

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

June 2, 2014
Report 0553.R4

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

SUBJECT: UST REMOVAL REPORT
Cathedral Gardens
638 21st Street
Oakland, CA

Dear Mr. Kwong:

P&D Environmental, Inc. (P&D) has prepared this report documenting the removal of one 500-gallon capacity heating oil underground storage tank (UST) from the subject site. The UST was discovered on May 15, 2014 during excavation on the property near the 21st Street sidewalk. At the time of discovery, the UST was determined to be filled with oily water and low viscosity petroleum hydrocarbon liquid that exhibited a diesel odor. The fluid in the UST was removed from the UST and the UST was removed from the site on May 20, 2014. A Site Location Map (Figure 1), a Site Plan Aerial Photograph showing the approximate location of the UST (Figure 2), and a Site Plan Detail (Figure 3) showing the location of the UST and sample collection locations are attached with this report. All sample collection was performed under the supervision of a professional geologist.

The site addresses have historically included 2100 Martin Luther King Jr. Way, 616-634 21st Street and 635 22nd Street, Oakland, California. Based on the new mailing address for the new housing project, the address used to reference the Cathedral Gardens site in this report documenting the UST removal is 638 21st Street in Oakland, California.

BACKGROUND

Review of a Limited Phase II Environmental Site Assessment report dated June 27, 2011 prepared by Basics Environmental, Inc. of Oakland, California identified the historical use of the property as a church consisting of a cathedral and separate school building beginning in 1880 with demolition of the church in 1993. From 1993 until the time of site development for public housing in mid-2012 a small portable building and the former school building were present at the site.

In mid-2012 development of the site began for a public housing project that included retaining the original school building as part of the project. In preparation for the development project, chlordane-impacted soil and lead-impacted soil were removed from the site. Documentation of the soil disposal is provided in P&D's December 20, 2012 Soil Disposal Documentation Report (document 0553.R3).

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During excavation in September 2012 for an underground parking structure for the housing project an UST filled with oily water and low viscosity heating oil was discovered in the central portion of the property at a depth of approximately three feet below the pre-construction ground surface. No pipes were observed to be connected to the UST. Based on the results of soil samples collected following removal of the UST, the City of Oakland Fire Department Hazmat Division did not require further action related to the UST. The area where the UST was discovered was subsequently excavated for completion of the construction of the underground parking structure. Documentation of the UST removal and sample collection are provided in P&D's December 21, 2012 UST Removal Report (document 0553.R2).

On May 15, 2014 during excavation near the 21st Street sidewalk for property perimeter fence columns a second UST that was partially filled with petroleum hydrocarbon liquid was discovered at a depth of approximately 4.5 feet below the pre-construction ground surface elevation. The fluid in the UST was subsequently determined to be oily water with low viscosity heating oil-range fuel.

FIELD ACTIVITIES

Immediately following discovery of the UST on May 15, 2014 notification was provided to Inspector Leroy Griffin of the City of Oakland Fire Department HAZMAT Division. Prior to removal of the UST, an UST removal permit was obtained from the City of Oakland Fire Department HAZMAT Division.

UST Fluid Removal

On May 20, 2014 approximately 335 gallons of fluid consisting primarily of oily water was pumped from the UST into drums by DECON Environmental Services, Inc. (Decon) of Hayward, California in preparation for UST removal. The fluid was hauled from the site on May 21, 2014 as a non-RCRA hazardous waste liquid by Decon to the Clean Harbors facility located in San Jose, California using uniform hazardous waste manifest # 009234311 JJK. Decon is a State-certified hazardous waste hauler.

A copy of uniform hazardous waste manifest #009234311 JJK for removal of liquid from the UST prior to UST removal was mailed to the Department of Toxic Substances Control (DTSC) on May 30, 2014. A copy of the manifest is attached with this report in Appendix A.

UST Removal and Soil Sample Collection

On May 20, 2014 the soil surrounding the UST was excavated and the UST was removed from the UST pit by IMX, Inc. of Oakland, California (IMX). An LEL/oxygen meter was used to evaluate the UST atmosphere, and the meter readings showed 1% LEL and 20.9% oxygen. Prior to removal of the UST from the pit, the UST atmosphere was not inerted based on the LEL and oxygen values obtained from the meter. Inspector Leroy Griffin from the City of Oakland Fire Department HAZMAT Division was onsite and approved removal of the UST from the UST pit.

The top of the UST was at a depth of approximately 4.5 feet below the ground surface (bgs), and the bottom of the UST was at a depth of approximately 7.5 feet below the ground surface (bgs). The soil excavated from above the UST and from the sides of the UST consisted of dark brown

sandy silt and did not exhibit any evidence of discoloration or odor. The excavated soil was stockpiled on a sheet of visqueen and was covered at the end of the day.

Following removal of the UST from the pit, the UST was visually inspected. The UST was measured to be 3 feet in diameter and 10 feet in length with a calculated volume of approximately 500 gallons. The UST was constructed of single wall bare steel with welded seams. The exterior of the UST was observed to be rusted, with rust scaling and holes from corrosion observed at an elevation midway between the top and the bottom of the UST. Multiple corrosion holes were observed in the middle of the UST and several corrosion holes were observed in the bottom of the UST, with the largest hole measuring approximately four and a half inches in diameter and located on the side of the UST.

The soil underneath the UST consisted of blue-gray sandy silt and exhibited a strong petroleum odor. The material directly beneath the UST appeared to be a layer of fine sand measuring several inches in thickness that is assumed to have been associated with construction of the UST pit. Following removal of the UST from the UST pit, soil was excavated from the bottom of the UST pit from a depth of approximately 7.5 feet bgs to a depth of approximately 9.5 feet bgs and stockpiled separately from the soil removed from above and around the UST.

At the direction of Inspector Griffin one soil sample designated as T1-9.5 was collected from the western portion of the UST pit and a second soil sample designated as T2-9.5 was collected from the eastern portion of the UST pit. Both soil samples were collected from the excavator bucket from relatively undisturbed soil that was excavated from the bottom of the UST pit at a depth of approximately 9.5 feet bgs. Additional exploratory excavation was performed at the east end of the UST pit to a depth of approximately 11.5 feet bgs, and a soil sample designated as T2-11.5 was collected from relatively undisturbed soil in the excavator bucket from soil that was excavated from the bottom of the UST pit at a depth of approximately 11.5 feet bgs. This additional soil sample was collected to evaluate any evidence of vertical attenuation of petroleum hydrocarbon concentrations beneath the UST.

Each soil sample was collected into a 2-inch diameter, 6-inch long stainless steel tube. All three soil samples were blue-gray in color and exhibited a moderate petroleum odor. Each of the tubes was filled entirely to ensure that no head space was present in the tube. The ends of the tube were then sequentially covered with aluminum foil and plastic end caps, and the tube was then labeled and stored in a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling.

One discrete soil sample was collected into a stainless steel tube from each of the soil stockpiles using procedures described above. The soil sample collected from soil excavated from above and around the UST was designated as S1, and the soil sample collected from soil excavated from below the UST was designated as S2.

The sample collection locations are shown in Figure 3. Inspector Leroy Griffin was on site to observe excavation of the bottom of the UST pit and collection of the soil samples from the bottom of the UST pit. A copy of the Oakland Fire Department Underground Storage Tank Closure/Removal Field Inspection Report dated May 20, 2014 is attached with this report as Appendix B.

Photographs showing the UST following removal of the soil from around the UST prior to removal of the UST from the UST pit, the UST at the time of removal from the UST pit, and the UST following removal of the UST from the UST pit are attached with this report as Appendix C.

UST Transportation and Destruction

Following removal of the UST from the UST pit, the UST was loaded onto an Ecology Control Industries (ECI) truck and transported on May 20, 2014 with uniform hazardous waste manifest # 007944808 JJK to the ECI facility in Richmond, California. ECI is a State-certified hazardous waste hauler, and the ECI Richmond facility is a State-certified Transport, Storage and Disposal Facility. The UST was subsequently destroyed at the ECI facility. A copy of the uniform hazardous waste manifest for transportation of the and a copy of the certificate of UST destruction are attached with this report as Appendix D.

A copy of uniform hazardous waste manifest # 007944808 JJK dated May 20, 2014 for transportation of the UST was mailed to the DTSC on May 30, 2014.

Groundwater Sample Collection

On May 23, 2014 a 3.5-inch diameter steel hand auger was used to auger a borehole through the bottom of the borehole for collection of a groundwater grab sample. Based on a discussion with Mr. James Yoo of the Alameda County Public Works Agency, a soil boring permit was not required. Groundwater was encountered at a depth of approximately 15 feet bgs. The borehole extended to a depth of approximately 15.5 feet bgs. The subsurface materials encountered between the depths of 11.5 feet bgs and the total depth explored of 15.5 feet bgs consisted of sandy silt to a depth of approximately 12.5 feet bgs, which was underlain by fine sand to a depth of 15.5 feet bgs. All of the materials encountered in the borehole were discolored blue-gray and exhibited a moderate petroleum hydrocarbon odor.

A 3/4-inch diameter slotted PVC pipe was placed into the borehole and a 1/4-inch outside diameter polyethylene tube was inserted into the PVC pipe into the groundwater. A peristaltic pump was used to collect the groundwater sample. A moderate petroleum hydrocarbon odor and sheen were observed on the water that was pumped from the borehole. The water was pumped at a rate of approximately 200 milliliters per minute until the water was relatively clear. One groundwater sample designated as UST Pit Water 1 was collected directly from the discharge tubing into 40-milliliter glass Volatile Organic Analysis (VOA) vials which were provided by the laboratory and contained hydrochloric acid preservative. The VOA vials were sealed with caps containing Teflon-lined septa, and were overturned and tapped to ensure that no bubbles were present. The VOA vials were then labeled and placed in a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling.

Pit Backfilling

On May 23, 2014 following groundwater sample collection the UST pit was backfilled with material that had been excavated from other locations at the site. Compaction testing was performed by Fugro West, Inc. personnel.

Soil Disposal

On May 27, 2014, the soil stockpile that originated from beneath the UST was removed from the site by IMX. A total of 9.31 tons of soil was transported from the site as non-hazardous waste to the Vasco Road Landfill, Livermore, California. Copies of the non-hazardous waste manifest and the WeighMaster Certificate documenting the weight of the soil are attached to this report as Appendix E.

LABORATORY ANALYSIS

The soil samples collected from the bottom of the UST pit (samples T1-9.5, T2-9.5, and T2-11.5), the stockpile soil samples (samples S1 and S2), and the UST pit groundwater sample (UST Pit Water 1) were analyzed at McCampbell Analytical, Inc. (McCampbell) of Pittsburg, California. McCampbell Analytical, Inc. is a State-accredited hazardous waste testing laboratory.

The soil samples were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G) and Stoddard solvent (TPH-SS) using EPA Method 5030B in conjunction with EPA Method 8021B and modified EPA Method 8015B, for Total Petroleum Hydrocarbons as Kerosene (TPH-K), Diesel (TPH-D), Bunker Oil (TPH-BO) and 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 total xylenes (BTEX) and naphthalene using EPA Method 5030B in conjunction with EPA Method 8260B. The UST pit groundwater sample was analyzed for TPH-G and TPH-SS using EPA Method 5030B in conjunction with EPA Method 8021B and modified EPA Method 8015B, for TPH-K, TPH-D, TPH-BO, and TPH-MO using EPA Method 3510C in conjunction with EPA Method 8015B, and for VOCs, including MTBE, BTEX, and naphthalene, using the same methods as described above for soil samples.

The tank pit sample results are summarized in Table 1, the soil stockpile sample results are summarized in Table 2, and the UST pit groundwater sample results are summarized in Table 3. Copies of the laboratory reports and chain of custody documentation are attached with this report as Appendix F.

DISCUSSION AND RECOMMENDATIONS

Review of Table 1 shows that the laboratory analytical results of the tank pit bottom samples shows that MTBE, BTEX and naphthalene were not detected in any of the samples, and TPH-G was detected in samples T1-9.5, T2-9.5, and T2-11.5 at concentrations of 24, 21, and 20 milligrams per kilogram (mg/kg), respectively; TPH-SS was detected at concentrations of 51, 47, and 41 mg/kg, respectively; TPH-K was detected at concentrations of 570, 970, and 790 mg/kg, respectively; TPH-D was detected at concentrations of 790, 1,100, and 1,100 mg/kg, respectively; TPH-BO was detected at concentrations of 810, 1,100, and 1,100 mg/kg, respectively; and TPH-MO was detected at concentrations of 290, 470, and 380 mg/kg, respectively. Several petroleum hydrocarbon-related VOCs were detected (n-Butyl benzene, sec-Butyl benzene, 4-Isopropyl toluene, and n-Propyl benzene) at concentrations ranging from 0.0064 to 0.15 mg/kg. Review of the laboratory analytical report shows that the laboratory noted that there was significant strongly aged gasoline- or diesel-range compounds in the TPH-G

chromatogram, and described all of the TPH-K, TPH-D, TPH-BO, and TPH-MO results as consisting of unmodified or weakly modified diesel-range compounds.

Review of Table 2 shows that the laboratory analytical results of the stockpile soil samples show that MTBE, BTEX, and naphthalene were not detected in either of the stockpile soil samples, and TPH-G and TPH-SS were not detected in stockpile soil sample S1 that was collected from material that had been excavated from above and around the UST. TPH-K, TPH-D, TPH-BO and TPH-MO were detected in soil sample S1 at concentrations of 8.7, 13, 23, and 18 mg/kg, respectively. TPH-G, TPH-SS, TPH-K, TPH-D, TPH-BO, and TPH-MO were detected in stockpile soil sample S2 at concentrations of 24, 47, 1,300, 1,600, 1,600, and 540 mg/kg, respectively. Similar to the tank pit bottom samples, petroleum hydrocarbon-related VOCs were detected in stockpile soil sample S2 at concentrations ranging from 0.0063 to 0.091 mg/kg. Further review of the laboratory analytical report shows that the laboratory noted that there was significant strongly aged gasoline- or diesel-range compounds in the TPH-G chromatogram, and described all of the TPH-K, TPH-D, TPH-BO, and TPH-MO results as consisting of unmodified or weakly modified diesel-range compounds.

The laboratory analytical results for the groundwater sample collected from beneath the UST pit shows that MTBE and BTEX were not detected; TPH-G, TPH-SS, TPH-K, TPH-D, TPH-BO, and TPH-MO were detected at concentrations of 110, 130, 3,300, 4,600, 4,700, and 1,700 micrograms per Liter (ug/L), respectively. The only VOCs detected in the UST pit groundwater sample were naphthalene and sec-Butyl benzene at concentrations of 1.0 and 2.7 ug/L, respectively. Further review of the laboratory analytical report shows that the laboratory described the TPH-G and TPH-SS results as consisting of Stoddard solvent- or mineral spirits-range compounds, and the laboratory described the TPH-K, TPH-D, TPH-BO, and TPH-MO results as consisting of diesel-range compounds.

Comparison of the soil sample results in Table 1 with their respective San Francisco Bay Regional Water Quality Control Board (RWQCB) December 2013 Table A-1 shallow soil screening level Environmental Screening Levels (ESLs) for residential land use and Table C-1 deep soil screening level Environmental Screening Levels (ESLs) for residential land use shows that none of the detected concentrations exceed their respective ESL values, with the following exceptions:

- TPH-K, TPH-D, TPH-BO, and TPH-MO in soil sample T1-9.5 at concentrations of 570, 790, 810, and 290 mg/kg, respectively, exceed the respective Table A-1 ESL values of 100 mg/kg,
- TPH-K, TPH-D, TPH-BO, and TPH-MO in soil sample T2-9.5 at concentrations of 970, 1,100, 1,100, and 470 mg/kg, respectively, exceed the respective Table A-1 ESL values of 100 mg/kg,
- TPH-K, TPH-D, and TPH-BO in soil sample T2-11.5 at concentrations of 790, 1,100, and 1,100 mg/kg, respectively, exceed the respective Table C-1 ESL values of 110 mg/kg for TPH-K and TPH-D, and 500 mg/kg for TPH-BO.

Similarly, comparison of the groundwater sample results in Table 3 with their respective San Francisco Bay RWQCB December 2013 Table F-1a groundwater screening level ESLs where

groundwater is a current or potential drinking water resource, shows that none of the detected concentrations exceed their respective ESL values, with the following exceptions:

- TPH-G, TPH-SS, TPH-K, TPH-D, TPH-BO, and TPH-MO in groundwater sample UST Pit Water 1 at concentrations of 110, 130, 3,300, 4,600, 4,700, and 1,700 ug/L, respectively, exceed the respective Table F-1a values of 100 ug/L.

Comparison of the groundwater sample results in Table 3 with their respective San Francisco Bay RWQCB December 2013 Table E-1 groundwater screening levels for evaluation of potential vapor intrusion ESLs for a fine-coarse mixture for residential land use shows that none of the detected concentrations exceed their respective ESL values.

Based on the detected petroleum hydrocarbons in soil samples collected from beneath the former UST at concentrations exceeding their respective December 2013 Table A-1 and Table C-1 residential land use ESL values, P&D recommends further investigation of soil at the site to delineate the vertical and horizontal extent of petroleum hydrocarbons in soil.

Based on the detected petroleum hydrocarbons in the groundwater sample collected from beneath the UST pit at a depth of approximately 7.5 feet beneath the former UST, P&D recommends investigation of groundwater at the site to delineate the vertical and horizontal extent of petroleum hydrocarbons in groundwater.

An unauthorized release form was filed with M Mr. Leroy Griffin at the City of Oakland Fire Department HAZMAT Division under separate cover.

DISTRIBUTION

A copy of this report should be sent to Mr. Leroy Griffin at the City of Oakland Fire Department HAZMAT Division.

LIMITATIONS

This report was prepared solely for the use of 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 the 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 borings 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

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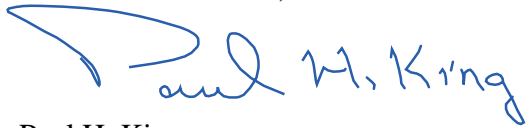
of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

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 UST Pit Soil Sample Laboratory Analytical Results

Table 2 - Summary of Soil Stockpile Sample Laboratory Analytical Results

Table 3 - Summary of Groundwater Sample Laboratory Analytical Results

Figure 1 - Site Location Map

Figure 2 - Site Plan Aerial Photograph Showing Approximate UST Location

Figure 3 - Site Plan Detail Showing Former UST and Sample Collection Locations

Appendix A - UST Fluid Disposal Uniform Hazardous Waste Manifest

Appendix B - City of Oakland Fire Department Underground Storage Tank Closure/Removal Field Inspection Report dated May 20, 2014

Appendix C - Photographs

Appendix D - UST Disposal Uniform Hazardous Waste Manifest and Certificate of Tank Destruction

Appendix E - Soil Disposal Non-Hazardous Waste Manifest and WeighMaster Certificate

Appendix F - Laboratory Analytical Reports and Chain of Custody Documentation

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TABLES

TABLE 1
SUMMARY OF UST PIT BOTTOM SOIL SAMPLE LABORATORY ANALYTICAL RESULTS

Sample ID	Sample Date	Sample Depth (Feet)	TPH-G	TPH-SS	TPH-K	TPH-D	TPH-BO	TPH-MO	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other VOCs by EPA 8260B
T1-9.5	5/20/2014	9.5	24, a	51, a	570, b	790, b	810, b	290, b	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND, except n-Butyl benzene = 0.012, sec-Butyl benzene = 0.11, 4-Isopropyl toluene = 0.0064, n-Propyl benzene = 0.0066
T2-9.5	5/20/2014	9.5	21, a	47, a	970, b	1,100, b	1,100, b	470, b	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	All ND, except sec-Butyl benzene = 0.15
T2-11.5	5/20/2014	11.5	20, a	41, a	<u>790, b</u>	<u>1,100, b</u>	<u>1,100, b</u>	380, b	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND, except sec-Butyl benzene = 0.15, 4-Isopropyl toluene = 0.015
ESL ¹			100	100	100	100	100	100	0.023	0.044	2.9	3.3	2.3	n-Butyl benzene = No Value, sec-Butyl benzene = No Value, 4-Isopropyl toluene = No Value, n-Propyl benzene = No Value
ESL ²			500	500	110	110	500	500	0.023	0.044	2.9	3.3	2.3	n-Butyl benzene = No Value, sec-Butyl benzene = No Value, 4-Isopropyl toluene = No Value, n-Propyl benzene = No Value
NOTES														
TPH-G = Total Petroleum Hydrocarbons as Gasoline.														
TPH-SS = Total Petroleum Hydrocarbons as Stoddard solvent.														
TPH-K = Total Petroleum Hydrocarbons as Kerosene.														
TPH-D = Total Petroleum Hydrocarbons as Diesel.														
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.														
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.														
MTBE = Methyl-tert-Butyl Ether.														
ND = Not Detected.														
a = Laboratory Analytical Note: strongly aged gasoline or diesel range compounds are significant in the TPH-G chromatogram.														
b = Laboratory Analytical Note: unmodified or weakly modified diesel is significant.														
of drinking water. Residential land use.														
ESL ¹ = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board , updated December 2013, from Table A-1 – Shallow Soil Screening Levels,Groundwater is a current or potential source of drinking water. Residential land use.														
ESL ² = 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 source of drinking water. Residential land use.														
Values in bold exceed their respective ESL¹ values.														
<u>Underlined values exceed their respective ESL² values.</u>														
All results and ESLs reported in milligrams per kilogram (mg/kg) unless otherwise noted.														

TABLE 2
SUMMARY OF SOIL STOCKPILE SAMPLE LABORATORY ANALYTICAL RESULTS

Sample ID	Sample Date	TPH-G	TPH-SS	TPH-K	TPH-D	TPH-BO	TPH-MO	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other VOCs by EPA 8260B
S1	5/20/2014	ND<1.0	ND<1.0	8.7, b	13, b	23, b	18, b	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND
S2	5/20/2014	24, a	47, a	1,300, b	1,600, b	1,600, b	540, b	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND, except n-Butyl benzene = 0.010, sec-Butyl benzene = 0.091, 4-Isopropyl toluene = 0.0063
NOTES													
TPH-G = Total Petroleum Hydrocarbons as Gasoline.													
TPH-SS = Total Petroleum Hydrocarbons as Stoddard solvent.													
TPH-K = Total Petroleum Hydrocarbons as Kerosene.													
TPH-D = Total Petroleum Hydrocarbons as Diesel.													
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.													
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.													
MTBE = Methyl-tert-Butyl Ether.													
ND = Not Detected.													
a = Laboratory Analytical Note: strongly aged gasoline or diesel range compounds are significant in the TPH-G chromatogram.													
b = Laboratory Analytical Note: unmodified or weakly modified diesel is significant.													
All results reported in milligrams per kilogram (mg/kg) unless otherwise noted.													

TABLE 3
SUMMARY OF GROUNDWATER SAMPLE LABORATORY ANALYTICAL RESULTS

Sample ID	Sample Date	TPH-G	TPH-SS	TPH-K	TPH-D	TPH-BO	TPH-MO	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other VOCs by EPA 8260B
UST Pit Water 1	5/23/2014	110, a	130, a	3,300, b	4,600, b	4,700, b	1,700, b	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND, except Naphthalene = 1.0, sec-Butyl benzene = 2.7
ESL ¹		100	100	100	100	100	100	0.023	0.044	2.9	3.3	2.3	Naphthalene = 6.1, sec-Butyl benzene = No Value
ESL ²		None	None	None	None	None	None	9,900	27	95,000	310	37,000	Naphthalene = 160, sec-Butyl benzene = No Value,
NOTES													
TPH-G = Total Petroleum Hydrocarbons as Gasoline.													
TPH-SS = Total Petroleum Hydrocarbons as Stoddard solvent.													
TPH-K = Total Petroleum Hydrocarbons as Kerosene.													
TPH-D = Total Petroleum Hydrocarbons as Diesel.													
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.													
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.													
MTBE = Methyl-tert-Butyl Ether.													
ND = Not Detected.													
a = Laboratory Analytical Note: TPH pattern that does not appear to be derived from gasoline (Stoddard solvent/ mineral spirits?).													
b = Laboratory Analytical Note: unmodified or weakly modified diesel is significant.													
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.													
Values in bold exceed their respective ESL¹ values.													
All results and ESLs reported in milligrams per kilogram (mg/kg) unless otherwise noted.													

FIGURES

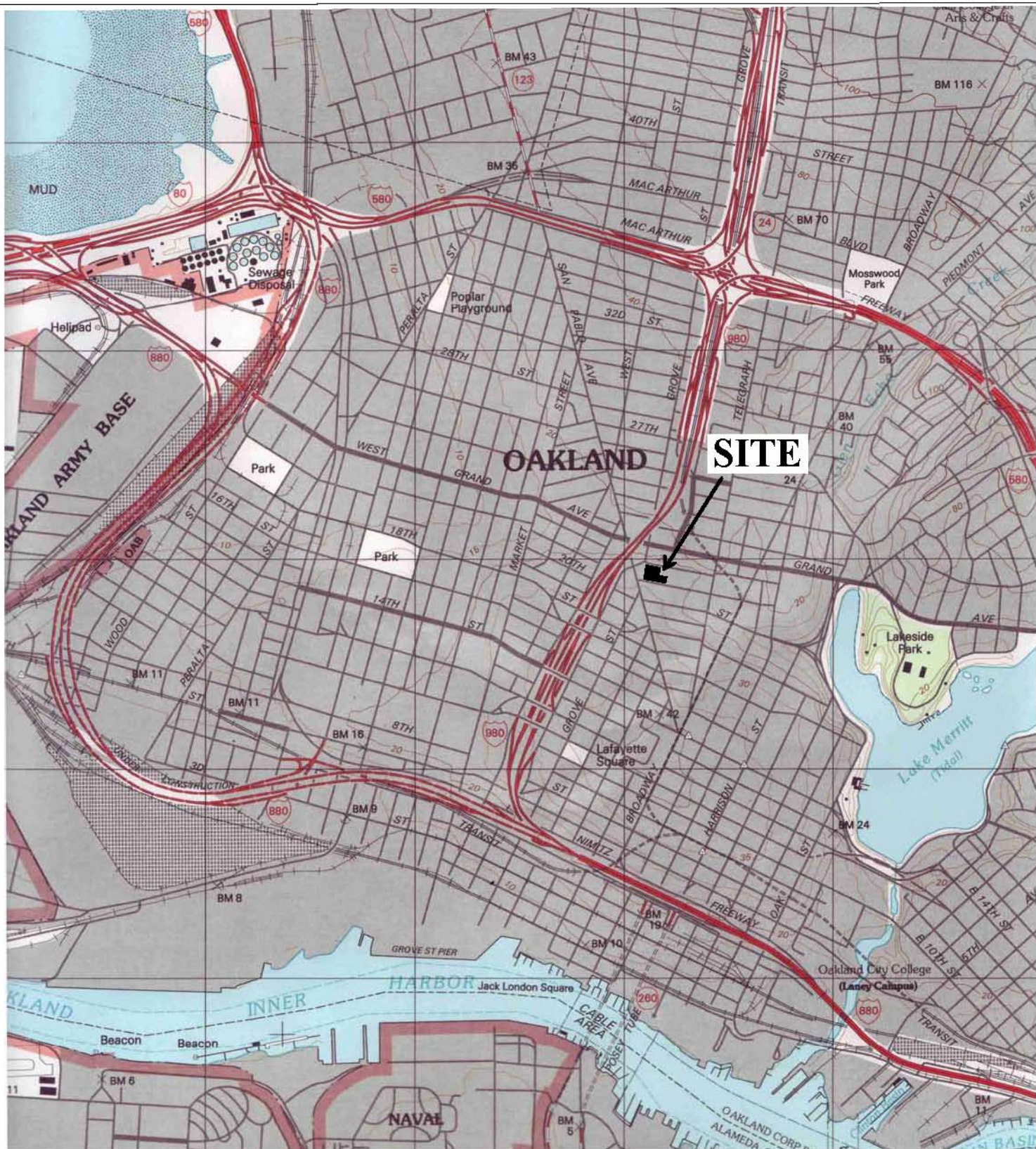


Figure 1
 Site Location Map
 Cathedral Gardens
 638 21st Street
 Oakland, California

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

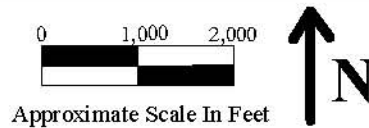
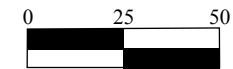




Figure 2
 Site Plan Aerial Photograph Showing Approximate UST Location
 Cathedral Gardens
 638 21st Street
 Oakland, California

Base Map From:
 Basics Environmental, Limited Phase II
 Environmental Site Sampling Report,
 dated June 27, 2011, and Google Earth, image dated
 September 2012

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



Approximate Scale In Feet



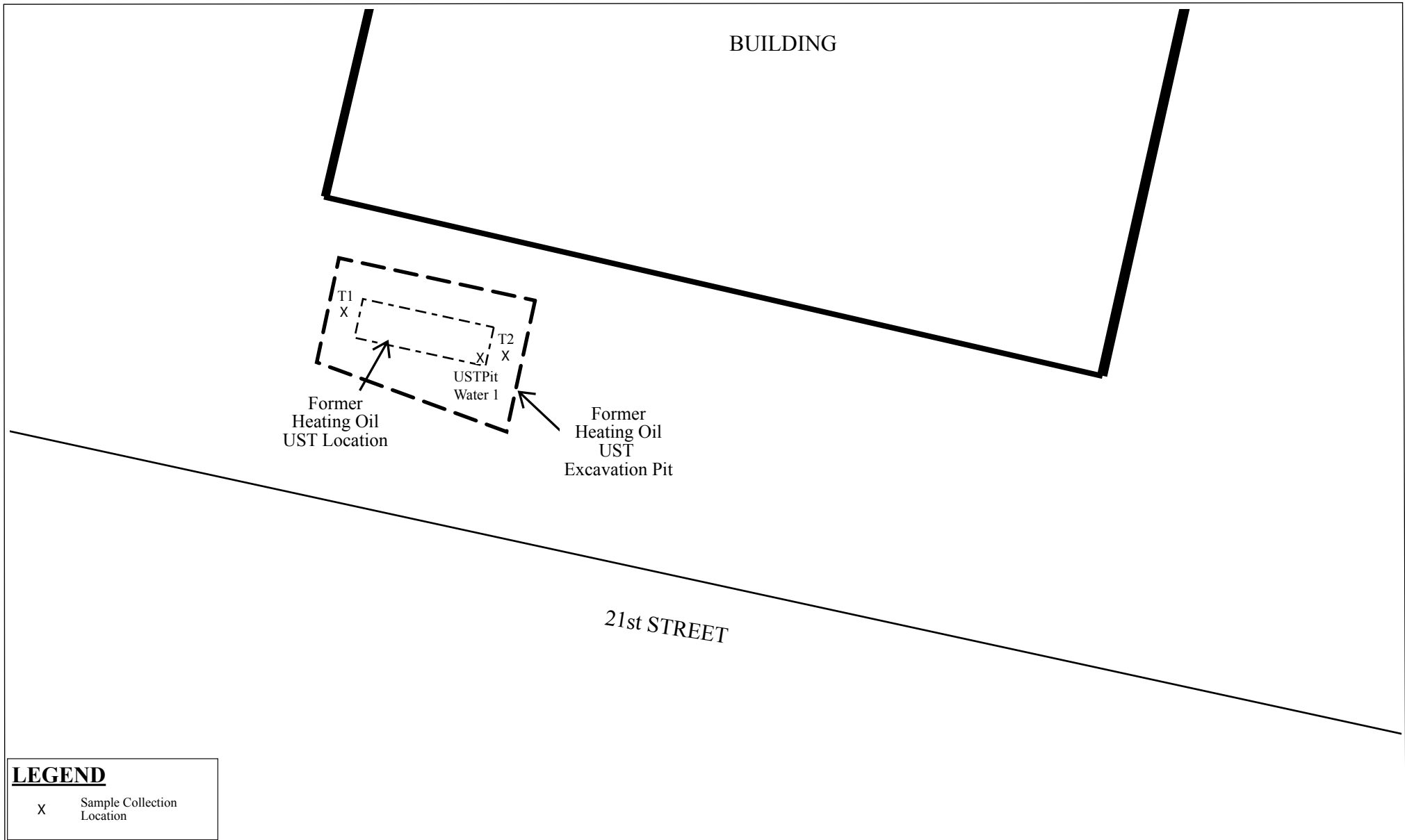
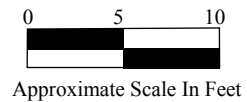


Figure 3
 Site Plan Detail Showing Former UST and Sample Collection Locations
 Cathedral Gardens
 638 21st Street
 Oakland, California

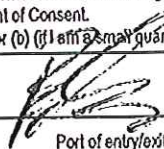

Base Map From:
 Basics Environmental, Limited Phase II
 Environmental Site Sampling Report,
 dated June 27, 2011

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



APPENDIX A
UST Fluid Disposal Uniform Hazardous Waste Manifest

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CA C002771459	2. Page 1 of 1	3. Emergency Response Phone (800) 925-4994	4. Manifest Tracking Number 009234311 JJK		
5. Generator's Name and Mailing Address CATHEDRAL GARDENS OAKLAND, L.P. 2169 FRANCISCO BLVD E, STE EAH SAN RAFAEL, CA 94901		Generator's Site Address (if different than mailing address) CATHEDRAL GARDENS OAKLAND, L.P. 638 E. 21 ST. OAKLAND, CA 94606 (415) 295-8857					
6. Transporter 1 Company Name MATHESON ENVIRONMENTAL SERVICES, INC.		Generator's Phone: (510) 732-6444		U.S. EPA ID Number CA R000226894			
7. Transporter 2 Company Name				U.S. EPA ID Number			
8. Designated Facility Name and Site Address CLEAN HARBORS OF SAN JOSE LLC 1021 BERRYESSA ROAD SAN JOSE, CA 95133		Facility's Phone: (408) 441-0962		U.S. EPA ID Number CA D059494310			
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt/Vol.	13. Waste Codes
	X	1. UN1268 WASTE PETROLEUM DISTILLATES, N.O.S. (DIESEL FUEL, GASOLINE), 3, PG II, ERG #128	8	DM	335	G	213 0001 0002 0018
		2.					
		3.					
		4.					
14. Special Handling Instructions and Additional Information 1: PH#: CH812256 ERG#: 128						PO#: JIS#6448 WO#: WO777 Ref#: 1105	
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offoror's Printed/Typed Name PENNY KWONG		Signature 		Month Day Year 5 20 14			
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:					
17. Transporter Acknowledgment of Receipt of Materials		Transporter 1 Printed/Typed Name MINE COLLIER		Signature 		Month Day Year 05 21 14	
Transporter 2 Printed/Typed Name		Signature		Month Day Year			
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
Manifest Reference Number:							
18b. Alternate Facility (or Generator)		U.S. EPA ID Number					
Facility's Phone:							
18c. Signature of Alternate Facility (or Generator)						Month Day Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1.		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name		Signature		Month Day Year			

APPENDIX B

**City Of Oakland Fire Department Underground Storage Tank
Closure/Removal Field Inspection Report Dated May 20, 2014**

OAKLAND FIRE DEPARTMENT/FIRE PREVENTION BUREAU HAZARDOUS MATERIALS UNIT

250 FRANK H. OGAWA PLAZA, SUITE 3341, OAKLAND, CA 94612-2032 • (510) 238-3927

HAZARDOUS MATERIALS INSPECTION REPORT

	Facility Name:	Address:	
N/A	CATHEDRAL GARAGE	658 21 ST Bldg 1	94612

Inspection Report

PERMISSION TO INSPECT GRANTED

1) ON SITE FOR REMOVAL OF ONE UST, 500-gallon
SINGLE WALL STEEL TANK.

2) CONTRACTOR OF RECORD IMX INC
CONSULTANT FOR ENVIRONMENT P+D ENVIRONMENTAL


3) TANK WAS REMOVED FROM EXCAVATION WITH NO
ISSUES.

Observation:

1) TANK had several holes from CORROSION, SEAMS WERE
INTACT

2) Excavation had discolored soil (GREYISH)
Samples were taken at 9.5' bottom of the tank
was 7.5'

Top - BLACK SLUDG, KEROSENE, STEADY solvent.

Facility Contact/Print Name:	Inspected By: <input checked="" type="checkbox"/> AFM Griffin 238-7759
Heena Dhanan	<input type="checkbox"/> Insp. Matthews 238-2396
Facility Contact/Signature:	<input type="checkbox"/> Insp. Skillern 238-7253
	<input type="checkbox"/> _____ 238-3927
	Date: 5/20/14

**OAKLAND FIRE DEPARTMENT, OES
UNDERGROUND STORAGE TANK CLOSURE/REMOVAL FIELD INSPECTION REPORT**

Site Address: <u>638 21st</u>	Name of Facility: <u>Cathedral Gardens</u>
Inspector: <u>LEROY GRIFFINS</u>	Contact on site: <u>HEENA DHAWAN</u>
Date and Time of Arrival:	Contractor/Consultant: <u>P+D ENVIRONMENTAL</u>

General Requirements	Yes	No	N/A
Approved closure plan on site.	✓		
Changes to approved plan noted.			✓
Residuals properly stored/transported.	✓		
Receipt for adequate dry ice noted.			✓

General Requirements	Yes	No	N/A
Site Safety Plan properly signed.	✓		
40B:C fire extinguisher on site.	✓		
"No Smoking" signs posted.	✓		
Gas detector challenged by inspector.	✓		

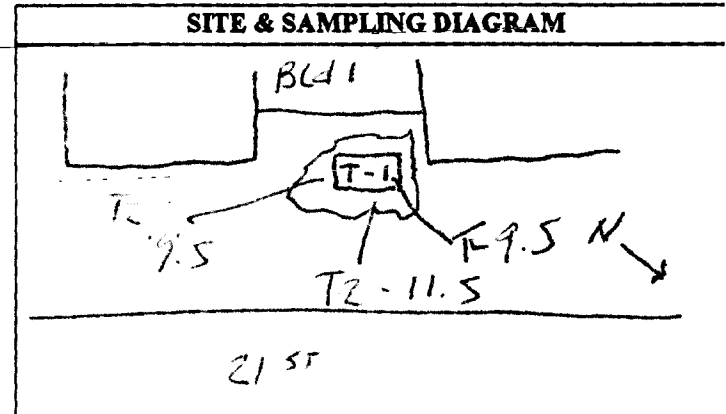
Tank Observations	T #1	T #2	T #3	T #4
Tank Capacity (gallons)	<u>520</u>			
Material last stored	<u>H-O</u>			
Dry ice used (pounds)	<u>0</u>			
Combustible gas concentration as %LEL. (Note time & sampling point)				
(1) <u>4.45 Benzol</u>	<u>0</u>			
(2)				
(3)				
Oxygen concentration as % volume. (Note time & sampling point)				
(1)	<u>21</u>			
(2)				
(3)				
Tank Material	<u>Steel</u>			
Wrapping/Coating, if any	<u>1.0</u>			
Obvious holes?	<u>Yes</u>			

Tank Observations	T #1	T #2	T #3	T #4
Obvious corrosion?	<u>Yes</u>			
Obvious odors from tank?	<u>No</u>			
Seams intact?	<u>Yes</u>			
Tank bed backfill material	<u>Sand</u>			
Obvious discoloration?	<u>Yes</u>			
Obvious odors ex tank bed?	<u>Yes</u>			
Water in excavation?	<u>No</u>			
Sheen/product on water?	<u>No</u>			
Tank tagged by transporter?				
Tank wrapped for transport?				
Tank plugged w/ vent cap?	<u>Y</u>			
Date/time tank hauled off?				
No. of soil samples taken?				
Depth of soil samples (ft. bgs)				

Piping Removal	Yes	No	N/A
All piping removed hauled off w/ tanks?			<u>N/A</u>
Obvious holes on pipes?			
Obvious odors from pipes?			
Obvious soil discoloration in piping trench?			
Obvious odors from piping trench?			
Water in piping trench?			<u>N/A</u>
Number & depth of soil samples from piping trench?			<u>2'</u>
Number & depth of water samples from piping trench?			

General Observations	Yes	No	N/A
Leak from any tank suspected?	X		
"Leak Report" form given to the operator?	X		
Obviously contaminated soil excavated?	X		
Soil stockpile sampled?	X		
Stockpile lined AND covered?	X		
Water in excavation sampled?			X
Number/depth of water samples taken?			<u>N/A</u>
All samples properly preserved for transport?	X		

Additional Observations	Yes	No	N/A
Soil/water sampling protocols acceptable?	X		
Sampling "chain of custody" noted?	X		
Tank pit filled in or covered?			X
Tank pit fenced or barricaded?			
Transporter a registered HW hauler?	X		
Uniform HW Manifest completed?	X		
Contractor/Consultant reminded of complete UST Removal Report due within 30 days?	X		
Date/Time removal/closure operations completed?			<u>5:22</u>
OT hours or additional charges due from contractor?			



Notes/Comments: _____

APPENDIX C
Photographs



UST prior to removal



UST at the time of removal



UST after removal

APPENDIX D
**UST Disposal Uniform Hazardous Waste Manifest and Certificate
of Tank Destruction**

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CAC002701506	2. Page 1 of 1	3. Emergency Response Phone 800-424-9300	4. Manifest Tracking Number 007944808 JJK		
5. Generator's Name and Mailing Address CATHEDRAL GARDEN OAKLAND LP CARE OF EAH INC 2169 FRANCISCO BLVD E STE B SAN RAFAEL, CA 94901				Generator's Site Address (if different than mailing address) 638 21ST C OAKLAND, CA 94612			
Generator's Phone: 415-295-8857		6. Transporter 1 Company Name ECOLOGY CONTROL INDUSTRIES		U.S. EPA ID Number CAD982030173x			
7. Transporter 2 Company Name				U.S. EPA ID Number			
8. Designated Facility Name and Site Address ECOLOGY CONTROL INDUSTRIES 255 PARR BOULEVARD RICHMOND, CA 94801				U.S. EPA ID Number CAD009466392			
Facility's Phone: 510-235-1393							
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
1.	NON-RCRA HAZARDOUS WASTE SOLID (EMPTY STORAGE TANK)	001	TP	500	P	512x	
2.				0			
3.				0			
4.				0			
14. Special Handling Instructions and Additional Information ECI JOB # 52T45062 TANK # 34554 WEAR PROPER PPE WHEN HANDLING // WEIGHTS AND VOLUMES ARE APPROXIMATE P&D IN: 0553							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offoror's Printed/Typed Name BENNY KWONG				Signature <i>[Signature]</i>		Month Day Year 5 20 14	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name Bill Maarske				Signature <i>[Signature]</i>		Month Day Year 5 20 14	
Transporter 2 Printed/Typed Name				Signature		Month Day Year 5 20 14	
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
18b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number _____							
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
A129							
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name Shou Spence				Signature <i>[Signature]</i>		Month Day Year 5 20 14	

167-BLC-O 6 10436
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CERTIFICATE
CERTIFIED SERVICES COMPANY
255 Parr Boulevard · Richmond, California 94801
Phone # 510-235-1393

CUSTOMER: P & D ENVIRONMENTAL **JOB NO:** 52T4562
GENERATOR: CATHEDRAL GARDENS OAKLAND, L.P.
638 21 STREET OAKLAND CA 94606
FOR: ECOLOGY CONTROL INDUSTRIES **TANK NO.:** 34554
LOCATION: RICHMOND **DATE:** 05/23/2014
LAST PRODUCT: FUEL OIL **TEST METHOD:** VISUAL GASTECH/1314 SMPN

This is to certify that I have personally determined that this is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE: 500 GALLONS

CONDITION: SAFE FOR FIRE

REMARKS:

OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1% ECOLOGY CONTROL INDUSTRIES

HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN CUT OPEN, PROCESSED

AND THEREFORE, DESTROYED AT OUR PERMITTED HAZARDOUS WASTE FACILITY.

ECOLOGY CONTROL INDUSTRIES HAS THE APPROPRIATE PERMITS FOR AND HAS ACCEPTED

THE TANK SHIPPED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or it in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) in the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

Bill Mause
REPRESENTATIVE

TITLE

[Signature]
INSPECTOR

APPENDIX E
Soil Disposal Non-Hazardous Waste Manifest and WeighMaster
Certificate

1802107

If waste is asbestos waste, complete Sections I, II, III and IV
 If waste is **NOT** asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r) c. Page 1 of _____

a. Generator's US EPA ID Number: N/A

b. Manifest Document Number: _____

e. Generator's Mailing Address:
 Cathedral Gardens Oakland, L.P. c/o EAH Inc.
 2169 E. Francisco Blvd., Suite EAH
 San Rafael, CA 94901 415-295-8857

f. Generator's Name and Location:
 Cathedral Gardens Oakland, L.P. c/o EAH Inc.
 638 21 St.
 Phone: Oakland, CA 94612 415-295-8857

g. Phone: San Rafael, CA 94901 415-295-8857

h. If the owner of the generating facility differs from the generator, provide:
 Owner's Name: _____ i. Owner's Phone No.: _____

Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers		n. Total Quantity	o. Unit Wt/Vol
			No.	Type		
3850148533	5/21/2015	Soil				CY

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

Generator Authorized Agent Name (Print): Benny Kwong q. Signature: [Signature] r. Date: 5-27-14

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

Transporter's Name and Address:
FMX INC
4200 Park Hill #253 Oakland

s. Phone: _____

t. Driver Name (Print): Ray Mautny u. Signature: [Signature] v. Date: 5-28-14

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address:
 Vasco Rd Landfill
 4001 N. Vasco Rd.
 Livemore, CA 94551 925-447-0491

c. US EPA Number: _____ d. Discrepancy Indication Space: _____

Waste Profile # _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

w. Name of Authorized Agent (Print): M. Keshorn x. Signature: [Signature] y. Date: 5-28-14

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address: _____ c. Responsible Agency Name and Address: _____

b. Phone: _____ d. Phone: _____

e. Special Handling Instructions and Additional Information: _____

f. Friable Non-Friable Both % Friable % Non-Friable

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

z. Operator's Name and Title (Print): BENNY KWONG, Sr. Proj. mgr aa. Signature: [Signature] ab. Date: 5/27/14

*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both

Landfill
 Vasco Road
 CA 925-447-0491

CONTRACT - Exempt Acct
 1001 N. VASCO ROAD
 LIVERMORE, CA 94551
 3850148533

SITE 01	TICKET # 961920	CELL
WEIGHMASTER M. Pedroza		
DATE/TIME IN 05-28-2014 12:29 pm		DATE/TIME OUT 05-28-2014 12:5
VEHICLE 10		CONTAINER
REFERENCE CC/7K75946 CASH		
BILL OF LADING		

GROSS WEIGHT 46,000 NET TONS 9.31
 TARE WEIGHT 27,380 NET WEIGHT 18,620 INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
9.31	TN	SW-CONT SOIL-ALT DAILY COVE OAKLAND	\$30.00	\$279.30	\$0.00	\$279.30

WEIGHMASTER CERTIFICATE - This is to certify that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food & Agriculture.

Payment (s)

CREDIT CARD-SCALE \$279.30

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

NET AMOUNT
\$279.30
TENDERED
\$279.30
CHANGE
\$0.00
CHECK#

APPENDIX F

Laboratory Analytical Reports and Chain of Custody Documentation

- **McC Campbell Workorder # 1405780: T1 & T2 Results**
- **McC Campbell Workorder # 1405779: S1 & S2 Results**
- **McC Campbell Workorder # 1405960: UST Pit Water 1 Results**



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1405780

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

Project Contact: Heena Dhawan
Project P.O.:
Project Name: #0553; Cathedral Gardens

Project Received: 05/20/2014

Analytical Report reviewed & approved for release on 05/21/2014 by:

*Question about
your data?*

[Click here to email
McC Campbell](#)

Angela Rydelius,
Laboratory Manager

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





Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: #0553; Cathedral Gardens
WorkOrder: 1405780

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 Qualifier

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e1	unmodified or weakly modified diesel is significant



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 17:07
Date Prepared: 5/20/14

WorkOrder: 1405780
Extraction Method: SW5030B
Analytical Method: SW8260B
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
T1-9.5	1405780-001A	Soil	05/20/2014	GC10	90628
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	05/21/2014 02:00
tert-Amyl methyl ether (TAME)	ND		0.0050	1	05/21/2014 02:00
Benzene	ND		0.0050	1	05/21/2014 02:00
Bromobenzene	ND		0.0050	1	05/21/2014 02:00
Bromochloromethane	ND		0.0050	1	05/21/2014 02:00
Bromodichloromethane	ND		0.0050	1	05/21/2014 02:00
Bromoform	ND		0.0050	1	05/21/2014 02:00
Bromomethane	ND		0.0050	1	05/21/2014 02:00
2-Butanone (MEK)	ND		0.020	1	05/21/2014 02:00
t-Butyl alcohol (TBA)	ND		0.050	1	05/21/2014 02:00
n-Butyl benzene	0.012		0.0050	1	05/21/2014 02:00
sec-Butyl benzene	0.11		0.0050	1	05/21/2014 02:00
tert-Butyl benzene	ND		0.0050	1	05/21/2014 02:00
Carbon Disulfide	ND		0.0050	1	05/21/2014 02:00
Carbon Tetrachloride	ND		0.0050	1	05/21/2014 02:00
Chlorobenzene	ND		0.0050	1	05/21/2014 02:00
Chloroethane	ND		0.0050	1	05/21/2014 02:00
Chloroform	ND		0.0050	1	05/21/2014 02:00
Chloromethane	ND		0.0050	1	05/21/2014 02:00
2-Chlorotoluene	ND		0.0050	1	05/21/2014 02:00
4-Chlorotoluene	ND		0.0050	1	05/21/2014 02:00
Dibromochloromethane	ND		0.0050	1	05/21/2014 02:00
1,2-Dibromo-3-chloropropane	ND		0.0040	1	05/21/2014 02:00
1,2-Dibromoethane (EDB)	ND		0.0040	1	05/21/2014 02:00
Dibromomethane	ND		0.0050	1	05/21/2014 02:00
1,2-Dichlorobenzene	ND		0.0050	1	05/21/2014 02:00
1,3-Dichlorobenzene	ND		0.0050	1	05/21/2014 02:00
1,4-Dichlorobenzene	ND		0.0050	1	05/21/2014 02:00
Dichlorodifluoromethane	ND		0.0050	1	05/21/2014 02:00
1,1-Dichloroethane	ND		0.0050	1	05/21/2014 02:00
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	05/21/2014 02:00
1,1-Dichloroethene	ND		0.0050	1	05/21/2014 02:00
cis-1,2-Dichloroethene	ND		0.0050	1	05/21/2014 02:00
trans-1,2-Dichloroethene	ND		0.0050	1	05/21/2014 02:00
1,2-Dichloropropane	ND		0.0050	1	05/21/2014 02:00
1,3-Dichloropropane	ND		0.0050	1	05/21/2014 02:00
2,2-Dichloropropane	ND		0.0050	1	05/21/2014 02:00
1,1-Dichloropropene	ND		0.0050	1	05/21/2014 02:00

(Cont.)



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 17:07
Date Prepared: 5/20/14

WorkOrder: 1405780
Extraction Method: SW5030B
Analytical Method: SW8260B
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
T1-9.5	1405780-001A	Soil	05/20/2014	GC10	90628
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	05/21/2014 02:00
trans-1,3-Dichloropropene	ND		0.0050	1	05/21/2014 02:00
Diisopropyl ether (DIPE)	ND		0.0050	1	05/21/2014 02:00
Ethylbenzene	ND		0.0050	1	05/21/2014 02:00
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	05/21/2014 02:00
Freon 113	ND		0.10	1	05/21/2014 02:00
Hexachlorobutadiene	ND		0.0050	1	05/21/2014 02:00
Hexachloroethane	ND		0.0050	1	05/21/2014 02:00
2-Hexanone	ND		0.0050	1	05/21/2014 02:00
Isopropylbenzene	ND		0.0050	1	05/21/2014 02:00
4-Isopropyl toluene	0.0064		0.0050	1	05/21/2014 02:00
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	05/21/2014 02:00
Methylene chloride	ND		0.0050	1	05/21/2014 02:00
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	05/21/2014 02:00
Naphthalene	ND		0.0050	1	05/21/2014 02:00
n-Propyl benzene	0.0066		0.0050	1	05/21/2014 02:00
Styrene	ND		0.0050	1	05/21/2014 02:00
1,1,1,2-Tetrachloroethane	ND		0.0050	1	05/21/2014 02:00
1,1,2,2-Tetrachloroethane	ND		0.0050	1	05/21/2014 02:00
Tetrachloroethene	ND		0.0050	1	05/21/2014 02:00
Toluene	ND		0.0050	1	05/21/2014 02:00
1,2,3-Trichlorobenzene	ND		0.0050	1	05/21/2014 02:00
1,2,4-Trichlorobenzene	ND		0.0050	1	05/21/2014 02:00
1,1,1-Trichloroethane	ND		0.0050	1	05/21/2014 02:00
1,1,2-Trichloroethane	ND		0.0050	1	05/21/2014 02:00
Trichloroethene	ND		0.0050	1	05/21/2014 02:00
Trichlorofluoromethane	ND		0.0050	1	05/21/2014 02:00
1,2,3-Trichloropropane	ND		0.0050	1	05/21/2014 02:00
1,2,4-Trimethylbenzene	ND		0.0050	1	05/21/2014 02:00
1,3,5-Trimethylbenzene	ND		0.0050	1	05/21/2014 02:00
Vinyl Chloride	ND		0.0050	1	05/21/2014 02:00
Xylenes, Total	ND		0.0050	1	05/21/2014 02:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	103		70-130		05/21/2014 02:00
Toluene-d8	112		70-130		05/21/2014 02:00
4-BFB	102		70-130		05/21/2014 02:00

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Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 17:07
Date Prepared: 5/20/14

WorkOrder: 1405780
Extraction Method: SW5030B
Analytical Method: SW8260B
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
T2-9.5	1405780-002A	Soil	05/20/2014	GC16	90628
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.20	2	05/21/2014 10:06
tert-Amyl methyl ether (TAME)	ND		0.010	2	05/21/2014 10:06
Benzene	ND		0.010	2	05/21/2014 10:06
Bromobenzene	ND		0.010	2	05/21/2014 10:06
Bromochloromethane	ND		0.010	2	05/21/2014 10:06
Bromodichloromethane	ND		0.010	2	05/21/2014 10:06
Bromoform	ND		0.010	2	05/21/2014 10:06
Bromomethane	ND		0.010	2	05/21/2014 10:06
2-Butanone (MEK)	ND		0.040	2	05/21/2014 10:06
t-Butyl alcohol (TBA)	ND		0.10	2	05/21/2014 10:06
n-Butyl benzene	ND		0.010	2	05/21/2014 10:06
sec-Butyl benzene	0.15		0.010	2	05/21/2014 10:06
tert-Butyl benzene	ND		0.010	2	05/21/2014 10:06
Carbon Disulfide	ND		0.010	2	05/21/2014 10:06
Carbon Tetrachloride	ND		0.010	2	05/21/2014 10:06
Chlorobenzene	ND		0.010	2	05/21/2014 10:06
Chloroethane	ND		0.010	2	05/21/2014 10:06
Chloroform	ND		0.010	2	05/21/2014 10:06
Chloromethane	ND		0.010	2	05/21/2014 10:06
2-Chlorotoluene	ND		0.010	2	05/21/2014 10:06
4-Chlorotoluene	ND		0.010	2	05/21/2014 10:06
Dibromochloromethane	ND		0.010	2	05/21/2014 10:06
1,2-Dibromo-3-chloropropane	ND		0.0080	2	05/21/2014 10:06
1,2-Dibromoethane (EDB)	ND		0.0080	2	05/21/2014 10:06
Dibromomethane	ND		0.010	2	05/21/2014 10:06
1,2-Dichlorobenzene	ND		0.010	2	05/21/2014 10:06
1,3-Dichlorobenzene	ND		0.010	2	05/21/2014 10:06
1,4-Dichlorobenzene	ND		0.010	2	05/21/2014 10:06
Dichlorodifluoromethane	ND		0.010	2	05/21/2014 10:06
1,1-Dichloroethane	ND		0.010	2	05/21/2014 10:06
1,2-Dichloroethane (1,2-DCA)	ND		0.0080	2	05/21/2014 10:06
1,1-Dichloroethene	ND		0.010	2	05/21/2014 10:06
cis-1,2-Dichloroethene	ND		0.010	2	05/21/2014 10:06
trans-1,2-Dichloroethene	ND		0.010	2	05/21/2014 10:06
1,2-Dichloropropane	ND		0.010	2	05/21/2014 10:06
1,3-Dichloropropane	ND		0.010	2	05/21/2014 10:06
2,2-Dichloropropane	ND		0.010	2	05/21/2014 10:06
1,1-Dichloropropene	ND		0.010	2	05/21/2014 10:06

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Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 17:07
Date Prepared: 5/20/14

WorkOrder: 1405780
Extraction Method: SW5030B
Analytical Method: SW8260B
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
T2-9.5	1405780-002A	Soil	05/20/2014	GC16	90628
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.010	2	05/21/2014 10:06
trans-1,3-Dichloropropene	ND		0.010	2	05/21/2014 10:06
Diisopropyl ether (DIPE)	ND		0.010	2	05/21/2014 10:06
Ethylbenzene	ND		0.010	2	05/21/2014 10:06
Ethyl tert-butyl ether (ETBE)	ND		0.010	2	05/21/2014 10:06
Freon 113	ND		0.20	2	05/21/2014 10:06
Hexachlorobutadiene	ND		0.010	2	05/21/2014 10:06
Hexachloroethane	ND		0.010	2	05/21/2014 10:06
2-Hexanone	ND		0.010	2	05/21/2014 10:06
Isopropylbenzene	ND		0.010	2	05/21/2014 10:06
4-Isopropyl toluene	ND		0.010	2	05/21/2014 10:06
Methyl-t-butyl ether (MTBE)	ND		0.010	2	05/21/2014 10:06
Methylene chloride	ND		0.010	2	05/21/2014 10:06
4-Methyl-2-pentanone (MIBK)	ND		0.010	2	05/21/2014 10:06
Naphthalene	ND		0.010	2	05/21/2014 10:06
n-Propyl benzene	ND		0.010	2	05/21/2014 10:06
Styrene	ND		0.010	2	05/21/2014 10:06
1,1,1,2-Tetrachloroethane	ND		0.010	2	05/21/2014 10:06
1,1,2,2-Tetrachloroethane	ND		0.010	2	05/21/2014 10:06
Tetrachloroethene	ND		0.010	2	05/21/2014 10:06
Toluene	ND		0.010	2	05/21/2014 10:06
1,2,3-Trichlorobenzene	ND		0.010	2	05/21/2014 10:06
1,2,4-Trichlorobenzene	ND		0.010	2	05/21/2014 10:06
1,1,1-Trichloroethane	ND		0.010	2	05/21/2014 10:06
1,1,2-Trichloroethane	ND		0.010	2	05/21/2014 10:06
Trichloroethene	ND		0.010	2	05/21/2014 10:06
Trichlorofluoromethane	ND		0.010	2	05/21/2014 10:06
1,2,3-Trichloropropane	ND		0.010	2	05/21/2014 10:06
1,2,4-Trimethylbenzene	ND		0.010	2	05/21/2014 10:06
1,3,5-Trimethylbenzene	ND		0.010	2	05/21/2014 10:06
Vinyl Chloride	ND		0.010	2	05/21/2014 10:06
Xylenes, Total	ND		0.010	2	05/21/2014 10:06
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	104		70-130		05/21/2014 10:06
Toluene-d8	106		70-130		05/21/2014 10:06
4-BFB	109		70-130		05/21/2014 10:06

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Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 17:07
Date Prepared: 5/20/14

WorkOrder: 1405780
Extraction Method: SW5030B
Analytical Method: SW8260B
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
T2-11.5	1405780-003A	Soil	05/20/2014	GC16	90642
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.20	2	05/21/2014 10:49
tert-Amyl methyl ether (TAME)	ND		0.010	2	05/21/2014 10:49
Benzene	ND		0.010	2	05/21/2014 10:49
Bromobenzene	ND		0.010	2	05/21/2014 10:49
Bromochloromethane	ND		0.010	2	05/21/2014 10:49
Bromodichloromethane	ND		0.010	2	05/21/2014 10:49
Bromoform	ND		0.010	2	05/21/2014 10:49
Bromomethane	ND		0.010	2	05/21/2014 10:49
2-Butanone (MEK)	ND		0.040	2	05/21/2014 10:49
t-Butyl alcohol (TBA)	ND		0.10	2	05/21/2014 10:49
n-Butyl benzene	ND		0.010	2	05/21/2014 10:49
sec-Butyl benzene	0.15		0.010	2	05/21/2014 10:49
tert-Butyl benzene	ND		0.010	2	05/21/2014 10:49
Carbon Disulfide	ND		0.010	2	05/21/2014 10:49
Carbon Tetrachloride	ND		0.010	2	05/21/2014 10:49
Chlorobenzene	ND		0.010	2	05/21/2014 10:49
Chloroethane	ND		0.010	2	05/21/2014 10:49
Chloroform	ND		0.010	2	05/21/2014 10:49
Chloromethane	ND		0.010	2	05/21/2014 10:49
2-Chlorotoluene	ND		0.010	2	05/21/2014 10:49
4-Chlorotoluene	ND		0.010	2	05/21/2014 10:49
Dibromochloromethane	ND		0.010	2	05/21/2014 10:49
1,2-Dibromo-3-chloropropane	ND		0.0080	2	05/21/2014 10:49
1,2-Dibromoethane (EDB)	ND		0.0080	2	05/21/2014 10:49
Dibromomethane	ND		0.010	2	05/21/2014 10:49
1,2-Dichlorobenzene	ND		0.010	2	05/21/2014 10:49
1,3-Dichlorobenzene	ND		0.010	2	05/21/2014 10:49
1,4-Dichlorobenzene	ND		0.010	2	05/21/2014 10:49
Dichlorodifluoromethane	ND		0.010	2	05/21/2014 10:49
1,1-Dichloroethane	ND		0.010	2	05/21/2014 10:49
1,2-Dichloroethane (1,2-DCA)	ND		0.0080	2	05/21/2014 10:49
1,1-Dichloroethene	ND		0.010	2	05/21/2014 10:49
cis-1,2-Dichloroethene	ND		0.010	2	05/21/2014 10:49
trans-1,2-Dichloroethene	ND		0.010	2	05/21/2014 10:49
1,2-Dichloropropane	ND		0.010	2	05/21/2014 10:49
1,3-Dichloropropane	ND		0.010	2	05/21/2014 10:49
2,2-Dichloropropane	ND		0.010	2	05/21/2014 10:49
1,1-Dichloropropene	ND		0.010	2	05/21/2014 10:49

(Cont.)



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 17:07
Date Prepared: 5/20/14

WorkOrder: 1405780
Extraction Method: SW5030B
Analytical Method: SW8260B
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
T2-11.5	1405780-003A	Soil	05/20/2014	GC16	90642
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.010	2	05/21/2014 10:49
trans-1,3-Dichloropropene	ND		0.010	2	05/21/2014 10:49
Diisopropyl ether (DIPE)	ND		0.010	2	05/21/2014 10:49
Ethylbenzene	ND		0.010	2	05/21/2014 10:49
Ethyl tert-butyl ether (ETBE)	ND		0.010	2	05/21/2014 10:49
Freon 113	ND		0.20	2	05/21/2014 10:49
Hexachlorobutadiene	ND		0.010	2	05/21/2014 10:49
Hexachloroethane	ND		0.010	2	05/21/2014 10:49
2-Hexanone	ND		0.010	2	05/21/2014 10:49
Isopropylbenzene	ND		0.010	2	05/21/2014 10:49
4-Isopropyl toluene	0.015		0.010	2	05/21/2014 10:49
Methyl-t-butyl ether (MTBE)	ND		0.010	2	05/21/2014 10:49
Methylene chloride	ND		0.010	2	05/21/2014 10:49
4-Methyl-2-pentanone (MIBK)	ND		0.010	2	05/21/2014 10:49
Naphthalene	ND		0.010	2	05/21/2014 10:49
n-Propyl benzene	ND		0.010	2	05/21/2014 10:49
Styrene	ND		0.010	2	05/21/2014 10:49
1,1,1,2-Tetrachloroethane	ND		0.010	2	05/21/2014 10:49
1,1,2,2-Tetrachloroethane	ND		0.010	2	05/21/2014 10:49
Tetrachloroethene	ND		0.010	2	05/21/2014 10:49
Toluene	ND		0.010	2	05/21/2014 10:49
1,2,3-Trichlorobenzene	ND		0.010	2	05/21/2014 10:49
1,2,4-Trichlorobenzene	ND		0.010	2	05/21/2014 10:49
1,1,1-Trichloroethane	ND		0.010	2	05/21/2014 10:49
1,1,2-Trichloroethane	ND		0.010	2	05/21/2014 10:49
Trichloroethene	ND		0.010	2	05/21/2014 10:49
Trichlorofluoromethane	ND		0.010	2	05/21/2014 10:49
1,2,3-Trichloropropane	ND		0.010	2	05/21/2014 10:49
1,2,4-Trimethylbenzene	ND		0.010	2	05/21/2014 10:49
1,3,5-Trimethylbenzene	ND		0.010	2	05/21/2014 10:49
Vinyl Chloride	ND		0.010	2	05/21/2014 10:49
Xylenes, Total	ND		0.010	2	05/21/2014 10:49
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	104		70-130		05/21/2014 10:49
Toluene-d8	107		70-130		05/21/2014 10:49
4-BFB	114		70-130		05/21/2014 10:49



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 17:07
Date Prepared: 5/20/14

WorkOrder: 1405780
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons with BTEX & MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
T1-9.5	1405780-001A	Soil	05/20/2014	GC7	90640
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	24		10	10	05/21/2014 04:08
TPH(ss)	51		10	10	05/21/2014 04:08
MTBE	---		0.50	10	05/21/2014 04:08
Benzene	---		0.050	10	05/21/2014 04:08
Toluene	---		0.050	10	05/21/2014 04:08
Ethylbenzene	---		0.050	10	05/21/2014 04:08
Xylenes	---		0.050	10	05/21/2014 04:08
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	83		70-130		05/21/2014 04:08
T2-9.5	1405780-002A	Soil	05/20/2014	GC7	90640
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	21		10	10	05/21/2014 04:37
TPH(ss)	47		10	10	05/21/2014 04:37
MTBE	---		0.50	10	05/21/2014 04:37
Benzene	---		0.050	10	05/21/2014 04:37
Toluene	---		0.050	10	05/21/2014 04:37
Ethylbenzene	---		0.050	10	05/21/2014 04:37
Xylenes	---		0.050	10	05/21/2014 04:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	86		70-130		05/21/2014 04:37
T2-11.5	1405780-003A	Soil	05/20/2014	GC7	90640
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	20		10	10	05/21/2014 05:37
TPH(ss)	41		10	10	05/21/2014 05:37
MTBE	---		0.50	10	05/21/2014 05:37
Benzene	---		0.050	10	05/21/2014 05:37
Toluene	---		0.050	10	05/21/2014 05:37
Ethylbenzene	---		0.050	10	05/21/2014 05:37
Xylenes	---		0.050	10	05/21/2014 05:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	99		70-130		05/21/2014 05:37



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 17:07
Date Prepared: 5/20/14

WorkOrder: 1405780
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
T1-9.5	1405780-001A	Soil	05/20/2014	GC6B	90638

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	790	1.0	1	05/20/2014 22:51
TPH-Motor Oil (C18-C36)	290	5.0	1	05/20/2014 22:51
TPH-Bunker Oil (C10-C36)	810	5.0	1	05/20/2014 22:51
TPH-Kerosene (C9-C18)	570	1.0	1	05/20/2014 22:51
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: e1	
C9	115	70-130	05/20/2014 22:51	

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
T2-9.5	1405780-002A	Soil	05/20/2014	GC11B	90638

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1100	2.0	2	05/21/2014 12:54
TPH-Motor Oil (C18-C36)	470	10	2	05/21/2014 12:54
TPH-Bunker Oil (C10-C36)	1100	10	2	05/21/2014 12:54
TPH-Kerosene (C9-C18)	970	2.0	2	05/21/2014 12:54
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: e1	
C9	126	70-130	05/21/2014 12:54	

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
T2-11.5	1405780-003A	Soil	05/20/2014	GC6B	90638

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1100	2.0	2	05/21/2014 14:03
TPH-Motor Oil (C18-C36)	380	10	2	05/21/2014 14:03
TPH-Bunker Oil (C10-C36)	1100	10	2	05/21/2014 14:03
TPH-Kerosene (C9-C18)	790	2.0	2	05/21/2014 14:03
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: e1	
C9	118	70-130	05/21/2014 14:03	



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/20/14
Instrument: GC10
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405780
BatchID: 90628
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90628
 1405773-001AMS/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	0.0403	0.0050	0.050	-	80.6	70-130
Benzene	ND	0.0449	0.0050	0.050	-	89.8	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	0.175	0.050	0.20	-	87.6	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	0.0450	0.0050	0.050	-	90.1	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	0.0454	0.0040	0.050	-	90.8	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	0.0550	0.0040	0.050	-	110	70-130
1,1-Dichloroethene	ND	0.0467	0.0050	0.050	-	93.4	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	-	-	-	-

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/20/14
Instrument: GC10
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405780
BatchID: 90628
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90628
 1405773-001AMS/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	0.0409	0.0050	0.050	-	81.8	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0427	0.0050	0.050	-	85.4	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	0.0467	0.0050	0.050	-	93.4	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	-	94.3	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	0.0474	0.0050	0.050	-	94.9	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	0.130	0.188		0.18	104	108	70-130
Toluene-d8	0.138	0.191		0.18	111	109	70-130
4-BFB	0.0115	0.0155		0.018	92	88	70-130

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/20/14
Instrument: GC10
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405780
BatchID: 90628
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90628
 1405773-001AMS/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)	0.0386	0.0381	0.050	ND	77.2	76.2	70-130	1.30	30
Benzene	0.0408	0.0406	0.050	ND	81.6	81.3	70-130	0.374	30
t-Butyl alcohol (TBA)	0.173	0.168	0.20	ND	86.6	84.1	70-130	2.94	30
Chlorobenzene	0.0407	0.0404	0.050	ND	81.4	80.9	70-130	0.644	30
1,2-Dibromoethane (EDB)	0.0423	0.0401	0.050	ND	84.5	80.3	70-130	5.16	30
1,2-Dichloroethane (1,2-DCA)	0.0501	0.0486	0.050	ND	100	97.3	70-130	2.95	30
1,1-Dichloroethene	0.0413	0.0405	0.050	ND	82.7	80.9	70-130	2.14	30
Diisopropyl ether (DIPE)	0.0379	0.0375	0.050	ND	75.9	74.9	70-130	1.24	30
Ethyl tert-butyl ether (ETBE)	0.0402	0.0397	0.050	ND	80.4	79.4	70-130	1.23	30
Methyl-t-butyl ether (MTBE)	0.0447	0.0434	0.050	ND	89.4	86.9	70-130	2.83	30
Toluene	0.0423	0.0421	0.050	ND	84.6	84.3	70-130	0.384	30
Trichloroethene	0.0430	0.0417	0.050	ND	86.1	83.3	70-130	3.23	30
Surrogate Recovery									
Dibromofluoromethane	0.185	0.180	0.18		106	103	70-130	2.64	30
Toluene-d8	0.186	0.183	0.18		107	105	70-130	1.84	30
4-BFB	0.0154	0.0152	0.018		88	87	70-130	1.59	30

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/21/14
Instrument: GC10
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405780
BatchID: 90642
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90642
 1405780-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0388	0.0050	0.050	-	77.7	70-130
Benzene	ND	0.0425	0.0050	0.050	-	85	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	0.175	0.050	0.20	-	87.7	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	0.0438	0.0050	0.050	-	87.6	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	0.0432	0.0040	0.050	-	86.3	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	0.0492	0.0040	0.050	-	98.4	70-130
1,1-Dichloroethene	ND	0.0440	0.0050	0.050	-	88	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	-	-	-	-

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/21/14
Instrument: GC10
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405780
BatchID: 90642
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90642
 1405780-003AMS/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	0.0391	0.0050	0.050	-	78.1	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0407	0.0050	0.050	-	81.3	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	0.0448	0.0050	0.050	-	89.6	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	0.0467	0.0050	0.050	-	93.4	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	0.0457	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	0.125	0.182		0.18	100	104	70-130
Toluene-d8	0.139	0.193		0.18	111	110	70-130
4-BFB	0.0113	0.0154		0.018	90	88	70-130

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/21/14
Instrument: GC10
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405780
BatchID: 90642
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90642
 1405780-003AMS/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)	NR	NR	0.050	ND<0.010	NR	NR	70-130	NR	30
Benzene	NR	NR	0.050	ND<0.010	NR	NR	70-130	NR	30
t-Butyl alcohol (TBA)	NR	NR	0.20	ND<0.10	NR	NR	70-130	NR	30
Chlorobenzene	NR	NR	0.050	ND<0.010	NR	NR	70-130	NR	30
1,2-Dibromoethane (EDB)	NR	NR	0.050	ND<0.008	NR	NR	70-130	NR	30
1,2-Dichloroethane (1,2-DCA)	NR	NR	0.050	ND<0.008	NR	NR	70-130	NR	30
1,1-Dichloroethene	NR	NR	0.050	ND<0.010	NR	NR	70-130	NR	30
Diisopropyl ether (DIPE)	NR	NR	0.050	ND<0.010	NR	NR	70-130	NR	30
Ethyl tert-butyl ether (ETBE)	NR	NR	0.050	ND<0.010	NR	NR	70-130	NR	30
Methyl-t-butyl ether (MTBE)	NR	NR	0.050	ND<0.010	NR	NR	70-130	NR	30
Toluene	NR	NR	0.050	ND<0.010	NR	NR	70-130	NR	30
Trichloroethene	NR	NR	0.050	ND<0.010	NR	NR	70-130	NR	30

Surrogate Recovery

Dibromofluoromethane	NR	NR	0.18		NR	NR	70-130	NR	30
Toluene-d8	NR	NR	0.18		NR	NR	70-130	NR	30
4-BFB	NR	NR	0.018		NR	NR	70-130	NR	30



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/21/14
Instrument: GC7
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405780
BatchID: 90640
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-90640
 1405780-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.590	0.40	0.60	-	98.4	70-130
MTBE	ND	0.0863	0.050	0.10	-	86.3	70-130
Benzene	ND	0.114	0.0050	0.10	-	114	70-130
Toluene	ND	0.110	0.0050	0.10	-	110	70-130
Ethylbenzene	ND	0.118	0.0050	0.10	-	118	70-130
Xylenes	ND	0.360	0.0050	0.30	-	120	70-130

Surrogate Recovery

2-Fluorotoluene	0.103	0.114		0.10	103	113	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR	0	ND<4	NR	NR	-	NR	
MTBE	NR	NR	0	ND<0.5	NR	NR	-	NR	
Benzene	NR	NR	0	ND<0.05	NR	NR	-	NR	
Toluene	NR	NR	0	ND<0.05	NR	NR	-	NR	
Ethylbenzene	NR	NR	0	ND<0.05	NR	NR	-	NR	
Xylenes	NR	NR	0	ND<0.05	NR	NR	-	NR	

Surrogate Recovery

2-Fluorotoluene	NR	NR	0		NR	NR	-	NR	
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Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/21/14
Instrument: GC2B, GC6B
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405780
BatchID: 90638
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-90638
 1405779-002AMS/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	39.0	1.0	40	-	97.6	70-130
Surrogate Recovery							
C9	27.9	24.5		25	112	98	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	40	1600	NR	NR	70-130	NR	30
Surrogate Recovery									
C9	NR	NR	25		NR	NR	70-130	NR	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1405780

ClientCode: PDEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQuIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Heena Dhawan
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:

1 day

Date Received: 05/20/2014

Date Printed: 05/20/2014

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	
1405780-001	T1-9.5	Soil	5/20/2014	<input type="checkbox"/>	A	A											
1405780-002	T2-9.5	Soil	5/20/2014	<input type="checkbox"/>	A	A											
1405780-003	T2-11.5	Soil	5/20/2014	<input type="checkbox"/>	A	A											

Test Legend:

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

The following SamplIDs: 001A, 002A, 003A 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.



WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL

QC Level: LEVEL 2

Work Order: 1405780

Project: #0553; Cathedral Gardens

Client Contact: Heena Dhawan

Date Received: 5/20/2014

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
1405780-001A	T1-9.5	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Tube	<input type="checkbox"/>	5/20/2014	1 day		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		1 day	<input type="checkbox"/>		
1405780-002A	T2-9.5	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Tube	<input type="checkbox"/>	5/20/2014	1 day		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		1 day	<input type="checkbox"/>		
1405780-003A	T2-11.5	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Tube	<input type="checkbox"/>	5/20/2014	1 day		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		1 day	<input type="checkbox"/>		

*** 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:

Stainless Tube =



Sample Receipt Checklist

Client Name: **P & D Environmental** Date and Time Received: **5/20/2014 5:07:12 PM**
 Project Name: **#0553; Cathedral Gardens** LogIn Reviewed by: **Maria Venegas**
 WorkOrder N°: **1405780** Matrix: Soil Carrier: Client Drop-In

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: 13.5°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: OTHERS)

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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1405779

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

Project Contact: Heena Dhawan
Project P.O.:
Project Name: #0553; Cathedral Gardens

Project Received: 05/20/2014

Analytical Report reviewed & approved for release on 05/21/2014 by:

Question about
your data?

[Click here to email
McC Campbell](#)

Angela Rydelius,
Laboratory Manager

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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: #0553; Cathedral Gardens
WorkOrder: 1405779

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 Qualifier

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e1	unmodified or weakly modified diesel is significant



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 16:59
Date Prepared: 5/20/14

WorkOrder: 1405779
Extraction Method: SW5030B
Analytical Method: SW8260B
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
S1	1405779-001A	Soil	05/20/2014 14:30	GC10	90628
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	05/21/2014 00:37
tert-Amyl methyl ether (TAME)	ND		0.0050	1	05/21/2014 00:37
Benzene	ND		0.0050	1	05/21/2014 00:37
Bromobenzene	ND		0.0050	1	05/21/2014 00:37
Bromochloromethane	ND		0.0050	1	05/21/2014 00:37
Bromodichloromethane	ND		0.0050	1	05/21/2014 00:37
Bromoform	ND		0.0050	1	05/21/2014 00:37
Bromomethane	ND		0.0050	1	05/21/2014 00:37
2-Butanone (MEK)	ND		0.020	1	05/21/2014 00:37
t-Butyl alcohol (TBA)	ND		0.050	1	05/21/2014 00:37
n-Butyl benzene	ND		0.0050	1	05/21/2014 00:37
sec-Butyl benzene	ND		0.0050	1	05/21/2014 00:37
tert-Butyl benzene	ND		0.0050	1	05/21/2014 00:37
Carbon Disulfide	ND		0.0050	1	05/21/2014 00:37
Carbon Tetrachloride	ND		0.0050	1	05/21/2014 00:37
Chlorobenzene	ND		0.0050	1	05/21/2014 00:37
Chloroethane	ND		0.0050	1	05/21/2014 00:37
Chloroform	ND		0.0050	1	05/21/2014 00:37
Chloromethane	ND		0.0050	1	05/21/2014 00:37
2-Chlorotoluene	ND		0.0050	1	05/21/2014 00:37
4-Chlorotoluene	ND		0.0050	1	05/21/2014 00:37
Dibromochloromethane	ND		0.0050	1	05/21/2014 00:37
1,2-Dibromo-3-chloropropane	ND		0.0040	1	05/21/2014 00:37
1,2-Dibromoethane (EDB)	ND		0.0040	1	05/21/2014 00:37
Dibromomethane	ND		0.0050	1	05/21/2014 00:37
1,2-Dichlorobenzene	ND		0.0050	1	05/21/2014 00:37
1,3-Dichlorobenzene	ND		0.0050	1	05/21/2014 00:37
1,4-Dichlorobenzene	ND		0.0050	1	05/21/2014 00:37
Dichlorodifluoromethane	ND		0.0050	1	05/21/2014 00:37
1,1-Dichloroethane	ND		0.0050	1	05/21/2014 00:37
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	05/21/2014 00:37
1,1-Dichloroethene	ND		0.0050	1	05/21/2014 00:37
cis-1,2-Dichloroethene	ND		0.0050	1	05/21/2014 00:37
trans-1,2-Dichloroethene	ND		0.0050	1	05/21/2014 00:37
1,2-Dichloropropane	ND		0.0050	1	05/21/2014 00:37
1,3-Dichloropropane	ND		0.0050	1	05/21/2014 00:37
2,2-Dichloropropane	ND		0.0050	1	05/21/2014 00:37
1,1-Dichloropropene	ND		0.0050	1	05/21/2014 00:37

(Cont.)



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 16:59
Date Prepared: 5/20/14

WorkOrder: 1405779
Extraction Method: SW5030B
Analytical Method: SW8260B
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
S1	1405779-001A	Soil	05/20/2014 14:30	GC10	90628
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	05/21/2014 00:37
trans-1,3-Dichloropropene	ND		0.0050	1	05/21/2014 00:37
Diisopropyl ether (DIPE)	ND		0.0050	1	05/21/2014 00:37
Ethylbenzene	ND		0.0050	1	05/21/2014 00:37
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	05/21/2014 00:37
Freon 113	ND		0.10	1	05/21/2014 00:37
Hexachlorobutadiene	ND		0.0050	1	05/21/2014 00:37
Hexachloroethane	ND		0.0050	1	05/21/2014 00:37
2-Hexanone	ND		0.0050	1	05/21/2014 00:37
Isopropylbenzene	ND		0.0050	1	05/21/2014 00:37
4-Isopropyl toluene	ND		0.0050	1	05/21/2014 00:37
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	05/21/2014 00:37
Methylene chloride	ND		0.0050	1	05/21/2014 00:37
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	05/21/2014 00:37
Naphthalene	ND		0.0050	1	05/21/2014 00:37
n-Propyl benzene	ND		0.0050	1	05/21/2014 00:37
Styrene	ND		0.0050	1	05/21/2014 00:37
1,1,1,2-Tetrachloroethane	ND		0.0050	1	05/21/2014 00:37
1,1,2,2-Tetrachloroethane	ND		0.0050	1	05/21/2014 00:37
Tetrachloroethene	ND		0.0050	1	05/21/2014 00:37
Toluene	ND		0.0050	1	05/21/2014 00:37
1,2,3-Trichlorobenzene	ND		0.0050	1	05/21/2014 00:37
1,2,4-Trichlorobenzene	ND		0.0050	1	05/21/2014 00:37
1,1,1-Trichloroethane	ND		0.0050	1	05/21/2014 00:37
1,1,2-Trichloroethane	ND		0.0050	1	05/21/2014 00:37
Trichloroethene	ND		0.0050	1	05/21/2014 00:37
Trichlorofluoromethane	ND		0.0050	1	05/21/2014 00:37
1,2,3-Trichloropropane	ND		0.0050	1	05/21/2014 00:37
1,2,4-Trimethylbenzene	ND		0.0050	1	05/21/2014 00:37
1,3,5-Trimethylbenzene	ND		0.0050	1	05/21/2014 00:37
Vinyl Chloride	ND		0.0050	1	05/21/2014 00:37
Xylenes, Total	ND		0.0050	1	05/21/2014 00:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	105		70-130		05/21/2014 00:37
Toluene-d8	109		70-130		05/21/2014 00:37
4-BFB	90		70-130		05/21/2014 00:37

(Cont.)



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 16:59
Date Prepared: 5/20/14

WorkOrder: 1405779
Extraction Method: SW5030B
Analytical Method: SW8260B
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
S2	1405779-002A	Soil	05/20/2014 14:35	GC10	90628
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	05/21/2014 01:19
tert-Amyl methyl ether (TAME)	ND		0.0050	1	05/21/2014 01:19
Benzene	ND		0.0050	1	05/21/2014 01:19
Bromobenzene	ND		0.0050	1	05/21/2014 01:19
Bromochloromethane	ND		0.0050	1	05/21/2014 01:19
Bromodichloromethane	ND		0.0050	1	05/21/2014 01:19
Bromoform	ND		0.0050	1	05/21/2014 01:19
Bromomethane	ND		0.0050	1	05/21/2014 01:19
2-Butanone (MEK)	ND		0.020	1	05/21/2014 01:19
t-Butyl alcohol (TBA)	ND		0.050	1	05/21/2014 01:19
n-Butyl benzene	0.010		0.0050	1	05/21/2014 01:19
sec-Butyl benzene	0.091		0.0050	1	05/21/2014 01:19
tert-Butyl benzene	ND		0.0050	1	05/21/2014 01:19
Carbon Disulfide	ND		0.0050	1	05/21/2014 01:19
Carbon Tetrachloride	ND		0.0050	1	05/21/2014 01:19
Chlorobenzene	ND		0.0050	1	05/21/2014 01:19
Chloroethane	ND		0.0050	1	05/21/2014 01:19
Chloroform	ND		0.0050	1	05/21/2014 01:19
Chloromethane	ND		0.0050	1	05/21/2014 01:19
2-Chlorotoluene	ND		0.0050	1	05/21/2014 01:19
4-Chlorotoluene	ND		0.0050	1	05/21/2014 01:19
Dibromochloromethane	ND		0.0050	1	05/21/2014 01:19
1,2-Dibromo-3-chloropropane	ND		0.0040	1	05/21/2014 01:19
1,2-Dibromoethane (EDB)	ND		0.0040	1	05/21/2014 01:19
Dibromomethane	ND		0.0050	1	05/21/2014 01:19
1,2-Dichlorobenzene	ND		0.0050	1	05/21/2014 01:19
1,3-Dichlorobenzene	ND		0.0050	1	05/21/2014 01:19
1,4-Dichlorobenzene	ND		0.0050	1	05/21/2014 01:19
Dichlorodifluoromethane	ND		0.0050	1	05/21/2014 01:19
1,1-Dichloroethane	ND		0.0050	1	05/21/2014 01:19
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	05/21/2014 01:19
1,1-Dichloroethene	ND		0.0050	1	05/21/2014 01:19
cis-1,2-Dichloroethene	ND		0.0050	1	05/21/2014 01:19
trans-1,2-Dichloroethene	ND		0.0050	1	05/21/2014 01:19
1,2-Dichloropropane	ND		0.0050	1	05/21/2014 01:19
1,3-Dichloropropane	ND		0.0050	1	05/21/2014 01:19
2,2-Dichloropropane	ND		0.0050	1	05/21/2014 01:19
1,1-Dichloropropene	ND		0.0050	1	05/21/2014 01:19

(Cont.)



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 16:59
Date Prepared: 5/20/14

WorkOrder: 1405779
Extraction Method: SW5030B
Analytical Method: SW8260B
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
S2	1405779-002A	Soil	05/20/2014 14:35	GC10	90628
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	05/21/2014 01:19
trans-1,3-Dichloropropene	ND		0.0050	1	05/21/2014 01:19
Diisopropyl ether (DIPE)	ND		0.0050	1	05/21/2014 01:19
Ethylbenzene	ND		0.0050	1	05/21/2014 01:19
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	05/21/2014 01:19
Freon 113	ND		0.10	1	05/21/2014 01:19
Hexachlorobutadiene	ND		0.0050	1	05/21/2014 01:19
Hexachloroethane	ND		0.0050	1	05/21/2014 01:19
2-Hexanone	ND		0.0050	1	05/21/2014 01:19
Isopropylbenzene	ND		0.0050	1	05/21/2014 01:19
4-Isopropyl toluene	0.0063		0.0050	1	05/21/2014 01:19
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	05/21/2014 01:19
Methylene chloride	ND		0.0050	1	05/21/2014 01:19
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	05/21/2014 01:19
Naphthalene	ND		0.0050	1	05/21/2014 01:19
n-Propyl benzene	ND		0.0050	1	05/21/2014 01:19
Styrene	ND		0.0050	1	05/21/2014 01:19
1,1,1,2-Tetrachloroethane	ND		0.0050	1	05/21/2014 01:19
1,1,2,2-Tetrachloroethane	ND		0.0050	1	05/21/2014 01:19
Tetrachloroethene	ND		0.0050	1	05/21/2014 01:19
Toluene	ND		0.0050	1	05/21/2014 01:19
1,2,3-Trichlorobenzene	ND		0.0050	1	05/21/2014 01:19
1,2,4-Trichlorobenzene	ND		0.0050	1	05/21/2014 01:19
1,1,1-Trichloroethane	ND		0.0050	1	05/21/2014 01:19
1,1,2-Trichloroethane	ND		0.0050	1	05/21/2014 01:19
Trichloroethene	ND		0.0050	1	05/21/2014 01:19
Trichlorofluoromethane	ND		0.0050	1	05/21/2014 01:19
1,2,3-Trichloropropane	ND		0.0050	1	05/21/2014 01:19
1,2,4-Trimethylbenzene	ND		0.0050	1	05/21/2014 01:19
1,3,5-Trimethylbenzene	ND		0.0050	1	05/21/2014 01:19
Vinyl Chloride	ND		0.0050	1	05/21/2014 01:19
Xylenes, Total	ND		0.0050	1	05/21/2014 01:19
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	104		70-130		05/21/2014 01:19
Toluene-d8	111		70-130		05/21/2014 01:19
4-BFB	105		70-130		05/21/2014 01:19



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 16:59
Date Prepared: 5/20/14

WorkOrder: 1405779
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons with BTEX & MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
S1	1405779-001A	Soil	05/20/2014 14:30	GC7	90605

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	05/21/2014 01:40
TPH(ss)	ND	1.0	1	05/21/2014 01:40
MTBE	---	0.050	1	05/21/2014 01:40
Benzene	---	0.0050	1	05/21/2014 01:40
Toluene	---	0.0050	1	05/21/2014 01:40
Ethylbenzene	---	0.0050	1	05/21/2014 01:40
Xylenes	---	0.0050	1	05/21/2014 01:40
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	93	70-130		05/21/2014 01:40

S2	1405779-002A	Soil	05/20/2014 14:35	GC7	90605
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	24	10	10	05/21/2014 03:38
TPH(ss)	47	10	10	05/21/2014 03:38
MTBE	---	0.50	10	05/21/2014 03:38
Benzene	---	0.050	10	05/21/2014 03:38
Toluene	---	0.050	10	05/21/2014 03:38
Ethylbenzene	---	0.050	10	05/21/2014 03:38
Xylenes	---	0.050	10	05/21/2014 03:38
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	95	70-130		05/21/2014 03:38



Analytical Report

Client: P & D Environmental
Project: #0553; Cathedral Gardens
Date Received: 5/20/14 16:59
Date Prepared: 5/20/14

WorkOrder: 1405779
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
S1	1405779-001A	Soil	05/20/2014 14:30	GC6B	90638

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	13	2.0	2	05/21/2014 12:49
TPH-Motor Oil (C18-C36)	18	10	2	05/21/2014 12:49
TPH-Bunker Oil (C10-C36)	23	10	2	05/21/2014 12:49
TPH-Kerosene (C9-C18)	8.7	2.0	2	05/21/2014 12:49
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: e1	
C9	118	70-130	05/21/2014 12:49	

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
S2	1405779-002A	Soil	05/20/2014 14:35	GC6A	90638

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1600	2.0	2	05/21/2014 09:50
TPH-Motor Oil (C18-C36)	540	10	2	05/21/2014 09:50
TPH-Bunker Oil (C10-C36)	1600	10	2	05/21/2014 09:50
TPH-Kerosene (C9-C18)	1300	2.0	2	05/21/2014 09:50
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: e1	
C9	118	70-130	05/21/2014 09:50	



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/20/14
Instrument: GC10
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405779
BatchID: 90628
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90628
 1405773-001AMS/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	0.0403	0.0050	0.050	-	80.6	70-130
Benzene	ND	0.0449	0.0050	0.050	-	89.8	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	0.175	0.050	0.20	-	87.6	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	0.0450	0.0050	0.050	-	90.1	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	0.0454	0.0040	0.050	-	90.8	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	0.0550	0.0040	0.050	-	110	70-130
1,1-Dichloroethene	ND	0.0467	0.0050	0.050	-	93.4	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	-	-	-	-

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/20/14
Instrument: GC10
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405779
BatchID: 90628
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90628
 1405773-001AMS/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	0.0409	0.0050	0.050	-	81.8	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0427	0.0050	0.050	-	85.4	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	0.0467	0.0050	0.050	-	93.4	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	-	94.3	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	0.0474	0.0050	0.050	-	94.9	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	0.130	0.188		0.18	104	108	70-130
Toluene-d8	0.138	0.191		0.18	111	109	70-130
4-BFB	0.0115	0.0155		0.018	92	88	70-130

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/20/14
Instrument: GC10
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405779
BatchID: 90628
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-90628
 1405773-001AMS/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)	0.0386	0.0381	0.050	ND	77.2	76.2	70-130	1.30	30
Benzene	0.0408	0.0406	0.050	ND	81.6	81.3	70-130	0.374	30
t-Butyl alcohol (TBA)	0.173	0.168	0.20	ND	86.6	84.1	70-130	2.94	30
Chlorobenzene	0.0407	0.0404	0.050	ND	81.4	80.9	70-130	0.644	30
1,2-Dibromoethane (EDB)	0.0423	0.0401	0.050	ND	84.5	80.3	70-130	5.16	30
1,2-Dichloroethane (1,2-DCA)	0.0501	0.0486	0.050	ND	100	97.3	70-130	2.95	30
1,1-Dichloroethene	0.0413	0.0405	0.050	ND	82.7	80.9	70-130	2.14	30
Diisopropyl ether (DIPE)	0.0379	0.0375	0.050	ND	75.9	74.9	70-130	1.24	30
Ethyl tert-butyl ether (ETBE)	0.0402	0.0397	0.050	ND	80.4	79.4	70-130	1.23	30
Methyl-t-butyl ether (MTBE)	0.0447	0.0434	0.050	ND	89.4	86.9	70-130	2.83	30
Toluene	0.0423	0.0421	0.050	ND	84.6	84.3	70-130	0.384	30
Trichloroethene	0.0430	0.0417	0.050	ND	86.1	83.3	70-130	3.23	30
Surrogate Recovery									
Dibromofluoromethane	0.185	0.180	0.18		106	103	70-130	2.64	30
Toluene-d8	0.186	0.183	0.18		107	105	70-130	1.84	30
4-BFB	0.0154	0.0152	0.018		88	87	70-130	1.59	30



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/19/14
Date Analyzed: 5/21/14
Instrument: GC7
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405779
BatchID: 90605
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-90605
 1405779-002AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.687	0.40	0.60	-	114	70-130
MTBE	ND	0.0813	0.050	0.10	-	81.3	70-130
Benzene	ND	0.115	0.0050	0.10	-	115	70-130
Toluene	ND	0.112	0.0050	0.10	-	112	70-130
Ethylbenzene	ND	0.117	0.0050	0.10	-	117	70-130
Xylenes	ND	0.359	0.0050	0.30	-	120	70-130

Surrogate Recovery

2-Fluorotoluene	0.120	0.108		0.10	120	108	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR	0	ND<4	NR	NR	-	NR	
MTBE	NR	NR	0	ND<0.5	NR	NR	-	NR	
Benzene	NR	NR	0	ND<0.05	NR	NR	-	NR	
Toluene	NR	NR	0	ND<0.05	NR	NR	-	NR	
Ethylbenzene	NR	NR	0	ND<0.05	NR	NR	-	NR	
Xylenes	NR	NR	0	ND<0.05	NR	NR	-	NR	

Surrogate Recovery

2-Fluorotoluene	NR	NR	0		NR	NR	-	NR
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Quality Control Report

Client: P & D Environmental
Date Prepared: 5/20/14
Date Analyzed: 5/21/14
Instrument: GC2B, GC6B
Matrix: Soil
Project: #0553; Cathedral Gardens

WorkOrder: 1405779
BatchID: 90638
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-90638
 1405779-002AMS/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	39.0	1.0	40	-	97.6	70-130
Surrogate Recovery							
C9	27.9	24.5		25	112	98	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	40	1600	NR	NR	70-130	NR	30
Surrogate Recovery									
C9	NR	NR	25		NR	NR	70-130	NR	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1405779

ClientCode: PDEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Heena Dhawan
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:

1 day

Date Received: 05/20/2014

Date Printed: 05/20/2014

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	
1405779-001	S1	Soil	5/20/2014 14:30	<input type="checkbox"/>	A	A											
1405779-002	S2	Soil	5/20/2014 14:35	<input type="checkbox"/>	A	A											

Test Legend:

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

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

Prepared by: Maria Venegas

Comments: 1 Day TAT

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



WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL

QC Level: LEVEL 2

Work Order: 1405779

Project: #0553; Cathedral Gardens

Client Contact: Heena Dhawan

Date Received: 5/20/2014

Comments: 1 Day TAT

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
1405779-001A	S1	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Tube	<input type="checkbox"/>	5/20/2014 14:30	1 day		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>					
1405779-002A	S2	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Tube	<input type="checkbox"/>	5/20/2014 14:35	1 day		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>					

*** 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:

Stainless Tube =

1405779

CHAIN OF CUSTODY RECORD

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 Street, Oakland, CA

SAMPLED BY: (PRINTED & SIGNATURE)
Heena Dhawan

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION
S1	5/20/14	1430	SOIL	
S2	↓	1435	↓	

NUMBER OF CONTAINERS	ANALYSIS(ES):										PRESERVATIVE	REMARKS	
	TPH	G.D.	M.D.	B.O.	K.	V.S.S.							
1	X	X										ICE	24 Hour Rush
1	X	X										↓	

ICE# **13.5**

GOOD CONDITION _____ APPROPRIATE CONTAINERS _____

HEAD SPACE ABSENT _____ PRESERVED IN LAB _____

DECHLORINATED IN LAB _____ PRESERVED IN LAB _____

PRESERVATION: VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)
Heena Dhawan

DATE: **5/20/14**
TIME: **1435**

RECEIVED BY: (SIGNATURE)
[Signature]

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

LABORATORY: **McCampbell Analytical, Inc**

RELINQUISHED BY: (SIGNATURE)

DATE: _____
TIME: _____

RECEIVED BY: (SIGNATURE)

LABORATORY CONTACT: **Angela Rydellius (877) 252-9262**
LABORATORY PHONE NUMBER:

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: **24 hour Rush Analysis**



Sample Receipt Checklist

Client Name: **P & D Environmental** Date and Time Received: **5/20/2014 4:59:03 PM**
 Project Name: **#0553; Cathedral Gardens** LogIn Reviewed by: **Maria Venegas**
 WorkOrder N°: **1405779** Matrix: Soil Carrier: Client Drop-In

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: 13.5°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: OTHERS)

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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1405960

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

Project Contact: Paul King

Project P.O.:

Project Name: #0553; Cathedral Gardens Oakland, 638 21st Oakland
CA 94612

Project Received: 05/23/2014

Analytical Report reviewed & approved for release on 05/28/2014 by:

Question about
your data?

[Click here to email
McC Campbell](#)

Angela Rydelius,
Laboratory Manager

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





Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: #0553; Cathedral Gardens Oakland, 638 21st Oakland CA 94612
WorkOrder: 1405960

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

d5	TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?)
e1	unmodified or weakly modified diesel is significant



Analytical Report

Client: P & D Environmental **WorkOrder:** 1405960
Project: #0553; Cathedral Gardens Oakland, 638 21st Oaklan **Extraction Method:** SW5030B
Date Received: 5/23/14 20:17 **Analytical Method:** SW8260B
Date Prepared: 5/24/14 **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
USTPIT WATER 1	1405960-001B	Water	05/23/2014 09:00	GC28	90833
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	05/24/2014 07:49
tert-Amyl methyl ether (TAME)	ND		0.50	1	05/24/2014 07:49
Benzene	ND		0.50	1	05/24/2014 07:49
Bromobenzene	ND		0.50	1	05/24/2014 07:49
Bromochloromethane	ND		0.50	1	05/24/2014 07:49
Bromodichloromethane	ND		0.50	1	05/24/2014 07:49
Bromoform	ND		0.50	1	05/24/2014 07:49
Bromomethane	ND		0.50	1	05/24/2014 07:49
2-Butanone (MEK)	ND		2.0	1	05/24/2014 07:49
t-Butyl alcohol (TBA)	ND		2.0	1	05/24/2014 07:49
n-Butyl benzene	ND		0.50	1	05/24/2014 07:49
sec-Butyl benzene	2.7		0.50	1	05/24/2014 07:49
tert-Butyl benzene	ND		0.50	1	05/24/2014 07:49
Carbon Disulfide	ND		0.50	1	05/24/2014 07:49
Carbon Tetrachloride	ND		0.50	1	05/24/2014 07:49
Chlorobenzene	ND		0.50	1	05/24/2014 07:49
Chloroethane	ND		0.50	1	05/24/2014 07:49
Chloroform	ND		0.50	1	05/24/2014 07:49
Chloromethane	ND		0.50	1	05/24/2014 07:49
2-Chlorotoluene	ND		0.50	1	05/24/2014 07:49
4-Chlorotoluene	ND		0.50	1	05/24/2014 07:49
Dibromochloromethane	ND		0.50	1	05/24/2014 07:49
1,2-Dibromo-3-chloropropane	ND		0.20	1	05/24/2014 07:49
1,2-Dibromoethane (EDB)	ND		0.50	1	05/24/2014 07:49
Dibromomethane	ND		0.50	1	05/24/2014 07:49
1,2-Dichlorobenzene	ND		0.50	1	05/24/2014 07:49
1,3-Dichlorobenzene	ND		0.50	1	05/24/2014 07:49
1,4-Dichlorobenzene	ND		0.50	1	05/24/2014 07:49
Dichlorodifluoromethane	ND		0.50	1	05/24/2014 07:49
1,1-Dichloroethane	ND		0.50	1	05/24/2014 07:49
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	05/24/2014 07:49
1,1-Dichloroethene	ND		0.50	1	05/24/2014 07:49
cis-1,2-Dichloroethene	ND		0.50	1	05/24/2014 07:49
trans-1,2-Dichloroethene	ND		0.50	1	05/24/2014 07:49
1,2-Dichloropropane	ND		0.50	1	05/24/2014 07:49
1,3-Dichloropropane	ND		0.50	1	05/24/2014 07:49
2,2-Dichloropropane	ND		0.50	1	05/24/2014 07:49
1,1-Dichloropropene	ND		0.50	1	05/24/2014 07:49

(Cont.)



Analytical Report

Client: P & D Environmental **WorkOrder:** 1405960
Project: #0553; Cathedral Gardens Oakland, 638 21st Oaklan **Extraction Method:** SW5030B
Date Received: 5/23/14 20:17 **Analytical Method:** SW8260B
Date Prepared: 5/24/14 **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
USTPIT WATER 1	1405960-001B	Water	05/23/2014 09:00	GC28	90833
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.50	1	05/24/2014 07:49
trans-1,3-Dichloropropene	ND		0.50	1	05/24/2014 07:49
Diisopropyl ether (DIPE)	ND		0.50	1	05/24/2014 07:49
Ethylbenzene	ND		0.50	1	05/24/2014 07:49
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	05/24/2014 07:49
Freon 113	ND		0.50	1	05/24/2014 07:49
Hexachlorobutadiene	ND		0.50	1	05/24/2014 07:49
Hexachloroethane	ND		0.50	1	05/24/2014 07:49
2-Hexanone	ND		0.50	1	05/24/2014 07:49
Isopropylbenzene	ND		0.50	1	05/24/2014 07:49
4-Isopropyl toluene	ND		0.50	1	05/24/2014 07:49
Methyl-t-butyl ether (MTBE)	ND		0.50	1	05/24/2014 07:49
Methylene chloride	ND		0.50	1	05/24/2014 07:49
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	05/24/2014 07:49
Naphthalene	1.0		0.50	1	05/24/2014 07:49
n-Propyl benzene	ND		0.50	1	05/24/2014 07:49
Styrene	ND		0.50	1	05/24/2014 07:49
1,1,1,2-Tetrachloroethane	ND		0.50	1	05/24/2014 07:49
1,1,2,2-Tetrachloroethane	ND		0.50	1	05/24/2014 07:49
Tetrachloroethene	ND		0.50	1	05/24/2014 07:49
Toluene	ND		0.50	1	05/24/2014 07:49
1,2,3-Trichlorobenzene	ND		0.50	1	05/24/2014 07:49
1,2,4-Trichlorobenzene	ND		0.50	1	05/24/2014 07:49
1,1,1-Trichloroethane	ND		0.50	1	05/24/2014 07:49
1,1,2-Trichloroethane	ND		0.50	1	05/24/2014 07:49
Trichloroethene	ND		0.50	1	05/24/2014 07:49
Trichlorofluoromethane	ND		0.50	1	05/24/2014 07:49
1,2,3-Trichloropropane	ND		0.50	1	05/24/2014 07:49
1,2,4-Trimethylbenzene	ND		0.50	1	05/24/2014 07:49
1,3,5-Trimethylbenzene	ND		0.50	1	05/24/2014 07:49
Vinyl Chloride	ND		0.50	1	05/24/2014 07:49
Xylenes, Total	ND		0.50	1	05/24/2014 07:49
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	112		70-130		05/24/2014 07:49
Toluene-d8	117		70-130		05/24/2014 07:49
4-BFB	105		70-130		05/24/2014 07:49



Analytical Report

Client:	P & D Environmental	WorkOrder:	1405960
Project:	#0553; Cathedral Gardens Oakland, 638 21st Oaklan	Extraction Method:	SW5030B
Date Received:	5/23/14 20:17	Analytical Method:	SW8021B/8015Bm
Date Prepared:	5/27/14	Unit:	µg/L

Gasoline Range (C6-C12) + Stoddard Solvent Range (C9-C12) as Volatile Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
USTPIT WATER1	1405960-001A	Water	05/23/2014 09:00	GC3	90861
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	110		50	1	05/27/2014 16:43
TPH(ss)	130		50	1	05/27/2014 16:43
MTBE	---		5.0	1	05/27/2014 16:43
Benzene	---		0.50	1	05/27/2014 16:43
Toluene	---		0.50	1	05/27/2014 16:43
Ethylbenzene	---		0.50	1	05/27/2014 16:43
Xylenes	---		0.50	1	05/27/2014 16:43
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d5	
aaa-TFT	97		70-130		05/27/2014 16:43



Analytical Report

Client: P & D Environmental	WorkOrder: 1405960
Project: #0553; Cathedral Gardens Oakland, 638 21st Oaklan	Extraction Method: SW3510C
Date Received: 5/23/14 20:17	Analytical Method: SW8015B
Date Prepared: 5/23/14	Unit: µg/L

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
USTPIT WATER1	1405960-001A	Water	05/23/2014 09:00	GC6B	90821
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	4600		50	1	05/27/2014 20:43
TPH-Motor Oil (C18-C36)	1700		250	1	05/27/2014 20:43
TPH-Bunker Oil (C10-C36)	4700		100	1	05/27/2014 20:43
TPH-Kerosene (C9-C18)	3300		50	1	05/27/2014 20:43
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e1	
C9	99		70-130		05/27/2014 20:43



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/27/14
Date Analyzed: 5/23/14
Instrument: GC28
Matrix: Water
Project: #0553; Cathedral Gardens Oakland, 638 21st
 Oakland CA 94612

WorkOrder: 1405960
BatchID: 90833
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-90833
 1405843-001FMS/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	20.3	0.50	20	-	101	70-130
Benzene	ND	19.8	0.50	20	-	98.9	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	70.7	2.0	80	-	88.4	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	20.2	0.50	20	-	101	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	20.3	0.50	20	-	102	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	18.5	0.50	20	-	92.7	70-130
1,1-Dichloroethene	ND	19.6	0.50	20	-	98	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	-	-	-	-

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/27/14
Date Analyzed: 5/23/14
Instrument: GC28
Matrix: Water
Project: #0553; Cathedral Gardens Oakland, 638 21st
 Oakland CA 94612

WorkOrder: 1405960
BatchID: 90833
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-90833
 1405843-001FMS/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	20.0	0.50	20	-	100	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	19.8	0.50	20	-	98.9	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	19.6	0.50	20	-	98	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	20.7	0.50	20	-	103	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	19.8	0.50	20	-	99.1	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	27.2	49.9		45	109	111	70-130
Toluene-d8	28.3	50.7		45	113	113	70-130
4-BFB	2.52	4.66		4.5	101	104	70-130

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/27/14
Date Analyzed: 5/23/14
Instrument: GC28
Matrix: Water
Project: #0553; Cathedral Gardens Oakland, 638 21st
 Oakland CA 94612

WorkOrder: 1405960
BatchID: 90833
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-90833
 1405843-001FMS/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)	22.5	22.9	20	ND	113	114	70-130	1.62	20
Benzene	21.8	21.6	20	ND	109	108	70-130	0.702	20
t-Butyl alcohol (TBA)	83.2	89.5	80	ND	104	112	70-130	7.34	20
Chlorobenzene	21.0	21.2	20	ND	105	106	70-130	1.14	20
1,2-Dibromoethane (EDB)	22.5	22.6	20	ND	113	113	70-130	0	20
1,2-Dichloroethane (1,2-DCA)	20.6	20.5	20	ND	103	102	70-130	0.307	20
1,1-Dichloroethene	19.6	20.7	20	ND	98.1	104	70-130	5.37	20
Diisopropyl ether (DIPE)	22.6	22.4	20	ND	113	112	70-130	1.16	20
Ethyl tert-butyl ether (ETBE)	21.8	22.1	20	ND	109	111	70-130	1.34	20
Methyl-t-butyl ether (MTBE)	21.6	22.2	20	ND	108	111	70-130	2.32	20
Toluene	21.6	21.7	20	ND	108	108	70-130	0	20
Trichloroethene	20.8	21.1	20	ND	104	106	70-130	1.75	20
Surrogate Recovery									
Dibromofluoromethane	51.1	51.7	45		114	115	70-130	1.07	20
Toluene-d8	51.1	50.5	45		113	112	70-130	1.17	20
4-BFB	4.63	4.70	4.5		103	105	70-130	1.56	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 5/27/14
Date Analyzed: 5/27/14
Instrument: GC3
Matrix: Water
Project: #0553; Cathedral Gardens Oakland, 638 21st
 Oakland CA 94612

WorkOrder: 1405960
BatchID: 90861
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-90861
 1405959-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	64.1	40	60	-	107	70-130
MTBE	ND	11.1	5.0	10	-	111	70-130
Benzene	ND	10.3	0.50	10	-	103	70-130
Toluene	ND	10.2	0.50	10	-	102	70-130
Ethylbenzene	ND	10.3	0.50	10	-	103	70-130
Xylenes	ND	31.1	0.50	30	-	104	70-130

Surrogate Recovery

aaa-TFT	9.81	9.67		10	98	97	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	65.4	65.4	60	ND	109	109	70-130	0	20
MTBE	10.2	10.2	10	ND	103	102	70-130	0.928	20
Benzene	9.47	9.81	10	ND	94.7	98.1	70-130	3.54	20
Toluene	9.62	9.91	10	ND	96.2	99.1	70-130	3.00	20
Ethylbenzene	9.43	9.77	10	ND	94.3	97.7	70-130	3.48	20
Xylenes	28.5	29.4	30	ND	95.1	98.1	70-130	3.11	20

Surrogate Recovery

aaa-TFT	9.20	9.31	10		92	93	70-130	1.24	20
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Quality Control Report

Client: P & D Environmental
Date Prepared: 5/23/14
Date Analyzed: 5/27/14
Instrument: GC6A, GC6B
Matrix: Water
Project: #0553; Cathedral Gardens Oakland, 638 21st
 Oakland CA 94612

WorkOrder: 1405960
BatchID: 90821
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L
Sample ID: MB/LCS-90821

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	857	50	1000	-	85.7	70-130
Surrogate Recovery							
C9	649	613		625	104	98	70-130



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1405960

ClientCode: PDEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

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

Email: lab@pdenviro.com
cc/3rd Party:
PO:
ProjectNo: #0553; Cathedral Gardens Oakland, 638
21st Oakland CA 94612

Bill to:

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

Requested TAT:

2 days

Date Received: 05/23/2014

Date Printed: 05/23/2014

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	
1405960-001	USTPIT WATER 1	Water	5/23/2014 9:00	<input type="checkbox"/>	B												
1405960-001	USTPIT WATER1	Water	5/23/2014 9:00	<input type="checkbox"/>		A											

Test Legend:

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

The following SampID: 001A contains 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.



WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL

QC Level: LEVEL 2

Work Order: 1405960

Project: #0553; Cathedral Gardens Oakland, 638 21st Oakland CA 9

Client Contact: Paul King

Date Received: 5/23/2014

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
1405960-001A	USTPIT WATER1	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	<input type="checkbox"/>	5/23/2014 9:00	2 days	Present	<input type="checkbox"/>	
1405960-001B	USTPIT WATER 1	Water	SW8260B (VOCs)	4	VOA w/ HCl	<input type="checkbox"/>	5/23/2014 9:00	2 days	Present	<input type="checkbox"/>	

*** 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



Sample Receipt Checklist

Client Name: **P & D Environmental** Date and Time Received: **5/23/2014 8:17:39 PM**
 Project Name: **#0553; Cathedral Gardens Oakland, 638 21st Oakland CA 9** LogIn Reviewed by: **Shana Carter**
 WorkOrder N°: **1405960** 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: 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

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

 Comments: