Cathedral Gardens Oakland, L.P.
2169 East Francisco Boulevard, Suite EAH
San Rafael, CA 94901
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August 18, 2014

Mr. Jerry Wickham
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION REPORT CERTIFICATION
RO 0003138
Cathedral Gardens
638 21st Street
Oakland, California

Dear Mr. Wickham:

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

- Subsurface Investigation Report dated August 18, 2014 (document 0553.R5).

I declare, under penalty of perjury, that the information and/or recommendations contained in the above-mentioned work plan for the subject site is true and correct to the best of my knowledge.

Please don't hesitate to call me if you have any questions.

Sincerely,

Benny Kwong
EAH, Inc. for
Cathedral Gardens Oakland, L.P.

0553.L7

P&D ENVIRONMENTAL, INC.

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

August 18, 2014
Report 0553.R5

Mr. Benny Kwong
EAH Housing
2169 East Francisco Blvd, Suite EAH
San Rafael, CA 94901

SUBJECT: SUBSURFACE INVESTIGATION REPORT
(B6 THROUGH B17 AND SG1)
Cathedral Gardens
638 21st Street
Oakland, CA

Dear Mr. Kwong:

P&D Environmental, Inc. (P&D) has prepared this report documenting subsurface investigation activities in accordance with P&D's Subsurface Investigation Work Plan dated June 13, 2014 (document 0553.W4). The work plan was approved in a letter from the Alameda County Department of Environmental Health (ACDEH) dated June 18, 2014.

Drilling for soil and groundwater sample collection from boreholes B6 through B15 was performed on July 21, and 22, 2014 and soil gas sample collection from soil gas well SG1 was performed on July 28, 2014. Based on the groundwater sample results, additional drilling at locations B16 and B17 for additional groundwater sample collection was performed on August 4, 2014.

A Site Location Map is attached as Figure 1, a Site Vicinity Aerial Photograph showing the groundwater grab sample collection locations is attached as Figure 3, and a Site Plan Detail showing the Former UST and soil sample locations and soil gas well SG1 is attached as Figure 4. All work was performed under the direct supervision of a professional geologist.

BACKGROUND

During May 2014 a heating oil UST was discovered and removed from the subject site. Based on soil and groundwater sample results for samples collected from beneath the UST, a work plan dated June 13, 2014 prepared by P&D for investigation of the extent of petroleum hydrocarbons in soil and groundwater and for the presence of petroleum hydrocarbons in soil gas was provided to the ACDEH. A detailed discussion of the site background is provided in the work plan.

FIELD ACTIVITIES

Prior to performing field activities, drilling permits W2014-0664 and W2014-0665 were obtained from the Alameda County Public Works Agency (ACPWA), city excavation permits 1401779 and 1401780 and city obstruction permits OB1400503 and OB1400504 were obtained from City of

Oakland Planning and Building Department for work on 21st and 22nd Streets, drilling locations were marked with white paint, Underground Service Alert was notified for underground utility location, a health and safety plan was prepared, and traffic control plans were prepared. Notification of the drilling dates and sampling dates was also provided to ACDEH.

Continuous Coring and Sample Collection

P&D personnel oversaw hand augering and drilling at locations B6 through B15 on July 21 and 22, 2014, at locations B16 through B17 on August 4, 2014, and at location B13A on August 5, 2014 (see Figure 2). Borehole B13 was drilled in the former UST pit, and replacement boring B13A was drilled as close to the south side of the UST pit as possible based on the location of underground utilities that were identified immediately to the south of the UST pit (see Figure 2). Boreholes B6 through B11, B16 and B17 were drilled or hand augered for groundwater sample collection to evaluate the presence and extent of petroleum hydrocarbons in groundwater. Boreholes B12 through B15 were drilled for the collection of soil samples to evaluate the presence and extent of petroleum hydrocarbons in soil in the vicinity of the former UST pit. All boreholes were hand augered to a depth of 5.0 feet below the ground surface (bgs) for utility clearance purposes.

All drilling was performed by Vironex, Inc. of Concord, California (Vironex) using Geoprobe dual tube or Macrocore direct push methods with a Macrocore barrel sampler lined with transparent PVC sleeves, with the exception of B16 and B17 which were hand augered in the parking structure basement (located within the footprint of the site building). Boreholes B7, B8, B11, and B12 through B15 were continuously cored to a total depth of 20.0 feet bgs, boreholes B9 and B10 were continuously cored to a total depth of 15.0 feet bgs, and borehole B6 was continuously cored to a depth of 16 feet bgs using a Geoprobe Macrocore barrel sampler lined with transparent PVC sleeves. Boreholes B16 and B17 were located in the underground parking structure and were both hand augered from the parking structure floor (beginning at a depth of 8.0 feet bgs) to a depth of 16.0 feet bgs (a depth of 8 feet below the top of the parking structure floor slab). Although dual wall drilling rods were used to drill at location B6, heaving sand inside the drilling rods between the depths of 14.0 and 17.0 feet bgs resulted in drilling refusal at a depth of 17.0 feet bgs at this location.

The soil from the boreholes was logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System, and was evaluated with a Photoionization Detector (PID) equipped with a 10.6 eV bulb that was calibrated with a 100 parts per million (ppm) isobutylene standard. The soil was also evaluated for other evidence of petroleum hydrocarbon contamination such as odors, staining, and discoloration. No elevated PID values, odors, staining, or discoloration were detected in any of the boreholes, with the exception of B13 which was drilled in the former UST pit where moderate petroleum hydrocarbon odors, bluish gray staining, and elevated PID values ranging from 1.3 to 32 ppm were detected between the depths of 7.0 and 18.5 feet bgs.

Soil samples were retained from boreholes B12, B13, B13A, B14, and B15 at depths of 10.0, 15.0, and 20.0 feet bgs for laboratory analysis in the following manner. A 6-inch long section of transparent PVC tube soil core corresponding to the desired sample depth was cut from the Macrocore barrel core liner, the ends of the tube were evaluated with the PID, and then were

sequentially covered with aluminum foil and plastic endcaps. The sample was then labeled and placed into a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling. All of the continuous cores were logged as described above. Copies of the boring logs are attached with this report as Appendix A.

Groundwater was first encountered at a depth of approximately 14.0 feet bgs in all of the continuously cored boreholes (B6 through B15), except B10 where groundwater was first encountered at a depth of 12.5 feet bgs. Groundwater was encountered in hand augered boreholes B16 and B17 during hand augering at a depth of 15.0 feet bgs (7.0 feet below the top of the parking garage floor slab). The measured depth to water after drilling or hand augering and prior to groundwater sample collection in boreholes B7, B8, B9, B10, B11, B16, and B17 was 14.8, 15.8, 14.0, 9.7, 12.7, 14.3, and 14.5 feet, respectively. Because groundwater samples were not collected from boreholes B12 through B15, no water level measurements were recorded in these boreholes after the completion of drilling. Similarly, because no groundwater grab sample was collected from first encountered groundwater in borehole B6 (the borehole was drilled for lithologic logging purposes to identify the associated Hydropunch groundwater sample collection interval to define the vertical extent of impact to groundwater), no water level measurement was recorded in this borehole after the completion of drilling.

Following verification of the presence of groundwater in boreholes B11, B16, and B17 a temporary 1-inch diameter slotted PVC pipe was placed into the borehole. A groundwater grab sample was collected from the temporary PVC pipe at locations B11, B16, and B17 as follows: Approximately 0.25-gallons of groundwater was purged from borehole B11, and approximately 0.1-gallons of groundwater was purged from boreholes B16 and B17 prior to groundwater sample collection. The groundwater samples were collected directly from the discharge tubing at each location into 40-milliliter Volatile Organic Analysis (VOA) vials that were preserved with hydrochloric acid preservative and that were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to ensure that no air bubbles were present, and then were labeled and transferred to a cooler with ice until they were transported to the laboratory. Chain of custody documentation accompanied the samples to the laboratory. No odor or sheen was detected on the water purged from the boreholes.

Immediately adjacent to continuously cored borehole B6 one depth-discrete groundwater sample was collected with a Hydropunch to evaluate the vertical extent of petroleum in groundwater. The Hydropunch groundwater sample was collected as described below.

Based on the presence of heaving sand in continuously cored boreholes B6, B7, B8, B9, and B10, a Hydropunch was pushed to total depths of 20.0, 20.0, 18.0, and 20.0 feet bgs for groundwater sample collection at locations immediately adjacent to the continuously cored boreholes. Following placement of the Hydropunch to the sample collection depth and prior to retraction of the drilling rods to expose the Hydropunch screen, the interior of the Hydropunch drilling rods were evaluated with an electric water level indicator to verify that water had not entered the drill rods or Hydropunch. Following verification that the interior of the drilling rods and Hydropunch were dry, the drilling rods were retracted to expose a 4-foot section of Hydropunch screen. The sample collection depths in feet bgs were as follows:

- B6: 46 to 50,
- B7: 16 to 20,
- B8: 16 to 20,
- B9: 14 to 18,
- B10: 16 to 20,

Approximately 0.25-gallons of groundwater was purged from boreholes B7 through B10, and approximately 0.1-gallons of groundwater was purged from boreholes B16 and B17 prior to groundwater sample collection. Groundwater was not purged from B6 prior to sample collection. The groundwater samples were collected directly from the discharge tubing at each location into 40-milliliter VOA vials that were preserved with hydrochloric acid preservative and that were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to ensure that no air bubbles were present, and then were labeled and transferred to a cooler with ice until they were transported to the laboratory. Chain of custody documentation accompanied the samples to the laboratory. No odor or sheen was detected on the water purged from the boreholes. One boring log for the Hydropunch advanced at location B6 is attached with this report in Appendix A.

Immediately following groundwater sample collection from each borehole, the boreholes were grouted with neat cement grout using the drilling rods and the Hydropunch drill rods as a tremie pipe. Boreholes B11, B16 and B17 were grouted using neat cement grout and the temporary PVC casing as a tremie pipe. All drilling and sampling equipment was cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. All soil and water generated during subsurface investigation was stored in 55-gallon drums at the site and labeled pending characterization and proper disposal.

Soil Gas Well Construction and Sample Collection

One permanent soil gas well was constructed at location SG1 adjacent to a site building (see Figure 4) to evaluate the presence of petroleum hydrocarbon soil vapors in the vicinity of the former UST location. Soil gas well installation at location SG1 was performed on July 22, 2014, and soil gas sample collection was performed on July 28, 2014.

Soil gas well SG1 was constructed by Vironex by hand augering with a 3.0-inch outside diameter hand auger to a depth of 5.0 feet bgs. A #2/16 Lonestar sack sand was then added to the annular borehole to fill the lowermost 6 inches of the borehole with sand. A 7.5-foot long 0.250-inch outside diameter (0.187-inch inside diameter) polyethylene tube with a HDPE filter at the bottom of the tube was inserted to the top of the sand (a depth of 6 inches above the bottom of the borehole), and additional #2/16 Lonestar sack sand was added to the borehole to one foot above the bottom of the borehole (the lowermost one foot of the borehole was filled with sand with the filter at the end of the tube in the middle of the sand interval).

Granular bentonite (measuring approximately 1 to 2 millimeters in diameter) was placed in the annular space above the sand to 6 inches above the sand, and the remaining borehole was filled with hydrated bentonite slurry. The top of soil gas well SG1 was enclosed in a well box with a lid that was secured with bolts. Following construction, the soil gas well was not sampled for a minimum of 48 hours.

No precipitation occurred during the five days prior to the soil gas sample collection date (July 28, 2014). A soil gas sampling manifold with a 1-liter Summa canister as the sampling canister (see Figure 5) was assembled in a shroud consisting of a 35-gallon Rubbermaid bin that had been modified by cutting viewing ports into the sides of the shroud and covering the viewing ports with transparent polycarbonate sheets. A hole measuring approximately two inches square in the bottom of the shroud allowed the shroud to cover the soil gas well while still allowing access to the temporary well through the bottom of the bin. At the time that the sampling manifold was assembled, the vacuum for the sample canister was verified with a vacuum gauge and recorded.

Prior to soil gas sample collection, a 10 minute shut-in test of the sampling manifold was performed by closing the valve located between the filter and the pressure gauge, opening the purge canister valve, and recording the manifold system vacuum (see Figure 5). No purge testing for purge volume determination was performed because the sample was collected using a Summa canister. Following successful verification of the manifold shut-in test, a default of three purge volumes was extracted prior to sample collection. The purge volume was calculated based on the void space surrounding the HDPE filter and the volume of the tube. The purge time was calculated using a nominal flow rate provided by the flow controller of 150 cubic centimeters per minute. Copies of the purge volume calculation sheet is attached with this report as Appendix B.

Following completion of the purging of three volumes, a lid was placed onto the shroud and a tracer gas 1,1-Difluoroethane (DFA) was sprayed into the shroud interior for one second through a tube connected to a hole in the side of the shroud. Gloves in the lid of the shroud were used to open the sample canister valve. During Summa canister sample collection an air sample was collected from the shroud atmosphere to quantify the shroud tracer gas concentration while the soil gas sample was being collected. The shroud atmosphere sample was collected into a Tedlar bag that was placed into a vacuum chamber with the Tedlar bag inlet connected to a new piece of Teflon or polyethylene tubing that was inserted into the shroud atmosphere through a hole in the side of the shroud.

The gloves in the lid of the shroud were used to close the sample canister valve once the vacuum for the sample canister vacuum had decreased to 5 inches of mercury. The pressure gage on the inlet side of the flow controller (see Figure 5) was monitored during sample collection to ensure that the vacuum applied to the soil gas well did not exceed 100 inches of water.

One duplicate soil gas sample was collected into a Summa canister at location SG1 ath the time that the SG1 soil gas sample was collected by using a stainless steel sampling tee to connect the duplicate Summa canister to the sampling manifold. Following soil gas sample collection, a PID was connected to the Teflon tubing to obtain a preliminary field value for the sample collection location. The soil gas Summa canister samples were stored in a box and promptly shipped to the laboratory for extraction and analysis.

In addition to collection of Summa canister samples as described above, a sorbent tube sample was collected at SG1 as follows. The manifold was equipped with a tee located downstream from the flow controller. At the time that the manifold was assembled (prior to the shut-in test) a sorbent tube was connected inside the shroud to the tee located downstream from the flow controller, with a valve located between the sorbent tube and the tee. The downstream side of

the sorbent tube was connected with a polyethylene tube to a flow meter and a vacuum pump. Following Summa canister sample collection, a dish containing 2-Propanol was placed in the shroud and used as a tracer gas for EPA Method TO-17 sample analysis. The Summa canister was then isolated from the manifold with a valve, and the valve between the manifold and the sorbent tube was opened. A vacuum pump was used to apply a vacuum to the sorbent tube and a flow meter was used to measure the soil gas flow rate at a nominal flow rate of 150 cubic centimeters per minute for collection of a 200 cubic centimeter sample. In addition, one replicate sorbent tube sample was collected at location SG1. Following collection of the sorbent tube soil gas sample the ends of each sorbent tube was sealed. Before and after connection of the sorbent tube to the manifold the sorbent tube was stored in a cooler with ice.

Chain of custody procedures were observed for all sample handling. Clean, unused vacuum gages and stainless steel sampling manifolds were used for all sample collection location. Measurements of vacuums, purging and equilibration time intervals, and PID readings were recorded on Soil Gas Sampling Data Sheets that are attached with this report as Appendix B.

WEATHER

No precipitation occurred during the days of soil gas sampling (July 28, 2014), or during the five days preceding each day of soil gas sampling. Weather data, including precipitation and barometric pressure for the days of the sampling event and also for the two weeks preceding and following the day of sampling is provided as Appendix C. The weather station is located on the southwest corner of the intersection of Broadway and 20th Street in Oakland at an elevation of 16 feet above sea level, approximately 1,500 feet to the west-southwest of the subject site. The subject site is located at an elevation of approximately 25 feet above sea level. An internet link to the weather station information is provided in Appendix C.

WASTE DISPOSAL

One drum of investigation derived solid waste was generated during borehole drilling activities and was removed from the site on August 18, 2014 as non-hazardous waste by Big Sky Environmental Solutions, Inc. of Benicia, California. A copy of the non-hazardous waste manifest associated with removal of the drum from the site is attached with this report as Appendix D.

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 Pleistocene Beach and Dune Sand Deposits (Merrit Sand)(Qps), which is described as loose well-sorted fine to medium sand. Immediately to the north of the site the materials are identified as Late Pleistocene Alluvium (Qpa), which is described as weakly consolidated slightly weathered poorly sorted irregularly interbedded clay, silt, sand, and gravel.

Review of the subsurface materials encountered in borehole B6 through B17 (see Appendix A) shows that the materials consisted predominantly of sandy clay and silty clay that were underlain by coarse-grained materials to the total depth explored at depths in feet bgs as follows:

- B6:
  - 12.0 to 14.0 clayey sand,
  - 14.0 to 17.0 (refusal) silty fine sand.
- B7:
  - 12.0 to 20.0 silty fine sand.
- B8:
  - 9.5 to 12.0 gravelly sand,
  - 12.0 to 20.0 silty fine sand.
- B9:
  - 12.0 to 13.0 gravelly sand,
  - 13.0 to 15.0 silty fine sand.
- B10:
  - 10.0 to 12.5 clayey fine sand,
  - 12.5 to 14.5 silty fine sand,
  - 14.5 to 15.0 fine sand.
- B11:
  - 10.0 to 14.0 silty fine sand,
  - 14.0 to 20.0 fine sand.
- B12:
  - 14.0 to 20.0 silty fine sand.
- B13:
  - 12.0 to 14.0 clayey fine sand,
  - 14.0 to 20.0 silty fine sand.
- B13A:
  - 8.0 to 11.0 silty fine sand,
  - 12.5 to 20.0 silty fine sand.
- B14:
  - 12.0 to 14.0 clayey sand,
  - 14.0 to 20.0 silty fine sand.
- B15:
  - 14.0 to 20.0 silty fine sand.
- B16:
  - 10.5 to 16.0 silty fine sand.
- B17:
  - 15.0 to 16.0 silty fine sand.

The materials encountered in the boreholes to a depth of approximately 10.0 to 15.0 feet bgs are consistent with the Qpa map description, and beneath the Qpa are best described as Qps to the total depth explored in all of the boreholes. The materials encountered in the boreholes are also consistent with the materials identified at the Greyhound Lines Terminal (Greyhound) site located at 2103 San Pablo Avenue across San Pablo Avenue from the subject site. Geologic cross sections obtained from a December 21, 2011 Revised Site Conceptual Model for the Greyhound site at 2103 San Pablo Avenue were included with P&D's June 13, 2014 Subsurface Investigation Work Plan. Review of the cross sections shows that sand bodies ranging in thickness from 10 to greater than 25 feet in thickness are identified at the Greyhound site. The subsurface materials

encountered in and beneath the UST pit at the subject site consisted of sandy silt to a depth of approximately 12.5 feet bgs, beneath which fine sand was encountered to the total depth explored of 15.5 feet bgs. Groundwater was encountered in the former UST pit at a depth of approximately 15.0 feet bgs.

Groundwater was first encountered at a depth of 14.0 feet bgs in all of the continuously cored boreholes at the subject site, except B10 where groundwater was first encountered at a depth of 12.5 feet bgs, and in hand augered boreholes B16 and B17 where groundwater was first encountered at a depth of 15.0 feet bgs.

Figure 2 shows the locations of fuel release sites in the immediate vicinity of the subject site where the historical groundwater flow direction has been identified based on measurements of water levels in groundwater monitoring wells. Based on the groundwater flow directions at the nearby sites, the subject site is located in the immediate vicinity of a groundwater divide where the groundwater flow direction for sites located to the east of the subject site is easterly and the groundwater flow direction for sites located to the west of the subject site is westerly. Review of available groundwater flow direction information for the Greyhound site located at 2103 San Pablo Avenue (location # 1 on Figure 2, approximately 180 feet to the west of the subject site) shows that the groundwater flow direction during one of the well sampling events was to the east, suggesting that the location of the groundwater divide may change seasonally. The groundwater divide is suspected to generally be located approximately beneath the subject site.

Lake Merritt is located approximately 2,900 feet to the east-southeast of the subject site, and the Oakland Inner Harbor is located approximately 1.3 miles south of the subject site (see Figure 1).

LABORATORY ANALYSIS

All of the borehole soil and groundwater samples were analyzed at McCampbell Analytical, Inc. (McCampbell) in Pittsburg, California. The soil samples were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G) using EPA Method 8021B in conjunction with modified EPA Method 8015B, for Total Petroleum Hydrocarbons as Diesel (TPH-D) and Total Petroleum Hydrocarbons as Motor Oil (TPH-MO)using EPA Method 3550B in conjunction with EPA Method 8015B, and for Volatile Organic Compounds (VOCs) including methyl-tert-butyl ether (MTBE), benzene, toluene, ethylbenzene, and xylenes (MBTEX), and naphthalene using EPA Method 5030B in conjunction with EPA Method 8260B.

All of the groundwater samples were analyzed for TPH-G by EPA Method 5030 in conjunction with EPA Method 8021B and modified EPA Method 8015B; TPH-D and TPH-MO by EPA Method 3510 in conjunction with modified EPA Method 8015B: and for VOCs, including BTEX, MTBE, and naphthalene by EPA Method 8260B.

All of the soil gas samples were analyzed at Air Toxics, Limited in Folsom, California. The samples collected in Summa canisters were analyzed for TPH-G, BTEX, MTBE, and DFA (the tracer gas) using EPA Method TO-15, and for oxygen, methane and carbon dioxide using method ASTM D-1946. The samples collected on sorbent tubes were analyzed for TPH-D, naphthalene and 2-Propanol (the tracer gas) using EPA Method TO-17. All of the shroud air Tedlar bags were analyzed for the tracer gases DFA and 2-Propanol using EPA Method TO-15.

The borehole soil sample laboratory analytical results are summarized in Table 1, the borehole groundwater grab sample laboratory analytical are summarized in Table 2, the soil gas TO-15 and TO-17 laboratory analytical results are summarized in Table 3A, the shroud air Tedlar bag sample results are summarized in Table 3B, and the soil gas ASTM D-1946 laboratory analytical results are summarized in Table 3C. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report as Appendix E.

DISCUSSION AND RECOMMENDATIONS

Review of the sample results with respect to the State Water Resources Control Board (SWRCB) Low Threat Closure Policy (LTCP) is provided below.

Soil

Review of the soil sample results in Table 1 shows that petroleum hydrocarbons were encountered in soil at concentrations exceeding RWQCB December 2013 commercial and residential soil Environmental Screening Level Table C-1 and C-2 values at depths of 10.0 and 15.0 feet bgs in borehole B13 (located in the former UST pit). The detected concentrations of TPH-D in soil samples B13-10 and B13-15 of 1,300 and 3,100 milligrams per kilogram (mg/kg) exceed the Table C1 and Table C2 value for TPH-D of 110 mg/kg, and the detected concentration of TPH-MO in soil sample B13-15 of 1,300 mg/kg exceeds the Table C1 and Table C2 values for TPH-MO of 500 and 1,000 mg/kg, respectively. However, review of the soil sample results for borehole B13A shows that no analytes were detected in any of the samples.

MTBE and BTEX were not detected in any of the soil samples, and no analytes were detected in any of the soil samples collected from boreholes B12, B13A, B14, and B15, with the exceptions of TPH-D in soil samples B12-15, B12-20, and B14-10 at concentrations of 1.0, 1.3, and 1.9 mg/kg, respectively, and additionally TPH-MO in sample B14-10 at a concentration of 6.5 mg/kg. No VOCs were detected in any of the soil samples with the exception of sec-Butyl benzene in soil samples B13-10 and B13-15 at concentrations of 0.11 and 0.39 mg/kg, respectively. Further review of the laboratory analytical report shows that the laboratory described the TPH-G results for samples B13-10 and B13-15 as consisting of strongly aged gasoline- or diesel-range compounds; the laboratory described the TPH-D results for samples B12-15, B12-20, and B13-20 as consisting of diesel-range compounds with no recognizable pattern; and described the TPH-D and TPH-MO results for soil sample B14-10 as consisting of both oil-range compounds and diesel-range compounds with no recognizable pattern. Based on the sample results obtained from boreholes B12, B13A, B14 and B15 (see Table 1 and Figure 4) the extent of petroleum hydrocarbons in soil in the vicinity of the former UST pit has been defined.

Table 1 includes values from the LTCP Table 1 Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Affecting Human Health for benzene, ethylbenzene, and naphthalene for 5.0 to 10.0 feet bgs in a residential land use scenario, and for 0.0 to 10 feet bgs for utility workers. Since MTBE, benzene, and naphthalene were not detected in any soil samples, they do not exceed LTCP criteria. Additionally, the absence of evidence of contamination (staining, discoloration, odor, or detectable organic vapor concentrations with the PID) in all of the boreholes surrounding the former UST pit indicates that the petroleum hydrocarbon contamination in soil has

been horizontally and vertically defined. Based on the sample results, P&D recommends that no further investigation of soil at the subject site be performed.

Groundwater

Review of Table 2 shows that MTBE and BTEX were not detected in any of the groundwater samples, and that no analytes were detected in any of the groundwater samples collected from any of the boreholes with the exception of chloroform detected in the sample collected from borehole B7 at a concentration of 0.82 micrograms per Liter (ug/L), and TPH-D and TPH-MO which were detected in groundwater sample B11-W at concentrations of 230 and 1,300 ug/L, respectively. Further review of the laboratory analytical results show that the lab described the TPH-D and TPH-MO results as consisting of both oil-range compounds and diesel-range compounds with no recognizable pattern.

Table 2 includes values from the LTCP Groundwater Specific Criteria scenarios 2 and 4 for MTBE and benzene. Since MTBE and benzene were not detected in any groundwater samples, they do not exceed LTCP criteria.

Groundwater grab samples B16 and B17 were collected at locations between the former USTs at the site and borehole B11 where TPH-D and TPH-MO were detected. The absence of detectable concentrations of petroleum hydrocarbons in the B16 and B17 groundwater samples indicates that neither of the former USTs is the source of the petroleum hydrocarbons detected at borehole B11.

During construction of the current subject site buildings, excavation to a depth of approximately 9.0 feet bgs was performed in the western portion of the property between 21st and 22nd Streets for construction of a subsurface parking structure. No petroleum hydrocarbons were reported in soil at the time of excavation. Based on the absence of detected petroleum hydrocarbons in excavated soil to a depth of 9.0 feet bgs for the majority of the site and the absence of petroleum hydrocarbons in groundwater samples collected at locations B16 and B17, the petroleum hydrocarbons detected in the groundwater sample at location B11 appear to have originated from an offsite source.

Based on the groundwater sample results, the petroleum hydrocarbon contamination detected in groundwater at the former UST pit has been horizontally and vertically defined. P&D recommends that no further investigation of petroleum hydrocarbons in groundwater be performed.

Soil Gas

Review of the Table 3A Percent Shroud columns shows that the tracer gas concentrations detected in the samples are less than 5 percent of the shroud atmosphere tracer gas concentrations (see Table 3B for the shroud tracer gas concentrations). Additionally, review of Table 3A shows that none of the TO-15 or TO-17 analytes were detected with the exception of tracer gases.

Table 3A includes values for benzene, ethylbenzene, and naphthalene from the LTCP Appendix 4 Soil Gas Criteria Direct Measurement of Soil Gas Concentration with no bioattenuation zone in a residential land use scenario. Since MTBE, benzene, and naphthalene were not detected in the soil gas sample or the duplicate sample, they do not exceed LTCP criteria. Based on the soil gas sample results, P&D recommends that no further investigation of soil gas be performed at the subject site.

Case Closure

The Chemicals of Potential Concern (COPCs) for the site are TPH-D and TPH-MO. The physical and chemical characteristics associated with the migration of the COPCs are summarized in Table 4. The values provided in Table 3 were obtained from the December 2013 RWQCB Table J-1 "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater" guidance document.

In accordance with December 2013 RWQCB "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater" Table J-1, chemicals are considered to be "volatile" if the Henry's Law constant as expressed in atm m3/mole is greater than 0.00001 and the molecular weight is less than 200. For comparison with Table 3 Physical-Chemical data, 0.00001 is 1.0E-05. Review of Table 4 shows that based on Henry's Law constants and molecular weights, all of the COPCs are considered to be volatile with the exception of TPH-MO. Similarly, review of Table 3 shows that based on solubility, all of the compounds are considered soluble with the exception of TPH-MO. Based on the volatility these compounds can potentially migrate in soil vapor to indoor air, and based on their solubility all of these compounds can migrate in groundwater.

Based on the detected presence of COPCs in groundwater at the site, the COPCs appear to have migrated at the site in groundwater, with the extent of COPCs appearing to be limited primarily to the immediate vicinity of the former UST pit.

The general criteria for the LTCP are satisfied as follows:

(a) The subject site is located within the municipal water supply service area of EBMUD;
(b) The unauthorized release consists only of petroleum;
(c) The release has been stopped by removal of the 1,000-gallon gasoline UST, and in-place closure of the three 280-gallon gasoline USTs;
(d) No free product has been detected in any soil or water samples collected at the site and for this reason removal of free product is not required,
(e) A conceptual site model that assesses the nature, extent, and mobility of the release has been developed;
(f) The extent of petroleum-impacted soil and groundwater has been defined and is limited, and for this reason no secondary source removal is required;
(g) Soil and groundwater have been tested for MTBE, the results show that MTBE was not detected in any of the samples, for this reason MTBE is not a COPC for the site, and the results have been reported in accordance with Health and Safety Code section 25296.15; and
(h) Review of site conditions shows that a nuisance as defined by Water Code section 13050 does not exist at the site.

The media-specific criteria are satisfied as discussed above based on the absence of detectable concentrations of COPCs associated with the LTCP closure criteria.

Based on the defined extent of petroleum hydrocarbons in soil and groundwater, the absence of detectable concentrations of petroleum hydrocarbons in soil gas, and the absence of conditions exceeding LTCP criteria, P&D recommends that the case be closed.

DISTRIBUTION

A copy of this report will be uploaded to the County ftp website and to GeoTracker.

LIMITATIONS

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

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

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

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

Sincerely,
P&D Environmental, Inc.

Paul H. King
Professional Geologist # 5901
Expires: 12/31/15

Attachments:

Table 1 - Summary of Borehole Soil Sample Analytical Results
Table 2 - Summary of Borehole Groundwater Sample Analytical Results
Table 3A - Summary of Soil Gas Sample Analytical Results - TPH-G and VOCs
Table 3B - Summary of Soil Gas Shroud Sample Analytical Results - 1,1,-Difluoroethane and 2-Propanol
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Figure 1 - Site Location Map
Figure 2 - Site Location Map Detail
Figure 3 - Site Vicinity Aerial Photograph Showing Groundwater Grab Sample Locations
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Appendix B - Purge Volume Calculations and Soil Gas Sampling Data Sheets
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Appendix E - Laboratory Analytical Reports and Chain of Custody Documentation

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TABLES

Table 1
Summary of Borehole Soil Sample Analytical Results

Sample ID	Sample Collection Date	Sample Collection Depth (ft bgs)	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Method 8260B
B12-10	7/22/2014	10.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B12-15	7/22/2014	15.0	ND<1.0	1.0, b	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B12-20	7/22/2014	20.0	ND<1.0	1.3, b	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B13-10	7/22/2014	10.0	30, a	**1,300**	480	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	All ND, except sec-Butyl benzene = 0.11
B13-15	7/22/2014	15.0	120, a	**3,100**	**1,300**	ND<0.033	ND<0.033	ND<0.033	ND<0.033	ND<0.033	All ND, except sec-Butyl benzene = 0.39
B13-20	7/22/2014	20.0	ND<1.0	1.0, b	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B13A-10	8/5/2014	10.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B13A-15	8/5/2014	15.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B13A-20	8/5/2014	20.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B14-10	7/22/2014	10.0	ND<1.0	1.9, b,c	6.5, b,c	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B14-15	7/22/2014	15.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B14-20	7/22/2014	20.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B15-10	7/22/2014	10.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B15-15	7/22/2014	15.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
B15-20	7/22/2014	20.0	ND<1.0	ND<1.0	ND<5.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
LTCP	Residential						5-10' = 2.8		5-10' = 32		5-10' = Naphthalene = 9.7
	Residential						0-10' = 14		0-10' = 314		0-10' = Naphthalene = 219
	Utility Worker										
ESL[1]	deper res		500	110	500	0.023	0.044	2.9	3.3	2.3	sec-Butyl benzene = No Value,
ESL[2]	deeper comm		770	110	1,000	0.023	0.044	2.9	3.3	2.3	sec-Butyl benzene = No Value,

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.
MTBE = Methyl tertiary-butyl ether.
VOCs = Volatile Organic Compounds.
PCE = Tetrachloroethene.
MEK = Methyl Ethyl Ketone (2-Butanone).
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: Diesel range compounds are significant; no recognizable pattern.
c = Laboratory Note: Oil range compounds are significant.
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. Residential land use and Utility Worker.
ESL [1] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated December 2013, from Table C-1 – Deep Soil Screening Levels, groundwater is a current or potential drinking water resource. Residential Land Use.
ESL [2] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated December 2013, from Table C-2 – Deep Soil Screening Levels, groundwater is a current or potential drinking water resource. Commerical/Industrial Land Use.
Hi-lighted depths include the interval 5.0-10.0 feet.
Results in bold exceed their respective ESL[1] value.
Underlined results exceed their respective ESL[2] value.
Results, LTCP, and ESL values, reported in µg/L (micrograms per Liter), unless otherwise indicated.

Table 2

Summary of Borehole Groundwater Sample Analytical Results

Sample ID	Sample Collection Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Other VOCs by EPA Metod 8260B
B6-W	7/22/2014	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
B7-W	7/21/2014	ND<50	ND<150	ND<750	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND, except Chloroform = 0.82
B8-W	7/21/2014	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
B9-W	7/22/2014	ND<50	ND<100	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
B10-W	7/21/2014	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
B11-W	7/21/2014	ND<50	**230, a,b**	**1,300, a,b**	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
B16-W	8/4/2014	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
B17-W	8/4/2014	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
LTCP Groundwater Specific Criteria	Scenario 2	None	None	None	1,000	3,000	None	None	None	None
	Scenario 4	None	None	None	1,000	1,000	None	None	None	None
ESL[1]		100	100	100	5.0	1.0	40	30	20	Chloroform = 80
ESL[2]		No Value	No Value	No Value	9,900	27	95,000	310	37,000	Chloroform = 170
ESL[3]		No Value	No Value	No Value	100,000	270	No Value	3,100	No Value	Chloroform = 1,700

NOTES:

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tertiary-butyl ether.

VOCs = Volatile Organic Compounds.

ND = Not detected.

a = Laboratory Note: Oil range compounds are significant.

b = 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 Groundwater Specific Criteria Scenarios 2 and 4.

ESL [1] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated December 2013, from Table F-1a – Groundwater Screening Levels, groundwater is a current or potential drinking water resource.

ESL [2] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated December 2013, from Table E-1 – Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion. Fine-Coarse Mix. Residential Land Use.

ESL [3] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated December 2013, from Table E-1 – Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion. Fine-Coarse Mix. Commercial/Industrial Land Use.

Results in bold exceed their respective ESL[1] values.

Results, LTCP, and ESL values, reported in µg/L (micrograms per Liter), unless otherwise indicated.

Table 3A
Summary of Soil Gas Sample Analytical Results - TPH-G and VOCs

Sample ID	Sample Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	m,p-Xylenes	o-Xylenes	Naphthalene	1,1-DFA	Percent Shroud	2-Propanol	Percent Shroud
SG1	7/28/2014	ND<5,000	ND<510	ND<8.9	ND<7.9	ND<9.3	ND<11	ND<11	ND<11	ND<2.5	10,000, a	0	ND<240	0
SG1-DUP	7/28/2014	NA	ND<510	ND<8.9	ND<7.9	ND<9.3	ND<11	ND<11	ND<11	NA	14,000, a	0	NA	NA
SG1-REP	7/28/2014	ND<5,000	NA	NA	NA	NA	NA	NA	NA	ND<2.5	NA	NA	ND<240	0
LTCP														
(No Bioattenuation Zone)		*No Value*	*No Value*	*No Value*	*85*	*No Value*	*1,100*	*No Value*	*No Value*	*93*	*No Value*		*No Value*	
Residential														
ESL [1]		*68,000*	*300,000*	*4,700*	*42*	*160,000*	*490*	*Combined = 52,000*		*36*	*No Value*		*No Value*	
ESL [2]		*570,000*	*2,500,000*	*47,000*	*420*	*1,300,000*	*4,900*	*Combined = 440,000*		*360*	*No Value*		*No Value*	

Notes:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

MTBE = Methyl-tert-Butyl Ether.

1,1-DFA = 1,1-Difluoroethane.

ND = Not Detected.

NA = Not Analyzed.

a = Laboratory Note: exceeds instrument calibration range.

LTCP = Low Threat Closure Policy, developed by State Water Resources Control Board , effective August 17, 2012, from Appendix 4 Soil Gas Criteria Direct Measurement of Soil Gas Concentration (No Bioattenuation Zone) Residential Land Use.

ESL [1] *= Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board , updated December 2013 from Table E – Indoor Air and Soil Gas (Vapor Intrusion Concerns) Shallow Soil Gas Screening Levels for Residential Land Use.*

ESL [2] *= Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board , updated December 2013 from Table E – Indoor Air and Soil Gas (Vapor Intrusion Concerns) Shallow Soil Gas Screening Levels for Commerical/Industrial Land Use.*

Results and LTCP values reported in micrograms per cubic meter (µg/m3), unless otherwise indicated.

Table 3B

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

Sample ID	Sample Date	1,1-DFA, #	2-Propanol, ##
SG1 DFA	7/28/2014	20,000,000	NA
SG1 2-Propanol	7/28/2014	NA	810,000
Notes:			
ND = Not Detected.			
NA = Not Analyzed.			
# = 1,1-Difluoroethane (1,1-DFA) used as leak detection compound fo TO-15 analysis.			
## = 2-Propanol used as leak detection compound for TO-17 analysis.			
Results in micrograms per cubic meter (µg/m3), unless otherwise indicated.			

Table 3C

Summary of Soil Gas Sample Analytical Results - Oxygen, Methane, Carbon Dioxide

Sample ID	Sample Date	Oxygen (%)	Methane (%)	Carbon Dioxide (%)
SG1	7/28/2014	15	ND<0.00025	1.7
SG1 DUP	7/28/2014	15	ND<0.00025	1.8

NOTES:

ND = Not Detected.

