-Trichlorobenzene	ND	0.0050	1	12/19/2016 16:54
1,2,4-Trichlorobenzene	ND	0.0050	1	12/19/2016 16:54
1,1,1-Trichloroethane	ND	0.0050	1	12/19/2016 16:54
1,1,2-Trichloroethane	ND	0.0050	1	12/19/2016 16:54
Trichloroethene	ND	0.0050	1	12/19/2016 16:54
Trichlorofluoromethane	ND	0.0050	1	12/19/2016 16:54
1,2,3-Trichloropropane	ND	0.0050	1	12/19/2016 16:54
1,2,4-Trimethylbenzene	ND	0.0050	1	12/19/2016 16:54
1,3,5-Trimethylbenzene	ND	0.0050	1	12/19/2016 16:54
Vinyl Chloride	ND	0.0050	1	12/19/2016 16:54
Xylenes, Total	ND	0.0050	1	12/19/2016 16:54

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P1-24.5	1612781-001A	Soil	12/13/2016 15:50	GC10	131454

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	104	70-130		12/19/2016 16:54
Toluene-d8	117	70-130		12/19/2016 16:54
4-BFB	95	70-130		12/19/2016 16:54
Benzene-d6	87	60-140		12/19/2016 16:54
Ethylbenzene-d10	114	60-140		12/19/2016 16:54
1,2-DCB-d4	97	60-140		12/19/2016 16:54

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-4.5	1612781-002A	Soil	12/13/2016 15:00	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	12/17/2016 03:55
tert-Amyl methyl ether (TAME)	ND	0.0050	1	12/17/2016 03:55
Benzene	ND	0.0050	1	12/17/2016 03:55
Bromobenzene	ND	0.0050	1	12/17/2016 03:55
Bromochloromethane	ND	0.0050	1	12/17/2016 03:55
Bromodichloromethane	ND	0.0050	1	12/17/2016 03:55
Bromoform	ND	0.0050	1	12/17/2016 03:55
Bromomethane	ND	0.0050	1	12/17/2016 03:55
2-Butanone (MEK)	ND	0.020	1	12/17/2016 03:55
t-Butyl alcohol (TBA)	ND	0.050	1	12/17/2016 03:55
n-Butyl benzene	ND	0.0050	1	12/17/2016 03:55
sec-Butyl benzene	ND	0.0050	1	12/17/2016 03:55
tert-Butyl benzene	ND	0.0050	1	12/17/2016 03:55
Carbon Disulfide	ND	0.0050	1	12/17/2016 03:55
Carbon Tetrachloride	ND	0.0050	1	12/17/2016 03:55
Chlorobenzene	ND	0.0050	1	12/17/2016 03:55
Chloroethane	ND	0.0050	1	12/17/2016 03:55
Chloroform	ND	0.0050	1	12/17/2016 03:55
Chloromethane	ND	0.0050	1	12/17/2016 03:55
2-Chlorotoluene	ND	0.0050	1	12/17/2016 03:55
4-Chlorotoluene	ND	0.0050	1	12/17/2016 03:55
Dibromochloromethane	ND	0.0050	1	12/17/2016 03:55
1,2-Dibromo-3-chloropropane	ND	0.0040	1	12/17/2016 03:55
1,2-Dibromoethane (EDB)	ND	0.0040	1	12/17/2016 03:55
Dibromomethane	ND	0.0050	1	12/17/2016 03:55
1,2-Dichlorobenzene	ND	0.0050	1	12/17/2016 03:55
1,3-Dichlorobenzene	ND	0.0050	1	12/17/2016 03:55
1,4-Dichlorobenzene	ND	0.0050	1	12/17/2016 03:55
Dichlorodifluoromethane	ND	0.0050	1	12/17/2016 03:55
1,1-Dichloroethane	ND	0.0050	1	12/17/2016 03:55
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	12/17/2016 03:55
1,1-Dichloroethene	ND	0.0050	1	12/17/2016 03:55
cis-1,2-Dichloroethene	ND	0.0050	1	12/17/2016 03:55
trans-1,2-Dichloroethene	ND	0.0050	1	12/17/2016 03:55
1,2-Dichloropropane	ND	0.0050	1	12/17/2016 03:55
1,3-Dichloropropane	ND	0.0050	1	12/17/2016 03:55
2,2-Dichloropropane	ND	0.0050	1	12/17/2016 03:55

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-4.5	1612781-002A	Soil	12/13/2016 15:00	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/17/2016 03:55
cis-1,3-Dichloropropene	ND	0.0050	1	12/17/2016 03:55
trans-1,3-Dichloropropene	ND	0.0050	1	12/17/2016 03:55
Diisopropyl ether (DIPE)	ND	0.0050	1	12/17/2016 03:55
Ethylbenzene	ND	0.0050	1	12/17/2016 03:55
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/17/2016 03:55
Freon 113	ND	0.0050	1	12/17/2016 03:55
Hexachlorobutadiene	ND	0.0050	1	12/17/2016 03:55
Hexachloroethane	ND	0.0050	1	12/17/2016 03:55
2-Hexanone	ND	0.0050	1	12/17/2016 03:55
Isopropylbenzene	ND	0.0050	1	12/17/2016 03:55
4-Isopropyl toluene	ND	0.0050	1	12/17/2016 03:55
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/17/2016 03:55
Methylene chloride	ND	0.0050	1	12/17/2016 03:55
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/17/2016 03:55
Naphthalene	ND	0.0050	1	12/17/2016 03:55
n-Propyl benzene	ND	0.0050	1	12/17/2016 03:55
Styrene	ND	0.0050	1	12/17/2016 03:55
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/17/2016 03:55
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/17/2016 03:55
Tetrachloroethene	ND	0.0050	1	12/17/2016 03:55
Toluene	ND	0.0050	1	12/17/2016 03:55
1,2,3-Trichlorobenzene	ND	0.0050	1	12/17/2016 03:55
1,2,4-Trichlorobenzene	ND	0.0050	1	12/17/2016 03:55
1,1,1-Trichloroethane	ND	0.0050	1	12/17/2016 03:55
1,1,2-Trichloroethane	ND	0.0050	1	12/17/2016 03:55
Trichloroethene	ND	0.0050	1	12/17/2016 03:55
Trichlorofluoromethane	ND	0.0050	1	12/17/2016 03:55
1,2,3-Trichloropropane	ND	0.0050	1	12/17/2016 03:55
1,2,4-Trimethylbenzene	ND	0.0050	1	12/17/2016 03:55
1,3,5-Trimethylbenzene	ND	0.0050	1	12/17/2016 03:55
Vinyl Chloride	ND	0.0050	1	12/17/2016 03:55
Xylenes, Total	ND	0.0050	1	12/17/2016 03:55

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-4.5	1612781-002A	Soil	12/13/2016 15:00	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	99	70-130		12/17/2016 03:55
Toluene-d8	118	70-130		12/17/2016 03:55
4-BFB	82	70-130		12/17/2016 03:55
Benzene-d6	81	60-140		12/17/2016 03:55
Ethylbenzene-d10	109	60-140		12/17/2016 03:55
1,2-DCB-d4	89	60-140		12/17/2016 03:55

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-9.5	1612781-003A	Soil	12/13/2016 15:05	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	12/17/2016 04:36
tert-Amyl methyl ether (TAME)	ND	0.0050	1	12/17/2016 04:36
Benzene	ND	0.0050	1	12/17/2016 04:36
Bromobenzene	ND	0.0050	1	12/17/2016 04:36
Bromochloromethane	ND	0.0050	1	12/17/2016 04:36
Bromodichloromethane	ND	0.0050	1	12/17/2016 04:36
Bromoform	ND	0.0050	1	12/17/2016 04:36
Bromomethane	ND	0.0050	1	12/17/2016 04:36
2-Butanone (MEK)	ND	0.020	1	12/17/2016 04:36
t-Butyl alcohol (TBA)	ND	0.050	1	12/17/2016 04:36
n-Butyl benzene	ND	0.0050	1	12/17/2016 04:36
sec-Butyl benzene	ND	0.0050	1	12/17/2016 04:36
tert-Butyl benzene	ND	0.0050	1	12/17/2016 04:36
Carbon Disulfide	ND	0.0050	1	12/17/2016 04:36
Carbon Tetrachloride	ND	0.0050	1	12/17/2016 04:36
Chlorobenzene	ND	0.0050	1	12/17/2016 04:36
Chloroethane	ND	0.0050	1	12/17/2016 04:36
Chloroform	ND	0.0050	1	12/17/2016 04:36
Chloromethane	ND	0.0050	1	12/17/2016 04:36
2-Chlorotoluene	ND	0.0050	1	12/17/2016 04:36
4-Chlorotoluene	ND	0.0050	1	12/17/2016 04:36
Dibromochloromethane	ND	0.0050	1	12/17/2016 04:36
1,2-Dibromo-3-chloropropane	ND	0.0040	1	12/17/2016 04:36
1,2-Dibromoethane (EDB)	ND	0.0040	1	12/17/2016 04:36
Dibromomethane	ND	0.0050	1	12/17/2016 04:36
1,2-Dichlorobenzene	ND	0.0050	1	12/17/2016 04:36
1,3-Dichlorobenzene	ND	0.0050	1	12/17/2016 04:36
1,4-Dichlorobenzene	ND	0.0050	1	12/17/2016 04:36
Dichlorodifluoromethane	ND	0.0050	1	12/17/2016 04:36
1,1-Dichloroethane	ND	0.0050	1	12/17/2016 04:36
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	12/17/2016 04:36
1,1-Dichloroethene	ND	0.0050	1	12/17/2016 04:36
cis-1,2-Dichloroethene	ND	0.0050	1	12/17/2016 04:36
trans-1,2-Dichloroethene	ND	0.0050	1	12/17/2016 04:36
1,2-Dichloropropane	ND	0.0050	1	12/17/2016 04:36
1,3-Dichloropropane	ND	0.0050	1	12/17/2016 04:36
2,2-Dichloropropane	ND	0.0050	1	12/17/2016 04:36

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-9.5	1612781-003A	Soil	12/13/2016 15:05	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/17/2016 04:36
cis-1,3-Dichloropropene	ND	0.0050	1	12/17/2016 04:36
trans-1,3-Dichloropropene	ND	0.0050	1	12/17/2016 04:36
Diisopropyl ether (DIPE)	ND	0.0050	1	12/17/2016 04:36
Ethylbenzene	ND	0.0050	1	12/17/2016 04:36
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/17/2016 04:36
Freon 113	ND	0.0050	1	12/17/2016 04:36
Hexachlorobutadiene	ND	0.0050	1	12/17/2016 04:36
Hexachloroethane	ND	0.0050	1	12/17/2016 04:36
2-Hexanone	ND	0.0050	1	12/17/2016 04:36
Isopropylbenzene	ND	0.0050	1	12/17/2016 04:36
4-Isopropyl toluene	ND	0.0050	1	12/17/2016 04:36
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/17/2016 04:36
Methylene chloride	ND	0.0050	1	12/17/2016 04:36
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/17/2016 04:36
Naphthalene	ND	0.0050	1	12/17/2016 04:36
n-Propyl benzene	ND	0.0050	1	12/17/2016 04:36
Styrene	ND	0.0050	1	12/17/2016 04:36
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/17/2016 04:36
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/17/2016 04:36
Tetrachloroethene	ND	0.0050	1	12/17/2016 04:36
Toluene	ND	0.0050	1	12/17/2016 04:36
1,2,3-Trichlorobenzene	ND	0.0050	1	12/17/2016 04:36
1,2,4-Trichlorobenzene	ND	0.0050	1	12/17/2016 04:36
1,1,1-Trichloroethane	ND	0.0050	1	12/17/2016 04:36
1,1,2-Trichloroethane	ND	0.0050	1	12/17/2016 04:36
Trichloroethene	ND	0.0050	1	12/17/2016 04:36
Trichlorofluoromethane	ND	0.0050	1	12/17/2016 04:36
1,2,3-Trichloropropane	ND	0.0050	1	12/17/2016 04:36
1,2,4-Trimethylbenzene	ND	0.0050	1	12/17/2016 04:36
1,3,5-Trimethylbenzene	ND	0.0050	1	12/17/2016 04:36
Vinyl Chloride	ND	0.0050	1	12/17/2016 04:36
Xylenes, Total	ND	0.0050	1	12/17/2016 04:36

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-9.5	1612781-003A	Soil	12/13/2016 15:05	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	101	70-130		12/17/2016 04:36
Toluene-d8	119	70-130		12/17/2016 04:36
4-BFB	82	70-130		12/17/2016 04:36
Benzene-d6	83	60-140		12/17/2016 04:36
Ethylbenzene-d10	112	60-140		12/17/2016 04:36
1,2-DCB-d4	90	60-140		12/17/2016 04:36

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-14.5	1612781-004A	Soil	12/13/2016 15:10	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	12/17/2016 05:17
tert-Amyl methyl ether (TAME)	ND	0.0050	1	12/17/2016 05:17
Benzene	ND	0.0050	1	12/17/2016 05:17
Bromobenzene	ND	0.0050	1	12/17/2016 05:17
Bromochloromethane	ND	0.0050	1	12/17/2016 05:17
Bromodichloromethane	ND	0.0050	1	12/17/2016 05:17
Bromoform	ND	0.0050	1	12/17/2016 05:17
Bromomethane	ND	0.0050	1	12/17/2016 05:17
2-Butanone (MEK)	ND	0.020	1	12/17/2016 05:17
t-Butyl alcohol (TBA)	ND	0.050	1	12/17/2016 05:17
n-Butyl benzene	ND	0.0050	1	12/17/2016 05:17
sec-Butyl benzene	ND	0.0050	1	12/17/2016 05:17
tert-Butyl benzene	ND	0.0050	1	12/17/2016 05:17
Carbon Disulfide	ND	0.0050	1	12/17/2016 05:17
Carbon Tetrachloride	ND	0.0050	1	12/17/2016 05:17
Chlorobenzene	ND	0.0050	1	12/17/2016 05:17
Chloroethane	ND	0.0050	1	12/17/2016 05:17
Chloroform	ND	0.0050	1	12/17/2016 05:17
Chloromethane	ND	0.0050	1	12/17/2016 05:17
2-Chlorotoluene	ND	0.0050	1	12/17/2016 05:17
4-Chlorotoluene	ND	0.0050	1	12/17/2016 05:17
Dibromochloromethane	ND	0.0050	1	12/17/2016 05:17
1,2-Dibromo-3-chloropropane	ND	0.0040	1	12/17/2016 05:17
1,2-Dibromoethane (EDB)	ND	0.0040	1	12/17/2016 05:17
Dibromomethane	ND	0.0050	1	12/17/2016 05:17
1,2-Dichlorobenzene	ND	0.0050	1	12/17/2016 05:17
1,3-Dichlorobenzene	ND	0.0050	1	12/17/2016 05:17
1,4-Dichlorobenzene	ND	0.0050	1	12/17/2016 05:17
Dichlorodifluoromethane	ND	0.0050	1	12/17/2016 05:17
1,1-Dichloroethane	ND	0.0050	1	12/17/2016 05:17
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	12/17/2016 05:17
1,1-Dichloroethene	ND	0.0050	1	12/17/2016 05:17
cis-1,2-Dichloroethene	ND	0.0050	1	12/17/2016 05:17
trans-1,2-Dichloroethene	ND	0.0050	1	12/17/2016 05:17
1,2-Dichloropropane	ND	0.0050	1	12/17/2016 05:17
1,3-Dichloropropane	ND	0.0050	1	12/17/2016 05:17
2,2-Dichloropropane	ND	0.0050	1	12/17/2016 05:17

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-14.5	1612781-004A	Soil	12/13/2016 15:10	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/17/2016 05:17
cis-1,3-Dichloropropene	ND	0.0050	1	12/17/2016 05:17
trans-1,3-Dichloropropene	ND	0.0050	1	12/17/2016 05:17
Diisopropyl ether (DIPE)	ND	0.0050	1	12/17/2016 05:17
Ethylbenzene	ND	0.0050	1	12/17/2016 05:17
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/17/2016 05:17
Freon 113	ND	0.0050	1	12/17/2016 05:17
Hexachlorobutadiene	ND	0.0050	1	12/17/2016 05:17
Hexachloroethane	ND	0.0050	1	12/17/2016 05:17
2-Hexanone	ND	0.0050	1	12/17/2016 05:17
Isopropylbenzene	ND	0.0050	1	12/17/2016 05:17
4-Isopropyl toluene	ND	0.0050	1	12/17/2016 05:17
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/17/2016 05:17
Methylene chloride	ND	0.0050	1	12/17/2016 05:17
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/17/2016 05:17
Naphthalene	ND	0.0050	1	12/17/2016 05:17
n-Propyl benzene	ND	0.0050	1	12/17/2016 05:17
Styrene	ND	0.0050	1	12/17/2016 05:17
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/17/2016 05:17
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/17/2016 05:17
Tetrachloroethene	ND	0.0050	1	12/17/2016 05:17
Toluene	ND	0.0050	1	12/17/2016 05:17
1,2,3-Trichlorobenzene	ND	0.0050	1	12/17/2016 05:17
1,2,4-Trichlorobenzene	ND	0.0050	1	12/17/2016 05:17
1,1,1-Trichloroethane	ND	0.0050	1	12/17/2016 05:17
1,1,2-Trichloroethane	ND	0.0050	1	12/17/2016 05:17
Trichloroethene	ND	0.0050	1	12/17/2016 05:17
Trichlorofluoromethane	ND	0.0050	1	12/17/2016 05:17
1,2,3-Trichloropropane	ND	0.0050	1	12/17/2016 05:17
1,2,4-Trimethylbenzene	ND	0.0050	1	12/17/2016 05:17
1,3,5-Trimethylbenzene	ND	0.0050	1	12/17/2016 05:17
Vinyl Chloride	ND	0.0050	1	12/17/2016 05:17
Xylenes, Total	ND	0.0050	1	12/17/2016 05:17

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-14.5	1612781-004A	Soil	12/13/2016 15:10	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	100	70-130		12/17/2016 05:17
Toluene-d8	119	70-130		12/17/2016 05:17
4-BFB	80	70-130		12/17/2016 05:17
Benzene-d6	84	60-140		12/17/2016 05:17
Ethylbenzene-d10	111	60-140		12/17/2016 05:17
1,2-DCB-d4	91	60-140		12/17/2016 05:17

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-19.5	1612781-005A	Soil	12/13/2016 16:20	GC10	131454
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	12/19/2016 16:13
tert-Amyl methyl ether (TAME)	ND		0.0050	1	12/19/2016 16:13
Benzene	ND		0.0050	1	12/19/2016 16:13
Bromobenzene	ND		0.0050	1	12/19/2016 16:13
Bromochloromethane	ND		0.0050	1	12/19/2016 16:13
Bromodichloromethane	ND		0.0050	1	12/19/2016 16:13
Bromoform	ND		0.0050	1	12/19/2016 16:13
Bromomethane	ND		0.0050	1	12/19/2016 16:13
2-Butanone (MEK)	ND		0.020	1	12/19/2016 16:13
t-Butyl alcohol (TBA)	ND		0.050	1	12/19/2016 16:13
n-Butyl benzene	ND		0.0050	1	12/19/2016 16:13
sec-Butyl benzene	ND		0.0050	1	12/19/2016 16:13
tert-Butyl benzene	ND		0.0050	1	12/19/2016 16:13
Carbon Disulfide	ND		0.0050	1	12/19/2016 16:13
Carbon Tetrachloride	ND		0.0050	1	12/19/2016 16:13
Chlorobenzene	ND		0.0050	1	12/19/2016 16:13
Chloroethane	ND		0.0050	1	12/19/2016 16:13
Chloroform	ND		0.0050	1	12/19/2016 16:13
Chloromethane	ND		0.0050	1	12/19/2016 16:13
2-Chlorotoluene	ND		0.0050	1	12/19/2016 16:13
4-Chlorotoluene	ND		0.0050	1	12/19/2016 16:13
Dibromochloromethane	ND		0.0050	1	12/19/2016 16:13
1,2-Dibromo-3-chloropropane	ND		0.0040	1	12/19/2016 16:13
1,2-Dibromoethane (EDB)	ND		0.0040	1	12/19/2016 16:13
Dibromomethane	ND		0.0050	1	12/19/2016 16:13
1,2-Dichlorobenzene	ND		0.0050	1	12/19/2016 16:13
1,3-Dichlorobenzene	ND		0.0050	1	12/19/2016 16:13
1,4-Dichlorobenzene	ND		0.0050	1	12/19/2016 16:13
Dichlorodifluoromethane	ND		0.0050	1	12/19/2016 16:13
1,1-Dichloroethane	ND		0.0050	1	12/19/2016 16:13
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	12/19/2016 16:13
1,1-Dichloroethene	ND		0.0050	1	12/19/2016 16:13
cis-1,2-Dichloroethene	ND		0.0050	1	12/19/2016 16:13
trans-1,2-Dichloroethene	ND		0.0050	1	12/19/2016 16:13
1,2-Dichloropropane	ND		0.0050	1	12/19/2016 16:13
1,3-Dichloropropane	ND		0.0050	1	12/19/2016 16:13
2,2-Dichloropropane	ND		0.0050	1	12/19/2016 16:13

