



MADISON PARK

December 4, 2017

RECEIVED

By Alameda County Environmental Health 9:14 am, Dec 18, 2017

Mr. Keith Nowell
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION REPORT CERTIFICATION
County Case # RO 3219 for 3902-3906 Adeline Street
3900 Adeline Street
Oakland, California

Dear Mr. Nowell:

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

- Subsurface Investigation Report dated December 4, 2017 (document 0735.R2).

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

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

Sincerely,

Madison Park Financial

John Protoppapas
Managing Member

Attachment
0735.L1



P&D ENVIRONMENTAL, INC.

55 Santa Clara Avenue, Suite 240

Oakland, CA 94610

(510) 658-6916

December 4, 2017

Report 0735.R2

Mr. Bob Huff
3900 Adeline, LLC
155 Grand Avenue, Suite 950
Oakland, CA 94612

SUBJECT: SUBSURFACE INVESTIGATION REPORT
County Case # RO 3219 for 3902-3906 Adeline Street
3900 Adeline Street
Oakland, California

Dear Mr. Huff:

P&D Environmental, Inc. (P&D) has prepared this report documenting the hand augering of one borehole, designated as B1, at the west end of a former underground storage tank (UST) excavation pit at the subject site. This work was performed in accordance with discussions during a June 27, 2016 meeting between representatives of P&D, Alameda County Department of Environmental Health (ACDEH), and the property owners at the ACDEH offices. The objective of the investigation was to collect soil and groundwater samples from the west end of the former UST pit where EBMUD water lines were located above the former UST which resulted in limitations in collection of a soil sample at the time of UST removal.

Activities associated with the removal of the UST at 3900 Adeline Street in Emeryville are identified on the ACDEH website associate with County Case # RO 3219 for 3902-3906 Adeline Street in Emeryville, California. A Site Location Map is attached with this report as Figure 1 and a Site Plan Detail showing the former UST and borehole location is attached with this report as Figure 2. All work was performed under the direct supervision of a California professional geologist.

BACKGROUND

One single-walled bare steel 575 gallon capacity UST was removed from the site on November 25, 2017. Based on the type of petroleum hydrocarbons detected in soil samples collected from under the former UST and in the soil removed from on top of and around the former UST, the UST formerly contained a diesel-range heating oil. The UST was discovered on November 16, 2015 adjacent to 39th Street and directly beneath a 6-inch diameter East Bay Municipal Utility District (EBMUD) water pipe during landscaping activities for construction of tree wells associated with development of the property, and following the completion of permitting, was removed from the site on November 25, 2015.

Although petroleum hydrocarbons were not detected in the soil sample collected from below the UST, petroleum was detected in soil samples collected from stockpiled soil that had been removed from around the UST.

The bottom of the UST was located at a depth of 7.0 feet below the ground surface (bgs), and the soil sample collected at the time of UST removal on November 25, 2015 was collected at a depth of 9.0 feet bgs. Groundwater was not encountered in the UST pit at the time of UST removal. Based on the unknown history of the UST, the UST was permitted for removal as an unknown UST, and the full suite of waste oil analytes was analyzed for the soil sample collected from the UST pit. Further discussion regarding the removal of the former UST and sample collection activities is provided in P&D's UST Removal Report dated December 10, 2015 (document 0735.R1).

Based on the detected presence of petroleum in the stockpiled soil sample associated with the UST removal, the site was referred from the Alameda County CUPA Program to the ACDEH on May 23, 2016. The compounds detected in the stockpiled soil samples included the following:

- Total Petroleum Hydrocarbons (TPH) as Gasoline (TPH-G), TPH as Diesel (TPH-D), and TPH as Motor Oil (TPH-MO).
- The Volatile Organic Compounds (VOCs) by EPA Method 8260B naphthalene and 1,2,4-Trimethylbenzene.
- The Semi Volatile Organic Compounds (SVOCs) by EPA Method 8270C naphthalene, 2-Methylnaphthalene and Phenanthrene.

During a June 27, 2016 meeting between representatives of P&D, ACDEH, and the property owner to discuss steps to move the case to closure, the following actions were identified to determine if the case could be closed: collection of soil samples from a borehole in native material at depths of 7.0 and 9.0 feet bgs, and collection of one groundwater grab sample from the same borehole with analysis for detected analytes to evaluate the presence of residual petroleum in soil and groundwater at the end of the UST where access had been limited by buried water lines.

FIELD ACTIVITIES

Prior to performing field activities, drilling permit W2016-0472 was obtained from the Alameda County Public Works Agency (ACPWA), site access was scheduled with the property manager, drilling locations were marked with white paint, Underground Service Alert was notified for underground utility location, and a health and safety plan was prepared.

Continuous Coring and Soil and Groundwater Sample Collection

P&D personnel oversaw hand augering at location B1 on July 1, 2016 (see Figure 2) for the collection of soil and groundwater samples to evaluate the presence of residual petroleum in soil and groundwater at the west end of the UST where access had been limited by buried water lines. The borehole was hand augered inside of the utility vault for the EBMUD water meters adjacent to the buried water lines. Borehole B1 was hand augered on July 1, 2016 to a total depth of 10.0 feet bgs by IMX, Inc. of Oakland, California (IMX) using a 3.5-inch outside diameter hand auger.

The soil from the borehole was logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System, and was evaluated with a Photoionization Detector (PID) equipped with a 10.6 eV bulb that was calibrated with a 100 parts per million (ppm) isobutylene standard. The soil was also evaluated for other evidence of contamination such as odors, staining, and discoloration. No elevated PID values, odors, staining, or discoloration were detected in the borehole. A copy of the boring log is attached with this report in Appendix A.

Two soil samples were retained from borehole B1 at depths of approximately 7.0 and 9.5 feet bgs, respectively. The soil samples were collected into stainless steel tubes using a slide hammer, the ends of the tube were evaluated with the PID and then were sequentially covered with aluminum foil and plastic endcaps. The samples were then labeled and placed into a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling.

Groundwater was first encountered in borehole B1 at a depth of 8.0 feet bgs, and following the completion of hand augering to a depth of 10.0 feet bgs a temporary 1-inch diameter slotted PVC pipe was placed into the borehole. The groundwater sample was collected from borehole B1 on the day of hand augering (July 1, 2016). The measured depth to water in borehole B1 following groundwater sample collection was 7.3 feet bgs.

The groundwater sample was collected from borehole B1 using a peristaltic pump and polyethylene tubing after purging approximately 0.1 gallon of groundwater and then collecting the sample directly from the discharge tubing into 40-milliliter Volatile Organic Analysis (VOA) vials that contained hydrochloric acid; 40-milliliter amber unpreserved VOA vials. All of the sample bottles were provided by the laboratory and were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to ensure that no air bubbles were present, and the bottles were then labeled and transferred to a cooler with ice until they were transported to the laboratory. Chain of custody procedures were observed for all sample handling. No odor or sheen was detected on the groundwater purged from the borehole or in the groundwater sample.

The borehole was grouted on July 1, 2016 with neat cement using the temporary PVC casing as a tremie pipe. All drilling and sampling equipment was cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole, and all temporary PVC casing and tubing used for sample collection was new and unused. All soil and water generated during subsurface investigation was stored in a 5-gallon plastic bucket with lid at the site and labeled pending characterization and proper disposal.

GEOLOGY AND HYDROGEOLOGY

Based on review of regional geologic maps from U. S. Geological Survey Professional Paper 943, "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning," by E. J. Helley and K. R. Lajoie, 1979, the subject site is located over materials consisting of Late Pleistocene alluvium (Qpa) and adjacent to Medium-Grained Alluvium (Qham) that is located immediately to the west of the site. The Late Pleistocene alluvium is described as weakly consolidated, slightly weathered, poorly sorted, irregularly interbedded clay, silt, sand, and gravel. The Medium-Grained Alluvium is described as unconsolidated, moderately sorted, permeable fine sand, silt, and clayey silt with a few thin beds of coarse sand.

The soil encountered in borehole B1 consisted of olive-brown clay to a depth of 6.0 feet bgs, which was underlain by brown clayey silt to a depth of 7.0 feet bgs, which was in turn underlain by brown clayey sandy gravel to the maximum depth of exploration of 10.0 feet bgs. Review of the boring log attached with this report as Appendix A shows that the subsurface materials encountered in the boreholes are consistent with the Qpa description.

Groundwater was first encountered in the borehole at a depth of approximately 8.0 feet bgs, and was subsequently measured in the borehole at a depth of 7.3 feet bgs. The groundwater flow direction at the site is unknown.

San Francisco Bay is located approximately 4,600 feet to the west of the subject site (see Figure 1). Review of documents on the internet site GeoTracker identified a site located approximately 270 feet to the southwest of the subject site former UST at 3800 San Pablo Avenue (County Case # RO 2520) where the depth to groundwater in groundwater monitoring wells ranged from approximately 8.0 to 10.0 feet bgs and the groundwater flow direction was reported to be to the southwest.

LABORATORY ANALYSIS

The soil sample collected at a depth of 9.5 feet bgs was placed on hold at the laboratory based on the depth at which groundwater was encountered in borehole B1. The soil sample collected at a depth of 7.0 feet bgs and the groundwater sample were analyzed at McCampbell Analytical, Inc. in Pittsburg, California for the following analytes:

- TPH-G using EPA Methods 5030B and 8021B in conjunction with modified EPA Method 8015B.
- TPH-D and TPH-MO using EPA Methods 3550B, 3510C and 8015B.
- VOCs using EPA Method 8260B.
- SVOCs using EPA Method 8270C.