Results in percent (%), unless otherwise indicated.

Table 4
Physical-Chemical Characteristics for Chemicals of Potential Concern

CAS No.	Chemical	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Pure component water solubility, S (mg/L)	Henry's law constant H' (unitless)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (^oC)	Normal boiling point, T_B (^oK)	Critical emperature T_C (^oK)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Molecular weight, MW (g/mol)
91203	Naphthalene	1.54E+03	6.05E-02	8.38E-06	3.10E+01	1.80E-02	4.40E-04	25	491.1	748.4	10,373	1.28E+02
None	TPH Diesel (TPH-D)	5.00E+03	7.00E-02	1.00E-05	3.00E+00	3.20E+01	7.80E+00	25	NA	NA	NA	1.70E+02
None	TPH Motor Oil (TPH-MO)	5.00E+03	0.00E+00	0.00E+00	3.00E+00	0.00E+00	0.00E+00	25	NA	NA	NA	0.00E+00

NOTES:

NA = Not Available

Naphthalene and TPH values obtained from Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated December 2013, from Table J-1 Physical-Chemical Values

FIGURES

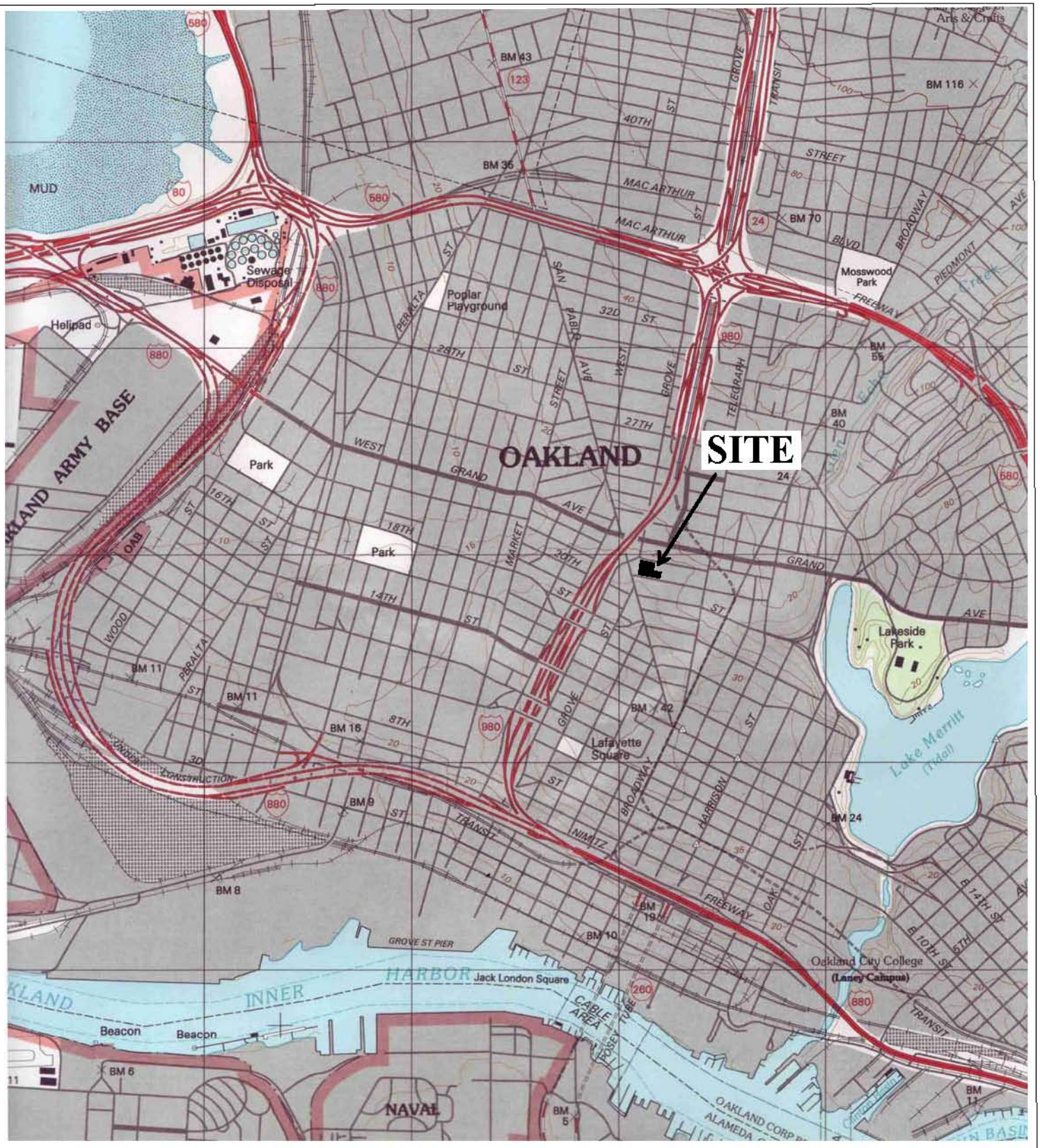

Figure 1
Site Location Map
Cathedral Gardens
638 21st Street
Oakland, California

Base Map From:
U.S. Geological Survey
Oakland West, California
7.5-Minute Quadrangle
Photorevised 1993

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

0 1,000 2,000
Approximate Scale In Feet

N

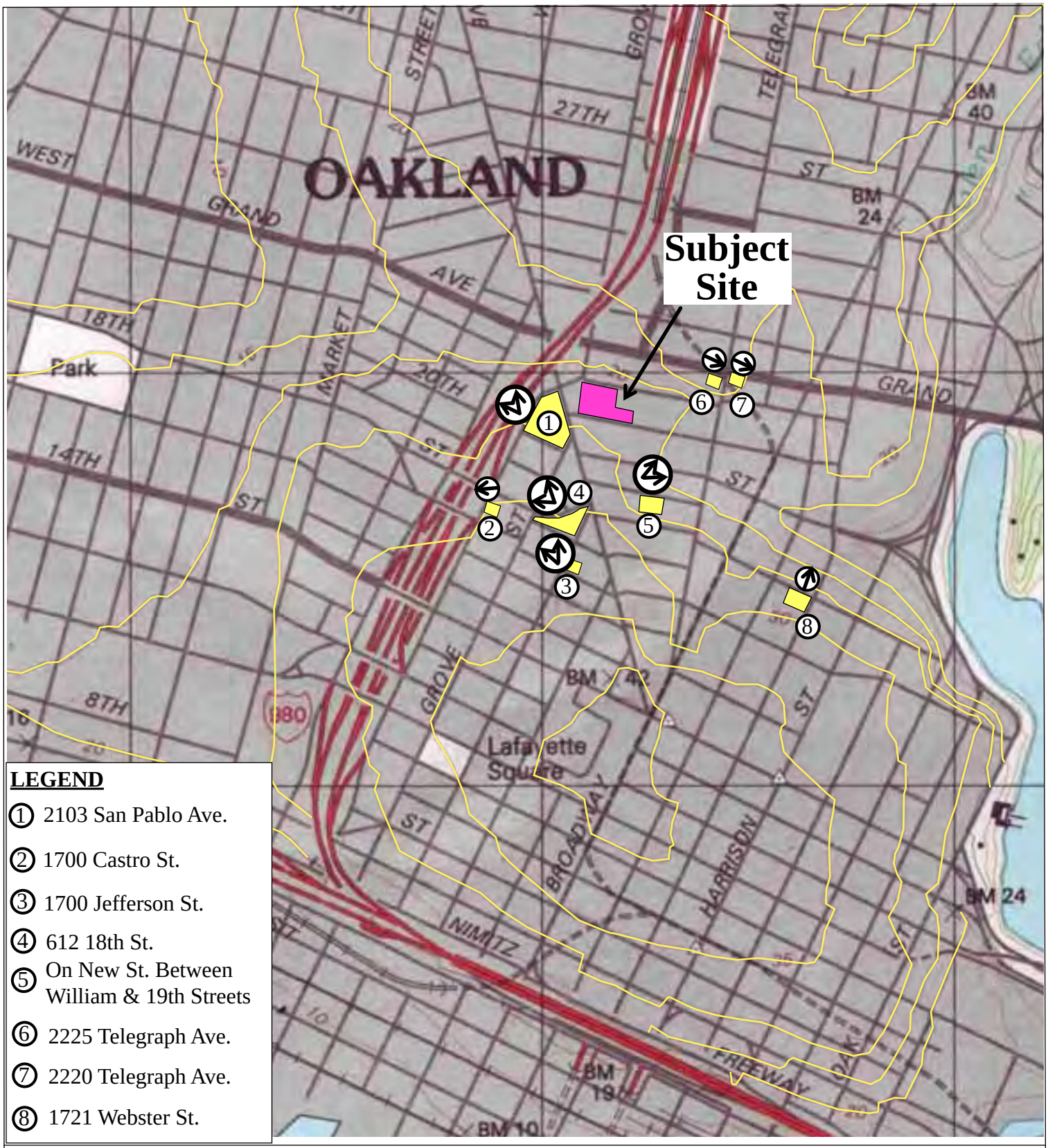

Figure 2
Site Location Map Detail
Cathedral Gardens
638 21st Street
Oakland, California

Base Map From:
U.S. Geological Survey
Oakland West, California
7.5-Minute Quadrangle
Photorevised 1993

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

0 500 1,000
Approximate Scale In Feet

N

Figure 3
Site Vicinity Aerial Photograph Showing Groundwater Grab Sample Collection Locations
Cathedral Gardens
638 21st Street
Oakland, California

Base Map From:

U.S. Geological Survey
Oakland West, California
7.5-Minute Quadrangle
Photorevised 1993

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

0 40 80
Approximate Scale In Feet

N

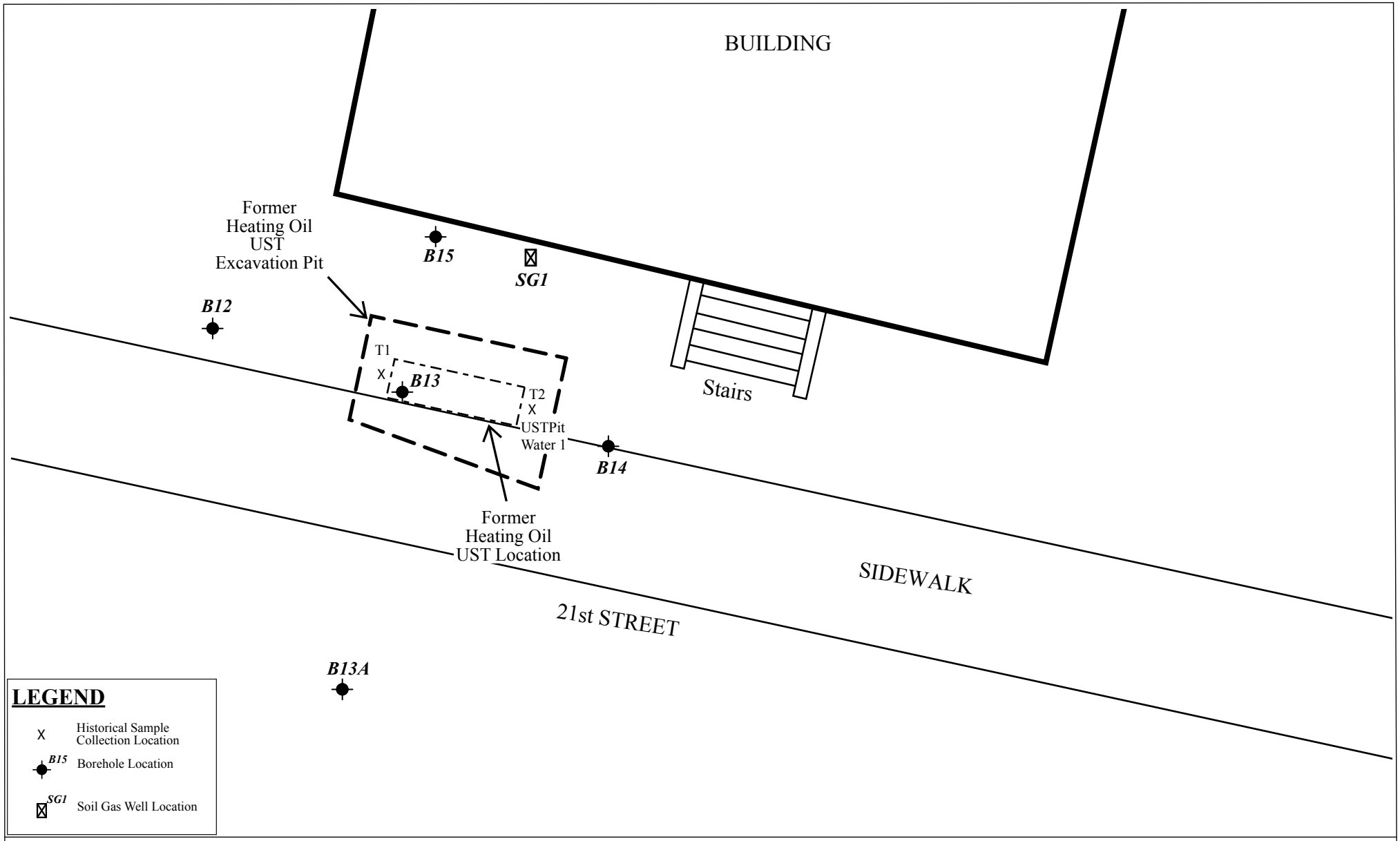

Figure 4
Site Plan Detail Showing Former UST and Sample Collection Locations
Cathedral Gardens
638 21st Street
Oakland, California

Base Map From:
Basics Environmental, Limited Phase II Environmental Site Sampling Report, dated June 27, 2011

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

0 5 10
Approximate Scale In Feet

N

Figure 5
Typical Soil Gas Sampling Manifold
Cathedral Gardens
638 21st Street
Oakland, California

APPENDIX A

Boring Logs

P&D ENVIRONMENTAL, INC.

BORING NO.: B6	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 23 ft. east and 13 ft. south of southwest corner of brick building		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Joel	DATE & TIME STARTED: 07/22/14 1300	DATE & TIME FINISHED: 07/22/14 1630
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 17.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY: PMK
FIRST WATER DEPTH: 14.0 Feet	NO. OF SAMPLES: None		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 2.0 ft. Dark brown gravelly silty sand (FILL).	FILL		No Well Constructed	0	Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 17.0 ft. using a 4.0-inch O.D. Geoprobe dual wall drilling rods containing a 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.
	2.0 to 4.0 ft. Olive-brown silty clay (CL); medium stiff, moist, with black mottling. No Petroleum Hydrocarbon (PHC) odor. (0,0,100)	CL			0	
5	4.0 to 5.0 ft. Brown clayey sand (SC); medium dense, moist. No PHC odor. (0,70,30)	SC				5.0 to 10.0 ft. 4.6 ft. recovery 10.0 to 15.0 ft. 4.8 ft. recovery 15.0 to 17.0 ft. 2.0 ft. recovery
	5.0 to 12.0 ft. Brown silty clay (CL); medium stiff, moist, with few fine sand and black mottling. No PHC odor. (0,15,85)	CL			0	Water encountered during drilling at 14.0 ft. at 1330.
10					0	14.0 to 17.0 ft. heaving sands.
	12.0 to 14.0 ft. Grayish-brown clayey sand (SC); medium dense, moist to saturated. No PHC odor. (0,70,30) Wet at 13.5 ft. Saturated at 14.0 ft.	SC		▽	0	Borehole terminated at 17.0 ft. (refusal) on 7/22/14.
15	14.0 to 17.0 ft. Grayish-brown silty fine sand (SM); medium dense, moist, with orange mottling. No PHC odor. (0,80,20)	SM			0	
20						Borehole grouted on 07/22/14 using neat cement grout and a tremie pipe. Mr. Steve Miller with Alameda County Public Works Agency gave verbal authorization to grout 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.: B6	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 4 ft. east of continuously cored borehole B6		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: John	DATE & TIME STARTED: 07/22/14 1400	DATE & TIME FINISHED: 07/22/14 1630
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: Hydropunch to 50.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH:	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
5 10 15 20 25 30				No Well Constructed		On 07/22/14 at a location approximately 4.0 ft. east of continuously cored borehole B6, a Hydropunch was pushed to 50.0 feet. Hydropunch seal integrity was confirmed using an elctrical water level indicator. The Hydropunch rods were then retracted to 46.0 ft. The water level in the Hydropunch rods was measured at 45.2 ft. at 1450, and at 16.1 ft. at 1500. Water sample B6-W collected at 1500 using new unused disposable polyethylene tubing attached to a peristaltic pump. No odor or sheen on sample. Water level was subsequently measured at 16.8 ft. at 1602. The Hydropunch borehole was grouted on 07/22/14 using neat cement grout and the Hydropunch rods as a tremie pipe. Mr. Steve Miller with Alameda County Public Works Agency gave verbal authorization to grout 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.

P&D ENVIRONMENTAL, INC.

BORING NO.: B7	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 92 ft. east of southwest corner of property, in planter area			ELEVATION AND DATUM: None
DRILLING AGENCY: Vironex, Inc.		DRILLER: John	DATE & TIME STARTED: 07/21/14 1500 / DATE & TIME FINISHED: 07/21/14 1715
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 20.0 Feet	BEDROCK DEPTH: Not Encountered		LOGGED BY: MLBD / CHECKED BY:
FIRST WATER DEPTH: 14.0 Feet	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 3.0 ft. Dark brown clayey sand (FILL); with brick fragments.	FILL		No Well Constructed	0	Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 20.0 ft. using a 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.
	3.0 to 5.0 ft. Olive-brown sandy clay (CL); medium stiff, moist. No Petroleum Hydrocarbon (PHC) odor. (0,35,65)	CL			0	
5	5.0 to 6.0 ft. Brown fine sand (SP); medium dense, moist, with orange and black mottling. No PHC odor. (0,95,5)	SP				5.0 to 10.0 ft. 4.6 ft. recovery 10.0 to 15.0 ft. 4.6 ft. recovery 15.0 to 20.0 ft. 4.5 ft. recovery
	6.0 to 12.0 ft. Olive-brown silty clay (CL); medium stiff, moist, with black mottling. No PHC odor. (0,0,100)	CL			0	Water encountered during drilling at 14.0 ft. at 1620. 12.0 to 20.0 ft. heaving sands.
10					0	Hydropunch pushed to 20.0 ft. Hydropunch seal integrity was confirmed using an electric water level indicator. The Hydropunch rods were then retracted to 16.0 ft. The water level in the Hydropunch rods was measured at 15.1 ft. at 1640, and at 14.8 ft. at 1650.
	12.0 to 20.0 ft. Olive-brown silty fine sand (SM); medium dense, moist, with orange and black mottling. No PHC odor. (0,70,30) Wet at 13.5 ft. Saturated at 14.0 ft.	SM		▽ ▼	0	Approximately 0.25-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample B7-W collected at 1700 directly from the discharge tubing. No odor or sheen on sample. Water level subsequently measured at 15.8 ft. at 1710.
15						
					0	
20						
						Borehole grouted on 07/21/14 using neat cement grout and a tremie pipe. Mr. Steve Miller with Alameda County Public Works Agency gave verbal authorization to grout 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.
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P&D ENVIRONMENTAL, INC.

BORING NO.: B8	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 35 ft. east of northwest corner of 635 21st Street building, in tree planter		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: John	DATE & TIME STARTED: 07/21/14 1330	DATE & TIME FINISHED: 07/21/14 1520
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 20.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY: PMK
FIRST WATER DEPTH: 14.0 Feet	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 1.5 ft. Brown gravelly sand (FILL).	FILL		No Well Constructed	0	Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 20.0 ft. using a 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.
	1.5 to 6.0 ft. Brown fine sand (SP); medium dense, moist. No Petroleum Hydrocarbon (PHC) odor. (0,90,10)	SP			0	
5						5.0 to 10.0 ft. 4.6 ft. recovery 10.0 to 15.0 ft. 4.6 ft. recovery 15.0 to 20.0 ft. 4.6 ft. recovery
	6.0 to 9.5 ft. Olive-brown sandy clay (CL); medium stiff, moist, with black mottling. No PHC odor. (0,35,65)	CL			0	Water encountered during drilling at 14.0 ft. at 1405. 12.0 to 20.0 ft. heaving sands.
10	9.5 to 12.0 ft. Brown gravelly sand (SW); medium dense, moist, with few coarse angular gravel to 0.25-inch diameter. No PHC odor. (10,85,5)	SW		▼	0	Hydropunch pushed to 20.0 ft. Hydropunch seal integrity was confirmed using an electric water level indicator. The Hydropunch rods were then retracted to 16.0 ft. The water level in the Hydropunch rods was measured at 16.1 ft. at 1412 and at 15.8 ft. at 1422.
	12.0 to 20.0 ft. Gray silty fine sand (SM); medium dense, moist to saturated. No PHC odor. (0,80,20) Wet at 13.5 ft. Saturated at 14.0 ft.	SM		▽	0	Approximately 0.25-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample B8-W collected at 1430 directly from the discharge tubing. No odor or sheen on sample. Water level subsequently measured at 15.9 ft. at 1505.
15						
					0	Borehole grouted on 07/21/14 using neat cement grout and a tremie pipe.
20						
						Mr. Steve Miller with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
25						Drilling Notes: 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.: B9	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 7 ft. east of southwest corner of brick building, adjacent to sidewalk		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Joel	DATE & TIME STARTED: 07/22/14 0730	DATE & TIME FINISHED: 07/22/14 1430
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 15.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY: PMK
FIRST WATER DEPTH: 14.0 Feet	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 1.5 ft. Dark brown gravelly sandy clay (FILL).	FILL		No Well Constructed	0	Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 15.0 ft. using a 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.
	1.5 to 6.0 ft. Brown silty clay (CL); medium stiff, moist. No Petroleum Hydrocarbon (PHC) odor. (0,0,100)	CL			0	
5						5.0 to 10.0 ft. 4.6 ft. recovery 10.0 to 15.0 ft. 4.8 ft. recovery
	6.0 to 7.0 ft. Brown clayey fine sand (SC); medium dense, moist, with black mottling. No PHC odor. (0,80,20)	SC				Water encountered during drilling at 14.0 ft. at 0810.
	7.0 to 12.0 ft. Brown silty clay (CL); medium stiff, moist, with few fine sand and black mottling. No PHC odor. (0,15,85)	CL			0	13.0 to 15.0 ft heaving sands.
10						Hydropunch pushed to 18.0 ft. Hydropunch seal integrity was confirmed using an electric water level indicator. The Hydropunch rods were then retracted to 14.0 ft. The water level in the Hydropunch rods was measured at 14.4 ft. at 0838, and at 14.0 ft. at 0848.
	12.0 to 13.0 ft. Brown gravelly sand (SW); medium dense, moist, with coarse angular gravel to 0.25-inch diameter. No PHC odor. (0,80,20)	SW			0	
	13.0 to 15.0 ft. Olive-brown silty fine sand (SM); medium dense, moist to saturated, with orange mottling. No PHC odor. (0,80,20) Wet at 13.5 ft. Saturated at 14.0 ft.	SM		▽▼		
15					0	Approximately 0.25-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump.
					0	Water sample B9-W collected at 0915 directly from the discharge tubing. No odor or sheen on sample. Water level subsequently measured at 14.2 ft. at 0935.
20						Borehole grouted on 07/22/14 using neat cement grout and a tremie pipe.
						Mr. Steve Miller with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
25						Drilling Notes:
						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.: B10	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 4 ft. west and 2 ft. north of northeast corner of 627 22nd Street building		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: John	DATE & TIME STARTED: 07/21/14 0800	DATE & TIME FINISHED: 07/21/14 1315
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 15.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH: 12.5 Feet	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 2.0 ft. Base rock and sand (FILL).	FILL		No Well Constructed	0	Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 15.0 ft. using a 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.
	2.0 to 5.0 ft. Gray silt (ML); medium stiff, moist. No Petroleum Hydrocarbon (PHC) odor. (0,0,100)	ML			0	
5						5.0 to 10.0 ft. 4.8 ft. recovery 10.0 to 15.0 ft. 4.8 ft. recovery
	5.0 to 10.0 ft. Gray silty clay (CL); medium stiff, moist. No PHC odor. (0,0,100)	CL			0	Water encountered during drilling at 12.5 ft. at 0830. 12.0 to 15.0 ft. heaving sands.
10				▼		Temporary 1.0-inch O.D. slotted PVC casing placed in borehole. Water level measured at 9.8 ft. at 0832, and at 9.7 at 0842. Inadequate water in temporary PVC pipe for groundwater sample collection.
	10.0 to 12.5 ft. Gray clayey fine sand (SC); medium dense, moist to saturated. No PHC odor. (0,65,35) Wet at 12.0 ft. Saturated at 12.5 ft.	SC		▽	0	
	12.5 to 14.5 ft. Gray silty fine sand (SM); medium dense, saturated. No PHC odor. (0,85,15)	SM			0	Hydropunch pushed to 20.0 ft. Hydropunch seal integrity was confirmed using an electric water level indicator. The Hydropunch rods were then retracted to 16.0 ft.
	14.5 to 15.0 ft. Brown fine sand (SP); medium dense, saturated. No PHC odor. (0,95,5)	SP				
15					0	
					0	Approximately 0.25-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample B10-W collected at 0900 directly from the discharge tubing. No odor or sheen on sample. Water level subsequently measured at 10.5 ft. at 0935.
20						Borehole grouted on 07/21/14 using neat cement grout and a tremie pipe.
25						Mr. Steve Miller with Alameda County Public Works Agency gave verbal authorization to grout the borehole.
30						Drilling Notes: 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.: B11	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 14 ft. east of property line and 6 ft. north of 22nd Street curb			ELEVATION AND DATUM: None
DRILLING AGENCY: Vironex, Inc.		DRILLER: John	DATE & TIME STARTED: 07/21/14 0930 / DATE & TIME FINISHED: 07/21/14 1315
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 20.0 Feet	BEDROCK DEPTH: Not Encountered		LOGGED BY: MLBD / CHECKED BY:
FIRST WATER DEPTH: 13.0 Feet	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 2.0 ft. Base rock and sand (FILL).	FILL		No Well Constructed	0	Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 20.0 ft. using a 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.
	2.0 to 5.0 ft. Brown fine sand (SP); medium dense, moist. No Petroleum Hydrocarbon (PHC) odor. (0,90,10)	SP			0	
5	5.0 to 6.0 ft. Brown sandy clay (CL); medium stiff, moist, with abundant fine sand. No PHC odor. (0,40,60)					5.0 to 10.0 ft. 4.6 ft. recovery 10.0 to 15.0 ft. 4.6 ft. recovery 15.0 to 20.0 ft. 4.8 ft. recovery
	6.0 to 10.0 ft. Olive-brown silty clay (CL); medium stiff, moist, with black and orange mottling. No PHC odor. (0,0,100)	CL			0	Water encountered during drilling at 13.0 ft. at 1015.
						10.0 to 20.0 ft. heaving sands.
10	10.0 to 14.0 ft. Brown silty fine sand (SM); medium dense, moist to saturated, with black mottling. No PHC odor. (0,80,20) Wet at 12.5 ft. Saturated at 13.0 ft. 13.0 to 14.0 ft. Color change to gray.	SM		▼ ▽	0	Temporary 1.0-inch O.D. slotted PVC casing placed in borehole. Water level measured at 12.9 ft. at 1032, and at 12.7 at 1042.
					0	Approximately 0.25-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample B11-W collected at 1100 directly from the discharge tubing. No odor or sheen on sample. Water level subsequently measured at 10.5 ft. at 0935.
15	14.0 to 20.0 ft. Brown fine sand (SP); medium dense, saturated, with orange mottling. No PHC odor. (0,95,5)	SP			0	
20					0	
						Borehole grouted on 07/21/14 using neat cement grout and a tremie pipe.
						Mr. Steve Miller with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
25						Drilling Notes:
						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.: B12	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 3 ft. west and 12 ft. south of southwest corner of brick building		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Joel	DATE & TIME STARTED: 07/22/14 1100	DATE & TIME FINISHED: 07/22/14 1330
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 20.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY: PMK
FIRST WATER DEPTH: 14.0 Feet	NO. OF SAMPLES: 3 Soil		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 2.5 ft. Dark brown gravelly silty sand (FILL).	FILL		No Well Constructed	0	Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 20.0 ft. using a 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.
	2.5 to 5.0 ft. Olive-brown silty clay (CL); medium stiff, moist, with black mottling. No Petroleum Hydrocarbon (PHC) odor. (0,0,100)				0	
5						5.0 to 10.0 ft. 4.6 ft. recovery 10.0 to 15.0 ft. 4.8 ft. recovery 15.0 to 20.0 ft. 4.6 ft. recovery
	5.0 to 14.0 ft. Brown silty clay (CL); medium stiff, moist, with black mottling. No PHC odor. (0,0,100) Wet at 13.5 ft. Saturated at 14.0 ft.	CL			0	Water encountered during drilling at 14.0 ft. at 1108.
10		X		B12-10.0	0	
				▽	0	
	14.0 to 15.0 ft. Brown silty fine sand (SM); medium dense, saturated, with orange mottling. No PHC odor. (0,80,20)					
15		X		B12-15.0		
	15.0 to 20.0 ft. Brown silty fine sand (SM); medium dense, saturated. No PHC odor. (0,80,20)	SM			0	
20		X		B12-20.0	0	Borehole grouted on 07/22/14 using neat cement grout and a tremie pipe.
						Mr. Steve Miller with Alameda County Public Works Agency gave verbal authorization to grout the borehole.
25						Drilling Notes:
						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.: B13	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 8 ft. east and 25 ft. south of southwest corner of brick building		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Joel	DATE & TIME STARTED: 07/22/14 1030	DATE & TIME FINISHED: 07/22/14 1330
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 20.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH: 14.0 Feet	NO. OF SAMPLES: 3 Soil		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
5	0.0 to 7.0 ft. Dark brown gravelly silty sand (FILL). No Petroleum Hydrocarbon (PHC) odor.	FILL		No Well Constructed	0 0	Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 20.0 ft. using a 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. 5.0 to 10.0 ft. 4.6 ft. recovery 10.0 to 15.0 ft. 4.8 ft. recovery 15.0 to 20.0 ft. 4.6 ft. recovery
10	7.0 to 12.0 ft. Olive-brown silty clay (CL); medium stiff, moist, with bluish-gray staining. Moderate PHC odor. (0,0,100)	CL	X	B13-10.0	1.8 32	Water encountered during drilling at 14.0 ft. at 1038.
	12.0 to 14.0 ft. Bluish-gray clayey sand (SC); medium dense, moist to saturated. Moderate PHC odor. (0,70,30) Wet at 13.5 ft. Saturated at 14.0 ft.	SC		▽	7.6	
15	14.0 to 20.0 ft. Brown silty fine sand (SM); medium dense, saturated, with bluish-gray staining to 18.5 ft. Moderate PHC odor. (0,80,20)	SM	X	B13-15.0	1.3 0	
20			X	B13-20.0		Borehole grouted on 07/22/14 using neat cement grout and a tremie pipe. Mr. Steve Miller with Alameda County Public Works Agency gave verbal authorization to grout the borehole. Drilling Notes: 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.: B13A	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 6 ft. east of southwest corner of brick building and 11 ft. south of street curb		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Joel	DATE & TIME STARTED: 08/05/14 0730	DATE & TIME FINISHED: 08/05/14 0900
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 20.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY: PMK
FIRST WATER DEPTH: 14.0 Feet	NO. OF SAMPLES: 3 Soil		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 0.5 ft. Asphalt (3-inches) and base rock.			No Well Constructed		Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 20.0 ft. using a 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.
	0.5 to 3.0 ft. Dark brown silt (ML); medium stiff, moist No Petroleum Hydrocarbon (PHC) odor. (0,0,100)	ML			0	
	3.0 to 5.0 ft. Olive-brown sandy clay (CL); medium stiff, moist, with abundant fine sand, and orange mottling. No PHC odor. (0,45,65)	CL			0	
5	5.0 to 8.0 ft. Olive-brown silty clay (CL); medium stiff, moist, with black mottling. No PHC odor. (0,0,100)				0	5.0 to 10.0 ft. 4.6 ft. recovery 10.0 to 15.0 ft. 4.8 ft. recovery 15.0 to 20.0 ft. 4.8 ft. recovery Water encountered during drilling at 14.0 ft. at 0751.
	8.0 to 11.0 ft. Brown silty fine sand (SM); medium dense, moist, with orange mottling. No PHC odor. (0,80,20)	SM	X	B13-10.0	0	
10	11.0 to 12.5 ft. Olive-brown sandy clay (CL); medium stiff, moist, with some fine sand. No PHC odor. (0,25,75)	CL			0	
	12.5 to 20.0 ft. Brown silty fine sand (SM); medium dense, moist to saturated, with orange mottling. No PHC odor. (0,80,20) Wet at 13.5 ft. Saturated at 14.0 ft.	SM	X	▽ B13-15.0	0	
15					0	
20			X	B13-20.0		Borehole grouted on 07/22/14 using neat cement grout and a tremie pipe. Mr. Steve Miller with Alameda County Public Works Agency gave verbal authorization to grout the borehole. Drilling Notes: 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.: B14	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 25 ft. east and 13 ft. south of southwest corner of brick building		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Joel	DATE & TIME STARTED: 07/22/14 1255	DATE & TIME FINISHED: 07/22/14 1330
DRILLING EQUIPMENT: Track Rig			
COMPLETION DEPTH: 20.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY: PMK
FIRST WATER DEPTH: 14.0 Feet	NO. OF SAMPLES: 3 Soil		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 2.0 ft. Dark brown gravelly silty sand (FILL).	FILL		No Well Constructed	0	Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 20.0 ft. using a 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.
	2.0 to 5.0 ft. Olive-brown silty clay (CL); medium stiff, moist, with black mottling. No Petroleum Hydrocarbon (PHC) odor. (0,15,85)				0	
5						5.0 to 10.0 ft. 4.8 ft. recovery 10.0 to 15.0 ft. 4.8 ft. recovery 15.0 to 20.0 ft. 4.6 ft. recovery
	5.0 to 12.0 ft. Brown silty clay (CL); medium stiff, moist, with few fine sand and black mottling. No PHC odor. (0,15,85)	CL			0	Water encountered during drilling at 14.0 ft. at 1258.
10		X		B14-10.0	0	
	12.0 to 14.0 ft. Grayish-brown clayey sand (SC); medium dense, moist to saturated. No PHC odor. (0,70,30) Wet at 13.5 ft. Saturated at 14.0 ft.	SC		▽	0	
15		X		B14-15.0		
	14.0 to 20.0 ft. Grayish-brown silty fine sand (SM); medium dense, moist, with orange mottling. No PHC odor. (0,80,20)	SM			0	
20		X		B14-20.0	0	Borehole grouted on 07/22/14 using neat cement grout and a tremie pipe. Mr. Steve Miller with Alameda County Public Works Agency gave verbal authorization to grout the borehole.
25						Drilling Notes: 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.: B15	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approximately 5 ft. east and 3 ft. south of southwest corner of brick building			ELEVATION AND DATUM: None
DRILLING AGENCY: Vironex, Inc.		DRILLER: Joel	DATE & TIME STARTED: 07/22/14 1130 / DATE & TIME FINISHED: 07/22/14 1330
DRILLING EQUIPMENT: Geoprobe 6600			
COMPLETION DEPTH: 20.0 Feet	BEDROCK DEPTH: Not Encountered		LOGGED BY: MLBD / CHECKED BY: PMK
FIRST WATER DEPTH: 14.0 Feet	NO. OF SAMPLES: 3 Soil		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 3.0 ft. Dark brown gravelly silty sand (FILL).	FILL		No Well Constructed	0	Borehole was hand augered from 0.0 to 5.0 ft. using a 3.0-inch diameter hand auger. Borehole was continuously cored from 5.0 to 20.0 ft. using a 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.
	3.0 to 5.0 ft. Olive-brown silty clay (CL); medium stiff, moist, with black mottling. No Petroleum Hydrocarbon (PHC) odor. (0,0,100)	CL			0	
5	5.0 to 6.0 ft. Grayish-brown clayey fine sand (SC); medium dense, moist. No PHC odor. (0,65,35)	SC				5.0 to 10.0 ft. 4.8 ft. recovery 10.0 to 15.0 ft. 4.8 ft. recovery 15.0 to 20.0 ft. 4.6 ft. recovery
					0	Water encountered during drilling at 14.0 ft. at 1138.
10	6.0 to 14.0 ft. Grayish-brown silty clay (CL); medium stiff, moist to saturated, with black mottling. No PHC odor. (0,0,100) Wet at 13.5 ft. Saturated at 14.0 ft.	CL	X	B15-10.0	0	
				▽	0	
15			X	B15-15.0		
	14.0 to 20.0 ft. Grayish-brown silty fine sand (SM); medium dense, saturated, with orange mottling to 15.0 ft. No PHC odor. (0,80,20)	SM			0	
20			X	B15-20.0	0	Borehole grouted on 07/22/14 using neat cement grout and a tremie pipe.
						Mr. Steve Miller with Alameda County Public Works Agency onsite to observe and documentgrouting of the borehole.
25						Drilling Notes:
						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.: B16	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approx. 20 ft. west and 50 ft. north of southwest corner of brick building, in garage basement		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Jose	DATE & TIME STARTED: 08/4/14 1000	DATE & TIME FINISHED: 08/4/14 1355
DRILLING EQUIPMENT: 3.0-Inch O.D. Hand Auger			
COMPLETION DEPTH: 16.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY: PMK
FIRST WATER DEPTH: 15.0 Feet	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
5	Garage Basement			No Well Constructed	0 0 0	Borehole was hand augered from 8.5 to 16.0 ft. using a 3.0-inch diameter hand auger. Water encountered during augering at 15.0 ft. at 1115. Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 14.9 ft. at 1120 and at 14.3 ft. at 1130. Approximately 0.1-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing connected to a peristaltic pump. Water sample B16-W collected at 1150 directly from the discharge tubing. No odor or sheen on sample. Slow recharge. Water level was subsequently measured at 14.4 ft. at 1157.
	8.0 to 8.5 ft. Concrete (5-inches) and base rock.	FILL				
10	8.5 to 10.5 ft. Brown gravelly silt (ML); medium stiff, moist. No Petroleum Hydrocarbon (PHC) odor. (10,0,90)	ML			0	
	10.5 to 12.0 ft. Brown silty fine sand (SM); medium dense, moist, with orange mottling. (0,80,20)					
15	12.0 to 16.0 ft. Dark brown silty fine sand (SM); medium dense, moist. No PHC odor. 13.5 to 16.0 ft. Color change to olive-brown. (0,80,20) Wet at 14.5 ft. Saturated at 15.0 ft.	SM		▼ ▽	0	
20					0 0	Borehole grouted on 08/04/14 using neat cement grout and a tremie pipe. Mr. Steve Miller 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.
25						
30						

P&D ENVIRONMENTAL, INC.

BORING NO.: B17	PROJECT NO.: 0553	PROJECT NAME: Cathedral Gardens 638 21st Street, Oakland	
BORING LOCATION: Approx. 42 ft. west and 154 ft. north of southwest corner of brick building, in garage basement		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Jose	DATE & TIME STARTED: 08/4/14 1130	DATE & TIME FINISHED: 08/4/14 1345
DRILLING EQUIPMENT: 3.0-Inch O.D. Hand Auger			
COMPLETION DEPTH: 16.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH: 15.0 Feet	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	Garage Basement			No Well Constructed	0	Borehole was hand augered from 8.5 to 16.0 ft. using a 3.0-inch diameter hand auger.
5					0	Water encountered during augering at 15.0 ft. at 1240.
					0	Temporary 1.0-inch diameter slotted PVC casing placed in borehole. Water level was measured at 14.7 ft. at 1250 and at 14.5 ft. at 1300.
	8.0 to 8.5 ft. Concrete (5-inches) and base rock.	FILL				Approximately 0.1-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing connected to a peristaltic pump. Water sample B17-W collected at 1310 directly from the discharge tubing. No odor or sheen on sample. Slow recharge. Water level was subsequently measured at 14.8 ft. at 1322.
	8.5 to 10.0 ft. Brown silt (ML); medium stiff, moist. No Petroleum Hydrocarbon (PHC) odor. (0,0,100)	ML				
10					0	
	10.0 to 15.0 ft. Brown silty clay (CL); medium stiff, moist, with black mottling. (0,0,100) Wet at 14.5 ft. Saturated at 15.0 ft.	CL		▼ ▽		
					0	
15	15.0 to 16.0 ft. Brown silty fine sand (SM); medium dense, saturated. (0,85,15)	SM				
						Borehole grouted on 08/04/14 using neat cement grout and a tremie pipe.
						Mr. Steve Miller with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
20						Drilling Notes:
						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

Purge Volume Calculations and Soil Gas Sampling Data Sheets

Report 0553.R5
7.5 feet tubing, 12 inch sand interval, 6 inch non-hydrated bentonite interval above sand

Soil Gas Purge Volume Calculations

One Purge Volume is calculated as the volume of the tubing interior plus the volume of the sand interval of the borehole.

The tubing interior volume is calculated as follows:

V tubing = pi x (r x r) x h, where pi = 3.14, r = 0.187 in/2, and h = 7.5 ft.

V tubing = 3.14 x (0.0935 x 0.0935) x (7.5 ft. x 12 in./ft) = 2.47 cubic inches.

The sand interval volume is calculated as follows:

V sand interval = pi x (r x r) x h x porosity, where pi = 3.14, r = 3 in./2, h = 18 in., and porosity = 0.35

V sand interval = 3.14 x (1.5 x 1.5) x 18 x 0.35 = 44.51 cubic inches.

The total volume for one purge volume is V tubing + V sand interval, where

V total = 2.47 cubic inches + 44.51 cubic inches = 46.98 cubic inches.

To convert to cubic centimeters:

V total = 46.98 cubic inches x 16.39 cubic centimeters/cubic inches = 770.0 cubic centimeters.

The total volume to be purged is 3 purge volumes.

V purge total = 770.0 cubic centimeters x 3 = 2310 cubic centimeters.

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

The purge time is calculated as follows:

T purge = 2310 cubic centimeters/ 150 cubic centimeters per minute = 15.40 minutes.

Converting the purge time to seconds, 15.40 minutes x 60seconds/ minute = 924 seconds.

Notes:

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

Sand interval is 1 ft from 5 to 6 ft bgs, filter is at center of sand pack, 6-inches bentonite above sand is non-hydrated.

SOIL GAS SAMPLING DATA SHEET

Address 638 21st St, Oakland

Job # 0558

Date 7/28/14

Sampler Name MLBB

Drilling Company VIRONEX

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

Soil Gas Location Designation	Probe Depth (Ft.)	Time Probe Installation Completed	Canister #	Sample Canister Initial Vacuum Check (In. Hg) and time	Start leak check vacuum (In. Hg) and time	End leak check vacuum (In. Hg) and time	ADDITIONAL leak check vacuum (In. Hg) and time	Start PURGE time	End PURGE time	Start of tracer gas injection time	Begin sample collection vacuum (In. Hg) and time	End sample collection vacuum (In. Hg) and time	PID value in Teflon tube after sample collection	NOTES
SG 1			35546	vac -29 time 0920	vac -30 time 1000	vac -30 time 1010	vac time	time 101100	DFA time 102624	1047 time SORBENT	vac -30 time 104600 110600	vac -5 time 105856 110720	ppm time	2-PROPANOL 1100
SG 1 DUP			12368	vac -30 time 0925	vac -30 time 1000	vac -30 time 1010	vac time	time 101100	time 102624 SORBENT-REP	time	vac -30 time 104600 111500	vac -5 time 105856 111620	ppm time	
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	SORBENT SAMPLE 200 CC
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	
SG				vac time	vac time	vac time	vac time	time	time	time	vac time	vac time	ppm time	

APPENDIX C

Weather Information

http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCAOAKLA38&graphspan=custom&month=7&day=14&year=2014&monthend=7&dayend=28&yearend=2014

Weather History for KCAOAKLA38

Downtown Oakland, Oakland, CA

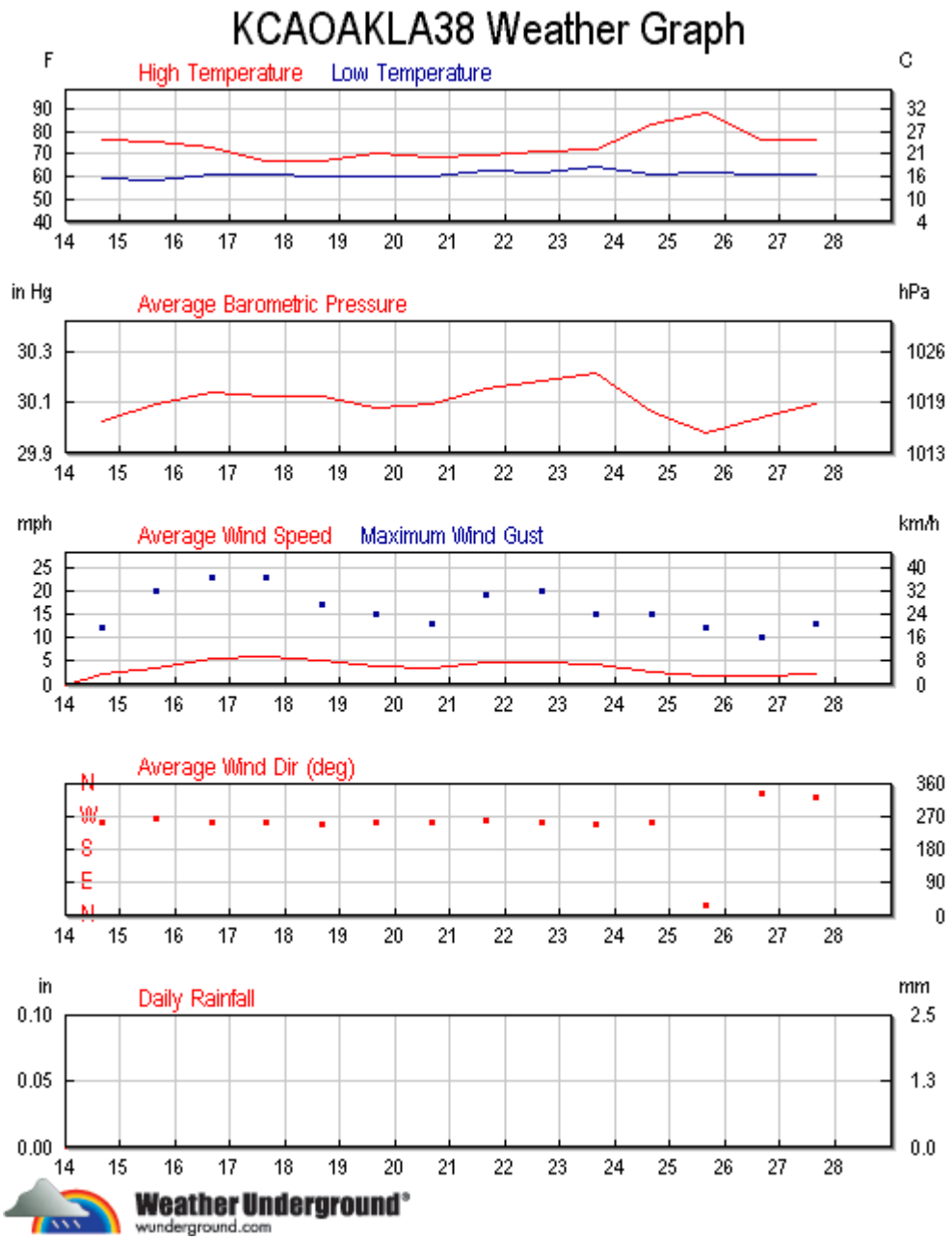
About This Weather Station

Lat: N 37 ° 48 ' 31 " (37.809 °)
Lon: W 122 ° 16 ' 3 " (-122.268 °)
Elevation (ft): 16
Hardware:
Weather Station Software:

July 14 2014 - TO - July 28 2014 Go

Daily Weekly Monthly Yearly **Custom**

	High:	Low:	Average:
Temperature:	**88.3** °F	**58.1** °F	**66.0** °F
Dew Point:	**64.0** °F	**54.1** °F	**59.2** °F
Humidity:	94.0%	36.0%	79.9%
Wind Speed:	**23.0**mph from the WNW	-	**3.6**mph
Wind Gust:	**23.0**mph from the SW	-	-
Wind:	-	-	WSW
Pressure:	**30.27**in	**29.95**in	-
Precipitation:	**0.00**in		


KCAOAKLA38 Weather Graph
F
High Temperature
Low Temperature
C
90
80
70
60
50
40
32
27
21
16
10
4
14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
in Hg
Average Barometric Pressure
hPa
30.3
30.1
29.9
1026
1019
1013
14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
mph
Average Wind Speed
Maximum Wind Gust
km/h
25
20
15
10
5
0
40
32
24
16
8
0
14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Average Wind Dir (deg)
N
W
S
E
N
360
270
180
90
0
14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
in
Daily Rainfall
mm
0.10
0.05
0.00
2.5
1.3
0.0
14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Weather Underground
wunderground.com

http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCAOAKLA38&graphspan=day&month=7&day=28&year=2014

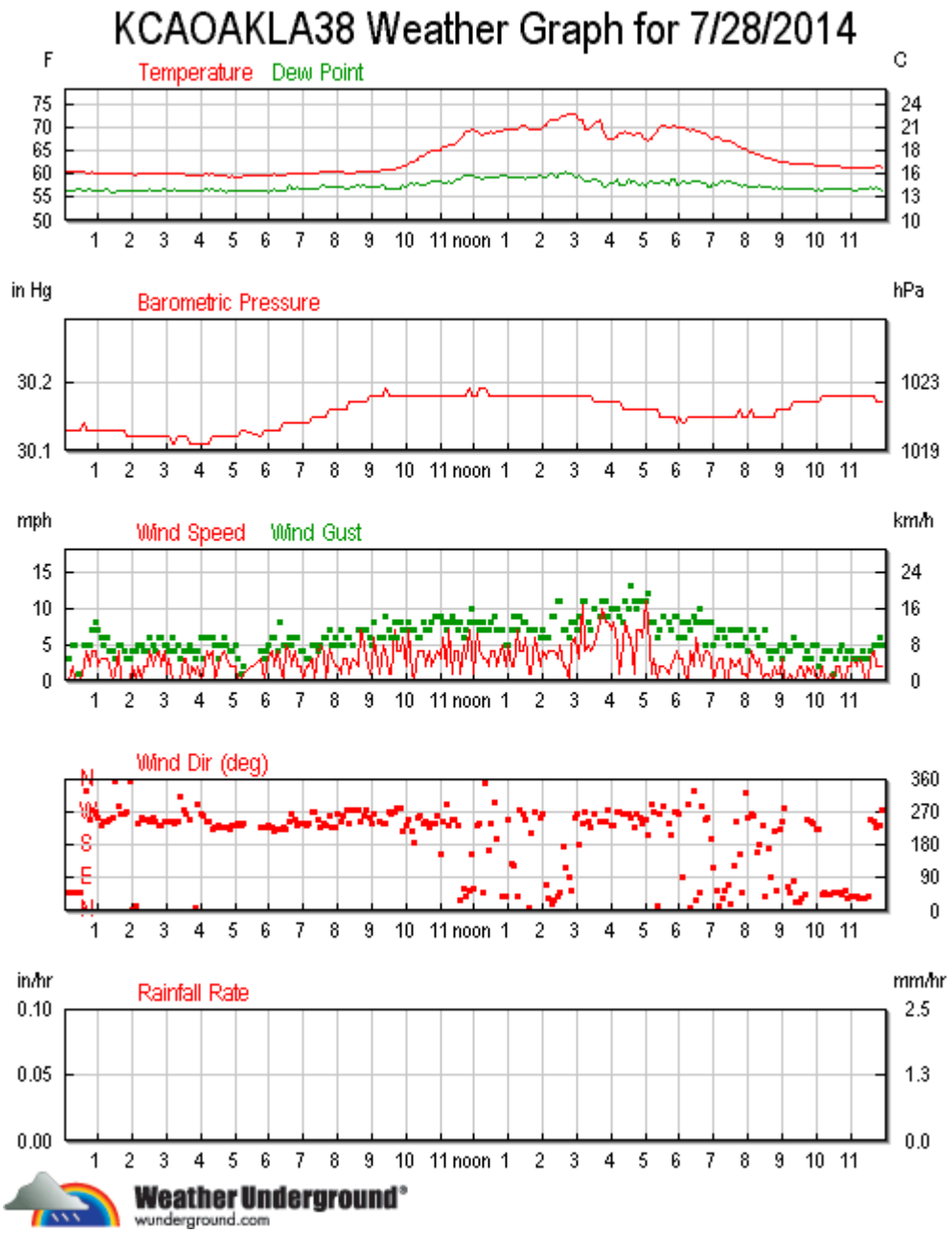
« Previous Day | July | 28 | 2014 | View | Next Day »

Daily Weekly Monthly Yearly Custom

	Current:	High:	Low:	Average:
Temperature:	**67.1** °F	**73.5** °F	**59.9** °F	**64.5** °F
Dew Point:	**58.9** °F	**60.9** °F	**56.4** °F	**57.9** °F
Humidity:	75%	91%	63%	80%
Wind Speed:	**5.0**mph	**11.0**mph	-	**2.7**mph
Wind Gust:	**7.0**mph	**13.0**mph	-	-
Wind:	West	-	-	WSW
Pressure:	**30.08**in	**30.19**in	**30.11**in	-
Precipitation:	**0.00**in			

Weather History for the Rest of This Month

	High:	Low:	Average:
Temperature:	**88.3** °F	**54.9** °F	**64.0** °F
Dew Point:	**64.0** °F	**52.1** °F	**57.6** °F
Humidity:	95.0%	36.0%	80.7%
Wind Speed:	**23.0**mph from the WNW	-	**3.6**mph
Wind Gust:	**23.0**mph from the SW	-	-
Wind:	-	-	WSW
Pressure:	**30.27**in	**29.92**in	-
Precipitation:	**0.00**in		

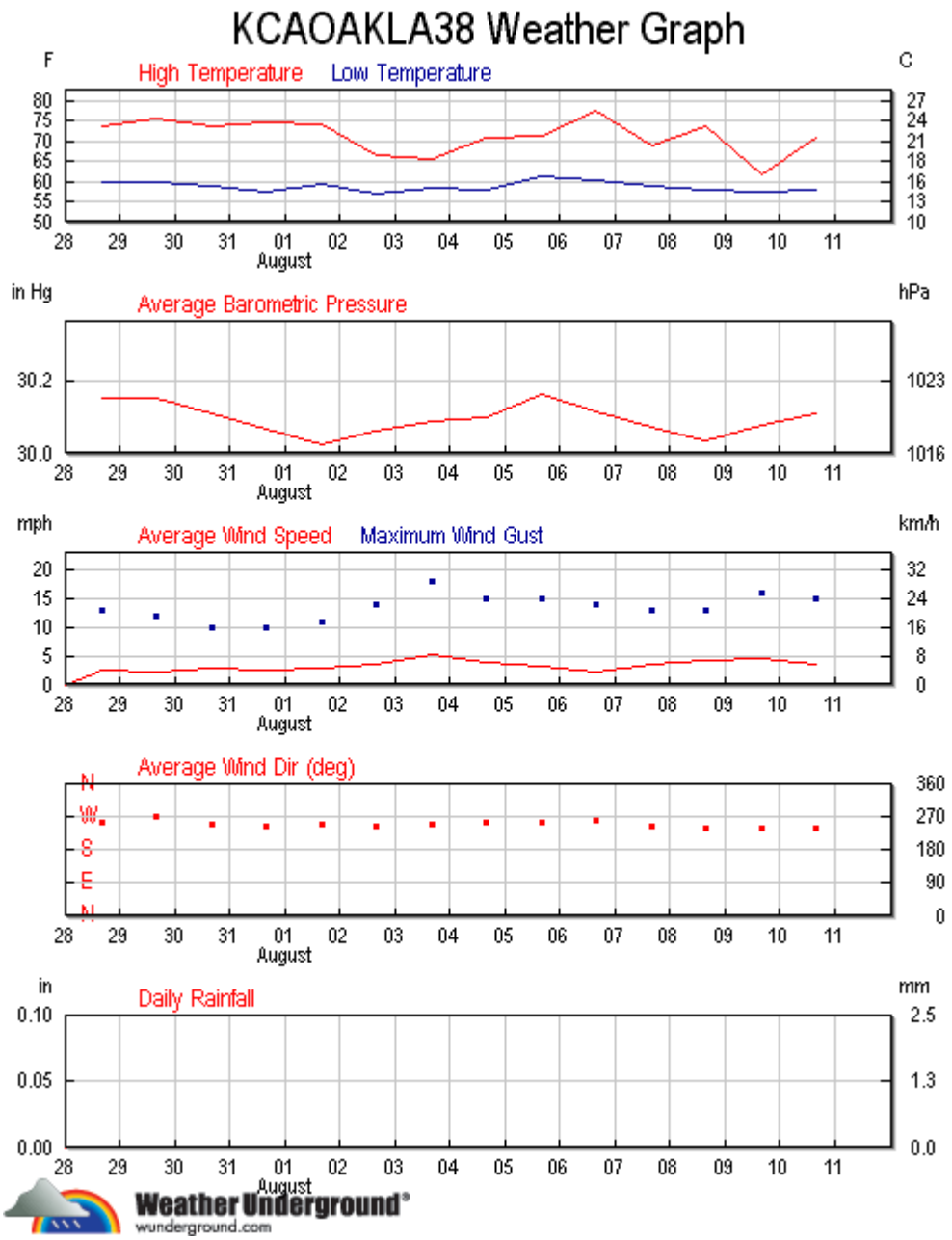

KCAOAKLA38 Weather Graph for 7/28/2014
F
Temperature
Dew Point
C
75
70
65
60
55
50
24
21
18
16
13
10
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
in Hg
Barometric Pressure
hPa
30.2
30.1
1023
1019
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
mph
Wind Speed
Wind Gust
km/h
15
10
5
0
24
16
8
0
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
Wind Dir (deg)
N
W
S
E
360
270
180
90
0
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
in/hr
Rainfall Rate
mm/hr
0.10
0.05
0.00
2.5
1.3
0.0
1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11
Weather Underground
wunderground.com

http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCAOAKLA38&graphspan=custom&month=7&day=28&year=2014&monthend=8&dayend=11&yearend=2014

July 28 2014 - TO - August 11 2014 Go

Daily Weekly Monthly Yearly **Custom**

	High:	Low:	Average:
Temperature:	**77.5** °F	**57.0** °F	**63.3** °F
Dew Point:	**64.5** °F	**54.2** °F	**57.7** °F
Humidity:	95.0%	56.0%	82.7%
Wind Speed:	**13.0**mph from the WSW	-	**3.4**mph
Wind Gust:	**18.0**mph from the WSW	-	-
Wind:	-	-	WSW
Pressure:	**30.20**in	**29.99**in	-
Precipitation:	**0.00**in		


KCAOAKLA38 Weather Graph
F
High Temperature
Low Temperature
C
80 75 70 65 60 55 50
27 24 21 18 16 13 10
28 29 30 31 01 02 03 04 05 06 07 08 09 10 11
August
in Hg
Average Barometric Pressure
hPa
30.2
30.0
1023
1016
mph
Average Wind Speed
Maximum Wind Gust
km/h
20 15 10 5 0
32 24 16 8 0
Average Wind Dir (deg)
N W S E N
360 270 180 90 0
in
Daily Rainfall
mm
0.10 0.05 0.00
2.5 1.3 0.0
Weather Underground
wunderground.com

APPENDIX D

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.: CAC 002701506

Manifest Document No.: 081214

2. Page 1 of 1

3. Generator's Name and Mailing Address
CATHEDRAL GARDEN OAKLAND LP CARE OF EAH INC.
2169 FRANCISCO BLVD STE B
SAN RAFAEL, CA 94901

4. Generator's Phone ( )

638 21st Oakland

538 21ST.C
OAKLAND, CA 94612

5. Transporter 1 Company Name: BK SKY ENVIRONMENTAL SOLUTIONS

6. US EPA ID Number: CAL000346010

A. State Transporter's ID

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
BK SKY ENTERPRISES
401 W. CANWELL ROAD
BEDICIA, CA 94570

10. US EPA ID Number: CAL000301639

E. State Facility's ID

F. Facility's Phone: 800 - 479-7993

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON HAZARDOUS WASTE SOIL	001	DM	250	P
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
NEAR PPE

EMERGENCY CONTACT JEFF RHODES 510 541-2128

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	Signature	Date Month	Day	Year
SNA	SNA	8	18	14

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year
Edilberto De Arco	Edilberto De Arco	08	18	14

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date 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	Signature	Date Month	Day	Year
Jeff Rhodes		8	19	14

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

APPENDIX E

Laboratory Analytical Reports and Chain of Custody Documentation

Soil

- **McCampbell W/O# 1407857 - B12 through B15 Soil Sample Results**
- **McCampbell W/O# 1408147 - B13A Soil Sample Results**

Groundwater

- **McCampbell W/O# 1407844 - B6-W (Hydropunch) and B7-W through B11-W First Encountered Groundwater Sample Results**
- **McCampbell W/O# 1408149 - B16-W and B17-W First Encountered Groundwater Sample Results**

Soil Gas

- **Air Toxics W/O # 1407517 A – SG1 and SG1-DUP TO-15 Results**
- **Air Toxics W/O # 1407520 – SG1 and SG1-DUP TO-17 Results**
- **Air Toxics W/O # 1407514 – SG1 DFA and SG1 2-Propanol Shroud TO-15 Results**
- **Air Toxics W/O # 1407517B – SG1 and SG1-DUP ASTM D-1946 Results**

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1407857

Report Created for: P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

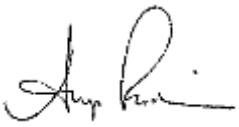
Project Contact: Michael Deschenes
Project P.O.:
Project Name: #0553; Cathedral Gardens

Project Received: 07/23/2014

Analytical Report reviewed & approved for release on 07/30/2014 by:

Question about your data?

Click here to email McCampbell



Angela Rydelius,
Laboratory Manager

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

Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: #0553; Cathedral Gardens
WorkOrder: 1407857

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
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
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

Analytical Qualifiers

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e1	unmodified or weakly modified 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 was out of acceptance criteria; LCS validated the prep batch.

McCampbell Analytical, Inc.
"When Quality Counts"

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

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B12-10	**1407857-001A**	**Soil**	**07/22/2014 11:00**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/25/2014 20:42
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/25/2014 20:42
Benzene	ND	0.0050	1	07/25/2014 20:42
Bromobenzene	ND	0.0050	1	07/25/2014 20:42
Bromochloromethane	ND	0.0050	1	07/25/2014 20:42
Bromodichloromethane	ND	0.0050	1	07/25/2014 20:42
Bromoform	ND	0.0050	1	07/25/2014 20:42
Bromomethane	ND	0.0050	1	07/25/2014 20:42
2-Butanone (MEK)	ND	0.020	1	07/25/2014 20:42
t-Butyl alcohol (TBA)	ND	0.050	1	07/25/2014 20:42
n-Butyl benzene	ND	0.0050	1	07/25/2014 20:42
sec-Butyl benzene	ND	0.0050	1	07/25/2014 20:42
tert-Butyl benzene	ND	0.0050	1	07/25/2014 20:42
Carbon Disulfide	ND	0.0050	1	07/25/2014 20:42
Carbon Tetrachloride	ND	0.0050	1	07/25/2014 20:42
Chlorobenzene	ND	0.0050	1	07/25/2014 20:42
Chloroethane	ND	0.0050	1	07/25/2014 20:42
Chloroform	ND	0.0050	1	07/25/2014 20:42
Chloromethane	ND	0.0050	1	07/25/2014 20:42
2-Chlorotoluene	ND	0.0050	1	07/25/2014 20:42
4-Chlorotoluene	ND	0.0050	1	07/25/2014 20:42
Dibromochloromethane	ND	0.0050	1	07/25/2014 20:42
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/25/2014 20:42
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/25/2014 20:42
Dibromomethane	ND	0.0050	1	07/25/2014 20:42
1,2-Dichlorobenzene	ND	0.0050	1	07/25/2014 20:42
1,3-Dichlorobenzene	ND	0.0050	1	07/25/2014 20:42
1,4-Dichlorobenzene	ND	0.0050	1	07/25/2014 20:42
Dichlorodifluoromethane	ND	0.0050	1	07/25/2014 20:42
1,1-Dichloroethane	ND	0.0050	1	07/25/2014 20:42
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/25/2014 20:42
1,1-Dichloroethene	ND	0.0050	1	07/25/2014 20:42
cis-1,2-Dichloroethene	ND	0.0050	1	07/25/2014 20:42
trans-1,2-Dichloroethene	ND	0.0050	1	07/25/2014 20:42
1,2-Dichloropropane	ND	0.0050	1	07/25/2014 20:42
1,3-Dichloropropane	ND	0.0050	1	07/25/2014 20:42
2,2-Dichloropropane	ND	0.0050	1	07/25/2014 20:42
1,1-Dichloropropene	ND	0.0050	1	07/25/2014 20:42

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B12-10	**1407857-001A**	**Soil**	**07/22/2014 11:00**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	07/25/2014 20:42
trans-1,3-Dichloropropene	ND	0.0050	1	07/25/2014 20:42
Diisopropyl ether (DIPE)	ND	0.0050	1	07/25/2014 20:42
Ethylbenzene	ND	0.0050	1	07/25/2014 20:42
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/25/2014 20:42
Freon 113	ND	0.10	1	07/25/2014 20:42
Hexachlorobutadiene	ND	0.0050	1	07/25/2014 20:42
Hexachloroethane	ND	0.0050	1	07/25/2014 20:42
2-Hexanone	ND	0.0050	1	07/25/2014 20:42
Isopropylbenzene	ND	0.0050	1	07/25/2014 20:42
4-Isopropyl toluene	ND	0.0050	1	07/25/2014 20:42
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/25/2014 20:42
Methylene chloride	ND	0.0050	1	07/25/2014 20:42
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/25/2014 20:42
Naphthalene	ND	0.0050	1	07/25/2014 20:42
n-Propyl benzene	ND	0.0050	1	07/25/2014 20:42
Styrene	ND	0.0050	1	07/25/2014 20:42
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/25/2014 20:42
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/25/2014 20:42
Tetrachloroethene	ND	0.0050	1	07/25/2014 20:42
Toluene	ND	0.0050	1	07/25/2014 20:42
1,2,3-Trichlorobenzene	ND	0.0050	1	07/25/2014 20:42
1,2,4-Trichlorobenzene	ND	0.0050	1	07/25/2014 20:42
1,1,1-Trichloroethane	ND	0.0050	1	07/25/2014 20:42
1,1,2-Trichloroethane	ND	0.0050	1	07/25/2014 20:42
Trichloroethene	ND	0.0050	1	07/25/2014 20:42
Trichlorofluoromethane	ND	0.0050	1	07/25/2014 20:42
1,2,3-Trichloropropane	ND	0.0050	1	07/25/2014 20:42
1,2,4-Trimethylbenzene	ND	0.0050	1	07/25/2014 20:42
1,3,5-Trimethylbenzene	ND	0.0050	1	07/25/2014 20:42
Vinyl Chloride	ND	0.0050	1	07/25/2014 20:42
Xylenes, Total	ND	0.0050	1	07/25/2014 20:42

Surrogates	REC (%)	Limits	
Dibromofluoromethane	91	70-130	07/25/2014 20:42
Toluene-d8	97	70-130	07/25/2014 20:42
4-BFB	96	70-130	07/25/2014 20:42

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B12-15	**1407857-002A**	**Soil**	**07/22/2014 11:05**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/25/2014 21:24
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/25/2014 21:24
Benzene	ND	0.0050	1	07/25/2014 21:24
Bromobenzene	ND	0.0050	1	07/25/2014 21:24
Bromochloromethane	ND	0.0050	1	07/25/2014 21:24
Bromodichloromethane	ND	0.0050	1	07/25/2014 21:24
Bromoform	ND	0.0050	1	07/25/2014 21:24
Bromomethane	ND	0.0050	1	07/25/2014 21:24
2-Butanone (MEK)	ND	0.020	1	07/25/2014 21:24
t-Butyl alcohol (TBA)	ND	0.050	1	07/25/2014 21:24
n-Butyl benzene	ND	0.0050	1	07/25/2014 21:24
sec-Butyl benzene	ND	0.0050	1	07/25/2014 21:24
tert-Butyl benzene	ND	0.0050	1	07/25/2014 21:24
Carbon Disulfide	ND	0.0050	1	07/25/2014 21:24
Carbon Tetrachloride	ND	0.0050	1	07/25/2014 21:24
Chlorobenzene	ND	0.0050	1	07/25/2014 21:24
Chloroethane	ND	0.0050	1	07/25/2014 21:24
Chloroform	ND	0.0050	1	07/25/2014 21:24
Chloromethane	ND	0.0050	1	07/25/2014 21:24
2-Chlorotoluene	ND	0.0050	1	07/25/2014 21:24
4-Chlorotoluene	ND	0.0050	1	07/25/2014 21:24
Dibromochloromethane	ND	0.0050	1	07/25/2014 21:24
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/25/2014 21:24
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/25/2014 21:24
Dibromomethane	ND	0.0050	1	07/25/2014 21:24
1,2-Dichlorobenzene	ND	0.0050	1	07/25/2014 21:24
1,3-Dichlorobenzene	ND	0.0050	1	07/25/2014 21:24
1,4-Dichlorobenzene	ND	0.0050	1	07/25/2014 21:24
Dichlorodifluoromethane	ND	0.0050	1	07/25/2014 21:24
1,1-Dichloroethane	ND	0.0050	1	07/25/2014 21:24
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/25/2014 21:24
1,1-Dichloroethene	ND	0.0050	1	07/25/2014 21:24
cis-1,2-Dichloroethene	ND	0.0050	1	07/25/2014 21:24
trans-1,2-Dichloroethene	ND	0.0050	1	07/25/2014 21:24
1,2-Dichloropropane	ND	0.0050	1	07/25/2014 21:24
1,3-Dichloropropane	ND	0.0050	1	07/25/2014 21:24
2,2-Dichloropropane	ND	0.0050	1	07/25/2014 21:24
1,1-Dichloropropene	ND	0.0050	1	07/25/2014 21:24

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B12-15	**1407857-002A**	**Soil**	**07/22/2014 11:05**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	07/25/2014 21:24
trans-1,3-Dichloropropene	ND	0.0050	1	07/25/2014 21:24
Diisopropyl ether (DIPE)	ND	0.0050	1	07/25/2014 21:24
Ethylbenzene	ND	0.0050	1	07/25/2014 21:24
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/25/2014 21:24
Freon 113	ND	0.10	1	07/25/2014 21:24
Hexachlorobutadiene	ND	0.0050	1	07/25/2014 21:24
Hexachloroethane	ND	0.0050	1	07/25/2014 21:24
2-Hexanone	ND	0.0050	1	07/25/2014 21:24
Isopropylbenzene	ND	0.0050	1	07/25/2014 21:24
4-Isopropyl toluene	ND	0.0050	1	07/25/2014 21:24
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/25/2014 21:24
Methylene chloride	ND	0.0050	1	07/25/2014 21:24
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/25/2014 21:24
Naphthalene	ND	0.0050	1	07/25/2014 21:24
n-Propyl benzene	ND	0.0050	1	07/25/2014 21:24
Styrene	ND	0.0050	1	07/25/2014 21:24
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/25/2014 21:24
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/25/2014 21:24
Tetrachloroethene	ND	0.0050	1	07/25/2014 21:24
Toluene	ND	0.0050	1	07/25/2014 21:24
1,2,3-Trichlorobenzene	ND	0.0050	1	07/25/2014 21:24
1,2,4-Trichlorobenzene	ND	0.0050	1	07/25/2014 21:24
1,1,1-Trichloroethane	ND	0.0050	1	07/25/2014 21:24
1,1,2-Trichloroethane	ND	0.0050	1	07/25/2014 21:24
Trichloroethene	ND	0.0050	1	07/25/2014 21:24
Trichlorofluoromethane	ND	0.0050	1	07/25/2014 21:24
1,2,3-Trichloropropane	ND	0.0050	1	07/25/2014 21:24
1,2,4-Trimethylbenzene	ND	0.0050	1	07/25/2014 21:24
1,3,5-Trimethylbenzene	ND	0.0050	1	07/25/2014 21:24
Vinyl Chloride	ND	0.0050	1	07/25/2014 21:24
Xylenes, Total	ND	0.0050	1	07/25/2014 21:24

Surrogates	REC (%)	Limits	
Dibromofluoromethane	93	70-130	07/25/2014 21:24
Toluene-d8	97	70-130	07/25/2014 21:24
4-BFB	99	70-130	07/25/2014 21:24

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP KF Analyst's Initial  Angela Rydelius, Lab Manager

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B12-20	**1407857-003A**	**Soil**	**07/22/2014 11:10**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/25/2014 22:15
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/25/2014 22:15
Benzene	ND	0.0050	1	07/25/2014 22:15
Bromobenzene	ND	0.0050	1	07/25/2014 22:15
Bromochloromethane	ND	0.0050	1	07/25/2014 22:15
Bromodichloromethane	ND	0.0050	1	07/25/2014 22:15
Bromoform	ND	0.0050	1	07/25/2014 22:15
Bromomethane	ND	0.0050	1	07/25/2014 22:15
2-Butanone (MEK)	ND	0.020	1	07/25/2014 22:15
t-Butyl alcohol (TBA)	ND	0.050	1	07/25/2014 22:15
n-Butyl benzene	ND	0.0050	1	07/25/2014 22:15
sec-Butyl benzene	ND	0.0050	1	07/25/2014 22:15
tert-Butyl benzene	ND	0.0050	1	07/25/2014 22:15
Carbon Disulfide	ND	0.0050	1	07/25/2014 22:15
Carbon Tetrachloride	ND	0.0050	1	07/25/2014 22:15
Chlorobenzene	ND	0.0050	1	07/25/2014 22:15
Chloroethane	ND	0.0050	1	07/25/2014 22:15
Chloroform	ND	0.0050	1	07/25/2014 22:15
Chloromethane	ND	0.0050	1	07/25/2014 22:15
2-Chlorotoluene	ND	0.0050	1	07/25/2014 22:15
4-Chlorotoluene	ND	0.0050	1	07/25/2014 22:15
Dibromochloromethane	ND	0.0050	1	07/25/2014 22:15
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/25/2014 22:15
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/25/2014 22:15
Dibromomethane	ND	0.0050	1	07/25/2014 22:15
1,2-Dichlorobenzene	ND	0.0050	1	07/25/2014 22:15
1,3-Dichlorobenzene	ND	0.0050	1	07/25/2014 22:15
1,4-Dichlorobenzene	ND	0.0050	1	07/25/2014 22:15
Dichlorodifluoromethane	ND	0.0050	1	07/25/2014 22:15
1,1-Dichloroethane	ND	0.0050	1	07/25/2014 22:15
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/25/2014 22:15
1,1-Dichloroethene	ND	0.0050	1	07/25/2014 22:15
cis-1,2-Dichloroethene	ND	0.0050	1	07/25/2014 22:15
trans-1,2-Dichloroethene	ND	0.0050	1	07/25/2014 22:15
1,2-Dichloropropane	ND	0.0050	1	07/25/2014 22:15
1,3-Dichloropropane	ND	0.0050	1	07/25/2014 22:15
2,2-Dichloropropane	ND	0.0050	1	07/25/2014 22:15
1,1-Dichloropropene	ND	0.0050	1	07/25/2014 22:15

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B12-20	**1407857-003A**	**Soil**	**07/22/2014 11:10**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	07/25/2014 22:15
trans-1,3-Dichloropropene	ND	0.0050	1	07/25/2014 22:15
Diisopropyl ether (DIPE)	ND	0.0050	1	07/25/2014 22:15
Ethylbenzene	ND	0.0050	1	07/25/2014 22:15
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/25/2014 22:15
Freon 113	ND	0.10	1	07/25/2014 22:15
Hexachlorobutadiene	ND	0.0050	1	07/25/2014 22:15
Hexachloroethane	ND	0.0050	1	07/25/2014 22:15
2-Hexanone	ND	0.0050	1	07/25/2014 22:15
Isopropylbenzene	ND	0.0050	1	07/25/2014 22:15
4-Isopropyl toluene	ND	0.0050	1	07/25/2014 22:15
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/25/2014 22:15
Methylene chloride	ND	0.0050	1	07/25/2014 22:15
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/25/2014 22:15
Naphthalene	ND	0.0050	1	07/25/2014 22:15
n-Propyl benzene	ND	0.0050	1	07/25/2014 22:15
Styrene	ND	0.0050	1	07/25/2014 22:15
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/25/2014 22:15
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/25/2014 22:15
Tetrachloroethene	ND	0.0050	1	07/25/2014 22:15
Toluene	ND	0.0050	1	07/25/2014 22:15
1,2,3-Trichlorobenzene	ND	0.0050	1	07/25/2014 22:15
1,2,4-Trichlorobenzene	ND	0.0050	1	07/25/2014 22:15
1,1,1-Trichloroethane	ND	0.0050	1	07/25/2014 22:15
1,1,2-Trichloroethane	ND	0.0050	1	07/25/2014 22:15
Trichloroethene	ND	0.0050	1	07/25/2014 22:15
Trichlorofluoromethane	ND	0.0050	1	07/25/2014 22:15
1,2,3-Trichloropropane	ND	0.0050	1	07/25/2014 22:15
1,2,4-Trimethylbenzene	ND	0.0050	1	07/25/2014 22:15
1,3,5-Trimethylbenzene	ND	0.0050	1	07/25/2014 22:15
Vinyl Chloride	ND	0.0050	1	07/25/2014 22:15
Xylenes, Total	ND	0.0050	1	07/25/2014 22:15

Surrogates	REC (%)	Limits	
Dibromofluoromethane	92	70-130	07/25/2014 22:15
Toluene-d8	99	70-130	07/25/2014 22:15
4-BFB	98	70-130	07/25/2014 22:15

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13-10	**1407857-004A**	**Soil**	**07/22/2014 10:35**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.20	2	07/26/2014 05:11
tert-Amyl methyl ether (TAME)	ND	0.010	2	07/26/2014 05:11
Benzene	ND	0.010	2	07/26/2014 05:11
Bromobenzene	ND	0.010	2	07/26/2014 05:11
Bromochloromethane	ND	0.010	2	07/26/2014 05:11
Bromodichloromethane	ND	0.010	2	07/26/2014 05:11
Bromoform	ND	0.010	2	07/26/2014 05:11
Bromomethane	ND	0.010	2	07/26/2014 05:11
2-Butanone (MEK)	ND	0.040	2	07/26/2014 05:11
t-Butyl alcohol (TBA)	ND	0.10	2	07/26/2014 05:11
n-Butyl benzene	ND	0.010	2	07/26/2014 05:11
sec-Butyl benzene	**0.11**	0.010	2	07/26/2014 05:11
tert-Butyl benzene	ND	0.010	2	07/26/2014 05:11
Carbon Disulfide	ND	0.010	2	07/26/2014 05:11
Carbon Tetrachloride	ND	0.010	2	07/26/2014 05:11
Chlorobenzene	ND	0.010	2	07/26/2014 05:11
Chloroethane	ND	0.010	2	07/26/2014 05:11
Chloroform	ND	0.010	2	07/26/2014 05:11
Chloromethane	ND	0.010	2	07/26/2014 05:11
2-Chlorotoluene	ND	0.010	2	07/26/2014 05:11
4-Chlorotoluene	ND	0.010	2	07/26/2014 05:11
Dibromochloromethane	ND	0.010	2	07/26/2014 05:11
1,2-Dibromo-3-chloropropane	ND	0.0080	2	07/26/2014 05:11
1,2-Dibromoethane (EDB)	ND	0.0080	2	07/26/2014 05:11
Dibromomethane	ND	0.010	2	07/26/2014 05:11
1,2-Dichlorobenzene	ND	0.010	2	07/26/2014 05:11
1,3-Dichlorobenzene	ND	0.010	2	07/26/2014 05:11
1,4-Dichlorobenzene	ND	0.010	2	07/26/2014 05:11
Dichlorodifluoromethane	ND	0.010	2	07/26/2014 05:11
1,1-Dichloroethane	ND	0.010	2	07/26/2014 05:11
1,2-Dichloroethane (1,2-DCA)	ND	0.0080	2	07/26/2014 05:11
1,1-Dichloroethene	ND	0.010	2	07/26/2014 05:11
cis-1,2-Dichloroethene	ND	0.010	2	07/26/2014 05:11
trans-1,2-Dichloroethene	ND	0.010	2	07/26/2014 05:11
1,2-Dichloropropane	ND	0.010	2	07/26/2014 05:11
1,3-Dichloropropane	ND	0.010	2	07/26/2014 05:11
2,2-Dichloropropane	ND	0.010	2	07/26/2014 05:11
1,1-Dichloropropene	ND	0.010	2	07/26/2014 05:11

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13-10	**1407857-004A**	**Soil**	**07/22/2014 10:35**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.010	2	07/26/2014 05:11
trans-1,3-Dichloropropene	ND	0.010	2	07/26/2014 05:11
Diisopropyl ether (DIPE)	ND	0.010	2	07/26/2014 05:11
Ethylbenzene	ND	0.010	2	07/26/2014 05:11
Ethyl tert-butyl ether (ETBE)	ND	0.010	2	07/26/2014 05:11
Freon 113	ND	0.20	2	07/26/2014 05:11
Hexachlorobutadiene	ND	0.010	2	07/26/2014 05:11
Hexachloroethane	ND	0.010	2	07/26/2014 05:11
2-Hexanone	ND	0.010	2	07/26/2014 05:11
Isopropylbenzene	ND	0.010	2	07/26/2014 05:11
4-Isopropyl toluene	ND	0.010	2	07/26/2014 05:11
Methyl-t-butyl ether (MTBE)	ND	0.010	2	07/26/2014 05:11
Methylene chloride	ND	0.010	2	07/26/2014 05:11
4-Methyl-2-pentanone (MIBK)	ND	0.010	2	07/26/2014 05:11
Naphthalene	ND	0.010	2	07/26/2014 05:11
n-Propyl benzene	ND	0.010	2	07/26/2014 05:11
Styrene	ND	0.010	2	07/26/2014 05:11
1,1,1,2-Tetrachloroethane	ND	0.010	2	07/26/2014 05:11
1,1,2,2-Tetrachloroethane	ND	0.010	2	07/26/2014 05:11
Tetrachloroethene	ND	0.010	2	07/26/2014 05:11
Toluene	ND	0.010	2	07/26/2014 05:11
1,2,3-Trichlorobenzene	ND	0.010	2	07/26/2014 05:11
1,2,4-Trichlorobenzene	ND	0.010	2	07/26/2014 05:11
1,1,1-Trichloroethane	ND	0.010	2	07/26/2014 05:11
1,1,2-Trichloroethane	ND	0.010	2	07/26/2014 05:11
Trichloroethene	ND	0.010	2	07/26/2014 05:11
Trichlorofluoromethane	ND	0.010	2	07/26/2014 05:11
1,2,3-Trichloropropane	ND	0.010	2	07/26/2014 05:11
1,2,4-Trimethylbenzene	ND	0.010	2	07/26/2014 05:11
1,3,5-Trimethylbenzene	ND	0.010	2	07/26/2014 05:11
Vinyl Chloride	ND	0.010	2	07/26/2014 05:11
Xylenes, Total	ND	0.010	2	07/26/2014 05:11

Surrogates	REC (%)	Limits	
Dibromofluoromethane	92	70-130	07/26/2014 05:11
Toluene-d8	99	70-130	07/26/2014 05:11
4-BFB	95	70-130	07/26/2014 05:11

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13-15	**1407857-005A**	**Soil**	**07/22/2014 10:40**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.67	6.7	07/26/2014 05:53
tert-Amyl methyl ether (TAME)	ND	0.033	6.7	07/26/2014 05:53
Benzene	ND	0.033	6.7	07/26/2014 05:53
Bromobenzene	ND	0.033	6.7	07/26/2014 05:53
Bromochloromethane	ND	0.033	6.7	07/26/2014 05:53
Bromodichloromethane	ND	0.033	6.7	07/26/2014 05:53
Bromoform	ND	0.033	6.7	07/26/2014 05:53
Bromomethane	ND	0.033	6.7	07/26/2014 05:53
2-Butanone (MEK)	ND	0.13	6.7	07/26/2014 05:53
t-Butyl alcohol (TBA)	ND	0.33	6.7	07/26/2014 05:53
n-Butyl benzene	ND	0.033	6.7	07/26/2014 05:53
sec-Butyl benzene	**0.39**	0.033	6.7	07/26/2014 05:53
tert-Butyl benzene	ND	0.033	6.7	07/26/2014 05:53
Carbon Disulfide	ND	0.033	6.7	07/26/2014 05:53
Carbon Tetrachloride	ND	0.033	6.7	07/26/2014 05:53
Chlorobenzene	ND	0.033	6.7	07/26/2014 05:53
Chloroethane	ND	0.033	6.7	07/26/2014 05:53
Chloroform	ND	0.033	6.7	07/26/2014 05:53
Chloromethane	ND	0.033	6.7	07/26/2014 05:53
2-Chlorotoluene	ND	0.033	6.7	07/26/2014 05:53
4-Chlorotoluene	ND	0.033	6.7	07/26/2014 05:53
Dibromochloromethane	ND	0.033	6.7	07/26/2014 05:53
1,2-Dibromo-3-chloropropane	ND	0.027	6.7	07/26/2014 05:53
1,2-Dibromoethane (EDB)	ND	0.027	6.7	07/26/2014 05:53
Dibromomethane	ND	0.033	6.7	07/26/2014 05:53
1,2-Dichlorobenzene	ND	0.033	6.7	07/26/2014 05:53
1,3-Dichlorobenzene	ND	0.033	6.7	07/26/2014 05:53
1,4-Dichlorobenzene	ND	0.033	6.7	07/26/2014 05:53
Dichlorodifluoromethane	ND	0.033	6.7	07/26/2014 05:53
1,1-Dichloroethane	ND	0.033	6.7	07/26/2014 05:53
1,2-Dichloroethane (1,2-DCA)	ND	0.027	6.7	07/26/2014 05:53
1,1-Dichloroethene	ND	0.033	6.7	07/26/2014 05:53
cis-1,2-Dichloroethene	ND	0.033	6.7	07/26/2014 05:53
trans-1,2-Dichloroethene	ND	0.033	6.7	07/26/2014 05:53
1,2-Dichloropropane	ND	0.033	6.7	07/26/2014 05:53
1,3-Dichloropropane	ND	0.033	6.7	07/26/2014 05:53
2,2-Dichloropropane	ND	0.033	6.7	07/26/2014 05:53
1,1-Dichloropropene	ND	0.033	6.7	07/26/2014 05:53

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13-15	**1407857-005A**	**Soil**	**07/22/2014 10:40**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.033	6.7	07/26/2014 05:53
trans-1,3-Dichloropropene	ND	0.033	6.7	07/26/2014 05:53
Diisopropyl ether (DIPE)	ND	0.033	6.7	07/26/2014 05:53
Ethylbenzene	ND	0.033	6.7	07/26/2014 05:53
Ethyl tert-butyl ether (ETBE)	ND	0.033	6.7	07/26/2014 05:53
Freon 113	ND	0.67	6.7	07/26/2014 05:53
Hexachlorobutadiene	ND	0.033	6.7	07/26/2014 05:53
Hexachloroethane	ND	0.033	6.7	07/26/2014 05:53
2-Hexanone	ND	0.033	6.7	07/26/2014 05:53
Isopropylbenzene	ND	0.033	6.7	07/26/2014 05:53
4-Isopropyl toluene	ND	0.033	6.7	07/26/2014 05:53
Methyl-t-butyl ether (MTBE)	ND	0.033	6.7	07/26/2014 05:53
Methylene chloride	ND	0.033	6.7	07/26/2014 05:53
4-Methyl-2-pentanone (MIBK)	ND	0.033	6.7	07/26/2014 05:53
Naphthalene	ND	0.033	6.7	07/26/2014 05:53
n-Propyl benzene	ND	0.033	6.7	07/26/2014 05:53
Styrene	ND	0.033	6.7	07/26/2014 05:53
1,1,1,2-Tetrachloroethane	ND	0.033	6.7	07/26/2014 05:53
1,1,2,2-Tetrachloroethane	ND	0.033	6.7	07/26/2014 05:53
Tetrachloroethene	ND	0.033	6.7	07/26/2014 05:53
Toluene	ND	0.033	6.7	07/26/2014 05:53
1,2,3-Trichlorobenzene	ND	0.033	6.7	07/26/2014 05:53
1,2,4-Trichlorobenzene	ND	0.033	6.7	07/26/2014 05:53
1,1,1-Trichloroethane	ND	0.033	6.7	07/26/2014 05:53
1,1,2-Trichloroethane	ND	0.033	6.7	07/26/2014 05:53
Trichloroethene	ND	0.033	6.7	07/26/2014 05:53
Trichlorofluoromethane	ND	0.033	6.7	07/26/2014 05:53
1,2,3-Trichloropropane	ND	0.033	6.7	07/26/2014 05:53
1,2,4-Trimethylbenzene	ND	0.033	6.7	07/26/2014 05:53
1,3,5-Trimethylbenzene	ND	0.033	6.7	07/26/2014 05:53
Vinyl Chloride	ND	0.033	6.7	07/26/2014 05:53
Xylenes, Total	ND	0.033	6.7	07/26/2014 05:53

Surrogates	REC (%)	Limits	
Dibromofluoromethane	94	70-130	07/26/2014 05:53
Toluene-d8	96	70-130	07/26/2014 05:53
4-BFB	90	70-130	07/26/2014 05:53

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13-20	**1407857-006A**	**Soil**	**07/22/2014 10:45**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/25/2014 22:57
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/25/2014 22:57
Benzene	ND	0.0050	1	07/25/2014 22:57
Bromobenzene	ND	0.0050	1	07/25/2014 22:57
Bromochloromethane	ND	0.0050	1	07/25/2014 22:57
Bromodichloromethane	ND	0.0050	1	07/25/2014 22:57
Bromoform	ND	0.0050	1	07/25/2014 22:57
Bromomethane	ND	0.0050	1	07/25/2014 22:57
2-Butanone (MEK)	ND	0.020	1	07/25/2014 22:57
t-Butyl alcohol (TBA)	ND	0.050	1	07/25/2014 22:57
n-Butyl benzene	ND	0.0050	1	07/25/2014 22:57
sec-Butyl benzene	ND	0.0050	1	07/25/2014 22:57
tert-Butyl benzene	ND	0.0050	1	07/25/2014 22:57
Carbon Disulfide	ND	0.0050	1	07/25/2014 22:57
Carbon Tetrachloride	ND	0.0050	1	07/25/2014 22:57
Chlorobenzene	ND	0.0050	1	07/25/2014 22:57
Chloroethane	ND	0.0050	1	07/25/2014 22:57
Chloroform	ND	0.0050	1	07/25/2014 22:57
Chloromethane	ND	0.0050	1	07/25/2014 22:57
2-Chlorotoluene	ND	0.0050	1	07/25/2014 22:57
4-Chlorotoluene	ND	0.0050	1	07/25/2014 22:57
Dibromochloromethane	ND	0.0050	1	07/25/2014 22:57
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/25/2014 22:57
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/25/2014 22:57
Dibromomethane	ND	0.0050	1	07/25/2014 22:57
1,2-Dichlorobenzene	ND	0.0050	1	07/25/2014 22:57
1,3-Dichlorobenzene	ND	0.0050	1	07/25/2014 22:57
1,4-Dichlorobenzene	ND	0.0050	1	07/25/2014 22:57
Dichlorodifluoromethane	ND	0.0050	1	07/25/2014 22:57
1,1-Dichloroethane	ND	0.0050	1	07/25/2014 22:57
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/25/2014 22:57
1,1-Dichloroethene	ND	0.0050	1	07/25/2014 22:57
cis-1,2-Dichloroethene	ND	0.0050	1	07/25/2014 22:57
trans-1,2-Dichloroethene	ND	0.0050	1	07/25/2014 22:57
1,2-Dichloropropane	ND	0.0050	1	07/25/2014 22:57
1,3-Dichloropropane	ND	0.0050	1	07/25/2014 22:57
2,2-Dichloropropane	ND	0.0050	1	07/25/2014 22:57
1,1-Dichloropropene	ND	0.0050	1	07/25/2014 22:57

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13-20	**1407857-006A**	**Soil**	**07/22/2014 10:45**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	07/25/2014 22:57
trans-1,3-Dichloropropene	ND	0.0050	1	07/25/2014 22:57
Diisopropyl ether (DIPE)	ND	0.0050	1	07/25/2014 22:57
Ethylbenzene	ND	0.0050	1	07/25/2014 22:57
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/25/2014 22:57
Freon 113	ND	0.10	1	07/25/2014 22:57
Hexachlorobutadiene	ND	0.0050	1	07/25/2014 22:57
Hexachloroethane	ND	0.0050	1	07/25/2014 22:57
2-Hexanone	ND	0.0050	1	07/25/2014 22:57
Isopropylbenzene	ND	0.0050	1	07/25/2014 22:57
4-Isopropyl toluene	ND	0.0050	1	07/25/2014 22:57
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/25/2014 22:57
Methylene chloride	ND	0.0050	1	07/25/2014 22:57
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/25/2014 22:57
Naphthalene	ND	0.0050	1	07/25/2014 22:57
n-Propyl benzene	ND	0.0050	1	07/25/2014 22:57
Styrene	ND	0.0050	1	07/25/2014 22:57
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/25/2014 22:57
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/25/2014 22:57
Tetrachloroethene	ND	0.0050	1	07/25/2014 22:57
Toluene	ND	0.0050	1	07/25/2014 22:57
1,2,3-Trichlorobenzene	ND	0.0050	1	07/25/2014 22:57
1,2,4-Trichlorobenzene	ND	0.0050	1	07/25/2014 22:57
1,1,1-Trichloroethane	ND	0.0050	1	07/25/2014 22:57
1,1,2-Trichloroethane	ND	0.0050	1	07/25/2014 22:57
Trichloroethene	ND	0.0050	1	07/25/2014 22:57
Trichlorofluoromethane	ND	0.0050	1	07/25/2014 22:57
1,2,3-Trichloropropane	ND	0.0050	1	07/25/2014 22:57
1,2,4-Trimethylbenzene	ND	0.0050	1	07/25/2014 22:57
1,3,5-Trimethylbenzene	ND	0.0050	1	07/25/2014 22:57
Vinyl Chloride	ND	0.0050	1	07/25/2014 22:57
Xylenes, Total	ND	0.0050	1	07/25/2014 22:57

Surrogates	REC (%)	Limits	
Dibromofluoromethane	94	70-130	07/25/2014 22:57
Toluene-d8	98	70-130	07/25/2014 22:57
4-BFB	101	70-130	07/25/2014 22:57

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B14-10	**1407857-007A**	**Soil**	**07/22/2014 12:55**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/25/2014 23:39
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/25/2014 23:39
Benzene	ND	0.0050	1	07/25/2014 23:39
Bromobenzene	ND	0.0050	1	07/25/2014 23:39
Bromochloromethane	ND	0.0050	1	07/25/2014 23:39
Bromodichloromethane	ND	0.0050	1	07/25/2014 23:39
Bromoform	ND	0.0050	1	07/25/2014 23:39
Bromomethane	ND	0.0050	1	07/25/2014 23:39
2-Butanone (MEK)	ND	0.020	1	07/25/2014 23:39
t-Butyl alcohol (TBA)	ND	0.050	1	07/25/2014 23:39
n-Butyl benzene	ND	0.0050	1	07/25/2014 23:39
sec-Butyl benzene	ND	0.0050	1	07/25/2014 23:39
tert-Butyl benzene	ND	0.0050	1	07/25/2014 23:39
Carbon Disulfide	ND	0.0050	1	07/25/2014 23:39
Carbon Tetrachloride	ND	0.0050	1	07/25/2014 23:39
Chlorobenzene	ND	0.0050	1	07/25/2014 23:39
Chloroethane	ND	0.0050	1	07/25/2014 23:39
Chloroform	ND	0.0050	1	07/25/2014 23:39
Chloromethane	ND	0.0050	1	07/25/2014 23:39
2-Chlorotoluene	ND	0.0050	1	07/25/2014 23:39
4-Chlorotoluene	ND	0.0050	1	07/25/2014 23:39
Dibromochloromethane	ND	0.0050	1	07/25/2014 23:39
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/25/2014 23:39
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/25/2014 23:39
Dibromomethane	ND	0.0050	1	07/25/2014 23:39
1,2-Dichlorobenzene	ND	0.0050	1	07/25/2014 23:39
1,3-Dichlorobenzene	ND	0.0050	1	07/25/2014 23:39
1,4-Dichlorobenzene	ND	0.0050	1	07/25/2014 23:39
Dichlorodifluoromethane	ND	0.0050	1	07/25/2014 23:39
1,1-Dichloroethane	ND	0.0050	1	07/25/2014 23:39
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/25/2014 23:39
1,1-Dichloroethene	ND	0.0050	1	07/25/2014 23:39
cis-1,2-Dichloroethene	ND	0.0050	1	07/25/2014 23:39
trans-1,2-Dichloroethene	ND	0.0050	1	07/25/2014 23:39
1,2-Dichloropropane	ND	0.0050	1	07/25/2014 23:39
1,3-Dichloropropane	ND	0.0050	1	07/25/2014 23:39
2,2-Dichloropropane	ND	0.0050	1	07/25/2014 23:39
1,1-Dichloropropene	ND	0.0050	1	07/25/2014 23:39

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B14-10	**1407857-007A**	**Soil**	**07/22/2014 12:55**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	07/25/2014 23:39
trans-1,3-Dichloropropene	ND	0.0050	1	07/25/2014 23:39
Diisopropyl ether (DIPE)	ND	0.0050	1	07/25/2014 23:39
Ethylbenzene	ND	0.0050	1	07/25/2014 23:39
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/25/2014 23:39
Freon 113	ND	0.10	1	07/25/2014 23:39
Hexachlorobutadiene	ND	0.0050	1	07/25/2014 23:39
Hexachloroethane	ND	0.0050	1	07/25/2014 23:39
2-Hexanone	ND	0.0050	1	07/25/2014 23:39
Isopropylbenzene	ND	0.0050	1	07/25/2014 23:39
4-Isopropyl toluene	ND	0.0050	1	07/25/2014 23:39
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/25/2014 23:39
Methylene chloride	ND	0.0050	1	07/25/2014 23:39
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/25/2014 23:39
Naphthalene	ND	0.0050	1	07/25/2014 23:39
n-Propyl benzene	ND	0.0050	1	07/25/2014 23:39
Styrene	ND	0.0050	1	07/25/2014 23:39
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/25/2014 23:39
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/25/2014 23:39
Tetrachloroethene	ND	0.0050	1	07/25/2014 23:39
Toluene	ND	0.0050	1	07/25/2014 23:39
1,2,3-Trichlorobenzene	ND	0.0050	1	07/25/2014 23:39
1,2,4-Trichlorobenzene	ND	0.0050	1	07/25/2014 23:39
1,1,1-Trichloroethane	ND	0.0050	1	07/25/2014 23:39
1,1,2-Trichloroethane	ND	0.0050	1	07/25/2014 23:39
Trichloroethene	ND	0.0050	1	07/25/2014 23:39
Trichlorofluoromethane	ND	0.0050	1	07/25/2014 23:39
1,2,3-Trichloropropane	ND	0.0050	1	07/25/2014 23:39
1,2,4-Trimethylbenzene	ND	0.0050	1	07/25/2014 23:39
1,3,5-Trimethylbenzene	ND	0.0050	1	07/25/2014 23:39
Vinyl Chloride	ND	0.0050	1	07/25/2014 23:39
Xylenes, Total	ND	0.0050	1	07/25/2014 23:39

Surrogates	REC (%)	Limits	
Dibromofluoromethane	92	70-130	07/25/2014 23:39
Toluene-d8	98	70-130	07/25/2014 23:39
4-BFB	96	70-130	07/25/2014 23:39

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B14-15	**1407857-008A**	**Soil**	**07/22/2014 13:00**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/26/2014 00:20
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/26/2014 00:20
Benzene	ND	0.0050	1	07/26/2014 00:20
Bromobenzene	ND	0.0050	1	07/26/2014 00:20
Bromochloromethane	ND	0.0050	1	07/26/2014 00:20
Bromodichloromethane	ND	0.0050	1	07/26/2014 00:20
Bromoform	ND	0.0050	1	07/26/2014 00:20
Bromomethane	ND	0.0050	1	07/26/2014 00:20
2-Butanone (MEK)	ND	0.020	1	07/26/2014 00:20
t-Butyl alcohol (TBA)	ND	0.050	1	07/26/2014 00:20
n-Butyl benzene	ND	0.0050	1	07/26/2014 00:20
sec-Butyl benzene	ND	0.0050	1	07/26/2014 00:20
tert-Butyl benzene	ND	0.0050	1	07/26/2014 00:20
Carbon Disulfide	ND	0.0050	1	07/26/2014 00:20
Carbon Tetrachloride	ND	0.0050	1	07/26/2014 00:20
Chlorobenzene	ND	0.0050	1	07/26/2014 00:20
Chloroethane	ND	0.0050	1	07/26/2014 00:20
Chloroform	ND	0.0050	1	07/26/2014 00:20
Chloromethane	ND	0.0050	1	07/26/2014 00:20
2-Chlorotoluene	ND	0.0050	1	07/26/2014 00:20
4-Chlorotoluene	ND	0.0050	1	07/26/2014 00:20
Dibromochloromethane	ND	0.0050	1	07/26/2014 00:20
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/26/2014 00:20
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/26/2014 00:20
Dibromomethane	ND	0.0050	1	07/26/2014 00:20
1,2-Dichlorobenzene	ND	0.0050	1	07/26/2014 00:20
1,3-Dichlorobenzene	ND	0.0050	1	07/26/2014 00:20
1,4-Dichlorobenzene	ND	0.0050	1	07/26/2014 00:20
Dichlorodifluoromethane	ND	0.0050	1	07/26/2014 00:20
1,1-Dichloroethane	ND	0.0050	1	07/26/2014 00:20
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/26/2014 00:20
1,1-Dichloroethene	ND	0.0050	1	07/26/2014 00:20
cis-1,2-Dichloroethene	ND	0.0050	1	07/26/2014 00:20
trans-1,2-Dichloroethene	ND	0.0050	1	07/26/2014 00:20
1,2-Dichloropropane	ND	0.0050	1	07/26/2014 00:20
1,3-Dichloropropane	ND	0.0050	1	07/26/2014 00:20
2,2-Dichloropropane	ND	0.0050	1	07/26/2014 00:20
1,1-Dichloropropene	ND	0.0050	1	07/26/2014 00:20

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B14-15	**1407857-008A**	**Soil**	**07/22/2014 13:00**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	07/26/2014 00:20
trans-1,3-Dichloropropene	ND	0.0050	1	07/26/2014 00:20
Diisopropyl ether (DIPE)	ND	0.0050	1	07/26/2014 00:20
Ethylbenzene	ND	0.0050	1	07/26/2014 00:20
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/26/2014 00:20
Freon 113	ND	0.10	1	07/26/2014 00:20
Hexachlorobutadiene	ND	0.0050	1	07/26/2014 00:20
Hexachloroethane	ND	0.0050	1	07/26/2014 00:20
2-Hexanone	ND	0.0050	1	07/26/2014 00:20
Isopropylbenzene	ND	0.0050	1	07/26/2014 00:20
4-Isopropyl toluene	ND	0.0050	1	07/26/2014 00:20
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/26/2014 00:20
Methylene chloride	ND	0.0050	1	07/26/2014 00:20
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/26/2014 00:20
Naphthalene	ND	0.0050	1	07/26/2014 00:20
n-Propyl benzene	ND	0.0050	1	07/26/2014 00:20
Styrene	ND	0.0050	1	07/26/2014 00:20
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/26/2014 00:20
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/26/2014 00:20
Tetrachloroethene	ND	0.0050	1	07/26/2014 00:20
Toluene	ND	0.0050	1	07/26/2014 00:20
1,2,3-Trichlorobenzene	ND	0.0050	1	07/26/2014 00:20
1,2,4-Trichlorobenzene	ND	0.0050	1	07/26/2014 00:20
1,1,1-Trichloroethane	ND	0.0050	1	07/26/2014 00:20
1,1,2-Trichloroethane	ND	0.0050	1	07/26/2014 00:20
Trichloroethene	ND	0.0050	1	07/26/2014 00:20
Trichlorofluoromethane	ND	0.0050	1	07/26/2014 00:20
1,2,3-Trichloropropane	ND	0.0050	1	07/26/2014 00:20
1,2,4-Trimethylbenzene	ND	0.0050	1	07/26/2014 00:20
1,3,5-Trimethylbenzene	ND	0.0050	1	07/26/2014 00:20
Vinyl Chloride	ND	0.0050	1	07/26/2014 00:20
Xylenes, Total	ND	0.0050	1	07/26/2014 00:20

Surrogates	REC (%)	Limits	
Dibromofluoromethane	93	70-130	07/26/2014 00:20
Toluene-d8	98	70-130	07/26/2014 00:20
4-BFB	99	70-130	07/26/2014 00:20

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B14-20	**1407857-009A**	**Soil**	**07/22/2014 13:05**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/26/2014 01:02
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/26/2014 01:02
Benzene	ND	0.0050	1	07/26/2014 01:02
Bromobenzene	ND	0.0050	1	07/26/2014 01:02
Bromochloromethane	ND	0.0050	1	07/26/2014 01:02
Bromodichloromethane	ND	0.0050	1	07/26/2014 01:02
Bromoform	ND	0.0050	1	07/26/2014 01:02
Bromomethane	ND	0.0050	1	07/26/2014 01:02
2-Butanone (MEK)	ND	0.020	1	07/26/2014 01:02
t-Butyl alcohol (TBA)	ND	0.050	1	07/26/2014 01:02
n-Butyl benzene	ND	0.0050	1	07/26/2014 01:02
sec-Butyl benzene	ND	0.0050	1	07/26/2014 01:02
tert-Butyl benzene	ND	0.0050	1	07/26/2014 01:02
Carbon Disulfide	ND	0.0050	1	07/26/2014 01:02
Carbon Tetrachloride	ND	0.0050	1	07/26/2014 01:02
Chlorobenzene	ND	0.0050	1	07/26/2014 01:02
Chloroethane	ND	0.0050	1	07/26/2014 01:02
Chloroform	ND	0.0050	1	07/26/2014 01:02
Chloromethane	ND	0.0050	1	07/26/2014 01:02
2-Chlorotoluene	ND	0.0050	1	07/26/2014 01:02
4-Chlorotoluene	ND	0.0050	1	07/26/2014 01:02
Dibromochloromethane	ND	0.0050	1	07/26/2014 01:02
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/26/2014 01:02
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/26/2014 01:02
Dibromomethane	ND	0.0050	1	07/26/2014 01:02
1,2-Dichlorobenzene	ND	0.0050	1	07/26/2014 01:02
1,3-Dichlorobenzene	ND	0.0050	1	07/26/2014 01:02
1,4-Dichlorobenzene	ND	0.0050	1	07/26/2014 01:02
Dichlorodifluoromethane	ND	0.0050	1	07/26/2014 01:02
1,1-Dichloroethane	ND	0.0050	1	07/26/2014 01:02
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/26/2014 01:02
1,1-Dichloroethene	ND	0.0050	1	07/26/2014 01:02
cis-1,2-Dichloroethene	ND	0.0050	1	07/26/2014 01:02
trans-1,2-Dichloroethene	ND	0.0050	1	07/26/2014 01:02
1,2-Dichloropropane	ND	0.0050	1	07/26/2014 01:02
1,3-Dichloropropane	ND	0.0050	1	07/26/2014 01:02
2,2-Dichloropropane	ND	0.0050	1	07/26/2014 01:02
1,1-Dichloropropene	ND	0.0050	1	07/26/2014 01:02

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B14-20	**1407857-009A**	**Soil**	**07/22/2014 13:05**	**GC10**	**93134**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	07/26/2014 01:02
trans-1,3-Dichloropropene	ND	0.0050	1	07/26/2014 01:02
Diisopropyl ether (DIPE)	ND	0.0050	1	07/26/2014 01:02
Ethylbenzene	ND	0.0050	1	07/26/2014 01:02
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/26/2014 01:02
Freon 113	ND	0.10	1	07/26/2014 01:02
Hexachlorobutadiene	ND	0.0050	1	07/26/2014 01:02
Hexachloroethane	ND	0.0050	1	07/26/2014 01:02
2-Hexanone	ND	0.0050	1	07/26/2014 01:02
Isopropylbenzene	ND	0.0050	1	07/26/2014 01:02
4-Isopropyl toluene	ND	0.0050	1	07/26/2014 01:02
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/26/2014 01:02
Methylene chloride	ND	0.0050	1	07/26/2014 01:02
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/26/2014 01:02
Naphthalene	ND	0.0050	1	07/26/2014 01:02
n-Propyl benzene	ND	0.0050	1	07/26/2014 01:02
Styrene	ND	0.0050	1	07/26/2014 01:02
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/26/2014 01:02
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/26/2014 01:02
Tetrachloroethene	ND	0.0050	1	07/26/2014 01:02
Toluene	ND	0.0050	1	07/26/2014 01:02
1,2,3-Trichlorobenzene	ND	0.0050	1	07/26/2014 01:02
1,2,4-Trichlorobenzene	ND	0.0050	1	07/26/2014 01:02
1,1,1-Trichloroethane	ND	0.0050	1	07/26/2014 01:02
1,1,2-Trichloroethane	ND	0.0050	1	07/26/2014 01:02
Trichloroethene	ND	0.0050	1	07/26/2014 01:02
Trichlorofluoromethane	ND	0.0050	1	07/26/2014 01:02
1,2,3-Trichloropropane	ND	0.0050	1	07/26/2014 01:02
1,2,4-Trimethylbenzene	ND	0.0050	1	07/26/2014 01:02
1,3,5-Trimethylbenzene	ND	0.0050	1	07/26/2014 01:02
Vinyl Chloride	ND	0.0050	1	07/26/2014 01:02
Xylenes, Total	ND	0.0050	1	07/26/2014 01:02

Surrogates	REC (%)	Limits	
Dibromofluoromethane	93	70-130	07/26/2014 01:02
Toluene-d8	97	70-130	07/26/2014 01:02
4-BFB	102	70-130	07/26/2014 01:02

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-10	**1407857-010A**	**Soil**	**07/22/2014 11:35**	**GC10**	**93143**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/24/2014 14:08
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/24/2014 14:08
Benzene	ND	0.0050	1	07/24/2014 14:08
Bromobenzene	ND	0.0050	1	07/24/2014 14:08
Bromochloromethane	ND	0.0050	1	07/24/2014 14:08
Bromodichloromethane	ND	0.0050	1	07/24/2014 14:08
Bromoform	ND	0.0050	1	07/24/2014 14:08
Bromomethane	ND	0.0050	1	07/24/2014 14:08
2-Butanone (MEK)	ND	0.020	1	07/24/2014 14:08
t-Butyl alcohol (TBA)	ND	0.050	1	07/24/2014 14:08
n-Butyl benzene	ND	0.0050	1	07/24/2014 14:08
sec-Butyl benzene	ND	0.0050	1	07/24/2014 14:08
tert-Butyl benzene	ND	0.0050	1	07/24/2014 14:08
Carbon Disulfide	ND	0.0050	1	07/24/2014 14:08
Carbon Tetrachloride	ND	0.0050	1	07/24/2014 14:08
Chlorobenzene	ND	0.0050	1	07/24/2014 14:08
Chloroethane	ND	0.0050	1	07/24/2014 14:08
Chloroform	ND	0.0050	1	07/24/2014 14:08
Chloromethane	ND	0.0050	1	07/24/2014 14:08
2-Chlorotoluene	ND	0.0050	1	07/24/2014 14:08
4-Chlorotoluene	ND	0.0050	1	07/24/2014 14:08
Dibromochloromethane	ND	0.0050	1	07/24/2014 14:08
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/24/2014 14:08
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/24/2014 14:08
Dibromomethane	ND	0.0050	1	07/24/2014 14:08
1,2-Dichlorobenzene	ND	0.0050	1	07/24/2014 14:08
1,3-Dichlorobenzene	ND	0.0050	1	07/24/2014 14:08
1,4-Dichlorobenzene	ND	0.0050	1	07/24/2014 14:08
Dichlorodifluoromethane	ND	0.0050	1	07/24/2014 14:08
1,1-Dichloroethane	ND	0.0050	1	07/24/2014 14:08
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/24/2014 14:08
1,1-Dichloroethene	ND	0.0050	1	07/24/2014 14:08
cis-1,2-Dichloroethene	ND	0.0050	1	07/24/2014 14:08
trans-1,2-Dichloroethene	ND	0.0050	1	07/24/2014 14:08
1,2-Dichloropropane	ND	0.0050	1	07/24/2014 14:08
1,3-Dichloropropane	ND	0.0050	1	07/24/2014 14:08
2,2-Dichloropropane	ND	0.0050	1	07/24/2014 14:08
1,1-Dichloropropene	ND	0.0050	1	07/24/2014 14:08

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-10	**1407857-010A**	**Soil**	**07/22/2014 11:35**	**GC10**	**93143**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	07/24/2014 14:08
trans-1,3-Dichloropropene	ND	0.0050	1	07/24/2014 14:08
Diisopropyl ether (DIPE)	ND	0.0050	1	07/24/2014 14:08
Ethylbenzene	ND	0.0050	1	07/24/2014 14:08
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/24/2014 14:08
Freon 113	ND	0.10	1	07/24/2014 14:08
Hexachlorobutadiene	ND	0.0050	1	07/24/2014 14:08
Hexachloroethane	ND	0.0050	1	07/24/2014 14:08
2-Hexanone	ND	0.0050	1	07/24/2014 14:08
Isopropylbenzene	ND	0.0050	1	07/24/2014 14:08
4-Isopropyl toluene	ND	0.0050	1	07/24/2014 14:08
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/24/2014 14:08
Methylene chloride	ND	0.0050	1	07/24/2014 14:08
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/24/2014 14:08
Naphthalene	ND	0.0050	1	07/24/2014 14:08
n-Propyl benzene	ND	0.0050	1	07/24/2014 14:08
Styrene	ND	0.0050	1	07/24/2014 14:08
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/24/2014 14:08
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/24/2014 14:08
Tetrachloroethene	ND	0.0050	1	07/24/2014 14:08
Toluene	ND	0.0050	1	07/24/2014 14:08
1,2,3-Trichlorobenzene	ND	0.0050	1	07/24/2014 14:08
1,2,4-Trichlorobenzene	ND	0.0050	1	07/24/2014 14:08
1,1,1-Trichloroethane	ND	0.0050	1	07/24/2014 14:08
1,1,2-Trichloroethane	ND	0.0050	1	07/24/2014 14:08
Trichloroethene	ND	0.0050	1	07/24/2014 14:08
Trichlorofluoromethane	ND	0.0050	1	07/24/2014 14:08
1,2,3-Trichloropropane	ND	0.0050	1	07/24/2014 14:08
1,2,4-Trimethylbenzene	ND	0.0050	1	07/24/2014 14:08
1,3,5-Trimethylbenzene	ND	0.0050	1	07/24/2014 14:08
Vinyl Chloride	ND	0.0050	1	07/24/2014 14:08
Xylenes, Total	ND	0.0050	1	07/24/2014 14:08

Surrogates	REC (%)	Limits	
Dibromofluoromethane	93	70-130	07/24/2014 14:08
Toluene-d8	96	70-130	07/24/2014 14:08
4-BFB	89	70-130	07/24/2014 14:08

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-15	**1407857-011A**	**Soil**	**07/22/2014 11:40**	**GC10**	**93143**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/26/2014 01:43
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/26/2014 01:43
Benzene	ND	0.0050	1	07/26/2014 01:43
Bromobenzene	ND	0.0050	1	07/26/2014 01:43
Bromochloromethane	ND	0.0050	1	07/26/2014 01:43
Bromodichloromethane	ND	0.0050	1	07/26/2014 01:43
Bromoform	ND	0.0050	1	07/26/2014 01:43
Bromomethane	ND	0.0050	1	07/26/2014 01:43
2-Butanone (MEK)	ND	0.020	1	07/26/2014 01:43
t-Butyl alcohol (TBA)	ND	0.050	1	07/26/2014 01:43
n-Butyl benzene	ND	0.0050	1	07/26/2014 01:43
sec-Butyl benzene	ND	0.0050	1	07/26/2014 01:43
tert-Butyl benzene	ND	0.0050	1	07/26/2014 01:43
Carbon Disulfide	ND	0.0050	1	07/26/2014 01:43
Carbon Tetrachloride	ND	0.0050	1	07/26/2014 01:43
Chlorobenzene	ND	0.0050	1	07/26/2014 01:43
Chloroethane	ND	0.0050	1	07/26/2014 01:43
Chloroform	ND	0.0050	1	07/26/2014 01:43
Chloromethane	ND	0.0050	1	07/26/2014 01:43
2-Chlorotoluene	ND	0.0050	1	07/26/2014 01:43
4-Chlorotoluene	ND	0.0050	1	07/26/2014 01:43
Dibromochloromethane	ND	0.0050	1	07/26/2014 01:43
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/26/2014 01:43
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/26/2014 01:43
Dibromomethane	ND	0.0050	1	07/26/2014 01:43
1,2-Dichlorobenzene	ND	0.0050	1	07/26/2014 01:43
1,3-Dichlorobenzene	ND	0.0050	1	07/26/2014 01:43
1,4-Dichlorobenzene	ND	0.0050	1	07/26/2014 01:43
Dichlorodifluoromethane	ND	0.0050	1	07/26/2014 01:43
1,1-Dichloroethane	ND	0.0050	1	07/26/2014 01:43
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/26/2014 01:43
1,1-Dichloroethene	ND	0.0050	1	07/26/2014 01:43
cis-1,2-Dichloroethene	ND	0.0050	1	07/26/2014 01:43
trans-1,2-Dichloroethene	ND	0.0050	1	07/26/2014 01:43
1,2-Dichloropropane	ND	0.0050	1	07/26/2014 01:43
1,3-Dichloropropane	ND	0.0050	1	07/26/2014 01:43
2,2-Dichloropropane	ND	0.0050	1	07/26/2014 01:43
1,1-Dichloropropene	ND	0.0050	1	07/26/2014 01:43

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-15	**1407857-011A**	**Soil**	**07/22/2014 11:40**	**GC10**	**93143**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	07/26/2014 01:43
trans-1,3-Dichloropropene	ND	0.0050	1	07/26/2014 01:43
Diisopropyl ether (DIPE)	ND	0.0050	1	07/26/2014 01:43
Ethylbenzene	ND	0.0050	1	07/26/2014 01:43
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/26/2014 01:43
Freon 113	ND	0.10	1	07/26/2014 01:43
Hexachlorobutadiene	ND	0.0050	1	07/26/2014 01:43
Hexachloroethane	ND	0.0050	1	07/26/2014 01:43
2-Hexanone	ND	0.0050	1	07/26/2014 01:43
Isopropylbenzene	ND	0.0050	1	07/26/2014 01:43
4-Isopropyl toluene	ND	0.0050	1	07/26/2014 01:43
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/26/2014 01:43
Methylene chloride	ND	0.0050	1	07/26/2014 01:43
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/26/2014 01:43
Naphthalene	ND	0.0050	1	07/26/2014 01:43
n-Propyl benzene	ND	0.0050	1	07/26/2014 01:43
Styrene	ND	0.0050	1	07/26/2014 01:43
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/26/2014 01:43
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/26/2014 01:43
Tetrachloroethene	ND	0.0050	1	07/26/2014 01:43
Toluene	ND	0.0050	1	07/26/2014 01:43
1,2,3-Trichlorobenzene	ND	0.0050	1	07/26/2014 01:43
1,2,4-Trichlorobenzene	ND	0.0050	1	07/26/2014 01:43
1,1,1-Trichloroethane	ND	0.0050	1	07/26/2014 01:43
1,1,2-Trichloroethane	ND	0.0050	1	07/26/2014 01:43
Trichloroethene	ND	0.0050	1	07/26/2014 01:43
Trichlorofluoromethane	ND	0.0050	1	07/26/2014 01:43
1,2,3-Trichloropropane	ND	0.0050	1	07/26/2014 01:43
1,2,4-Trimethylbenzene	ND	0.0050	1	07/26/2014 01:43
1,3,5-Trimethylbenzene	ND	0.0050	1	07/26/2014 01:43
Vinyl Chloride	ND	0.0050	1	07/26/2014 01:43
Xylenes, Total	ND	0.0050	1	07/26/2014 01:43

Surrogates	REC (%)	Limits	
Dibromofluoromethane	94	70-130	07/26/2014 01:43
Toluene-d8	97	70-130	07/26/2014 01:43
4-BFB	92	70-130	07/26/2014 01:43

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-20	**1407857-012A**	**Soil**	**07/22/2014 11:45**	**GC10**	**93143**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/26/2014 02:25
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/26/2014 02:25
Benzene	ND	0.0050	1	07/26/2014 02:25
Bromobenzene	ND	0.0050	1	07/26/2014 02:25
Bromochloromethane	ND	0.0050	1	07/26/2014 02:25
Bromodichloromethane	ND	0.0050	1	07/26/2014 02:25
Bromoform	ND	0.0050	1	07/26/2014 02:25
Bromomethane	ND	0.0050	1	07/26/2014 02:25
2-Butanone (MEK)	ND	0.020	1	07/26/2014 02:25
t-Butyl alcohol (TBA)	ND	0.050	1	07/26/2014 02:25
n-Butyl benzene	ND	0.0050	1	07/26/2014 02:25
sec-Butyl benzene	ND	0.0050	1	07/26/2014 02:25
tert-Butyl benzene	ND	0.0050	1	07/26/2014 02:25
Carbon Disulfide	ND	0.0050	1	07/26/2014 02:25
Carbon Tetrachloride	ND	0.0050	1	07/26/2014 02:25
Chlorobenzene	ND	0.0050	1	07/26/2014 02:25
Chloroethane	ND	0.0050	1	07/26/2014 02:25
Chloroform	ND	0.0050	1	07/26/2014 02:25
Chloromethane	ND	0.0050	1	07/26/2014 02:25
2-Chlorotoluene	ND	0.0050	1	07/26/2014 02:25
4-Chlorotoluene	ND	0.0050	1	07/26/2014 02:25
Dibromochloromethane	ND	0.0050	1	07/26/2014 02:25
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/26/2014 02:25
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/26/2014 02:25
Dibromomethane	ND	0.0050	1	07/26/2014 02:25
1,2-Dichlorobenzene	ND	0.0050	1	07/26/2014 02:25
1,3-Dichlorobenzene	ND	0.0050	1	07/26/2014 02:25
1,4-Dichlorobenzene	ND	0.0050	1	07/26/2014 02:25
Dichlorodifluoromethane	ND	0.0050	1	07/26/2014 02:25
1,1-Dichloroethane	ND	0.0050	1	07/26/2014 02:25
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/26/2014 02:25
1,1-Dichloroethene	ND	0.0050	1	07/26/2014 02:25
cis-1,2-Dichloroethene	ND	0.0050	1	07/26/2014 02:25
trans-1,2-Dichloroethene	ND	0.0050	1	07/26/2014 02:25
1,2-Dichloropropane	ND	0.0050	1	07/26/2014 02:25
1,3-Dichloropropane	ND	0.0050	1	07/26/2014 02:25
2,2-Dichloropropane	ND	0.0050	1	07/26/2014 02:25
1,1-Dichloropropene	ND	0.0050	1	07/26/2014 02:25

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8260B
Date Prepared:	7/23/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-20	**1407857-012A**	**Soil**	**07/22/2014 11:45**	**GC10**	**93143**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	07/26/2014 02:25
trans-1,3-Dichloropropene	ND	0.0050	1	07/26/2014 02:25
Diisopropyl ether (DIPE)	ND	0.0050	1	07/26/2014 02:25
Ethylbenzene	ND	0.0050	1	07/26/2014 02:25
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/26/2014 02:25
Freon 113	ND	0.10	1	07/26/2014 02:25
Hexachlorobutadiene	ND	0.0050	1	07/26/2014 02:25
Hexachloroethane	ND	0.0050	1	07/26/2014 02:25
2-Hexanone	ND	0.0050	1	07/26/2014 02:25
Isopropylbenzene	ND	0.0050	1	07/26/2014 02:25
4-Isopropyl toluene	ND	0.0050	1	07/26/2014 02:25
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/26/2014 02:25
Methylene chloride	ND	0.0050	1	07/26/2014 02:25
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/26/2014 02:25
Naphthalene	ND	0.0050	1	07/26/2014 02:25
n-Propyl benzene	ND	0.0050	1	07/26/2014 02:25
Styrene	ND	0.0050	1	07/26/2014 02:25
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/26/2014 02:25
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/26/2014 02:25
Tetrachloroethene	ND	0.0050	1	07/26/2014 02:25
Toluene	ND	0.0050	1	07/26/2014 02:25
1,2,3-Trichlorobenzene	ND	0.0050	1	07/26/2014 02:25
1,2,4-Trichlorobenzene	ND	0.0050	1	07/26/2014 02:25
1,1,1-Trichloroethane	ND	0.0050	1	07/26/2014 02:25
1,1,2-Trichloroethane	ND	0.0050	1	07/26/2014 02:25
Trichloroethene	ND	0.0050	1	07/26/2014 02:25
Trichlorofluoromethane	ND	0.0050	1	07/26/2014 02:25
1,2,3-Trichloropropane	ND	0.0050	1	07/26/2014 02:25
1,2,4-Trimethylbenzene	ND	0.0050	1	07/26/2014 02:25
1,3,5-Trimethylbenzene	ND	0.0050	1	07/26/2014 02:25
Vinyl Chloride	ND	0.0050	1	07/26/2014 02:25
Xylenes, Total	ND	0.0050	1	07/26/2014 02:25

Surrogates	REC (%)	Limits	
Dibromofluoromethane	93	70-130	07/26/2014 02:25
Toluene-d8	98	70-130	07/26/2014 02:25
4-BFB	100	70-130	07/26/2014 02:25

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	7/23/14	**Unit:**	mg/Kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B12-10	**1407857-001A**	**Soil**	**07/22/2014 11:00**	**GC7**	**93065**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/24/2014 23:05
MTBE	---	0.050	1	07/24/2014 23:05
Benzene	---	0.0050	1	07/24/2014 23:05
Toluene	---	0.0050	1	07/24/2014 23:05
Ethylbenzene	---	0.0050	1	07/24/2014 23:05
Xylenes	---	0.0050	1	07/24/2014 23:05

Surrogates	REC (%)	Limits	
2-Fluorotoluene	102	70-130	07/24/2014 23:05

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B12-15	**1407857-002A**	**Soil**	**07/22/2014 11:05**	**GC7**	**93065**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/24/2014 23:36
MTBE	---	0.050	1	07/24/2014 23:36
Benzene	---	0.0050	1	07/24/2014 23:36
Toluene	---	0.0050	1	07/24/2014 23:36
Ethylbenzene	---	0.0050	1	07/24/2014 23:36
Xylenes	---	0.0050	1	07/24/2014 23:36

Surrogates	REC (%)	Limits	
2-Fluorotoluene	99	70-130	07/24/2014 23:36

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B12-20	**1407857-003A**	**Soil**	**07/22/2014 11:10**	**GC7**	**93065**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/25/2014 00:06
MTBE	---	0.050	1	07/25/2014 00:06
Benzene	---	0.0050	1	07/25/2014 00:06
Toluene	---	0.0050	1	07/25/2014 00:06
Ethylbenzene	---	0.0050	1	07/25/2014 00:06
Xylenes	---	0.0050	1	07/25/2014 00:06

Surrogates	REC (%)	Limits	
2-Fluorotoluene	101	70-130	07/25/2014 00:06

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	7/23/14	**Unit:**	mg/Kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13-10	**1407857-004A**	**Soil**	**07/22/2014 10:35**	**GC7**	**93145**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**30**	1.0	1	07/25/2014 01:07
MTBE	---	0.050	1	07/25/2014 01:07
Benzene	---	0.0050	1	07/25/2014 01:07
Toluene	---	0.0050	1	07/25/2014 01:07
Ethylbenzene	---	0.0050	1	07/25/2014 01:07
Xylenes	---	0.0050	1	07/25/2014 01:07

Surrogates	REC (%)	Limits	Analytical Comments: d7	
2-Fluorotoluene	116	70-130		07/25/2014 01:07

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13-15	**1407857-005A**	**Soil**	**07/22/2014 10:40**	**GC7**	**93145**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**120**	10	10	07/25/2014 01:37
MTBE	---	0.50	10	07/25/2014 01:37
Benzene	---	0.050	10	07/25/2014 01:37
Toluene	---	0.050	10	07/25/2014 01:37
Ethylbenzene	---	0.050	10	07/25/2014 01:37
Xylenes	---	0.050	10	07/25/2014 01:37

Surrogates	REC (%)	Limits	Analytical Comments: d7	
aaa-TFT_2	92	70-130		07/25/2014 01:37

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13-20	**1407857-006A**	**Soil**	**07/22/2014 10:45**	**GC19**	**93145**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/25/2014 15:53
MTBE	---	0.050	1	07/25/2014 15:53
Benzene	---	0.0050	1	07/25/2014 15:53
Toluene	---	0.0050	1	07/25/2014 15:53
Ethylbenzene	---	0.0050	1	07/25/2014 15:53
Xylenes	---	0.0050	1	07/25/2014 15:53

Surrogates	REC (%)	Limits	
2-Fluorotoluene	92	70-130	07/25/2014 15:53

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	7/23/14	**Unit:**	mg/Kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B14-10	**1407857-007A**	**Soil**	**07/22/2014 12:55**	**GC19**	**93145**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/25/2014 16:40
MTBE	---	0.050	1	07/25/2014 16:40
Benzene	---	0.0050	1	07/25/2014 16:40
Toluene	---	0.0050	1	07/25/2014 16:40
Ethylbenzene	---	0.0050	1	07/25/2014 16:40
Xylenes	---	0.0050	1	07/25/2014 16:40

Surrogates	REC (%)	Limits	
2-Fluorotoluene	98	70-130	07/25/2014 16:40

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B14-15	**1407857-008A**	**Soil**	**07/22/2014 13:00**	**GC19**	**93145**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/25/2014 23:12
MTBE	---	0.050	1	07/25/2014 23:12
Benzene	---	0.0050	1	07/25/2014 23:12
Toluene	---	0.0050	1	07/25/2014 23:12
Ethylbenzene	---	0.0050	1	07/25/2014 23:12
Xylenes	---	0.0050	1	07/25/2014 23:12

Surrogates	REC (%)	Limits	
2-Fluorotoluene	92	70-130	07/25/2014 23:12

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B14-20	**1407857-009A**	**Soil**	**07/22/2014 13:05**	**GC19**	**93145**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/25/2014 23:45
MTBE	---	0.050	1	07/25/2014 23:45
Benzene	---	0.0050	1	07/25/2014 23:45
Toluene	---	0.0050	1	07/25/2014 23:45
Ethylbenzene	---	0.0050	1	07/25/2014 23:45
Xylenes	---	0.0050	1	07/25/2014 23:45

Surrogates	REC (%)	Limits	
2-Fluorotoluene	89	70-130	07/25/2014 23:45

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW5030B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	7/23/14	**Unit:**	mg/Kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-10	**1407857-010A**	**Soil**	**07/22/2014 11:35**	**GC19**	**93145**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/26/2014 00:18
MTBE	---	0.050	1	07/26/2014 00:18
Benzene	---	0.0050	1	07/26/2014 00:18
Toluene	---	0.0050	1	07/26/2014 00:18
Ethylbenzene	---	0.0050	1	07/26/2014 00:18
Xylenes	---	0.0050	1	07/26/2014 00:18

Surrogates	REC (%)	Limits	
2-Fluorotoluene	100	70-130	07/26/2014 00:18

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-15	**1407857-011A**	**Soil**	**07/22/2014 11:40**	**GC19**	**93145**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/26/2014 01:51
MTBE	---	0.050	1	07/26/2014 01:51
Benzene	---	0.0050	1	07/26/2014 01:51
Toluene	---	0.0050	1	07/26/2014 01:51
Ethylbenzene	---	0.0050	1	07/26/2014 01:51
Xylenes	---	0.0050	1	07/26/2014 01:51

Surrogates	REC (%)	Limits	
2-Fluorotoluene	91	70-130	07/26/2014 01:51

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-20	**1407857-012A**	**Soil**	**07/22/2014 11:45**	**GC19**	**93145**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/24/2014 14:49
MTBE	---	0.050	1	07/24/2014 14:49
Benzene	---	0.0050	1	07/24/2014 14:49
Toluene	---	0.0050	1	07/24/2014 14:49
Ethylbenzene	---	0.0050	1	07/24/2014 14:49
Xylenes	---	0.0050	1	07/24/2014 14:49

Surrogates	REC (%)	Limits	
2-Fluorotoluene	91	70-130	07/24/2014 14:49

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW3550B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8015B
Date Prepared:	7/23/14	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B12-10	**1407857-001A**	**Soil**	**07/22/2014 11:00**	**GC9a**	**93136**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/29/2014 17:56
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/29/2014 17:56
Surrogates	REC (%)	Limits		
C9	119	70-130		07/29/2014 17:56

B12-15	1407857-002A	Soil	07/22/2014 11:05	GC11B	93136

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1.0**	1.0	1	07/24/2014 19:22
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/24/2014 19:22
Surrogates	REC (%)	Limits	Analytical Comments: e2	
C9	115	70-130		07/24/2014 19:22

B12-20	1407857-003A	Soil	07/22/2014 11:10	GC9a	93136

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1.3**	1.0	1	07/25/2014 05:51
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/25/2014 05:51
Surrogates	REC (%)	Limits	Analytical Comments: e2	
C9	117	70-130		07/25/2014 05:51

B13-10	1407857-004A	Soil	07/22/2014 10:35	GC9a	93136

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1300**	10	10	07/28/2014 15:35
TPH-Motor Oil (C18-C36)	**480**	50	10	07/28/2014 15:35
Surrogates	REC (%)	Limits	Analytical Comments: e1	
C9	104	70-130		07/28/2014 15:35

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW3550B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8015B
Date Prepared:	7/23/14	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13-15	**1407857-005A**	**Soil**	**07/22/2014 10:40**	**GC9b**	**93136**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**3100**	20	20	07/28/2014 15:35
TPH-Motor Oil (C18-C36)	**1300**	100	20	07/28/2014 15:35
Surrogates	REC (%)	Limits	Analytical Comments: e1	
C9	101	70-130		07/28/2014 15:35

B13-20	1407857-006A	Soil	07/22/2014 10:45	GC11B	93136

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1.0**	1.0	1	07/24/2014 18:13
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/24/2014 18:13
Surrogates	REC (%)	Limits	Analytical Comments: e2	
C9	112	70-130		07/24/2014 18:13

B14-10	1407857-007A	Soil	07/22/2014 12:55	GC9a	93136

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1.9**	1.0	1	07/26/2014 01:58
TPH-Motor Oil (C18-C36)	**6.5**	5.0	1	07/26/2014 01:58
Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	
C9	122	70-130		07/26/2014 01:58

B14-15	1407857-008A	Soil	07/22/2014 13:00	GC9a	93136

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/26/2014 07:53
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/26/2014 07:53
Surrogates	REC (%)	Limits		
C9	118	70-130		07/26/2014 07:53

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Project:	#0553; Cathedral Gardens	**Extraction Method:**	SW3550B
Date Received:	7/23/14 17:12	**Analytical Method:**	SW8015B
Date Prepared:	7/23/14	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B14-20	**1407857-009A**	**Soil**	**07/22/2014 13:05**	**GC9a**	**93136**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/25/2014 22:22
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/25/2014 22:22
Surrogates	REC (%)	Limits		
C9	124	70-130		07/25/2014 22:22

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-10	**1407857-010A**	**Soil**	**07/22/2014 11:35**	**GC9a**	**93144**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/26/2014 13:53
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/26/2014 13:53
Surrogates	REC (%)	Limits		
C9	124	70-130		07/26/2014 13:53

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-15	**1407857-011A**	**Soil**	**07/22/2014 11:40**	**GC9a**	**93144**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/25/2014 07:02
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/25/2014 07:02
Surrogates	REC (%)	Limits		
C9	119	70-130		07/25/2014 07:02

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B15-20	**1407857-012A**	**Soil**	**07/22/2014 11:45**	**GC11B**	**93144**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/24/2014 20:30
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/24/2014 20:30
Surrogates	REC (%)	Limits		
C9	116	70-130		07/24/2014 20:30

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Date Prepared:	7/23/14	**BatchID:**	93134
Date Analyzed:	7/23/14	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gardens	**Sample ID:**	MB/LCS-93134 1407842-001AMS/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	0.0391	0.0050	0.050	-	78.3	70-130
Benzene	ND	0.0451	0.0050	0.050	-	90.2	70-130
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	0.188	0.050	0.20	-	93.9	70-130
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	0.0459	0.0050	0.050	-	91.9	70-130
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	0.0415	0.0040	0.050	-	83	70-130
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	0.0433	0.0040	0.050	-	86.5	70-130
1,1-Dichloroethene	ND	0.0418	0.0050	0.050	-	83.6	70-130
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	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Date Prepared:	7/23/14	**BatchID:**	93134
Date Analyzed:	7/23/14	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gardens	**Sample ID:**	MB/LCS-93134 1407842-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0425	0.0050	0.050	-	85	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0419	0.0050	0.050	-	83.8	70-130
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	0.0416	0.0050	0.050	-	83.1	70-130
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	0.0482	0.0050	0.050	-	96.3	70-130
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	0.0457	0.0050	0.050	-	91.4	70-130
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	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	0.122	0.168		0.18	98	96	70-130
Toluene-d8	0.130	0.171		0.18	104	98	70-130
4-BFB	0.0130	0.0163		0.018	104	93	70-130

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Date Prepared:	7/23/14	**BatchID:**	93134
Date Analyzed:	7/23/14	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gardens	**Sample ID:**	MB/LCS-93134 1407842-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0378	0.0382	0.050	ND	75.7	76.4	70-130	0.924	30
Benzene	0.0435	0.0439	0.050	ND	87	87.7	70-130	0.856	30
t-Butyl alcohol (TBA)	0.176	0.180	0.20	ND	87.8	90	70-130	2.43	30
Chlorobenzene	0.0434	0.0436	0.050	ND	86.7	87.3	70-130	0.634	30
1,2-Dibromoethane (EDB)	0.0390	0.0405	0.050	ND	78	81.1	70-130	3.82	30
1,2-Dichloroethane (1,2-DCA)	0.0412	0.0420	0.050	ND	82.3	84	70-130	2.07	30
1,1-Dichloroethene	0.0402	0.0410	0.050	ND	80.4	82.1	70-130	2.13	30
Diisopropyl ether (DIPE)	0.0409	0.0415	0.050	ND	81.8	83	70-130	1.53	30
Ethyl tert-butyl ether (ETBE)	0.0402	0.0405	0.050	ND	80.4	81	70-130	0.685	30
Methyl-t-butyl ether (MTBE)	0.0404	0.0410	0.050	ND	80.7	81.9	70-130	1.45	30
Toluene	0.0455	0.0456	0.050	ND	91	91.3	70-130	0.310	30
Trichloroethene	0.0435	0.0448	0.050	ND	86.9	89.6	70-130	3.00	30
Surrogate Recovery									
Dibromofluoromethane	0.168	0.172	0.18		96	98	70-130	2.22	30
Toluene-d8	0.169	0.169	0.18		97	96	70-130	0.237	30
4-BFB	0.0162	0.0163	0.018		92	93	70-130	0.855	30

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Date Prepared:	7/23/14	**BatchID:**	93143
Date Analyzed:	7/24/14	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gardens	**Sample ID:**	MB/LCS-93143 1407857-010AMS/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	-	76.7	70-130
Benzene	ND	0.0456	0.0050	0.050	-	91.2	70-130
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	0.182	0.050	0.20	-	91.1	70-130
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	0.0453	0.0050	0.050	-	90.5	70-130
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	0.0415	0.0040	0.050	-	83.1	70-130
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	0.0429	0.0040	0.050	-	85.7	70-130
1,1-Dichloroethene	ND	0.0433	0.0050	0.050	-	86.5	70-130
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	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

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"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Date Prepared:	7/23/14	**BatchID:**	93143
Date Analyzed:	7/24/14	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gardens	**Sample ID:**	MB/LCS-93143 1407857-010AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0424	0.0050	0.050	-	84.7	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0410	0.0050	0.050	-	82	70-130
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	0.0408	0.0050	0.050	-	81.5	70-130
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	0.0472	0.0050	0.050	-	94.4	70-130
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	0.0468	0.0050	0.050	-	93.6	70-130
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	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	0.114	0.171		0.18	91	98	70-130
Toluene-d8	0.125	0.166		0.18	100	95	70-130
4-BFB	0.0125	0.0167		0.018	100	95	70-130

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Date Prepared:	7/23/14	**BatchID:**	93143
Date Analyzed:	7/24/14	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gardens	**Sample ID:**	MB/LCS-93143 1407857-010AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0376	0.0369	0.050	ND	75.1	73.7	70-130	1.90	30
Benzene	0.0437	0.0420	0.050	ND	87.4	83.9	70-130	4.11	30
t-Butyl alcohol (TBA)	0.182	0.185	0.20	ND	91.2	92.5	70-130	1.44	30
Chlorobenzene	0.0448	0.0434	0.050	ND	89.6	86.8	70-130	3.07	30
1,2-Dibromoethane (EDB)	0.0426	0.0415	0.050	ND	85.3	83.1	70-130	2.61	30
1,2-Dichloroethane (1,2-DCA)	0.0411	0.0395	0.050	ND	82.2	79	70-130	3.89	30
1,1-Dichloroethene	0.0416	0.0393	0.050	ND	83.2	78.6	70-130	5.72	30
Diisopropyl ether (DIPE)	0.0409	0.0394	0.050	ND	81.7	78.8	70-130	3.58	30
Ethyl tert-butyl ether (ETBE)	0.0392	0.0385	0.050	ND	78.4	76.9	70-130	1.92	30
Methyl-t-butyl ether (MTBE)	0.0393	0.0382	0.050	ND	78.6	76.5	70-130	2.70	30
Toluene	0.0469	0.0447	0.050	ND	93.9	89.4	70-130	4.83	30
Trichloroethene	0.0442	0.0429	0.050	ND	88.5	85.8	70-130	3.09	30
Surrogate Recovery									
Dibromofluoromethane	0.161	0.161	0.18		92	92	70-130	0	30
Toluene-d8	0.164	0.160	0.18		93	91	70-130	2.15	30
4-BFB	0.0168	0.0166	0.018		96	95	70-130	1.13	30

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Date Prepared:	7/22/14	**BatchID:**	93065
Date Analyzed:	7/23/14	**Extraction Method:**	SW5030B
Instrument:	GC7	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gardens	**Sample ID:**	MB/LCS-93065 1407739-006AMS/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	0.643	0.40	0.60	-	107	70-130
MTBE	ND	0.0784	0.050	0.10	-	78.4	70-130
Benzene	ND	0.108	0.0050	0.10	-	108	70-130
Toluene	ND	0.108	0.0050	0.10	-	108	70-130
Ethylbenzene	ND	0.113	0.0050	0.10	-	113	70-130
Xylenes	ND	0.346	0.0050	0.30	-	115	70-130
Surrogate Recovery							
2-Fluorotoluene	0.110	0.107		0.10	110	107	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR	0	ND	NR	NR	-	NR	
MTBE	NR	NR	0	ND	NR	NR	-	NR	
Benzene	NR	NR	0	ND	NR	NR	-	NR	
Toluene	NR	NR	0	ND	NR	NR	-	NR	
Ethylbenzene	NR	NR	0	ND	NR	NR	-	NR	
Xylenes	NR	NR	0	ND	NR	NR	-	NR	
Surrogate Recovery									
2-Fluorotoluene	NR	NR	0		NR	NR	-	NR	

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Date Prepared:	7/23/14	**BatchID:**	93145
Date Analyzed:	7/24/14	**Extraction Method:**	SW5030B
Instrument:	GC19	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gardens	**Sample ID:**	MB/LCS-93145 1407857-012AMS/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	0.544	0.40	0.60	-	90.6	70-130
MTBE	ND	0.0920	0.050	0.10	-	92	70-130
Benzene	ND	0.0995	0.0050	0.10	-	99.5	70-130
Toluene	ND	0.101	0.0050	0.10	-	101	70-130
Ethylbenzene	ND	0.100	0.0050	0.10	-	100	70-130
Xylenes	ND	0.316	0.0050	0.30	-	105	70-130
Surrogate Recovery							
2-Fluorotoluene	0.103	0.0998		0.10	103	100	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.507	0.503	0.60	ND	84.5	83.8	70-130	0.771	20
MTBE	0.0761	0.0832	0.10	ND	76.1	83.2	70-130	8.90	20
Benzene	0.0821	0.0846	0.10	ND	82.1	84.7	70-130	3.10	20
Toluene	0.0889	0.0896	0.10	ND	88.9	89.6	70-130	0.806	20
Ethylbenzene	0.0914	0.0910	0.10	ND	91.4	91	70-130	0.487	20
Xylenes	0.292	0.288	0.30	ND	97.4	95.9	70-130	1.57	20
Surrogate Recovery									
2-Fluorotoluene	0.0859	0.0866	0.10		86	87	70-130	0.775	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Date Prepared:	7/23/14	**BatchID:**	93136
Date Analyzed:	7/23/14	**Extraction Method:**	SW3550B
Instrument:	GC6A	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gardens	**Sample ID:**	MB/LCS-93136 1407842-003AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	45.1	1.0	40	-	113	70-130
Surrogate Recovery							
C9	22.8	22.6		25	91	90	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	63.0	66.2	40	12.94	125	133,F1	70-130	4.97	30
Surrogate Recovery									
C9	30.7	30.9	25		123	124	70-130	0.700	30

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407857
Date Prepared:	7/23/14	**BatchID:**	93144
Date Analyzed:	7/24/14	**Extraction Method:**	SW3550B
Instrument:	GC6A, GC9a	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gardens	**Sample ID:**	MB/LCS-93144 1407857-011AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	44.4	1.0	40	-	111	70-130
Surrogate Recovery							
C9	27.3	24.0		25	109	96	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	51.3	52.8	40	ND	128	132,F1	70-130	2.85	30
Surrogate Recovery									
C9	29.6	30.0	25		118	120	70-130	1.32	30

McCampbell Analytical, Inc.
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(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1407857 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ 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
cc/3rd Party:
PO:
ProjectNo: #0553; Cathedral Gardens

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

Requested TAT: 5 days

Date Received: **07/23/2014**
Date Printed: **07/30/2014**

					Requested Tests (See legend below)											
Lab ID	**Client ID**	**Matrix**	**Collection Date**	**Hold**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1407857-001	B12-10	Soil	7/22/2014 11:00	☐	A	A										
1407857-002	B12-15	Soil	7/22/2014 11:05	☐	A	A										
1407857-003	B12-20	Soil	7/22/2014 11:10	☐	A	A										
1407857-004	B13-10	Soil	7/22/2014 10:35	☐	A	A										
1407857-005	B13-15	Soil	7/22/2014 10:40	☐	A	A										
1407857-006	B13-20	Soil	7/22/2014 10:45	☐	A	A										
1407857-007	B14-10	Soil	7/22/2014 12:55	☐	A	A										
1407857-008	B14-15	Soil	7/22/2014 13:00	☐	A	A										
1407857-009	B14-20	Soil	7/22/2014 13:05	☐	A	A										
1407857-010	B15-10	Soil	7/22/2014 11:35	☐	A	A										
1407857-011	B15-15	Soil	7/22/2014 11:40	☐	A	A										
1407857-012	B15-20	Soil	7/22/2014 11:45	☐	A	A										

Test Legend:

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

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

Prepared by: Maria Venegas

Comments:

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.

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: #0553; Cathedral Gardens
Comments:

QC Level: LEVEL 2
Client Contact: Michael Deschenes
Contact's Email: lab@pdenviro.com

Work Order: 1407857
Date Received: 7/23/2014

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1407857-001A	B12-10	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 11:00	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1407857-002A	B12-15	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 11:05	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1407857-003A	B12-20	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 11:10	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1407857-004A	B13-10	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 10:35	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1407857-005A	B13-15	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 10:40	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1407857-006A	B13-20	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 10:45	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1407857-007A	B14-10	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 12:55	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1407857-008A	B14-15	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 13:00	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1407857-009A	B14-20	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 13:05	5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:

Acetate Liner = Acetate Liner

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: #0553; Cathedral Gardens
Comments:

QC Level: LEVEL 2
Client Contact: Michael Deschenes
Contact's Email: lab@pdenviro.com

Work Order: 1407857
Date Received: 7/23/2014

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1407857-009A	B14-20	Soil	SW8260B (VOCs)	1	Acetate Liner	☐	7/22/2014 13:05	5 days		☐	
1407857-010A	B15-10	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 11:35	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1407857-011A	B15-15	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 11:40	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1407857-012A	B15-20	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	7/22/2014 11:45	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
Acetate Liner = Acetate Liner

1407857

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

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

PROJECT NUMBER: 0553

PROJECT NAME: CATHEDRAL GARDENS 638 21st ST OAKLAND, CA

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH(G,D,MO)	VOCs MTBE AND BTEX, INCLUDING NAPHTHALENE BY EPA 8260B	PRESERVATIVE	REMARKS
B12-10	7/22/14	1100	Soil		1	X	X	ICE	NORMAL TAT
B12-15	"	1105	"		1	X	X	"	
B12-20	"	1110	"		1	X	X	"	
B13-10	7/22/14	1035	Soil		1	X	X	"	NORMAL TAT
B13-15	"	1040	"		1	X	X	"	
B13-20	"	1045	"		1	X	X	"	
B14-10	7/22/14	1255	Soil		1	X	X	"	NORMAL TAT
B14-15	"	1300	"		1	X	X	"	
B14-20	"	1305	"		1	X	X	"	
B15-10	7/22/14	1135	Soil		1	X	X	"	NORMAL TAT
B15-15	"	1140	"		1	X	X	"	
B15-20	"	1145	"		1	X	X	"	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	12
	7/23/14	1433		Total No. of Containers (This Shipment)	12
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: ANGELA RYDELINS	LABORATORY PHONE NUMBER: (877) 252-9262
	7/23/14	1615			
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

LABORATORY: MCCAMPBELL ANALYTICAL, INC

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

REMARKS:

ICE/t° 4.5
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB

VOAS | O&G | METALS | OTHER

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name: **P & D Environmental**
Date and Time Received: **7/23/2014 5:12:34 PM**

Project Name: **#0553; Cathedral Gardens**
LogIn Reviewed by: Maria Venegas

WorkOrder №: **1407857** Matrix: Soil
Carrier: Rob Pringle (MAI Courier)

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 4.5°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1408147

Report Created for: P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

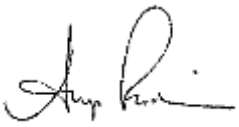
Project Contact: Michael Deschenes
Project P.O.:
Project Name: #0553; Cathedral Gradens 638 21st Street Oakland, ca

Project Received: 08/05/2014

Analytical Report reviewed & approved for release on 08/12/2014 by:

Question about your data?

Click here to email McCampbell



Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: #0553; Cathedral Gradens 638 21st Street Oakland, ca
WorkOrder: 1408147

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
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
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD was out of acceptance criteria; LCS validated the prep batch.
F2	LCS recovery for this compound is outside of acceptance limits.

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:40	**Analytical Method:**	SW8260B
Date Prepared:	8/5/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-10	**1408147-001A**	**Soil**	**08/05/2014 07:45**	**GC16**	**93668**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/08/2014 10:50
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/08/2014 10:50
Benzene	ND	0.0050	1	08/08/2014 10:50
Bromobenzene	ND	0.0050	1	08/08/2014 10:50
Bromochloromethane	ND	0.0050	1	08/08/2014 10:50
Bromodichloromethane	ND	0.0050	1	08/08/2014 10:50
Bromoform	ND	0.0050	1	08/08/2014 10:50
Bromomethane	ND	0.0050	1	08/08/2014 10:50
2-Butanone (MEK)	ND	0.020	1	08/08/2014 10:50
t-Butyl alcohol (TBA)	ND	0.050	1	08/08/2014 10:50
n-Butyl benzene	ND	0.0050	1	08/08/2014 10:50
sec-Butyl benzene	ND	0.0050	1	08/08/2014 10:50
tert-Butyl benzene	ND	0.0050	1	08/08/2014 10:50
Carbon Disulfide	ND	0.0050	1	08/08/2014 10:50
Carbon Tetrachloride	ND	0.0050	1	08/08/2014 10:50
Chlorobenzene	ND	0.0050	1	08/08/2014 10:50
Chloroethane	ND	0.0050	1	08/08/2014 10:50
Chloroform	ND	0.0050	1	08/08/2014 10:50
Chloromethane	ND	0.0050	1	08/08/2014 10:50
2-Chlorotoluene	ND	0.0050	1	08/08/2014 10:50
4-Chlorotoluene	ND	0.0050	1	08/08/2014 10:50
Dibromochloromethane	ND	0.0050	1	08/08/2014 10:50
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/08/2014 10:50
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/08/2014 10:50
Dibromomethane	ND	0.0050	1	08/08/2014 10:50
1,2-Dichlorobenzene	ND	0.0050	1	08/08/2014 10:50
1,3-Dichlorobenzene	ND	0.0050	1	08/08/2014 10:50
1,4-Dichlorobenzene	ND	0.0050	1	08/08/2014 10:50
Dichlorodifluoromethane	ND	0.0050	1	08/08/2014 10:50
1,1-Dichloroethane	ND	0.0050	1	08/08/2014 10:50
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/08/2014 10:50
1,1-Dichloroethene	ND	0.0050	1	08/08/2014 10:50
cis-1,2-Dichloroethene	ND	0.0050	1	08/08/2014 10:50
trans-1,2-Dichloroethene	ND	0.0050	1	08/08/2014 10:50
1,2-Dichloropropane	ND	0.0050	1	08/08/2014 10:50
1,3-Dichloropropane	ND	0.0050	1	08/08/2014 10:50
2,2-Dichloropropane	ND	0.0050	1	08/08/2014 10:50
1,1-Dichloropropene	ND	0.0050	1	08/08/2014 10:50

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:40	**Analytical Method:**	SW8260B
Date Prepared:	8/5/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-10	**1408147-001A**	**Soil**	**08/05/2014 07:45**	**GC16**	**93668**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/08/2014 10:50
trans-1,3-Dichloropropene	ND	0.0050	1	08/08/2014 10:50
Diisopropyl ether (DIPE)	ND	0.0050	1	08/08/2014 10:50
Ethylbenzene	ND	0.0050	1	08/08/2014 10:50
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/08/2014 10:50
Freon 113	ND	0.10	1	08/08/2014 10:50
Hexachlorobutadiene	ND	0.0050	1	08/08/2014 10:50
Hexachloroethane	ND	0.0050	1	08/08/2014 10:50
2-Hexanone	ND	0.0050	1	08/08/2014 10:50
Isopropylbenzene	ND	0.0050	1	08/08/2014 10:50
4-Isopropyl toluene	ND	0.0050	1	08/08/2014 10:50
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/08/2014 10:50
Methylene chloride	ND	0.0050	1	08/08/2014 10:50
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/08/2014 10:50
Naphthalene	ND	0.0050	1	08/08/2014 10:50
n-Propyl benzene	ND	0.0050	1	08/08/2014 10:50
Styrene	ND	0.0050	1	08/08/2014 10:50
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/08/2014 10:50
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/08/2014 10:50
Tetrachloroethene	ND	0.0050	1	08/08/2014 10:50
Toluene	ND	0.0050	1	08/08/2014 10:50
1,2,3-Trichlorobenzene	ND	0.0050	1	08/08/2014 10:50
1,2,4-Trichlorobenzene	ND	0.0050	1	08/08/2014 10:50
1,1,1-Trichloroethane	ND	0.0050	1	08/08/2014 10:50
1,1,2-Trichloroethane	ND	0.0050	1	08/08/2014 10:50
Trichloroethene	ND	0.0050	1	08/08/2014 10:50
Trichlorofluoromethane	ND	0.0050	1	08/08/2014 10:50
1,2,3-Trichloropropane	ND	0.0050	1	08/08/2014 10:50
1,2,4-Trimethylbenzene	ND	0.0050	1	08/08/2014 10:50
1,3,5-Trimethylbenzene	ND	0.0050	1	08/08/2014 10:50
Vinyl Chloride	ND	0.0050	1	08/08/2014 10:50
Xylenes, Total	ND	0.0050	1	08/08/2014 10:50

Surrogates	REC (%)	Limits	
Dibromofluoromethane	97	70-130	08/08/2014 10:50
Toluene-d8	102	70-130	08/08/2014 10:50
4-BFB	93	70-130	08/08/2014 10:50

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:40	**Analytical Method:**	SW8260B
Date Prepared:	8/5/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-15	**1408147-002A**	**Soil**	**08/05/2014 07:50**	**GC16**	**93668**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/08/2014 11:33
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/08/2014 11:33
Benzene	ND	0.0050	1	08/08/2014 11:33
Bromobenzene	ND	0.0050	1	08/08/2014 11:33
Bromochloromethane	ND	0.0050	1	08/08/2014 11:33
Bromodichloromethane	ND	0.0050	1	08/08/2014 11:33
Bromoform	ND	0.0050	1	08/08/2014 11:33
Bromomethane	ND	0.0050	1	08/08/2014 11:33
2-Butanone (MEK)	ND	0.020	1	08/08/2014 11:33
t-Butyl alcohol (TBA)	ND	0.050	1	08/08/2014 11:33
n-Butyl benzene	ND	0.0050	1	08/08/2014 11:33
sec-Butyl benzene	ND	0.0050	1	08/08/2014 11:33
tert-Butyl benzene	ND	0.0050	1	08/08/2014 11:33
Carbon Disulfide	ND	0.0050	1	08/08/2014 11:33
Carbon Tetrachloride	ND	0.0050	1	08/08/2014 11:33
Chlorobenzene	ND	0.0050	1	08/08/2014 11:33
Chloroethane	ND	0.0050	1	08/08/2014 11:33
Chloroform	ND	0.0050	1	08/08/2014 11:33
Chloromethane	ND	0.0050	1	08/08/2014 11:33
2-Chlorotoluene	ND	0.0050	1	08/08/2014 11:33
4-Chlorotoluene	ND	0.0050	1	08/08/2014 11:33
Dibromochloromethane	ND	0.0050	1	08/08/2014 11:33
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/08/2014 11:33
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/08/2014 11:33
Dibromomethane	ND	0.0050	1	08/08/2014 11:33
1,2-Dichlorobenzene	ND	0.0050	1	08/08/2014 11:33
1,3-Dichlorobenzene	ND	0.0050	1	08/08/2014 11:33
1,4-Dichlorobenzene	ND	0.0050	1	08/08/2014 11:33
Dichlorodifluoromethane	ND	0.0050	1	08/08/2014 11:33
1,1-Dichloroethane	ND	0.0050	1	08/08/2014 11:33
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/08/2014 11:33
1,1-Dichloroethene	ND	0.0050	1	08/08/2014 11:33
cis-1,2-Dichloroethene	ND	0.0050	1	08/08/2014 11:33
trans-1,2-Dichloroethene	ND	0.0050	1	08/08/2014 11:33
1,2-Dichloropropane	ND	0.0050	1	08/08/2014 11:33
1,3-Dichloropropane	ND	0.0050	1	08/08/2014 11:33
2,2-Dichloropropane	ND	0.0050	1	08/08/2014 11:33
1,1-Dichloropropene	ND	0.0050	1	08/08/2014 11:33

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:40	**Analytical Method:**	SW8260B
Date Prepared:	8/5/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-15	**1408147-002A**	**Soil**	**08/05/2014 07:50**	**GC16**	**93668**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/08/2014 11:33
trans-1,3-Dichloropropene	ND	0.0050	1	08/08/2014 11:33
Diisopropyl ether (DIPE)	ND	0.0050	1	08/08/2014 11:33
Ethylbenzene	ND	0.0050	1	08/08/2014 11:33
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/08/2014 11:33
Freon 113	ND	0.10	1	08/08/2014 11:33
Hexachlorobutadiene	ND	0.0050	1	08/08/2014 11:33
Hexachloroethane	ND	0.0050	1	08/08/2014 11:33
2-Hexanone	ND	0.0050	1	08/08/2014 11:33
Isopropylbenzene	ND	0.0050	1	08/08/2014 11:33
4-Isopropyl toluene	ND	0.0050	1	08/08/2014 11:33
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/08/2014 11:33
Methylene chloride	ND	0.0050	1	08/08/2014 11:33
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/08/2014 11:33
Naphthalene	ND	0.0050	1	08/08/2014 11:33
n-Propyl benzene	ND	0.0050	1	08/08/2014 11:33
Styrene	ND	0.0050	1	08/08/2014 11:33
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/08/2014 11:33
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/08/2014 11:33
Tetrachloroethene	ND	0.0050	1	08/08/2014 11:33
Toluene	ND	0.0050	1	08/08/2014 11:33
1,2,3-Trichlorobenzene	ND	0.0050	1	08/08/2014 11:33
1,2,4-Trichlorobenzene	ND	0.0050	1	08/08/2014 11:33
1,1,1-Trichloroethane	ND	0.0050	1	08/08/2014 11:33
1,1,2-Trichloroethane	ND	0.0050	1	08/08/2014 11:33
Trichloroethene	ND	0.0050	1	08/08/2014 11:33
Trichlorofluoromethane	ND	0.0050	1	08/08/2014 11:33
1,2,3-Trichloropropane	ND	0.0050	1	08/08/2014 11:33
1,2,4-Trimethylbenzene	ND	0.0050	1	08/08/2014 11:33
1,3,5-Trimethylbenzene	ND	0.0050	1	08/08/2014 11:33
Vinyl Chloride	ND	0.0050	1	08/08/2014 11:33
Xylenes, Total	ND	0.0050	1	08/08/2014 11:33

Surrogates	REC (%)	Limits	
Dibromofluoromethane	95	70-130	08/08/2014 11:33
Toluene-d8	102	70-130	08/08/2014 11:33
4-BFB	90	70-130	08/08/2014 11:33

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP AK Analyst's Initial Angela Rydelius, Lab Manager

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:40	**Analytical Method:**	SW8260B
Date Prepared:	8/5/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-20	**1408147-003A**	**Soil**	**08/05/2014 07:55**	**GC16**	**93668**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/08/2014 12:16
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/08/2014 12:16
Benzene	ND	0.0050	1	08/08/2014 12:16
Bromobenzene	ND	0.0050	1	08/08/2014 12:16
Bromochloromethane	ND	0.0050	1	08/08/2014 12:16
Bromodichloromethane	ND	0.0050	1	08/08/2014 12:16
Bromoform	ND	0.0050	1	08/08/2014 12:16
Bromomethane	ND	0.0050	1	08/08/2014 12:16
2-Butanone (MEK)	ND	0.020	1	08/08/2014 12:16
t-Butyl alcohol (TBA)	ND	0.050	1	08/08/2014 12:16
n-Butyl benzene	ND	0.0050	1	08/08/2014 12:16
sec-Butyl benzene	ND	0.0050	1	08/08/2014 12:16
tert-Butyl benzene	ND	0.0050	1	08/08/2014 12:16
Carbon Disulfide	ND	0.0050	1	08/08/2014 12:16
Carbon Tetrachloride	ND	0.0050	1	08/08/2014 12:16
Chlorobenzene	ND	0.0050	1	08/08/2014 12:16
Chloroethane	ND	0.0050	1	08/08/2014 12:16
Chloroform	ND	0.0050	1	08/08/2014 12:16
Chloromethane	ND	0.0050	1	08/08/2014 12:16
2-Chlorotoluene	ND	0.0050	1	08/08/2014 12:16
4-Chlorotoluene	ND	0.0050	1	08/08/2014 12:16
Dibromochloromethane	ND	0.0050	1	08/08/2014 12:16
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/08/2014 12:16
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/08/2014 12:16
Dibromomethane	ND	0.0050	1	08/08/2014 12:16
1,2-Dichlorobenzene	ND	0.0050	1	08/08/2014 12:16
1,3-Dichlorobenzene	ND	0.0050	1	08/08/2014 12:16
1,4-Dichlorobenzene	ND	0.0050	1	08/08/2014 12:16
Dichlorodifluoromethane	ND	0.0050	1	08/08/2014 12:16
1,1-Dichloroethane	ND	0.0050	1	08/08/2014 12:16
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/08/2014 12:16
1,1-Dichloroethene	ND	0.0050	1	08/08/2014 12:16
cis-1,2-Dichloroethene	ND	0.0050	1	08/08/2014 12:16
trans-1,2-Dichloroethene	ND	0.0050	1	08/08/2014 12:16
1,2-Dichloropropane	ND	0.0050	1	08/08/2014 12:16
1,3-Dichloropropane	ND	0.0050	1	08/08/2014 12:16
2,2-Dichloropropane	ND	0.0050	1	08/08/2014 12:16
1,1-Dichloropropene	ND	0.0050	1	08/08/2014 12:16

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:40	**Analytical Method:**	SW8260B
Date Prepared:	8/5/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-20	**1408147-003A**	**Soil**	**08/05/2014 07:55**	**GC16**	**93668**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/08/2014 12:16
trans-1,3-Dichloropropene	ND	0.0050	1	08/08/2014 12:16
Diisopropyl ether (DIPE)	ND	0.0050	1	08/08/2014 12:16
Ethylbenzene	ND	0.0050	1	08/08/2014 12:16
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/08/2014 12:16
Freon 113	ND	0.10	1	08/08/2014 12:16
Hexachlorobutadiene	ND	0.0050	1	08/08/2014 12:16
Hexachloroethane	ND	0.0050	1	08/08/2014 12:16
2-Hexanone	ND	0.0050	1	08/08/2014 12:16
Isopropylbenzene	ND	0.0050	1	08/08/2014 12:16
4-Isopropyl toluene	ND	0.0050	1	08/08/2014 12:16
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/08/2014 12:16
Methylene chloride	ND	0.0050	1	08/08/2014 12:16
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/08/2014 12:16
Naphthalene	ND	0.0050	1	08/08/2014 12:16
n-Propyl benzene	ND	0.0050	1	08/08/2014 12:16
Styrene	ND	0.0050	1	08/08/2014 12:16
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/08/2014 12:16
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/08/2014 12:16
Tetrachloroethene	ND	0.0050	1	08/08/2014 12:16
Toluene	ND	0.0050	1	08/08/2014 12:16
1,2,3-Trichlorobenzene	ND	0.0050	1	08/08/2014 12:16
1,2,4-Trichlorobenzene	ND	0.0050	1	08/08/2014 12:16
1,1,1-Trichloroethane	ND	0.0050	1	08/08/2014 12:16
1,1,2-Trichloroethane	ND	0.0050	1	08/08/2014 12:16
Trichloroethene	ND	0.0050	1	08/08/2014 12:16
Trichlorofluoromethane	ND	0.0050	1	08/08/2014 12:16
1,2,3-Trichloropropane	ND	0.0050	1	08/08/2014 12:16
1,2,4-Trimethylbenzene	ND	0.0050	1	08/08/2014 12:16
1,3,5-Trimethylbenzene	ND	0.0050	1	08/08/2014 12:16
Vinyl Chloride	ND	0.0050	1	08/08/2014 12:16
Xylenes, Total	ND	0.0050	1	08/08/2014 12:16

Surrogates	REC (%)	Limits	
Dibromofluoromethane	97	70-130	08/08/2014 12:16
Toluene-d8	101	70-130	08/08/2014 12:16
4-BFB	89	70-130	08/08/2014 12:16

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:40	**Analytical Method:**	SW8260B
Date Prepared:	8/5/14	**Unit:**	mg/Kg

Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-10	**1408147-001A**	**Soil**	**08/05/2014 07:45**	**GC16**	**93668**

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	08/08/2014 10:50
Ethylbenzene	ND	0.0050	1	08/08/2014 10:50
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/08/2014 10:50
Naphthalene	ND	0.0050	1	08/08/2014 10:50
Toluene	ND	0.0050	1	08/08/2014 10:50
Xylenes	ND	0.0050	1	08/08/2014 10:50
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	97	70-130		08/08/2014 10:50
Toluene-d8	102	70-130		08/08/2014 10:50
4-BFB	93	70-130		08/08/2014 10:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-15	**1408147-002A**	**Soil**	**08/05/2014 07:50**	**GC16**	**93668**

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	08/08/2014 11:33
Ethylbenzene	ND	0.0050	1	08/08/2014 11:33
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/08/2014 11:33
Naphthalene	ND	0.0050	1	08/08/2014 11:33
Toluene	ND	0.0050	1	08/08/2014 11:33
Xylenes	ND	0.0050	1	08/08/2014 11:33
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	95	70-130		08/08/2014 11:33
Toluene-d8	102	70-130		08/08/2014 11:33
4-BFB	90	70-130		08/08/2014 11:33

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:40	**Analytical Method:**	SW8260B
Date Prepared:	8/5/14	**Unit:**	mg/Kg

Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-20	**1408147-003A**	**Soil**	**08/05/2014 07:55**	**GC16**	**93668**

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	08/08/2014 12:16
Ethylbenzene	ND	0.0050	1	08/08/2014 12:16
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/08/2014 12:16
Naphthalene	ND	0.0050	1	08/08/2014 12:16
Toluene	ND	0.0050	1	08/08/2014 12:16
Xylenes	ND	0.0050	1	08/08/2014 12:16
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	97	70-130		08/08/2014 12:16
Toluene-d8	101	70-130		08/08/2014 12:16
4-BFB	89	70-130		08/08/2014 12:16

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:40	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	8/5/14	**Unit:**	mg/Kg

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-10	**1408147-001A**	**Soil**	**08/05/2014 07:45**	**GC19**	**93639**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/07/2014 04:06
MTBE	---	0.050	1	08/07/2014 04:06
Benzene	---	0.0050	1	08/07/2014 04:06
Toluene	---	0.0050	1	08/07/2014 04:06
Ethylbenzene	---	0.0050	1	08/07/2014 04:06
Xylenes	---	0.0050	1	08/07/2014 04:06

Surrogates	REC (%)	Limits	
2-Fluorotoluene	101	70-130	08/07/2014 04:06

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-15	**1408147-002A**	**Soil**	**08/05/2014 07:50**	**GC19**	**93639**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/07/2014 06:06
MTBE	---	0.050	1	08/07/2014 06:06
Benzene	---	0.0050	1	08/07/2014 06:06
Toluene	---	0.0050	1	08/07/2014 06:06
Ethylbenzene	---	0.0050	1	08/07/2014 06:06
Xylenes	---	0.0050	1	08/07/2014 06:06

Surrogates	REC (%)	Limits	
2-Fluorotoluene	100	70-130	08/07/2014 06:06

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-20	**1408147-003A**	**Soil**	**08/05/2014 07:55**	**GC19**	**93639**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/07/2014 06:36
MTBE	---	0.050	1	08/07/2014 06:36
Benzene	---	0.0050	1	08/07/2014 06:36
Toluene	---	0.0050	1	08/07/2014 06:36
Ethylbenzene	---	0.0050	1	08/07/2014 06:36
Xylenes	---	0.0050	1	08/07/2014 06:36

Surrogates	REC (%)	Limits	
2-Fluorotoluene	94	70-130	08/07/2014 06:36

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW3550B
Date Received:	8/5/14 19:40	**Analytical Method:**	SW8015B
Date Prepared:	8/5/14	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-10	**1408147-001A**	**Soil**	**08/05/2014 07:45**	**GC6B**	**93664**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	08/08/2014 00:18
TPH-Motor Oil (C18-C36)	ND	5.0	1	08/08/2014 00:18

Surrogates	REC (%)	Limits	
C9	122	70-130	08/08/2014 00:18

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-15	**1408147-002A**	**Soil**	**08/05/2014 07:50**	**GC6A**	**93664**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	08/09/2014 21:50
TPH-Motor Oil (C18-C36)	ND	5.0	1	08/09/2014 21:50

Surrogates	REC (%)	Limits	
C9	106	70-130	08/09/2014 21:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B13A-20	**1408147-003A**	**Soil**	**08/05/2014 07:55**	**GC6B**	**93664**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	08/09/2014 15:51
TPH-Motor Oil (C18-C36)	ND	5.0	1	08/09/2014 15:51

Surrogates	REC (%)	Limits	
C26	130	70-130	08/09/2014 15:51

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Date Prepared:	8/5/14	**BatchID:**	93668
Date Analyzed:	8/7/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, ca	**Sample ID:**	MB/LCS-93668 1408119-001AMS/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	0.0363	0.0050	0.050	-	72.6	61-115
Benzene	ND	0.0413	0.0050	0.050	-	82.7	75-126
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	0.183	0.050	0.20	-	91.6	63-125
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	0.0426	0.0050	0.050	-	85.2	80-118
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	0.0371	0.0040	0.050	-	74.3	74-121
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	0.0483	0.0040	0.050	-	96.5	68-122
1,1-Dichloroethene	ND	0.0365	0.0050	0.050	-	73.1	65-138
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	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Date Prepared:	8/5/14	**BatchID:**	93668
Date Analyzed:	8/7/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, ca	**Sample ID:**	MB/LCS-93668 1408119-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0438	0.0050	0.050	-	87.6	68-117
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0429	0.0050	0.050	-	85.8	67-116
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	0.0394	0.0050	0.050	-	78.7	66-118
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	0.0413	0.0050	0.050	-	82.5, F2	84-129
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	0.0446	0.0050	0.050	-	89.2	82-130
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	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	0.121	0.163		0.18	97	93	80-120
Toluene-d8	0.124	0.166		0.18	99	95	80-120
4-BFB	0.0110	0.0156		0.018	88	89	80-120

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Date Prepared:	8/5/14	**BatchID:**	93668
Date Analyzed:	8/7/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, ca	**Sample ID:**	MB/LCS-93668 1408119-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0298	0.0306	0.050	ND	59.7,F1	61.2,F1	70-130	2.63	30
Benzene	0.0307	0.0316	0.050	ND	61.3,F1	63.2,F1	70-130	3.05	30
t-Butyl alcohol (TBA)	0.146	0.156	0.20	ND	72.9	77.8	70-130	6.47	30
Chlorobenzene	0.0342	0.0339	0.050	ND	68.4,F1	67.8,F1	70-130	0.865	30
1,2-Dibromoethane (EDB)	0.0290	0.0290	0.050	ND	58.1,F1	58.1,F1	70-130	0	30
1,2-Dichloroethane (1,2-DCA)	0.0393	0.0369	0.050	ND	78.5	73.9	70-130	6.11	30
1,1-Dichloroethene	0.0522	0.0577	0.050	ND	104	115	70-130	10.0	30
Diisopropyl ether (DIPE)	0.0343	0.0357	0.050	ND	68.6,F1	71.5	70-130	4.09	30
Ethyl tert-butyl ether (ETBE)	0.0342	0.0355	0.050	ND	68.3,F1	71.1	70-130	3.94	30
Methyl-t-butyl ether (MTBE)	0.0323	0.0333	0.050	ND	64.6,F1	66.7,F1	70-130	3.17	30
Toluene	0.0312	0.0319	0.050	ND	62.5,F1	63.9,F1	70-130	2.23	30
Trichloroethene	0.0778	0.0806	0.050	ND	156,F1	161,F1	70-130	3.56	30
Surrogate Recovery									
Dibromofluoromethane	0.124	0.122	0.18		71	70	70-130	1.58	30
Toluene-d8	0.154	0.156	0.18		88	89	70-130	1.15	30
4-BFB	0.0138	0.0140	0.018		79	80	70-130	1.44	30

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Date Prepared:	8/5/14	**BatchID:**	93639
Date Analyzed:	8/5/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, ca	**Sample ID:**	MB/LCS-93639

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.661	0.40	0.60	-	110	70-130
MTBE	ND	0.0961	0.050	0.10	-	96.1	70-130
Benzene	ND	0.0994	0.0050	0.10	-	99.4	70-130
Toluene	ND	0.0997	0.0050	0.10	-	99.7	70-130
Ethylbenzene	ND	0.100	0.0050	0.10	-	100	70-130
Xylenes	ND	0.306	0.0050	0.30	-	102	70-130
Surrogate Recovery							
2-Fluorotoluene	0.0960	0.0915		0.10	96	92	70-130

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1408147
Date Prepared:	8/5/14	**BatchID:**	93664
Date Analyzed:	8/6/14	**Extraction Method:**	SW3550B
Instrument:	GC11A	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, ca	**Sample ID:**	MB/LCS-93664 1407A51-001BMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	39.8	1.0	40	-	99.4	70-130
Surrogate Recovery							
C9	26.2	26.1		25	105	104	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	NR	NR	0	39	NR	NR	-	NR	
Surrogate Recovery									
C9	NR	NR	0		NR	NR	-	NR	

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408147 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ 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
cc/3rd Party:
PO:
ProjectNo: #0553; Cathedral Gradens 638 21st Street Oakland, ca

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

Requested TAT: 5 days

Date Received: **08/05/2014**
Date Printed: **08/12/2014**

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
1408147-001	B13A-10	Soil	8/5/2014 7:45	☐	A	A										
1408147-002	B13A-15	Soil	8/5/2014 7:50	☐	A	A										
1408147-003	B13A-20	Soil	8/5/2014 7:55	☐	A	A										

Test Legend:

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

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

Prepared by: Shana Carter

Comments:

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.

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"When Quality Counts"

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

WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
QC Level: LEVEL 2
Work Order: 1408147
Project: #0553; Cathedral Gradens 638 21st Street Oakland, ca
Client Contact: Michael Deschenes
Date Received: 8/5/2014
Comments:
Contact's Email: lab@pdenviro.com

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408147-001A	B13A-10	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	8/5/2014 7:45	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1408147-002A	B13A-15	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	8/5/2014 7:50	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1408147-003A	B13A-20	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	☐	8/5/2014 7:55	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
Acetate Liner = Acetate Liner

CHAIN OF CUSTODY RECORD

1408147

PAGE 1 OF 1

P&D ENVIRONMENTAL, INC.

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

PROJECT NUMBER: 0553

PROJECT NAME: Cathedral Gardens 638 21st Street Oakland, CA

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-(G,D,MO)	VOCs, MTBE, AND BTEX, INCLUDING NAPHTHALENE BY EPA 8260B	PRESERVATIVE	REMARKS
B13A-10	8/5/14	0745	Soil		1	X	X	ICE	NORMAL TAT
B13A-15	↓	0750	↓		1	X	XX	↓	↓
B13A-20	↓	0755	↓		1	X	XX	↓	↓

ICE/t° 12
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB
PRESERVATION: VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	DATE 8/5/14	TIME 1525	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment) 3	LABORATORY: McCAMPBELL ANALYTICAL, INC.	
RELINQUISHED BY: (SIGNATURE)	DATE 8/5/14	TIME 1700	RECEIVED BY: (SIGNATURE) Stana Carter	Total No. of Containers (This Shipment) 3	LABORATORY CONTACT: ANGELA RYDELNIK	LABORATORY PHONE NUMBER: (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:

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Sample Receipt Checklist

Client Name: **P & D Environmental**
Date and Time Received: **8/5/2014 7:40:03 PM**
Project Name: **#0553; Cathedral Gradens 638 21st Street Oakland, ca**
LogIn Reviewed by: Shana Carter
WorkOrder №: **1408147** Matrix: Soil
Carrier: Rob Pringle (MAI Courier)

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 1.2°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: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.
"When Quality Counts"

Analytical Report

WorkOrder: 1407844

Report Created for: P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

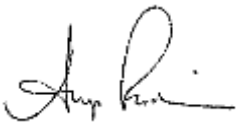
Project Contact: Michael Deschenes
Project P.O.:
Project Name: #0553; Cathedral Gardens 638 21st St Oakland, CA

Project Received: 07/23/2014

Analytical Report reviewed & approved for release on 07/30/2014 by:

Question about your data?

Click here to email McCampbell



Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: #0553; Cathedral Gardens 638 21st St Oakland, CA
WorkOrder: 1407844

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
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
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

Analytical Qualifiers

a4	the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.
b1	aqueous sample that contains greater than ~1 vol. % sediment
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 was out of acceptance criteria; LCS validated the prep batch.

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B6-W	**1407844-001B**	**Water**	**07/22/2014 15:00**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	07/25/2014 10:48
tert-Amyl methyl ether (TAME)	ND	0.50	1	07/25/2014 10:48
Benzene	ND	0.50	1	07/25/2014 10:48
Bromobenzene	ND	0.50	1	07/25/2014 10:48
Bromochloromethane	ND	0.50	1	07/25/2014 10:48
Bromodichloromethane	ND	0.50	1	07/25/2014 10:48
Bromoform	ND	0.50	1	07/25/2014 10:48
Bromomethane	ND	0.50	1	07/25/2014 10:48
2-Butanone (MEK)	ND	2.0	1	07/25/2014 10:48
t-Butyl alcohol (TBA)	ND	2.0	1	07/25/2014 10:48
n-Butyl benzene	ND	0.50	1	07/25/2014 10:48
sec-Butyl benzene	ND	0.50	1	07/25/2014 10:48
tert-Butyl benzene	ND	0.50	1	07/25/2014 10:48
Carbon Disulfide	ND	0.50	1	07/25/2014 10:48
Carbon Tetrachloride	ND	0.50	1	07/25/2014 10:48
Chlorobenzene	ND	0.50	1	07/25/2014 10:48
Chloroethane	ND	0.50	1	07/25/2014 10:48
Chloroform	ND	0.50	1	07/25/2014 10:48
Chloromethane	ND	0.50	1	07/25/2014 10:48
2-Chlorotoluene	ND	0.50	1	07/25/2014 10:48
4-Chlorotoluene	ND	0.50	1	07/25/2014 10:48
Dibromochloromethane	ND	0.50	1	07/25/2014 10:48
1,2-Dibromo-3-chloropropane	ND	0.20	1	07/25/2014 10:48
1,2-Dibromoethane (EDB)	ND	0.50	1	07/25/2014 10:48
Dibromomethane	ND	0.50	1	07/25/2014 10:48
1,2-Dichlorobenzene	ND	0.50	1	07/25/2014 10:48
1,3-Dichlorobenzene	ND	0.50	1	07/25/2014 10:48
1,4-Dichlorobenzene	ND	0.50	1	07/25/2014 10:48
Dichlorodifluoromethane	ND	0.50	1	07/25/2014 10:48
1,1-Dichloroethane	ND	0.50	1	07/25/2014 10:48
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	07/25/2014 10:48
1,1-Dichloroethene	ND	0.50	1	07/25/2014 10:48
cis-1,2-Dichloroethene	ND	0.50	1	07/25/2014 10:48
trans-1,2-Dichloroethene	ND	0.50	1	07/25/2014 10:48
1,2-Dichloropropane	ND	0.50	1	07/25/2014 10:48
1,3-Dichloropropane	ND	0.50	1	07/25/2014 10:48
2,2-Dichloropropane	ND	0.50	1	07/25/2014 10:48
1,1-Dichloropropene	ND	0.50	1	07/25/2014 10:48

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B6-W	**1407844-001B**	**Water**	**07/22/2014 15:00**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	07/25/2014 10:48
trans-1,3-Dichloropropene	ND	0.50	1	07/25/2014 10:48
Diisopropyl ether (DIPE)	ND	0.50	1	07/25/2014 10:48
Ethylbenzene	ND	0.50	1	07/25/2014 10:48
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	07/25/2014 10:48
Freon 113	ND	0.50	1	07/25/2014 10:48
Hexachlorobutadiene	ND	0.50	1	07/25/2014 10:48
Hexachloroethane	ND	0.50	1	07/25/2014 10:48
2-Hexanone	ND	0.50	1	07/25/2014 10:48
Isopropylbenzene	ND	0.50	1	07/25/2014 10:48
4-Isopropyl toluene	ND	0.50	1	07/25/2014 10:48
Methyl-t-butyl ether (MTBE)	ND	0.50	1	07/25/2014 10:48
Methylene chloride	ND	0.50	1	07/25/2014 10:48
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	07/25/2014 10:48
Naphthalene	ND	0.50	1	07/25/2014 10:48
n-Propyl benzene	ND	0.50	1	07/25/2014 10:48
Styrene	ND	0.50	1	07/25/2014 10:48
1,1,1,2-Tetrachloroethane	ND	0.50	1	07/25/2014 10:48
1,1,2,2-Tetrachloroethane	ND	0.50	1	07/25/2014 10:48
Tetrachloroethene	ND	0.50	1	07/25/2014 10:48
Toluene	ND	0.50	1	07/25/2014 10:48
1,2,3-Trichlorobenzene	ND	0.50	1	07/25/2014 10:48
1,2,4-Trichlorobenzene	ND	0.50	1	07/25/2014 10:48
1,1,1-Trichloroethane	ND	0.50	1	07/25/2014 10:48
1,1,2-Trichloroethane	ND	0.50	1	07/25/2014 10:48
Trichloroethene	ND	0.50	1	07/25/2014 10:48
Trichlorofluoromethane	ND	0.50	1	07/25/2014 10:48
1,2,3-Trichloropropane	ND	0.50	1	07/25/2014 10:48
1,2,4-Trimethylbenzene	ND	0.50	1	07/25/2014 10:48
1,3,5-Trimethylbenzene	ND	0.50	1	07/25/2014 10:48
Vinyl Chloride	ND	0.50	1	07/25/2014 10:48
Xylenes, Total	ND	0.50	1	07/25/2014 10:48

Surrogates	REC (%)	Limits	Analytical Comments: b1	
Dibromofluoromethane	93	70-130		07/25/2014 10:48
Toluene-d8	101	70-130		07/25/2014 10:48
4-BFB	86	70-130		07/25/2014 10:48

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B7-W	**1407844-002B**	**Water**	**07/21/2014 17:00**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	07/28/2014 22:29
tert-Amyl methyl ether (TAME)	ND	0.50	1	07/28/2014 22:29
Benzene	ND	0.50	1	07/28/2014 22:29
Bromobenzene	ND	0.50	1	07/28/2014 22:29
Bromochloromethane	ND	0.50	1	07/28/2014 22:29
Bromodichloromethane	ND	0.50	1	07/28/2014 22:29
Bromoform	ND	0.50	1	07/28/2014 22:29
Bromomethane	ND	0.50	1	07/28/2014 22:29
2-Butanone (MEK)	ND	2.0	1	07/28/2014 22:29
t-Butyl alcohol (TBA)	ND	2.0	1	07/28/2014 22:29
n-Butyl benzene	ND	0.50	1	07/28/2014 22:29
sec-Butyl benzene	ND	0.50	1	07/28/2014 22:29
tert-Butyl benzene	ND	0.50	1	07/28/2014 22:29
Carbon Disulfide	ND	0.50	1	07/28/2014 22:29
Carbon Tetrachloride	ND	0.50	1	07/28/2014 22:29
Chlorobenzene	ND	0.50	1	07/28/2014 22:29
Chloroethane	ND	0.50	1	07/28/2014 22:29
Chloroform	**0.82**	0.50	1	07/28/2014 22:29
Chloromethane	ND	0.50	1	07/28/2014 22:29
2-Chlorotoluene	ND	0.50	1	07/28/2014 22:29
4-Chlorotoluene	ND	0.50	1	07/28/2014 22:29
Dibromochloromethane	ND	0.50	1	07/28/2014 22:29
1,2-Dibromo-3-chloropropane	ND	0.20	1	07/28/2014 22:29
1,2-Dibromoethane (EDB)	ND	0.50	1	07/28/2014 22:29
Dibromomethane	ND	0.50	1	07/28/2014 22:29
1,2-Dichlorobenzene	ND	0.50	1	07/28/2014 22:29
1,3-Dichlorobenzene	ND	0.50	1	07/28/2014 22:29
1,4-Dichlorobenzene	ND	0.50	1	07/28/2014 22:29
Dichlorodifluoromethane	ND	0.50	1	07/28/2014 22:29
1,1-Dichloroethane	ND	0.50	1	07/28/2014 22:29
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	07/28/2014 22:29
1,1-Dichloroethene	ND	0.50	1	07/28/2014 22:29
cis-1,2-Dichloroethene	ND	0.50	1	07/28/2014 22:29
trans-1,2-Dichloroethene	ND	0.50	1	07/28/2014 22:29
1,2-Dichloropropane	ND	0.50	1	07/28/2014 22:29
1,3-Dichloropropane	ND	0.50	1	07/28/2014 22:29
2,2-Dichloropropane	ND	0.50	1	07/28/2014 22:29
1,1-Dichloropropene	ND	0.50	1	07/28/2014 22:29

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B7-W	**1407844-002B**	**Water**	**07/21/2014 17:00**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	07/28/2014 22:29
trans-1,3-Dichloropropene	ND	0.50	1	07/28/2014 22:29
Diisopropyl ether (DIPE)	ND	0.50	1	07/28/2014 22:29
Ethylbenzene	ND	0.50	1	07/28/2014 22:29
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	07/28/2014 22:29
Freon 113	ND	0.50	1	07/28/2014 22:29
Hexachlorobutadiene	ND	0.50	1	07/28/2014 22:29
Hexachloroethane	ND	0.50	1	07/28/2014 22:29
2-Hexanone	ND	0.50	1	07/28/2014 22:29
Isopropylbenzene	ND	0.50	1	07/28/2014 22:29
4-Isopropyl toluene	ND	0.50	1	07/28/2014 22:29
Methyl-t-butyl ether (MTBE)	ND	0.50	1	07/28/2014 22:29
Methylene chloride	ND	0.50	1	07/28/2014 22:29
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	07/28/2014 22:29
Naphthalene	ND	0.50	1	07/28/2014 22:29
n-Propyl benzene	ND	0.50	1	07/28/2014 22:29
Styrene	ND	0.50	1	07/28/2014 22:29
1,1,1,2-Tetrachloroethane	ND	0.50	1	07/28/2014 22:29
1,1,2,2-Tetrachloroethane	ND	0.50	1	07/28/2014 22:29
Tetrachloroethene	ND	0.50	1	07/28/2014 22:29
Toluene	ND	0.50	1	07/28/2014 22:29
1,2,3-Trichlorobenzene	ND	0.50	1	07/28/2014 22:29
1,2,4-Trichlorobenzene	ND	0.50	1	07/28/2014 22:29
1,1,1-Trichloroethane	ND	0.50	1	07/28/2014 22:29
1,1,2-Trichloroethane	ND	0.50	1	07/28/2014 22:29
Trichloroethene	ND	0.50	1	07/28/2014 22:29
Trichlorofluoromethane	ND	0.50	1	07/28/2014 22:29
1,2,3-Trichloropropane	ND	0.50	1	07/28/2014 22:29
1,2,4-Trimethylbenzene	ND	0.50	1	07/28/2014 22:29
1,3,5-Trimethylbenzene	ND	0.50	1	07/28/2014 22:29
Vinyl Chloride	ND	0.50	1	07/28/2014 22:29
Xylenes, Total	ND	0.50	1	07/28/2014 22:29

Surrogates	REC (%)	Limits	Analytical Comments: b1	
Dibromofluoromethane	90	70-130		07/28/2014 22:29
Toluene-d8	98	70-130		07/28/2014 22:29
4-BFB	86	70-130		07/28/2014 22:29

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B8-W	**1407844-003B**	**Water**	**07/21/2014 14:30**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	07/25/2014 12:25
tert-Amyl methyl ether (TAME)	ND	0.50	1	07/25/2014 12:25
Benzene	ND	0.50	1	07/25/2014 12:25
Bromobenzene	ND	0.50	1	07/25/2014 12:25
Bromochloromethane	ND	0.50	1	07/25/2014 12:25
Bromodichloromethane	ND	0.50	1	07/25/2014 12:25
Bromoform	ND	0.50	1	07/25/2014 12:25
Bromomethane	ND	0.50	1	07/25/2014 12:25
2-Butanone (MEK)	ND	2.0	1	07/25/2014 12:25
t-Butyl alcohol (TBA)	ND	2.0	1	07/25/2014 12:25
n-Butyl benzene	ND	0.50	1	07/25/2014 12:25
sec-Butyl benzene	ND	0.50	1	07/25/2014 12:25
tert-Butyl benzene	ND	0.50	1	07/25/2014 12:25
Carbon Disulfide	ND	0.50	1	07/25/2014 12:25
Carbon Tetrachloride	ND	0.50	1	07/25/2014 12:25
Chlorobenzene	ND	0.50	1	07/25/2014 12:25
Chloroethane	ND	0.50	1	07/25/2014 12:25
Chloroform	ND	0.50	1	07/25/2014 12:25
Chloromethane	ND	0.50	1	07/25/2014 12:25
2-Chlorotoluene	ND	0.50	1	07/25/2014 12:25
4-Chlorotoluene	ND	0.50	1	07/25/2014 12:25
Dibromochloromethane	ND	0.50	1	07/25/2014 12:25
1,2-Dibromo-3-chloropropane	ND	0.20	1	07/25/2014 12:25
1,2-Dibromoethane (EDB)	ND	0.50	1	07/25/2014 12:25
Dibromomethane	ND	0.50	1	07/25/2014 12:25
1,2-Dichlorobenzene	ND	0.50	1	07/25/2014 12:25
1,3-Dichlorobenzene	ND	0.50	1	07/25/2014 12:25
1,4-Dichlorobenzene	ND	0.50	1	07/25/2014 12:25
Dichlorodifluoromethane	ND	0.50	1	07/25/2014 12:25
1,1-Dichloroethane	ND	0.50	1	07/25/2014 12:25
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	07/25/2014 12:25
1,1-Dichloroethene	ND	0.50	1	07/25/2014 12:25
cis-1,2-Dichloroethene	ND	0.50	1	07/25/2014 12:25
trans-1,2-Dichloroethene	ND	0.50	1	07/25/2014 12:25
1,2-Dichloropropane	ND	0.50	1	07/25/2014 12:25
1,3-Dichloropropane	ND	0.50	1	07/25/2014 12:25
2,2-Dichloropropane	ND	0.50	1	07/25/2014 12:25
1,1-Dichloropropene	ND	0.50	1	07/25/2014 12:25

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B8-W	**1407844-003B**	**Water**	**07/21/2014 14:30**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	07/25/2014 12:25
trans-1,3-Dichloropropene	ND	0.50	1	07/25/2014 12:25
Diisopropyl ether (DIPE)	ND	0.50	1	07/25/2014 12:25
Ethylbenzene	ND	0.50	1	07/25/2014 12:25
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	07/25/2014 12:25
Freon 113	ND	0.50	1	07/25/2014 12:25
Hexachlorobutadiene	ND	0.50	1	07/25/2014 12:25
Hexachloroethane	ND	0.50	1	07/25/2014 12:25
2-Hexanone	ND	0.50	1	07/25/2014 12:25
Isopropylbenzene	ND	0.50	1	07/25/2014 12:25
4-Isopropyl toluene	ND	0.50	1	07/25/2014 12:25
Methyl-t-butyl ether (MTBE)	ND	0.50	1	07/25/2014 12:25
Methylene chloride	ND	0.50	1	07/25/2014 12:25
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	07/25/2014 12:25
Naphthalene	ND	0.50	1	07/25/2014 12:25
n-Propyl benzene	ND	0.50	1	07/25/2014 12:25
Styrene	ND	0.50	1	07/25/2014 12:25
1,1,1,2-Tetrachloroethane	ND	0.50	1	07/25/2014 12:25
1,1,2,2-Tetrachloroethane	ND	0.50	1	07/25/2014 12:25
Tetrachloroethene	ND	0.50	1	07/25/2014 12:25
Toluene	ND	0.50	1	07/25/2014 12:25
1,2,3-Trichlorobenzene	ND	0.50	1	07/25/2014 12:25
1,2,4-Trichlorobenzene	ND	0.50	1	07/25/2014 12:25
1,1,1-Trichloroethane	ND	0.50	1	07/25/2014 12:25
1,1,2-Trichloroethane	ND	0.50	1	07/25/2014 12:25
Trichloroethene	ND	0.50	1	07/25/2014 12:25
Trichlorofluoromethane	ND	0.50	1	07/25/2014 12:25
1,2,3-Trichloropropane	ND	0.50	1	07/25/2014 12:25
1,2,4-Trimethylbenzene	ND	0.50	1	07/25/2014 12:25
1,3,5-Trimethylbenzene	ND	0.50	1	07/25/2014 12:25
Vinyl Chloride	ND	0.50	1	07/25/2014 12:25
Xylenes, Total	ND	0.50	1	07/25/2014 12:25

Surrogates	REC (%)	Limits	Analytical Comments: b1	
Dibromofluoromethane	93	70-130		07/25/2014 12:25
Toluene-d8	102	70-130		07/25/2014 12:25
4-BFB	84	70-130		07/25/2014 12:25

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B9-W	**1407844-004B**	**Water**	**07/22/2014 09:15**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	07/25/2014 13:08
tert-Amyl methyl ether (TAME)	ND	0.50	1	07/25/2014 13:08
Benzene	ND	0.50	1	07/25/2014 13:08
Bromobenzene	ND	0.50	1	07/25/2014 13:08
Bromochloromethane	ND	0.50	1	07/25/2014 13:08
Bromodichloromethane	ND	0.50	1	07/25/2014 13:08
Bromoform	ND	0.50	1	07/25/2014 13:08
Bromomethane	ND	0.50	1	07/25/2014 13:08
2-Butanone (MEK)	ND	2.0	1	07/25/2014 13:08
t-Butyl alcohol (TBA)	ND	2.0	1	07/25/2014 13:08
n-Butyl benzene	ND	0.50	1	07/25/2014 13:08
sec-Butyl benzene	ND	0.50	1	07/25/2014 13:08
tert-Butyl benzene	ND	0.50	1	07/25/2014 13:08
Carbon Disulfide	ND	0.50	1	07/25/2014 13:08
Carbon Tetrachloride	ND	0.50	1	07/25/2014 13:08
Chlorobenzene	ND	0.50	1	07/25/2014 13:08
Chloroethane	ND	0.50	1	07/25/2014 13:08
Chloroform	ND	0.50	1	07/25/2014 13:08
Chloromethane	ND	0.50	1	07/25/2014 13:08
2-Chlorotoluene	ND	0.50	1	07/25/2014 13:08
4-Chlorotoluene	ND	0.50	1	07/25/2014 13:08
Dibromochloromethane	ND	0.50	1	07/25/2014 13:08
1,2-Dibromo-3-chloropropane	ND	0.20	1	07/25/2014 13:08
1,2-Dibromoethane (EDB)	ND	0.50	1	07/25/2014 13:08
Dibromomethane	ND	0.50	1	07/25/2014 13:08
1,2-Dichlorobenzene	ND	0.50	1	07/25/2014 13:08
1,3-Dichlorobenzene	ND	0.50	1	07/25/2014 13:08
1,4-Dichlorobenzene	ND	0.50	1	07/25/2014 13:08
Dichlorodifluoromethane	ND	0.50	1	07/25/2014 13:08
1,1-Dichloroethane	ND	0.50	1	07/25/2014 13:08
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	07/25/2014 13:08
1,1-Dichloroethene	ND	0.50	1	07/25/2014 13:08
cis-1,2-Dichloroethene	ND	0.50	1	07/25/2014 13:08
trans-1,2-Dichloroethene	ND	0.50	1	07/25/2014 13:08
1,2-Dichloropropane	ND	0.50	1	07/25/2014 13:08
1,3-Dichloropropane	ND	0.50	1	07/25/2014 13:08
2,2-Dichloropropane	ND	0.50	1	07/25/2014 13:08
1,1-Dichloropropene	ND	0.50	1	07/25/2014 13:08

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B9-W	**1407844-004B**	**Water**	**07/22/2014 09:15**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	07/25/2014 13:08
trans-1,3-Dichloropropene	ND	0.50	1	07/25/2014 13:08
Diisopropyl ether (DIPE)	ND	0.50	1	07/25/2014 13:08
Ethylbenzene	ND	0.50	1	07/25/2014 13:08
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	07/25/2014 13:08
Freon 113	ND	0.50	1	07/25/2014 13:08
Hexachlorobutadiene	ND	0.50	1	07/25/2014 13:08
Hexachloroethane	ND	0.50	1	07/25/2014 13:08
2-Hexanone	ND	0.50	1	07/25/2014 13:08
Isopropylbenzene	ND	0.50	1	07/25/2014 13:08
4-Isopropyl toluene	ND	0.50	1	07/25/2014 13:08
Methyl-t-butyl ether (MTBE)	ND	0.50	1	07/25/2014 13:08
Methylene chloride	ND	0.50	1	07/25/2014 13:08
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	07/25/2014 13:08
Naphthalene	ND	0.50	1	07/25/2014 13:08
n-Propyl benzene	ND	0.50	1	07/25/2014 13:08
Styrene	ND	0.50	1	07/25/2014 13:08
1,1,1,2-Tetrachloroethane	ND	0.50	1	07/25/2014 13:08
1,1,2,2-Tetrachloroethane	ND	0.50	1	07/25/2014 13:08
Tetrachloroethene	ND	0.50	1	07/25/2014 13:08
Toluene	ND	0.50	1	07/25/2014 13:08
1,2,3-Trichlorobenzene	ND	0.50	1	07/25/2014 13:08
1,2,4-Trichlorobenzene	ND	0.50	1	07/25/2014 13:08
1,1,1-Trichloroethane	ND	0.50	1	07/25/2014 13:08
1,1,2-Trichloroethane	ND	0.50	1	07/25/2014 13:08
Trichloroethene	ND	0.50	1	07/25/2014 13:08
Trichlorofluoromethane	ND	0.50	1	07/25/2014 13:08
1,2,3-Trichloropropane	ND	0.50	1	07/25/2014 13:08
1,2,4-Trimethylbenzene	ND	0.50	1	07/25/2014 13:08
1,3,5-Trimethylbenzene	ND	0.50	1	07/25/2014 13:08
Vinyl Chloride	ND	0.50	1	07/25/2014 13:08
Xylenes, Total	ND	0.50	1	07/25/2014 13:08

Surrogates	REC (%)	Limits	Analytical Comments: b1	
Dibromofluoromethane	95	70-130		07/25/2014 13:08
Toluene-d8	101	70-130		07/25/2014 13:08
4-BFB	82	70-130		07/25/2014 13:08

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B10-W	**1407844-005B**	**Water**	**07/21/2014 09:00**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	07/25/2014 18:11
tert-Amyl methyl ether (TAME)	ND	0.50	1	07/25/2014 18:11
Benzene	ND	0.50	1	07/25/2014 18:11
Bromobenzene	ND	0.50	1	07/25/2014 18:11
Bromochloromethane	ND	0.50	1	07/25/2014 18:11
Bromodichloromethane	ND	0.50	1	07/25/2014 18:11
Bromoform	ND	0.50	1	07/25/2014 18:11
Bromomethane	ND	0.50	1	07/25/2014 18:11
2-Butanone (MEK)	ND	2.0	1	07/25/2014 18:11
t-Butyl alcohol (TBA)	ND	2.0	1	07/25/2014 18:11
n-Butyl benzene	ND	0.50	1	07/25/2014 18:11
sec-Butyl benzene	ND	0.50	1	07/25/2014 18:11
tert-Butyl benzene	ND	0.50	1	07/25/2014 18:11
Carbon Disulfide	ND	0.50	1	07/25/2014 18:11
Carbon Tetrachloride	ND	0.50	1	07/25/2014 18:11
Chlorobenzene	ND	0.50	1	07/25/2014 18:11
Chloroethane	ND	0.50	1	07/25/2014 18:11
Chloroform	ND	0.50	1	07/25/2014 18:11
Chloromethane	ND	0.50	1	07/25/2014 18:11
2-Chlorotoluene	ND	0.50	1	07/25/2014 18:11
4-Chlorotoluene	ND	0.50	1	07/25/2014 18:11
Dibromochloromethane	ND	0.50	1	07/25/2014 18:11
1,2-Dibromo-3-chloropropane	ND	0.20	1	07/25/2014 18:11
1,2-Dibromoethane (EDB)	ND	0.50	1	07/25/2014 18:11
Dibromomethane	ND	0.50	1	07/25/2014 18:11
1,2-Dichlorobenzene	ND	0.50	1	07/25/2014 18:11
1,3-Dichlorobenzene	ND	0.50	1	07/25/2014 18:11
1,4-Dichlorobenzene	ND	0.50	1	07/25/2014 18:11
Dichlorodifluoromethane	ND	0.50	1	07/25/2014 18:11
1,1-Dichloroethane	ND	0.50	1	07/25/2014 18:11
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	07/25/2014 18:11
1,1-Dichloroethene	ND	0.50	1	07/25/2014 18:11
cis-1,2-Dichloroethene	ND	0.50	1	07/25/2014 18:11
trans-1,2-Dichloroethene	ND	0.50	1	07/25/2014 18:11
1,2-Dichloropropane	ND	0.50	1	07/25/2014 18:11
1,3-Dichloropropane	ND	0.50	1	07/25/2014 18:11
2,2-Dichloropropane	ND	0.50	1	07/25/2014 18:11
1,1-Dichloropropene	ND	0.50	1	07/25/2014 18:11

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B10-W	**1407844-005B**	**Water**	**07/21/2014 09:00**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	07/25/2014 18:11
trans-1,3-Dichloropropene	ND	0.50	1	07/25/2014 18:11
Diisopropyl ether (DIPE)	ND	0.50	1	07/25/2014 18:11
Ethylbenzene	ND	0.50	1	07/25/2014 18:11
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	07/25/2014 18:11
Freon 113	ND	0.50	1	07/25/2014 18:11
Hexachlorobutadiene	ND	0.50	1	07/25/2014 18:11
Hexachloroethane	ND	0.50	1	07/25/2014 18:11
2-Hexanone	ND	0.50	1	07/25/2014 18:11
Isopropylbenzene	ND	0.50	1	07/25/2014 18:11
4-Isopropyl toluene	ND	0.50	1	07/25/2014 18:11
Methyl-t-butyl ether (MTBE)	ND	0.50	1	07/25/2014 18:11
Methylene chloride	ND	0.50	1	07/25/2014 18:11
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	07/25/2014 18:11
Naphthalene	ND	0.50	1	07/25/2014 18:11
n-Propyl benzene	ND	0.50	1	07/25/2014 18:11
Styrene	ND	0.50	1	07/25/2014 18:11
1,1,1,2-Tetrachloroethane	ND	0.50	1	07/25/2014 18:11
1,1,2,2-Tetrachloroethane	ND	0.50	1	07/25/2014 18:11
Tetrachloroethene	ND	0.50	1	07/25/2014 18:11
Toluene	ND	0.50	1	07/25/2014 18:11
1,2,3-Trichlorobenzene	ND	0.50	1	07/25/2014 18:11
1,2,4-Trichlorobenzene	ND	0.50	1	07/25/2014 18:11
1,1,1-Trichloroethane	ND	0.50	1	07/25/2014 18:11
1,1,2-Trichloroethane	ND	0.50	1	07/25/2014 18:11
Trichloroethene	ND	0.50	1	07/25/2014 18:11
Trichlorofluoromethane	ND	0.50	1	07/25/2014 18:11
1,2,3-Trichloropropane	ND	0.50	1	07/25/2014 18:11
1,2,4-Trimethylbenzene	ND	0.50	1	07/25/2014 18:11
1,3,5-Trimethylbenzene	ND	0.50	1	07/25/2014 18:11
Vinyl Chloride	ND	0.50	1	07/25/2014 18:11
Xylenes, Total	ND	0.50	1	07/25/2014 18:11

Surrogates	REC (%)	Limits	Analytical Comments: b1	
Dibromofluoromethane	94	70-130		07/25/2014 18:11
Toluene-d8	101	70-130		07/25/2014 18:11
4-BFB	84	70-130		07/25/2014 18:11

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B11-W	**1407844-006B**	**Water**	**07/21/2014 11:00**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	07/29/2014 23:44
tert-Amyl methyl ether (TAME)	ND	0.50	1	07/29/2014 23:44
Benzene	ND	0.50	1	07/29/2014 23:44
Bromobenzene	ND	0.50	1	07/29/2014 23:44
Bromochloromethane	ND	0.50	1	07/29/2014 23:44
Bromodichloromethane	ND	0.50	1	07/29/2014 23:44
Bromoform	ND	0.50	1	07/29/2014 23:44
Bromomethane	ND	0.50	1	07/29/2014 23:44
2-Butanone (MEK)	ND	2.0	1	07/29/2014 23:44
t-Butyl alcohol (TBA)	ND	2.0	1	07/29/2014 23:44
n-Butyl benzene	ND	0.50	1	07/29/2014 23:44
sec-Butyl benzene	ND	0.50	1	07/29/2014 23:44
tert-Butyl benzene	ND	0.50	1	07/29/2014 23:44
Carbon Disulfide	ND	0.50	1	07/29/2014 23:44
Carbon Tetrachloride	ND	0.50	1	07/29/2014 23:44
Chlorobenzene	ND	0.50	1	07/29/2014 23:44
Chloroethane	ND	0.50	1	07/29/2014 23:44
Chloroform	ND	0.50	1	07/29/2014 23:44
Chloromethane	ND	0.50	1	07/29/2014 23:44
2-Chlorotoluene	ND	0.50	1	07/29/2014 23:44
4-Chlorotoluene	ND	0.50	1	07/29/2014 23:44
Dibromochloromethane	ND	0.50	1	07/29/2014 23:44
1,2-Dibromo-3-chloropropane	ND	0.20	1	07/29/2014 23:44
1,2-Dibromoethane (EDB)	ND	0.50	1	07/29/2014 23:44
Dibromomethane	ND	0.50	1	07/29/2014 23:44
1,2-Dichlorobenzene	ND	0.50	1	07/29/2014 23:44
1,3-Dichlorobenzene	ND	0.50	1	07/29/2014 23:44
1,4-Dichlorobenzene	ND	0.50	1	07/29/2014 23:44
Dichlorodifluoromethane	ND	0.50	1	07/29/2014 23:44
1,1-Dichloroethane	ND	0.50	1	07/29/2014 23:44
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	07/29/2014 23:44
1,1-Dichloroethene	ND	0.50	1	07/29/2014 23:44
cis-1,2-Dichloroethene	ND	0.50	1	07/29/2014 23:44
trans-1,2-Dichloroethene	ND	0.50	1	07/29/2014 23:44
1,2-Dichloropropane	ND	0.50	1	07/29/2014 23:44
1,3-Dichloropropane	ND	0.50	1	07/29/2014 23:44
2,2-Dichloropropane	ND	0.50	1	07/29/2014 23:44
1,1-Dichloropropene	ND	0.50	1	07/29/2014 23:44

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8260B
Date Prepared:	7/25/14-7/29/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B11-W	**1407844-006B**	**Water**	**07/21/2014 11:00**	**GC16**	**93297**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	07/29/2014 23:44
trans-1,3-Dichloropropene	ND	0.50	1	07/29/2014 23:44
Diisopropyl ether (DIPE)	ND	0.50	1	07/29/2014 23:44
Ethylbenzene	ND	0.50	1	07/29/2014 23:44
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	07/29/2014 23:44
Freon 113	ND	0.50	1	07/29/2014 23:44
Hexachlorobutadiene	ND	0.50	1	07/29/2014 23:44
Hexachloroethane	ND	0.50	1	07/29/2014 23:44
2-Hexanone	ND	0.50	1	07/29/2014 23:44
Isopropylbenzene	ND	0.50	1	07/29/2014 23:44
4-Isopropyl toluene	ND	0.50	1	07/29/2014 23:44
Methyl-t-butyl ether (MTBE)	ND	0.50	1	07/29/2014 23:44
Methylene chloride	ND	0.50	1	07/29/2014 23:44
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	07/29/2014 23:44
Naphthalene	ND	0.50	1	07/29/2014 23:44
n-Propyl benzene	ND	0.50	1	07/29/2014 23:44
Styrene	ND	0.50	1	07/29/2014 23:44
1,1,1,2-Tetrachloroethane	ND	0.50	1	07/29/2014 23:44
1,1,2,2-Tetrachloroethane	ND	0.50	1	07/29/2014 23:44
Tetrachloroethene	ND	0.50	1	07/29/2014 23:44
Toluene	ND	0.50	1	07/29/2014 23:44
1,2,3-Trichlorobenzene	ND	0.50	1	07/29/2014 23:44
1,2,4-Trichlorobenzene	ND	0.50	1	07/29/2014 23:44
1,1,1-Trichloroethane	ND	0.50	1	07/29/2014 23:44
1,1,2-Trichloroethane	ND	0.50	1	07/29/2014 23:44
Trichloroethene	ND	0.50	1	07/29/2014 23:44
Trichlorofluoromethane	ND	0.50	1	07/29/2014 23:44
1,2,3-Trichloropropane	ND	0.50	1	07/29/2014 23:44
1,2,4-Trimethylbenzene	ND	0.50	1	07/29/2014 23:44
1,3,5-Trimethylbenzene	ND	0.50	1	07/29/2014 23:44
Vinyl Chloride	ND	0.50	1	07/29/2014 23:44
Xylenes, Total	ND	0.50	1	07/29/2014 23:44

Surrogates	REC (%)	Limits	Analytical Comments: b1	
Dibromofluoromethane	92	70-130		07/29/2014 23:44
Toluene-d8	99	70-130		07/29/2014 23:44
4-BFB	84	70-130		07/29/2014 23:44

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	7/24/14-7/25/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B6-W	**1407844-001A**	**Water**	**07/22/2014 15:00**	**GC3**	**93159**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	07/24/2014 05:25
MTBE	---	5.0	1	07/24/2014 05:25
Benzene	---	0.50	1	07/24/2014 05:25
Toluene	---	0.50	1	07/24/2014 05:25
Ethylbenzene	---	0.50	1	07/24/2014 05:25
Xylenes	---	0.50	1	07/24/2014 05:25

Surrogates	REC (%)	Limits	Analytical Comments: b1	
aaa-TFT_2	99	70-130		07/24/2014 05:25

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B7-W	**1407844-002A**	**Water**	**07/21/2014 17:00**	**GC3**	**93159**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	07/24/2014 05:55
MTBE	---	5.0	1	07/24/2014 05:55
Benzene	---	0.50	1	07/24/2014 05:55
Toluene	---	0.50	1	07/24/2014 05:55
Ethylbenzene	---	0.50	1	07/24/2014 05:55
Xylenes	---	0.50	1	07/24/2014 05:55

Surrogates	REC (%)	Limits	Analytical Comments: b1	
aaa-TFT_2	101	70-130		07/24/2014 05:55

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B8-W	**1407844-003A**	**Water**	**07/21/2014 14:30**	**GC3**	**93159**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	07/25/2014 02:45
MTBE	---	5.0	1	07/25/2014 02:45
Benzene	---	0.50	1	07/25/2014 02:45
Toluene	---	0.50	1	07/25/2014 02:45
Ethylbenzene	---	0.50	1	07/25/2014 02:45
Xylenes	---	0.50	1	07/25/2014 02:45

Surrogates	REC (%)	Limits	Analytical Comments: b1	
aaa-TFT_2	100	70-130		07/25/2014 02:45

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW5030B
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	7/24/14-7/25/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B9-W	**1407844-004A**	**Water**	**07/22/2014 09:15**	**GC3**	**93159**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	07/24/2014 08:23
MTBE	---	5.0	1	07/24/2014 08:23
Benzene	---	0.50	1	07/24/2014 08:23
Toluene	---	0.50	1	07/24/2014 08:23
Ethylbenzene	---	0.50	1	07/24/2014 08:23
Xylenes	---	0.50	1	07/24/2014 08:23

Surrogates	REC (%)	Limits	Analytical Comments: b1
aaa-TFT_2	101	70-130	07/24/2014 08:23

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B10-W	**1407844-005A**	**Water**	**07/21/2014 09:00**	**GC3**	**93159**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	07/24/2014 08:53
MTBE	---	5.0	1	07/24/2014 08:53
Benzene	---	0.50	1	07/24/2014 08:53
Toluene	---	0.50	1	07/24/2014 08:53
Ethylbenzene	---	0.50	1	07/24/2014 08:53
Xylenes	---	0.50	1	07/24/2014 08:53

Surrogates	REC (%)	Limits	Analytical Comments: b1
aaa-TFT_2	104	70-130	07/24/2014 08:53

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B11-W	**1407844-006A**	**Water**	**07/21/2014 11:00**	**GC3**	**93159**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	07/24/2014 09:23
MTBE	---	5.0	1	07/24/2014 09:23
Benzene	---	0.50	1	07/24/2014 09:23
Toluene	---	0.50	1	07/24/2014 09:23
Ethylbenzene	---	0.50	1	07/24/2014 09:23
Xylenes	---	0.50	1	07/24/2014 09:23

Surrogates	REC (%)	Limits	Analytical Comments: b1
aaa-TFT_2	100	70-130	07/24/2014 09:23

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW3510C
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8015B
Date Prepared:	7/23/14	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B6-W	**1407844-001A**	**Water**	**07/22/2014 15:00**	**GC6A**	**93092**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	07/25/2014 01:35
TPH-Motor Oil (C18-C36)	ND	250	1	07/25/2014 01:35
Surrogates	REC (%)	Limits	Analytical Comments: b1	
C9	95	70-130		07/25/2014 01:35

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B7-W	**1407844-002A**	**Water**	**07/21/2014 17:00**	**GC9a**	**93092**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	150	1	07/27/2014 09:00
TPH-Motor Oil (C18-C36)	ND	750	1	07/27/2014 09:00
Surrogates	REC (%)	Limits	Analytical Comments: a4,b1	
C9	101	70-130		07/27/2014 09:00

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B8-W	**1407844-003A**	**Water**	**07/21/2014 14:30**	**GC6A**	**93092**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	07/25/2014 03:59
TPH-Motor Oil (C18-C36)	ND	250	1	07/25/2014 03:59
Surrogates	REC (%)	Limits	Analytical Comments: b1	
C9	93	70-130		07/25/2014 03:59

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B9-W	**1407844-004A**	**Water**	**07/22/2014 09:15**	**GC9a**	**93092**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	100	1	07/27/2014 07:49
TPH-Motor Oil (C18-C36)	ND	500	1	07/27/2014 07:49
Surrogates	REC (%)	Limits	Analytical Comments: b1	
C9	103	70-130		07/27/2014 07:49

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Extraction Method:**	SW3510C
Date Received:	7/23/14 16:29	**Analytical Method:**	SW8015B
Date Prepared:	7/23/14	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B10-W	**1407844-005A**	**Water**	**07/21/2014 09:00**	**GC6A**	**93092**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	07/25/2014 02:47
TPH-Motor Oil (C18-C36)	ND	250	1	07/25/2014 02:47

Surrogates	REC (%)	Limits	Analytical Comments: b1	
C9	95	70-130		07/25/2014 02:47

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B11-W	**1407844-006A**	**Water**	**07/21/2014 11:00**	**GC2A**	**93092**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**230**	50	1	07/25/2014 05:19
TPH-Motor Oil (C18-C36)	**1300**	250	1	07/25/2014 05:19

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2,a4,b1	
C9	109	70-130		07/25/2014 05:19

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Date Prepared:	7/28/14	**BatchID:**	93297
Date Analyzed:	7/25/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Sample ID:**	MB/LCS-93297 1407844-005BMS/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	17.2	0.50	20	-	86.2	70-130
Benzene	ND	21.1	0.50	20	-	105	70-130
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	62.6	2.0	80	-	78.2	70-130
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	19.5	0.50	20	-	97.4	70-130
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	16.8	0.50	20	-	83.8	70-130
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	17.7	0.50	20	-	88.6	70-130
1,1-Dichloroethene	ND	18.0	0.50	20	-	90.2	70-130
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	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Date Prepared:	7/28/14	**BatchID:**	93297
Date Analyzed:	7/25/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Sample ID:**	MB/LCS-93297 1407844-005BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	17.1	0.50	20	-	85.6	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	17.2	0.50	20	-	85.8	70-130
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	16.6	0.50	20	-	82.8	70-130
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	19.3	0.50	20	-	96.3	70-130
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	20.3	0.50	20	-	101	70-130
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	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	23.3	42.4		45	93	94	70-130
Toluene-d8	25.0	45.0		45	100	100	70-130
4-BFB	2.14	3.93		4.5	86	87	70-130

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Date Prepared:	7/28/14	**BatchID:**	93297
Date Analyzed:	7/25/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Sample ID:**	MB/LCS-93297 1407844-005BMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	21.1	18.0	20	ND	105	90	70-130	15.7	20
Benzene	23.2	19.4	20	ND	116	96.8	70-130	18.1	20
t-Butyl alcohol (TBA)	107	80.6	80	ND	134,F1	101	70-130	28.1,F1	20
Chlorobenzene	21.3	17.5	20	ND	107	87.3	70-130	19.9	20
1,2-Dibromoethane (EDB)	20.2	17.8	20	ND	101	88.8	70-130	12.9	20
1,2-Dichloroethane (1,2-DCA)	20.9	17.8	20	ND	104	88.8	70-130	16.2	20
1,1-Dichloroethene	19.6	16.4	20	ND	97.7	81.8	70-130	17.7	20
Diisopropyl ether (DIPE)	19.6	16.9	20	ND	98.1	84.4	70-130	15.1	20
Ethyl tert-butyl ether (ETBE)	20.5	17.4	20	ND	103	87.2	70-130	16.1	20
Methyl-t-butyl ether (MTBE)	20.9	17.7	20	ND	105	88.4	70-130	16.8	20
Toluene	20.5	17.0	20	ND	102	85.3	70-130	18.3	20
Trichloroethene	21.9	18.0	20	ND	109	89.8	70-130	19.6	20
Surrogate Recovery									
Dibromofluoromethane	45.9	41.5	45		102	92	70-130	10.2	20
Toluene-d8	45.8	42.4	45		102	94	70-130	7.77	20
4-BFB	4.06	3.68	4.5		90	82	70-130	9.82	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Date Prepared:	7/24/14	**BatchID:**	93159
Date Analyzed:	7/23/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Sample ID:**	MB/LCS-93159 1407849-004AMS/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	63.4	40	60	-	106	70-130
MTBE	ND	10.1	5.0	10	-	101	70-130
Benzene	ND	9.83	0.50	10	-	98.3	70-130
Toluene	ND	9.76	0.50	10	-	97.6	70-130
Ethylbenzene	ND	9.76	0.50	10	-	97.6	70-130
Xylenes	ND	29.5	0.50	30	-	98.4	70-130
Surrogate Recovery							
aaa-TFT_2	9.79	9.54		10	98	95	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	64.7	63.4	60	ND	108	106	70-130	1.98	20
MTBE	10.6	10.7	10	ND	106	107	70-130	0.452	20
Benzene	10.4	10.7	10	ND	104	107	70-130	3.41	20
Toluene	10.3	10.6	10	ND	103	106	70-130	2.86	20
Ethylbenzene	10.3	10.6	10	ND	103	106	70-130	2.42	20
Xylenes	31.3	31.9	30	ND	104	106	70-130	1.97	20
Surrogate Recovery									
aaa-TFT_2	9.72	10.0	10		97	101	70-130	3.36	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1407844
Date Prepared:	7/23/14	**BatchID:**	93092
Date Analyzed:	7/23/14 - 7/24/14	**Extraction Method:**	SW3510C
Instrument:	GC11B, GC2B	**Analytical Method:**	SW8015B
Matrix:	Water	**Unit:**	µg/L
Project:	#0553; Cathedral Gardens 638 21st St Oakland, CA	**Sample ID:**	MB/LCS-93092

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	924	50	1000	-	92.5	70-130
Surrogate Recovery							
C9	614	737		625	98	118	70-130

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(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1407844 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ 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
cc/3rd Party:
PO:
ProjectNo: #0553; Cathedral Gardens 638 21st St Oakland, CA

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

Requested TAT: 5 days

Date Received: **07/23/2014**
Date Printed: **07/30/2014**

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
1407844-001	B6-W	Water	7/22/2014 15:00	☐	B	A										
1407844-002	B7-W	Water	7/21/2014 17:00	☐	B	A										
1407844-003	B8-W	Water	7/21/2014 14:30	☐	B	A										
1407844-004	B9-W	Water	7/22/2014 9:15	☐	B	A										
1407844-005	B10-W	Water	7/21/2014 9:00	☐	B	A										
1407844-006	B11-W	Water	7/21/2014 11:00	☐	B	A										

Test Legend:

1	8260B_W	2	G-MBTEX_W	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A contain testgroup.

Prepared by: Shana Carter

Comments:

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.

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: #0553; Cathedral Gardens 638 21st St Oakland, CA
Comments:

QC Level: LEVEL 2
Client Contact: Michael Deschenes
Contact's Email: lab@pdenviro.com

Work Order: 1407844
Date Received: 7/23/2014

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1407844-001A	B6-W	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	☐	7/22/2014 15:00	5 days	1%+	☐	
1407844-001B	B6-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	7/22/2014 15:00	5 days	1%+	☐	
1407844-002A	B7-W	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	☐	7/21/2014 17:00	5 days	5%+	☐	
1407844-002B	B7-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	7/21/2014 17:00	5 days	5%+	☐	
1407844-003A	B8-W	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	☐	7/21/2014 14:30	5 days	1%+	☐	
1407844-003B	B8-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	7/21/2014 14:30	5 days	1%+	☐	
1407844-004A	B9-W	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	☐	7/22/2014 9:15	5 days	2%+	☐	
1407844-004B	B9-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	7/22/2014 9:15	5 days	2%+	☐	
1407844-005A	B10-W	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	☐	7/21/2014 9:00	5 days	2%+	☐	
1407844-005B	B10-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	7/21/2014 9:00	5 days	2%+	☐	
1407844-006A	B11-W	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	☐	7/21/2014 11:00	5 days	5%+	☐	
1407844-006B	B11-W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	7/21/2014 11:00	5 days	5%+	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
VOA w/ HCl = 43mL VOA w/ HCl

CHAIN OF CUSTODY RECORD

1407844

PAGE 1 OF 1

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

RUSH

PROJECT NUMBER: 0553

PROJECT NAME: CATHEDRAL GARDENS 638 21st ST. OAKLAND, CA

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-(G,D,MO)	VOCs MTBE AND BTEX INCLUDING NAPHTHALENE BY EPA 8260B	PRESERVATIVE	REMARKS
10% B6-W	7/22/14	1500	H2O		7	X	X	ICE	NORMAL TAT
50% B7-W	7/21/14	1700	H2O		7	X	X	"	
10% B8-W	7/21/14	1430	H2O		7	X	X	"	
20% B9-W	7/22/14	0915	H2O		7	X	X	"	
20% B10-W	7/21/14	0900	H2O		7	X	X	"	
5% B11-W	7/24/14	1100	H2O		7	X	X	"	

ICE/T 15
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
PRESERVATION

APPROPRIATE CONTAINERS
PRESERVED IN LAB

VOAS	O&G	METALS	OTHER

	DATE	TIME	
RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	7/23/14	1433	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	7/23/14	1615	RECEIVED BY: (SIGNATURE) Shana Carter
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)

Total No. of Samples (This Shipment): 7
Total No. of Containers (This Shipment): 42

LABORATORY: McCAMPBELL ANALYTICAL, INC

LABORATORY CONTACT: ANGELA RYDELIUS

LABORATORY PHONE NUMBER: (877) 252-9262

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO

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

REMARKS: ALL VOAs PRESERVED WITH HCL

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Sample Receipt Checklist

Client Name: **P & D Environmental** Date and Time Received: **7/23/2014 4:29:12 PM**

Project Name: **#0553; Cathedral Gardens 638 21st St Oakland, CA** LogIn Reviewed by: Shana Carter

WorkOrder №: **1407844** Matrix: Water Carrier: Rob Pringle (MAI Courier)

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 1.5°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1408149

Report Created for: P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

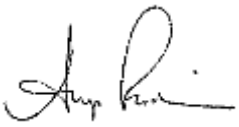
Project Contact: Michael Deschenes
Project P.O.:
Project Name: #0553; Cathedral Gradens 638 21st Street Oakland, ca

Project Received: 08/05/2014

Analytical Report reviewed & approved for release on 08/12/2014 by:

Question about your data?

Click here to email McCampbell



Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: #0553; Cathedral Gradens 638 21st Street Oakland, ca
WorkOrder: 1408149

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
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
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
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
TEQ	Toxicity Equivalence

Analytical Qualifiers

B	analyte detected in the associated Method Blank

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:48	**Analytical Method:**	SW8260B
Date Prepared:	8/7/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B16-w	**1408149-001B**	**Water**	**08/04/2014 11:50**	**GC28**	**93791**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetone	ND	B	10	1	08/07/2014 17:21
tert-Amyl methyl ether (TAME)	ND		0.50	1	08/07/2014 17:21
Benzene	ND		0.50	1	08/07/2014 17:21
Bromobenzene	ND		0.50	1	08/07/2014 17:21
Bromochloromethane	ND		0.50	1	08/07/2014 17:21
Bromodichloromethane	ND		0.50	1	08/07/2014 17:21
Bromoform	ND		0.50	1	08/07/2014 17:21
Bromomethane	ND		0.50	1	08/07/2014 17:21
2-Butanone (MEK)	ND		2.0	1	08/07/2014 17:21
t-Butyl alcohol (TBA)	ND		2.0	1	08/07/2014 17:21
n-Butyl benzene	ND		0.50	1	08/07/2014 17:21
sec-Butyl benzene	ND		0.50	1	08/07/2014 17:21
tert-Butyl benzene	ND		0.50	1	08/07/2014 17:21
Carbon Disulfide	ND		0.50	1	08/07/2014 17:21
Carbon Tetrachloride	ND		0.50	1	08/07/2014 17:21
Chlorobenzene	ND		0.50	1	08/07/2014 17:21
Chloroethane	ND		0.50	1	08/07/2014 17:21
Chloroform	ND		0.50	1	08/07/2014 17:21
Chloromethane	ND		0.50	1	08/07/2014 17:21
2-Chlorotoluene	ND		0.50	1	08/07/2014 17:21
4-Chlorotoluene	ND		0.50	1	08/07/2014 17:21
Dibromochloromethane	ND		0.50	1	08/07/2014 17:21
1,2-Dibromo-3-chloropropane	ND		0.20	1	08/07/2014 17:21
1,2-Dibromoethane (EDB)	ND		0.50	1	08/07/2014 17:21
Dibromomethane	ND		0.50	1	08/07/2014 17:21
1,2-Dichlorobenzene	ND		0.50	1	08/07/2014 17:21
1,3-Dichlorobenzene	ND		0.50	1	08/07/2014 17:21
1,4-Dichlorobenzene	ND		0.50	1	08/07/2014 17:21
Dichlorodifluoromethane	ND		0.50	1	08/07/2014 17:21
1,1-Dichloroethane	ND		0.50	1	08/07/2014 17:21
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	08/07/2014 17:21
1,1-Dichloroethene	ND		0.50	1	08/07/2014 17:21
cis-1,2-Dichloroethene	ND		0.50	1	08/07/2014 17:21
trans-1,2-Dichloroethene	ND		0.50	1	08/07/2014 17:21
1,2-Dichloropropane	ND		0.50	1	08/07/2014 17:21
1,3-Dichloropropane	ND		0.50	1	08/07/2014 17:21
2,2-Dichloropropane	ND		0.50	1	08/07/2014 17:21
1,1-Dichloropropene	ND		0.50	1	08/07/2014 17:21

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:48	**Analytical Method:**	SW8260B
Date Prepared:	8/7/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B16-w	**1408149-001B**	**Water**	**08/04/2014 11:50**	**GC28**	**93791**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		0.50	1	08/07/2014 17:21
trans-1,3-Dichloropropene	ND		0.50	1	08/07/2014 17:21
Diisopropyl ether (DIPE)	ND		0.50	1	08/07/2014 17:21
Ethylbenzene	ND		0.50	1	08/07/2014 17:21
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	08/07/2014 17:21
Freon 113	ND		0.50	1	08/07/2014 17:21
Hexachlorobutadiene	ND		0.50	1	08/07/2014 17:21
Hexachloroethane	ND		0.50	1	08/07/2014 17:21
2-Hexanone	ND		0.50	1	08/07/2014 17:21
Isopropylbenzene	ND		0.50	1	08/07/2014 17:21
4-Isopropyl toluene	ND		0.50	1	08/07/2014 17:21
Methyl-t-butyl ether (MTBE)	ND		0.50	1	08/07/2014 17:21
Methylene chloride	ND		0.50	1	08/07/2014 17:21
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	08/07/2014 17:21
Naphthalene	ND		0.50	1	08/07/2014 17:21
n-Propyl benzene	ND		0.50	1	08/07/2014 17:21
Styrene	ND		0.50	1	08/07/2014 17:21
1,1,1,2-Tetrachloroethane	ND		0.50	1	08/07/2014 17:21
1,1,2,2-Tetrachloroethane	ND		0.50	1	08/07/2014 17:21
Tetrachloroethene	ND		0.50	1	08/07/2014 17:21
Toluene	ND		0.50	1	08/07/2014 17:21
1,2,3-Trichlorobenzene	ND		0.50	1	08/07/2014 17:21
1,2,4-Trichlorobenzene	ND		0.50	1	08/07/2014 17:21
1,1,1-Trichloroethane	ND		0.50	1	08/07/2014 17:21
1,1,2-Trichloroethane	ND		0.50	1	08/07/2014 17:21
Trichloroethene	ND		0.50	1	08/07/2014 17:21
Trichlorofluoromethane	ND		0.50	1	08/07/2014 17:21
1,2,3-Trichloropropane	ND		0.50	1	08/07/2014 17:21
1,2,4-Trimethylbenzene	ND		0.50	1	08/07/2014 17:21
1,3,5-Trimethylbenzene	ND		0.50	1	08/07/2014 17:21
Vinyl Chloride	ND		0.50	1	08/07/2014 17:21
Xylenes, Total	ND		0.50	1	08/07/2014 17:21

Surrogates	REC (%)	Limits	
Dibromofluoromethane	90	70-130	08/07/2014 17:21
Toluene-d8	89	70-130	08/07/2014 17:21
4-BFB	77	70-130	08/07/2014 17:21

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP GM Analyst's Initial  Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:48	**Analytical Method:**	SW8260B
Date Prepared:	8/7/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B17-w	**1408149-002B**	**Water**	**08/04/2014 13:10**	**GC28**	**93791**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetone	ND	B	10	1	08/07/2014 18:01
tert-Amyl methyl ether (TAME)	ND		0.50	1	08/07/2014 18:01
Benzene	ND		0.50	1	08/07/2014 18:01
Bromobenzene	ND		0.50	1	08/07/2014 18:01
Bromochloromethane	ND		0.50	1	08/07/2014 18:01
Bromodichloromethane	ND		0.50	1	08/07/2014 18:01
Bromoform	ND		0.50	1	08/07/2014 18:01
Bromomethane	ND		0.50	1	08/07/2014 18:01
2-Butanone (MEK)	ND		2.0	1	08/07/2014 18:01
t-Butyl alcohol (TBA)	ND		2.0	1	08/07/2014 18:01
n-Butyl benzene	ND		0.50	1	08/07/2014 18:01
sec-Butyl benzene	ND		0.50	1	08/07/2014 18:01
tert-Butyl benzene	ND		0.50	1	08/07/2014 18:01
Carbon Disulfide	ND		0.50	1	08/07/2014 18:01
Carbon Tetrachloride	ND		0.50	1	08/07/2014 18:01
Chlorobenzene	ND		0.50	1	08/07/2014 18:01
Chloroethane	ND		0.50	1	08/07/2014 18:01
Chloroform	ND		0.50	1	08/07/2014 18:01
Chloromethane	ND		0.50	1	08/07/2014 18:01
2-Chlorotoluene	ND		0.50	1	08/07/2014 18:01
4-Chlorotoluene	ND		0.50	1	08/07/2014 18:01
Dibromochloromethane	ND		0.50	1	08/07/2014 18:01
1,2-Dibromo-3-chloropropane	ND		0.20	1	08/07/2014 18:01
1,2-Dibromoethane (EDB)	ND		0.50	1	08/07/2014 18:01
Dibromomethane	ND		0.50	1	08/07/2014 18:01
1,2-Dichlorobenzene	ND		0.50	1	08/07/2014 18:01
1,3-Dichlorobenzene	ND		0.50	1	08/07/2014 18:01
1,4-Dichlorobenzene	ND		0.50	1	08/07/2014 18:01
Dichlorodifluoromethane	ND		0.50	1	08/07/2014 18:01
1,1-Dichloroethane	ND		0.50	1	08/07/2014 18:01
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	08/07/2014 18:01
1,1-Dichloroethene	ND		0.50	1	08/07/2014 18:01
cis-1,2-Dichloroethene	ND		0.50	1	08/07/2014 18:01
trans-1,2-Dichloroethene	ND		0.50	1	08/07/2014 18:01
1,2-Dichloropropane	ND		0.50	1	08/07/2014 18:01
1,3-Dichloropropane	ND		0.50	1	08/07/2014 18:01
2,2-Dichloropropane	ND		0.50	1	08/07/2014 18:01
1,1-Dichloropropene	ND		0.50	1	08/07/2014 18:01

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:48	**Analytical Method:**	SW8260B
Date Prepared:	8/7/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B17-w	**1408149-002B**	**Water**	**08/04/2014 13:10**	**GC28**	**93791**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		0.50	1	08/07/2014 18:01
trans-1,3-Dichloropropene	ND		0.50	1	08/07/2014 18:01
Diisopropyl ether (DIPE)	ND		0.50	1	08/07/2014 18:01
Ethylbenzene	ND		0.50	1	08/07/2014 18:01
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	08/07/2014 18:01
Freon 113	ND		0.50	1	08/07/2014 18:01
Hexachlorobutadiene	ND		0.50	1	08/07/2014 18:01
Hexachloroethane	ND		0.50	1	08/07/2014 18:01
2-Hexanone	ND		0.50	1	08/07/2014 18:01
Isopropylbenzene	ND		0.50	1	08/07/2014 18:01
4-Isopropyl toluene	ND		0.50	1	08/07/2014 18:01
Methyl-t-butyl ether (MTBE)	ND		0.50	1	08/07/2014 18:01
Methylene chloride	ND		0.50	1	08/07/2014 18:01
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	08/07/2014 18:01
Naphthalene	ND		0.50	1	08/07/2014 18:01
n-Propyl benzene	ND		0.50	1	08/07/2014 18:01
Styrene	ND		0.50	1	08/07/2014 18:01
1,1,1,2-Tetrachloroethane	ND		0.50	1	08/07/2014 18:01
1,1,2,2-Tetrachloroethane	ND		0.50	1	08/07/2014 18:01
Tetrachloroethene	ND		0.50	1	08/07/2014 18:01
Toluene	ND		0.50	1	08/07/2014 18:01
1,2,3-Trichlorobenzene	ND		0.50	1	08/07/2014 18:01
1,2,4-Trichlorobenzene	ND		0.50	1	08/07/2014 18:01
1,1,1-Trichloroethane	ND		0.50	1	08/07/2014 18:01
1,1,2-Trichloroethane	ND		0.50	1	08/07/2014 18:01
Trichloroethene	ND		0.50	1	08/07/2014 18:01
Trichlorofluoromethane	ND		0.50	1	08/07/2014 18:01
1,2,3-Trichloropropane	ND		0.50	1	08/07/2014 18:01
1,2,4-Trimethylbenzene	ND		0.50	1	08/07/2014 18:01
1,3,5-Trimethylbenzene	ND		0.50	1	08/07/2014 18:01
Vinyl Chloride	ND		0.50	1	08/07/2014 18:01
Xylenes, Total	ND		0.50	1	08/07/2014 18:01

Surrogates	REC (%)	Limits	
Dibromofluoromethane	91	70-130	08/07/2014 18:01
Toluene-d8	88	70-130	08/07/2014 18:01
4-BFB	79	70-130	08/07/2014 18:01

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW5030B
Date Received:	8/5/14 19:48	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	8/7/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B16-w	**1408149-001A**	**Water**	**08/04/2014 11:50**	**GC3**	**93729**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	08/07/2014 04:06
MTBE	---	5.0	1	08/07/2014 04:06
Benzene	---	0.50	1	08/07/2014 04:06
Toluene	---	0.50	1	08/07/2014 04:06
Ethylbenzene	---	0.50	1	08/07/2014 04:06
Xylenes	---	0.50	1	08/07/2014 04:06
Surrogates	REC (%)	Limits		
aaa-TFT_2	99	70-130		08/07/2014 04:06

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B17-w	**1408149-002A**	**Water**	**08/04/2014 13:10**	**GC3**	**93729**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	08/07/2014 04:36
MTBE	---	5.0	1	08/07/2014 04:36
Benzene	---	0.50	1	08/07/2014 04:36
Toluene	---	0.50	1	08/07/2014 04:36
Ethylbenzene	---	0.50	1	08/07/2014 04:36
Xylenes	---	0.50	1	08/07/2014 04:36
Surrogates	REC (%)	Limits		
aaa-TFT_2	102	70-130		08/07/2014 04:36

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, c	**Extraction Method:**	SW3510C
Date Received:	8/5/14 19:48	**Analytical Method:**	SW8015B
Date Prepared:	8/5/14	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B16-w	**1408149-001A**	**Water**	**08/04/2014 11:50**	**GC6B**	**93657**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	08/09/2014 11:01
TPH-Motor Oil (C18-C36)	ND	250	1	08/09/2014 11:01

Surrogates	REC (%)	Limits	
C9	122	70-130	08/09/2014 11:01

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B17-w	**1408149-002A**	**Water**	**08/04/2014 13:10**	**GC6B**	**93657**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	08/08/2014 09:52
TPH-Motor Oil (C18-C36)	ND	250	1	08/08/2014 09:52

Surrogates	REC (%)	Limits	
C9	123	70-130	08/08/2014 09:52

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Date Prepared:	8/8/14	**BatchID:**	93791
Date Analyzed:	8/7/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, ca	**Sample ID:**	MB/LCS-93791 1408149-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	24.4	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	16.9	0.50	20	-	84.7	70-130
Benzene	ND	17.4	0.50	20	-	87.1	70-130
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	63.8	2.0	80	-	79.7	70-130
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	16.9	0.50	20	-	84.6	70-130
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	16.4	0.50	20	-	82	70-130
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	15.4	0.50	20	-	77.1	70-130
1,1-Dichloroethene	ND	17.0	0.50	20	-	84.9	70-130
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	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Date Prepared:	8/8/14	**BatchID:**	93791
Date Analyzed:	8/7/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, ca	**Sample ID:**	MB/LCS-93791 1408149-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	17.0	0.50	20	-	85.3	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	17.0	0.50	20	-	84.8	70-130
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	16.6	0.50	20	-	83	70-130
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	17.4	0.50	20	-	86.8	70-130
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	17.1	0.50	20	-	85.6	70-130
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	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	22.9	22.6		25	91	90	70-130
Toluene-d8	21.5	21.8		25	86	87	70-130
4-BFB	1.95	1.96		2.5	78	78	70-130

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Date Prepared:	8/8/14	**BatchID:**	93791
Date Analyzed:	8/7/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, ca	**Sample ID:**	MB/LCS-93791 1408149-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	20.0	21.4	20	ND	99.9	107	70-130	7.04	20
Benzene	19.2	20.2	20	ND	95.8	101	70-130	5.58	20
t-Butyl alcohol (TBA)	84.8	98.9	80	ND	106	124	70-130	15.3	20
Chlorobenzene	18.8	20.0	20	ND	93.8	100	70-130	6.35	20
1,2-Dibromoethane (EDB)	19.2	20.5	20	ND	96.2	103	70-130	6.32	20
1,2-Dichloroethane (1,2-DCA)	17.3	18.8	20	ND	86.5	94	70-130	8.29	20
1,1-Dichloroethene	18.4	19.7	20	ND	91.8	98.5	70-130	6.98	20
Diisopropyl ether (DIPE)	19.1	20.4	20	ND	95.6	102	70-130	6.20	20
Ethyl tert-butyl ether (ETBE)	19.7	21.2	20	ND	98.3	106	70-130	7.70	20
Methyl-t-butyl ether (MTBE)	19.7	21.4	20	ND	98.4	107	70-130	8.54	20
Toluene	19.1	20.5	20	ND	95.6	102	70-130	7.01	20
Trichloroethene	18.8	20.2	20	ND	93.8	101	70-130	7.08	20
Surrogate Recovery									
Dibromofluoromethane	22.6	22.6	25		90	90	70-130	0	20
Toluene-d8	21.6	21.6	25		86	86	70-130	0	20
4-BFB	1.89	1.93	2.5		76	77	70-130	2.32	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Date Prepared:	8/7/14	**BatchID:**	93729
Date Analyzed:	8/6/14 - 8/7/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, ca	**Sample ID:**	MB/LCS-93729 1408179-001BMS/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	63.1	40	60	-	105	70-130
MTBE	ND	11.4	5.0	10	-	114	70-130
Benzene	ND	10.1	0.50	10	-	101	70-130
Toluene	ND	10.3	0.50	10	-	103	70-130
Ethylbenzene	ND	10.4	0.50	10	-	104	70-130
Xylenes	ND	31.5	0.50	30	-	105	70-130
Surrogate Recovery							
aaa-TFT_2	10.4	9.39		10	103	94	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	61.0	61.5	60	ND	102	102	70-130	0	20
MTBE	10.4	10.4	10	ND	104	104	70-130	0	20
Benzene	9.75	9.97	10	ND	97.5	99.7	70-130	2.25	20
Toluene	10.0	10.2	10	ND	100	102	70-130	2.02	20
Ethylbenzene	10.1	10.4	10	ND	101	104	70-130	2.84	20
Xylenes	30.6	31.5	30	ND	102	105	70-130	2.76	20
Surrogate Recovery									
aaa-TFT_2	9.55	9.59	10		95	96	70-130	0.422	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1408149
Date Prepared:	8/5/14	**BatchID:**	93657
Date Analyzed:	8/5/14	**Extraction Method:**	SW3510C
Instrument:	GC6A	**Analytical Method:**	SW8015B
Matrix:	Water	**Unit:**	µg/L
Project:	#0553; Cathedral Gradens 638 21st Street Oakland, ca	**Sample ID:**	MB/LCS-93657

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1060	50	1000	-	106	70-130
Surrogate Recovery							
C9	577	576		625	92	92	70-130

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408149 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ 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
cc/3rd Party:
PO:
ProjectNo: #0553; Cathedral Gradens 638 21st Street Oakland, ca

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

Requested TAT: 5 days

Date Received: **08/05/2014**
Date Printed: **08/12/2014**

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
1408149-001	B16-w	Water	8/4/2014 11:50	☐	B	A	A									
1408149-002	B17-w	Water	8/4/2014 13:10	☐	B	A	A									

Test Legend:

1	8260B_W	2	G-MBTEX_W	3	TPH(DMO)_W	4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A contain testgroup.

Prepared by: Shana Carter

Comments:

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.

McCampbell Analytical, Inc.
"When Quality Counts"

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

WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
QC Level: LEVEL 2
Work Order: 1408149
Project: #0553; Cathedral Gradens 638 21st Street Oakland, ca
Client Contact: Michael Deschenes
Date Received: 8/5/2014
Comments:
Contact's Email: lab@pdenviro.com

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408149-001A	B16-w	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl	☐	8/4/2014 11:50	5 days	Present	☐	
1408149-001B	B16-w	Water	SW8260B (VOCs) <Benzene, Ethylbenzene, Methyl-t-butyl ether (MTBE), Naphthalene, Toluene, Xylenes>	2	VOA w/ HCl	☐	8/4/2014 11:50	5 days	Present	☐	
1408149-002A	B17-w	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl	☐	8/4/2014 13:10	5 days	Present	☐	
1408149-002B	B17-w	Water	SW8260B (VOCs) <Benzene, Ethylbenzene, Methyl-t-butyl ether (MTBE), Naphthalene, Toluene, Xylenes>	2	VOA w/ HCl	☐	8/4/2014 13:10	5 days	Present	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
VOA w/ HCl = 43mL VOA w/ HCl

CHAIN OF CUSTODY RECORD 1408149

PAGE 1 OF 1

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

PROJECT NUMBER: 0553

PROJECT NAME: Cathedral Gardens, 638 21st Street, Oakland, CA

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-(G,D,MO)	VOCs, MTBE AND BTEX, INCLUDING NAPHTHALENE BY EPA 8260B	PRESERVATIVE	REMARKS
B16-W	8/4/14	1150	H2O		5	X	X	ICE	NORMAL TAT
B17-W	"	1310	"		5	X	X	"	" "

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes — DATE 8/5/14 — TIME 1525
RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE) — DATE 8/5/14 — TIME 1700
RECEIVED BY: (SIGNATURE) Shana Carter

RELINQUISHED BY: (SIGNATURE) — DATE — TIME
RECEIVED FOR LABORATORY BY: (SIGNATURE)

Total No. of Samples (This Shipment): 2
Total No. of Containers (This Shipment): 10

LABORATORY: McCAMPBELL ANALYTICAL, INC

LABORATORY CONTACT: ANGELA RYDELIUS

LABORATORY PHONE NUMBER: (877) 252-9262

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO

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

REMARKS: ALL VOA's PRESERVED WITH HCL

McCampbell Analytical, Inc.
"When Quality Counts"

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

Sample Receipt Checklist

Client Name: **P & D Environmental**
Date and Time Received: **8/5/2014 7:48:16 PM**
Project Name: **#0553; Cathedral Gradens 638 21st Street Oakland, ca**
LogIn Reviewed by: Shana Carter
WorkOrder №: **1408149** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 1.2°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: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

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8/12/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: Cathedral Gardens 638 21st Street
Project #: 0553
Workorder #: 1407517A

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 7/30/2014 at Air Toxics Ltd.

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

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

Regards,

Kyle Vagadori

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1407517A

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0553 Cathedral Gardens 638 21st Street
DATE RECEIVED:	07/30/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	08/11/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SG1	TO-15	5.5 "Hg	15 psi
02A	SG1-DUP	TO-15	5.5 "Hg	15 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 08/12/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-13-6, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
P & D Environmental
Workorder# 1407517A

Two 1 Liter Summa Canister samples were received on July 30, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples SG1 and SG1-DUP due to the presence of high level target species.

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

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

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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

Client Sample ID: SG1

Lab ID#: 1407517A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	9.9	3800 E	27	10000 E

Client Sample ID: SG1-DUP

Lab ID#: 1407517A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	9.9	5100 E	27	14000 E

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Client Sample ID: SG1

Lab ID#: 1407517A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17080110**	**Date of Collection: 7/28/14**	
Dil. Factor:	**4.95**	**Date of Analysis: 8/1/14 01:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	2.5	Not Detected	8.9	Not Detected
Benzene	2.5	Not Detected	7.9	Not Detected
Toluene	2.5	Not Detected	9.3	Not Detected
Ethyl Benzene	2.5	Not Detected	11	Not Detected
m,p-Xylene	2.5	Not Detected	11	Not Detected
o-Xylene	2.5	Not Detected	11	Not Detected
TPH ref. to Gasoline (MW=100)	120	Not Detected	510	Not Detected
1,1-Difluoroethane	9.9	3800 E	27	10000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: SG1-DUP

Lab ID#: 1407517A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17080111**	**Date of Collection: 7/28/14**	
Dil. Factor:	**4.95**	**Date of Analysis: 8/1/14 02:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	2.5	Not Detected	8.9	Not Detected
Benzene	2.5	Not Detected	7.9	Not Detected
Toluene	2.5	Not Detected	9.3	Not Detected
Ethyl Benzene	2.5	Not Detected	11	Not Detected
m,p-Xylene	2.5	Not Detected	11	Not Detected
o-Xylene	2.5	Not Detected	11	Not Detected
TPH ref. to Gasoline (MW=100)	120	Not Detected	510	Not Detected
1,1-Difluoroethane	9.9	5100 E	27	14000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1407517A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17080107a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/1/14 12:12 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected
1,1-Difluoroethane	2.0	Not Detected	5.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: CCV

Lab ID#: 1407517A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17080102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/1/14 09:47 AM**	

Compound	%Recovery
Methyl tert-butyl ether	94
Benzene	97
Toluene	99
Ethyl Benzene	101
m,p-Xylene	103
o-Xylene	100
TPH ref. to Gasoline (MW=100)	100
1,1-Difluoroethane	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: LCS

Lab ID#: 1407517A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17080103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/1/14 10:09 AM**	

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	92	70-130
Benzene	93	70-130
Toluene	94	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	97	70-130
o-Xylene	91	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: LCSD

Lab ID#: 1407517A-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17080104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/1/14 10:31 AM**	

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	90	70-130
Benzene	92	70-130
Toluene	94	70-130
Ethyl Benzene	96	70-130
m,p-Xylene	98	70-130
o-Xylene	94	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	106	70-130

CHAIN OF CUSTODY RECORD 1407517

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

PROJECT NUMBER: 0553

PROJECT NAME: Cathedral Gardens 638 21st Street Oakland, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL BASS-DESCHENES [signature]

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION (INIT VAC / FINAL VAC / PID (PPM))	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-G, MTBE, BTEX, AND DPA by TO-15	O_2, CH_4, CO_2 BY ASTM D-1946						PRESERVATIVE	REMARKS
01A SG1	7/28/14	104600 105856	SIL/GAS	-30 -5 0	1	X	X						NONE	NORMAL ~~WEEK~~ TAT
02A SG1-DUP	"	104600 105856	"	-30 -5 0	1	X	X						"	" "

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)		
[signature]	7/30	9:49	[signature]	Total No. of Samples (This Shipment): 2; Total No. of Containers (This Shipment): 2	LABORATORY: Eurofins/Air Toxics Ltd.
[signature]	7/30/14	1155	[signature]	LABORATORY CONTACT: Kyle Vagadori	LABORATORY PHONE NUMBER: (916) 985-1000 x3339
			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: 1-liter Summa

Custody Seal Intact? Y N None Temp N/A

eurofins | Air Toxics

8/12/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: Cathedral Gardens 638 21st Street Oaklan
Project #: 0553
Workorder #: 1407520

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 7/30/2014 at Air Toxics Ltd.

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

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

Regards,

Kyle Vagadori

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1407520

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0553 Cathedral Gardens 638 21st Street Oaklan
DATE RECEIVED:	07/30/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	08/12/2014		

FRACTION #	NAME	TEST
01A	SG1	Modified TO-17 VI
02A	SG1-REP	Modified TO-17 VI
03A	Lab Blank	Modified TO-17 VI
04A	CCV	Modified TO-17 VI
05A	LCS	Modified TO-17 VI
05AA	LCSD	Modified TO-17 VI

CERTIFIED BY:  DATE: 08/12/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-13-6, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified EPA Method TO-17 (VI Tubes)
P & D Environmental
Workorder# 1407520

Two TO-17 VI Tube samples were received on July 30, 2014. The laboratory performed the analysis via modified EPA Method TO-17 using GC/MS in the full scan mode. TO-17 'VI' sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

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

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

Requirement	***TO-17***	***ATL Modifications***
Initial Calibration	%RSD</=30% with 2 allowed out up to 40%	VOC list: %RSD</=30% with 2 allowed out up to 40% SVOC list: %RSD</=30% with 2 allowed out up to 40%
Daily Calibration	%D for each target compound within +/-30%.	Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene within +/-40%D
Audit Accuracy	70-130%	Second source recovery limits for Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene = 60-140%.
Distributed Volume Pairs	Collection of distributed volume pairs required for monitoring ambient air to insure high quality.	If site is well-characterized or performance previously verified, single tube sampling may be appropriate. Distributed pairs may be impractical for soil gas collection due to configuration and volume constraints.

Receiving Notes

A Temperature Blank was included with the shipment. Temperature was measured and was not within 4±2 °C. Coolant in the form of blue ice was present. Analysis proceeded.

Analytical Notes

A sampling volume of 0.200 L was used to convert ng to ug/m3 for the associated Lab Blank.

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

Definition of Data Qualifying Flags

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

B - Compound present in blank (subtraction not performed).

J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-17

Client Sample ID: SG1

Lab ID#: 1407520-01A

No Detections Were Found.

Client Sample ID: SG1-REP

Lab ID#: 1407520-02A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: SG1

Lab ID#: 1407520-01A

EPA METHOD TO-17

File Name:	**18073015**	**Date of Extraction: NA**	**Date of Collection: 7/28/14**
Dil. Factor:	**1.00**		**Date of Analysis: 7/31/14 08:46 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected
TPH (Diesel Range C10-C24)	1000	5000	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	77	50-150
Toluene-d8	73	50-150
Naphthalene-d8	74	50-150

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Client Sample ID: SG1-REP

Lab ID#: 1407520-02A

EPA METHOD TO-17

File Name:	**18073016**	**Date of Extraction: NA**	**Date of Collection: 7/28/14**
Dil. Factor:	**1.00**		**Date of Analysis: 7/31/14 09:27 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected
TPH (Diesel Range C10-C24)	1000	5000	Not Detected	Not Detected

Air Sample Volume(L): 0.200
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	50-150
Toluene-d8	90	50-150
Naphthalene-d8	94	50-150

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Client Sample ID: Lab Blank

Lab ID#: 1407520-03A

EPA METHOD TO-17

File Name:	**18073014**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 7/31/14 12:42 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
2-Propanol	49	240	Not Detected	Not Detected
Naphthalene	0.50	2.5	Not Detected	Not Detected
TPH (Diesel Range C10-C24)	1000	5000	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	83	50-150
Toluene-d8	80	50-150
Naphthalene-d8	81	50-150

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1407520-04A

EPA METHOD TO-17

File Name:	**18073007**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 7/30/14 06:27 PM**

Compound	%Recovery
2-Propanol	90
Naphthalene	98
TPH (Diesel Range C10-C24)	135

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	50-150
Toluene-d8	93	50-150
Naphthalene-d8	99	50-150

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1407520-05A

EPA METHOD TO-17

File Name:	**18073008**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 7/30/14 07:09 PM**

Compound	%Recovery	Method Limits
2-Propanol	93	70-130
Naphthalene	105	70-130
TPH (Diesel Range C10-C24)	125	60-140

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	50-150
Toluene-d8	96	50-150
Naphthalene-d8	100	50-150

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Client Sample ID: LCSD

Lab ID#: 1407520-05AA

EPA METHOD TO-17

File Name:	**18073009**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 7/30/14 07:51 PM**

Compound	%Recovery	Method Limits
2-Propanol	90	70-130
Naphthalene	101	70-130
TPH (Diesel Range C10-C24)	Not Spiked	60-140

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	50-150
Toluene-d8	94	50-150
Naphthalene-d8	98	50-150

CHAIN OF CUSTODY RECORD

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

PROJECT NUMBER: 0553

PROJECT NAME: Cathedral Gardens, 638 21st Street, Oakland, CA

SAMPLED BY: (PRINTED & SIGNATURE) Michael Bass-Deschenes [signature]

ANALYSIS(ES): Naphthalene, TPH-D, 1,4-Dioxane by EPA TO-17

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	Naphthalene, TPH-D, 1,4-Dioxane by EPA TO-17							PRESERVATIVE	REMARKS
01A	SG1	7/28/14		Soil Gas		1	X							ICE	NORMAL TAT
02A	SG1 - REP	"		"		1	X							"	" "
															Analyte = [illegible]

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment)	LABORATORY:
[signature]	7/30	9:49	[signature]	2	Eurofins/Air Toxics
				Total No. of Containers (This Shipment): 2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT:	LABORATORY PHONE NUMBER:
	7/30	1555	[signature] EATL	[signature]	(916) 985-1000 x 3339

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: Sorbent Tubes

Custody Seal Intact? N/A
Y N None Temp [illegible]

1407520

eurofins | Air Toxics

8/8/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: Cathedral Gardens 638 21st Street
Project #: 0553
Workorder #: 1407514

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 7/30/2014 at Air Toxics Ltd.

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

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

Regards,

Kyle Vagadori

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1407514

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0553 Cathedral Gardens 638 21st Street
DATE RECEIVED:	07/30/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	08/07/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SG1 DFA	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
02A	SG1 2-PROPANOL	Modified TO-15 (5&20 ppbv	Tedlar Bag	Tedlar Bag
03A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
04A	CCV	Modified TO-15 (5&20 ppbv	NA	NA
05A	LCS	Modified TO-15 (5&20 ppbv	NA	NA
05AA	LCSD	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 08/08/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-13-6, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15 Soil Gas
P & D Environmental
Workorder# 1407514

Two 1 Liter Tedlar Bag samples were received on July 30, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples SG1 DFA and SG1 2-PROPANOL due to the presence of high level target species.

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

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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

Client Sample ID: SG1 DFA

Lab ID#: 1407514-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	250000	7600000	680000	20000000

Client Sample ID: SG1 2-PROPANOL

Lab ID#: 1407514-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	25000	330000	61000	810000

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Client Sample ID: SG1 DFA

Lab ID#: 1407514-01A

EPA METHOD TO-15 GC/MS

File Name:	**14073109**	**Date of Collection: 7/28/14 10:47:00 AM**	
Dil. Factor:	**12500**	**Date of Analysis: 7/31/14 07:53 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Difluoroethane	250000	7600000	680000	20000000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	90	70-130

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Client Sample ID: SG1 2-PROPANOL

Lab ID#: 1407514-02A

EPA METHOD TO-15 GC/MS

File Name:	**14073110**	**Date of Collection: 7/28/14 11:00:00 AM**	
Dil. Factor:	**1250**	**Date of Analysis: 7/31/14 08:25 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	25000	330000	61000	810000

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1407514-03A

EPA METHOD TO-15 GC/MS

File Name:	**14073108a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/31/14 07:04 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	20	Not Detected	49	Not Detected
1,1-Difluoroethane	20	Not Detected	54	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	93	70-130

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Client Sample ID: CCV

Lab ID#: 1407514-04A

EPA METHOD TO-15 GC/MS

File Name:	**14073103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/31/14 04:31 PM**	

Compound	%Recovery
2-Propanol	115
1,1-Difluoroethane	108

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: LCS

Lab ID#: 1407514-05A

EPA METHOD TO-15 GC/MS

File Name:	**14073104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/31/14 04:59 PM**	

Compound	%Recovery	Method Limits
2-Propanol	115	70-130
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: LCSD

Lab ID#: 1407514-05AA

EPA METHOD TO-15 GC/MS

File Name:	**14073105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/31/14 05:22 PM**	

Compound	%Recovery	Method Limits
2-Propanol	107	70-130
1,1-Difluoroethane	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	94	70-130

CHAIN OF CUSTODY RECORD 1407514

PAGE 1 OF 1

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

PROJECT NUMBER: 0553

PROJECT NAME: Cathedral Gardens, 638 21st Street, Oakland, CA

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): DFA	2-PROPANOL	PRESERVATIVE	REMARKS
01A SG1 DFA	7/28/14	1047	AIR		1	X		HCWE	NORMAL ~~FWEEK~~ TAT
02A SG1 2-PROPANOL	7/28/14	1100	AIR		1		X	HCWE	NORMAL ~~FWEEK~~ TAT

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	DATE 7/30	TIME 9:49	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment): 2; Total No. of Containers (This Shipment): 2	LABORATORY: Eurofins/Air Toxics
RELINQUISHED BY: (SIGNATURE)	DATE 7/30/14	TIME 1155	RECEIVED BY: (SIGNATURE) EATL	LABORATORY CONTACT: Kyle Vercadoz	LABORATORY PHONE NUMBER: (916) 985-1000 x 3339
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (✓) NO	

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

REMARKS: TEDLAR BAGS

Custody Seal Intact? ~~Y~~ N None Temp NA

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8/12/2014
Mr. Paul King
P & D Environmental
55 Santa Clara
Suite 240
Oakland CA 94610

Project Name: Cathedral Gardens 638 21st Street
Project #: 0553
Workorder #: 1407517B

Dear Mr. Paul King

The following report includes the data for the above referenced project for sample(s) received on 7/30/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

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

Regards,

Kyle Vagadori

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1407517B

Work Order Summary

CLIENT:	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610	**BILL TO:**	Mr. Paul King P & D Environmental 55 Santa Clara Suite 240 Oakland, CA 94610
PHONE:	510-658-6916	**P.O. #**	
FAX:	510-834-0772	**PROJECT #**	0553 Cathedral Gardens 638 21st Street
DATE RECEIVED:	07/30/2014	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	08/12/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SG1	Modified ASTM D-1946	5.5 "Hg	15 psi
02A	SG1-DUP	Modified ASTM D-1946	5.5 "Hg	15 psi
03A	Lab Blank	Modified ASTM D-1946	NA	NA
04A	LCS	Modified ASTM D-1946	NA	NA
04AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 08/12/14

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-13-6, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified ASTM D-1946
P & D Environmental
Workorder# 1407517B

Two 1 Liter Summa Canister samples were received on July 30, 2014. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	***ASTM D-1946***	***ATL Modifications***
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

Summary of Detected Compounds
MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Client Sample ID: SG1

Lab ID#: 1407517B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	15
Carbon Dioxide	0.025	1.7

Client Sample ID: SG1-DUP

Lab ID#: 1407517B-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	15
Carbon Dioxide	0.025	1.8

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Client Sample ID: SG1

Lab ID#: 1407517B-01A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9080116**	**Date of Collection: 7/28/14**	
Dil. Factor:	**2.47**	**Date of Analysis: 8/1/14 04:49 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	15
Methane	0.00025	Not Detected
Carbon Dioxide	0.025	1.7

Container Type: 1 Liter Summa Canister

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Client Sample ID: SG1-DUP

Lab ID#: 1407517B-02A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9080117**	**Date of Collection: 7/28/14**	
Dil. Factor:	**2.47**	**Date of Analysis: 8/1/14 05:17 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	15
Methane	0.00025	Not Detected
Carbon Dioxide	0.025	1.8

Container Type: 1 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1407517B-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9080105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/1/14 11:04 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1407517B-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9080102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/1/14 09:17 AM**	

Compound	%Recovery	Method Limits
Oxygen	100	85-115
Methane	95	85-115
Carbon Dioxide	101	85-115

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1407517B-04AA

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9080120**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/1/14 07:02 PM**	

Compound	%Recovery	Method Limits
Oxygen	99	85-115
Methane	94	85-115
Carbon Dioxide	100	85-115

Container Type: NA - Not Applicable

CHAIN OF CUSTODY RECORD 1407517

PAGE 1 OF 1

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

PROJECT NUMBER: 0553

PROJECT NAME: Cathedral Gardens 638 21st Street Oakland, CA

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	INIT VAC	FINAL VAC	PID (PPM)	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-G MTBE, BTEX, and DIA by TO-15	O2, CO2, CH4 by ASTM D-1946	PRESERVATIVE	REMARKS
01A SG1	7/28/14	1046 1058	Silva Bass		-30	-5	0	1	X	X	NONE	NORMAL TAT
02A SG1-DUP	"	1048 1058	"		-30	-5	0	1	X	X	"	"

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	DATE 7/30	TIME 9:49	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment) 2	LABORATORY: Eurofins/Air Toxics Ltd.	
RELINQUISHED BY: (SIGNATURE)	DATE 7/30/14	TIME 1155	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment) 2	LABORATORY CONTACT: Kyle Vagadori	LABORATORY PHONE NUMBER: (916) 985-1000 x 3339
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: 1-liter Summas

Custody Seal Intact? Y N None Temp N/A