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-19.5	1612781-005A	Soil	12/13/2016 16:20	GC10	131454

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/19/2016 16:13
cis-1,3-Dichloropropene	ND	0.0050	1	12/19/2016 16:13
trans-1,3-Dichloropropene	ND	0.0050	1	12/19/2016 16:13
Diisopropyl ether (DIPE)	ND	0.0050	1	12/19/2016 16:13
Ethylbenzene	ND	0.0050	1	12/19/2016 16:13
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/19/2016 16:13
Freon 113	ND	0.0050	1	12/19/2016 16:13
Hexachlorobutadiene	ND	0.0050	1	12/19/2016 16:13
Hexachloroethane	ND	0.0050	1	12/19/2016 16:13
2-Hexanone	ND	0.0050	1	12/19/2016 16:13
Isopropylbenzene	ND	0.0050	1	12/19/2016 16:13
4-Isopropyl toluene	ND	0.0050	1	12/19/2016 16:13
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/19/2016 16:13
Methylene chloride	ND	0.0050	1	12/19/2016 16:13
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/19/2016 16:13
Naphthalene	ND	0.0050	1	12/19/2016 16:13
n-Propyl benzene	ND	0.0050	1	12/19/2016 16:13
Styrene	ND	0.0050	1	12/19/2016 16:13
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/19/2016 16:13
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/19/2016 16:13
Tetrachloroethene	ND	0.0050	1	12/19/2016 16:13
Toluene	ND	0.0050	1	12/19/2016 16:13
1,2,3-Trichlorobenzene	ND	0.0050	1	12/19/2016 16:13
1,2,4-Trichlorobenzene	ND	0.0050	1	12/19/2016 16:13
1,1,1-Trichloroethane	ND	0.0050	1	12/19/2016 16:13
1,1,2-Trichloroethane	ND	0.0050	1	12/19/2016 16:13
Trichloroethene	ND	0.0050	1	12/19/2016 16:13
Trichlorofluoromethane	ND	0.0050	1	12/19/2016 16:13
1,2,3-Trichloropropane	ND	0.0050	1	12/19/2016 16:13
1,2,4-Trimethylbenzene	ND	0.0050	1	12/19/2016 16:13
1,3,5-Trimethylbenzene	ND	0.0050	1	12/19/2016 16:13
Vinyl Chloride	ND	0.0050	1	12/19/2016 16:13
Xylenes, Total	ND	0.0050	1	12/19/2016 16:13

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-19.5	1612781-005A	Soil	12/13/2016 16:20	GC10	131454

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	105	70-130		12/19/2016 16:13
Toluene-d8	114	70-130		12/19/2016 16:13
4-BFB	95	70-130		12/19/2016 16:13
Benzene-d6	77	60-140		12/19/2016 16:13
Ethylbenzene-d10	97	60-140		12/19/2016 16:13
1,2-DCB-d4	88	60-140		12/19/2016 16:13

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-7.5	1612781-007A	Soil	12/13/2016 12:40	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	12/19/2016 11:39
tert-Amyl methyl ether (TAME)	ND	0.0050	1	12/19/2016 11:39
Benzene	ND	0.0050	1	12/19/2016 11:39
Bromobenzene	ND	0.0050	1	12/19/2016 11:39
Bromochloromethane	ND	0.0050	1	12/19/2016 11:39
Bromodichloromethane	ND	0.0050	1	12/19/2016 11:39
Bromoform	ND	0.0050	1	12/19/2016 11:39
Bromomethane	ND	0.0050	1	12/19/2016 11:39
2-Butanone (MEK)	ND	0.020	1	12/19/2016 11:39
t-Butyl alcohol (TBA)	ND	0.050	1	12/19/2016 11:39
n-Butyl benzene	ND	0.0050	1	12/19/2016 11:39
sec-Butyl benzene	ND	0.0050	1	12/19/2016 11:39
tert-Butyl benzene	ND	0.0050	1	12/19/2016 11:39
Carbon Disulfide	ND	0.0050	1	12/19/2016 11:39
Carbon Tetrachloride	ND	0.0050	1	12/19/2016 11:39
Chlorobenzene	ND	0.0050	1	12/19/2016 11:39
Chloroethane	ND	0.0050	1	12/19/2016 11:39
Chloroform	ND	0.0050	1	12/19/2016 11:39
Chloromethane	ND	0.0050	1	12/19/2016 11:39
2-Chlorotoluene	ND	0.0050	1	12/19/2016 11:39
4-Chlorotoluene	ND	0.0050	1	12/19/2016 11:39
Dibromochloromethane	ND	0.0050	1	12/19/2016 11:39
1,2-Dibromo-3-chloropropane	ND	0.0040	1	12/19/2016 11:39
1,2-Dibromoethane (EDB)	ND	0.0040	1	12/19/2016 11:39
Dibromomethane	ND	0.0050	1	12/19/2016 11:39
1,2-Dichlorobenzene	ND	0.0050	1	12/19/2016 11:39
1,3-Dichlorobenzene	ND	0.0050	1	12/19/2016 11:39
1,4-Dichlorobenzene	ND	0.0050	1	12/19/2016 11:39
Dichlorodifluoromethane	ND	0.0050	1	12/19/2016 11:39
1,1-Dichloroethane	ND	0.0050	1	12/19/2016 11:39
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	12/19/2016 11:39
1,1-Dichloroethene	ND	0.0050	1	12/19/2016 11:39
cis-1,2-Dichloroethene	ND	0.0050	1	12/19/2016 11:39
trans-1,2-Dichloroethene	ND	0.0050	1	12/19/2016 11:39
1,2-Dichloropropane	ND	0.0050	1	12/19/2016 11:39
1,3-Dichloropropane	ND	0.0050	1	12/19/2016 11:39
2,2-Dichloropropane	ND	0.0050	1	12/19/2016 11:39

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-7.5	1612781-007A	Soil	12/13/2016 12:40	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/19/2016 11:39
cis-1,3-Dichloropropene	ND	0.0050	1	12/19/2016 11:39
trans-1,3-Dichloropropene	ND	0.0050	1	12/19/2016 11:39
Diisopropyl ether (DIPE)	ND	0.0050	1	12/19/2016 11:39
Ethylbenzene	ND	0.0050	1	12/19/2016 11:39
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/19/2016 11:39
Freon 113	ND	0.0050	1	12/19/2016 11:39
Hexachlorobutadiene	ND	0.0050	1	12/19/2016 11:39
Hexachloroethane	ND	0.0050	1	12/19/2016 11:39
2-Hexanone	ND	0.0050	1	12/19/2016 11:39
Isopropylbenzene	ND	0.0050	1	12/19/2016 11:39
4-Isopropyl toluene	ND	0.0050	1	12/19/2016 11:39
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/19/2016 11:39
Methylene chloride	ND	0.0050	1	12/19/2016 11:39
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/19/2016 11:39
Naphthalene	ND	0.0050	1	12/19/2016 11:39
n-Propyl benzene	ND	0.0050	1	12/19/2016 11:39
Styrene	ND	0.0050	1	12/19/2016 11:39
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/19/2016 11:39
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/19/2016 11:39
Tetrachloroethene	ND	0.0050	1	12/19/2016 11:39
Toluene	ND	0.0050	1	12/19/2016 11:39
1,2,3-Trichlorobenzene	ND	0.0050	1	12/19/2016 11:39
1,2,4-Trichlorobenzene	ND	0.0050	1	12/19/2016 11:39
1,1,1-Trichloroethane	ND	0.0050	1	12/19/2016 11:39
1,1,2-Trichloroethane	ND	0.0050	1	12/19/2016 11:39
Trichloroethene	ND	0.0050	1	12/19/2016 11:39
Trichlorofluoromethane	ND	0.0050	1	12/19/2016 11:39
1,2,3-Trichloropropane	ND	0.0050	1	12/19/2016 11:39
1,2,4-Trimethylbenzene	ND	0.0050	1	12/19/2016 11:39
1,3,5-Trimethylbenzene	ND	0.0050	1	12/19/2016 11:39
Vinyl Chloride	ND	0.0050	1	12/19/2016 11:39
Xylenes, Total	ND	0.0050	1	12/19/2016 11:39

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-7.5	1612781-007A	Soil	12/13/2016 12:40	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	104	70-130		12/19/2016 11:39
Toluene-d8	114	70-130		12/19/2016 11:39
4-BFB	122	70-130		12/19/2016 11:39
Benzene-d6	67	60-140		12/19/2016 11:39
Ethylbenzene-d10	82	60-140		12/19/2016 11:39
1,2-DCB-d4	82	60-140		12/19/2016 11:39

Analyst(s): AK



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-16.0	1612781-008A	Soil	12/13/2016 12:45	GC10	131341
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	12/21/2016 12:49	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	12/21/2016 12:49	
Benzene	ND	0.0050	1	12/21/2016 12:49	
Bromobenzene	ND	0.0050	1	12/21/2016 12:49	
Bromochloromethane	ND	0.0050	1	12/21/2016 12:49	
Bromodichloromethane	ND	0.0050	1	12/21/2016 12:49	
Bromoform	ND	0.0050	1	12/21/2016 12:49	
Bromomethane	ND	0.0050	1	12/21/2016 12:49	
2-Butanone (MEK)	ND	0.020	1	12/21/2016 12:49	
t-Butyl alcohol (TBA)	ND	0.050	1	12/21/2016 12:49	
n-Butyl benzene	ND	0.0050	1	12/21/2016 12:49	
sec-Butyl benzene	ND	0.0050	1	12/21/2016 12:49	
tert-Butyl benzene	ND	0.0050	1	12/21/2016 12:49	
Carbon Disulfide	ND	0.0050	1	12/21/2016 12:49	
Carbon Tetrachloride	ND	0.0050	1	12/21/2016 12:49	
Chlorobenzene	ND	0.0050	1	12/21/2016 12:49	
Chloroethane	ND	0.0050	1	12/21/2016 12:49	
Chloroform	ND	0.0050	1	12/21/2016 12:49	
Chloromethane	ND	0.0050	1	12/21/2016 12:49	
2-Chlorotoluene	ND	0.0050	1	12/21/2016 12:49	
4-Chlorotoluene	ND	0.0050	1	12/21/2016 12:49	
Dibromochloromethane	ND	0.0050	1	12/21/2016 12:49	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	12/21/2016 12:49	
1,2-Dibromoethane (EDB)	ND	0.0040	1	12/21/2016 12:49	
Dibromomethane	ND	0.0050	1	12/21/2016 12:49	
1,2-Dichlorobenzene	ND	0.0050	1	12/21/2016 12:49	
1,3-Dichlorobenzene	ND	0.0050	1	12/21/2016 12:49	
1,4-Dichlorobenzene	ND	0.0050	1	12/21/2016 12:49	
Dichlorodifluoromethane	ND	0.0050	1	12/21/2016 12:49	
1,1-Dichloroethane	ND	0.0050	1	12/21/2016 12:49	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	12/21/2016 12:49	
1,1-Dichloroethene	ND	0.0050	1	12/21/2016 12:49	
cis-1,2-Dichloroethene	ND	0.0050	1	12/21/2016 12:49	
trans-1,2-Dichloroethene	ND	0.0050	1	12/21/2016 12:49	
1,2-Dichloropropane	ND	0.0050	1	12/21/2016 12:49	
1,3-Dichloropropane	ND	0.0050	1	12/21/2016 12:49	
2,2-Dichloropropane	ND	0.0050	1	12/21/2016 12:49	

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-16.0	1612781-008A	Soil	12/13/2016 12:45	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/21/2016 12:49
cis-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 12:49
trans-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 12:49
Diisopropyl ether (DIPE)	ND	0.0050	1	12/21/2016 12:49
Ethylbenzene	ND	0.0050	1	12/21/2016 12:49
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/21/2016 12:49
Freon 113	ND	0.0050	1	12/21/2016 12:49
Hexachlorobutadiene	ND	0.0050	1	12/21/2016 12:49
Hexachloroethane	ND	0.0050	1	12/21/2016 12:49
2-Hexanone	ND	0.0050	1	12/21/2016 12:49
Isopropylbenzene	ND	0.0050	1	12/21/2016 12:49
4-Isopropyl toluene	ND	0.0050	1	12/21/2016 12:49
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/21/2016 12:49
Methylene chloride	ND	0.0050	1	12/21/2016 12:49
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/21/2016 12:49
Naphthalene	ND	0.0050	1	12/21/2016 12:49
n-Propyl benzene	ND	0.0050	1	12/21/2016 12:49
Styrene	ND	0.0050	1	12/21/2016 12:49
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 12:49
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 12:49
Tetrachloroethene	ND	0.0050	1	12/21/2016 12:49
Toluene	ND	0.0050	1	12/21/2016 12:49
1,2,3-Trichlorobenzene	ND	0.0050	1	12/21/2016 12:49
1,2,4-Trichlorobenzene	ND	0.0050	1	12/21/2016 12:49
1,1,1-Trichloroethane	ND	0.0050	1	12/21/2016 12:49
1,1,2-Trichloroethane	ND	0.0050	1	12/21/2016 12:49
Trichloroethene	ND	0.0050	1	12/21/2016 12:49
Trichlorofluoromethane	ND	0.0050	1	12/21/2016 12:49
1,2,3-Trichloropropane	ND	0.0050	1	12/21/2016 12:49
1,2,4-Trimethylbenzene	ND	0.0050	1	12/21/2016 12:49
1,3,5-Trimethylbenzene	ND	0.0050	1	12/21/2016 12:49
Vinyl Chloride	ND	0.0050	1	12/21/2016 12:49
Xylenes, Total	ND	0.0050	1	12/21/2016 12:49

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/19/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-16.0	1612781-008A	Soil	12/13/2016 12:45	GC10	131341

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	103	70-130		12/21/2016 12:49
Toluene-d8	115	70-130		12/21/2016 12:49
4-BFB	82	70-130		12/21/2016 12:49
Benzene-d6	88	60-140		12/21/2016 12:49
Ethylbenzene-d10	113	60-140		12/21/2016 12:49
1,2-DCB-d4	92	60-140		12/21/2016 12:49

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/21/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
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
P1-24.5	1612781-001A	Soil	12/13/2016 15:50	GC19	131352

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	12/18/2016 05:38
MTBE	---	0.050	1	12/18/2016 05:38
Benzene	---	0.0050	1	12/18/2016 05:38
Toluene	---	0.0050	1	12/18/2016 05:38
Ethylbenzene	---	0.0050	1	12/18/2016 05:38
Xylenes	---	0.015	1	12/18/2016 05:38

Surrogates	REC (%)	Limits
2-Fluorotoluene	108	69-117

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-4.5	1612781-002A	Soil	12/13/2016 15:00	GC19	131352

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	12/18/2016 05:08
MTBE	---	0.050	1	12/18/2016 05:08
Benzene	---	0.0050	1	12/18/2016 05:08
Toluene	---	0.0050	1	12/18/2016 05:08
Ethylbenzene	---	0.0050	1	12/18/2016 05:08
Xylenes	---	0.015	1	12/18/2016 05:08

Surrogates	REC (%)	Limits
2-Fluorotoluene	103	69-117

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/21/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
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
P2-9.5	1612781-003A	Soil	12/13/2016 15:05	GC19	131352

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	12/18/2016 04:39
MTBE	---	0.050	1	12/18/2016 04:39
Benzene	---	0.0050	1	12/18/2016 04:39
Toluene	---	0.0050	1	12/18/2016 04:39
Ethylbenzene	---	0.0050	1	12/18/2016 04:39
Xylenes	---	0.015	1	12/18/2016 04:39

Surrogates	REC (%)	Limits
2-Fluorotoluene	101	69-117

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-14.5	1612781-004A	Soil	12/13/2016 15:10	GC19	131352

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	12/18/2016 03:12
MTBE	---	0.050	1	12/18/2016 03:12
Benzene	---	0.0050	1	12/18/2016 03:12
Toluene	---	0.0050	1	12/18/2016 03:12
Ethylbenzene	---	0.0050	1	12/18/2016 03:12
Xylenes	---	0.015	1	12/18/2016 03:12

Surrogates	REC (%)	Limits
2-Fluorotoluene	101	69-117

Analyst(s): IA



Analytical Report

Client: P & D Environmental	WorkOrder: 1612781
Date Received: 12/15/16 15:30	Extraction Method: SW5030B
Date Prepared: 12/15/16-12/21/16	Analytical Method: SW8021B/8015Bm
Project: 0741; 2868 Hannah St. Oakland, CA	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
P2-19.5	1612781-005A	Soil	12/13/2016 16:20	GC19	131352

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	12/18/2016 02:42
MTBE	---	0.050	1	12/18/2016 02:42
Benzene	---	0.0050	1	12/18/2016 02:42
Toluene	---	0.0050	1	12/18/2016 02:42
Ethylbenzene	---	0.0050	1	12/18/2016 02:42
Xylenes	---	0.015	1	12/18/2016 02:42

Surrogates	REC (%)	Limits
2-Fluorotoluene	91	69-117

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-7.5	1612781-007A	Soil	12/13/2016 12:40	GC19	131602

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	1.7	1.0	1	12/22/2016 09:36
MTBE	---	0.050	1	12/22/2016 09:36
Benzene	---	0.0050	1	12/22/2016 09:36
Toluene	---	0.0050	1	12/22/2016 09:36
Ethylbenzene	---	0.0050	1	12/22/2016 09:36
Xylenes	---	0.015	1	12/22/2016 09:36

Surrogates	REC (%)	Limits
2-Fluorotoluene	94	69-117

Analyst(s): IA

Analytical Comments: d7



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16-12/21/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
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
P11-16.0	1612781-008A	Soil	12/13/2016 12:45	GC19	131352

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	12/18/2016 04:10
MTBE	---	0.050	1	12/18/2016 04:10
Benzene	---	0.0050	1	12/18/2016 04:10
Toluene	---	0.0050	1	12/18/2016 04:10
Ethylbenzene	---	0.0050	1	12/18/2016 04:10
Xylenes	---	0.015	1	12/18/2016 04:10

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	100	69-117	12/18/2016 04:10

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
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
P1-24.5	1612781-001A	Soil	12/13/2016 15:50	GC6A	131363

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	12/16/2016 14:13
TPH-Motor Oil (C18-C36)	ND	5.0	1	12/16/2016 14:13
TPH-Bunker Oil (C10-C36)	ND	5.0	1	12/16/2016 14:13

Surrogates	REC (%)	Limits	Date Analyzed
C9	103	72-114	12/16/2016 14:13

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-4.5	1612781-002A	Soil	12/13/2016 15:00	GC6A	131363

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	12/16/2016 23:21
TPH-Motor Oil (C18-C36)	ND	5.0	1	12/16/2016 23:21
TPH-Bunker Oil (C10-C36)	ND	5.0	1	12/16/2016 23:21

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	72-114	12/16/2016 23:21

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-9.5	1612781-003A	Soil	12/13/2016 15:05	GC6A	131363

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	12/16/2016 22:04
TPH-Motor Oil (C18-C36)	ND	5.0	1	12/16/2016 22:04
TPH-Bunker Oil (C10-C36)	ND	5.0	1	12/16/2016 22:04

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	72-114	12/16/2016 22:04

Analyst(s): TK

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
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
P2-14.5	1612781-004A	Soil	12/13/2016 15:10	GC6A	131363

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	12/16/2016 14:52
TPH-Motor Oil (C18-C36)	ND	5.0	1	12/16/2016 14:52
TPH-Bunker Oil (C10-C36)	ND	5.0	1	12/16/2016 14:52

Surrogates	REC (%)	Limits	Date Analyzed
C9	99	72-114	12/16/2016 14:52

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-19.5	1612781-005A	Soil	12/13/2016 16:20	GC6A	131363

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	12/16/2016 19:29
TPH-Motor Oil (C18-C36)	ND	5.0	1	12/16/2016 19:29
TPH-Bunker Oil (C10-C36)	ND	5.0	1	12/16/2016 19:29

Surrogates	REC (%)	Limits	Date Analyzed
C9	98	72-114	12/16/2016 19:29

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-7.5	1612781-007A	Soil	12/13/2016 12:40	GC6A	131363

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1000	100	100	12/17/2016 00:39
TPH-Motor Oil (C18-C36)	1300	500	100	12/17/2016 00:39
TPH-Bunker Oil (C10-C36)	1500	500	100	12/17/2016 00:39

Surrogates	REC (%)	Limits	Date Analyzed
C9	104	72-114	12/17/2016 00:39

Analyst(s): TK

Analytical Comments: e7,e2

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/15/16
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
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
P11-16.0	1612781-008A	Soil	12/13/2016 12:45	GC6A	131363

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	12/16/2016 20:46
TPH-Motor Oil (C18-C36)	ND	5.0	1	12/16/2016 20:46
TPH-Bunker Oil (C10-C36)	ND	5.0	1	12/16/2016 20:46

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	72-114	12/16/2016 20:46

Analyst(s): TK



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/15/16 - 12/16/16
Instrument: GC10
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland, CA


WorkOrder: 1612781
BatchID: 131341
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131341
 1612737-001AMS/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	0.0398	0.0050	0.050	-	80	53-116
Benzene	ND	0.0482	0.0050	0.050	-	96	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	0.146	0.050	0.20	-	73	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	0.0534	0.0050	0.050	-	107	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	0.0468	0.0040	0.050	-	94	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	0.0430	0.0040	0.050	-	86	58-135
1,1-Dichloroethene	ND	0.0518	0.0050	0.050	-	104	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: 12/15/16
Date Analyzed: 12/15/16 - 12/16/16
Instrument: GC10
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
BatchID: 131341
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131341
 1612737-001AMS/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	0.0445	0.0050	0.050	-	89	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0428	0.0050	0.050	-	85	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	0.0406	0.0050	0.050	-	81	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	0.0552	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	0.0535	0.0050	0.050	-	107	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: 12/15/16
Date Analyzed: 12/15/16 - 12/16/16
Instrument: GC10
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
BatchID: 131341
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131341
 1612737-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.128	0.129		0.12	102	103	70-130
Toluene-d8	0.147	0.149		0.12	117	119	70-130
4-BFB	0.0117	0.0127		0.012	94	102	70-130
Benzene-d6	0.0898	0.0849		0.10	90	85	60-140
Ethylbenzene-d10	0.121	0.118		0.10	121	118	60-140
1,2-DCB-d4	0.0994	0.0958		0.10	99	96	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)	0.0334	0.0341	0.050	ND	67	68	53-116	2.21	20
Benzene	0.0396	0.0402	0.050	ND	79	80	63-137	1.40	20
t-Butyl alcohol (TBA)	0.131	0.134	0.20	ND	65	67	41-135	2.48	20
Chlorobenzene	0.0439	0.0436	0.050	ND	88	87	77-121	0.796	20
1,2-Dibromoethane (EDB)	0.0387	0.0393	0.050	ND	77	79	67-119	1.69	20
1,2-Dichloroethane (1,2-DCA)	0.0398	0.0381	0.050	ND	80	76	58-135	4.26	20
1,1-Dichloroethene	0.0455	0.0426	0.050	ND	91	85	42-145	6.55	20
Diisopropyl ether (DIPE)	0.0404	0.0382	0.050	ND	81	76	52-129	5.61	20
Ethyl tert-butyl ether (ETBE)	0.0376	0.0367	0.050	ND	75	73	53-125	2.49	20
Methyl-t-butyl ether (MTBE)	0.0353	0.0356	0.050	ND	71	71	58-122	0	20
Toluene	0.0440	0.0439	0.050	ND	88	88	76-130	0	20
Trichloroethene	0.0451	0.0440	0.050	ND	90	88	72-132	2.39	20
Surrogate Recovery									
Dibromofluoromethane	0.135	0.133	0.12		108	106	70-130	1.47	20
Toluene-d8	0.143	0.144	0.12		114	115	70-130	0.942	20
4-BFB	0.0128	0.0142	0.012		103	114	70-130	10.2	20
Benzene-d6	0.0725	0.0729	0.10		73	73	60-140	0	20
Ethylbenzene-d10	0.0982	0.0930	0.10		98	93	60-140	5.49	20
1,2-DCB-d4	0.0863	0.0839	0.10		86	84	60-140	2.80	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/19/16
Date Analyzed: 12/19/16
Instrument: GC10
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland, CA


WorkOrder: 1612781
BatchID: 131454
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131454
 1612907-003AMS/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	0.0358	0.0050	0.050	-	72	53-116
Benzene	ND	0.0437	0.0050	0.050	-	87	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	0.139	0.050	0.20	-	69	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	0.0480	0.0050	0.050	-	96	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	0.0419	0.0040	0.050	-	84	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	0.0404	0.0040	0.050	-	81	58-135
1,1-Dichloroethene	ND	0.0465	0.0050	0.050	-	93	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: 12/19/16
Date Analyzed: 12/19/16
Instrument: GC10
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
BatchID: 131454
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131454
 1612907-003AMS/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	0.0418	0.0050	0.050	-	84	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0391	0.0050	0.050	-	78	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	0.0377	0.0050	0.050	-	75	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	0.0495	0.0050	0.050	-	99	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	0.0478	0.0050	0.050	-	96	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: 12/19/16
Date Analyzed: 12/19/16
Instrument: GC10
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
BatchID: 131454
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131454
 1612907-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.128	0.130		0.12	102	104	70-130
Toluene-d8	0.151	0.148		0.12	121	118	70-130
4-BFB	0.0115	0.0135		0.012	92	108	70-130
Benzene-d6	0.0835	0.0799		0.10	83	80	60-140
Ethylbenzene-d10	0.119	0.109		0.10	119	109	60-140
1,2-DCB-d4	0.0904	0.0900		0.10	90	90	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)	0.0334	0.0343	0.050	ND	67	69	53-116	2.46	20
Benzene	0.0412	0.0425	0.050	ND	82	85	63-137	3.23	20
t-Butyl alcohol (TBA)	0.128	0.132	0.20	ND	64	66	41-135	2.89	20
Chlorobenzene	0.0419	0.0433	0.050	ND	84	87	77-121	3.36	20
1,2-Dibromoethane (EDB)	0.0361	0.0374	0.050	ND	72	75	67-119	3.47	20
1,2-Dichloroethane (1,2-DCA)	0.0375	0.0378	0.050	ND	75	76	58-135	0.605	20
1,1-Dichloroethene	0.0387	0.0404	0.050	ND	77	81	42-145	4.38	20
Diisopropyl ether (DIPE)	0.0376	0.0379	0.050	ND	75	76	52-129	0.689	20
Ethyl tert-butyl ether (ETBE)	0.0370	0.0376	0.050	ND	74	75	53-125	1.54	20
Methyl-t-butyl ether (MTBE)	0.0346	0.0356	0.050	ND	69	71	58-122	3.04	20
Toluene	0.0441	0.0464	0.050	ND	88	93	76-130	4.99	20
Trichloroethene	0.0414	0.0429	0.050	ND	83	86	72-132	3.49	20
Surrogate Recovery									
Dibromofluoromethane	0.130	0.130	0.12		104	104	70-130	0	20
Toluene-d8	0.150	0.151	0.12		120	121	70-130	0.804	20
4-BFB	0.0119	0.0121	0.012		95	96	70-130	1.64	20
Benzene-d6	0.0736	0.0770	0.10		74	77	60-140	4.54	20
Ethylbenzene-d10	0.0937	0.101	0.10		94	101	60-140	7.30	20
1,2-DCB-d4	0.0802	0.0810	0.10		80	81	60-140	1.02	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/16/16 - 12/17/16
Instrument: GC19
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
BatchID: 131352
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-131352
 1612736-001AMS/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	0.577	0.40	0.60	-	96	89-118
MTBE	ND	0.0989	0.050	0.10	-	99	68-116
Benzene	ND	0.106	0.0050	0.10	-	106	85-118
Toluene	ND	0.105	0.0050	0.10	-	105	87-121
Ethylbenzene	ND	0.105	0.0050	0.10	-	105	91-124
Xylenes	ND	0.311	0.015	0.30	-	104	92-126
Surrogate Recovery							
2-Fluorotoluene	0.114	0.105		0.10	114	105	88-119

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.544	0.543	0.60	ND	91	90	66-122	0.210	20
MTBE	0.0790	0.0796	0.10	ND	79	80	58-106	0.691	20
Benzene	0.0949	0.0999	0.10	ND	95	100	63-116	5.11	20
Toluene	0.0948	0.0996	0.10	ND	93	98	66-118	4.98	20
Ethylbenzene	0.0968	0.0991	0.10	ND	97	99	69-121	2.37	20
Xylenes	0.288	0.295	0.30	ND	96	98	70-125	2.23	20
Surrogate Recovery									
2-Fluorotoluene	0.0968	0.100	0.10		97	100	69-117	3.66	20



Quality Control Report

Client: P & D Environmental	WorkOrder: 1612781
Date Prepared: 12/20/16	BatchID: 131602
Date Analyzed: 12/21/16	Extraction Method: SW5030B
Instrument: GC19	Analytical Method: SW8021B/8015Bm
Matrix: Soil	Unit: mg/Kg
Project: 0741; 2868 Hannah St. Oakland, CA	Sample ID: MB/LCS-131602

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.592	0.40	0.60	-	99	89-118
MTBE	ND	0.100	0.050	0.10	-	100	68-116
Benzene	ND	0.123	0.0050	0.10	-	123, F2	85-118
Toluene	ND	0.122	0.0050	0.10	-	122, F2	87-121
Ethylbenzene	ND	0.122	0.0050	0.10	-	122	91-124
Xylenes	ND	0.360	0.015	0.30	-	120	92-126
Surrogate Recovery							
2-Fluorotoluene	0.106	0.123		0.10	106	123, F2	88-119



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/15/16
Date Analyzed: 12/16/16
Instrument: GC11A, GC9a
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland, CA

WorkOrder: 1612781
BatchID: 131363
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-131363
 1612780-001AMS/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	38.1	1.0	40	-	95	91-127
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	23.5	23.6		25	94	94	74-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	54.8	55.2	40	13.28	104	105	74-143	0.713	30
Surrogate Recovery									
C9	24.9	24.9	25		100	100	72-114	0	30



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1612781

ClientCode: PDEO

WaterTrax WriteOn EDF Excel EQUS Email HardCopy ThirdParty J-flag

Report to:

Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Bill to:

Email: lab@pdenviro.com; Paul.King@pdenviro.co
cc/3rd Party:
PO:
ProjectNo: 0741; 2868 Hannah St. Oakland, CA

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days;

Date Received: 12/15/2016

Date Logged: 12/15/2016

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	
1612781-001	P1-24.5	Soil	12/13/2016 15:50	<input type="checkbox"/>	A	A	A										
1612781-002	P2-4.5	Soil	12/13/2016 15:00	<input type="checkbox"/>	A	A	A										
1612781-003	P2-9.5	Soil	12/13/2016 15:05	<input type="checkbox"/>	A	A	A										
1612781-004	P2-14.5	Soil	12/13/2016 15:10	<input type="checkbox"/>	A	A	A										
1612781-005	P2-19.5	Soil	12/13/2016 16:20	<input type="checkbox"/>	A	A	A										
1612781-007	P11-7.5	Soil	12/13/2016 12:40	<input type="checkbox"/>	A	A	A										
1612781-008	P11-16.0	Soil	12/13/2016 12:45	<input type="checkbox"/>	A	A	A										

Test Legend:

1	8260B_S	2	G-MBTEX_S	3	TPH_S	4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 007A, 008A contain testgroup Multi Range_S.

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

Project: 0741; 2868 Hannah St. Oakland, CA

Work Order: 1612781

Client Contact: Paul King

QC Level: LEVEL 2

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

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

Date Logged: 12/15/2016

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
1612781-001A	P1-24.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 15:50	5 days		<input type="checkbox"/>	
1612781-002A	P2-4.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 15:00	5 days		<input type="checkbox"/>	
1612781-003A	P2-9.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 15:05	5 days		<input type="checkbox"/>	
1612781-004A	P2-14.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 15:10	5 days		<input type="checkbox"/>	
1612781-005A	P2-19.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 16:20	5 days		<input type="checkbox"/>	
1612781-006A	P2-24.5	Soil		1	Acetate Liner	<input type="checkbox"/>	12/13/2016 16:25			<input checked="" type="checkbox"/>	
1612781-007A	P11-7.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 12:40	5 days		<input type="checkbox"/>	
1612781-008A	P11-16.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 12:45	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: 0741; 2868 Hannah St. Oakland, CA

Work Order: 1612781

Client Contact: Paul King

QC Level: LEVEL 2

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

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

Date Logged: 12/15/2016

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
1612781-008A	P11-16.0	Soil	SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	12/13/2016 12:45	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.

CHAIN OF CUSTODY RECORD

1412781

P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

PROJECT NUMBER:

0741

PROJECT NAME:

2268 Hannah St.
Oakland, CA

NUMBER OF CONTAINERS

ANALYSIS(ES):

TTH-(G.D., B.O., MO)
VOCS BY EPA 826013

PRESERVATIVE

REMARKS

SAMPLED BY: (PRINTED & SIGNATURE)

MICHAEL BASS-DESCHENES *Michael Bass-Deschenes*

SAMPLE NUMBER

DATE

TIME

TYPE

SAMPLE LOCATION

1

X

X

ICE

NORMAL TAT

P1-24.5

12-13-16

1550

Soil

P2-4.5

12-13-16

1500

Soil

P2-9.5

"

1505

"

P2-14.5

"

1510

"

P2-19.5

"

1620

"

P2-24.5

"

1625

"

NORMAL TAT
↓
HOLD

P11-7.5

12-13-16

1240

Soil

P11-16.0

"

1245

"

ICE

NORMAL TAT

"

NORMAL TAT

RELINQUISHED BY: (SIGNATURE)

Michael Bass-Deschenes

DATE

TIME

12-15-16

1008

RECEIVED BY: (SIGNATURE)

[Signature]

Total No. of Samples (This Shipment)

8

Total No. of Containers (This Shipment)

8

LABORATORY:

Mc CAMPBELL ANALYTICAL, INC

RELINQUISHED BY: (SIGNATURE)

[Signature]

DATE

TIME

12-15-16

1532

RECEIVED BY: (SIGNATURE)

[Signature]

LABORATORY CONTACT:

ANGELA RADELLS (877) 252-9262

LABORATORY PHONE NUMBER:

RELINQUISHED BY: (SIGNATURE)

DATE

TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE)

[Signature]

SAMPLE ANALYSIS REQUEST SHEET

ATTACHED: () YES (X) NO

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

REMARKS:

5.2



Sample Receipt Checklist

Client Name: **P & D Environmental**
 Project Name: **0741; 2868 Hannah St. Oakland, CA**
 WorkOrder No: **1612781** Matrix: Soil
 Carrier: David Shaver (MAI Courier)

Date and Time Received: **12/15/2016 15:30**
 Date Logged: **12/15/2016**
 Received by: Agustina Venegas
 Logged by: Agustina Venegas

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: 5.2°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: 1612926

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Michael Deschenes

Project P.O.:

Project Name: 0741; 2868 Hannah St. Oakland CA

Project Received: 12/15/2016

Analytical Report reviewed & approved for release on 12/27/2016 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: 0741; 2868 Hannah St. Oakland CA
WorkOrder: 1612926

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: 0741; 2868 Hannah St. Oakland CA
WorkOrder: 1612926

Analytical Qualifiers

S surrogate spike recovery outside accepted recovery limits
c2 surrogate recovery outside of the control limits due to matrix interference.
d7 strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9 no recognizable pattern
e3 aged diesel is significant



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/19/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612926
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3-7.0	1612926-001A	Soil	12/14/2016 15:25	GC10	131509
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	12/21/2016 09:17
tert-Amyl methyl ether (TAME)	ND		0.0050	1	12/21/2016 09:17
Benzene	ND		0.0050	1	12/21/2016 09:17
Bromobenzene	ND		0.0050	1	12/21/2016 09:17
Bromochloromethane	ND		0.0050	1	12/21/2016 09:17
Bromodichloromethane	ND		0.0050	1	12/21/2016 09:17
Bromoform	ND		0.0050	1	12/21/2016 09:17
Bromomethane	ND		0.0050	1	12/21/2016 09:17
2-Butanone (MEK)	ND		0.020	1	12/21/2016 09:17
t-Butyl alcohol (TBA)	ND		0.050	1	12/21/2016 09:17
n-Butyl benzene	ND		0.0050	1	12/21/2016 09:17
sec-Butyl benzene	ND		0.0050	1	12/21/2016 09:17
tert-Butyl benzene	0.0050		0.0050	1	12/21/2016 09:17
Carbon Disulfide	ND		0.0050	1	12/21/2016 09:17
Carbon Tetrachloride	ND		0.0050	1	12/21/2016 09:17
Chlorobenzene	ND		0.0050	1	12/21/2016 09:17
Chloroethane	ND		0.0050	1	12/21/2016 09:17
Chloroform	ND		0.0050	1	12/21/2016 09:17
Chloromethane	ND		0.0050	1	12/21/2016 09:17
2-Chlorotoluene	ND		0.0050	1	12/21/2016 09:17
4-Chlorotoluene	ND		0.0050	1	12/21/2016 09:17
Dibromochloromethane	ND		0.0050	1	12/21/2016 09:17
1,2-Dibromo-3-chloropropane	ND		0.0040	1	12/21/2016 09:17
1,2-Dibromoethane (EDB)	ND		0.0040	1	12/21/2016 09:17
Dibromomethane	ND		0.0050	1	12/21/2016 09:17
1,2-Dichlorobenzene	ND		0.0050	1	12/21/2016 09:17
1,3-Dichlorobenzene	ND		0.0050	1	12/21/2016 09:17
1,4-Dichlorobenzene	ND		0.0050	1	12/21/2016 09:17
Dichlorodifluoromethane	ND		0.0050	1	12/21/2016 09:17
1,1-Dichloroethane	ND		0.0050	1	12/21/2016 09:17
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	12/21/2016 09:17
1,1-Dichloroethene	ND		0.0050	1	12/21/2016 09:17
cis-1,2-Dichloroethene	ND		0.0050	1	12/21/2016 09:17
trans-1,2-Dichloroethene	ND		0.0050	1	12/21/2016 09:17
1,2-Dichloropropane	ND		0.0050	1	12/21/2016 09:17
1,3-Dichloropropane	ND		0.0050	1	12/21/2016 09:17
2,2-Dichloropropane	ND		0.0050	1	12/21/2016 09:17

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/19/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612926
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3-7.0	1612926-001A	Soil	12/14/2016 15:25	GC10	131509

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	12/21/2016 09:17
cis-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 09:17
trans-1,3-Dichloropropene	ND	0.0050	1	12/21/2016 09:17
Diisopropyl ether (DIPE)	ND	0.0050	1	12/21/2016 09:17
Ethylbenzene	ND	0.0050	1	12/21/2016 09:17
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	12/21/2016 09:17
Freon 113	ND	0.0050	1	12/21/2016 09:17
Hexachlorobutadiene	ND	0.0050	1	12/21/2016 09:17
Hexachloroethane	ND	0.0050	1	12/21/2016 09:17
2-Hexanone	ND	0.0050	1	12/21/2016 09:17
Isopropylbenzene	ND	0.0050	1	12/21/2016 09:17
4-Isopropyl toluene	ND	0.0050	1	12/21/2016 09:17
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	12/21/2016 09:17
Methylene chloride	ND	0.0050	1	12/21/2016 09:17
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	12/21/2016 09:17
Naphthalene	ND	0.0050	1	12/21/2016 09:17
n-Propyl benzene	ND	0.0050	1	12/21/2016 09:17
Styrene	ND	0.0050	1	12/21/2016 09:17
1,1,1,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 09:17
1,1,2,2-Tetrachloroethane	ND	0.0050	1	12/21/2016 09:17
Tetrachloroethene	ND	0.0050	1	12/21/2016 09:17
Toluene	ND	0.0050	1	12/21/2016 09:17
1,2,3-Trichlorobenzene	ND	0.0050	1	12/21/2016 09:17
1,2,4-Trichlorobenzene	ND	0.0050	1	12/21/2016 09:17
1,1,1-Trichloroethane	ND	0.0050	1	12/21/2016 09:17
1,1,2-Trichloroethane	ND	0.0050	1	12/21/2016 09:17
Trichloroethene	ND	0.0050	1	12/21/2016 09:17
Trichlorofluoromethane	ND	0.0050	1	12/21/2016 09:17
1,2,3-Trichloropropane	ND	0.0050	1	12/21/2016 09:17
1,2,4-Trimethylbenzene	ND	0.0050	1	12/21/2016 09:17
1,3,5-Trimethylbenzene	ND	0.0050	1	12/21/2016 09:17
Vinyl Chloride	ND	0.0050	1	12/21/2016 09:17
Xylenes, Total	ND	0.0050	1	12/21/2016 09:17

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/19/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612926
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3-7.0	1612926-001A	Soil	12/14/2016 15:25	GC10	131509

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
Dibromofluoromethane	103		70-130	12/21/2016 09:17
Toluene-d8	111		70-130	12/21/2016 09:17
4-BFB	189	S	70-130	12/21/2016 09:17
Benzene-d6	80		60-140	12/21/2016 09:17
Ethylbenzene-d10	105		60-140	12/21/2016 09:17
1,2-DCB-d4	92		60-140	12/21/2016 09:17

Analyst(s): KF

Analytical Comments: c2



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/19/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612926
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
P3-7.0	1612926-001A	Soil	12/14/2016 15:25	GC19	131458

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	7.8	1.0	1	12/27/2016 16:13
MTBE	---	0.050	1	12/27/2016 16:13
Benzene	---	0.0050	1	12/27/2016 16:13
Toluene	---	0.0050	1	12/27/2016 16:13
Ethylbenzene	---	0.0050	1	12/27/2016 16:13
Xylenes	---	0.015	1	12/27/2016 16:13

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	78	69-117	12/27/2016 16:13

Analyst(s): IA

Analytical Comments: d7,d9



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/19/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612926
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
P3-7.0	1612926-001A	Soil	12/14/2016 15:25	GC11A	131451

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	43	2.0	2	12/20/2016 02:05
TPH-Motor Oil (C18-C36)	74	10	2	12/20/2016 02:05
TPH-Bunker Oil (C10-C36)	74	10	2	12/20/2016 02:05

Surrogates	REC (%)	Limits	Date Analyzed
C9	96	72-114	12/20/2016 02:05

Analyst(s): TK **Analytical Comments:** e3



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/19/16
Date Analyzed: 12/20/16
Instrument: GC18
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA


WorkOrder: 1612926
BatchID: 131509
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131509
 1612926-001AMS/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	0.0364	0.0050	0.050	-	73	53-116
Benzene	ND	0.0480	0.0050	0.050	-	96	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	0.165	0.050	0.20	-	82	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	0.0432	0.0050	0.050	-	86	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	0.0401	0.0040	0.050	-	80	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	0.0432	0.0040	0.050	-	86	58-135
1,1-Dichloroethene	ND	0.0443	0.0050	0.050	-	89	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	-	-	-	-

(Cont.)

NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/19/16
Date Analyzed: 12/20/16
Instrument: GC18
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612926
BatchID: 131509
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131509
 1612926-001AMS/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	0.0459	0.0050	0.050	-	92	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0429	0.0050	0.050	-	86	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	0.0428	0.0050	0.050	-	86	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	0.0519	0.0050	0.050	-	104	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	0.0428	0.0050	0.050	-	86	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: 12/19/16
Date Analyzed: 12/20/16
Instrument: GC18
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612926
BatchID: 131509
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-131509
 1612926-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.120	0.125		0.12	96	100	70-130
Toluene-d8	0.143	0.148		0.12	114	118	70-130
4-BFB	0.0119	0.0116		0.012	95	93	70-130
Benzene-d6	0.0787	0.0876		0.10	79	88	60-140
Ethylbenzene-d10	0.104	0.113		0.10	104	113	60-140
1,2-DCB-d4	0.0811	0.0921		0.10	81	92	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)	NR	NR		ND	NR	NR	-	NR	
Benzene	NR	NR		ND	NR	NR	-	NR	
t-Butyl alcohol (TBA)	NR	NR		ND	NR	NR	-	NR	
Chlorobenzene	NR	NR		ND	NR	NR	-	NR	
1,2-Dibromoethane (EDB)	NR	NR		ND	NR	NR	-	NR	
1,2-Dichloroethane (1,2-DCA)	NR	NR		ND	NR	NR	-	NR	
1,1-Dichloroethene	NR	NR		ND	NR	NR	-	NR	
Diisopropyl ether (DIPE)	NR	NR		ND	NR	NR	-	NR	
Ethyl tert-butyl ether (ETBE)	NR	NR		ND	NR	NR	-	NR	
Methyl-t-butyl ether (MTBE)	NR	NR		ND	NR	NR	-	NR	
Toluene	NR	NR		ND	NR	NR	-	NR	
Trichloroethene	NR	NR		ND	NR	NR	-	NR	
Surrogate Recovery									
Dibromofluoromethane	NR	NR			NR	NR	-	NR	
Toluene-d8	NR	NR			NR	NR	-	NR	
4-BFB	NR	NR			NR	NR	-	NR	
Benzene-d6	NR	NR			NR	NR	-	NR	
Ethylbenzene-d10	NR	NR			NR	NR	-	NR	
1,2-DCB-d4	NR	NR			NR	NR	-	NR	



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/19/16
Date Analyzed: 12/19/16 - 12/20/16
Instrument: GC12, GC19, GC7
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612926
BatchID: 131458
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-131458
 1612907-001AMS/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	0.647	0.40	0.60	-	108	89-118
MTBE	ND	0.0985	0.050	0.10	-	99	68-116
Benzene	ND	0.112	0.0050	0.10	-	112	85-118
Toluene	ND	0.112	0.0050	0.10	-	112	87-121
Ethylbenzene	ND	0.112	0.0050	0.10	-	112	91-124
Xylenes	ND	0.332	0.015	0.30	-	111	92-126

Surrogate Recovery

2-Fluorotoluene	0.0910	0.111		0.10	91	111	88-119
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.509	0.494	0.60	ND	85	82	66-122	2.99	20
MTBE	0.0822	0.0861	0.10	ND	78	82	58-106	4.65	20
Benzene	0.0992	0.108	0.10	ND	99	108	63-116	8.44	20
Toluene	0.0917	0.0886	0.10	ND	92	89	66-118	3.35	20
Ethylbenzene	0.0999	0.104	0.10	ND	100	104	69-121	3.97	20
Xylenes	0.297	0.305	0.30	ND	99	102	70-125	2.75	20

Surrogate Recovery

2-Fluorotoluene	0.0814	0.0908	0.10		81	91	69-117	11.0	20
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Quality Control Report

Client: P & D Environmental
Date Prepared: 12/19/16
Date Analyzed: 12/19/16
Instrument: GC11B, GC9b
Matrix: Soil
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612926
BatchID: 131451
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-131451
 1612907-004AMS/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	39.9	1.0	40	-	100	91-127
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	23.4	23.4		25	94	94	74-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	38.7	39.1	40	ND	97	98	74-143	1.09	30
Surrogate Recovery									
C9	23.7	23.8	25		95	95	72-114	0	30



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1612926

ClientCode: PDEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Michael Deschenes
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0741; 2868 Hannah St. Oakland CA

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days;

Date Received: 12/15/2016

Date Logged: 12/19/2016

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	
1612926-001	P3-7.0	Soil	12/14/2016 15:25	<input type="checkbox"/>	A	A	A										

Test Legend:

1	8260B_S	2	G-MBTEX_S	3	TPH(DMO)_S	4	
5		6		7		8	
9		10		11		12	

Prepared by: Alexandra Iniguez

The following SampID: 001A contains testgroup Multi Range_S.

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

Project: 0741; 2868 Hannah St. Oakland CA

Work Order: 1612926

Client Contact: Michael Deschenes

QC Level: LEVEL 2

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

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

Date Logged: 12/19/2016

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
1612926-001A	P3-7.0	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	12/14/2016 15:25	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.

CHAIN OF CUSTODY RECORD 11012926

P&D ENVIRONMENTAL, INC. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610 (510) 658-6916					NUMBER OF CONTAINERS	ANALYSIS(ES): TPH(C, D, BO, MO) VOCs BY EPA 8260 B										PRESERVATIVE	REMARKS	
PROJECT NUMBER: 0741		PROJECT NAME: 2868 Hornah St Oakland, CA																
SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL BASS-DESCHENES Michael Bass-Deschenes																		
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION														
P3-7.0	12/14/16	*1525	Soil		1	X	X								ICE	HOLD		
RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes					DATE 12/14	TIME 1009	RECEIVED BY: (SIGNATURE) [Signature]					Total No. of Samples (This Shipment) 1	LABORATORY: McCampbell Analytical					
RELINQUISHED BY: (SIGNATURE) [Signature]					DATE 12/16/16	TIME 1530	RECEIVED BY: (SIGNATURE) [Signature]					LABORATORY CONTACT: Angela Ryddius		LABORATORY PHONE NUMBER: (877) 252-9262				
RELINQUISHED BY: (SIGNATURE) [Signature]					DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE) [Signature]					SAMPLE ANALYSIS REQUEST SHEET ATTACHED: () YES (X) NO						
Results and billing to: P&D Environmental, Inc. lab@pdenviro.com					REMARKS: *Time taken off sample container. * off hold 12/16/16 per client email.													



Sample Receipt Checklist

Client Name: **P & D Environmental**
 Project Name: **0741; 2868 Hannah St. Oakland CA**
 WorkOrder No: **1612926** Matrix: Soil
 Carrier: David Shaver (MAI Courier)

Date and Time Received: **12/15/2016 15:30**
 Date Logged: **12/19/2016**
 Received by: Alexandra Iniguez
 Logged by: Alexandra Iniguez

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: 5.6°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: 1612793 **Amended:** 01/03/2017

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Michael Deschenes

Project P.O.:

Project Name: 0741; 2868 Hannah St. Oakland CA

Project Received: 12/15/2016

Analytical Report reviewed & approved for release on 12/23/2016 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: 0741; 2868 Hannah St. Oakland CA
WorkOrder: 1612793

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: 0741; 2868 Hannah St. Oakland CA
WorkOrder: 1612793

Analytical Qualifiers

S surrogate spike recovery outside accepted recovery limits
b1 aqueous sample that contains greater than ~1 vol. % sediment
c4 surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d6 one to a few isolated non-target peaks present in the TPH(g) chromatogram
d17 Reporting limit for MTBE raised due to co-elution with non-target peaks.
e2/e3 diesel range compounds are significant; no recognizable pattern; and/or aged diesel is significant
e2 diesel range compounds are significant; no recognizable pattern
e7 oil range compounds are significant

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validates the prep batch.



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P1-W	1612793-001B	Water	12/13/2016 14:50	GC10	131704
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	10,000	1,000	12/22/2016 02:41	
tert-Amyl methyl ether (TAME)	ND	500	1,000	12/22/2016 02:41	
Benzene	ND	500	1,000	12/22/2016 02:41	
Bromobenzene	ND	500	1,000	12/22/2016 02:41	
Bromochloromethane	ND	500	1,000	12/22/2016 02:41	
Bromodichloromethane	ND	500	1,000	12/22/2016 02:41	
Bromoform	ND	500	1,000	12/22/2016 02:41	
Bromomethane	ND	500	1,000	12/22/2016 02:41	
2-Butanone (MEK)	ND	2000	1,000	12/22/2016 02:41	
t-Butyl alcohol (TBA)	ND	2000	1,000	12/22/2016 02:41	
n-Butyl benzene	ND	500	1,000	12/22/2016 02:41	
sec-Butyl benzene	ND	500	1,000	12/22/2016 02:41	
tert-Butyl benzene	ND	500	1,000	12/22/2016 02:41	
Carbon Disulfide	ND	500	1,000	12/22/2016 02:41	
Carbon Tetrachloride	ND	500	1,000	12/22/2016 02:41	
Chlorobenzene	ND	500	1,000	12/22/2016 02:41	
Chloroethane	ND	500	1,000	12/22/2016 02:41	
Chloroform	ND	500	1,000	12/22/2016 02:41	
Chloromethane	ND	500	1,000	12/22/2016 02:41	
2-Chlorotoluene	ND	500	1,000	12/22/2016 02:41	
4-Chlorotoluene	ND	500	1,000	12/22/2016 02:41	
Dibromochloromethane	ND	500	1,000	12/22/2016 02:41	
1,2-Dibromo-3-chloropropane	ND	200	1,000	12/22/2016 02:41	
1,2-Dibromoethane (EDB)	ND	500	1,000	12/22/2016 02:41	
Dibromomethane	ND	500	1,000	12/22/2016 02:41	
1,2-Dichlorobenzene	ND	500	1,000	12/22/2016 02:41	
1,3-Dichlorobenzene	ND	500	1,000	12/22/2016 02:41	
1,4-Dichlorobenzene	ND	500	1,000	12/22/2016 02:41	
Dichlorodifluoromethane	ND	500	1,000	12/22/2016 02:41	
1,1-Dichloroethane	ND	500	1,000	12/22/2016 02:41	
1,2-Dichloroethane (1,2-DCA)	ND	500	1,000	12/22/2016 02:41	
1,1-Dichloroethene	ND	500	1,000	12/22/2016 02:41	
cis-1,2-Dichloroethene	720	500	1,000	12/22/2016 02:41	
trans-1,2-Dichloroethene	ND	500	1,000	12/22/2016 02:41	
1,2-Dichloropropane	ND	500	1,000	12/22/2016 02:41	
1,3-Dichloropropane	ND	500	1,000	12/22/2016 02:41	
2,2-Dichloropropane	ND	500	1,000	12/22/2016 02:41	

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P1-W	1612793-001B	Water	12/13/2016 14:50	GC10	131704

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	500	1,000	12/22/2016 02:41
cis-1,3-Dichloropropene	ND	500	1,000	12/22/2016 02:41
trans-1,3-Dichloropropene	ND	500	1,000	12/22/2016 02:41
Diisopropyl ether (DIPE)	ND	500	1,000	12/22/2016 02:41
Ethylbenzene	ND	500	1,000	12/22/2016 02:41
Ethyl tert-butyl ether (ETBE)	ND	500	1,000	12/22/2016 02:41
Freon 113	ND	500	1,000	12/22/2016 02:41
Hexachlorobutadiene	ND	500	1,000	12/22/2016 02:41
Hexachloroethane	ND	500	1,000	12/22/2016 02:41
2-Hexanone	ND	500	1,000	12/22/2016 02:41
Isopropylbenzene	ND	500	1,000	12/22/2016 02:41
4-Isopropyl toluene	ND	500	1,000	12/22/2016 02:41
Methyl-t-butyl ether (MTBE)	ND	500	1,000	12/22/2016 02:41
Methylene chloride	ND	500	1,000	12/22/2016 02:41
4-Methyl-2-pentanone (MIBK)	ND	500	1,000	12/22/2016 02:41
Naphthalene	ND	500	1,000	12/22/2016 02:41
n-Propyl benzene	ND	500	1,000	12/22/2016 02:41
Styrene	ND	500	1,000	12/22/2016 02:41
1,1,1,2-Tetrachloroethane	ND	500	1,000	12/22/2016 02:41
1,1,2,2-Tetrachloroethane	ND	500	1,000	12/22/2016 02:41
Tetrachloroethene	10,000	500	1,000	12/22/2016 02:41
Toluene	ND	500	1,000	12/22/2016 02:41
1,2,3-Trichlorobenzene	ND	500	1,000	12/22/2016 02:41
1,2,4-Trichlorobenzene	ND	500	1,000	12/22/2016 02:41
1,1,1-Trichloroethane	ND	500	1,000	12/22/2016 02:41
1,1,2-Trichloroethane	ND	500	1,000	12/22/2016 02:41
Trichloroethene	ND	500	1,000	12/22/2016 02:41
Trichlorofluoromethane	ND	500	1,000	12/22/2016 02:41
1,2,3-Trichloropropane	ND	500	1,000	12/22/2016 02:41
1,2,4-Trimethylbenzene	ND	500	1,000	12/22/2016 02:41
1,3,5-Trimethylbenzene	ND	500	1,000	12/22/2016 02:41
Vinyl Chloride	ND	500	1,000	12/22/2016 02:41
Xylenes, Total	ND	500	1,000	12/22/2016 02:41

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P1-W	1612793-001B	Water	12/13/2016 14:50	GC10	131704

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	115	70-130		12/22/2016 02:41
Toluene-d8	106	70-130		12/22/2016 02:41
4-BFB	92	70-130		12/22/2016 02:41

Analyst(s): KF **Analytical Comments:** b1



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-W	1612793-002B	Water	12/13/2016 15:45	GC10	131704

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	12/22/2016 01:19
tert-Amyl methyl ether (TAME)	ND	0.50	1	12/22/2016 01:19
Benzene	ND	0.50	1	12/22/2016 01:19
Bromobenzene	ND	0.50	1	12/22/2016 01:19
Bromochloromethane	ND	0.50	1	12/22/2016 01:19
Bromodichloromethane	ND	0.50	1	12/22/2016 01:19
Bromoform	ND	0.50	1	12/22/2016 01:19
Bromomethane	ND	0.50	1	12/22/2016 01:19
2-Butanone (MEK)	ND	2.0	1	12/22/2016 01:19
t-Butyl alcohol (TBA)	ND	2.0	1	12/22/2016 01:19
n-Butyl benzene	ND	0.50	1	12/22/2016 01:19
sec-Butyl benzene	ND	0.50	1	12/22/2016 01:19
tert-Butyl benzene	ND	0.50	1	12/22/2016 01:19
Carbon Disulfide	ND	0.50	1	12/22/2016 01:19
Carbon Tetrachloride	ND	0.50	1	12/22/2016 01:19
Chlorobenzene	ND	0.50	1	12/22/2016 01:19
Chloroethane	ND	0.50	1	12/22/2016 01:19
Chloroform	ND	0.50	1	12/22/2016 01:19
Chloromethane	ND	0.50	1	12/22/2016 01:19
2-Chlorotoluene	ND	0.50	1	12/22/2016 01:19
4-Chlorotoluene	ND	0.50	1	12/22/2016 01:19
Dibromochloromethane	ND	0.50	1	12/22/2016 01:19
1,2-Dibromo-3-chloropropane	ND	0.20	1	12/22/2016 01:19
1,2-Dibromoethane (EDB)	ND	0.50	1	12/22/2016 01:19
Dibromomethane	ND	0.50	1	12/22/2016 01:19
1,2-Dichlorobenzene	ND	0.50	1	12/22/2016 01:19
1,3-Dichlorobenzene	ND	0.50	1	12/22/2016 01:19
1,4-Dichlorobenzene	ND	0.50	1	12/22/2016 01:19
Dichlorodifluoromethane	ND	0.50	1	12/22/2016 01:19
1,1-Dichloroethane	ND	0.50	1	12/22/2016 01:19
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	12/22/2016 01:19
1,1-Dichloroethene	ND	0.50	1	12/22/2016 01:19
cis-1,2-Dichloroethene	1.7	0.50	1	12/22/2016 01:19
trans-1,2-Dichloroethene	ND	0.50	1	12/22/2016 01:19
1,2-Dichloropropane	ND	0.50	1	12/22/2016 01:19
1,3-Dichloropropane	ND	0.50	1	12/22/2016 01:19
2,2-Dichloropropane	ND	0.50	1	12/22/2016 01:19

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-W	1612793-002B	Water	12/13/2016 15:45	GC10	131704

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	12/22/2016 01:19
cis-1,3-Dichloropropene	ND	0.50	1	12/22/2016 01:19
trans-1,3-Dichloropropene	ND	0.50	1	12/22/2016 01:19
Diisopropyl ether (DIPE)	ND	0.50	1	12/22/2016 01:19
Ethylbenzene	ND	0.50	1	12/22/2016 01:19
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	12/22/2016 01:19
Freon 113	ND	0.50	1	12/22/2016 01:19
Hexachlorobutadiene	ND	0.50	1	12/22/2016 01:19
Hexachloroethane	ND	0.50	1	12/22/2016 01:19
2-Hexanone	ND	0.50	1	12/22/2016 01:19
Isopropylbenzene	ND	0.50	1	12/22/2016 01:19
4-Isopropyl toluene	ND	0.50	1	12/22/2016 01:19
Methyl-t-butyl ether (MTBE)	ND	0.50	1	12/22/2016 01:19
Methylene chloride	ND	0.50	1	12/22/2016 01:19
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	12/22/2016 01:19
Naphthalene	ND	0.50	1	12/22/2016 01:19
n-Propyl benzene	ND	0.50	1	12/22/2016 01:19
Styrene	ND	0.50	1	12/22/2016 01:19
1,1,1,2-Tetrachloroethane	ND	0.50	1	12/22/2016 01:19
1,1,2,2-Tetrachloroethane	ND	0.50	1	12/22/2016 01:19
Tetrachloroethene	18	0.50	1	12/22/2016 01:19
Toluene	ND	0.50	1	12/22/2016 01:19
1,2,3-Trichlorobenzene	ND	0.50	1	12/22/2016 01:19
1,2,4-Trichlorobenzene	ND	0.50	1	12/22/2016 01:19
1,1,1-Trichloroethane	ND	0.50	1	12/22/2016 01:19
1,1,2-Trichloroethane	ND	0.50	1	12/22/2016 01:19
Trichloroethene	1.1	0.50	1	12/22/2016 01:19
Trichlorofluoromethane	ND	0.50	1	12/22/2016 01:19
1,2,3-Trichloropropane	ND	0.50	1	12/22/2016 01:19
1,2,4-Trimethylbenzene	ND	0.50	1	12/22/2016 01:19
1,3,5-Trimethylbenzene	ND	0.50	1	12/22/2016 01:19
Vinyl Chloride	ND	0.50	1	12/22/2016 01:19
Xylenes, Total	ND	0.50	1	12/22/2016 01:19

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-W	1612793-002B	Water	12/13/2016 15:45	GC10	131704

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	110	70-130		12/22/2016 01:19
Toluene-d8	106	70-130		12/22/2016 01:19
4-BFB	97	70-130		12/22/2016 01:19

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3-W	1612793-003B	Water	12/14/2016 16:45	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	12/21/2016 03:16
tert-Amyl methyl ether (TAME)	ND	0.50	1	12/21/2016 03:16
Benzene	ND	0.50	1	12/21/2016 03:16
Bromobenzene	ND	0.50	1	12/21/2016 03:16
Bromochloromethane	ND	0.50	1	12/21/2016 03:16
Bromodichloromethane	ND	0.50	1	12/21/2016 03:16
Bromoform	ND	0.50	1	12/21/2016 03:16
Bromomethane	ND	0.50	1	12/21/2016 03:16
2-Butanone (MEK)	ND	2.0	1	12/21/2016 03:16
t-Butyl alcohol (TBA)	ND	2.0	1	12/21/2016 03:16
n-Butyl benzene	ND	0.50	1	12/21/2016 03:16
sec-Butyl benzene	ND	0.50	1	12/21/2016 03:16
tert-Butyl benzene	ND	0.50	1	12/21/2016 03:16
Carbon Disulfide	ND	0.50	1	12/21/2016 03:16
Carbon Tetrachloride	ND	0.50	1	12/21/2016 03:16
Chlorobenzene	ND	0.50	1	12/21/2016 03:16
Chloroethane	ND	0.50	1	12/21/2016 03:16
Chloroform	ND	0.50	1	12/21/2016 03:16
Chloromethane	ND	0.50	1	12/21/2016 03:16
2-Chlorotoluene	ND	0.50	1	12/21/2016 03:16
4-Chlorotoluene	ND	0.50	1	12/21/2016 03:16
Dibromochloromethane	ND	0.50	1	12/21/2016 03:16
1,2-Dibromo-3-chloropropane	ND	0.20	1	12/21/2016 03:16
1,2-Dibromoethane (EDB)	ND	0.50	1	12/21/2016 03:16
Dibromomethane	ND	0.50	1	12/21/2016 03:16
1,2-Dichlorobenzene	ND	0.50	1	12/21/2016 03:16
1,3-Dichlorobenzene	ND	0.50	1	12/21/2016 03:16
1,4-Dichlorobenzene	ND	0.50	1	12/21/2016 03:16
Dichlorodifluoromethane	ND	0.50	1	12/21/2016 03:16
1,1-Dichloroethane	ND	0.50	1	12/21/2016 03:16
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	12/21/2016 03:16
1,1-Dichloroethene	ND	0.50	1	12/21/2016 03:16
cis-1,2-Dichloroethene	1.7	0.50	1	12/21/2016 03:16
trans-1,2-Dichloroethene	ND	0.50	1	12/21/2016 03:16
1,2-Dichloropropane	ND	0.50	1	12/21/2016 03:16
1,3-Dichloropropane	ND	0.50	1	12/21/2016 03:16
2,2-Dichloropropane	ND	0.50	1	12/21/2016 03:16

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3-W	1612793-003B	Water	12/14/2016 16:45	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	12/21/2016 03:16
cis-1,3-Dichloropropene	ND	0.50	1	12/21/2016 03:16
trans-1,3-Dichloropropene	ND	0.50	1	12/21/2016 03:16
Diisopropyl ether (DIPE)	ND	0.50	1	12/21/2016 03:16
Ethylbenzene	ND	0.50	1	12/21/2016 03:16
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	12/21/2016 03:16
Freon 113	ND	0.50	1	12/21/2016 03:16
Hexachlorobutadiene	ND	0.50	1	12/21/2016 03:16
Hexachloroethane	ND	0.50	1	12/21/2016 03:16
2-Hexanone	ND	0.50	1	12/21/2016 03:16
Isopropylbenzene	ND	0.50	1	12/21/2016 03:16
4-Isopropyl toluene	ND	0.50	1	12/21/2016 03:16
Methyl-t-butyl ether (MTBE)	ND	0.50	1	12/21/2016 03:16
Methylene chloride	ND	0.50	1	12/21/2016 03:16
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	12/21/2016 03:16
Naphthalene	ND	0.50	1	12/21/2016 03:16
n-Propyl benzene	ND	0.50	1	12/21/2016 03:16
Styrene	ND	0.50	1	12/21/2016 03:16
1,1,1,2-Tetrachloroethane	ND	0.50	1	12/21/2016 03:16
1,1,2,2-Tetrachloroethane	ND	0.50	1	12/21/2016 03:16
Tetrachloroethene	ND	0.50	1	12/21/2016 03:16
Toluene	ND	0.50	1	12/21/2016 03:16
1,2,3-Trichlorobenzene	ND	0.50	1	12/21/2016 03:16
1,2,4-Trichlorobenzene	ND	0.50	1	12/21/2016 03:16
1,1,1-Trichloroethane	ND	0.50	1	12/21/2016 03:16
1,1,2-Trichloroethane	ND	0.50	1	12/21/2016 03:16
Trichloroethene	ND	0.50	1	12/21/2016 03:16
Trichlorofluoromethane	ND	0.50	1	12/21/2016 03:16
1,2,3-Trichloropropane	ND	0.50	1	12/21/2016 03:16
1,2,4-Trimethylbenzene	ND	0.50	1	12/21/2016 03:16
1,3,5-Trimethylbenzene	ND	0.50	1	12/21/2016 03:16
Vinyl Chloride	ND	0.50	1	12/21/2016 03:16
Xylenes, Total	ND	0.50	1	12/21/2016 03:16

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3-W	1612793-003B	Water	12/14/2016 16:45	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	104	70-130		12/21/2016 03:16
Toluene-d8	102	70-130		12/21/2016 03:16
4-BFB	86	70-130		12/21/2016 03:16

Analyst(s): HK

Analytical Comments: b1



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P4-W	1612793-004B	Water	12/14/2016 17:30	GC10	131704

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	12/22/2016 02:00
tert-Amyl methyl ether (TAME)	ND	0.50	1	12/22/2016 02:00
Benzene	ND	0.50	1	12/22/2016 02:00
Bromobenzene	ND	0.50	1	12/22/2016 02:00
Bromochloromethane	ND	0.50	1	12/22/2016 02:00
Bromodichloromethane	ND	0.50	1	12/22/2016 02:00
Bromoform	ND	0.50	1	12/22/2016 02:00
Bromomethane	ND	0.50	1	12/22/2016 02:00
2-Butanone (MEK)	ND	2.0	1	12/22/2016 02:00
t-Butyl alcohol (TBA)	ND	2.0	1	12/22/2016 02:00
n-Butyl benzene	ND	0.50	1	12/22/2016 02:00
sec-Butyl benzene	ND	0.50	1	12/22/2016 02:00
tert-Butyl benzene	ND	0.50	1	12/22/2016 02:00
Carbon Disulfide	ND	0.50	1	12/22/2016 02:00
Carbon Tetrachloride	ND	0.50	1	12/22/2016 02:00
Chlorobenzene	ND	0.50	1	12/22/2016 02:00
Chloroethane	ND	0.50	1	12/22/2016 02:00
Chloroform	ND	0.50	1	12/22/2016 02:00
Chloromethane	ND	0.50	1	12/22/2016 02:00
2-Chlorotoluene	ND	0.50	1	12/22/2016 02:00
4-Chlorotoluene	ND	0.50	1	12/22/2016 02:00
Dibromochloromethane	ND	0.50	1	12/22/2016 02:00
1,2-Dibromo-3-chloropropane	ND	0.20	1	12/22/2016 02:00
1,2-Dibromoethane (EDB)	ND	0.50	1	12/22/2016 02:00
Dibromomethane	ND	0.50	1	12/22/2016 02:00
1,2-Dichlorobenzene	ND	0.50	1	12/22/2016 02:00
1,3-Dichlorobenzene	ND	0.50	1	12/22/2016 02:00
1,4-Dichlorobenzene	ND	0.50	1	12/22/2016 02:00
Dichlorodifluoromethane	ND	0.50	1	12/22/2016 02:00
1,1-Dichloroethane	ND	0.50	1	12/22/2016 02:00
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	12/22/2016 02:00
1,1-Dichloroethene	ND	0.50	1	12/22/2016 02:00
cis-1,2-Dichloroethene	ND	0.50	1	12/22/2016 02:00
trans-1,2-Dichloroethene	ND	0.50	1	12/22/2016 02:00
1,2-Dichloropropane	ND	0.50	1	12/22/2016 02:00
1,3-Dichloropropane	ND	0.50	1	12/22/2016 02:00
2,2-Dichloropropane	ND	0.50	1	12/22/2016 02:00

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P4-W	1612793-004B	Water	12/14/2016 17:30	GC10	131704

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	12/22/2016 02:00
cis-1,3-Dichloropropene	ND	0.50	1	12/22/2016 02:00
trans-1,3-Dichloropropene	ND	0.50	1	12/22/2016 02:00
Diisopropyl ether (DIPE)	ND	0.50	1	12/22/2016 02:00
Ethylbenzene	ND	0.50	1	12/22/2016 02:00
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	12/22/2016 02:00
Freon 113	6.4	0.50	1	12/22/2016 02:00
Hexachlorobutadiene	ND	0.50	1	12/22/2016 02:00
Hexachloroethane	ND	0.50	1	12/22/2016 02:00
2-Hexanone	ND	0.50	1	12/22/2016 02:00
Isopropylbenzene	ND	0.50	1	12/22/2016 02:00
4-Isopropyl toluene	ND	0.50	1	12/22/2016 02:00
Methyl-t-butyl ether (MTBE)	1.5	0.50	1	12/22/2016 02:00
Methylene chloride	ND	0.50	1	12/22/2016 02:00
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	12/22/2016 02:00
Naphthalene	ND	0.50	1	12/22/2016 02:00
n-Propyl benzene	ND	0.50	1	12/22/2016 02:00
Styrene	ND	0.50	1	12/22/2016 02:00
1,1,1,2-Tetrachloroethane	ND	0.50	1	12/22/2016 02:00
1,1,2,2-Tetrachloroethane	ND	0.50	1	12/22/2016 02:00
Tetrachloroethene	ND	0.50	1	12/22/2016 02:00
Toluene	ND	0.50	1	12/22/2016 02:00
1,2,3-Trichlorobenzene	ND	0.50	1	12/22/2016 02:00
1,2,4-Trichlorobenzene	ND	0.50	1	12/22/2016 02:00
1,1,1-Trichloroethane	ND	0.50	1	12/22/2016 02:00
1,1,2-Trichloroethane	ND	0.50	1	12/22/2016 02:00
Trichloroethene	ND	0.50	1	12/22/2016 02:00
Trichlorofluoromethane	ND	0.50	1	12/22/2016 02:00
1,2,3-Trichloropropane	ND	0.50	1	12/22/2016 02:00
1,2,4-Trimethylbenzene	ND	0.50	1	12/22/2016 02:00
1,3,5-Trimethylbenzene	ND	0.50	1	12/22/2016 02:00
Vinyl Chloride	ND	0.50	1	12/22/2016 02:00
Xylenes, Total	ND	0.50	1	12/22/2016 02:00

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P4-W	1612793-004B	Water	12/14/2016 17:30	GC10	131704

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	110	70-130		12/22/2016 02:00
Toluene-d8	107	70-130		12/22/2016 02:00
4-BFB	97	70-130		12/22/2016 02:00

Analyst(s): KF



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P5-W	1612793-005B	Water	12/14/2016 16:05	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	12/21/2016 03:54
tert-Amyl methyl ether (TAME)	ND	0.50	1	12/21/2016 03:54
Benzene	ND	0.50	1	12/21/2016 03:54
Bromobenzene	ND	0.50	1	12/21/2016 03:54
Bromochloromethane	ND	0.50	1	12/21/2016 03:54
Bromodichloromethane	ND	0.50	1	12/21/2016 03:54
Bromoform	ND	0.50	1	12/21/2016 03:54
Bromomethane	ND	0.50	1	12/21/2016 03:54
2-Butanone (MEK)	ND	2.0	1	12/21/2016 03:54
t-Butyl alcohol (TBA)	ND	2.0	1	12/21/2016 03:54
n-Butyl benzene	ND	0.50	1	12/21/2016 03:54
sec-Butyl benzene	ND	0.50	1	12/21/2016 03:54
tert-Butyl benzene	ND	0.50	1	12/21/2016 03:54
Carbon Disulfide	ND	0.50	1	12/21/2016 03:54
Carbon Tetrachloride	ND	0.50	1	12/21/2016 03:54
Chlorobenzene	ND	0.50	1	12/21/2016 03:54
Chloroethane	ND	0.50	1	12/21/2016 03:54
Chloroform	ND	0.50	1	12/21/2016 03:54
Chloromethane	ND	0.50	1	12/21/2016 03:54
2-Chlorotoluene	ND	0.50	1	12/21/2016 03:54
4-Chlorotoluene	ND	0.50	1	12/21/2016 03:54
Dibromochloromethane	ND	0.50	1	12/21/2016 03:54
1,2-Dibromo-3-chloropropane	ND	0.20	1	12/21/2016 03:54
1,2-Dibromoethane (EDB)	ND	0.50	1	12/21/2016 03:54
Dibromomethane	ND	0.50	1	12/21/2016 03:54
1,2-Dichlorobenzene	ND	0.50	1	12/21/2016 03:54
1,3-Dichlorobenzene	ND	0.50	1	12/21/2016 03:54
1,4-Dichlorobenzene	ND	0.50	1	12/21/2016 03:54
Dichlorodifluoromethane	ND	0.50	1	12/21/2016 03:54
1,1-Dichloroethane	ND	0.50	1	12/21/2016 03:54
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	12/21/2016 03:54
1,1-Dichloroethene	ND	0.50	1	12/21/2016 03:54
cis-1,2-Dichloroethene	ND	0.50	1	12/21/2016 03:54
trans-1,2-Dichloroethene	ND	0.50	1	12/21/2016 03:54
1,2-Dichloropropane	ND	0.50	1	12/21/2016 03:54
1,3-Dichloropropane	ND	0.50	1	12/21/2016 03:54
2,2-Dichloropropane	ND	0.50	1	12/21/2016 03:54

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P5-W	1612793-005B	Water	12/14/2016 16:05	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	12/21/2016 03:54
cis-1,3-Dichloropropene	ND	0.50	1	12/21/2016 03:54
trans-1,3-Dichloropropene	ND	0.50	1	12/21/2016 03:54
Diisopropyl ether (DIPE)	ND	0.50	1	12/21/2016 03:54
Ethylbenzene	ND	0.50	1	12/21/2016 03:54
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	12/21/2016 03:54
Freon 113	ND	0.50	1	12/21/2016 03:54
Hexachlorobutadiene	ND	0.50	1	12/21/2016 03:54
Hexachloroethane	ND	0.50	1	12/21/2016 03:54
2-Hexanone	ND	0.50	1	12/21/2016 03:54
Isopropylbenzene	ND	0.50	1	12/21/2016 03:54
4-Isopropyl toluene	ND	0.50	1	12/21/2016 03:54
Methyl-t-butyl ether (MTBE)	0.95	0.50	1	12/21/2016 03:54
Methylene chloride	ND	0.50	1	12/21/2016 03:54
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	12/21/2016 03:54
Naphthalene	ND	0.50	1	12/21/2016 03:54
n-Propyl benzene	ND	0.50	1	12/21/2016 03:54
Styrene	ND	0.50	1	12/21/2016 03:54
1,1,1,2-Tetrachloroethane	ND	0.50	1	12/21/2016 03:54
1,1,2,2-Tetrachloroethane	ND	0.50	1	12/21/2016 03:54
Tetrachloroethene	ND	0.50	1	12/21/2016 03:54
Toluene	ND	0.50	1	12/21/2016 03:54
1,2,3-Trichlorobenzene	ND	0.50	1	12/21/2016 03:54
1,2,4-Trichlorobenzene	ND	0.50	1	12/21/2016 03:54
1,1,1-Trichloroethane	ND	0.50	1	12/21/2016 03:54
1,1,2-Trichloroethane	ND	0.50	1	12/21/2016 03:54
Trichloroethene	ND	0.50	1	12/21/2016 03:54
Trichlorofluoromethane	ND	0.50	1	12/21/2016 03:54
1,2,3-Trichloropropane	ND	0.50	1	12/21/2016 03:54
1,2,4-Trimethylbenzene	ND	0.50	1	12/21/2016 03:54
1,3,5-Trimethylbenzene	ND	0.50	1	12/21/2016 03:54
Vinyl Chloride	ND	0.50	1	12/21/2016 03:54
Xylenes, Total	ND	0.50	1	12/21/2016 03:54

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P5-W	1612793-005B	Water	12/14/2016 16:05	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	104	70-130		12/21/2016 03:54
Toluene-d8	102	70-130		12/21/2016 03:54
4-BFB	85	70-130		12/21/2016 03:54

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P6-W	1612793-006B	Water	12/14/2016 11:10	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	12/21/2016 04:33
tert-Amyl methyl ether (TAME)	ND	0.50	1	12/21/2016 04:33
Benzene	ND	0.50	1	12/21/2016 04:33
Bromobenzene	ND	0.50	1	12/21/2016 04:33
Bromochloromethane	ND	0.50	1	12/21/2016 04:33
Bromodichloromethane	ND	0.50	1	12/21/2016 04:33
Bromoform	ND	0.50	1	12/21/2016 04:33
Bromomethane	ND	0.50	1	12/21/2016 04:33
2-Butanone (MEK)	ND	2.0	1	12/21/2016 04:33
t-Butyl alcohol (TBA)	ND	2.0	1	12/21/2016 04:33
n-Butyl benzene	ND	0.50	1	12/21/2016 04:33
sec-Butyl benzene	ND	0.50	1	12/21/2016 04:33
tert-Butyl benzene	ND	0.50	1	12/21/2016 04:33
Carbon Disulfide	ND	0.50	1	12/21/2016 04:33
Carbon Tetrachloride	ND	0.50	1	12/21/2016 04:33
Chlorobenzene	ND	0.50	1	12/21/2016 04:33
Chloroethane	ND	0.50	1	12/21/2016 04:33
Chloroform	ND	0.50	1	12/21/2016 04:33
Chloromethane	ND	0.50	1	12/21/2016 04:33
2-Chlorotoluene	ND	0.50	1	12/21/2016 04:33
4-Chlorotoluene	ND	0.50	1	12/21/2016 04:33
Dibromochloromethane	ND	0.50	1	12/21/2016 04:33
1,2-Dibromo-3-chloropropane	ND	0.20	1	12/21/2016 04:33
1,2-Dibromoethane (EDB)	ND	0.50	1	12/21/2016 04:33
Dibromomethane	ND	0.50	1	12/21/2016 04:33
1,2-Dichlorobenzene	ND	0.50	1	12/21/2016 04:33
1,3-Dichlorobenzene	ND	0.50	1	12/21/2016 04:33
1,4-Dichlorobenzene	ND	0.50	1	12/21/2016 04:33
Dichlorodifluoromethane	ND	0.50	1	12/21/2016 04:33
1,1-Dichloroethane	ND	0.50	1	12/21/2016 04:33
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	12/21/2016 04:33
1,1-Dichloroethene	ND	0.50	1	12/21/2016 04:33
cis-1,2-Dichloroethene	ND	0.50	1	12/21/2016 04:33
trans-1,2-Dichloroethene	ND	0.50	1	12/21/2016 04:33
1,2-Dichloropropane	ND	0.50	1	12/21/2016 04:33
1,3-Dichloropropane	ND	0.50	1	12/21/2016 04:33
2,2-Dichloropropane	ND	0.50	1	12/21/2016 04:33

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P6-W	1612793-006B	Water	12/14/2016 11:10	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	12/21/2016 04:33
cis-1,3-Dichloropropene	ND	0.50	1	12/21/2016 04:33
trans-1,3-Dichloropropene	ND	0.50	1	12/21/2016 04:33
Diisopropyl ether (DIPE)	ND	0.50	1	12/21/2016 04:33
Ethylbenzene	ND	0.50	1	12/21/2016 04:33
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	12/21/2016 04:33
Freon 113	ND	0.50	1	12/21/2016 04:33
Hexachlorobutadiene	ND	0.50	1	12/21/2016 04:33
Hexachloroethane	ND	0.50	1	12/21/2016 04:33
2-Hexanone	ND	0.50	1	12/21/2016 04:33
Isopropylbenzene	ND	0.50	1	12/21/2016 04:33
4-Isopropyl toluene	ND	0.50	1	12/21/2016 04:33
Methyl-t-butyl ether (MTBE)	ND	0.50	1	12/21/2016 04:33
Methylene chloride	ND	0.50	1	12/21/2016 04:33
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	12/21/2016 04:33
Naphthalene	ND	0.50	1	12/21/2016 04:33
n-Propyl benzene	ND	0.50	1	12/21/2016 04:33
Styrene	ND	0.50	1	12/21/2016 04:33
1,1,1,2-Tetrachloroethane	ND	0.50	1	12/21/2016 04:33
1,1,2,2-Tetrachloroethane	ND	0.50	1	12/21/2016 04:33
Tetrachloroethene	ND	0.50	1	12/21/2016 04:33
Toluene	ND	0.50	1	12/21/2016 04:33
1,2,3-Trichlorobenzene	ND	0.50	1	12/21/2016 04:33
1,2,4-Trichlorobenzene	ND	0.50	1	12/21/2016 04:33
1,1,1-Trichloroethane	ND	0.50	1	12/21/2016 04:33
1,1,2-Trichloroethane	ND	0.50	1	12/21/2016 04:33
Trichloroethene	ND	0.50	1	12/21/2016 04:33
Trichlorofluoromethane	ND	0.50	1	12/21/2016 04:33
1,2,3-Trichloropropane	ND	0.50	1	12/21/2016 04:33
1,2,4-Trimethylbenzene	ND	0.50	1	12/21/2016 04:33
1,3,5-Trimethylbenzene	ND	0.50	1	12/21/2016 04:33
Vinyl Chloride	ND	0.50	1	12/21/2016 04:33
Xylenes, Total	ND	0.50	1	12/21/2016 04:33

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P6-W	1612793-006B	Water	12/14/2016 11:10	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	104	70-130		12/21/2016 04:33
Toluene-d8	102	70-130		12/21/2016 04:33
4-BFB	82	70-130		12/21/2016 04:33

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P7-W	1612793-007B	Water	12/14/2016 09:30	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	12/21/2016 05:12
tert-Amyl methyl ether (TAME)	ND	0.50	1	12/21/2016 05:12
Benzene	ND	0.50	1	12/21/2016 05:12
Bromobenzene	ND	0.50	1	12/21/2016 05:12
Bromochloromethane	ND	0.50	1	12/21/2016 05:12
Bromodichloromethane	ND	0.50	1	12/21/2016 05:12
Bromoform	ND	0.50	1	12/21/2016 05:12
Bromomethane	ND	0.50	1	12/21/2016 05:12
2-Butanone (MEK)	ND	2.0	1	12/21/2016 05:12
t-Butyl alcohol (TBA)	ND	2.0	1	12/21/2016 05:12
n-Butyl benzene	ND	0.50	1	12/21/2016 05:12
sec-Butyl benzene	ND	0.50	1	12/21/2016 05:12
tert-Butyl benzene	ND	0.50	1	12/21/2016 05:12
Carbon Disulfide	ND	0.50	1	12/21/2016 05:12
Carbon Tetrachloride	ND	0.50	1	12/21/2016 05:12
Chlorobenzene	ND	0.50	1	12/21/2016 05:12
Chloroethane	ND	0.50	1	12/21/2016 05:12
Chloroform	ND	0.50	1	12/21/2016 05:12
Chloromethane	ND	0.50	1	12/21/2016 05:12
2-Chlorotoluene	ND	0.50	1	12/21/2016 05:12
4-Chlorotoluene	ND	0.50	1	12/21/2016 05:12
Dibromochloromethane	ND	0.50	1	12/21/2016 05:12
1,2-Dibromo-3-chloropropane	ND	0.20	1	12/21/2016 05:12
1,2-Dibromoethane (EDB)	ND	0.50	1	12/21/2016 05:12
Dibromomethane	ND	0.50	1	12/21/2016 05:12
1,2-Dichlorobenzene	ND	0.50	1	12/21/2016 05:12
1,3-Dichlorobenzene	ND	0.50	1	12/21/2016 05:12
1,4-Dichlorobenzene	ND	0.50	1	12/21/2016 05:12
Dichlorodifluoromethane	ND	0.50	1	12/21/2016 05:12
1,1-Dichloroethane	ND	0.50	1	12/21/2016 05:12
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	12/21/2016 05:12
1,1-Dichloroethene	ND	0.50	1	12/21/2016 05:12
cis-1,2-Dichloroethene	ND	0.50	1	12/21/2016 05:12
trans-1,2-Dichloroethene	ND	0.50	1	12/21/2016 05:12
1,2-Dichloropropane	ND	0.50	1	12/21/2016 05:12
1,3-Dichloropropane	ND	0.50	1	12/21/2016 05:12
2,2-Dichloropropane	ND	0.50	1	12/21/2016 05:12

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P7-W	1612793-007B	Water	12/14/2016 09:30	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	12/21/2016 05:12
cis-1,3-Dichloropropene	ND	0.50	1	12/21/2016 05:12
trans-1,3-Dichloropropene	ND	0.50	1	12/21/2016 05:12
Diisopropyl ether (DIPE)	ND	0.50	1	12/21/2016 05:12
Ethylbenzene	ND	0.50	1	12/21/2016 05:12
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	12/21/2016 05:12
Freon 113	ND	0.50	1	12/21/2016 05:12
Hexachlorobutadiene	ND	0.50	1	12/21/2016 05:12
Hexachloroethane	ND	0.50	1	12/21/2016 05:12
2-Hexanone	ND	0.50	1	12/21/2016 05:12
Isopropylbenzene	ND	0.50	1	12/21/2016 05:12
4-Isopropyl toluene	ND	0.50	1	12/21/2016 05:12
Methyl-t-butyl ether (MTBE)	ND	0.50	1	12/21/2016 05:12
Methylene chloride	ND	0.50	1	12/21/2016 05:12
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	12/21/2016 05:12
Naphthalene	ND	0.50	1	12/21/2016 05:12
n-Propyl benzene	ND	0.50	1	12/21/2016 05:12
Styrene	ND	0.50	1	12/21/2016 05:12
1,1,1,2-Tetrachloroethane	ND	0.50	1	12/21/2016 05:12
1,1,2,2-Tetrachloroethane	ND	0.50	1	12/21/2016 05:12
Tetrachloroethene	1.9	0.50	1	12/21/2016 05:12
Toluene	ND	0.50	1	12/21/2016 05:12
1,2,3-Trichlorobenzene	ND	0.50	1	12/21/2016 05:12
1,2,4-Trichlorobenzene	ND	0.50	1	12/21/2016 05:12
1,1,1-Trichloroethane	ND	0.50	1	12/21/2016 05:12
1,1,2-Trichloroethane	ND	0.50	1	12/21/2016 05:12
Trichloroethene	ND	0.50	1	12/21/2016 05:12
Trichlorofluoromethane	ND	0.50	1	12/21/2016 05:12
1,2,3-Trichloropropane	ND	0.50	1	12/21/2016 05:12
1,2,4-Trimethylbenzene	ND	0.50	1	12/21/2016 05:12
1,3,5-Trimethylbenzene	ND	0.50	1	12/21/2016 05:12
Vinyl Chloride	ND	0.50	1	12/21/2016 05:12
Xylenes, Total	ND	0.50	1	12/21/2016 05:12

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P7-W	1612793-007B	Water	12/14/2016 09:30	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	104	70-130		12/21/2016 05:12
Toluene-d8	100	70-130		12/21/2016 05:12
4-BFB	87	70-130		12/21/2016 05:12

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P8-W	1612793-008B	Water	12/13/2016 15:25	GC28	131704

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	12/21/2016 15:20
tert-Amyl methyl ether (TAME)	ND	0.50	1	12/21/2016 15:20
Benzene	ND	0.50	1	12/21/2016 15:20
Bromobenzene	ND	0.50	1	12/21/2016 15:20
Bromochloromethane	ND	0.50	1	12/21/2016 15:20
Bromodichloromethane	ND	0.50	1	12/21/2016 15:20
Bromoform	ND	0.50	1	12/21/2016 15:20
Bromomethane	ND	0.50	1	12/21/2016 15:20
2-Butanone (MEK)	ND	2.0	1	12/21/2016 15:20
t-Butyl alcohol (TBA)	ND	2.0	1	12/21/2016 15:20
n-Butyl benzene	ND	0.50	1	12/21/2016 15:20
sec-Butyl benzene	ND	0.50	1	12/21/2016 15:20
tert-Butyl benzene	ND	0.50	1	12/21/2016 15:20
Carbon Disulfide	ND	0.50	1	12/21/2016 15:20
Carbon Tetrachloride	ND	0.50	1	12/21/2016 15:20
Chlorobenzene	ND	0.50	1	12/21/2016 15:20
Chloroethane	ND	0.50	1	12/21/2016 15:20
Chloroform	ND	0.50	1	12/21/2016 15:20
Chloromethane	ND	0.50	1	12/21/2016 15:20
2-Chlorotoluene	ND	0.50	1	12/21/2016 15:20
4-Chlorotoluene	ND	0.50	1	12/21/2016 15:20
Dibromochloromethane	ND	0.50	1	12/21/2016 15:20
1,2-Dibromo-3-chloropropane	ND	0.20	1	12/21/2016 15:20
1,2-Dibromoethane (EDB)	ND	0.50	1	12/21/2016 15:20
Dibromomethane	ND	0.50	1	12/21/2016 15:20
1,2-Dichlorobenzene	ND	0.50	1	12/21/2016 15:20
1,3-Dichlorobenzene	ND	0.50	1	12/21/2016 15:20
1,4-Dichlorobenzene	ND	0.50	1	12/21/2016 15:20
Dichlorodifluoromethane	ND	0.50	1	12/21/2016 15:20
1,1-Dichloroethane	1.8	0.50	1	12/21/2016 15:20
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	12/21/2016 15:20
1,1-Dichloroethene	1.1	0.50	1	12/21/2016 15:20
cis-1,2-Dichloroethene	4.5	0.50	1	12/21/2016 15:20
trans-1,2-Dichloroethene	ND	0.50	1	12/21/2016 15:20
1,2-Dichloropropane	ND	0.50	1	12/21/2016 15:20
1,3-Dichloropropane	ND	0.50	1	12/21/2016 15:20
2,2-Dichloropropane	ND	0.50	1	12/21/2016 15:20

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P8-W	1612793-008B	Water	12/13/2016 15:25	GC28	131704

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	12/21/2016 15:20
cis-1,3-Dichloropropene	ND	0.50	1	12/21/2016 15:20
trans-1,3-Dichloropropene	ND	0.50	1	12/21/2016 15:20
Diisopropyl ether (DIPE)	ND	0.50	1	12/21/2016 15:20
Ethylbenzene	ND	0.50	1	12/21/2016 15:20
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	12/21/2016 15:20
Freon 113	ND	0.50	1	12/21/2016 15:20
Hexachlorobutadiene	ND	0.50	1	12/21/2016 15:20
Hexachloroethane	ND	0.50	1	12/21/2016 15:20
2-Hexanone	ND	0.50	1	12/21/2016 15:20
Isopropylbenzene	ND	0.50	1	12/21/2016 15:20
4-Isopropyl toluene	ND	0.50	1	12/21/2016 15:20
Methyl-t-butyl ether (MTBE)	ND	0.50	1	12/21/2016 15:20
Methylene chloride	ND	0.50	1	12/21/2016 15:20
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	12/21/2016 15:20
Naphthalene	ND	0.50	1	12/21/2016 15:20
n-Propyl benzene	ND	0.50	1	12/21/2016 15:20
Styrene	ND	0.50	1	12/21/2016 15:20
1,1,1,2-Tetrachloroethane	ND	0.50	1	12/21/2016 15:20
1,1,2,2-Tetrachloroethane	ND	0.50	1	12/21/2016 15:20
Tetrachloroethene	31	0.50	1	12/21/2016 15:20
Toluene	ND	0.50	1	12/21/2016 15:20
1,2,3-Trichlorobenzene	ND	0.50	1	12/21/2016 15:20
1,2,4-Trichlorobenzene	ND	0.50	1	12/21/2016 15:20
1,1,1-Trichloroethane	1.0	0.50	1	12/21/2016 15:20
1,1,2-Trichloroethane	ND	0.50	1	12/21/2016 15:20
Trichloroethene	2.4	0.50	1	12/21/2016 15:20
Trichlorofluoromethane	ND	0.50	1	12/21/2016 15:20
1,2,3-Trichloropropane	ND	0.50	1	12/21/2016 15:20
1,2,4-Trimethylbenzene	ND	0.50	1	12/21/2016 15:20
1,3,5-Trimethylbenzene	ND	0.50	1	12/21/2016 15:20
Vinyl Chloride	0.55	0.50	1	12/21/2016 15:20
Xylenes, Total	ND	0.50	1	12/21/2016 15:20

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P8-W	1612793-008B	Water	12/13/2016 15:25	GC28	131704

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	109	70-130		12/21/2016 15:20
Toluene-d8	111	70-130		12/21/2016 15:20
4-BFB	102	70-130		12/21/2016 15:20

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P9-W	1612793-009B	Water	12/13/2016 14:04	GC28	131704

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	12/23/2016 03:09
tert-Amyl methyl ether (TAME)	ND	0.50	1	12/23/2016 03:09
Benzene	ND	0.50	1	12/23/2016 03:09
Bromobenzene	ND	0.50	1	12/23/2016 03:09
Bromochloromethane	ND	0.50	1	12/23/2016 03:09
Bromodichloromethane	ND	0.50	1	12/23/2016 03:09
Bromoform	ND	0.50	1	12/23/2016 03:09
Bromomethane	ND	0.50	1	12/23/2016 03:09
2-Butanone (MEK)	ND	2.0	1	12/23/2016 03:09
t-Butyl alcohol (TBA)	ND	2.0	1	12/23/2016 03:09
n-Butyl benzene	ND	0.50	1	12/23/2016 03:09
sec-Butyl benzene	ND	0.50	1	12/23/2016 03:09
tert-Butyl benzene	ND	0.50	1	12/23/2016 03:09
Carbon Disulfide	ND	0.50	1	12/23/2016 03:09
Carbon Tetrachloride	ND	0.50	1	12/23/2016 03:09
Chlorobenzene	ND	0.50	1	12/23/2016 03:09
Chloroethane	ND	0.50	1	12/23/2016 03:09
Chloroform	ND	0.50	1	12/23/2016 03:09
Chloromethane	ND	0.50	1	12/23/2016 03:09
2-Chlorotoluene	ND	0.50	1	12/23/2016 03:09
4-Chlorotoluene	ND	0.50	1	12/23/2016 03:09
Dibromochloromethane	ND	0.50	1	12/23/2016 03:09
1,2-Dibromo-3-chloropropane	ND	0.20	1	12/23/2016 03:09
1,2-Dibromoethane (EDB)	ND	0.50	1	12/23/2016 03:09
Dibromomethane	ND	0.50	1	12/23/2016 03:09
1,2-Dichlorobenzene	ND	0.50	1	12/23/2016 03:09
1,3-Dichlorobenzene	ND	0.50	1	12/23/2016 03:09
1,4-Dichlorobenzene	ND	0.50	1	12/23/2016 03:09
Dichlorodifluoromethane	ND	0.50	1	12/23/2016 03:09
1,1-Dichloroethane	ND	0.50	1	12/23/2016 03:09
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	12/23/2016 03:09
1,1-Dichloroethene	ND	0.50	1	12/23/2016 03:09
cis-1,2-Dichloroethene	ND	0.50	1	12/23/2016 03:09
trans-1,2-Dichloroethene	ND	0.50	1	12/23/2016 03:09
1,2-Dichloropropane	ND	0.50	1	12/23/2016 03:09
1,3-Dichloropropane	ND	0.50	1	12/23/2016 03:09
2,2-Dichloropropane	ND	0.50	1	12/23/2016 03:09

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P9-W	1612793-009B	Water	12/13/2016 14:04	GC28	131704

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	12/23/2016 03:09
cis-1,3-Dichloropropene	ND	0.50	1	12/23/2016 03:09
trans-1,3-Dichloropropene	ND	0.50	1	12/23/2016 03:09
Diisopropyl ether (DIPE)	ND	0.50	1	12/23/2016 03:09
Ethylbenzene	ND	0.50	1	12/23/2016 03:09
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	12/23/2016 03:09
Freon 113	ND	0.50	1	12/23/2016 03:09
Hexachlorobutadiene	ND	0.50	1	12/23/2016 03:09
Hexachloroethane	ND	0.50	1	12/23/2016 03:09
2-Hexanone	ND	0.50	1	12/23/2016 03:09
Isopropylbenzene	ND	0.50	1	12/23/2016 03:09
4-Isopropyl toluene	ND	0.50	1	12/23/2016 03:09
Methyl-t-butyl ether (MTBE)	ND	0.50	1	12/23/2016 03:09
Methylene chloride	ND	0.50	1	12/23/2016 03:09
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	12/23/2016 03:09
Naphthalene	ND	0.50	1	12/23/2016 03:09
n-Propyl benzene	ND	0.50	1	12/23/2016 03:09
Styrene	ND	0.50	1	12/23/2016 03:09
1,1,1,2-Tetrachloroethane	ND	0.50	1	12/23/2016 03:09
1,1,2,2-Tetrachloroethane	ND	0.50	1	12/23/2016 03:09
Tetrachloroethene	ND	0.50	1	12/23/2016 03:09
Toluene	ND	0.50	1	12/23/2016 03:09
1,2,3-Trichlorobenzene	ND	0.50	1	12/23/2016 03:09
1,2,4-Trichlorobenzene	ND	0.50	1	12/23/2016 03:09
1,1,1-Trichloroethane	ND	0.50	1	12/23/2016 03:09
1,1,2-Trichloroethane	ND	0.50	1	12/23/2016 03:09
Trichloroethene	ND	0.50	1	12/23/2016 03:09
Trichlorofluoromethane	ND	0.50	1	12/23/2016 03:09
1,2,3-Trichloropropane	ND	0.50	1	12/23/2016 03:09
1,2,4-Trimethylbenzene	ND	0.50	1	12/23/2016 03:09
1,3,5-Trimethylbenzene	ND	0.50	1	12/23/2016 03:09
Vinyl Chloride	ND	0.50	1	12/23/2016 03:09
Xylenes, Total	ND	0.50	1	12/23/2016 03:09

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P9-W	1612793-009B	Water	12/13/2016 14:04	GC28	131704

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	111	70-130		12/23/2016 03:09
Toluene-d8	109	70-130		12/23/2016 03:09
4-BFB	99	70-130		12/23/2016 03:09

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P10-W	1612793-010B	Water	12/13/2016 13:45	GC18	131577
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	12/20/2016 20:34
tert-Amyl methyl ether (TAME)	ND		0.50	1	12/20/2016 20:34
Benzene	ND		0.50	1	12/20/2016 20:34
Bromobenzene	ND		0.50	1	12/20/2016 20:34
Bromochloromethane	ND		0.50	1	12/20/2016 20:34
Bromodichloromethane	ND		0.50	1	12/20/2016 20:34
Bromoform	ND		0.50	1	12/20/2016 20:34
Bromomethane	ND		0.50	1	12/20/2016 20:34
2-Butanone (MEK)	ND		2.0	1	12/20/2016 20:34
t-Butyl alcohol (TBA)	ND		2.0	1	12/20/2016 20:34
n-Butyl benzene	ND		0.50	1	12/20/2016 20:34
sec-Butyl benzene	ND		0.50	1	12/20/2016 20:34
tert-Butyl benzene	ND		0.50	1	12/20/2016 20:34
Carbon Disulfide	ND		0.50	1	12/20/2016 20:34
Carbon Tetrachloride	ND		0.50	1	12/20/2016 20:34
Chlorobenzene	ND		0.50	1	12/20/2016 20:34
Chloroethane	ND		0.50	1	12/20/2016 20:34
Chloroform	ND		0.50	1	12/20/2016 20:34
Chloromethane	ND		0.50	1	12/20/2016 20:34
2-Chlorotoluene	ND		0.50	1	12/20/2016 20:34
4-Chlorotoluene	ND		0.50	1	12/20/2016 20:34
Dibromochloromethane	ND		0.50	1	12/20/2016 20:34
1,2-Dibromo-3-chloropropane	ND		0.20	1	12/20/2016 20:34
1,2-Dibromoethane (EDB)	ND		0.50	1	12/20/2016 20:34
Dibromomethane	ND		0.50	1	12/20/2016 20:34
1,2-Dichlorobenzene	ND		0.50	1	12/20/2016 20:34
1,3-Dichlorobenzene	ND		0.50	1	12/20/2016 20:34
1,4-Dichlorobenzene	ND		0.50	1	12/20/2016 20:34
Dichlorodifluoromethane	ND		0.50	1	12/20/2016 20:34
1,1-Dichloroethane	ND		0.50	1	12/20/2016 20:34
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	12/20/2016 20:34
1,1-Dichloroethene	ND		0.50	1	12/20/2016 20:34
cis-1,2-Dichloroethene	ND		0.50	1	12/20/2016 20:34
trans-1,2-Dichloroethene	ND		0.50	1	12/20/2016 20:34
1,2-Dichloropropane	ND		0.50	1	12/20/2016 20:34
1,3-Dichloropropane	ND		0.50	1	12/20/2016 20:34
2,2-Dichloropropane	ND		0.50	1	12/20/2016 20:34

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P10-W	1612793-010B	Water	12/13/2016 13:45	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	12/20/2016 20:34
cis-1,3-Dichloropropene	ND	0.50	1	12/20/2016 20:34
trans-1,3-Dichloropropene	ND	0.50	1	12/20/2016 20:34
Diisopropyl ether (DIPE)	ND	0.50	1	12/20/2016 20:34
Ethylbenzene	ND	0.50	1	12/20/2016 20:34
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	12/20/2016 20:34
Freon 113	ND	0.50	1	12/20/2016 20:34
Hexachlorobutadiene	ND	0.50	1	12/20/2016 20:34
Hexachloroethane	ND	0.50	1	12/20/2016 20:34
2-Hexanone	ND	0.50	1	12/20/2016 20:34
Isopropylbenzene	ND	0.50	1	12/20/2016 20:34
4-Isopropyl toluene	ND	0.50	1	12/20/2016 20:34
Methyl-t-butyl ether (MTBE)	ND	0.50	1	12/20/2016 20:34
Methylene chloride	ND	0.50	1	12/20/2016 20:34
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	12/20/2016 20:34
Naphthalene	ND	0.50	1	12/20/2016 20:34
n-Propyl benzene	ND	0.50	1	12/20/2016 20:34
Styrene	ND	0.50	1	12/20/2016 20:34
1,1,1,2-Tetrachloroethane	ND	0.50	1	12/20/2016 20:34
1,1,2,2-Tetrachloroethane	ND	0.50	1	12/20/2016 20:34
Tetrachloroethene	ND	0.50	1	12/20/2016 20:34
Toluene	ND	0.50	1	12/20/2016 20:34
1,2,3-Trichlorobenzene	ND	0.50	1	12/20/2016 20:34
1,2,4-Trichlorobenzene	ND	0.50	1	12/20/2016 20:34
1,1,1-Trichloroethane	ND	0.50	1	12/20/2016 20:34
1,1,2-Trichloroethane	ND	0.50	1	12/20/2016 20:34
Trichloroethene	ND	0.50	1	12/20/2016 20:34
Trichlorofluoromethane	ND	0.50	1	12/20/2016 20:34
1,2,3-Trichloropropane	ND	0.50	1	12/20/2016 20:34
1,2,4-Trimethylbenzene	ND	0.50	1	12/20/2016 20:34
1,3,5-Trimethylbenzene	ND	0.50	1	12/20/2016 20:34
Vinyl Chloride	ND	0.50	1	12/20/2016 20:34
Xylenes, Total	ND	0.50	1	12/20/2016 20:34

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P10-W	1612793-010B	Water	12/13/2016 13:45	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	105	70-130		12/20/2016 20:34
Toluene-d8	102	70-130		12/20/2016 20:34
4-BFB	82	70-130		12/20/2016 20:34

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-W	1612793-011B	Water	12/13/2016 14:30	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
Acetone	25	10	1	12/21/2016 01:57
tert-Amyl methyl ether (TAME)	ND	0.50	1	12/21/2016 01:57
Benzene	ND	0.50	1	12/21/2016 01:57
Bromobenzene	ND	0.50	1	12/21/2016 01:57
Bromochloromethane	ND	0.50	1	12/21/2016 01:57
Bromodichloromethane	ND	0.50	1	12/21/2016 01:57
Bromoform	ND	0.50	1	12/21/2016 01:57
Bromomethane	ND	0.50	1	12/21/2016 01:57
2-Butanone (MEK)	ND	2.0	1	12/21/2016 01:57
t-Butyl alcohol (TBA)	ND	2.0	1	12/21/2016 01:57
n-Butyl benzene	ND	0.50	1	12/21/2016 01:57
sec-Butyl benzene	ND	0.50	1	12/21/2016 01:57
tert-Butyl benzene	ND	0.50	1	12/21/2016 01:57
Carbon Disulfide	ND	0.50	1	12/21/2016 01:57
Carbon Tetrachloride	ND	0.50	1	12/21/2016 01:57
Chlorobenzene	ND	0.50	1	12/21/2016 01:57
Chloroethane	ND	0.50	1	12/21/2016 01:57
Chloroform	ND	0.50	1	12/21/2016 01:57
Chloromethane	ND	0.50	1	12/21/2016 01:57
2-Chlorotoluene	ND	0.50	1	12/21/2016 01:57
4-Chlorotoluene	ND	0.50	1	12/21/2016 01:57
Dibromochloromethane	ND	0.50	1	12/21/2016 01:57
1,2-Dibromo-3-chloropropane	ND	0.20	1	12/21/2016 01:57
1,2-Dibromoethane (EDB)	ND	0.50	1	12/21/2016 01:57
Dibromomethane	ND	0.50	1	12/21/2016 01:57
1,2-Dichlorobenzene	ND	0.50	1	12/21/2016 01:57
1,3-Dichlorobenzene	ND	0.50	1	12/21/2016 01:57
1,4-Dichlorobenzene	ND	0.50	1	12/21/2016 01:57
Dichlorodifluoromethane	ND	0.50	1	12/21/2016 01:57
1,1-Dichloroethane	ND	0.50	1	12/21/2016 01:57
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	12/21/2016 01:57
1,1-Dichloroethene	ND	0.50	1	12/21/2016 01:57
cis-1,2-Dichloroethene	ND	0.50	1	12/21/2016 01:57
trans-1,2-Dichloroethene	ND	0.50	1	12/21/2016 01:57
1,2-Dichloropropane	ND	0.50	1	12/21/2016 01:57
1,3-Dichloropropane	ND	0.50	1	12/21/2016 01:57
2,2-Dichloropropane	ND	0.50	1	12/21/2016 01:57

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-W	1612793-011B	Water	12/13/2016 14:30	GC18	131577
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.50	1	12/21/2016 01:57
cis-1,3-Dichloropropene	ND		0.50	1	12/21/2016 01:57
trans-1,3-Dichloropropene	ND		0.50	1	12/21/2016 01:57
Diisopropyl ether (DIPE)	ND		0.50	1	12/21/2016 01:57
Ethylbenzene	ND		0.50	1	12/21/2016 01:57
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	12/21/2016 01:57
Freon 113	ND		0.50	1	12/21/2016 01:57
Hexachlorobutadiene	ND		0.50	1	12/21/2016 01:57
Hexachloroethane	ND		0.50	1	12/21/2016 01:57
2-Hexanone	ND		0.50	1	12/21/2016 01:57
Isopropylbenzene	ND		0.50	1	12/21/2016 01:57
4-Isopropyl toluene	ND		0.50	1	12/21/2016 01:57
Methyl-t-butyl ether (MTBE)	ND		0.50	1	12/21/2016 01:57
Methylene chloride	ND		0.50	1	12/21/2016 01:57
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	12/21/2016 01:57
Naphthalene	ND		0.50	1	12/21/2016 01:57
n-Propyl benzene	ND		0.50	1	12/21/2016 01:57
Styrene	ND		0.50	1	12/21/2016 01:57
1,1,1,2-Tetrachloroethane	ND		0.50	1	12/21/2016 01:57
1,1,2,2-Tetrachloroethane	ND		0.50	1	12/21/2016 01:57
Tetrachloroethene	ND		0.50	1	12/21/2016 01:57
Toluene	ND		0.50	1	12/21/2016 01:57
1,2,3-Trichlorobenzene	ND		0.50	1	12/21/2016 01:57
1,2,4-Trichlorobenzene	ND		0.50	1	12/21/2016 01:57
1,1,1-Trichloroethane	ND		0.50	1	12/21/2016 01:57
1,1,2-Trichloroethane	ND		0.50	1	12/21/2016 01:57
Trichloroethene	ND		0.50	1	12/21/2016 01:57
Trichlorofluoromethane	ND		0.50	1	12/21/2016 01:57
1,2,3-Trichloropropane	ND		0.50	1	12/21/2016 01:57
1,2,4-Trimethylbenzene	ND		0.50	1	12/21/2016 01:57
1,3,5-Trimethylbenzene	ND		0.50	1	12/21/2016 01:57
Vinyl Chloride	ND		0.50	1	12/21/2016 01:57
Xylenes, Total	0.61		0.50	1	12/21/2016 01:57

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/20/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-W	1612793-011B	Water	12/13/2016 14:30	GC18	131577

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	104	70-130		12/21/2016 01:57
Toluene-d8	99	70-130		12/21/2016 01:57
4-BFB	92	70-130		12/21/2016 01:57

Analyst(s): HK



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/22/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
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
P1-W	1612793-001A	Water	12/13/2016 14:50	GC7	131705

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	7800	500	10	12/22/2016 19:41
MTBE	---	200	10	12/22/2016 19:41
Benzene	---	5.0	10	12/22/2016 19:41
Toluene	---	5.0	10	12/22/2016 19:41
Ethylbenzene	---	5.0	10	12/22/2016 19:41
Xylenes	---	15	10	12/22/2016 19:41

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
aaa-TFT	517	S	89-115	12/22/2016 19:41

Analyst(s): IA

Analytical Comments: d6,d17,c4,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-W	1612793-002A	Water	12/13/2016 15:45	GC7	131705

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	12/22/2016 21:39
MTBE	---	5.0	1	12/22/2016 21:39
Benzene	---	0.50	1	12/22/2016 21:39
Toluene	---	0.50	1	12/22/2016 21:39
Ethylbenzene	---	0.50	1	12/22/2016 21:39
Xylenes	---	1.5	1	12/22/2016 21:39

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	114	89-115	12/22/2016 21:39

Analyst(s): IA



Analytical Report

Client: P & D Environmental	WorkOrder: 1612793
Date Received: 12/15/16 15:30	Extraction Method: SW5030B
Date Prepared: 12/22/16-12/23/16	Analytical Method: SW8021B/8015Bm
Project: 0741; 2868 Hannah St. Oakland CA	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
P3-W	1612793-003A	Water	12/14/2016 16:45	GC3	131627
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		50	1	12/22/2016 04:52
MTBE	---		5.0	1	12/22/2016 04:52
Benzene	---		0.50	1	12/22/2016 04:52
Toluene	---		0.50	1	12/22/2016 04:52
Ethylbenzene	---		0.50	1	12/22/2016 04:52
Xylenes	---		1.5	1	12/22/2016 04:52
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	109		89-115		12/22/2016 04:52
<u>Analyst(s):</u> IA		<u>Analytical Comments:</u> b1			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P4-W	1612793-004A	Water	12/14/2016 17:30	GC3	131627
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		50	1	12/22/2016 05:22
MTBE	---		5.0	1	12/22/2016 05:22
Benzene	---		0.50	1	12/22/2016 05:22
Toluene	---		0.50	1	12/22/2016 05:22
Ethylbenzene	---		0.50	1	12/22/2016 05:22
Xylenes	---		1.5	1	12/22/2016 05:22
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	107		89-115		12/22/2016 05:22
<u>Analyst(s):</u> IA					



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/22/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
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
P5-W	1612793-005A	Water	12/14/2016 16:05	GC7	131770

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	12/22/2016 04:34
MTBE	---	5.0	1	12/22/2016 04:34
Benzene	---	0.50	1	12/22/2016 04:34
Toluene	---	0.50	1	12/22/2016 04:34
Ethylbenzene	---	0.50	1	12/22/2016 04:34
Xylenes	---	1.5	1	12/22/2016 04:34

Surrogates	REC (%)	Limits
aaa-TFT	110	89-115

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P6-W	1612793-006A	Water	12/14/2016 11:10	GC7	131770

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	12/22/2016 05:04
MTBE	---	5.0	1	12/22/2016 05:04
Benzene	---	0.50	1	12/22/2016 05:04
Toluene	---	0.50	1	12/22/2016 05:04
Ethylbenzene	---	0.50	1	12/22/2016 05:04
Xylenes	---	1.5	1	12/22/2016 05:04

Surrogates	REC (%)	Limits
aaa-TFT	113	89-115

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/22/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
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
P7-W	1612793-007A	Water	12/14/2016 09:30	GC7	131770

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	12/22/2016 05:33
MTBE	---	5.0	1	12/22/2016 05:33
Benzene	---	0.50	1	12/22/2016 05:33
Toluene	---	0.50	1	12/22/2016 05:33
Ethylbenzene	---	0.50	1	12/22/2016 05:33
Xylenes	---	1.5	1	12/22/2016 05:33
Surrogates	REC (%)	Limits		
aaa-TFT	114	89-115		12/22/2016 05:33

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P8-W	1612793-008A	Water	12/13/2016 15:25	GC12	131770

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	12/23/2016 13:06
MTBE	---	5.0	1	12/23/2016 13:06
Benzene	---	0.50	1	12/23/2016 13:06
Toluene	---	0.50	1	12/23/2016 13:06
Ethylbenzene	---	0.50	1	12/23/2016 13:06
Xylenes	---	1.5	1	12/23/2016 13:06
Surrogates	REC (%)	Limits		
aaa-TFT	112	89-115		12/23/2016 13:06

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/22/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
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
P9-W	1612793-009A	Water	12/13/2016 14:04	GC7	131770

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	12/22/2016 07:02
MTBE	---	5.0	1	12/22/2016 07:02
Benzene	---	0.50	1	12/22/2016 07:02
Toluene	---	0.50	1	12/22/2016 07:02
Ethylbenzene	---	0.50	1	12/22/2016 07:02
Xylenes	---	1.5	1	12/22/2016 07:02

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	110	89-115	12/22/2016 07:02

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P10-W	1612793-010A	Water	12/13/2016 13:45	GC7	131770

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	12/22/2016 08:31
MTBE	---	5.0	1	12/22/2016 08:31
Benzene	---	0.50	1	12/22/2016 08:31
Toluene	---	0.50	1	12/22/2016 08:31
Ethylbenzene	---	0.50	1	12/22/2016 08:31
Xylenes	---	1.5	1	12/22/2016 08:31

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	98	89-115	12/22/2016 08:31

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/22/16-12/23/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
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
P11-W	1612793-011A	Water	12/13/2016 14:30	GC7	131770

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	12/22/2016 09:01
MTBE	---	5.0	1	12/22/2016 09:01
Benzene	---	0.50	1	12/22/2016 09:01
Toluene	---	0.50	1	12/22/2016 09:01
Ethylbenzene	---	0.50	1	12/22/2016 09:01
Xylenes	---	1.5	1	12/22/2016 09:01

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	96	89-115	12/22/2016 09:01

Analyst(s): IA



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
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
P1-W	1612793-001A	Water	12/13/2016 14:50	GC11B	131383

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	12/17/2016 03:30
TPH-Motor Oil (C18-C36)	ND	250	1	12/17/2016 03:30
TPH-Bunker Oil (C10-C36)	ND	100	1	12/17/2016 03:30

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	96	72-117	12/17/2016 03:30

Analyst(s): TK Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2-W	1612793-002A	Water	12/13/2016 15:45	GC11A	131383

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	12/17/2016 08:02
TPH-Motor Oil (C18-C36)	ND	250	1	12/17/2016 08:02
TPH-Bunker Oil (C10-C36)	ND	100	1	12/17/2016 08:02

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	101	72-117	12/17/2016 08:02

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3-W	1612793-003A	Water	12/14/2016 16:45	GC11A	131383

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	61	50	1	12/17/2016 08:41
TPH-Motor Oil (C18-C36)	ND	250	1	12/17/2016 08:41
TPH-Bunker Oil (C10-C36)	ND	100	1	12/17/2016 08:41

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	101	72-117	12/17/2016 08:41

Analyst(s): TK Analytical Comments: e2,b1

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Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
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
P4-W	1612793-004A	Water	12/14/2016 17:30	GC11B	131383

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	12/17/2016 09:59
TPH-Motor Oil (C18-C36)	270	250	1	12/17/2016 09:59
TPH-Bunker Oil (C10-C36)	260	100	1	12/17/2016 09:59

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	96	72-117	12/17/2016 09:59

Analyst(s): TK Analytical Comments: e7

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P5-W	1612793-005A	Water	12/14/2016 16:05	GC11A	131383

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	12/17/2016 06:44
TPH-Motor Oil (C18-C36)	ND	250	1	12/17/2016 06:44
TPH-Bunker Oil (C10-C36)	ND	100	1	12/17/2016 06:44

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	98	72-117	12/17/2016 06:44

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P6-W	1612793-006A	Water	12/14/2016 11:10	GC11A	131383

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	55	50	1	12/17/2016 06:05
TPH-Motor Oil (C18-C36)	ND	250	1	12/17/2016 06:05
TPH-Bunker Oil (C10-C36)	ND	100	1	12/17/2016 06:05

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	102	72-117	12/17/2016 06:05

Analyst(s): TK Analytical Comments: e2

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
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
P7-W	1612793-007A	Water	12/14/2016 09:30	GC11A	131383

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	12/17/2016 03:30
TPH-Motor Oil (C18-C36)	ND	250	1	12/17/2016 03:30
TPH-Bunker Oil (C10-C36)	ND	100	1	12/17/2016 03:30

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	72-117	12/17/2016 03:30

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P8-W	1612793-008A	Water	12/13/2016 15:25	GC6A	131383

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	16,000	250	5	12/19/2016 10:41
TPH-Motor Oil (C18-C36)	20,000	1200	5	12/19/2016 10:41
TPH-Bunker Oil (C10-C36)	22,000	500	5	12/19/2016 10:41

Surrogates	REC (%)	Limits	Date Analyzed
C9	107	72-117	12/19/2016 10:41

Analyst(s): TK

Analytical Comments: e2/e3,e7

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P9-W	1612793-009A	Water	12/13/2016 14:04	GC11B	131383

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	12/17/2016 02:51
TPH-Motor Oil (C18-C36)	ND	250	1	12/17/2016 02:51
TPH-Bunker Oil (C10-C36)	ND	100	1	12/17/2016 02:51

Surrogates	REC (%)	Limits	Date Analyzed
C9	95	72-117	12/17/2016 02:51

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental
Date Received: 12/15/16 15:30
Date Prepared: 12/16/16
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
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
P10-W	1612793-010A	Water	12/13/2016 13:45	GC11A	131386

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	12/17/2016 09:59
TPH-Motor Oil (C18-C36)	ND	250	1	12/17/2016 09:59
TPH-Bunker Oil (C10-C36)	ND	100	1	12/17/2016 09:59

Surrogates	REC (%)	Limits	Date Analyzed
C9	98	72-117	12/17/2016 09:59

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P11-W	1612793-011A	Water	12/13/2016 14:30	GC11A	131386

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	700	50	1	12/17/2016 02:12
TPH-Motor Oil (C18-C36)	1000	250	1	12/17/2016 02:12
TPH-Bunker Oil (C10-C36)	1100	100	1	12/17/2016 02:12

Surrogates	REC (%)	Limits	Date Analyzed
C9	99	72-117	12/17/2016 02:12

Analyst(s): TK

Analytical Comments: e7,e2



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/20/16
Date Analyzed: 12/20/16
Instrument: GC18
Matrix: Water
Project: 0741; 2868 Hannah St. Oakland CA


WorkOrder: 1612793
BatchID: 131577
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-131577
 1612793-010BMS/MSD

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	7.83	0.50	10	-	78	54-140
Benzene	ND	9.31	0.50	10	-	93	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	30.9	2.0	40	-	77	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	8.26	0.50	10	-	83	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	7.66	0.50	10	-	77	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	8.52	0.50	10	-	85	66-125
1,1-Dichloroethene	ND	8.80	0.50	10	-	88	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	-	-	-	-

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NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/20/16
Date Analyzed: 12/20/16
Instrument: GC18
Matrix: Water
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
BatchID: 131577
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-131577
 1612793-010BMS/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	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	9.33	0.50	10	-	93	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	8.74	0.50	10	-	87	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	8.51	0.50	10	-	85	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	8.25	0.50	10	-	83	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: 12/20/16
Date Analyzed: 12/20/16
Instrument: GC18
Matrix: Water
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
BatchID: 131577
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-131577
 1612793-010BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	25.7	25.6		25	103	102	70-130
Toluene-d8	25.9	25.9		25	104	104	70-130
4-BFB	2.09	2.22		2.5	83	89	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	8.88	9.21	10	ND	89	92	69-139	3.64	20
Benzene	9.89	9.98	10	ND	99	100	69-141	0.940	20
t-Butyl alcohol (TBA)	34.3	36.2	40	ND	86	90	41-152	5.47	20
Chlorobenzene	8.73	9.04	10	ND	87	90	77-120	3.40	20
1,2-Dibromoethane (EDB)	8.56	8.67	10	ND	86	87	76-135	1.33	20
1,2-Dichloroethane (1,2-DCA)	9.59	9.73	10	ND	96	97	73-139	1.50	20
1,1-Dichloroethene	9.13	9.16	10	ND	91	92	59-140	0.329	20
Diisopropyl ether (DIPE)	10.2	10.4	10	ND	102	104	72-140	1.44	20
Ethyl tert-butyl ether (ETBE)	9.81	10.0	10	ND	98	100	71-140	2.18	20
Methyl-t-butyl ether (MTBE)	9.45	9.55	10	ND	94	95	73-139	1.07	20
Toluene	9.27	9.38	10	ND	90	91	71-128	1.17	20
Trichloroethene	9.23	9.32	10	ND	92	93	64-132	0.995	20

Surrogate Recovery									
Dibromofluoromethane	26.3	26.2	25		105	105	73-131	0	20
Toluene-d8	25.2	24.8	25		101	99	72-117	1.72	20
4-BFB	2.13	2.26	2.5		85	90	74-116	5.76	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/21/16
Date Analyzed: 12/21/16
Instrument: GC3
Matrix: Water
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
BatchID: 131627
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-131627
 1612956-001AMS/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	62.0	40	60	-	103	85-112
MTBE	ND	10.4	5.0	10	-	104	74-127
Benzene	ND	10.3	0.50	10	-	103	81-124
Toluene	ND	10.6	0.50	10	-	106	79-131
Ethylbenzene	ND	10.8	0.50	10	-	108	86-127
Xylenes	ND	34.4	1.5	30	-	115	87-133
Surrogate Recovery							
aaa-TFT	10.5	10.2		10	105	102	87-117

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	59.7	60.1	60	ND	100	100	85-113	0	20
MTBE	8.72	8.68	10	ND	87	87	73-120	0	20
Benzene	9.58	10.0	10	ND	96	100	84-121	4.61	20
Toluene	9.86	10.3	10	ND	99	103	86-125	4.40	20
Ethylbenzene	10.2	10.5	10	ND	101	104	93-124	3.00	20
Xylenes	32.0	32.7	30	ND	107	109	93-130	2.29	20
Surrogate Recovery									
aaa-TFT	10.3	10.7	10		103	107	89-115	3.91	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/21/16
Date Analyzed: 12/21/16
Instrument: GC28
Matrix: Water
Project: 0741; 2868 Hannah St. Oakland CA


WorkOrder: 1612793
BatchID: 131704
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-131704
 1612789-003AMS/MSD

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	9.04	0.50	10	-	90	54-140
Benzene	ND	9.44	0.50	10	-	94	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	27.2	2.0	40	-	68	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	10.1	0.50	10	-	101	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	9.42	0.50	10	-	94	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	9.17	0.50	10	-	92	66-125
1,1-Dichloroethene	ND	8.45	0.50	10	-	84	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	-	-	-	-

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NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/21/16
Date Analyzed: 12/21/16
Instrument: GC28
Matrix: Water
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
BatchID: 131704
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-131704
 1612789-003AMS/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	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	9.43	0.50	10	-	94	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.41	0.50	10	-	94	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	8.86	0.50	10	-	89	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	10.1	0.50	10	-	101	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	9.21	0.50	10	-	92	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: 12/21/16
Date Analyzed: 12/21/16
Instrument: GC28
Matrix: Water
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
BatchID: 131704
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-131704
 1612789-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	27.1	26.6		25	108	107	70-130
Toluene-d8	28.4	29.0		25	113	116	70-130
4-BFB	2.52	2.91		2.5	101	117	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	9.62	10.7	10	ND	96	107	69-139	10.4	20
Benzene	9.70	9.94	10	ND	97	99	69-141	2.43	20
t-Butyl alcohol (TBA)	32.8	41.8	40	ND	82	104	41-152	24.2,F1	20
Chlorobenzene	10.3	10.5	10	ND	103	105	77-120	2.43	20
1,2-Dibromoethane (EDB)	9.83	10.5	10	ND	98	105	76-135	6.21	20
1,2-Dichloroethane (1,2-DCA)	10.0	10.5	10	ND	97	101	73-139	4.54	20
1,1-Dichloroethene	8.44	8.63	10	ND	84	86	59-140	2.19	20
Diisopropyl ether (DIPE)	9.93	10.4	10	ND	99	104	72-140	4.14	20
Ethyl tert-butyl ether (ETBE)	10.0	10.6	10	ND	100	106	71-140	5.28	20
Methyl-t-butyl ether (MTBE)	11.9	12.7	10	2.333	96	104	73-139	6.65	20
Toluene	10.1	10.4	10	ND	101	103	71-128	2.73	20
Trichloroethene	10.3	10.5	10	0.6869	96	99	64-132	2.41	20

Surrogate Recovery									
Dibromofluoromethane	27.5	27.7	25		110	111	73-131	0.814	20
Toluene-d8	28.5	28.5	25		114	114	72-117	0	20
4-BFB	2.76	2.91	2.5		111	116	74-116	5.15	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/21/16 - 12/22/16
Date Analyzed: 12/21/16 - 12/22/16
Instrument: GC19
Matrix: Water
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
BatchID: 131705
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-131705
 1612792-001AMS/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	60.5	40	60	-	101	85-112
MTBE	ND	10.2	5.0	10	-	102	74-127
Benzene	ND	10.4	0.50	10	-	104	81-124
Toluene	ND	10.4	0.50	10	-	104	79-131
Ethylbenzene	ND	10.6	0.50	10	-	106	86-127
Xylenes	ND	31.7	1.5	30	-	106	87-133
Surrogate Recovery							
aaa-TFT	9.63	9.48		10	96	95	87-117

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	59.0	58.4	60	ND	98	97	85-113	0.919	20
MTBE	10.0	9.80	10	ND	100	98	73-120	2.11	20
Benzene	10.7	10.4	10	ND	107	104	84-121	2.74	20
Toluene	10.6	10.3	10	ND	105	103	86-125	2.46	20
Ethylbenzene	10.6	10.3	10	ND	106	103	93-124	2.35	20
Xylenes	31.3	30.6	30	ND	104	102	93-130	2.37	20
Surrogate Recovery									
aaa-TFT	9.65	9.72	10		97	97	89-115	0	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 12/21/16
Date Analyzed: 12/21/16
Instrument: GC7
Matrix: Water
Project: 0741; 2868 Hannah St. Oakland CA

WorkOrder: 1612793
BatchID: 131770
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-131770
 1612788-018AMS/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	58.0	40	60	-	97	85-112
MTBE	ND	11.3	5.0	10	-	113	74-127
Benzene	ND	11.8	0.50	10	-	118	81-124
Toluene	ND	12.3	0.50	10	-	123	79-131
Ethylbenzene	ND	11.5	0.50	10	-	115	86-127
Xylenes	ND	33.6	1.5	30	-	112	87-133
Surrogate Recovery							
aaa-TFT	9.85	10.7		10	99	107	87-117

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR		99	NR	NR	-	NR	
MTBE	NR	NR		ND	NR	NR	-	NR	
Benzene	NR	NR		4.4	NR	NR	-	NR	
Toluene	NR	NR		ND	NR	NR	-	NR	
Ethylbenzene	NR	NR		ND	NR	NR	-	NR	
Xylenes	NR	NR		ND	NR	NR	-	NR	
Surrogate Recovery									
aaa-TFT	NR	NR			NR	NR	-	NR	



Quality Control Report

Client: P & D Environmental	WorkOrder: 1612793
Date Prepared: 12/16/16	BatchID: 131383
Date Analyzed: 12/16/16	Extraction Method: SW3510C
Instrument: GC6B, GC9a	Analytical Method: SW8015B
Matrix: Water	Unit: µg/L
Project: 0741; 2868 Hannah St. Oakland CA	Sample ID: MB/LCS/LCSD-131383

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	590		625	94	74-107

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1140	1180	1000	114	118	95-136	0	30
Surrogate Recovery								
C9	595	606	625	95	97	74-107	0	30



Quality Control Report

Client: P & D Environmental	WorkOrder: 1612793
Date Prepared: 12/16/16	BatchID: 131386
Date Analyzed: 12/16/16	Extraction Method: SW3510C
Instrument: GC6B, GC9a	Analytical Method: SW8015B
Matrix: Water	Unit: µg/L
Project: 0741; 2868 Hannah St. Oakland CA	Sample ID: MB/LCS/LCSD-131386

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	587		625	94	74-107

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1170	1180	1000	117	118	95-136	0.600	30
Surrogate Recovery								
C9	591	606	625	95	97	74-107	2.49	30



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1612793

ClientCode: PDEO

WaterTrax WriteOn EDF Excel EQUS Email HardCopy ThirdParty J-flag

Report to:

Michael Deschenes
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0741; 2868 Hannah St. Oakland CA

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days;

Date Received: 12/15/2016

Date Logged: 12/16/2016

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	
1612793-001	P1-W	Water	12/13/2016 14:50	<input type="checkbox"/>	B	A	A										
1612793-002	P2-W	Water	12/13/2016 15:45	<input type="checkbox"/>	B	A	A										
1612793-003	P3-W	Water	12/14/2016 16:45	<input type="checkbox"/>	B	A	A										
1612793-004	P4-W	Water	12/14/2016 17:30	<input type="checkbox"/>	B	A	A										
1612793-005	P5-W	Water	12/14/2016 16:05	<input type="checkbox"/>	B	A	A										
1612793-006	P6-W	Water	12/14/2016 11:10	<input type="checkbox"/>	B	A	A										
1612793-007	P7-W	Water	12/14/2016 09:30	<input type="checkbox"/>	B	A	A										
1612793-008	P8-W	Water	12/13/2016 15:25	<input type="checkbox"/>	B	A	A										
1612793-009	P9-W	Water	12/13/2016 14:04	<input type="checkbox"/>	B	A	A										
1612793-010	P10-W	Water	12/13/2016 13:45	<input type="checkbox"/>	B	A	A										
1612793-011	P11-W	Water	12/13/2016 14:30	<input type="checkbox"/>	B	A	A										

Test Legend:

1	8260B_W	2	G-MBTEX_W	3	TPH_W	4	
5		6		7		8	
9		10		11		12	

Prepared by: Maria Venegas

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

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

Project: 0741; 2868 Hannah St. Oakland CA

Work Order: 1612793

Client Contact: Michael Deschenes

QC Level: LEVEL 2

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

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

Date Logged: 12/16/2016

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
1612793-001A	P1-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/13/2016 14:50	5 days	1%+	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-001B	P1-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/13/2016 14:50	5 days	1%+	<input type="checkbox"/>	
1612793-002A	P2-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/13/2016 15:45	5 days	Present	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-002B	P2-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/13/2016 15:45	5 days	Present	<input type="checkbox"/>	
1612793-003A	P3-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/14/2016 16:45	5 days	1%+	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-003B	P3-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/14/2016 16:45	5 days	1%+	<input type="checkbox"/>	
1612793-004A	P4-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/14/2016 17:30	5 days	Present	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-004B	P4-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/14/2016 17:30	5 days	Present	<input type="checkbox"/>	
1612793-005A	P5-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/14/2016 16:05	5 days	Present	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-005B	P5-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/14/2016 16:05	5 days	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.



WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL

Project: 0741; 2868 Hannah St. Oakland CA

Work Order: 1612793

Client Contact: Michael Deschenes

QC Level: LEVEL 2

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

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

Date Logged: 12/16/2016

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
1612793-006A	P6-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/14/2016 11:10	5 days	Present	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-006B	P6-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/14/2016 11:10	5 days	Present	<input type="checkbox"/>	
1612793-007A	P7-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/14/2016 9:30	5 days	Present	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-007B	P7-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/14/2016 9:30	5 days	Present	<input type="checkbox"/>	
1612793-008A	P8-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/13/2016 15:25	5 days	Present	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-008B	P8-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/13/2016 15:25	5 days	Present	<input type="checkbox"/>	
1612793-009A	P9-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/13/2016 14:04	5 days	Present	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-009B	P9-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/13/2016 14:04	5 days	Present	<input type="checkbox"/>	
1612793-010A	P10-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/13/2016 13:45	5 days	Present	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-010B	P10-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/13/2016 13:45	5 days	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.



WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL

Project: 0741; 2868 Hannah St. Oakland CA

Work Order: 1612793

Client Contact: Michael Deschenes

QC Level: LEVEL 2

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

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

Date Logged: 12/16/2016

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
1612793-011A	P11-W	Water	Multi-Range TPH by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	12/13/2016 14:30	5 days	Present	<input type="checkbox"/>	
				1	ILA	<input type="checkbox"/>					
1612793-011B	P11-W	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	12/13/2016 14:30	5 days	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.

1612793

CHAIN OF CUSTODY RECORD

P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

PROJECT NUMBER:

0741

PROJECT NAME:

2868 Hannah St.
Oakland, CA

SAMPLED BY: (PRINTED & SIGNATURE)

MICHAEL BASS-DESCHENES *Michael Bass-Deschenes*

NUMBER OF CONTAINERS

ANALYSIS(ES):

TAP (E.D., BQ, PB)
VOCs BY EPA 8260.B

PRESERVATIVE

REMARKS

SAMPLE NUMBER

DATE

TIME

TYPE

SAMPLE LOCATION

+1
+
+1
+
+
+
+
+
+
+
+
+

P1-W

12/13/16

1450

water

Borehole Grab Sample

7

X

X

ICE

Normal Turn Around

P2-W

"

1545

"

" " "

7

X

X

"

" " "

P3-W

12/14/16

1645

"

" " "

7

X

X

"

" " "

P4-W

"

1730

"

" " "

7

X

X

"

" " "

P5-W

"

1605

"

" " "

7

X

X

"

" " "

P6-W

"

1110

"

" " "

7

X

X

"

" " "

P7-W

"

0930

"

" " "

7

X

X

"

" " "

P8-W

12/13/16

1525

"

" " "

7

X

X

"

" " "

P9-W

"

1404

"

" " "

7

X

X

"

" " "

P10-W

"

1345

"

" " "

7

X

X

"

" " "

P11-W

"

1430

"

" " "

7

X

X

"

" " "

ICE/W 2.8
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
pH ADJUSTED IN LAB

RELINQUISHED BY: (SIGNATURE)

Michael Bass-Deschenes

DATE

12-15/16

TIME

1615

RECEIVED BY: (SIGNATURE)

[Signature]

Total No. of Samples (This Shipment)

11

LABORATORY:

MC CAMPBELL ANALYTICAL, INC

Total No. of Containers (This Shipment)

77

RELINQUISHED BY: (SIGNATURE)

[Signature]

DATE

12-15/16

TIME

530

RECEIVED BY: (SIGNATURE)

[Signature]

LABORATORY CONTACT:

ANGELA RYDELINS (877) 252-9262

LABORATORY PHONE NUMBER:

RELINQUISHED BY: (SIGNATURE)

DATE

TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE)

(SIGNATURE)

SAMPLE ANALYSIS REQUEST SHEET

ATTACHED: () YES (X) NO

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

REMARKS:

4 VOCs WITH HCL
2 AMBER VOCs (UNPRESERVED)
1 HTER AMBER (UNPRESERVED)



Sample Receipt Checklist

Client Name: **P & D Environmental**
 Project Name: **0741; 2868 Hannah St. Oakland CA**
 WorkOrder No: **1612793** Matrix: Water
 Carrier: David Shaver (MAI Courier)

Date and Time Received: **12/15/2016 15:30**
 Date Logged: **12/16/2016**
 Received by: **Maria Venegas**
 Logged by: **Maria Venegas**

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: 2.8°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:

APPENDIX C

Drum Disposal Non-Hazardous Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No. bse012417	2. Page 1 of
3. Generator's Name and Mailing Address		2868 Hannah St Oakland, CA			
4. Generator's Phone ()					
5. Transporter 1 Company Name		6. US EPA ID Number		A. State Transporter's ID	
Big Sky Enterprises				B. Transporter 1 Phone (800) 479-7993	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID	
				D. Transporter 2 Phone	
9. Designated Facility Name and Site Address		10. US EPA ID Number		E. State Facility's ID	
Big Sky Enterprises 401 W. Channel Rd Benicia, CA 94510				F. Facility's Phone (800) 479-7993	
11. WASTE DESCRIPTION		Containers		13. Total Quantity	14. Unit Wt./Vol.
		No.	Type		
a. Non Hazardous Waste Solid		002	DM	1400	P
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above		
Wear PPE					
15. Special Handling Instructions and Additional Information					
Material will be binned for disposal at Potrero Hill Landfill in Suisun CA					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name				Date	
SNA				Month Day Year 1 12 2017	
Signature				Date	
<i>SNA</i>				Month Day Year 1 12 2017	
17. Transporter 1 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name				Month Day Year	
Jeff Rhodes				1 12 2017	
Signature				Date	
<i>Jeff Rhodes</i>				Month Day Year 1 12 2017	
18. Transporter 2 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name				Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name				Date	
Jeff Rhodes				Month Day Year 1 12 2017	
Signature				Date	
<i>Jeff Rhodes</i>				Month Day Year 1 12 2017	

GENERATOR

TRANSPORTER

FACILITY