The soil sample analytical results are summarized in Table 1 and the borehole groundwater sample analytical results are summarized in Table 2. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report as Appendix B.

DISCUSSION AND RECOMMENDATIONS

Review of the sample results in Table 1 shows that no analytes were detected in the soil sample collected from borehole B1 at a depth of 7.0 feet bgs, and review of the sample results in Table 2 shows that the only petroleum analytes detected were 79 micrograms per liter ($\mu\text{g/L}$) TPH-D and 0.61 $\mu\text{g/L}$ of MTBE, both of which were detected at concentrations below their respective San Francisco Bay Regional Water Quality Control Board (SFRWQCB) February 2016 (Revision 3) Tier 1 groundwater Environmental Screening Level (ESL) values.

The source of the low concentrations of tetrachloroethene and chloroform that were detected in the groundwater sample at concentrations below their respective Tier 1 groundwater ESL values is unknown, and do not appear to be related to the former UST based on the absence of these compounds in any of the samples associated with the UST removal. Based on the sample results P&D recommends that no further investigation be performed and that the case be closed.

DISTRIBUTION

A copy of this report should be uploaded to the ACDEH ftp site and sent to Mr. Keith Nowell at the ACDEH.

LIMITATIONS

This report was prepared solely for the use of 3900 Adeline, LLC. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with 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 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.

December 4, 2017
Report 0735.R2

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: 12/31/17



Attachments:

Table 1A - Summary of Borehole Soil Sample Laboratory Analytical Results

Table 2 - Summary of Borehole Groundwater Sample Laboratory Analytical Results

Figure 1 - Site Location Map

Figure 2 - Site Plan Detail

Appendix A - Boring Log

Appendix B - Laboratory Analytical Reports and Chain of Custody Documentation

PHK/sjc
0735.R2

TABLES

Table 1

Summary of Borehole Soil Sample Laboratory Analytical Results

Sample ID	Sample Date	TPH-D	TPH-MO	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other VOCs by EPA Method 8260	SVOCs by EPA Method 8270
B1-7.0	7/1/2016	ND<1.0	ND<5.0	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	All ND	All ND
ESL		230	5,100	100	0.023	0.044	2.9	1.4	2.3	Various	Various
NOTES											
TPH-D = Total Petroleum Hydrocarbons as Diesel.											
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.											
TPH-G = Total Petroleum Hydrocarbons as Gasoline.											
MTBE = Methyl-tert-Butyl Ether.											
VOCs = Volatile Organic Compounds.											
SVOCs = Semi-Volatile Organic Compounds.											
ND = Not Detected.											
ESL = Tier 1 Environmental Screening Level, by San Francisco Bay-Regional Water Quality Control Board updated February 2016 (Revision 3), from Summary of Soil ESLs table.											
All results and ESLs reported in milligrams per kilogram (mg/kg) unless otherwise noted.											

Table 2

Summary of Borehole Groundwater Sample Laboratory Analytical Results

Sample ID	Sample Date	TPH-D	TPH-MO	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other VOCs by EPA Method 8260	SVOCs by EPA Method 8270
B1-W	7/1/2016	79, a	ND<250	ND<50	0.61	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND, except PCE = 0.99, Chloroform = 1.8	All ND
ESL		100	50,000	100	5.0	1.0	40	13	20	PCE = 3.0, Chloroform = 2.3	Various
NOTES											
TPH-D = Total Petroleum Hydrocarbons as Diesel.											
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.											
TPH-G = Total Petroleum Hydrocarbons as Gasoline.											
MTBE = Methyl-tert-Butyl Ether.											
VOCs = Volatile Organic Compounds.											
SVOCs = Semi-Volatile Organic Compounds.											
PCE = Tetrachloroethene.											
ND = Not Detected.											
a = Laboratory Note: Diesel range compounds are significant; no recognizable pattern.											
ESL = Tier 1 Environmental Screening Level, by San Francisco Bay-Regional Water Quality Control Board updated February 2016 (Revision 3), from Summary of Groundwater ESLs table.											
All results and ESLs reported in micrograms per liter (µg/L) unless otherwise noted.											

FIGURES

LEGEND

X Borehole Location

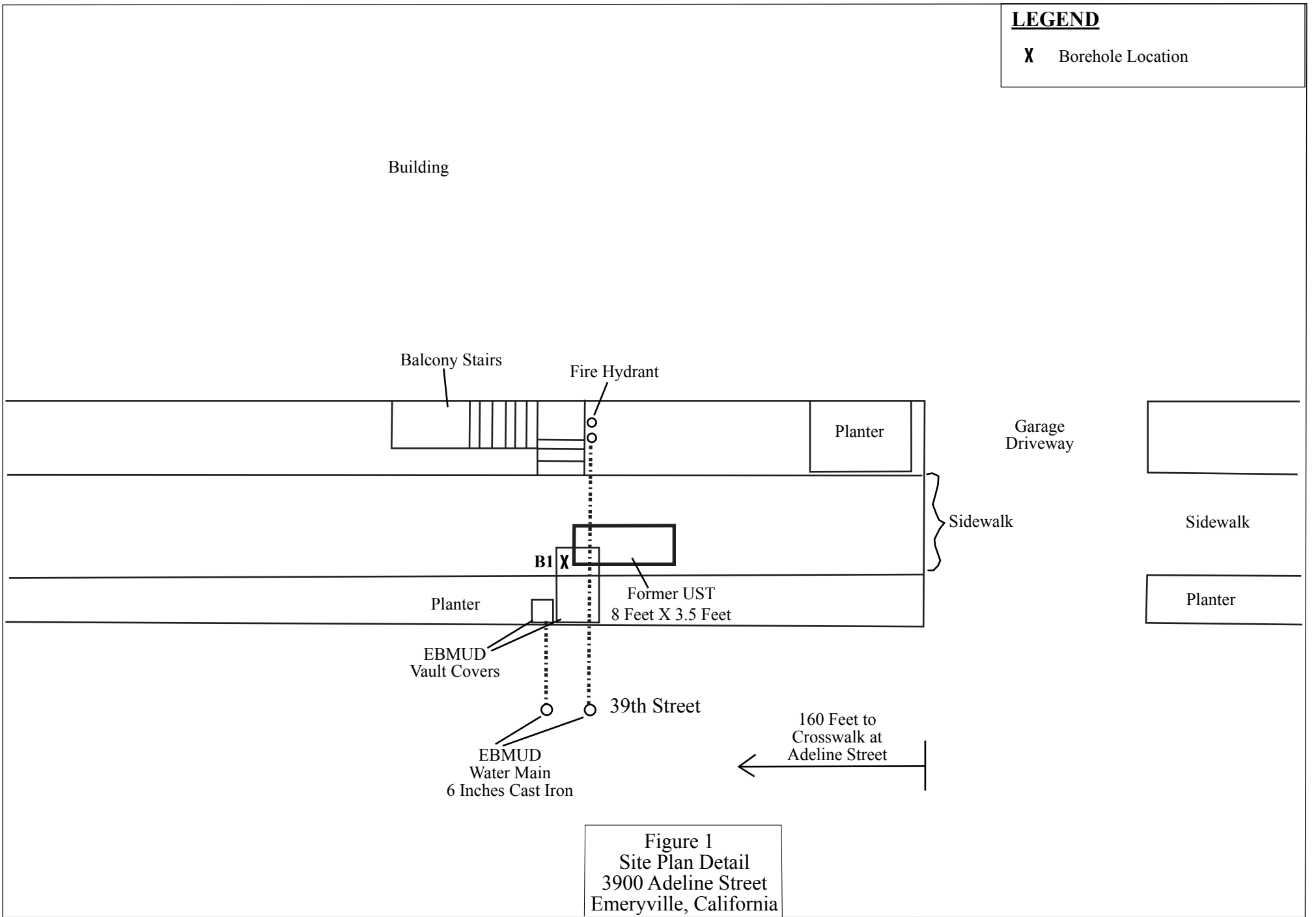
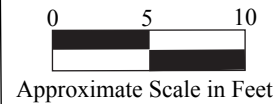


Figure 1
Site Plan Detail
3900 Adeline Street
Emeryville, California

Base Map from:
P&D Environmental using a steel tape and a rolatape,
November 17, 2015

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



APPENDIX A

BORING LOG

P&D ENVIRONMENTAL, INC.

BORING NO.: B1		PROJECT NO.: 0735		PROJECT NAME: 3900 Adeline St., Emeryville		
BORING LOCATION: Inside EBMUD utility vault in sidewalk				ELEVATION AND DATUM: None		
DRILLING AGENCY: IMX, Inc.		DRILLER: Alex		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 3.5-inch O.D. Hand Auger				7/1/16 0730	7/1/16 1000	
COMPLETION DEPTH: 10.0 Feet		BEDROCK DEPTH: Not Encountered		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: 8.0 Feet		NO. OF SAMPLES: 2 Soil, 1 Water		MLBD		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 4.0 ft. EBMUD Vault and base rock.			No Well Constructed	0	Borehole hand augered from 4.0 to 10.0 ft. using 3.5-inch O.D. hand auger.
					0	Water encountered during drilling at 8.0 ft. at 0825.
5	4.0 to 6.0 ft. Olive-brown clay (CL); medium stiff, moist. No Petroleum Hydrocarbon (PHC) odor. (0,0,100)	CL			0	Temporary 1-inch diameter slotted PVC casing placed in borehole. Water level was measured at 8.5 ft. at 0835 and at 8.3 ft. at 0850.
	6.0 to 7.0 ft. Brown clayey silt (ML); medium stiff, moist, with orange and black mottling. No PHC odor. (0.0,100)	ML			0	
	7.0 to 10.0 ft. Brown clayey sandy gravel (GC); moist to saturated, with coarse angular gravel to 0.5-inch diameter. No PHC odor. (75,10,15) Wet at 7.5 ft. Saturated at 8.0 ft.	X B1-7.0 GC		▼ ▽	0	Approximately 0.1-gallon purged from borehole prior to groundwater sample collection using new unused disposable polyethylene tubing connected to a peristaltic pump.
10		X B1-9.5				
						Water sample B1-W collected at 0915 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 7.3 ft. at 0925.
15						Borehole grouted on 7/1/16 using neat cement grout and a tremie pipe. Mr. Marcelino Valpando with Alameda County Public Works Agency, onsite to observe and document grouting of the borehole.
						<u>Drilling Notes:</u>
20						1) Field estimates of percent gravel, sand, and fines are shown in parentheses.
						2) Density determinations are qualitative and are not based on quantitative evaluation.
25						
30						

APPENDIX B

LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

- **McC Campbell Workorder # 1607021 - Soil Sample B1-7.0 Results**
- **McC Campbell Workorder # 1607031 - Groundwater Sample B1-W Results**



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1607021

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Steve Carmack

Project P.O.:

Project Name: 0735;3900 Adeline Street Emeryville,Ca.

Project Received: 07/01/2016

Analytical Report reviewed & approved for release on 07/11/2016 by:

Angela Rydelius,
Laboratory Manager

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





Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0735;3900 Adeline Street Emeryville, Ca.
WorkOrder: 1607021

Glossary Abbreviation

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

Quality Control Qualifiers

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



Analytical Report

Client: P & D Environmental

WorkOrder: 1607021

Date Received: 7/1/16 16:25

Extraction Method: SW5030B

Date Prepared: 7/1/16

Analytical Method: SW8260B

Project: 0735;3900 Adeline Street Emeryville, Ca.

Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-7.0	1607021-001A	Soil	07/01/2016 08:15	GC10	123127

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	07/07/2016 13:31
tert-Amyl methyl ether (TAME)	ND	0.0050	1	07/07/2016 13:31
Benzene	ND	0.0050	1	07/07/2016 13:31
Bromobenzene	ND	0.0050	1	07/07/2016 13:31
Bromochloromethane	ND	0.0050	1	07/07/2016 13:31
Bromodichloromethane	ND	0.0050	1	07/07/2016 13:31
Bromoform	ND	0.0050	1	07/07/2016 13:31
Bromomethane	ND	0.0050	1	07/07/2016 13:31
2-Butanone (MEK)	ND	0.020	1	07/07/2016 13:31
t-Butyl alcohol (TBA)	ND	0.050	1	07/07/2016 13:31
n-Butyl benzene	ND	0.0050	1	07/07/2016 13:31
sec-Butyl benzene	ND	0.0050	1	07/07/2016 13:31
tert-Butyl benzene	ND	0.0050	1	07/07/2016 13:31
Carbon Disulfide	ND	0.0050	1	07/07/2016 13:31
Carbon Tetrachloride	ND	0.0050	1	07/07/2016 13:31
Chlorobenzene	ND	0.0050	1	07/07/2016 13:31
Chloroethane	ND	0.0050	1	07/07/2016 13:31
Chloroform	ND	0.0050	1	07/07/2016 13:31
Chloromethane	ND	0.0050	1	07/07/2016 13:31
2-Chlorotoluene	ND	0.0050	1	07/07/2016 13:31
4-Chlorotoluene	ND	0.0050	1	07/07/2016 13:31
Dibromochloromethane	ND	0.0050	1	07/07/2016 13:31
1,2-Dibromo-3-chloropropane	ND	0.0040	1	07/07/2016 13:31
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/07/2016 13:31
Dibromomethane	ND	0.0050	1	07/07/2016 13:31
1,2-Dichlorobenzene	ND	0.0050	1	07/07/2016 13:31
1,3-Dichlorobenzene	ND	0.0050	1	07/07/2016 13:31
1,4-Dichlorobenzene	ND	0.0050	1	07/07/2016 13:31
Dichlorodifluoromethane	ND	0.0050	1	07/07/2016 13:31
1,1-Dichloroethane	ND	0.0050	1	07/07/2016 13:31
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/07/2016 13:31
1,1-Dichloroethene	ND	0.0050	1	07/07/2016 13:31
cis-1,2-Dichloroethene	ND	0.0050	1	07/07/2016 13:31
trans-1,2-Dichloroethene	ND	0.0050	1	07/07/2016 13:31
1,2-Dichloropropane	ND	0.0050	1	07/07/2016 13:31
1,3-Dichloropropane	ND	0.0050	1	07/07/2016 13:31
2,2-Dichloropropane	ND	0.0050	1	07/07/2016 13:31

(Cont.)



Analytical Report

Client: P & D Environmental

WorkOrder: 1607021

Date Received: 7/1/16 16:25

Extraction Method: SW5030B

Date Prepared: 7/1/16

Analytical Method: SW8260B

Project: 0735;3900 Adeline Street Emeryville, Ca.

Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-7.0	1607021-001A	Soil	07/01/2016 08:15	GC10	123127
Analytes	Result	RL	DF	Date Analyzed	
1,1-Dichloropropene	ND	0.0050	1	07/07/2016 13:31	
cis-1,3-Dichloropropene	ND	0.0050	1	07/07/2016 13:31	
trans-1,3-Dichloropropene	ND	0.0050	1	07/07/2016 13:31	
Diisopropyl ether (DIPE)	ND	0.0050	1	07/07/2016 13:31	
Ethylbenzene	ND	0.0050	1	07/07/2016 13:31	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	07/07/2016 13:31	
Freon 113	ND	0.0050	1	07/07/2016 13:31	
Hexachlorobutadiene	ND	0.0050	1	07/07/2016 13:31	
Hexachloroethane	ND	0.0050	1	07/07/2016 13:31	
2-Hexanone	ND	0.0050	1	07/07/2016 13:31	
Isopropylbenzene	ND	0.0050	1	07/07/2016 13:31	
4-Isopropyl toluene	ND	0.0050	1	07/07/2016 13:31	
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/07/2016 13:31	
Methylene chloride	ND	0.0050	1	07/07/2016 13:31	
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	07/07/2016 13:31	
Naphthalene	ND	0.0050	1	07/07/2016 13:31	
n-Propyl benzene	ND	0.0050	1	07/07/2016 13:31	
Styrene	ND	0.0050	1	07/07/2016 13:31	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	07/07/2016 13:31	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	07/07/2016 13:31	
Tetrachloroethene	ND	0.0050	1	07/07/2016 13:31	
Toluene	ND	0.0050	1	07/07/2016 13:31	
1,2,3-Trichlorobenzene	ND	0.0050	1	07/07/2016 13:31	
1,2,4-Trichlorobenzene	ND	0.0050	1	07/07/2016 13:31	
1,1,1-Trichloroethane	ND	0.0050	1	07/07/2016 13:31	
1,1,2-Trichloroethane	ND	0.0050	1	07/07/2016 13:31	
Trichloroethene	ND	0.0050	1	07/07/2016 13:31	
Trichlorofluoromethane	ND	0.0050	1	07/07/2016 13:31	
1,2,3-Trichloropropane	ND	0.0050	1	07/07/2016 13:31	
1,2,4-Trimethylbenzene	ND	0.0050	1	07/07/2016 13:31	
1,3,5-Trimethylbenzene	ND	0.0050	1	07/07/2016 13:31	
Vinyl Chloride	ND	0.0050	1	07/07/2016 13:31	
Xylenes, Total	ND	0.0050	1	07/07/2016 13:31	

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: P & D Environmental

WorkOrder: 1607021

Date Received: 7/1/16 16:25

Extraction Method: SW5030B

Date Prepared: 7/1/16

Analytical Method: SW8260B

Project: 0735;3900 Adeline Street Emeryville, Ca.

Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-7.0	1607021-001A	Soil	07/01/2016 08:15	GC10	123127

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	84	70-130		07/07/2016 13:31
Toluene-d8	96	70-130		07/07/2016 13:31
4-BFB	82	70-130		07/07/2016 13:31
Benzene-d6	87	60-140		07/07/2016 13:31
Ethylbenzene-d10	102	60-140		07/07/2016 13:31
1,2-DCB-d4	77	60-140		07/07/2016 13:31

Analyst(s): MW



Analytical Report

Client: P & D Environmental

WorkOrder: 1607021

Date Received: 7/1/16 16:25

Extraction Method: SW3550B

Date Prepared: 7/7/16

Analytical Method: SW8270C

Project: 0735;3900 Adeline Street Emeryville, Ca.

Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-7.0	1607021-001A	Soil	07/01/2016 08:15	GC17	123350

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.25	1	07/08/2016 19:06
Acenaphthylene	ND	0.25	1	07/08/2016 19:06
Acetochlor	ND	0.25	1	07/08/2016 19:06
Anthracene	ND	0.25	1	07/08/2016 19:06
Benzidine	ND	1.3	1	07/08/2016 19:06
Benzo (a) anthracene	ND	0.25	1	07/08/2016 19:06
Benzo (a) pyrene	ND	0.25	1	07/08/2016 19:06
Benzo (b) fluoranthene	ND	0.25	1	07/08/2016 19:06
Benzo (g,h,i) perylene	ND	0.25	1	07/08/2016 19:06
Benzo (k) fluoranthene	ND	0.25	1	07/08/2016 19:06
Benzyl Alcohol	ND	1.3	1	07/08/2016 19:06
1,1-Biphenyl	ND	0.25	1	07/08/2016 19:06
Bis (2-chloroethoxy) Methane	ND	0.25	1	07/08/2016 19:06
Bis (2-chloroethyl) Ether	ND	0.25	1	07/08/2016 19:06
Bis (2-chloroisopropyl) Ether	ND	0.25	1	07/08/2016 19:06
Bis (2-ethylhexyl) Adipate	ND	0.25	1	07/08/2016 19:06
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	07/08/2016 19:06
4-Bromophenyl Phenyl Ether	ND	0.25	1	07/08/2016 19:06
Butylbenzyl Phthalate	ND	0.25	1	07/08/2016 19:06
4-Chloroaniline	ND	0.50	1	07/08/2016 19:06
4-Chloro-3-methylphenol	ND	0.25	1	07/08/2016 19:06
2-Chloronaphthalene	ND	0.25	1	07/08/2016 19:06
2-Chlorophenol	ND	0.25	1	07/08/2016 19:06
4-Chlorophenyl Phenyl Ether	ND	0.25	1	07/08/2016 19:06
Chrysene	ND	0.25	1	07/08/2016 19:06
Dibenzo (a,h) anthracene	ND	0.25	1	07/08/2016 19:06
Dibenzofuran	ND	0.25	1	07/08/2016 19:06
Di-n-butyl Phthalate	ND	0.25	1	07/08/2016 19:06
1,2-Dichlorobenzene	ND	0.25	1	07/08/2016 19:06
1,3-Dichlorobenzene	ND	0.25	1	07/08/2016 19:06
1,4-Dichlorobenzene	ND	0.25	1	07/08/2016 19:06
3,3-Dichlorobenzidine	ND	0.50	1	07/08/2016 19:06
2,4-Dichlorophenol	ND	0.25	1	07/08/2016 19:06
Diethyl Phthalate	ND	0.25	1	07/08/2016 19:06
2,4-Dimethylphenol	ND	0.25	1	07/08/2016 19:06
Dimethyl Phthalate	ND	0.25	1	07/08/2016 19:06
4,6-Dinitro-2-methylphenol	ND	1.3	1	07/08/2016 19:06

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Analytical Report

Client: P & D Environmental

WorkOrder: 1607021

Date Received: 7/1/16 16:25

Extraction Method: SW3550B

Date Prepared: 7/7/16

Analytical Method: SW8270C

Project: 0735;3900 Adeline Street Emeryville, Ca.

Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-7.0	1607021-001A	Soil	07/01/2016 08:15	GC17	123350
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		6.3	1	07/08/2016 19:06
2,4-Dinitrotoluene	ND		0.25	1	07/08/2016 19:06
2,6-Dinitrotoluene	ND		0.25	1	07/08/2016 19:06
Di-n-octyl Phthalate	ND		0.50	1	07/08/2016 19:06
1,2-Diphenylhydrazine	ND		0.25	1	07/08/2016 19:06
Fluoranthene	ND		0.25	1	07/08/2016 19:06
Fluorene	ND		0.25	1	07/08/2016 19:06
Hexachlorobenzene	ND		0.25	1	07/08/2016 19:06
Hexachlorobutadiene	ND		0.25	1	07/08/2016 19:06
Hexachlorocyclopentadiene	ND		1.3	1	07/08/2016 19:06
Hexachloroethane	ND		0.25	1	07/08/2016 19:06
Indeno (1,2,3-cd) pyrene	ND		0.25	1	07/08/2016 19:06
Isophorone	ND		0.25	1	07/08/2016 19:06
2-Methylnaphthalene	ND		0.25	1	07/08/2016 19:06
2-Methylphenol (o-Cresol)	ND		0.25	1	07/08/2016 19:06
3 & 4-Methylphenol (m,p-Cresol)	ND		0.25	1	07/08/2016 19:06
Naphthalene	ND		0.25	1	07/08/2016 19:06
2-Nitroaniline	ND		1.3	1	07/08/2016 19:06
3-Nitroaniline	ND		1.3	1	07/08/2016 19:06
4-Nitroaniline	ND		1.3	1	07/08/2016 19:06
Nitrobenzene	ND		0.25	1	07/08/2016 19:06
2-Nitrophenol	ND		1.3	1	07/08/2016 19:06
4-Nitrophenol	ND		1.3	1	07/08/2016 19:06
N-Nitrosodiphenylamine	ND		0.25	1	07/08/2016 19:06
N-Nitrosodi-n-propylamine	ND		0.25	1	07/08/2016 19:06
Pentachlorophenol	ND		1.3	1	07/08/2016 19:06
Phenanthrene	ND		0.25	1	07/08/2016 19:06
Phenol	ND		0.25	1	07/08/2016 19:06
Pyrene	ND		0.25	1	07/08/2016 19:06
1,2,4-Trichlorobenzene	ND		0.25	1	07/08/2016 19:06
2,4,5-Trichlorophenol	ND		0.25	1	07/08/2016 19:06
2,4,6-Trichlorophenol	ND		0.25	1	07/08/2016 19:06

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Analytical Report

Client: P & D Environmental

WorkOrder: 1607021

Date Received: 7/1/16 16:25

Extraction Method: SW3550B

Date Prepared: 7/7/16

Analytical Method: SW8270C

Project: 0735;3900 Adeline Street Emeryville, Ca.

Unit: mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-7.0	1607021-001A	Soil	07/01/2016 08:15	GC17	123350

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
2-Fluorophenol	90	30-130		07/08/2016 19:06
Phenol-d5	84	30-130		07/08/2016 19:06
Nitrobenzene-d5	74	30-130		07/08/2016 19:06
2-Fluorobiphenyl	72	30-130		07/08/2016 19:06
2,4,6-Tribromophenol	45	16-130		07/08/2016 19:06
4-Terphenyl-d14	71	30-130		07/08/2016 19:06

Analyst(s): REB



Analytical Report

Client: P & D Environmental
Date Received: 7/1/16 16:25
Date Prepared: 7/1/16
Project: 0735;3900 Adeline Street Emeryville, Ca.

WorkOrder: 1607021
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-7.0	1607021-001A	Soil	07/01/2016 08:15	GC19	123124
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	07/06/2016 21:54
MTBE	---		0.050	1	07/06/2016 21:54
Benzene	---		0.0050	1	07/06/2016 21:54
Toluene	---		0.0050	1	07/06/2016 21:54
Ethylbenzene	---		0.0050	1	07/06/2016 21:54
Xylenes	---		0.015	1	07/06/2016 21:54
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	96		70-130		07/06/2016 21:54
<u>Analyst(s):</u> IA					



Analytical Report

Client: P & D Environmental	WorkOrder: 1607021
Date Received: 7/1/16 16:25	Extraction Method: SW3550B
Date Prepared: 7/1/16	Analytical Method: SW8015B
Project: 0735;3900 Adeline Street Emeryville, Ca.	Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-7.0	1607021-001A	Soil	07/01/2016 08:15	GC9a	123126
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		1.0	1	07/06/2016 15:39
TPH-Motor Oil (C18-C36)	ND		5.0	1	07/06/2016 15:39
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	112		70-130		07/06/2016 15:39
<u>Analyst(s):</u> TK					



Quality Control Report

Client: P & D Environmental
Date Prepared: 6/30/16
Date Analyzed: 7/5/16
Instrument: GC10
Matrix: Soil
Project: 0735;3900 Adeline Street Emeryville, Ca.


WorkOrder: 1607021
BatchID: 123127
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-123127
 1606F25-001AMS/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	0.0347	0.0050	0.050	-	69	53-116
Benzene	ND	0.0440	0.0050	0.050	-	88	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.108	0.050	0.20	-	54	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0428	0.0050	0.050	-	86	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0379	0.0040	0.050	-	76	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0391	0.0040	0.050	-	78	58-135
1,1-Dichloroethene	ND	0.0410	0.0050	0.050	-	82	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

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NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: P & D Environmental
Date Prepared: 6/30/16
Date Analyzed: 7/5/16
Instrument: GC10
Matrix: Soil
Project: 0735;3900 Adeline Street Emeryville, Ca.

WorkOrder: 1607021
BatchID: 123127
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-123127
 1606F25-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0343	0.0050	0.050	-	69	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0356	0.0050	0.050	-	71	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0344	0.0050	0.050	-	69	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0465	0.0050	0.050	-	93	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0477	0.0050	0.050	-	95	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-



Quality Control Report

Client: P & D Environmental
Date Prepared: 6/30/16
Date Analyzed: 7/5/16
Instrument: GC10
Matrix: Soil
Project: 0735;3900 Adeline Street Emeryville, Ca.

WorkOrder: 1607021
BatchID: 123127
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-123127
 1606F25-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.103	0.107		0.12	82	86	70-130
Toluene-d8	0.121	0.121		0.12	96	97	70-130
4-BFB	0.0109	0.0111		0.012	87	88	70-130
Benzene-d6	0.0867	0.0970		0.10	87	97	60-140
Ethylbenzene-d10	0.101	0.110		0.10	101	110	60-140
1,2-DCB-d4	0.0784	0.0796		0.10	78	80	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0277	0.0301	0.050	ND	55	60	53-116	8.22	20
Benzene	0.0353	0.0386	0.050	ND	71	77	63-137	8.83	20
t-Butyl alcohol (TBA)	0.0924	0.100	0.20	ND	46	50	41-135	8.18	20
Chlorobenzene	0.0346	0.0380	0.050	ND	69,F1	76,F1	77-121	9.22	20
1,2-Dibromoethane (EDB)	0.0306	0.0333	0.050	ND	61,F1	67	67-119	8.34	20
1,2-Dichloroethane (1,2-DCA)	0.0314	0.0344	0.050	ND	63	69	58-135	9.24	20
1,1-Dichloroethene	0.0315	0.0349	0.050	ND	63	70	42-145	10.3	20
Diisopropyl ether (DIPE)	0.0285	0.0311	0.050	ND	57	62	52-129	8.77	20
Ethyl tert-butyl ether (ETBE)	0.0290	0.0316	0.050	ND	58	63	53-125	8.55	20
Methyl-t-butyl ether (MTBE)	0.0280	0.0306	0.050	ND	56,F1	61	58-122	9.02	20
Toluene	0.0364	0.0402	0.050	ND	73,F1	80	76-130	9.91	20
Trichloroethene	0.0334	0.0364	0.050	ND	67,F1	73	72-132	8.54	20
Surrogate Recovery									
Dibromofluoromethane	0.108	0.107	0.12		86	86	70-130	0	20
Toluene-d8	0.118	0.118	0.12		94	95	70-130	0.139	20
4-BFB	0.0111	0.0112	0.012		89	90	70-130	1.12	20
Benzene-d6	0.0790	0.0831	0.10		79	83	60-140	5.14	20
Ethylbenzene-d10	0.0855	0.0936	0.10		85	94	60-140	9.12	20
1,2-DCB-d4	0.0674	0.0719	0.10		67	72	60-140	6.42	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 7/6/16
Date Analyzed: 7/7/16
Instrument: GC17
Matrix: Soil
Project: 0735;3900 Adeline Street Emeryville, Ca.

WorkOrder: 1607021
BatchID: 123350
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-123350

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	4.06	0.25	5	-	81	46-118
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.50	-	-	-	-
4-Chloro-3-methylphenol	ND	4.40	0.25	5	-	88	49-123
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.40	0.25	5	-	88	55-116
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.84	0.25	5	-	77	50-102
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-

(Cont.)



Quality Control Report

Client: P & D Environmental
Date Prepared: 7/6/16
Date Analyzed: 7/7/16
Instrument: GC17
Matrix: Soil
Project: 0735;3900 Adeline Street Emeryville, Ca.

WorkOrder: 1607021
BatchID: 123350
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-123350

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	4.39	0.25	5	-	88	47-117
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 & 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	3.75	1.3	5	-	75	40-102
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	3.53	0.25	5	-	71	47-108
Pentachlorophenol	ND	4.83	1.3	5	-	97	39-134
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.13	0.25	5	-	83	49-107
Pyrene	ND	4.19	0.25	5	-	84	55-124
1,2,4-Trichlorobenzene	ND	4.45	0.25	5	-	89	51-121
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

(Cont.)



Quality Control Report

Client: P & D Environmental	WorkOrder: 1607021
Date Prepared: 7/6/16	BatchID: 123350
Date Analyzed: 7/7/16	Extraction Method: SW3550B
Instrument: GC17	Analytical Method: SW8270C
Matrix: Soil	Unit: mg/Kg
Project: 0735;3900 Adeline Street Emeryville, Ca.	Sample ID: MB/LCS-123350

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
2-Fluorophenol	5.18	4.51		5	104	90	47-125
Phenol-d5	4.90	4.30		5	98	86	45-117
Nitrobenzene-d5	4.42	4.09		5	88	82	39-121
2-Fluorobiphenyl	4.32	4.04		5	86	81	35-120
2,4,6-Tribromophenol	3.74	3.65		5	75	73	32-111
4-Terphenyl-d14	4.71	3.87		5	94	77	32-128



Quality Control Report

Client: P & D Environmental
Date Prepared: 6/30/16
Date Analyzed: 7/1/16
Instrument: GC19
Matrix: Soil
Project: 0735;3900 Adeline Street Emeryville, Ca.

WorkOrder: 1607021
BatchID: 123124
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-123124
 1606F16-001AMS/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	0.557	0.40	0.60	-	93	70-130
MTBE	ND	0.0931	0.050	0.10	-	93	70-130
Benzene	ND	0.0964	0.0050	0.10	-	96	70-130
Toluene	ND	0.0972	0.0050	0.10	-	97	70-130
Ethylbenzene	ND	0.0987	0.0050	0.10	-	99	70-130
Xylenes	ND	0.297	0.015	0.30	-	99	70-130
Surrogate Recovery							
2-Fluorotoluene	0.0998	0.102		0.10	100	102	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.650	0.699	0.60	ND	108	116	70-130	7.23	20
MTBE	0.0985	0.0974	0.10	ND	99	97	70-130	1.13	20
Benzene	0.102	0.101	0.10	ND	102	101	70-130	1.03	20
Toluene	0.110	0.105	0.10	ND	106	100	70-130	4.95	20
Ethylbenzene	0.107	0.108	0.10	ND	107	108	70-130	0.762	20
Xylenes	0.323	0.372	0.30	ND	106	123	70-130	14.3	20
Surrogate Recovery									
2-Fluorotoluene	0.108	0.106	0.10		108	106	70-130	0.992	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 6/30/16
Date Analyzed: 7/1/16
Instrument: GC6B
Matrix: Soil
Project: 0735;3900 Adeline Street Emeryville, Ca.

WorkOrder: 1607021
BatchID: 123126
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-123126
 1606F16-003AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	45.8	1.0	40	-	114	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	22.9	21.4		25	92	86	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	51.2	49.5	40	1.256	125	121	70-130	3.43	30
Surrogate Recovery									
C9	22.3	22.5	25		89	90	70-130	1.10	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1607021

ClientCode: PDEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

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

Email: lab@pdenviro.com; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0735;3900 Adeline Street Emeryville,Ca.

Bill to:

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

Requested TAT: 5 days;

Date Received: 07/01/2016

Date Logged: 07/01/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1607021-001	B1-7.0	Soil	7/1/2016 8:15	<input type="checkbox"/>	A	A	A	A									

Test Legend:

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

Prepared by: Valerie Riva

The following SampID: 001A contains testgroup.

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

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



WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL

QC Level: LEVEL 2

Work Order: 1607021

Project: 0735;3900 Adeline Street Emeryville, Ca.

Client Contact: Steve Carmack

Date Logged: 7/1/2016

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

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

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1607021-001A	B1-7.0	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	7/1/2016 8:15	5 days		<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1607021-002A	B1-9.5	Soil		1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	7/1/2016 8:45			<input checked="" type="checkbox"/>	

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

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

Mccampbell Analytical, Inc.

From: lab@pdenviro.com
Sent: Friday, July 01, 2016 1:01 PM
To: McCampbell Analytical
Cc: Angela Rydelius
Subject: Incoming groundwater sample for P&D job # 0735/3900 Adeline St. Emeryville/question regarding 8270 microextraction

Good afternoon,

Bernie just picked up 2 soil samples and 1 groundwater sample for P&D job # 0735/ 3900 Adeline St. Emeryville.

1. The 2nd soil sample (B1-9.5) should have been marked to be placed on hold on the COC; please place sample B1-9.5 on hold. B1-7.0 should be analyzed as indicated on the COC.
2. For the groundwater sample we only submitted 3 clear HCL voas and 2 amber non-preserved voas. We asked for TPH-G/D/MO, 8260, and 8270. Is it possible to run a micro-extraction for 8270 from the amber voas? If so we would like to go ahead and run the micro-extraction, and if not, we would need this analysis canceled for the groundwater sample.

Plenas let us know if you have any questions and/or yuur thoughts on the micro-extraction.

Thank You!

Steve Carmack
Project Scientist
P&D Environmental, Inc.
55 Santa Clara Avenue, Suite 240
Oakland, CA 94610
steven.carmack@pdenviro.com
(510) 658-6916 telephone
(510) 834-0152 facsimile

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g - 1 voa hcl
8260 - 1 voa hcl
d - 1 AVOA

- 1 shot deal since 1 voa
- reporting limits would be raised

OK PER STEVE 7/1/16
TO USE THE 1 VOA
FOR 8270



Sample Receipt Checklist

Client Name: **P & D Environmental**
 Project Name: **0735;3900 Adeline Street Emeryville, Ca.**
 WorkOrder No: **1607021** Matrix: Soil
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **7/1/2016 16:25**
 Date Logged: **7/1/2016**
 Received by: Valerie Riva
 Logged by: Valerie Riva

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
 Sample/Temp Blank temperature Temp: 6.2°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

UCMR3 Samples:

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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1607031

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Paul King

Project P.O.:

Project Name: 0735; 3900 Adeline St. Emeryville, Ca.

Project Received: 07/01/2016

Analytical Report reviewed & approved for release on 07/11/2016 by:

Angela Rydelius,
Laboratory Manager

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





Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0735; 3900 Adeline St. Emeryville, Ca.
WorkOrder: 1607031

Glossary Abbreviation

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



Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0735; 3900 Adeline St. Emeryville, Ca.
WorkOrder: 1607031

Analytical Qualifiers

a4 reporting limits raised due to the sample's matrix prohibiting a full volume extraction.
e2 diesel range compounds are significant; no recognizable pattern



Analytical Report

Client: P & D Environmental
Date Received: 7/1/16 16:20
Date Prepared: 7/6/16
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-W	1607031-001B	Water	07/01/2016 09:15	GC18	123275

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	07/06/2016 00:51
tert-Amyl methyl ether (TAME)	ND	0.50	1	07/06/2016 00:51
Benzene	ND	0.50	1	07/06/2016 00:51
Bromobenzene	ND	0.50	1	07/06/2016 00:51
Bromochloromethane	ND	0.50	1	07/06/2016 00:51
Bromodichloromethane	ND	0.50	1	07/06/2016 00:51
Bromoform	ND	0.50	1	07/06/2016 00:51
Bromomethane	ND	0.50	1	07/06/2016 00:51
2-Butanone (MEK)	ND	2.0	1	07/06/2016 00:51
t-Butyl alcohol (TBA)	ND	2.0	1	07/06/2016 00:51
n-Butyl benzene	ND	0.50	1	07/06/2016 00:51
sec-Butyl benzene	ND	0.50	1	07/06/2016 00:51
tert-Butyl benzene	ND	0.50	1	07/06/2016 00:51
Carbon Disulfide	ND	0.50	1	07/06/2016 00:51
Carbon Tetrachloride	ND	0.50	1	07/06/2016 00:51
Chlorobenzene	ND	0.50	1	07/06/2016 00:51
Chloroethane	ND	0.50	1	07/06/2016 00:51
Chloroform	1.8	0.50	1	07/06/2016 00:51
Chloromethane	ND	0.50	1	07/06/2016 00:51
2-Chlorotoluene	ND	0.50	1	07/06/2016 00:51
4-Chlorotoluene	ND	0.50	1	07/06/2016 00:51
Dibromochloromethane	ND	0.50	1	07/06/2016 00:51
1,2-Dibromo-3-chloropropane	ND	0.20	1	07/06/2016 00:51
1,2-Dibromoethane (EDB)	ND	0.50	1	07/06/2016 00:51
Dibromomethane	ND	0.50	1	07/06/2016 00:51
1,2-Dichlorobenzene	ND	0.50	1	07/06/2016 00:51
1,3-Dichlorobenzene	ND	0.50	1	07/06/2016 00:51
1,4-Dichlorobenzene	ND	0.50	1	07/06/2016 00:51
Dichlorodifluoromethane	ND	0.50	1	07/06/2016 00:51
1,1-Dichloroethane	ND	0.50	1	07/06/2016 00:51
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	07/06/2016 00:51
1,1-Dichloroethene	ND	0.50	1	07/06/2016 00:51
cis-1,2-Dichloroethene	ND	0.50	1	07/06/2016 00:51
trans-1,2-Dichloroethene	ND	0.50	1	07/06/2016 00:51
1,2-Dichloropropane	ND	0.50	1	07/06/2016 00:51
1,3-Dichloropropane	ND	0.50	1	07/06/2016 00:51
2,2-Dichloropropane	ND	0.50	1	07/06/2016 00:51

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 7/1/16 16:20
Date Prepared: 7/6/16
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-W	1607031-001B	Water	07/01/2016 09:15	GC18	123275
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.50	1	07/06/2016 00:51
cis-1,3-Dichloropropene	ND		0.50	1	07/06/2016 00:51
trans-1,3-Dichloropropene	ND		0.50	1	07/06/2016 00:51
Diisopropyl ether (DIPE)	ND		0.50	1	07/06/2016 00:51
Ethylbenzene	ND		0.50	1	07/06/2016 00:51
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	07/06/2016 00:51
Freon 113	ND		0.50	1	07/06/2016 00:51
Hexachlorobutadiene	ND		0.50	1	07/06/2016 00:51
Hexachloroethane	ND		0.50	1	07/06/2016 00:51
2-Hexanone	ND		0.50	1	07/06/2016 00:51
Isopropylbenzene	ND		0.50	1	07/06/2016 00:51
4-Isopropyl toluene	ND		0.50	1	07/06/2016 00:51
Methyl-t-butyl ether (MTBE)	0.61		0.50	1	07/06/2016 00:51
Methylene chloride	ND		0.50	1	07/06/2016 00:51
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	07/06/2016 00:51
Naphthalene	ND		0.50	1	07/06/2016 00:51
n-Propyl benzene	ND		0.50	1	07/06/2016 00:51
Styrene	ND		0.50	1	07/06/2016 00:51
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/06/2016 00:51
1,1,2,2-Tetrachloroethane	ND		0.50	1	07/06/2016 00:51
Tetrachloroethene	0.99		0.50	1	07/06/2016 00:51
Toluene	ND		0.50	1	07/06/2016 00:51
1,2,3-Trichlorobenzene	ND		0.50	1	07/06/2016 00:51
1,2,4-Trichlorobenzene	ND		0.50	1	07/06/2016 00:51
1,1,1-Trichloroethane	ND		0.50	1	07/06/2016 00:51
1,1,2-Trichloroethane	ND		0.50	1	07/06/2016 00:51
Trichloroethene	ND		0.50	1	07/06/2016 00:51
Trichlorofluoromethane	ND		0.50	1	07/06/2016 00:51
1,2,3-Trichloropropane	ND		0.50	1	07/06/2016 00:51
1,2,4-Trimethylbenzene	ND		0.50	1	07/06/2016 00:51
1,3,5-Trimethylbenzene	ND		0.50	1	07/06/2016 00:51
Vinyl Chloride	ND		0.50	1	07/06/2016 00:51
Xylenes, Total	ND		0.50	1	07/06/2016 00:51

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 7/1/16 16:20
Date Prepared: 7/6/16
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-W	1607031-001B	Water	07/01/2016 09:15	GC18	123275

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	125	70-130		07/06/2016 00:51
Toluene-d8	107	70-130		07/06/2016 00:51
4-BFB	97	70-130		07/06/2016 00:51

Analyst(s): MW



Analytical Report

Client: P & D Environmental
Date Received: 7/1/16 16:20
Date Prepared: 7/1/16
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
Extraction Method: E625
Analytical Method: SW8270C
Unit: µg/L

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-W	1607031-001C	Water	07/01/2016 09:15	GC17	123169
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		49	1	07/06/2016 01:07
Acenaphthylene	ND		49	1	07/06/2016 01:07
Acetochlor	ND		49	1	07/06/2016 01:07
Anthracene	ND		49	1	07/06/2016 01:07
Benzidine	ND		240	1	07/06/2016 01:07
Benzo (a) anthracene	ND		49	1	07/06/2016 01:07
Benzo (a) pyrene	ND		49	1	07/06/2016 01:07
Benzo (b) fluoranthene	ND		49	1	07/06/2016 01:07
Benzo (g,h,i) perylene	ND		49	1	07/06/2016 01:07
Benzo (k) fluoranthene	ND		49	1	07/06/2016 01:07
Benzyl Alcohol	ND		240	1	07/06/2016 01:07
1,1-Biphenyl	ND		49	1	07/06/2016 01:07
Bis (2-chloroethoxy) Methane	ND		49	1	07/06/2016 01:07
Bis (2-chloroethyl) Ether	ND		49	1	07/06/2016 01:07
Bis (2-chloroisopropyl) Ether	ND		49	1	07/06/2016 01:07
Bis (2-ethylhexyl) Adipate	ND		49	1	07/06/2016 01:07
Bis (2-ethylhexyl) Phthalate	ND		98	1	07/06/2016 01:07
4-Bromophenyl Phenyl Ether	ND		240	1	07/06/2016 01:07
Butylbenzyl Phthalate	ND		49	1	07/06/2016 01:07
4-Chloroaniline	ND		98	1	07/06/2016 01:07
4-Chloro-3-methylphenol	ND		240	1	07/06/2016 01:07
2-Chloronaphthalene	ND		49	1	07/06/2016 01:07
2-Chlorophenol	ND		49	1	07/06/2016 01:07
4-Chlorophenyl Phenyl Ether	ND		49	1	07/06/2016 01:07
Chrysene	ND		49	1	07/06/2016 01:07
Dibenzo (a,h) anthracene	ND		49	1	07/06/2016 01:07
Dibenzofuran	ND		49	1	07/06/2016 01:07
Di-n-butyl Phthalate	ND		49	1	07/06/2016 01:07
1,2-Dichlorobenzene	ND		49	1	07/06/2016 01:07
1,3-Dichlorobenzene	ND		49	1	07/06/2016 01:07
1,4-Dichlorobenzene	ND		49	1	07/06/2016 01:07
3,3-Dichlorobenzidine	ND		98	1	07/06/2016 01:07
2,4-Dichlorophenol	ND		49	1	07/06/2016 01:07
Diethyl Phthalate	ND		49	1	07/06/2016 01:07
2,4-Dimethylphenol	ND		49	1	07/06/2016 01:07
Dimethyl Phthalate	ND		49	1	07/06/2016 01:07
4,6-Dinitro-2-methylphenol	ND		240	1	07/06/2016 01:07

(Cont.)



Analytical Report

Client: P & D Environmental
Date Received: 7/1/16 16:20
Date Prepared: 7/1/16
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
Extraction Method: E625
Analytical Method: SW8270C
Unit: µg/L

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-W	1607031-001C	Water	07/01/2016 09:15	GC17	123169

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrophenol	ND	610	1	07/06/2016 01:07
2,4-Dinitrotoluene	ND	49	1	07/06/2016 01:07
2,6-Dinitrotoluene	ND	49	1	07/06/2016 01:07
Di-n-octyl Phthalate	ND	49	1	07/06/2016 01:07
1,2-Diphenylhydrazine	ND	49	1	07/06/2016 01:07
Fluoranthene	ND	49	1	07/06/2016 01:07
Fluorene	ND	49	1	07/06/2016 01:07
Hexachlorobenzene	ND	49	1	07/06/2016 01:07
Hexachlorobutadiene	ND	49	1	07/06/2016 01:07
Hexachlorocyclopentadiene	ND	240	1	07/06/2016 01:07
Hexachloroethane	ND	49	1	07/06/2016 01:07
Indeno (1,2,3-cd) pyrene	ND	49	1	07/06/2016 01:07
Isophorone	ND	49	1	07/06/2016 01:07
2-Methylnaphthalene	ND	49	1	07/06/2016 01:07
2-Methylphenol (o-Cresol)	ND	49	1	07/06/2016 01:07
3 & 4-Methylphenol (m,p-Cresol)	ND	49	1	07/06/2016 01:07
Naphthalene	ND	49	1	07/06/2016 01:07
2-Nitroaniline	ND	240	1	07/06/2016 01:07
3-Nitroaniline	ND	240	1	07/06/2016 01:07
4-Nitroaniline	ND	240	1	07/06/2016 01:07
Nitrobenzene	ND	49	1	07/06/2016 01:07
2-Nitrophenol	ND	240	1	07/06/2016 01:07
4-Nitrophenol	ND	240	1	07/06/2016 01:07
N-Nitrosodiphenylamine	ND	49	1	07/06/2016 01:07
N-Nitrosodi-n-propylamine	ND	49	1	07/06/2016 01:07
Pentachlorophenol	ND	240	1	07/06/2016 01:07
Phenanthrene	ND	49	1	07/06/2016 01:07
Phenol	ND	49	1	07/06/2016 01:07
Pyrene	ND	49	1	07/06/2016 01:07
1,2,4-Trichlorobenzene	ND	49	1	07/06/2016 01:07
2,4,5-Trichlorophenol	ND	49	1	07/06/2016 01:07
2,4,6-Trichlorophenol	ND	49	1	07/06/2016 01:07

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Analytical Report

Client: P & D Environmental
Date Received: 7/1/16 16:20
Date Prepared: 7/1/16
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
Extraction Method: E625
Analytical Method: SW8270C
Unit: µg/L

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-W	1607031-001C	Water	07/01/2016 09:15	GC17	123169

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
2-Fluorophenol	37	8-130		07/06/2016 01:07
Phenol-d5	52	5-130		07/06/2016 01:07
Nitrobenzene-d5	70	20-140		07/06/2016 01:07
2-Fluorobiphenyl	71	40-140		07/06/2016 01:07
2,4,6-Tribromophenol	55	16-180		07/06/2016 01:07
4-Terphenyl-d14	91	40-170		07/06/2016 01:07

Analyst(s): REB

Analytical Comments: a4



Analytical Report

Client: P & D Environmental	WorkOrder: 1607031
Date Received: 7/1/16 16:20	Extraction Method: SW5030B
Date Prepared: 7/5/16	Analytical Method: SW8021B/8015Bm
Project: 0735; 3900 Adeline St. Emeryville, Ca.	Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-W	1607031-001A	Water	07/01/2016 09:15	GC3	123278
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	07/05/2016 17:59
MTBE	---		5.0	1	07/05/2016 17:59
Benzene	---		0.50	1	07/05/2016 17:59
Toluene	---		0.50	1	07/05/2016 17:59
Ethylbenzene	---		0.50	1	07/05/2016 17:59
Xylenes	---		1.5	1	07/05/2016 17:59
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	109		70-130		07/05/2016 17:59
<u>Analyst(s):</u> IA					



Analytical Report

Client: P & D Environmental
Date Received: 7/1/16 16:20
Date Prepared: 7/1/16
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-W	1607031-001A	Water	07/01/2016 09:15	GC11A	123142
Analytes					
	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	79		50	1	07/02/2016 07:15
TPH-Motor Oil (C18-C36)	ND		250	1	07/02/2016 07:15
Surrogates					
	<u>REC (%)</u>		<u>Limits</u>		
C9	100		70-130		07/02/2016 07:15
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e2		



Quality Control Report

Client: P & D Environmental
Date Prepared: 7/5/16
Date Analyzed: 7/5/16
Instrument: GC18
Matrix: Water
Project: 0735; 3900 Adeline St. Emeryville, Ca.


WorkOrder: 1607031
BatchID: 123275
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-123275
 1606F18-001AMS/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	10.8	0.50	10	-	108	54-140
Benzene	ND	10.9	0.50	10	-	109	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	37.1	2.0	40	-	93	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	10.6	0.50	10	-	106	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	10.4	0.50	10	-	104	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	12.3	0.50	10	-	123	66-125
1,1-Dichloroethene	ND	11.0	0.50	10	-	110	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-

(Cont.)

NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: P & D Environmental
Date Prepared: 7/5/16
Date Analyzed: 7/5/16
Instrument: GC18
Matrix: Water
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
BatchID: 123275
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-123275
 1606F18-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	10.3	0.50	10	-	103	57-136
Ethanol	ND	-	50	-	-	-	-
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	10.7	0.50	10	-	107	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	10.8	0.50	10	-	108	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	10.4	0.50	10	-	104	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	11.5	0.50	10	-	115	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-



Quality Control Report

Client: P & D Environmental
Date Prepared: 7/5/16
Date Analyzed: 7/5/16
Instrument: GC18
Matrix: Water
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
BatchID: 123275
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-123275
 1606F18-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	30.3	30.4		25	121	122	70-130
Toluene-d8	27.2	26.8		25	109	107	70-130
4-BFB	2.45	2.52		2.5	98	101	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	11.2	11.0	10	ND	112	110	69-139	2.06	20
Benzene	10.5	9.99	10	ND	105	100	69-141	5.04	20
t-Butyl alcohol (TBA)	43.1	47.0	40	ND	108	118	41-152	8.78	20
Chlorobenzene	10.2	9.63	10	ND	102	96	77-120	5.83	20
1,2-Dibromoethane (EDB)	10.8	10.4	10	ND	108	104	76-135	3.65	20
1,2-Dichloroethane (1,2-DCA)	12.6	11.9	10	ND	126	119	73-139	5.25	20
1,1-Dichloroethene	10.4	9.91	10	ND	104	99	59-140	5.20	20
Diisopropyl ether (DIPE)	10.3	9.95	10	ND	103	99	72-140	3.07	20
Ethyl tert-butyl ether (ETBE)	11.1	10.7	10	ND	111	107	71-140	3.05	20
Methyl-t-butyl ether (MTBE)	11.4	11.1	10	ND	114	111	73-139	2.32	20
Toluene	9.91	9.36	10	ND	99	94	71-128	5.68	20
Trichloroethene	11.0	10.5	10	ND	110	105	64-132	5.42	20
Surrogate Recovery									
Dibromofluoromethane	30.9	31.0	25		124	124	73-131	0	20
Toluene-d8	26.4	26.6	25		106	106	72-117	0	20
4-BFB	2.48	2.52	2.5		99	101	74-116	1.33	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 7/5/16
Date Analyzed: 7/5/16
Instrument: GC3
Matrix: Water
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
BatchID: 123278
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-123278
 1607014-003AMS/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	56.5	40	60	-	94	70-130
MTBE	ND	9.91	5.0	10	-	99	70-130
Benzene	ND	9.57	0.50	10	-	96	70-130
Toluene	ND	9.78	0.50	10	-	98	70-130
Ethylbenzene	ND	10.1	0.50	10	-	101	70-130
Xylenes	ND	30.3	1.5	30	-	101	70-130
Surrogate Recovery							
aaa-TFT	10.1	9.72		10	101	97	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	58.5	57.2	60	ND	97	95	70-130	2.13	20
MTBE	10.0	9.80	10	ND	100	98	70-130	2.34	20
Benzene	9.58	9.38	10	ND	96	94	70-130	2.10	20
Toluene	9.76	9.62	10	ND	98	96	70-130	1.35	20
Ethylbenzene	9.95	9.89	10	ND	100	99	70-130	0.579	20
Xylenes	29.7	29.7	30	ND	99	99	70-130	0	20
Surrogate Recovery									
aaa-TFT	9.52	9.54	10		95	95	70-130	0	20



Quality Control Report

Client: P & D Environmental
Date Prepared: 7/1/16
Date Analyzed: 7/1/16
Instrument: GC21
Matrix: Water
Project: 0735; 3900 Adeline St. Emeryville, Ca.

WorkOrder: 1607031
BatchID: 123169
Extraction Method: E625
Analytical Method: SW8270C
Unit: µg/L
Sample ID: MB/LCS/LCSD-123169

QC Summary Report for SW8270C

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Acenaphthene	ND	2.0	-	-	-
Acenaphthylene	ND	2.0	-	-	-
Acetochlor	ND	2.0	-	-	-
Anthracene	ND	2.0	-	-	-
Benzidine	ND	10	-	-	-
Benzo (a) anthracene	ND	2.0	-	-	-
Benzo (a) pyrene	ND	2.0	-	-	-
Benzo (b) fluoranthene	ND	2.0	-	-	-
Benzo (g,h,i) perylene	ND	2.0	-	-	-
Benzo (k) fluoranthene	ND	2.0	-	-	-
Benzyl Alcohol	ND	10	-	-	-
1,1-Biphenyl	ND	2.0	-	-	-
Bis (2-chloroethoxy) Methane	ND	2.0	-	-	-
Bis (2-chloroethyl) Ether	ND	2.0	-	-	-
Bis (2-chloroisopropyl) Ether	ND	2.0	-	-	-
Bis (2-ethylhexyl) Adipate	ND	2.0	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	4.0	-	-	-
4-Bromophenyl Phenyl Ether	ND	10	-	-	-
Butylbenzyl Phthalate	ND	2.0	-	-	-
4-Chloroaniline	ND	4.0	-	-	-
4-Chloro-3-methylphenol	ND	10	-	-	-
2-Chloronaphthalene	ND	2.0	-	-	-
2-Chlorophenol	ND	2.0	-	-	-
4-Chlorophenyl Phenyl Ether	ND	2.0	-	-	-
Chrysene	ND	2.0	-	-	-
Dibenzo (a,h) anthracene	ND	2.0	-	-	-
Dibenzofuran	ND	2.0	-	-	-
Di-n-butyl Phthalate	ND	2.0	-	-	-
1,2-Dichlorobenzene	ND	2.0	-	-	-
1,3-Dichlorobenzene	ND	2.0	-	-	-
1,4-Dichlorobenzene	ND	2.0	-	-	-
3,3-Dichlorobenzidine	ND	4.0	-	-	-
2,4-Dichlorophenol	ND	2.0	-	-	-
Diethyl Phthalate	ND	2.0	-	-	-
2,4-Dimethylphenol	ND	2.0	-	-	-
Dimethyl Phthalate	ND	2.0	-	-	-
4,6-Dinitro-2-methylphenol	ND	10	-	-	-
2,4-Dinitrophenol	ND	25	-	-	-
2,4-Dinitrotoluene	ND	2.0	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client:	P & D Environmental	WorkOrder:	1607031
Date Prepared:	7/1/16	BatchID:	123169
Date Analyzed:	7/1/16	Extraction Method:	E625
Instrument:	GC21	Analytical Method:	SW8270C
Matrix:	Water	Unit:	µg/L
Project:	0735; 3900 Adeline St. Emeryville, Ca.	Sample ID:	MB/LCS/LCSD-123169

QC Summary Report for SW8270C

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
2,6-Dinitrotoluene	ND	2.0	-	-	-
Di-n-octyl Phthalate	ND	2.0	-	-	-
1,2-Diphenylhydrazine	ND	2.0	-	-	-
Fluoranthene	ND	2.0	-	-	-
Fluorene	ND	2.0	-	-	-
Hexachlorobenzene	ND	2.0	-	-	-
Hexachlorobutadiene	ND	2.0	-	-	-
Hexachlorocyclopentadiene	ND	10	-	-	-
Hexachloroethane	ND	2.0	-	-	-
Indeno (1,2,3-cd) pyrene	ND	2.0	-	-	-
Isophorone	ND	2.0	-	-	-
2-Methylnaphthalene	ND	2.0	-	-	-
2-Methylphenol (o-Cresol)	ND	2.0	-	-	-
3 & 4-Methylphenol (m,p-Cresol)	ND	2.0	-	-	-
Naphthalene	ND	2.0	-	-	-
2-Nitroaniline	ND	10	-	-	-
3-Nitroaniline	ND	10	-	-	-
4-Nitroaniline	ND	10	-	-	-
Nitrobenzene	ND	2.0	-	-	-
2-Nitrophenol	ND	10	-	-	-
4-Nitrophenol	ND	10	-	-	-
N-Nitrosodiphenylamine	ND	2.0	-	-	-
N-Nitrosodi-n-propylamine	ND	2.0	-	-	-
Pentachlorophenol	ND	10	-	-	-
Phenanthrene	ND	2.0	-	-	-
Phenol	ND	2.0	-	-	-
Pyrene	ND	2.0	-	-	-
1,2,4-Trichlorobenzene	ND	2.0	-	-	-
2,4,5-Trichlorophenol	ND	2.0	-	-	-
2,4,6-Trichlorophenol	ND	2.0	-	-	-

Surrogate Recovery

2-Fluorophenol	21.3		20	107	29-140
Phenol-d5	21.6		20	108	38-148
Nitrobenzene-d5	20.8		20	104	31-152
2-Fluorobiphenyl	20.0		20	100	40-140
2,4,6-Tribromophenol	26.2		20	131	39-150
4-Terphenyl-d14	18.4		20	92	38-147

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client:	P & D Environmental	WorkOrder:	1607031
Date Prepared:	7/1/16	BatchID:	123169
Date Analyzed:	7/1/16	Extraction Method:	E625
Instrument:	GC21	Analytical Method:	SW8270C
Matrix:	Water	Unit:	µg/L
Project:	0735; 3900 Adeline St. Emeryville, Ca.	Sample ID:	MB/LCS/LCSD-123169

QC Summary Report for SW8270C

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Acenaphthene	9.50	9.82	10	95	98	63-119	3.30	25
4-Chloro-3-methylphenol	ND	ND	10	97	99	69-127	2.60	25
2-Chlorophenol	8.98	9.02	10	90	90	49-119	0	25
1,4-Dichlorobenzene	8.85	8.89	10	88	89	43-114	0.474	25
2,4-Dinitrotoluene	9.35	10.5	10	94	105	68-125	11.3	25
4-Nitrophenol	45.0	52.4	50	90	105	60-126	15.4	25
N-Nitrosodi-n-propylamine	9.50	10.4	10	95	103	61-120	8.50	25
Pentachlorophenol	20.0	20.6	20	100	103	50-146	2.59	25
Phenol	9.05	9.43	10	90	94	52-119	4.16	25
Pyrene	9.41	10.1	10	94	101	67-132	6.78	25
1,2,4-Trichlorobenzene	9.25	9.09	10	93	91	50-121	1.75	25
Surrogate Recovery								
2-Fluorophenol	19.4	19.4	20	97	97	29-140	0	25
Phenol-d5	19.8	20.7	20	99	104	38-148	4.43	25
Nitrobenzene-d5	20.6	20.8	20	103	104	31-152	1.14	25
2-Fluorobiphenyl	20.4	20.0	20	102	100	40-140	1.63	25
2,4,6-Tribromophenol	21.0	20.5	20	105	102	39-150	2.64	25
4-Terphenyl-d14	18.0	19.4	20	90	97	38-147	7.63	25



Quality Control Report

Client: P & D Environmental	WorkOrder: 1607031
Date Prepared: 7/1/16	BatchID: 123142
Date Analyzed: 7/1/16	Extraction Method: SW3510C
Instrument: GC9b	Analytical Method: SW8015B
Matrix: Water	Unit: µg/L
Project: 0735; 3900 Adeline St. Emeryville, Ca.	Sample ID: MB/LCS/LCSD-123142

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	250	-	-	-
TPH-Motor Oil (C18-C36)	ND	250	-	-	-
Surrogate Recovery					
C9	560		625	90	65-122

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1170	1120	1000	117	112	61-157	4.13	30
Surrogate Recovery								
C9	565	558	625	90	89	65-122	1.19	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1607031

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; Paul.King@pdenviro.c
 cc/3rd Party:
 PO:
 ProjectNo: 0735; 3900 Adeline St. Emeryville, Ca.

Bill to:

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

Requested TAT: 5 days;

Date Received: 07/01/2016

Date Logged: 07/01/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1607031-001	B1-W	Water	7/1/2016 9:15	<input type="checkbox"/>	B	C	A	A									

Test Legend:

1	8260B_W	2	8270_W	3	G-MBTEx_W	4	TPH(DMO)_W
5		6		7		8	
9		10		11		12	

Prepared by: Valerie Riva

The following SampID: 001A contains testgroup.

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

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



WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL

QC Level: LEVEL 2

Work Order: 1607031

Project: 0735; 3900 Adeline St. Emeryville, Ca.

Client Contact: Paul King

Date Logged: 7/1/2016

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

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

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1607031-001A	B1-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	2	VOA w/ HCl	<input type="checkbox"/>	7/1/2016 9:15	5 days	Present	<input type="checkbox"/>	
1607031-001B	B1-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	7/1/2016 9:15	5 days	Present	<input type="checkbox"/>	
1607031-001C	B1-W	Water	SW8270C (SVOCs)	2	aVOA	<input type="checkbox"/>	7/1/2016 9:15	5 days	Present	<input type="checkbox"/>	

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

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



Sample Receipt Checklist

Client Name: **P & D Environmental**
 Project Name: **0735; 3900 Adeline St. Emeryville, Ca.**
 WorkOrder №: **1607031** Matrix: Water
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **7/1/2016 16:20**
 Date Logged: **7/1/2016**
 Received by: Valerie Riva
 Logged by: Valerie Riva

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
 Sample/Temp Blank temperature Temp: 6.2°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

UCMR3 Samples:

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

 Comments: