Xtra OIL COMPANY
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October 13, 2014

RECEIVED
By Alameda County Environmental Health at 10:05 am, Oct 15, 2014

Ms. Karel Detterman
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: OZONE SPARGING PILOT TEST REPORT CERTIFICATION
County Case # RO 191
Xtra Oil Company
1701 Park Street
Alameda, CA

Dear Ms. Detterman**:**

P&D Environmental, Inc. has prepared the following document for the subject site:

- Semi-Annual Groundwater and Ozone Sparging Pilot Test Report dated October 13, 2014 (document 0058.R26).

I declare under penalty of perjury that the contents and conclusions in the document are true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to contact me at (510) 865-9506.

Sincerely,
Xtra Oil Company

Keith Simas

0058.L56

P&D ENVIRONMENTAL, INC.

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

October 13, 2014
Report 0058.R26

Mr. Ted Simas
Mr. Keith Simas
Xtra Oil Company
2307 Pacific Ave.
Alameda, CA 94501

SUBJECT: OZONE SPARGING PILOT TEST REPORT
County Case # RO 191
Xtra Oil Company
1701 Park Street
Alameda, CA

Gentlemen:

P&D Environmental, Inc. (P&D) has prepared this report documenting the start up, monitoring, and post-sparging groundwater sampling for a 30 day ozone sparging pilot test at the subject site. Ozone sparging was initated at well MW-2 beginning August 27, 2014 and operated continuously until mid-day on September 26, 2014. As part of the periodic monitoring that was performed during the pilot test, air samples were collected from the head space of groundwater wells located in the vicinity of well MW-2 on September 5, 2014. Following completion of air sparing on September 26, 2014 post-sparging groundwater monitoring and sample collection was performed on October 2 and 3, 2014.

The work was performed in accordance with P&D's In Situ Chemical Oxidation Feasibility Test Work Plan dated February 7, 2014 (document 0058.W6), P&D's In Situ Chemical Oxidation Feasibility Test Work Plan Addendum dated June 9, 2014 (document 0058.W6A), and a letter from the Alameda County Department of Environmental Health (ACDEH) dated August 6, 2014 requesting that the pilot test be performed for 30 days and that hexavalent chromium groundwater analysis be performed.

A Site Location Map (Figure 1) and Site Plan showing well and monitoring locations at the site (Figure 2) are attached with this report. All work was performed under the direct supervision of a California professional geologist.

BACKGROUND

The site is currently used as a retail gasoline station. In a letter from the ACDEH dated July 24, 2009 P&D was asked to review historical monitoring and sampling results, determine during which quarters contaminant concentrations were at their highest, and conduct semi-annual monitoring and sampling during those quarters (during either the first and third or the second and fourth quarters). Based on our review, semi-annual monitoring and sampling events were to be

scheduled during the second and fourth quarters starting in 2009. Also at the request of the ACDEH analysis of the groundwater samples was performed for fuel oxygenates including TBA and lead scavengers using EPA Method 8260B. In the second half of 2011 the case was assigned to caseworker Ms. Karel Detterman.

A detailed discussion of the site background, historical monitoring and sampling, and historical investigations are provided in P&D's Remedial Action Work Plan (RAWP) dated October 24, 2007 (document 0058.W2), P&D's Corrective Action Plan (CAP) dated October 11, 2010 (document 0058.W3), and P&D's Site Conceptual Model Report dated October 8, 2010 (document 0058.R10). As an interim step for implementation of the CAP, P&D prepared a Groundwater Extraction Feasibility Work Plan dated April 15, 2011 (document 0058.W4) to verify the feasibility of groundwater extraction at the site with a selected number of wells identified in the RAWP. On May 18 and 19, 2011 P&D oversaw the installation of dual phase extraction wells EW-2, EW-4, and EW-5 and observation well OW-2 at the subject site, in accordance with procedures identified in P&D's October 24, 2007 RAWP and P&D's April 15, 2011 Groundwater Extraction Feasibility Work Plan. P&D subsequently submitted a Chemical Oxidation Injection Feasibility Test Work Plan dated December 19, 2011 (document 0058.W5); an In Situ Chemical Oxidation Feasibility Test Work Plan dated February 7, 2014 (document 0058.W6); and a In Situ Chemical Oxidation Feasibility Test Work Plan Addendum dated June 9, 2014 (document 0058.W6A). In a letter from the ACDEH dated August 6, 2014 it was requested that the pilot test be performed for 30 days and that hexavalent chromium groundwater analysis be performed.

The semi-annual monitoring and sampling of the four historical groundwater monitoring wells (MW-1 through MW-4) and the four wells installed in 2011 for proposed site remediation (EW-2, EW-4, EW-5, and OW-2) was performed on June 19, 20, and 23 2014 for the reporting period of January through June 2014. At the time of the semi-annual monitoring event, the wells were also sampled for baseline water quality analysis in preparation for site remediation in accordance with P&D's In Situ Chemical Oxidation Feasibility Test Work Plan dated February 7, 2014 (document 0058.W6). Five air sparge points (ASP-2 through ASP-6) that had historically been installed for site remediation were also sampled during the June 2014 sampling event for baseline water quality determination in preparation for site remediation. In accordance with a letter from the ACDEH dated August 6, 2014 additional monitoring and sampling of all of the wells was performed on August 20 and 21, 2014 for hexavalent chromium analysis in preparation for site remediation. Documentation of the sampling and sampling results is provided in P&D's Semi-Annual Monitoring and Samplng (January Through June 2014) and Baseline Groundwater Quality Report (document 0058.R26) dated October 1, 2014.

FIELD ACTIVITIES

Prior to the beginning of ozone sparging, the following activities were performed.

- Prepared a health and safety plan,
- Placed a trailer-mounted 1 pound per day ozone generator at the site,
- Extended a ½-inch outside diameter Teflon tube from the ozone generator to well MW-2,

- Installed a stainless steel diffuser at the end of the Teflon tube that was placed in well MW-2 at a depth of approximately 6 inches above the bottom of the well,
- Installed an air-tight fitting at the top of well MW-2 to prevent ozone from entering the atmosphere at the wellhead,
- Installed valves and barb fittings for groundwater wellhead air monitoring at locations,
- Provided notification of the ozone sparging schedule to the ACDEH.

As part of the periodic monitoring that was performed during the pilot test, air samples were collected from the head space of groundwater wells located in the vicinity of well MW-2 on September 5, 2014. Following completion of air sparing on September 26, 2014 post-sparging groundwater monitoring and sample collection was performed on October 2 and 3, 2014.

Ozone Sparging and Monitoring

Ozone sparging was initiated beginning August 27, 2014 and operated continuously until mid-day on September 26, 2014. During ozone sparging periodic monitoring of the ozone generator was performed and recorded on Ozone Generator Monitoring Data Sheets (see Appendix A) and periodic monitoring of groundwater wellheads MW-1 through MW-4, EW-2, EW-4, EW-5 and OW-2 was performed and recorded on Ozone Injection Wellhead Monitoring Data Sheets (see Appendix B).

Review of the Ozone Generator Monitoring Data Sheets shows that the following parameters were monitored with the following ranges of values recorded for the ozone generator equipment.

- Hours System Operated (Hours and Valve #1 Hours on the data sheet). The system operated for 675 hours of the 30 day (720 hour) pilot test, resulting in the system operating during approximately 94 percent of the pilot test period.
- Oxygen Pressure for delivery to the ozone generator (in Pounds per Square Inch (PSI)). The range was 4.9 to 5.9 psi with the exception of readings of 4.0 to 6.0 psi shortly after startup.
- Oxygen Flow for delivery to the ozone generator (in Standard Cubic Feet Per Minute (SCFM)). The range was 9.5 to 10 scfm with one exception of 15 scfm on 9/19/14.
- Air Sparge Pressure for delivery to the sparge well (PSI). The range was 30 to 40 psi, with the exception of values of 36 and 45 psi at the time of startup.
- Air Sparge Flow Rate for delivery to the sparge well (SCFM). The range was 1.6 to 2.1 scfm with the exception of 1.5 scfm at the time of startup.
- Ozone Pressure for delivery to the sparge well (PSI). The range was 22 to 30 psi, with the exception of one reading of 27 psi at the time of startup.

During ozone sparging the air in wellheads MW-1 through MW-4, EW-2, EW-4, EW-5 and OW-2 was monitored sequentially for pressure, organic vapor concentrations, and ozone concentrations by attaching a flexible ¼-inch outside diameter polyethylene tube measuring approximately one foot in length to the barb at each wellhead, connecting the instrument that was to be used for measuring to the tubing, opening the valve at the wellhead, recording the instrument reading, closing the valve, and repeating the process with the next instrument. Organic vapors were

monitored with a Photoionization Detector (PID) that was calibrated using a 100 parts per million (ppm) isobutylene standard. Ozone was monitored using a handheld portable ozone detector with a range of 0.001 to 6 ppm. Pressure was measured using a 0 to 5 psi digital monometer with the exception of the first day of monitoring for all of the wells and for all days of monitoring at well MW-2 where a 0 to 60 psi Weksler Regal pressure gage was used. The pressure, PID, and ozone monitoring results are provided in Tables 1, 2 and 3, respectively.

Wellhead Air Sampling

On September 5, 2014 air samples were collected at wellheads OW-2, EW-2, EW-4 and EW-5 by attaching a flexible ¼-inch outside diameter polyethylene tube measuring approximately one foot in length to the barb at each wellhead and extracting 50 liters of air from the wellhead using an air pump. During purging air flow rates were monitored with a rotometer and organic vapor concentrations were monitored with a PID and were recorded on a Well Air Purging Data Sheet. Copies of the Well Air Purging Data Sheets are attached with this report as Appendix C.

Following completion of wellhead air purging, one air sample was collected from each wellhead using a 1-liter Tedlar bag that was placed in a vacuum chamber. The Tedlar bag inlet was connected to the barb at the wellhead using a new ¼-inch outside diameter polyethylene tube measuring approximately one foot in length. The vacuum pump was then used to remove air from the vacuum chamber, causing the Tedlar bag to fill with air from the wellhead. Once the Tedlar bag was mostly filled, the valve at the wellhead was closed, and the vacuum chamber was allowed to equilibrate with atmospheric pressure. The Tedlar bag was then removed from the vacuum chamber, labeled, and placed in a cooler pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling.

Post-Ozone Sparging Groundwater Monitoring and Sampling

Following completion of ozone sparging, water levels were measured and groundwater wells MW-1, MW-2, EW-2, EW-4, EW-5, and in air sparging points ASP-4 through ASP-6 were purged and sampled on October 2 and 3, 2014. The water levels were measured to the nearest 0.01 foot using an electric water level indicator, and the water level measurements are summarized in Table 4.

Wells MW-1, MW-2, EW-2, EW-4, EW-5, and air sparging points ASP-4 through ASP-6 were purged using low flow purge procedures in accordance with U.S. EPA 1996 guidelines. Purging was performed with a peristaltic pump and new or dedicated polyethylene tubing for a minimum of fifteen minutes at each sampling location or until the well dewatered. New or dedicated silicone tubing was used in the pump rollers at each well. The bottom of the tubing was set at a depth of approximately three to five feet above the bottom of each well. Purging was performed at a low flow rate of approximately 225 milliliters per minute to minimize turbulence and to minimize the likelihood of sediments in the samples. During purging operations, the field parameters of electrical conductivity, temperature, pH, dissolved oxygen (DO), oxidation/reduction potential (ORP), turbidity, and depth to water were monitored and recorded on a groundwater monitoring/well purging data sheet for each well. Depth to water was not recorded in the air sparging points during purging because the small (1-inch) pipe diameter of

the air sparging points is not large enough for both the discharge tubing and the water level indicator at the same time. Copies of the groundwater monitoring/well purging data sheet for are attached with this report as Appendix D.

During the sampling event no petroleum hydrocarbon sheen was detected on the purge water from any of the sampling locations. Strong petroleum hydrocarbon odors were detected on the purge water from well EW-5; moderate to strong petroleum hydrocarbon odors were detected on the purge water from well EW-2; moderate to slight petroleum hydrocarbon odors were detected on the purge water from wells MW-1 and EW-4; and no petroleum hydrocarbon odors were detected on the purge water from wells MW-2 or from air sparging points ASP-4, ASP-5, or ASP-6. Air spraging points ASP-4 and ASP-5 dewatered during purging for the sampling event.

Once the wells and air sparging points had been purged for a minimum of fifteen minutes and the field parameters were observed to have stabilized or the well dewatered and adequately recharged for sample collection, water samples were collected directly from the discharge tubing of the pump into the sample containers. During the June 2014 sample collection event the samples were collected into 40-milliliter glass Volatile Organic Analysis (VOA) vials and 125-milliliter and 500-milliliter polyethylene bottles which were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to ensure that no air bubbles were present. All of the samples were filtered using a new in-line filter in the pump discharge tubing for each sample, with the sample collected into 125-millilter polyethylene bottles that were preserved with a borate hydroxide buffer that was provided by the laboratory. Following sample collection, all sample containers were then labeled and transferred to a cooler with ice, pending transport to the laboratory. Chain of custody documentation accompanied the samples to the laboratory. Records of the field parameters measured during well purging are attached with this report in Appendix D, and are also summarized in Table 5 with historical water quality field parameter data.

HYDROGEOLOGY

The measured depth to water on October 2 and 3, 2014 for groundwater monitoring wells MW-1, MW-2 EW-2, EW-4, and EW-5 was 8.14, 9.04, 7.79, 6.79, and 6.94 feet, respectively. Additionally, the water levels in air sparge points ASP-4, ASP-5, and ASP-6 were 7.68, 7.36, and 7.51 feet, respectively. Groundwater level data collected during the monitoring event are presented in Table 4.

The groundwater flow direction at the site has historically been northeasterly to southeasterly. The historical groundwater surface elevation information for the subject site in conjunction with historical groundwater surface elevation information for the nearby property at 1725 Park Street has historically identified a northeasterly groundwater flow direction at and near the subject site. More detail regarding the site hydrogeology is provided in P&D's Semi-Annual Monitoring and Samplng (January Through June 2014) and Baseline Groundwater Quality Report (document 0058.R26) dated October 1, 2014.

LABORATORY RESULTS

All of the wellhead air samples were analyzed at McCampbell Analytical Inc. of Pittsburg, California (McCampbell) for Total Petroleum Hydrocarbons as Gasoline (TPH-G) and fuel oxygenates and lead scavengers using EPA Method 8260B, and for light gases acetylene, butane, ethane, ethylene, hexane, methane, pentane, and propane using method ASTM D 1946-90.

The wellhead air sample laboratory analytical results are summarized in Tables 6A and 6B. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report as Appendix E.

The groundwater samples collected from all of the wells and air sparging points at the subject site were analyzed at McCampbell for Total Petroleum Hydrocarbons as Diesel (TPH-D) and Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) using EPA Method 3510C in conjunction with EPA Method 8015B; Total Petroleum Hydrocarbons as Gasoline (TPH-G), benzene, toluene, ethylbenzene, total xylenes (BTEX) using EPA Method 5030B in conjunction with modified EPA Method 8015B and EPA Method 8021B; and for fuel oxygenates and lead scavengers by EPA Method 5030B in conjunction with EPA Method 8260B. Additionally, all of the groundwater samples were analyzed for carbon dioxide, ethane, ethane, and methane using EPA Method RSK175; nitrates and sulfates using EPA Method 300.1; total and speciated alkalinity as calcium carbonate using EPA Method SM2320B; dissolved and total iron using EPA Method E200.8; and for dissolved hexavalent chromium using EPA Method 218.6.

The groundwater sample laboratory analytical results are summarized in Tables 7A through 7C. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report as Appendix E.

DISCUSSION AND RECOMMENDATIONS

Review of Table 1 shows that during air sparging no detectable differences in subsurface pressure were observed at any of the wells other than at well MW-2 where sparging occurred. Similarly, review of Table 3 shows that 2 days after startup ozone was not detected in any of the wells other than at well MW-2 where sparging occurred. Review of Table 2 shows that during sparging PID values decreased in all of the wells with the exception of EW-2 and EW-5, where PID values increased.

Comparison of pre-sparging and post-sparging water levels in the wells in Table 4 shows that the water levels decreased in all of the wells, consistent with seasonal changes in groundwater at the site. Comparison of pre-sparging and post-sparging field parameter water quality data in the wells in Table 5 shows that the ORP value became substantially less negative in well MW-2 whereas the ORP value in the majority of the other wells remained relatively unchanged. Similarly, the DO value in well MW-2 increased whereas the DO value in all of the other wells decreased.

Residential screening criteria were applied to wellhead air samples for wells located along the northeastern property boundary bordering the mixed use property at 1713 and 1715 Park Street (OW-2, EW-4, EW-5, see Figure 2), and that commercial screening criteria were applied to well

EW-2. Review of the wellhead air sample results in Table 6A shows that TPH-G was detected in all of the tested soil gas wells at concentrations exceeding RWQCB December 2013 Table E2 Environmental Screening Level (ESL) soil gas values, that benzene exceeded Table E ESL values at locations EW-4 and EW-5, and that ethylbenzene exceeded the Table E ESL value at location EW-2. Elevated detection limits resulting from elevated TPH-G concentrations for the samples where benzene and ethylbenzene were not detected resulted in detection limits exceeding Table E ESL values for these samples. Review of the Table 6A wellhead soil gas sample results shows that substantial amounts of gasoline decomposition products were detected at locations EW-2, EW-4 and EW-5, with the highest concentrations of decomposition products detected at location EW-4.

Comparison of pre-sparging and post-sparging water quality data in Table 7A shows that TPH-G, TPH-D, MBTEX, and TBA concentrations were all substantially reduced in well MW-2, and increased in wells EW-2 and EW-4. Comparison of pre-sparging and post-sparging water quality data in Table 7B shows that the dissolved gases methane and carbon dioxide were substantially reduced at well MW-2, and increased in almost all of the other wells. Comparison of pre-sparging and post-sparging water quality data in Table 7C shows that dissolved hexavalent chromium was not present in any of the groundwater samples prior to ozone sparging, and was detected after ozone sparging only in well MW-2 at a concentration of 58 micrograms per liter.

Based on the sample results, P&D recommends that well MW-2 be sampled on a monthly basis for two months and that the samples be analyzed for dissolved hexavalent chromium.

DISTRIBUTION

A copy of this report will be uploaded to the ACDEH website, in accordance with ACDEH requirements. In addition, a copy of this report will be uploaded to the GeoTracker database.

LIMITATIONS

This report was prepared solely for the use of Xtra Oil Company. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with 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 are 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 or comments, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.

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

Attachments:

Table 1 - Summary of Wellhead Pressure Readings
Table 2 - Summary of Wellhead PID Readings
Table 3 - Summary of Wellhead Ozone Concentrations
Table 4 - Summary of Well and Air Sparging Point Water Level Monitoring Data
Table 5 - Summary of Water Quality Field Parameters
Table 6A - Summary of Wellhead Air Sample Analytical Results - TPH-G and VOCs
Table 6B - Summary of Wellhead Air Sample Analytical Results - Light Gases
Table 7A - Summary of Well Groundwater Sample Laboratory Analytical Results - TPH, MBTEX, Fuel Oxygenates, and Lead Scavengers
Table 7B - Summary of Well Groundwater Sample Laboratory Analytical Results - Ethane, Ethene, Methane, and Carbon Dioxide
Table 7C - Summary of Well Groundwater Sample Laboratory Analytical Results – Inorganic Analytes

Figure 1 - Site Location Map
Figure 2 - Site Plan Showing Groundwater Well and Air Sparging Point Locations

Appendix A - Ozone Generator Monitoring Data Sheets
Appendix B - Ozone Injection Wellhead Monitoring Data Sheet
Appendix C - Well Air Purging Data Sheets
Appendix D - Groundwater Monitoring/Well Purging Data Sheets
Appendix E - Laboratory Analytical Reports and Chain of Custody Documentation

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TABLES

Table 1
Summary of Observed Wellhead Pressure

Date Monitored	Well ID	MW-1	MW-2	MW-3	MW-4	EW-2	EW-4	EW-5	OW-2
8/27/2014		0	0	0	0	0	0	0	0
8/28/2014		0	0	0	0	0	0	0	0
9/2/2014		0	1.1	0	0	0	0	0	0
9/4/2014		0	1.0	0	0	0	0	0	0
9/9/2014		0	0.006	0	0	0	0	0	0
9/11/2014		0	1.0	0	0	0	0	0	0
9/19/2014		0	1.0	0	0	0	0	0	0
NOTES:									
All Pressure readings reported in pounds per square inch (psi).									

Table 2
Summary of Observed Wellhead PID Readings

Date Monitored	Well ID	MW-1	MW-2	MW-3	MW-4	EW-2	EW-4	EW-5	OW-2
8/27/2014		142	52	8	2	120	263	151	119
8/28/2014		64	40	9.8	1.7	144	102	115	159
9/2/2014		56	2.4	0.8	3.7	169	114	121	391
9/4/2014		58	2.1	1.1	4.3	174	116	208	253
9/9/2014		52	9.5	4.6	3.7	297	117	221	160
9/11/2014		34	0.1	1.2	0.8	177	91	211	29
9/19/2014		56	2.7	1.7	1.4	242	126	192	18
NOTES:									
All PID readings reported in parts per milion (ppm).									

Table 3
Summary of Observed Wellhead Ozone Concentrations

Date Monitored	Well ID	MW-1	MW-2	MW-3	MW-4	EW-2	EW-4	EW-5	OW-2
8/27/2014		0.05	6.1	0	0	0	0.11	0.08	0
8/28/2014		0.05	6.1	0	0	0	0.09	0.04	0
9/2/2014		0	6.01	0	0	0	0	0	0
9/4/2014		0	0	0	0	0	0	0	0
9/9/2014		0	0.04	0	0	0	0	0	0
9/11/2014		0	6.1	0	0	0	0	0	0
9/19/2014		0	6.1	0	0	0	0	0	0
NOTES:									
All Ozone readings reported in parts per milion (ppm).									

Table 4
Summary of Well and Air Sparging Point Water Level Monitoring Data

Well Number	Date Monitored	Top of Casing Elevation (ft-msl.)	Depth to Water (ft)	Water Table Elevation (ft-MSL.)
MW-1	10/3/2014	22.36*	8.14	14.22
	8/21/2014		8.01	14.35
	6/19/2014		7.33	15.03
	11/19/2013		8.06	14.30
	5/16/2013		6.95	15.41
	12/11/2012		6.30	16.06
	6/21/2012		6.66	15.70
	11/28/2011		7.11	15.25
	6/16/2011		6.41	15.95
	5/26/2011		5.86	16.50
	5/24/2011		6.43	15.93
	11/18/2010	19.60**	7.78	11.82
	4/28/2010		6.35	13.25
	12/3/2009		7.84	11.76
	2/25/2009		6.07	13.53
	11/25/2008		7.91	11.69
	8/27/2008		8.03	11.57
	5/28/2008		7.28	12.32
	2/27/2008		6.15	13.45
	11/29/2007		7.82	11.78
	8/29/2007		8.29	11.31
	5/29/2007		7.44	12.16
	3/12/2007		6.34	13.26
	11/6/2006		7.99	11.61
MW-2	10/3/2014	23.10*	9.04	14.06
	8/21/2014		8.51	14.59
	6/19/2014		7.79	15.31
	11/19/2013		8.35	14.75
	5/16/2013		7.42	15.68
	12/11/2012		6.83	16.27
	6/21/2012		7.18	15.92
	11/28/2011		7.61	15.49
	6/16/2011		6.89	16.21
	5/26/2011		6.90	16.20
	5/24/2011		6.90	16.20
	11/18/2010	20.31**	8.17	12.14
	4/28/2010		6.76	13.55
	12/3/2009		8.23	12.08
	2/25/2009		6.37	13.94
	11/25/2008		8.21	12.10
	8/27/2008		8.40	11.91
	5/28/2008		7.72	12.59
	2/27/2008		6.49	13.82
	11/29/2007		8.15	12.16
	8/29/2007		8.55	11.76
	5/29/2007		7.79	12.52
	3/12/2007		6.82	13.49
	11/6/2006		8.25	12.06
MW-3	10/3/2014	23.35*	Not monitored	
	8/20/2014		8.39	14.96
	6/19/2014		7.34	16.01
	11/19/2013		8.06	15.29
	5/16/2013		6.72	16.63
	12/11/2012		6.03	17.32
	6/21/2012		6.42	16.93
	11/28/2011		7.19	16.16
	6/16/2011		6.17	17.18
	5/26/2011		6.19	17.16
	5/24/2011		6.16	17.19
	11/18/2010	20.57**	7.93	12.64
	4/28/2010		6.00	14.57
	12/3/2009		7.83	12.74
	2/25/2009		5.42	15.15
	11/25/2008		7.83	12.74
	8/27/2008		8.23	12.34
	5/28/2008		7.36	13.21
	2/27/2008		5.75	14.82
	11/29/2007		7.88	12.69
	8/29/2007		8.31	12.26
	5/29/2007		7.26	13.31
	3/12/2007		6.03	14.54
	11/6/2006		8.09	12.48

Table 4
Summary of Well and Air Sparging Point Water Level Monitoring Data

Well Number	Date Monitored	Top of Casing Elevation (ft-msl.)	Depth to Water (ft)	Water Table Elevation (ft-MSL.)
MW-4	10/3/2014	22.48*	Not monitored	
	8/20/2014		8.03	14.45
	6/19/2014		7.20	15.28
	11/19/2013		8.03	14.45
	5/16/2013		6.77	15.71
	12/11/2012		5.86	16.62
	6/21/2012		6.00	16.48
	11/28/2011		6.62	15.86
	6/16/2011		5.79	16.69
	5/26/2011		6.41	16.07
	5/24/2011		5.82	16.66
	11/18/2010	19.69**	7.69	12.00
	4/28/2010		5.82	13.87
	12/3/2009		7.60	12.09
	2/25/2009		5.32	14.37
	11/25/2008		7.61	12.08
	8/27/2008		7.91	11.78
	5/28/2008		6.97	12.72
	2/27/2008		5.38	14.31
	11/29/2007		7.57	12.12
	8/29/2007		8.07	11.62
	5/29/2007		7.38	12.31
	3/12/2007		5.30	14.39
	11/6/2006		7.60	12.09
EW-2	10/3/2014	22.13*	7.79	14.34
	8/21/2014		7.71	14.42
	6/19/2014		7.09	15.04
	11/19/2013		7.64	14.49
	5/16/2013		6.70	15.43
	12/11/2012		6.07	16.06
	6/21/2012		6.39	15.74
	11/28/2011		6.75	15.38
	6/16/2011		6.09	16.04
	5/26/2011		6.14	15.99
	5/24/2011***		6.12	16.01
EW-4	10/3/2014	20.95*	6.79	14.16
	8/21/2014		6.67	14.28
	6/19/2014		5.98	14.97
	11/19/2013		6.71	14.24
	5/16/2013		5.49	15.46
	12/11/2012		4.80	16.15
	6/21/2012		5.10	15.85
	11/28/2011		5.51	15.44
	6/16/2011		4.72	16.23
	5/26/2011		4.77	16.18
	5/24/2011***		4.75	16.20
EW-5	10/3/2014	21.20*	6.94	14.26
	8/20/2014		6.77	14.43
	6/19/2014		6.02	15.18
	11/19/2013		6.82	14.38
	5/16/2013		5.61	15.59
	12/11/2012		4.75	16.45
	6/21/2012		4.91	16.29
	11/28/2011		5.49	15.71
	6/16/2011		4.71	16.49
	5/26/2011		4.88	16.32
	5/24/2011***		4.74	16.46
OW-2	10/3/2014	21.55*	Not monitored	
	8/20/2014		7.08	14.47
	6/19/2014		6.18	15.37
	11/19/2013		7.01	14.54
	5/16/2013		5.69	15.86
	12/11/2012		4.82	16.73
	6/21/2012		5.15	16.40
	11/28/2011		5.80	15.75
	6/16/2011		4.80	16.75
	5/26/2011		4.82	16.73
	5/24/2011***		4.79	16.76

Table 4
Summary of Well and Air Sparging Point Water Level Monitoring Data

Well Number	Date Monitored	Top of Casing Elevation (ft-msl.)	Depth to Water (ft)	Water Table Elevation (ft-MSL.)
ASP-2	10/2/2014	Unknown	Not monitored	
	8/20/2014		7.13	Unknown
	6/23/2014		6.56	Unknown
ASP-3	10/2/2014	Unknown	Not monitored	
	8/20/2014		7.23	Unknown
	6/23/2014		6.73	Unknown
ASP-4	10/2/2014	Unknown	7.68	Unknown
	8/21/2014		7.45	Unknown
	6/23/2014		6.70	Unknown
ASP-5	10/2/2014	Unknown	7.36	Unknown
	8/21/2014		7.13	Unknown
	6/23/2014		6.52	Unknown
ASP-6	10/2/2014	Unknown	7.51	Unknown
	8/21/2014		7.46	Unknown
	6/23/2014		6.68	Unknown
Abbreviations and Notes:				
* = Surveyed by Kier & Wright on June 9, 2011.				
** = Surveyed by Andreas Deak in April 1997.				
*** = Prior to well development.				
ft-MSL = feet above mean sea level				
ft = feet				

Table 5
Summary of Water Quality Field Parameters

Sample ID	Sample Date	D.O. (mg/L)	O.R.P. (mV)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Turbidity (NTU)
MW-1	10/3/2014	0.08	-157.8	6.65	1,003	23.9	0.00
	8/21/2014	0.46	-157.9	6.75	911	23.3	0.00
	6/19/2014	1.80*	-755.2	6.56	789	21.6	0.00
	11/19/2013	0.88	-103.7	6.79	635	21.6	0.00
	5/16/2013	0.18	-103.6	6.67	983	20.2	0.00
	12/11/2012	0.19	-139.3	6.16	777.0	20.6	2.89
	6/21/2012	0.18	-110.6	6.78	664	21.0	0.00
	11/29/2011	--	--	6.51	702	20.2	--
	5/26/2011	--	--	6.82	678	20.5	0.00
	11/18/2010	--	--	6.69	1,206	22.0	--
	4/28/2010	--	--	6.63	998	19.2	--
	12/3/2009	--	--	6.42	953	21.2	--
	2/25/2009	--	--	6.56	997	17.9	--
	11/25/2008	--	--	6.60	1,143	21.9	--
	8/27/2008	--	--	6.57	980	23.6	--
	5/28/2008	--	--	6.84	903	20.6	--
	2/27/2008	--	--	7.02	1,036	17.0	--
	11/29/2007	--	--	5.73	10,350	14.8	--
	8/29/2007	--	--	6.16	17,410	30.7	--
	5/30/2001	--	--	7.12	>20,000	17.3	--
	3/12/2007	--	--	6.79	177	29.2	--
	11/6/2006	--	--	6.69	66.9	27.2	--
MW-2	10/3/2014	1.03	-8.5	7.53	758	26.0	0.00
	8/21/2014	0.36	-149.5	6.61	853	24.3	0.00
	6/19/2014	2.13*	-160.9	6.46	791	22.3	0.00
	11/19/2013	0.61	-97.7	6.53	427.3	22.0	0.00
	5/16/2013	0.19	-101.3	6.50	813	20.6	0.00
	12/11/2012	0.18	-120.3	5.90	962	21.1	11.61
	6/21/2012	0.23	-89.2	6.58	644	21.3	14.05
	11/29/2011	--	--	6.24	629	20.6	--
	5/26/2011	--	--	6.47	763	20.2	0.00
	11/18/2010	--	--	6.48	815	22.5	--
	4/28/2010	--	--	6.53	823	19.2	--
	12/3/2009	--	--	6.24	739	21.8	--
	2/25/2009	--	--	6.21	832	18.2	--
	11/25/2008	--	--	6.39	740	21.9	--
	8/27/2008	--	--	6.34	840	23.7	--
	5/28/2008	--	--	6.70	880	20.4	--
	2/27/2008	--	--	6.88	821	17.5	--
	11/29/2007	--	--	5.51	>20,000	16.6	--
	8/29/2007	--	--	6.10	2,270	27.6	--
	5/30/2001	--	--	6.50	>20,000	18.2	--
	3/12/2007	--	--	6.57	228	26.8	--
	11/6/2006	--	--	6.44	7.43	25.7	--
MW-3	10/3/2014	Not Monitored					
	8/20/2014	0.63	-88.7	6.21	373.8	21.2	0.00
	6/19/2014	2.76*	-23.7	6.10	342.8	20.7	0.00
	11/19/2013	1.09	40.9	6.22	318.3	20.7	0.00
	5/16/2013	1.45	152.8	6.12	792	19.2	0.00
	12/11/2012	1.74	170.4	5.43	753	20.1	0.00
	6/21/2012	2.13	187.1	6.17	187	19.0	0.19
	11/28/2011	--	--	6.61	316	19.5	--
	5/26/2011	--	--	5.30	327	19.2	0.00
	11/18/2010	--	--	5.74	401	21.3	--
	4/28/2010	--	--	6.32	367	18.4	--
	12/3/2009	--	--	5.71	227	20.4	--
	2/25/2009	--	--	5.40	402	17.2	--
	11/25/2008	--	--	5.93	392	20.8	--
	8/27/2008	--	--	5.85	268	21.0	--
	5/28/2008	--	--	6.25	233	18.8	--
	2/27/2008	--	--	6.60	240	16.6	--
	11/29/2007	--	--	5.33	>20,000	21.4	--
	8/29/2007	--	--	5.77	2,210	30.1	--
	5/30/2001	--	--	6.61	>20,000	18.2	--
	3/12/2007	--	--	6.37	209	22.7	--
	11/6/2006	--	--	6.46	5.35	26.3	--

Table 5
Summary of Water Quality Field Parameters

Sample ID	Sample Date	D.O. (mg/L)	O.R.P. (mV)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Turbidity (NTU)
MW-4	10/3/2014	Not Monitored					
	8/20/2014	0.56	-125.9	6.67	640	21.5	0.00
	6/19/2014	1.77*	-103.1	6.56	523	19.8	0.00
	11/19/2013	1.10	-75.9	6.79	330.7	18.5	0.00
	5/16/2013	0.50	-68.7	6.93	510.2	17.9	0.00
	12/11/2012	0.20	-110.8	6.23	302.2	17.4	10.57
	6/21/2012	0.29	-92.3	6.84	159.5	19.2	0.00
	11/28/2011	--	--	6.70	232	17.1	--
	5/26/2011	--	--	7.10	466	20.7	0.00
	11/18/2010	--	--	6.06	535	18.8	--
	4/28/2010	--	--	6.65	672	16.6	--
	12/3/2009	--	--	6.31	478	18.1	--
	2/25/2009	--	--	6.28	348	15.3	--
	11/25/2008	--	--	6.25	227	18.4	--
	8/27/2008	--	--	6.42	255	21.4	--
	5/28/2008	--	--	6.73	148	17.9	--
	2/27/2008	--	--	7.11	194	14.4	--
	11/29/2007	--	--	5.57	>20,000	13.4	--
	8/29/2007	--	--	6.24	4,490	26.3	--
	5/30/2001	--	--	6.70	>20,000	17.5	--
	3/12/2007	--	--	6.98	46.2	25.2	--
	11/6/2006	--	--	6.56	42.9	27.9	--
EW-2	10/3/2014	0.14	-154.9	6.75	920	23.4	0.00
	8/21/2014	0.35	-131.4	7.03	869	23.1	0.00
	6/19/2014	2.48*	-148.1	7.13	790	21.1	0.00
	11/19/2013	1.16	-114.6	6.71	567	21.4	0.00
	5/16/2013	0.15	-118.3	6.94	908	20.0	0.00
	12/11/2012	0.16	-134.8	6.48	916	20.9	4.76
	6/21/2012	0.15	-134.8	6.97	829	19.9	0.00
	11/29/2011	--	--	6.59	733	20.8	--
	5/26/2011	--	--	6.87	888	19.5	0.00
EW-4	10/3/2014	0.16	-140.2	6.57	892	22.9	0.00
	8/21/2014	0.45	-169.4	6.70	873	22.7	0.00
	6/19/2014	1.94*	-122.5	6.66	675	21.5	0.00
	11/19/2013	1.06	-97.1	6.67	490.9	21.3	0.00
	5/16/2013	0.18	-107.4	7.23	642	19.9	0.00
	12/11/2012	0.13	-140.3	6.23	624	20.5	2.16
	6/21/2012	0.17	-111.2	6.82	318.8	20.2	0.00
	11/28/2011	--	--	6.48	420	21.0	--
	5/26/2011	--	--	7.15	585	20.3	2.32
EW-5	10/3/2014	0.17	-152.1	6.66	786	20.6	0.00
	8/20/2014	0.42	-171.9	6.72	786	21.1	0.00
	6/19/2014	2.29*	-142.8	6.58	668	19.4	0.00
	11/19/2013	0.70	-111.6	6.79	442.8	19.7	0.00
	5/16/2013	0.17	-102.9	6.80	485.3	18.5	0.00
	12/11/2012	0.22	-133.5	6.22	321.9	19.1	6.43
	6/21/2012	0.26	-113.0	6.87	236.5	18.4	0.00
	11/28/2011	--	--	6.55	436	19.0	--
	5/26/2011	--	--	6.83	589	18.3	1.75
OW-2	10/3/2014	Not Monitored					
	8/20/2014	0.41	-167.8	6.65	588	21.1	0.00
	6/20/2014	2.52*	31.1	6.32	469	18.9	0.00
	11/19/2013	0.72	-90.1	6.84	376.7	18.7	0.00
	5/16/2013	0.16	94.2	6.68	580.9	17.3	0.00
	12/11/2012	0.33	77.4	5.55	480.1	17.9	0.33
	6/21/2012	0.13	-87.0	6.70	609	17.8	0.00
	11/28/2011	--	--	6.80	478	18.2	--
	5/26/2011	--	--	6.56	652	17.5	1.73
ASP-2	10/2/2014	Not Monitored					
	8/20/2014	6.64	-47.5	7.53	808	21.1	0.00
	6/23/2014	4.91*	104.5	6.88	719	18.8	0.00
ASP-3	10/2/2014	Not Monitored					
	8/20/2014	0.70	-58.7	7.55	688	21.0	0.00
	6/23/2014	2.62*	89.9	7.38	627	21.5	0.00
ASP-4	10/2/2014	2.44	1.4	6.80	662	25.0	0.00
	8/21/2014	2.55	-21.7	6.95	664	24.1	0.00
	6/23/2014	7.31*	22.9	6.59	630	22.9	0.00
ASP-5	10/2/2014	1.61	86.9	7.21	666	25.2	0.00
	8/21/2014	3.47	-60.0	7.53	664	23.9	0.00
	6/23/2014	4.59*	60.1	7.22	378.9	23.2	0.00
ASP-6	10/2/2014	0.52	-72.0	7.26	729	25.1	0.00
	8/21/2014	1.27	-111.1	7.72	727	23.3	0.00
	6/23/2014	4.85*	-97.4	7.71	673	22.6	0.00

NOTES

D.O. = Dissolved Oxygen.
O.R.P = Oxidation-Reduction Potential.
mg/L = milligrams per Liter.
mV = millivolts.
µS/cm = microsiemens per centimeter.
C° = degrees celsius.
NTU = nephelometric turbidity units.
* = Defective Oxygen Sensor.

Table 6A

Summary of Wellhead Air Sample Analytical Results - TPH-G and VOCs

Sample ID	Sample Date	Land Use Scenario	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other Fuel Oxygenates by EPA Method 8260B
EW-2	9/5/2014	Commercial	52,000,000	ND<25,000	ND<25,000	ND<25,000	41,000	ND<25,000	All ND<25,000, except TBA ND<250,000
OW-2	9/5/2014	Residential	**5,100,000**	ND<2,500	ND<2,500	ND<2,500	ND<2,500	ND<2,500	All ND<2,500, except TBA ND<25,000
EW-4	9/5/2014	Residential	**98,000,000**	ND<50,000	**360,000**	ND<50,000	ND<50,000	ND<50,000	All ND<50,000, except TBA ND<500,000
EW-5	9/5/2014	Residential	**73,000,000**	ND<50,000	**82,000**	ND<50,000	ND<50,000	ND<50,000	All ND<50,000, except TBA ND<500,000
ESL[1]			300,000	4,700	42	160,000	490	Combined = 52,000	Various
ESL[2]			2,500,000	47,000	420	1,300,000	4,900	Combined = 440,000	Various

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

MTBE = Methyl-tert-Butyl Ether.

ND = Not Detected.

ESL[1] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board , updated December 2013 from Table E2 – Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion for Residential Land Use.

ESL[2] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board , updated December 2013 from Table E2 – Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion for Commercial/Industrial Land Use.

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

Underlined values exceed their respective ESL[2] values.

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

Table 6B

Summary of Wellhead Air Sample Analytical Results - Light Gases

Sample ID	Sample Date	Acetylene	Butane	Ethane	Ethylene	Hexane	Methane	Pentane	Propane
EW-2	9/5/2014	ND<4,260	121,232	ND<4,919	ND<4,589	4,229,202	2,296,115	826,258	11,000
OW-2	9/5/2014	ND<2,130	20,205	ND<2,460	ND<2,294	38,768	38,050	35,411	ND<3,607
EW-4	9/5/2014	ND<106,503	2,186,928	ND<122,986	ND<114,724	4,581,636	72,163,599	3,246,012	ND<180,327
EW-5	9/5/2014	ND<106,503	1,354,945	ND<122,986	ND<114,724	3,383,362	13,776,687	2,213,190	ND<180,327

NOTES:

ND = Not Detected.

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

Table 7A
Summary of Well Groundwater Sample Laboratory Analytical Results - TPH, MBTEX, Fuel Oxygenates, and Lead Scavengers

Well Number	Sample Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Fuel Oxygenates & Lead Scavengers	VOCs by EPA Method 8260
MW-1	10/3/2014	22,000	2,600, c	ND<250	600	4,500	150	620	1,200	ND, except TBA = 880	ND, except Naphthalene = 150, n-Propyl benzene = 160, 1,2,4-Trimethylbenzene = 210
	6/19/2014	15,000	4,200, b,c	ND<250	NA	3,100	230	500	1,300	ND, except MTBE = 350	NA
	11/19/2013	25,000	3,300, b,c	ND<250	ND<1,500	5,800	210	630	1,400	ND, except TBA = 1,600 MTBE = 1,000	NA
	5/16/2013	18,000	1,800, c	ND<250	ND<800	4,400	320	510	1,100	ND, except TBA = 180 MTBE = 240	NA
	12/11/2012	15,000	2,400, c	ND<250	ND<600	3,300	330	410	1,100	ND, except TBA = 190 MTBE = 100	NA
	6/21/2012	17,000	2,100, c	ND<250	ND<500	1,800	420	500	1,500	ND, except TBA = 110 MTBE = 49	NA
	11/28/2011	18,000	2,600, c	ND<250	ND<600	2,600	410	410	1,200	ND, except TBA = 460, MTBE = 210	NA
	5/26/2011	15,000	2,400, b,c	ND<250	ND<500	2,000	430	400	1,300	ND, except TBA = 570, MTBE = 120	NA
	11/18/2010	21,000	1,900, b,c	ND<250	1,700	6,300	340	340	860	ND, except TBA = 3,300, MTBE = 1,500	NA
	4/28/2010	19,000	2,800, b,c	260, b,c	840	3,400	680	500	1,600	ND, except TBA = 3,200, MTBE = 750	NA
	12/3/2009	19,000	1,900, b, c	ND<250	1,500	4,500	670	400	1,300	ND, except TBA = 10,000, MTBE = 1,100	NA
	2/25/2009	21,000	2,200, b,c	ND<250	ND<2,500	4,300	750	580	1,700	ND, except TBA = 17,000, MTBE = 1,400	NA
	11/25/2008	20,000	2,400, c	ND<250	1,900	5,500	490	530	1,300	ND, except TBA = 16,000, MTBE = 1,600	NA
	8/27/2008	46,000	5,200, c	ND<250	1,300	4,600	1,800	2,000	5,200	NA	NA
	5/28/2008	40,000	6,100, c	290	1,600	4,200	2,600	1,700	5,900	NA	NA
	2/27/2008	45,000	4,900, c	310	2,600	6,200	3,100	1,300	5,100	NA	NA
	11/29/2007	27,000	3,100, b,c	ND<250	2,600	4,700	930	770	2,600	NA	NA
	8/29/2007	26,000	3,900, b,c	470	3,200	5,400	1,400	810	3,000	NA	NA
	5/30/2007	22,000	3300, c	ND<250	ND<750	400	380	1,100	3,600	NA	NA
	3/12/2007	38,000	3,500, b,c	300	3,500	5,400	2,900	1,300	5,100	NA	NA
	11/6/2006	44,000,a	3,400, a,c	360	3,900	5,600	2,300	920	3,000	NA	NA
MW-2	10/3/2014	97, g	370, h	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND, except TBA = 42	ND, except Bromomethane = 1.2, Chloroform = 3.2, MIBK = 1.2, MBK = 0.87
	6/19/2014	4,700	2,700, b,c	350, b,c	NA	210	13	18	12	ND, except MTBE = 24	NA
	11/19/2013	6,600	3,000, b,c	ND<250	ND<17	160	9.6	36	10	ND	NA
	5/16/2013	4,700	2,300, c,e,f	470, c,e,f	ND<180	360	17	31	16	ND, except TBA = 200, MTBE = 62	NA
	12/11/2012	3,900	2,700, c,d	590	110	290	15	27	16	ND, except TBA = 190, MTBE = 99	NA
	6/21/2012	4,900	1,600, b,c	ND<250	180	560	14	36	12	ND, except TBA = 340, MTBE = 160	NA
	11/28/2011	4,900	2,900, c,d	420, c,d	ND<50	400	11	39	7.7	ND, except TBA = 72, MTBE = 29	NA
	5/26/2011	6,600	1,900, b,c	ND<250	ND<350	1,000	39	36	97	ND, except TBA = 480, MTBE = 210	NA
	11/18/2010	7,700, a	11,000, a,c,d	3,500, a,c,d	ND<35	640	16	74	14	ND, except TBA = 19, MTBE = 22	NA
	4/28/2010	9,400, a	23,000, a,c,d	9,100, a,c,d	ND<250	1,200	35	40	29	ND, except TBA = 300, MTBE = 100	NA
	12/3/2009	7,700, a	6,900, a, b,c	2,000, a, b, c	ND<250	840	29	34	28	ND, except TBA = 200, MTBE = 61	NA
	2/25/2009	7,600, a	21,000, a,c,d	6,200	ND<160	810	18	46	24	ND, except TBA = 38, MTBE = 31, 1,2-DCA = 2.7	NA
	11/25/2008	8,700, a	23,000, a,c,d	6,400	14,e	740	15	90	27	ND, except TBA = 11, MTBE = 14	NA
	8/27/2008	13,000, a	9,200, a,c,d	2,200	ND<200	990	14	93	19	NA	NA
	5/28/2008	12,000, a	25,000 a,c,d	7,200	ND<210	2,000	77	77	90	NA	NA
	2/27/2008	11,000, a	21,000, a,c,d	6,800	ND<150	940	36	ND<10	22	NA	NA
	11/29/2007	11,000, a	32,000, a,c,d	11,000	ND<50	1,000	28	120	31	NA	NA
	8/29/2007	8,600, a	6,300, a, b, c	2,600	ND<100	1,300	36	48	48	NA	NA
	5/30/2007	14,000, a	22,000, a,c,d	5,800	ND<210	2,200	51	100	99	NA	NA
	3/12/2007	8,500, a	74,000, a, c,d	21,000	ND< 80	1,200	34	140	69	NA	NA
	11/6/2006	14,000,a	45,000, a,c	11,000	ND<120	1,400	27	200	37	NA	NA

Table 7A

Summary of Well Groundwater Sample Laboratory Analytical Results - TPH, MBTEX, Fuel Oxygenates, and Lead Scavengers

Well Number	Sample Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Fuel Oxygenates & Lead Scavengers	VOCs by EPA Method 8260
MW-3	10/3/2014	Not Sampled.									
	6/19/2014	ND<50	ND<50	ND<250	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND	NA
	11/19/2013	ND<50	ND<50	ND<250	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND	NA
	5/16/2013	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	12/11/2012	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	6/21/2012	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	11/28/2011	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	5/26/2011	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	11/18/2010	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	4/28/2010	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	12/3/2009	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	2/25/2009	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	11/25/2008	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	8/27/2008	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA
	5/28/2008	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA
	2/27/2008	ND<50	ND<50	ND<250	15	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA
	11/29/2007	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA
	8/29/2007	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA
	5/30/2007	ND<50	ND<50	ND< 250	ND< 5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA
	3/12/2007	ND< 50	ND< 50	ND< 250	ND< 5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA
	11/6/2006	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA	NA
MW-4	10/3/2014	Not Sampled.									
	6/19/2014	6,000	1,400, c	ND<250	NA	940	22	95	200	ND, except MTBE = 70	NA
	11/19/2013	9,400	2,100, c	ND<250	ND<150	1,100	24	210	610	ND, except TBA = 82, MTBE = 83	NA
	5/16/2013	6,700	1,500, c	ND<250	ND<60	310	42	220	560	ND, except TBA = 43, MTBE = 21	NA
	12/11/2012	17,000	2,700, c	ND<250	ND<170	88	120	670	2,100	ND, except TBA = 12	NA
	6/21/2012	12,000	2,700, c	ND<250	ND<90	49	83	540	1,700	ND	NA
	11/28/2011	6,000	2,200, c	ND<250	ND<50	86	63	350	1,200	ND, except TBA = 11, MTBE = 12	NA
	5/26/2011	7,300	2,400, b,c	ND<250	ND<210	230	64	450	1,100	ND, except TBA = 74, MTBE = 80	NA
	11/18/2010	5,900	1,100, b,c	ND<250	470	1,100	28	150	390	ND, except TBA = 690, MTBE = 540	NA
	4/28/2010	6,300	1,400, c	ND<250	470	480	74	280	750	ND, except TBA = 350, MTBE = 360	NA
	12/3/2009	6,300	1,200, c	ND<250	640	1,100	35	120	390	ND, except TBA = 600, MTBE = 390	NA
	2/25/2009	11,000	2,200, c	ND<250	ND<300	350	120	490	1,400	ND, except TBA = 160, MTBE = 130	NA
	11/25/2008	10,000	1,900, c	ND<250	270	630	130	390	1,500	ND, except TBA = 190, MTBE = 250	NA
	8/27/2008	9,300	830, c	ND<250	ND<250	260	85	370	1,300	NA	NA
	5/28/2008	2,200	1,400, c	ND<250	ND<30	16	38	100	320	NA	NA
	2/27/2008	8,000	1,900, c	ND<250	ND<50	47	110	270	1,300	NA	NA
	11/29/2007	12,000	2,800, c	ND<250	ND<180	260	230	580	2,500	NA	NA
	8/29/2007	12,000, a	560, c	ND<250	660	910	200	750	2,200	NA	NA
	5/30/2007	43,000	4,500, c	610	3,600	5,800	3,700	1,400	5,400	NA	NA
	3/12/2007	19,000	3,100, c	ND< 250	370	560	450	1,100	4,400	NA	NA
	11/6/2006	23,000	4,300,c	850	ND<900	680	250	930	3,100	NA	NA
EW-2	10/3/2014	3,500	540, c	ND<250	31	670	ND<17	21	ND<17	ND	ND, except PCE = 350, TCE = 570, cis-1,2-DCE = 52, Isopropylbenzene = 19, n-Propyl benzene = 60
	6/19/2014	650, g	ND<50	ND<250	NA	47	0.87	1.1	ND<0.50	ND, except TBA = 8.6, MTBE = 6.0	NA
	11/19/2013	11,000	1,400, c	ND<250	ND<350	3,300	19	96	76	ND, except TBA = 190, MTBE = 89	NA
	5/16/2013	2,000	210, c	ND<250	83	580	4.9	32	7.3	ND, except TBA = 55, MTBE = 63	NA
	12/11/2012	2,500	160, c	ND<250	ND<120	470	3.6	31	5.1	ND, except TBA = 74, MTBE = 66	NA
	6/21/2012	3,700	280, c	ND< 250	180	960	9.5	20	16	ND, except TBA = 140, MTBE = 120	NA
	11/28/2011	4,600	960, c	ND< 250	260	1,600	15	62	38	ND, except TBA = 270, MTBE = 270	NA
	5/26/2011	2,700	560, b,c	ND< 250	ND<150	580	7.9	10	80	ND, except TBA = 290, MTBE = 97	NA

Table 7A

Summary of Well Groundwater Sample Laboratory Analytical Results - TPH, MBTEX, Fuel Oxygenates, and Lead Scavengers

Well Number	Sample Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Fuel Oxygenates & Lead Scavengers	VOCs by EPA Method 8260
EW-4	10/3/2014	15,000	2,300, c	ND<250	360	4,000	ND<100	170	ND<100	ND, except TBA = 450	ND, except Naphthalene = 280, n-Propyl benzene = 200
	6/19/2014	4,800	940, c	ND<250	NA	1,200	12	110	21	ND, except TBA = 290, MTBE = 190	NA
	11/19/2013	18,000	3,000, c	ND<250	ND<700	4,200	79	480	120	ND, except TBA = 320, MTBE = 270	NA
	5/16/2013	76	ND<50	ND<250	14	4.0	ND<0.5	1.7	ND<0.5	ND, except TBA = 11, MTBE = 13	NA
	12/11/2012	340	150, b,c	ND< 250	ND<30	28	1.5	6.9	0.91	ND, except TBA = 26, MTBE = 20	NA
	6/21/2012	9,600	2,200, c	ND< 250	ND<75	270	22	340	290	ND, except TBA = 18, MTBE = 6.7	NA
	11/28/2011	8,300	2,000, c	ND< 250	ND<150	520	40	510	530	ND, except TBA = 89, MTBE = 16	NA
	5/26/2011	2,800	500, b,c	ND< 250	ND<150	99	9.9	20	300	ND, except TBA = 110, MTBE = 83	NA
EW-5	10/3/2014	11,000	1,600, c	ND< 250	310	1,800	100	790	700	ND, except TBA = 380	ND, except Naphthalene = 190, n-Propyl benzene = 120, 1,2,4-Trimethylbenzene = 200
	6/19/2014	16,000	2,200, c	ND< 250	NA	1,200	140	950	1,100	ND, except TBA = 310, MTBE = 230	NA
	11/19/2013	17,000	2,600, c	ND< 250	ND<800	2,400	110	1,100	1,700	ND, except TBA = 420, MTBE = 330	NA
	5/16/2013	19,000	2,500, c	ND< 250	ND<300	1,500	100	1,700	2,100	ND, except TBA = 180, MTBE = 41	NA
	12/11/2012	40,000	4,700, c	ND< 250	ND<250	700	1,300	2,500	5,900	ND, except TBA = 180, MTBE = 8.6	NA
	6/21/2012	44,000	4,900, c	ND< 250	ND<1,000	710	2,400	2,300	8,800	ND, except TBA = 57, MTBE = 6.5	NA
	11/28/2011	48,000	3,500, b,c	ND< 250	ND<400	930	3,400	2,400	9,000	ND, except TBA = 110, MTBE = 48	NA
	5/26/2011	35,000	3,600, b,c	ND< 250	ND<450	1,000	2,700	850	11,000	ND, except TBA = 250, MTBE = 86	NA
OW-2	10/3/2014	Not Sampled.									
	6/20/2014	200	150, c	ND<250	NA	0.62	0.70	6.7	6.8	ND, except TBA = 2.4, MTBE = 1.5	NA
	11/19/2013	610	370, c	ND<250	ND<5.0	2.2	1.5	8.8	14	ND, except TBA = 5.1, MTBE = 2.1	NA
	5/16/2013	85	ND<100	ND<250	ND<5.0	0.57	0.88	ND<0.5	0.54	ND, except TBA = 7.6, MTBE = 0.99	NA
	12/11/2012	61	ND<50	ND<250	ND<5.0	3.2	0.70	0.94	3.5	ND, except TBA = 39, MTBE = 3.1	NA
	6/21/2012	4,600	840, c	ND< 250	ND<45	110	46	160	590	ND, except TBA = 60, MTBE = 5.4	NA
	11/28/2011	5,300	1,100, b,c	ND< 250	ND<130	350	170	24	790	ND, except TBA = 210, MTBE = 50	NA
	5/26/2011	450	430, b,c	ND< 250	ND<5.0	0.87	0.71	ND<0.5	7.7	ND, except TBA = 350, MTBE = 3.6	NA
ASP-2	10/2/2014	Not Sampled.									
	6/23/2014	ND<50	ND<50	ND<250	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND, except TBA = 3,700	NA
ASP-3	10/2/2014	Not Sampled.									
	6/23/2014	ND<50	ND<50	ND<250	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND	NA
ASP-4	10/2/2014	ND<50	ND<50	ND<250	1.7	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND, except TBA = 16	ND, except Acetone = 14
	6/23/2014	ND<50	220, f	ND<250	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND, except TBA = 5.7, MTBE = 0.78	NA
ASP-5	10/2/2014	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND	ND, except PCE = 3.1
	6/23/2014	ND<50	ND<50	ND<250	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND	NA
ASP-6	10/2/2014	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	0.68	ND<0.50	3.3	ND	ND, except 1,2,4-Trimethylbenzene = 1.3
	6/23/2014	ND<50	ND<50	ND<250	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND	NA

Abbreviations and Notes:

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-G = Total Petroleum Hydrocarbons as Gasoline
MTBE = Methyl tertiary-butyl ether
TBA = tert-Butyl alcohol
1,2-DCA = 1,2-Dichloroethane
PCE = Tetrachloroethene
TCE = Trichloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
MIBK = Methyl Iso-butyl Ketone (4-Methyl-2-pentanone).
MBK = Methyl Butyl Ketone (2-hexanone).
ND = Not Detected.
NA = Not Analyzed.
a = Laboratory Note: lighter than water immiscible sheen/ product is present
b = Laboratory Note: diesel range compounds are significant; no recognizable pattern
c = Laboratory Note: gasoline range compounds are significant
d = Laboratory Note: unmodified or weakly modified diesel range compounds are significant
e = Analysis by EPA 8260B as part of fuel oxygenate analysis. All other results for MTBE and all results for BTEX are by EPA 8021B.
f = Laboratory Note: aged diesel is significant
g = Laboratory Note: one to a few isolated non-target peaks present in the TPH-G chromatogram
h = Laboratory Note: diesel range compounds are significant; no recognizable pattern; and/or kerosene/kerosene range/jet fuel range.
Results are in micrograms per liter (µg/L), unless otherwise noted.

Table 7B

Summary of Well Groundwater Sample Laboratory Analytical Results - Ethane, Ethene, Methane, and Carbon Dioxide

Well Number	Sample Date	Ethane	Ethene	Methane	Carbon Dioxide
MW-1	10/3/2014	ND<20	ND<20	7,400	100,000
	6/19/2014	ND<0.20	1.3	3,100	69,000
MW-2	10/3/2014	ND<0.20	ND<0.20	8.7	6,700
	6/19/2014	ND<0.20	0.85	2,700	77,000
MW-3	10/3/2014	Not Sampled.			
	6/19/2014	ND<0.20	ND<0.20	2.5	59,000
MW-4	10/3/2014	Not Sampled.			
	6/19/2014	ND<0.20	0.59	2,500	63,000
EW-2	10/3/2014	ND<4.0	ND<4.0	1,800	41,000
	6/19/2014	ND<0.20	ND<0.20	160	11,000
EW-4	10/3/2014	ND<20	ND<20	6,800	96,000
	6/19/2014	ND<0.20	1.6	3,200	47,000
EW-5	10/3/2014	ND<20	ND<20	5,700	76,000
	6/19/2014	ND<0.20	2.6	7,000	67,000
OW-2	10/3/2014	Not Sampled.			
	6/20/2014	ND<0.20	ND<0.20	17	36,000
ASP-2	10/2/2014	Not Sampled.			
	6/23/2014	ND<0.20	ND<0.20	1.9	12,000
ASP-3	10/2/2014	Not Sampled.			
	6/23/2014	ND<0.20	ND<0.20	0.13	2,800
ASP-4	10/2/2014	ND<0.20	ND<0.20	5.7	2,700
	6/23/2014	ND<0.20	ND<0.20	ND<0.10	4,800
ASP-5	10/2/2014	ND<0.20	ND<0.20	0.41	3,500
	6/23/2014	ND<0.20	ND<0.20	ND<0.10	3,200
ASP-6	10/2/2014	ND<0.20	ND<0.20	ND<0.10	3,900
	6/23/2014	ND<0.20	ND<0.20	ND<0.10	240

Abbreviations and Notes:

ND = Not Detected.

Results are in micrograms per liter (µg/L), unless otherwise noted.

Table 7C
Summary of Well Groundwater Sample Laboratory Analytical Results - Inorganic Analytes

Well Number	Sample Date	Nitrate as N	Nitrate as NO3-	Sulfate	Total Alkalinity as Calcium Carbonate (mg $CaCO_3$/L)	Carbonate (mg $CaCO_3$/L)	Bicarbonate (mg $CaCO_3$/L)	Hydroxide (mg $CaCO_3$/L)	Dissolved Iron	Total Iron	Dissolved Ferrous Iron	Dissolved Hexavalent Chromium
MW-1	10/3/2014	ND<100	ND<450	240	496	ND<1.00	496	ND<1.00	22,000	22,000	15,000	ND<0.20
	8/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/19/2014	ND<100	ND<450	310	438	ND<1.00	438	ND<1.00	19,000	370,000	NA	NA
MW-2	10/3/2014	600	2,700	100,000	239	ND<1.00	239	ND<1.00	ND<200	580	ND<50	58
	8/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/19/2014	ND<100	ND<450	920	455	ND<1.00	455	ND<1.00	20,000	23,000	NA	NA
MW-3	10/3/2014	Not Sampled.										
	8/20/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/19/2014	ND<100	ND<450	28,000	134	ND<1.00	134	ND<1.00	1,600	2,800	NA	NA
MW-4	10/3/2014	Not Sampled.										
	8/20/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/19/2014	360	1,600	360	366	ND<1.00	366	ND<1.00	15,000	15,000	NA	NA
EW-2	10/3/2014	ND<100	ND<450	76,000	292	ND<1.00	292	ND<1.00	7,400	7,700	5,300	ND<0.20
	8/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/19/2014	ND<100	ND<450	110,000	186	ND<1.00	186	ND<1.00	840	1,000	NA	NA
EW-4	10/3/2014	ND<100	ND<450	200	436	ND<1.00	436	ND<1.00	27,000	28,000	20,000	ND<0.20
	8/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/19/2014	ND<100	ND<450	39,000	284	ND<1.00	284	ND<1.00	11,000	11,000	NA	NA
EW-5	10/3/2014	ND<100	ND<450	2,500	375	ND<1.00	375	ND<1.00	22,000		16,000	ND<0.20
	8/20/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/19/2014	ND<100	ND<450	640	372	ND<1.00	372	ND<1.00	24,000	26,000	NA	NA
OW-2	10/3/2014	Not Sampled.										
	8/20/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/20/2014	350	1,500	28,000	262	ND<1.00	262	ND<1.00	1,500	2,000	NA	NA
ASP-2	10/2/2014	Not Sampled.										
	8/20/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/23/2014	ND<100	ND<450	87,000	269	ND<1.00	269	ND<1.00	810	770	NA	NA
ASP-3	10/2/2014	Not Sampled.										
	8/20/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/23/2014	ND<100	ND<450	88,000	172	ND<1.00	172	ND<1.00	ND<20	520	NA	NA
ASP-4	10/2/2014	ND<100	ND<450	95,000	136	ND<1.00	136	ND<1.00	1,000	1,300	710	ND<0.20
	8/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/23/2014	ND<100	ND<450	90,000	150	ND<1.00	150	ND<1.00	520	3,200	NA	NA
ASP-5	10/2/2014	ND<100	ND<450	93,000	148	ND<1.00	148	ND<1.00	280	110	120	ND<0.20
	8/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/23/2014	ND<100	ND<450	87,000	151	ND<1.00	151	ND<1.00	99	760	NA	NA
ASP-6	10/2/2014	ND<100	ND<450	94,000	190	ND<1.00	190	ND<1.00	ND<200	11,000	97	ND<0.20
	8/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	6/23/2014	170	760	92,000	191	ND<1.00	191	ND<1.00	72	22,000	NA	NA

Abbreviations and Notes:

ND = Not Detected.

NA = Not Analyzed.

CaCO3 = Calcium Carbonate

Results are in micrograms per liter (µg/L), unless otherwise noted

FIGURES

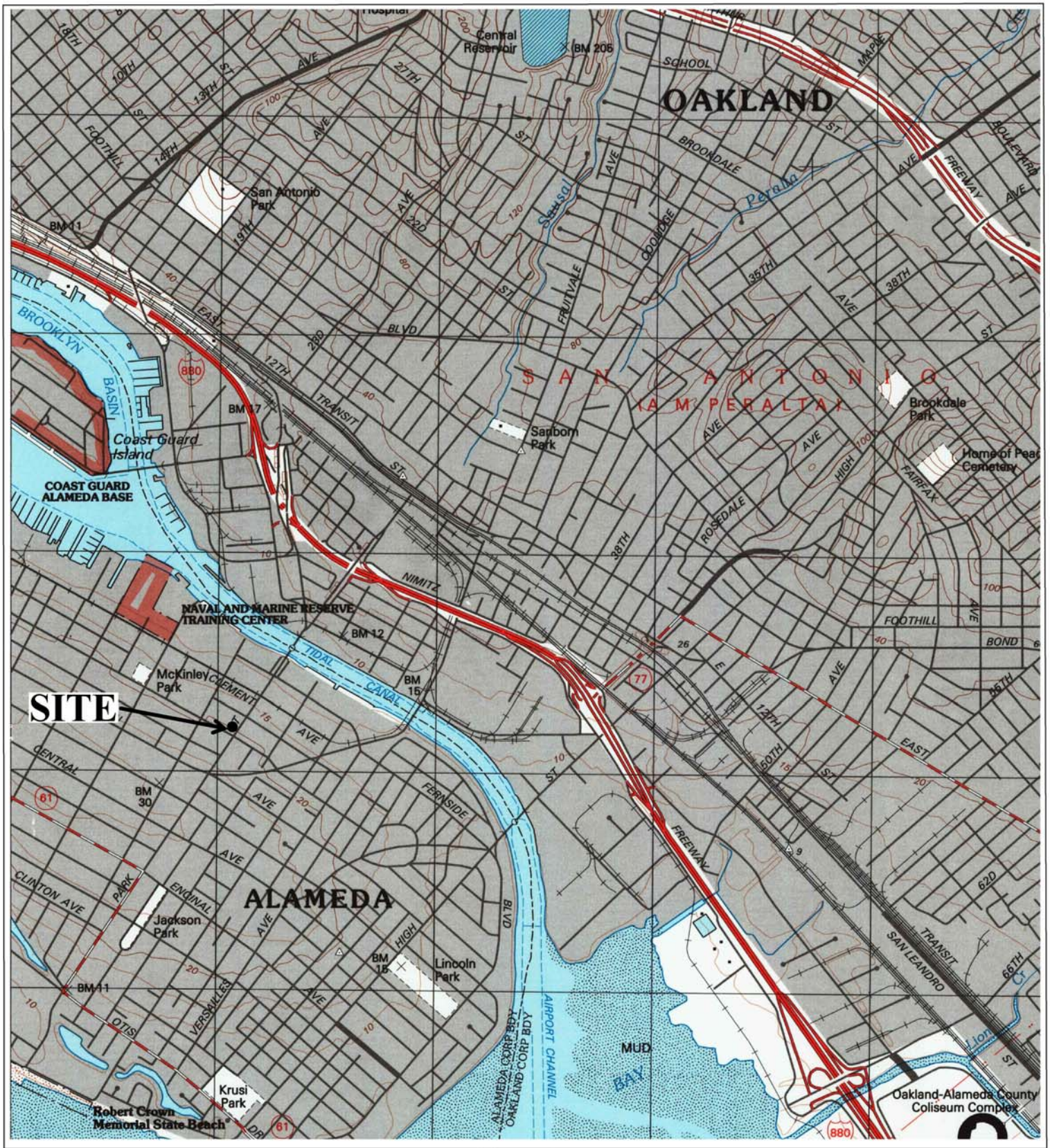


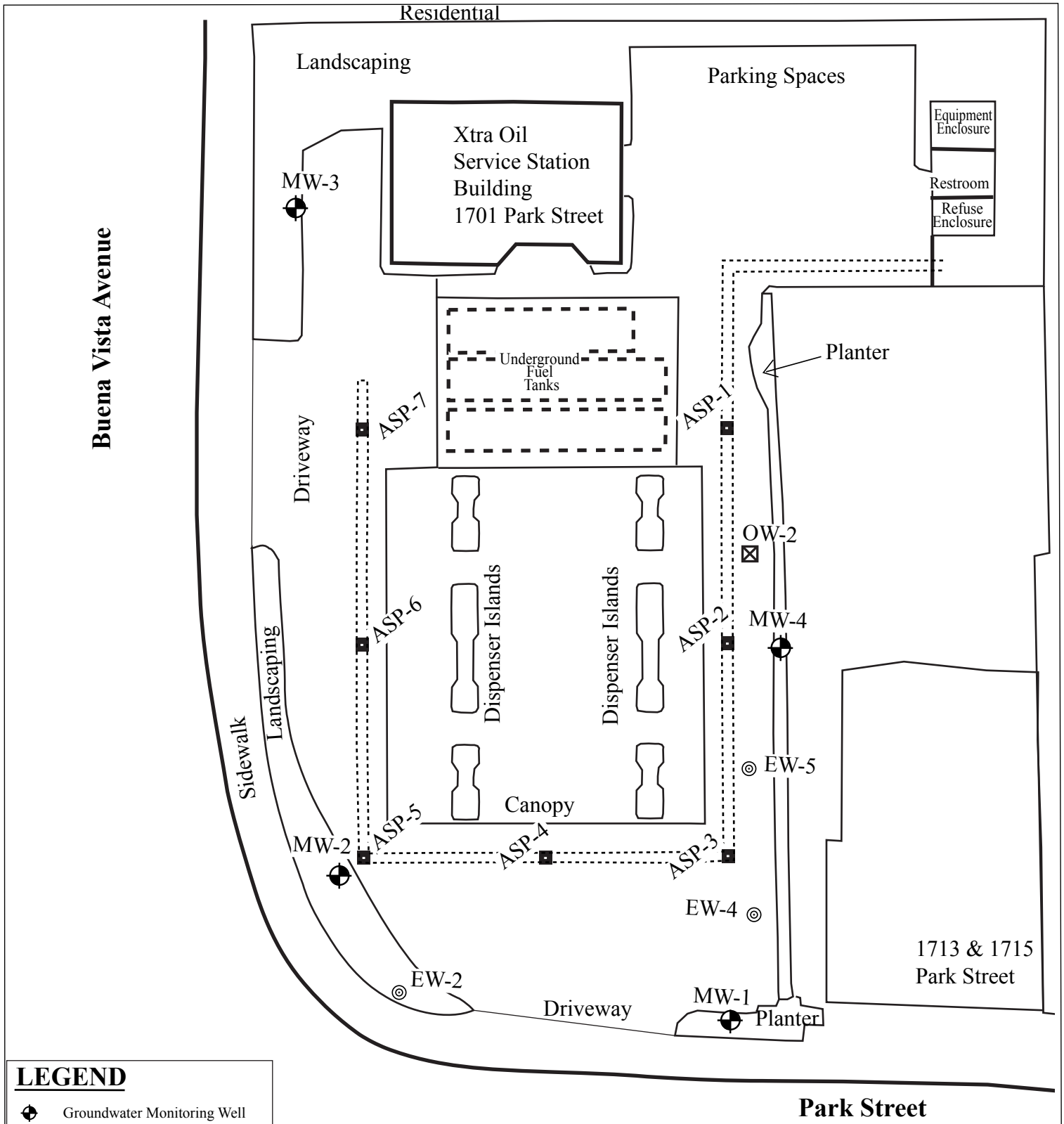
Figure 1
Site Location Map
Xtra Oil Company
1701 Park Street
Alameda, California

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

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

0 1,000 2,000
Approximate Scale in Feet

N



LEGEND

- Groundwater Monitoring Well
- Observation Well
- Extraction Well
- Air Sparging Point
- Horizontal Vapor Extraction Trenching
- Groundwater Surface Contour

Figure 2
Site Plan Showing Groundwater Well and Air Sparging Point Locations
Xtra Oil Company
1701 Park Street
Alameda, California

Basemap from: Alisto Engineering Group September 2005, and Google Earth October 2009

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

0 12.5 25
Approximate Scale in Feet

N

APPENDIX A

Ozone Generator Monitoring Data Sheets

P&D Environmental
Ozone Generator Monitoring Data Sheet

Site Name _ Xtra Oil Company/1701 Park Street, Alameda

Job Number 0058

Date	Time	Hours	Initials	O_2 Pressure (PSI)	O_2 Flow (SCFM)	Air Sparge Pressure (PSI)	Air Sparge Flow (SCFM)	O_3 Pressure (PSI)	Comments
8/27/14	1550	11	MLBD	4	10	40	1.5	30	O_2 pressure at 1.5 psi, adjusted to 4 psi air sparge flow at 1.1 SCFM, adjusted to 1.5
8/28/14	11:35	36	KG	5	9.5	45	1.5	35	~~2 hrs +5~~
"	"	4	KG	5.75		36		27	← Adjustment

USE REVISED DATA SHEET FOR NEW ENTRIES.

MLBD 8/28/14

NOTES

P&D Environmental
Ozone Generator Monitoring Data Sheet

Site Name __ Xtra Oil Company/1701 Park Street, Alameda

Job Number 0058

Date	Time	Initials	O_3 Pressure (PSI)	O_3 Flow (SCFM)	Air Sparge Pressure (PSI)	Air Sparge Flow (SCFM)	O_3 Pressure (PSI)	Valve #1 Hours	Comments
8/28/14	1350	MLBD	4.2	9.5	37	1.5	27	33	
8/29/14	0940	[illegible]	6	10	30	1.6	22	53	adjusted
9/2/14	0922	[illegible]	5.75	9.5	35	1.6	27	149	" (low O_2 press., high flow)
9/2/14	1335	MLBD	5.0	10	38	1.6	28	153	
9/3/14	1125	[illegible]	5.0	10	34	2.1	26	199	adjusted (↑ O_3 psi & Sparge psi)
9/4/14	1415	MLBD	5.0	10	40	2.1	30	202	adjust (↑ O_3 psi at 4psi)
9/5/14	1051	MLBD	5.0	10	40	2.1	30	222	adjust (↓ 6psi)
9/8/14	1630	[illegible]	5.9	10	31	1.8	22	226	
9/8/14	1435	[illegible]	4.9	10	31	1.9	22	249	* off upon arrival
9/9/14	1223	MLBD						269	system off.
9/9/14	1245	MLBD							system on
9/9/14	1315	MLBD							system off by Keith
9/9/14	15:15	[illegible]	5.1	10	33	1.7	24	270	2.5 kw per e-mon€
9/10/14	12:46	[illegible]	5	10	34	1.7	24	292	
9/11/14	12:21	[illegible]	5.9	9.5	34	1.8	25	316	adjusted
9/11/14	1308	MLBD	5.9	9.5	34	1.8	25	317	

NOTES

P&D Environmental
Ozone Generator Monitoring Data Sheet

Site Name _ Xtra Oil Company/1701 Park Street, Alameda

Job Number 0058

Date	Time	Initials	O_3 Pressure (PSI)	O_3 Flow (SCFM)	Air Sparge Pressure (PSI)	Air Sparge Flow (SCFM)	O_3 Pressure (PSI)	Valve #1 Hours	Comments
9/12/14	14:30	LJ	5.1	10	31	1.8	23 ~~25~~	338	Slight adjust
9/15/14	09:45	LJ	5.8	10	33	1.8	26	409	" "
9/16/14	08:56	LJ	5.8	10	33	1.8	26	433	OK
9/19/14	10:16	LJ	5.9	10	31	1.8	23	506	slight adjust
9/19/14	13:30	MLBD	5.9	15	30	1.8	22	509	down to 4.2 psi - adjusted to 5.
9/22/14	08:35	LJ	4.9	9.5	30	1.8	23	577	↓ O^2 flow
9/24/14	11:42	LJ						675	Shut down system (20 days per ACH)
9/24/14	11:42			Kwh total is		996			
					3.4/per hour				

NOTES

APPENDIX B

Ozone Injection Wellhead Monitoring Data Sheets

P&D Environmental
Ozone Injection Wellhead Monitoring Data Sheet

Site Name Xtra Oil Company/1701 Park Street, Alameda

Date 8/27/14

Job Number 0058

Personnel Initials MLBD

Time	Well ID	Pressure (Inches of Water)	Ozone reading (PPM)	PID Reading (PPM)	Comments
1605	MW1	* 0	0.05	142	* psi
1725	MW2	* 0	6.1	52	pressure measured
1705	MW3	* 0	0	8	with REGAL (0-60 psi)
1650	MW4	* 0	0	2	pressure gage at all wells
1715	EW2	* 0	0	120	
1635	EW4	* 0	0.11	263	ambient O3 at MW2 fittings = 0 ppm
1645	EW5	* 0	0.08	151	
1700	OW2	* 0	0	119	

NOTES

P&D Environmental
Ozone Injection Wellhead Monitoring Data Sheet

Site Name Xtra Oil Company/1701 Park Street, Alameda

Date 8/28/14

Job Number 0058

Personnel Initials MLBD

Time	Well ID	Pressure (PSI)	Ozone reading (PPM)	PID Reading (PPM)	Comments
1445	MW1	0	0.05	64	
1510	MW2	0	6.1	40	pressure measured with
1520	MW3	0	0	9.8	manometer at all wells,
1410	MW4	0	0	1.7	except at MW2.
1500	EW2	0	0	144	
1435	EW4	0	0.09	102	ambient O3 at MW2 fittings
1420	EW5	0	0.04	115	= 0 ppm.
1400	OW2	0	0	159	MW2 pressure @ Regal (0-60psi) = 0psi.

NOTES

P&D Environmental
Ozone Injection Wellhead Monitoring Data Sheet

Site Name Xtra Oil Company/1701 Park Street, Alameda

Date 9/2/14

Job Number 0058

Personnel Initials MLBD

Time	Well ID	Pressure (PSI)	Ozone reading (PPM)	PID Reading (PPM)	Comments
1425	MW1	0	0	56	pressure measure with
1625	MW2	1.1	6.01	2.4	Manometer at all wells,
1450	MW3	0	0	0.8	except MW2, which was
1400	MW4	0	0	3.7	measured w gage (1.1 psi)
1435	EW2	0	0	169	Ambient O3 at MW2 fittings
1420	EW4	0	0	114	= 0 ppm.
1410	EW5	0	0	181	
1350	OW2	0	0	391	

NOTES

P&D Environmental
Ozone Injection Wellhead Monitoring Data Sheet

Site Name Xtra Oil Company/1701 Park Street, Alameda

Date 9/4/14

Job Number 0058

Personnel Initials MLBD

Time	Well ID	Pressure (PSI)	Ozone reading (PPM)	PID Reading (PPM)	Comments
1505	MW1	0	0	58	pressure measured at all
1515	MW2	1.0	0	2.1	wells w manometer, except
1520	MW3	0	0	1.1	MW2 with pressure gage
1440	MW4	0	0	4.3	(0-10 psi).
1510	EW2	0	0	174	
1455	EW4	0	0	116	
1450	EW5	0	0	208	
1430	OW2	0	0	253	

NOTES

P&D Environmental
Ozone Injection Wellhead Monitoring Data Sheet

Site Name Xtra Oil Company/1701 Park Street, Alameda

Date 4/9/14

Job Number 0058

Personnel Initials MW30

Time	Well ID	Pressure (PSI)	Ozone reading (PPM)	PID Reading (PPM)	Comments
1253	MW1	0	0	52	System down to install
1320	MW2	0.006	0.04	9.5	outside alarm light
1330	MW3	0	0	4.6	system back on 1245
1240	MW4	0	0	37	power off by Keith 1315
1315	EW2	0	0	297	
1305	EW4	0	0	117	
1250	EW5	0	0	221	
1230	OW2	0.0	0	160	

NOTES

P&D Environmental
Ozone Injection Wellhead Monitoring Data Sheet

Site Name Xtra Oil Company/1701 Park Street, Alameda

Date 9/11/14

Job Number 0058

Personnel Initials MLBD

Time	Well ID	Pressure (PSI)	Ozone reading (PPM)	PID Reading (PPM)	Comments
1345	MW1	0	0	34	pressure measured to manometer, except at MW2 with pressure gage
1400	MW2	1.0	6.1	0.1	
1405	MW3	0	0	1.2	
1330	MW4	0	0	0.8	
1350	EW2	0	0	177	
1340	EW4	0	0	91	
1335	EW5	0	0	211	
1315	OW2	0	0	29	

NOTES

P&D Environmental
Ozone Injection Wellhead Monitoring Data Sheet

Site Name Xtra Oil Company/1701 Park Street, Alameda

Date 9/19/14

Job Number 0058

Personnel Initials MLBD

Time	Well ID	Pressure (PSI)	Ozone reading (PPM)	PID Reading (PPM)	Comments
1355	MW1	0	0	56	
1405	MW2	1.	6.1	2.7	
1410	MW3	0	0	1.8	
1340	MW4	0	0	1.4	
1400	EW2	0	0	242	
1350	EW4	0	0	126	
1345	EW5	0	0	192	
1335	OW2	0	0	18	

NOTES

APPENDIX C

Well Air Purging Data Sheets

P&D Environmental, Inc.
Well Air Purging Data Sheet

Site Name XTRA OIL CO/ 1701 PARK ST, ALAMEDA Well No. OW2

Job Number 0058.R26 Well Diameter (in.) 4

Date 9/5/14 Sample Collection Method VACUUM CHAMBER AND 1-LITER TEDLAR BAG W/ NEW UNUSED PE TUBING.

Range of meter 0-20 L/min

Time	Volume (Liters)	PID (ppm)
1110	INITIAL	178
1111	1	81
1112	5	58
1113	10	60
1114	15	57
11530	50	97

NOTES

OW2 air sample collected at 1155

P&D Environmental, Inc.
Well Air Purging Data Sheet

Site Name XTRA OIL CO/1701 PARK ST, ALAMEDA

Well No. EW2

Job Number 0058.R26

Well Diameter (in.) 4

Date 9/5/14

Sample Collection Method VACUUM CHAMBER AND 1-LITER TEDLAR BAG W/ NEW UNUSED PE TUBING.

Range of meter 0-20 L/MIN

Time	Volume (Liters)	PID (ppm)
1320	INITIAL	170
1321	1	179
1323	5	212
1324	10	261
1325	15	263
1327	50	283

NOTES

EW2 air sample collected at 1340

P&D Environmental, Inc.
Well Air Purging Data Sheet

Site Name XTRA OIL CO/1701 PARK ST, ALAMEDA Well No. EW4

Job Number 0058.R26 Well Diameter (in.) 4

Date 9/5/14 Sample Collection Method VACUUM CHAMBER AND 1-LITER TEDLAR BAG TO NEW UNUSED PE TUBING.

Range of meter 0-20 L/min

Time	Volume (Liters)	PID (ppm)
1248	INITIAL	123
1249	1	125
1250	5	133
1252	10	131
1258	15	135
1300	50	133

NOTES

EW4 air sample collected at 1310

P&D Environmental, Inc.
Well Air Purging Data Sheet

Site Name XTRA OIL CO/1701 PARK ST, ALAMEDA

Well No. EW5

Job Number 0058.R26

Well Diameter (in.) 4

Date 9/5/14

Sample Collection Method VACUUM CHAMBER AND 1-LITER TEDLAR BAG W/ NEW UNUSED PE TUBING.

Range of meter 0-20 L/min

Time	Volume (Liters)	PID (ppm)
1005	INITIAL	204
1205	1	207
1207	5	208
1208	10	205
1209	15	220
121030	50	246

NOTES

EW5 air sample collected at 1225

APPENDIX D

Groundwater Monitoring/Well Purging Data Sheets

P&D Environmental, Inc.
Groundwater Monitoring/Well Purging Data Sheet

Site Name: Xtra Oil Co. - Park Street, Alameda
Job Number: 0058
TOC to Water (ft.): 8.14
Well Depth (ft.): 19.2
Well Diameter: 2"
Flow Rate (mL/minute): ~325
Start Purge Time: 1112

Well No.: MW1
Date: 10/3/14
Sheen: None
Free Product Thickness: Ø
Sample Collection Method: Peristaltic pump + dedicated PE tubing

Time	Vol. Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
1113	225	8.42	6.65	1,057	22.8	7.06	-144.8	0.00
1116	900	8.42	6.65	1,052	23.2	0.31	-155.3	0.00
1119	1,575	8.47	6.65	1,044	23.4	0.13	-157.8	0.00
1122	2,250	8.47	6.65	1,043	23.5	0.11	-158.6	0.00
1125	2,925	8.47	6.65	1,035	23.7	0.08	-159.1	0.00
1128	3,600	8.48	6.65	1,003	23.9	0.08	-157.8	0.00

NOTES

Light-moderate phc odor No sheen
MW1 collected @ 1135 hrs

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

P&D Environmental, Inc.
Groundwater Monitoring/Well Purging Data Sheet

Site Name Xtra Oil Co. - Park St., Alameda
Job Number 0058
TOC to Water (ft.) 9.04 (top of gray Tee)
Well Depth (ft.) 13.4
Well Diameter 2"
Flow Rate (mL/minute) ~275
Start Purge Time 1241

Well No. MW2
Date 10/3/14
Sheen None
Free Product Thickness Ø
Sample Collection Method Peristaltic pump + new unused PE tubing

Time	Vol. Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
1242	225	9.15	7.25	733	26.2	5.64	9.9	0.00
1245	900	9.37	7.38	745	26.0	0.55	1.8	0.00
1248	1,575	9.45	7.50	766	26.0	0.97	-1.7	0.00
1251	2,250	9.47	7.57	761	26.0	1.01	-4.8	0.00
1254	2,925	9.47	7.52	757	26.0	1.03	-4.8	0.00
1257	3,600	9.48	7.53	758	26.0	1.03	-8.5	0.00

NOTES

No odor or sheen
MW2 collected @ 1305 hrs

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

P&D Environmental, Inc.
Groundwater Monitoring/Well Purging Data Sheet

Site Name Xtra Oil Co. - Park St. - Alameda
Well No. EW2
Job Number 0058
Date 10/3/14
TOC to Water (ft.) 7.79
Sheen None
Well Depth (ft.) 23.6
Free Product Thickness Ø
Well Diameter 4"
Sample Collection Method Peristaltic pump + new lined PE tubing
Flow Rate (mL/minute) ~275
Start Purge Time 1158

Time	Vol. Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
1159	225	7.91	6.79	927	24.7	5.21	-121.4	0.00
1207	900	7.97	6.74	924	23.5	0.35	-142.9	0.00
1205	1,575	8.04	6.75	924	23.3	0.22	-148.9	0.00
1208	2,250	8.04	6.75	922	23.4	0.20	-150.9	0.00
1211	2,925	8.05	6.75	921	23.3	0.16	-153.1	0.00
1214	3,600	8.07	6.75	920	23.4	0.14	-154.9	0.00

NOTES

Mod - strong phc odor; no sheen
EW2 collected @ 1220

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

P&D Environmental, Inc.
Groundwater Monitoring/Well Purging Data Sheet

Site Name XTRA OIL COMPANY/PARK ST.
Well No. EW4
Job Number 0058
Date 10/3/14
TOC to Water (ft.) 6.79
Sheen ~~YES~~ NO
Well Depth (ft.) 21.8
Free Product Thickness Ø
Well Diameter 4"
Sample Collection Method PERISTALTIC PUMP & NEW UNUSED PE TUBING
Flow Rate (mL/minute) 250
Start Purge Time 1009

Time	Vol. Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
1010	250	6.87	6.57	892	22.9	0.82	-124.8 mVbd.	0.00
1013	1000	6.94	6.56	893	22.8	0.32	-129.8	0.00
1016	1750	6.99	6.56	893	22.8	0.22	-134.0	0.00
1019	2500	7.02	6.57	893	22.8	0.19	-136.8	0.00
1022	3250	7.03	6.57	893	22.9	0.17	-138.6	0.00
1025	4000	7.05	6.57	892	22.9	0.16	-140.2	0.00

NOTES

EW4 collected at 1030

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

Slight to moderate ~~to strong~~ odor, NO sheens observed. mvbd

P&D Environmental, Inc.
Groundwater Monitoring/Well Purging Data Sheet

Site Name XTRA OIL COMPANY/PARK ST.
Well No. EW5
Job Number 0058
Date 10/3/14
TOC to Water (ft.) 6.94
Sheen NONE
Well Depth (ft.) 23.7
Free Product Thickness Ø
Well Diameter 4"
Sample Collection Method PERISTALTIC PUMP & NEW UNUSED PE TUBING
Flow Rate (mL/minute) 250
Start Purge Time 0811

Time	Vol. Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
0812	250	6.99	6.63	784	20.6	1.14	-127.8	0.00
0815	1000	7.04	6.65	784	20.6	0.55	-133.3	0.00
0818	1750	7.08	6.66	784	20.6	0.32	-140.9	0.00
0821	2500	7.11	6.65	784	20.6	0.24	-144.7	0.00
0824	3250	7.15	6.65	785	20.6	0.19	-149.4	0.00
0827	4000	7.17	6.66	786	20.6	0.17	-152.1	0.00

NOTES

EW5 collected @ 0830
Strong odor, no sheen

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

P&D Environmental, Inc.
Groundwater Monitoring/Well Purging Data Sheet

Site Name Xtra Oil - Park St, Alameda
Well No. ASP-4
Job Number 0058
Date 10/2/14
TOC to Water (ft.) 7.68
Sheen None
Well Depth (ft.) 24.85
Free Product Thickness 0
Well Diameter 4"
Sample Collection Method Peristaltic pump + new unused PE tubing
Flow Rate (mL/minute) ~250
Start Purge Time 1316

Time	Vol. Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
1317	250	—	6.80	668	24.8	4.07	-14.4	0.00
1320	1,000	—	6.80	662	25.0	2.44	1.4	0.00
~~1323~~	1322	Well dewatered						0.0
~~1326~~	1,500							~~0.00~~ SC
1329								0.00
1332								0.00

NOTES

No odor & no sheen.
ASP-4 collected @ 1340

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

P&D Environmental, Inc.
Groundwater Monitoring/Well Purging Data Sheet

Site Name: Xtra Oil, Park St., Alameda
Job Number: 0058
TOC to Water (ft.): 7.36
Well Depth (ft.): 29.2
Well Diameter: 1"
Flow Rate (mL/minute): ~250
Start Purge Time: 1453

Well No.: ASP-5
Date: 10/2/14
Sheen: None
Free Product Thickness: 0
Sample Collection Method: Peristaltic pump + new unused PE tubing

Time	Vol. Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
1454	250	—	7.44	675	26.0	4.18	-41.2	0.00
1457	1,000	—	7.32	663	25.6	1.52	92.3	0.00
1500	1,750	—	7.21	666	25.2	1.61	86.9	0.00
~~1503~~	1501	Well Pewatered						
~~1506~~	2000							
~~1509~~								

NOTES

No sheen + no odor.
ASP-5 collected @ 1630

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

P&D Environmental, Inc.
Groundwater Monitoring/Well Purging Data Sheet

Site Name: Xtra Oil - Park St., Alameda
Well No.: ASP-6
Job Number: 0058
Date: 10/2/14
TOC to Water (ft.): 7.51
Sheen: None
Well Depth (ft.): 27.9
Free Product Thickness: Ø
Well Diameter: 1"
Sample Collection Method: Peristaltic pump & new unused PE tubing
Flow Rate (mL/minute): ~250
Start Purge Time: 1529

Time	Vol. Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
1530	250	—	7.25	741	25.1	3.27	53.4	0.00
1533	1,000	—	7.23	733	24.1	0.51	-80.4	0.00
1536	1,750	—	7.15	731	23.8	0.26	-76.9	0.00
1539	2,500	—	7.19	738	25.5	0.26	-65.3	0.00
1542	3,250	—	7.22	731	25.3	0.50	-54.7	0.00
1545	4,000	—	7.26	729	25.1	0.52	-72.0	0.00

NOTES

No odor + no sheen.
ASP-6 collected @ 1550

Stability Parameters
p.H. = +/- 0.1
Sp. Conductivity = +/-3%
Turbidity = +/- 10%
D.O. = +/- 10%

APPENDIX E

LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

- **McCampbell Work Order #1409191: OW-2, EW-2, EW-4, and EW-5 Wellhead Air Sample Results - TPH, MBTEX, and Dissolved Gases**
- **McCampbell Work Order #1410124: MW-1, MW-2, EW-2, EW-4, and EW-5 Groundwater Sample Results - TPH, MBTEX, Inorganic Ions, Total and Dissolved Iron, Alkalinity, Dissolved Gases, and Dissolved Hexavalent Chromium**
- **McCampbell Work Order #1410123: ASP-4 Through ASP-6 Groundwater Sample Results TPH, MBTEX, Inorganic Ions, Total and Dissolved Iron, Alkalinity, Dissolved Gases, and Dissolved Hexavalent Chromium**

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1409191

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

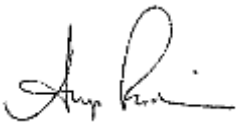
Project Contact: Michael Deschenes
Project P.O.:
Project Name: #0058; Xtra Oil Company

Project Received: 09/05/2014

Analytical Report reviewed & approved for release on 09/08/2014 by:

Question about your data?

Click here to email McCampbell



Angela Rydelius,
Laboratory Manager

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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: #0058; Xtra Oil Company
WorkOrder: 1409191

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifiers

H	samples were analyzed out of holding time
a3	sample diluted due to high organic content.

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Project:	#0058; Xtra Oil Company	**Extraction Method:**	SW5030B
Date Received:	9/5/14 15:31	**Analytical Method:**	SW8260B
Date Prepared:	9/5/14	**Unit:**	µg/m³

Oxygenated Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
OW2	1409191-001A	Air	09/05/2014 11:55	GC16	94886

Initial Pressure (psia)	Final Pressure (psia)
1.00	1.00

Analytes	Result	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	2500	10	09/05/2014 21:45
Benzene	ND	2500	10	09/05/2014 21:45
t-Butyl alcohol (TBA)	ND	25,000	10	09/05/2014 21:45
Diisopropyl ether (DIPE)	ND	2500	10	09/05/2014 21:45
Ethylbenzene	ND	2500	10	09/05/2014 21:45
Ethyl tert-butyl ether (ETBE)	ND	2500	10	09/05/2014 21:45
Methyl-t-butyl ether (MTBE)	ND	2500	10	09/05/2014 21:45
Toluene	ND	2500	10	09/05/2014 21:45
Xylenes, Total	ND	2500	10	09/05/2014 21:45

Surrogates	REC (%)	Limits	Analytical Comments: a3
Dibromofluoromethane	81	70-130	09/05/2014 21:45
Toluene-d8	80	70-130	09/05/2014 21:45
4-BFB	87	70-130	09/05/2014 21:45

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Project:	#0058; Xtra Oil Company	**Extraction Method:**	SW5030B
Date Received:	9/5/14 15:31	**Analytical Method:**	SW8260B
Date Prepared:	9/5/14	**Unit:**	µg/m³

Oxygenated Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1409191-002A**	**Air**	**09/05/2014 13:40**	**GC16**	**94886**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	25,000	100	09/05/2014 22:27
Benzene	ND	25,000	100	09/05/2014 22:27
t-Butyl alcohol (TBA)	ND	250,000	100	09/05/2014 22:27
Diisopropyl ether (DIPE)	ND	25,000	100	09/05/2014 22:27
Ethylbenzene	**41,000**	25,000	100	09/05/2014 22:27
Ethyl tert-butyl ether (ETBE)	ND	25,000	100	09/05/2014 22:27
Methyl-t-butyl ether (MTBE)	ND	25,000	100	09/05/2014 22:27
Toluene	ND	25,000	100	09/05/2014 22:27
Xylenes, Total	ND	25,000	100	09/05/2014 22:27

Surrogates	REC (%)	Limits	
Dibromofluoromethane	84	70-130	09/05/2014 22:27
Toluene-d8	80	70-130	09/05/2014 22:27
4-BFB	90	70-130	09/05/2014 22:27

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Project:	#0058; Xtra Oil Company	**Extraction Method:**	SW5030B
Date Received:	9/5/14 15:31	**Analytical Method:**	SW8260B
Date Prepared:	9/5/14	**Unit:**	µg/m³

Oxygenated Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1409191-003A**	**Air**	**09/05/2014 13:10**	**GC16**	**94886**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	50,000	200	09/05/2014 23:10
Benzene	**360,000**	50,000	200	09/05/2014 23:10
t-Butyl alcohol (TBA)	ND	500,000	200	09/05/2014 23:10
Diisopropyl ether (DIPE)	ND	50,000	200	09/05/2014 23:10
Ethylbenzene	ND	50,000	200	09/05/2014 23:10
Ethyl tert-butyl ether (ETBE)	ND	50,000	200	09/05/2014 23:10
Methyl-t-butyl ether (MTBE)	ND	50,000	200	09/05/2014 23:10
Toluene	ND	50,000	200	09/05/2014 23:10
Xylenes, Total	ND	50,000	200	09/05/2014 23:10

Surrogates	REC (%)	Limits	
Dibromofluoromethane	88	70-130	09/05/2014 23:10
Toluene-d8	81	70-130	09/05/2014 23:10
4-BFB	87	70-130	09/05/2014 23:10

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Project:	#0058; Xtra Oil Company	**Extraction Method:**	SW5030B
Date Received:	9/5/14 15:31	**Analytical Method:**	SW8260B
Date Prepared:	9/5/14	**Unit:**	µg/m³

Oxygenated Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1409191-004A**	**Air**	**09/05/2014 12:25**	**GC16**	**94886**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	50,000	200	09/05/2014 23:53
Benzene	**82,000**	50,000	200	09/05/2014 23:53
t-Butyl alcohol (TBA)	ND	500,000	200	09/05/2014 23:53
Diisopropyl ether (DIPE)	ND	50,000	200	09/05/2014 23:53
Ethylbenzene	ND	50,000	200	09/05/2014 23:53
Ethyl tert-butyl ether (ETBE)	ND	50,000	200	09/05/2014 23:53
Methyl-t-butyl ether (MTBE)	ND	50,000	200	09/05/2014 23:53
Toluene	ND	50,000	200	09/05/2014 23:53
Xylenes, Total	ND	50,000	200	09/05/2014 23:53

Surrogates	REC (%)	Limits	
Dibromofluoromethane	82	70-130	09/05/2014 23:53
Toluene-d8	81	70-130	09/05/2014 23:53
4-BFB	86	70-130	09/05/2014 23:53

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Project:	#0058; Xtra Oil Company	**Extraction Method:**	SW5030B
Date Received:	9/5/14 15:31	**Analytical Method:**	SW8260B
Date Prepared:	9/5/14	**Unit:**	µg/L

Oxygenated Volatile Organics & BTEX by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
OW2	**1409191-001A**	**Air**	**09/05/2014 11:55**	**GC16**	**94886**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	H	2.5	10	09/05/2014 21:45
Benzene	ND	H	2.5	10	09/05/2014 21:45
t-Butyl alcohol (TBA)	ND	H	25	10	09/05/2014 21:45
Diisopropyl ether (DIPE)	ND	H	2.5	10	09/05/2014 21:45
Ethylbenzene	ND	H	2.5	10	09/05/2014 21:45
Ethyl tert-butyl ether (ETBE)	ND	H	2.5	10	09/05/2014 21:45
Methyl-t-butyl ether (MTBE)	ND	H	2.5	10	09/05/2014 21:45
Toluene	ND	H	2.5	10	09/05/2014 21:45
Xylenes, Total	ND	H	2.5	10	09/05/2014 21:45

Surrogates	REC (%)	Qualifiers	Limits	Analytical Comments: a3
Dibromofluoromethane	81	H	70-130	09/05/2014 21:45
Toluene-d8	80	H	70-130	09/05/2014 21:45
4-BFB	87	H	70-130	09/05/2014 21:45

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1409191-002A**	**Air**	**09/05/2014 13:40**	**GC16**	**94886**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	H	25	100	09/05/2014 22:27
Benzene	ND	H	25	100	09/05/2014 22:27
t-Butyl alcohol (TBA)	ND	H	250	100	09/05/2014 22:27
Diisopropyl ether (DIPE)	ND	H	25	100	09/05/2014 22:27
Ethylbenzene	**41**	H	25	100	09/05/2014 22:27
Ethyl tert-butyl ether (ETBE)	ND	H	25	100	09/05/2014 22:27
Methyl-t-butyl ether (MTBE)	ND	H	25	100	09/05/2014 22:27
Toluene	ND	H	25	100	09/05/2014 22:27
Xylenes, Total	ND	H	25	100	09/05/2014 22:27

Surrogates	REC (%)	Qualifiers	Limits	
Dibromofluoromethane	84	H	70-130	09/05/2014 22:27
Toluene-d8	80	H	70-130	09/05/2014 22:27
4-BFB	90	H	70-130	09/05/2014 22:27

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Project:	#0058; Xtra Oil Company	**Extraction Method:**	SW5030B
Date Received:	9/5/14 15:31	**Analytical Method:**	SW8260B
Date Prepared:	9/5/14	**Unit:**	µg/L

Oxygenated Volatile Organics & BTEX by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1409191-003A**	**Air**	**09/05/2014 13:10**	**GC16**	**94886**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	H	50	200	09/05/2014 23:10
Benzene	**360**	H	50	200	09/05/2014 23:10
t-Butyl alcohol (TBA)	ND	H	500	200	09/05/2014 23:10
Diisopropyl ether (DIPE)	ND	H	50	200	09/05/2014 23:10
Ethylbenzene	ND	H	50	200	09/05/2014 23:10
Ethyl tert-butyl ether (ETBE)	ND	H	50	200	09/05/2014 23:10
Methyl-t-butyl ether (MTBE)	ND	H	50	200	09/05/2014 23:10
Toluene	ND	H	50	200	09/05/2014 23:10
Xylenes, Total	ND	H	50	200	09/05/2014 23:10

Surrogates	REC (%)	Qualifiers	Limits	
Dibromofluoromethane	88	H	70-130	09/05/2014 23:10
Toluene-d8	81	H	70-130	09/05/2014 23:10
4-BFB	87	H	70-130	09/05/2014 23:10

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1409191-004A**	**Air**	**09/05/2014 12:25**	**GC16**	**94886**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	H	50	200	09/05/2014 23:53
Benzene	**82**	H	50	200	09/05/2014 23:53
t-Butyl alcohol (TBA)	ND	H	500	200	09/05/2014 23:53
Diisopropyl ether (DIPE)	ND	H	50	200	09/05/2014 23:53
Ethylbenzene	ND	H	50	200	09/05/2014 23:53
Ethyl tert-butyl ether (ETBE)	ND	H	50	200	09/05/2014 23:53
Methyl-t-butyl ether (MTBE)	ND	H	50	200	09/05/2014 23:53
Toluene	ND	H	50	200	09/05/2014 23:53
Xylenes, Total	ND	H	50	200	09/05/2014 23:53

Surrogates	REC (%)	Qualifiers	Limits	
Dibromofluoromethane	82	H	70-130	09/05/2014 23:53
Toluene-d8	81	H	70-130	09/05/2014 23:53
4-BFB	86	H	70-130	09/05/2014 23:53

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Project:	#0058; Xtra Oil Company	**Extraction Method:**	SW5030B
Date Received:	9/5/14 15:31	**Analytical Method:**	SW8260B
Date Prepared:	9/5/14	**Unit:**	µg/m³

Oxygenated Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
OW2	**1409191-001A**	**Air**	**09/05/2014 11:55**	**GC16**	**94886**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**5,100,000**	250,000	10	09/05/2014 21:45

Surrogates	REC (%)	Limits	
4-BFB	83	70-130	09/05/2014 21:45

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1409191-002A**	**Air**	**09/05/2014 13:40**	**GC16**	**94886**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**52,000,000**	2,500,000	100	09/05/2014 22:27

Surrogates	REC (%)	Limits	
4-BFB	82	70-130	09/05/2014 22:27

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1409191-003A**	**Air**	**09/05/2014 13:10**	**GC16**	**94886**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**98,000,000**	5,000,000	200	09/05/2014 23:10

Surrogates	REC (%)	Limits	
4-BFB	80	70-130	09/05/2014 23:10

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Project:	#0058; Xtra Oil Company	**Extraction Method:**	SW5030B
Date Received:	9/5/14 15:31	**Analytical Method:**	SW8260B
Date Prepared:	9/5/14	**Unit:**	µg/m³

Oxygenated Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1409191-004A**	**Air**	**09/05/2014 12:25**	**GC16**	**94886**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**73,000,000**	5,000,000	200	09/05/2014 23:53

Surrogates	REC (%)	Limits	
4-BFB	79	70-130	09/05/2014 23:53

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Project:	#0058; Xtra Oil Company	**Extraction Method:**	SW5030B
Date Received:	9/5/14 15:31	**Analytical Method:**	SW8260B
Date Prepared:	9/5/14	**Unit:**	µg/L

TPH(g) by Purge & Trap and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
OW2	**1409191-001A**	**Air**	**09/05/2014 11:55**	**GC16**	**94886**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	**5100**	H	250	10	09/05/2014 21:45

Surrogates	REC (%)	Qualifiers	Limits	
4-BFB	83	H	70-130	09/05/2014 21:45

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1409191-002A**	**Air**	**09/05/2014 13:40**	**GC16**	**94886**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	**52,000**	H	2500	100	09/05/2014 22:27

Surrogates	REC (%)	Qualifiers	Limits	
4-BFB	82	H	70-130	09/05/2014 22:27

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1409191-003A**	**Air**	**09/05/2014 13:10**	**GC16**	**94886**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	**98,000**	H	5000	200	09/05/2014 23:10

Surrogates	REC (%)	Qualifiers	Limits	
4-BFB	80	H	70-130	09/05/2014 23:10

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1409191-004A**	**Air**	**09/05/2014 12:25**	**GC16**	**94886**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	**73,000**	H	5000	200	09/05/2014 23:53

Surrogates	REC (%)	Qualifiers	Limits	
4-BFB	79	H	70-130	09/05/2014 23:53

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Project:	#0058; Xtra Oil Company	**Extraction Method:**	ASTM D 1946-90
Date Received:	9/5/14 15:31	**Analytical Method:**	ASTM D 1946-90
Date Prepared:	9/8/14	**Unit:**	uL/L

Light Gases

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
OW2	**1409191-001A**	**Air**	**09/05/2014 11:55**	**GC26**	**94915**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetylene	ND	H	2.0	1	09/08/2014 12:05
Butane	**8.5**	H	2.0	1	09/08/2014 12:05
Ethane	ND	H	2.0	1	09/08/2014 12:05
Ethylene	ND	H	2.0	1	09/08/2014 12:05
Hexane	**11**	H	2.0	1	09/08/2014 12:05
Methane	**58**	H	1.0	1	09/08/2014 12:05
Pentane	**12**	H	2.0	1	09/08/2014 12:05
Propane	ND	H	2.0	1	09/08/2014 12:05

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1409191-002A**	**Air**	**09/05/2014 13:40**	**GC26**	**94915**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetylene	ND	H	4.0	2	09/08/2014 13:08
Butane	**51**	H	4.0	2	09/08/2014 13:08
Ethane	ND	H	4.0	2	09/08/2014 13:08
Ethylene	ND	H	4.0	2	09/08/2014 13:08
Hexane	**1200**	H	4.0	2	09/08/2014 13:08
Methane	**3500**	H	20	20	09/08/2014 16:04
Pentane	**280**	H	4.0	2	09/08/2014 13:08
Propane	**6.1**	H	4.0	2	09/08/2014 13:08

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Project:	#0058; Xtra Oil Company	**Extraction Method:**	ASTM D 1946-90
Date Received:	9/5/14 15:31	**Analytical Method:**	ASTM D 1946-90
Date Prepared:	9/8/14	**Unit:**	uL/L

Light Gases

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1409191-003A**	**Air**	**09/05/2014 13:10**	**GC26**	**94915**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetylene	ND	H	100	50	09/08/2014 14:11
Butane	**920**	H	100	50	09/08/2014 14:11
Ethane	ND	H	100	50	09/08/2014 14:11
Ethylene	ND	H	100	50	09/08/2014 14:11
Hexane	**1300**	H	100	50	09/08/2014 14:11
Methane	**110,000**	H	200	200	09/08/2014 16:20
Pentane	**1100**	H	100	50	09/08/2014 14:11
Propane	ND	H	100	50	09/08/2014 14:11

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1409191-004A**	**Air**	**09/05/2014 12:25**	**GC26**	**94915**

Initial Pressure (psia)	Final Pressure (psia)
1.00	**1.00**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetylene	ND	H	100	50	09/08/2014 15:05
Butane	**570**	H	100	50	09/08/2014 15:05
Ethane	ND	H	100	50	09/08/2014 15:05
Ethylene	ND	H	100	50	09/08/2014 15:05
Hexane	**960**	H	100	50	09/08/2014 15:05
Methane	**21,000**	H	50	50	09/08/2014 15:05
Pentane	**750**	H	100	50	09/08/2014 15:05
Propane	ND	H	100	50	09/08/2014 15:05

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Date Prepared:	9/8/14	**BatchID:**	94886
Date Analyzed:	9/5/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Company	**Sample ID:**	MB/LCS-94886 1409113-001AMS/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	9.34	0.50	10	-	93.4	64-120
Benzene	ND	10.1	0.50	10	-	101	73-123
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	32.5	2.0	40	-	81.2	29-146
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	-	0.50	-	-	-	-
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	-	0.50	-	-	-	-
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	-	0.50	-	-	-	-
1,1-Dichloroethene	ND	-	0.50	-	-	-	-
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.)

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Date Prepared:	9/8/14	**BatchID:**	94886
Date Analyzed:	9/5/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Company	**Sample ID:**	MB/LCS-94886 1409113-001AMS/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	9.56	0.50	10	-	95.7	62-125
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.30	0.50	10	-	93	63-126
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	8.66	0.50	10	-	86.6	56-126
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	0.538	-	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	9.65	0.50	10	-	96.5	78-114
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	-	0.50	-	-	-	-
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	23.0	24.2		25	92	97	77-120
Toluene-d8	20.9	20.4		25	83	82	78-118
4-BFB	2.08	2.30		2.5	83	92	63-129

(Cont.)

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Date Prepared:	9/8/14	**BatchID:**	94886
Date Analyzed:	9/5/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Company	**Sample ID:**	MB/LCS-94886 1409113-001AMS/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)	10.4	10.1	10	ND	104	101	70-130	2.91	20
Benzene	10.3	10.1	10	ND	103	101	70-130	2.07	20
t-Butyl alcohol (TBA)	46.2	44.6	40	ND	115	111	70-130	3.50	20
Diisopropyl ether (DIPE)	9.97	9.73	10	ND	99.7	97.3	70-130	2.43	20
Ethyl tert-butyl ether (ETBE)	10.1	9.75	10	ND	101	97.5	70-130	3.40	20
Methyl-t-butyl ether (MTBE)	9.87	9.59	10	ND	98.7	95.9	70-130	2.84	20
Toluene	9.37	9.29	10	ND	93.7	92.9	70-130	0.876	20
Surrogate Recovery									
Dibromofluoromethane	22.9	22.6	25		92	91	70-130	1.32	20
Toluene-d8	19.9	20.0	25		79	80	70-130	0.891	20
4-BFB	2.21	2.19	2.5		88	88	70-130	0	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Date Prepared:	9/8/14	**BatchID:**	94886
Date Analyzed:	9/5/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Air	**Unit:**	µg/L
Project:	#0058; Xtra Oil Company	**Sample ID:**	MB/LCS-94886

QC Summary Report for VOC (C6-C12)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
VOC (C6-C12)	ND	364	32	322	-	113	80-120
Surrogate Recovery							
4-BFB	0.957	0.984		1.25	77	79	70-130

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1409191
Date Prepared:	9/8/14	**BatchID:**	94915
Date Analyzed:	9/8/14	**Extraction Method:**	ASTM D 1946-90
Instrument:	GC26	**Analytical Method:**	ASTM D 1946-90
Matrix:	Soil Gas	**Unit:**	uL/L
Project:	#0058; Xtra Oil Company	**Sample ID:**	MB/LCS-94915

QC Summary Report for ASTM D1946-90

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetylene	ND	113	2.0	100	-	113	70-130
Butane	ND	87.5	2.0	100	-	87.5	70-130
Ethane	ND	94.6	2.0	100	-	94.6	70-130
Ethylene	ND	120	2.0	100	-	120	70-130
Hexane	ND	92.5	2.0	100	-	92.5	70-130
Methane	ND	122	2.0	100	-	122	70-130
Pentane	ND	93.4	2.0	100	-	93.4	70-130
Propane	ND	88.7	2.0	100	-	88.7	70-130

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1409191 **ClientCode: PDEO**

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

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

Email: lab@pdenviro.com
cc/3rd Party:
PO:
ProjectNo: #0058; Xtra Oil Company

Bill to:
Accounts Payable
Xtra Oil Company
2307 Pacific Avenue
Alameda, CA 94507
xtraoil@sbcglobal.net

Requested TAT: 1 day

Date Received: **09/05/2014**
Date Printed: **09/08/2014**

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
1409191-001	OW2	Air	9/5/2014 11:55	☐	A	A										
1409191-002	EW2	Air	9/5/2014 13:40	☐	A	A										
1409191-003	EW4	Air	9/5/2014 13:10	☐	A	A										
1409191-004	EW5	Air	9/5/2014 12:25	☐	A	A										

Test Legend:

1	GAS8260_A	2	LG_TEDLAR_AIR	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A 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.

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: #0058; Xtra Oil Company
Comments: 1 day TAT

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

Work Order: 1409191
Date Received: 9/5/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1409191-001A	OW2	Air	ASTM D1946-90 (Light Gases)	1	Tedlar	☐	9/5/2014 11:55	1 day		☐	
			TPH(g) & BTEX & 5-Oxys by 8260B			☐		1 day		☐	
1409191-002A	EW2	Air	ASTM D1946-90 (Light Gases)	1	Tedlar	☐	9/5/2014 13:40	1 day		☐	
			TPH(g) & BTEX & 5-Oxys by 8260B			☐		1 day		☐	
1409191-003A	EW4	Air	ASTM D1946-90 (Light Gases)	1	Tedlar	☐	9/5/2014 13:10	1 day		☐	
			TPH(g) & BTEX & 5-Oxys by 8260B			☐		1 day		☐	
1409191-004A	EW5	Air	ASTM D1946-90 (Light Gases)	1	Tedlar	☐	9/5/2014 12:25	1 day		☐	
			TPH(g) & BTEX & 5-Oxys by 8260B			☐		1 day		☐	

*** 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:
Tedlar = Tedlar Air Bag

CHAIN OF CUSTODY RECORD

1409191

PAGE 1 OF 1

RUSH

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

PROJECT NUMBER: 0058

PROJECT NAME: XTRA OIL COMPANY 1701 PARK ST. ALAMEDA

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	TPH-G AND BTEX BY EPA 8260B	LIGHT GASES BY ASTM-D 1946	PRESERVATIVE	REMARKS
OW2	9/5/14	1155	Air		1	X	X	NONE	24 hour RUSH
EW2		1340			1	X	X		
EW4		1310			1	X	X		
EW5		1225			1	X	X		

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	DATE 9/5/14	TIME 1528	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment) 4 / Total No. of Containers (This Shipment) 4	LABORATORY: MC CAMPBELL ANALYTICAL, INC.
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: ANGELA RYDELIUS	LABORATORY PHONE NUMBER: (877) 252-9262
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

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

REMARKS: TEDLAR BAGS.

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Sample Receipt Checklist

Client Name: **P & D Environmental**
Date and Time Received: **9/5/2014 3:31:16 PM**

Project Name: **#0058; Xtra Oil Company**
LogIn Reviewed by: Maria Venegas

WorkOrder №: **1409191** Matrix: Air
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:		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 ☑	
Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑

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

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1410124

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

Project Contact: Paul King
Project P.O.:
Project Name: #0058; Xtra Oil Co.

Project Received: 10/03/2014

Analytical Report reviewed & approved for release on 10/09/2014 by:

Question about your data?

Click here to email McCampbell

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.

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NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: #0058; Xtra Oil Co.
WorkOrder: 1410124

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifiers

S	spike recovery outside accepted recovery limits
a1	sample diluted due to matrix interference
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant
d6	one to a few isolated non-target peaks present in the TPH(g) chromatogram
e2/e8	diesel range compounds are significant; no recognizable pattern; and/or kerosene/kerosene range/jet fuel range
e4	gasoline range compounds are significant.

Quality Control Qualifiers

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

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E218.6
Date Received:	10/3/14 19:01	**Analytical Method:**	E218.6
Date Prepared:	10/6/14	**Unit:**	µg/L

Hexachrome by IC

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW1	**1410124-001G**	**Water**	**10/03/2014 11:35**	**IC2**	**96068**

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	0.20	1	10/06/2014 20:54

Analyst(s): AE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW2	**1410124-002G**	**Water**	**10/03/2014 13:05**	**IC2**	**96068**

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	**58**	0.40	2	10/06/2014 21:13

Analyst(s): AE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1410124-003G**	**Water**	**10/03/2014 12:20**	**IC2**	**96068**

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	0.20	1	10/06/2014 21:31

Analyst(s): AE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1410124-004G**	**Water**	**10/03/2014 10:30**	**IC2**	**96068**

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	0.20	1	10/06/2014 21:49

Analyst(s): AE

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E218.6
Date Received:	10/3/14 19:01	**Analytical Method:**	E218.6
Date Prepared:	10/6/14	**Unit:**	µg/L

Hexachrome by IC

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1410124-005G**	**Water**	**10/03/2014 08:30**	**IC2**	**96068**

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	0.20	1	10/06/2014 22:08

Analyst(s): AE

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E300.1
Date Received:	10/3/14 19:01	**Analytical Method:**	E300.1
Date Prepared:	10/4/14-10/6/14	**Unit:**	mg/L

Inorganic Anions by IC

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW1	**1410124-001F**	**Water**	**10/03/2014 11:35**	**IC3**	**96069**

Analytes	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	10/04/2014 16:55
Nitrate as NO_3^-	ND	0.45	1	10/04/2014 16:55
Sulfate	**0.24**	0.10	1	10/04/2014 16:55
Surrogates	**REC (%)**	**Limits**		
Formate	108	90-115		10/04/2014 16:55

Analyst(s): AE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW2	**1410124-002F**	**Water**	**10/03/2014 13:05**	**IC3**	**96069**

Analytes	Result	RL	DF	Date Analyzed
Nitrate as N	**0.60**	0.10	1	10/04/2014 17:34
Nitrate as NO_3^-	**2.7**	0.45	1	10/04/2014 17:34
Sulfate	**100**	5.0	50	10/06/2014 19:57
Surrogates	**REC (%)**	**Limits**		
Formate	107	90-115		10/04/2014 17:34

Analyst(s): AE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1410124-003F**	**Water**	**10/03/2014 12:20**	**IC3**	**96069**

Analytes	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	10/04/2014 18:12
Nitrate as NO_3^-	ND	0.45	1	10/04/2014 18:12
Sulfate	**76**	2.0	20	10/06/2014 19:19
Surrogates	**REC (%)**	**Limits**		
Formate	107	90-115		10/04/2014 18:12

Analyst(s): AE

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E300.1
Date Received:	10/3/14 19:01	**Analytical Method:**	E300.1
Date Prepared:	10/4/14-10/6/14	**Unit:**	mg/L

Inorganic Anions by IC

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1410124-004F**	**Water**	**10/03/2014 10:30**	**IC3**	**96069**

Analytes	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	10/04/2014 20:08
Nitrate as $NO3^-$	ND	0.45	1	10/04/2014 20:08
Sulfate	**0.20**	0.10	1	10/04/2014 20:08
Surrogates	**REC (%)**	**Limits**		
Formate	109	90-115		10/04/2014 20:08

Analyst(s): AE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1410124-005F**	**Water**	**10/03/2014 08:30**	**IC3**	**96069**

Analytes	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	10/04/2014 20:46
Nitrate as $NO3^-$	ND	0.45	1	10/04/2014 20:46
Sulfate	**2.5**	0.10	1	10/04/2014 20:46
Surrogates	**REC (%)**	**Limits**		
Formate	109	90-115		10/04/2014 20:46

Analyst(s): AE

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
MW1	**1410124-001B**	**Water**	**10/03/2014 11:35**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	2000	200	10/08/2014 00:01
tert-Amyl methyl ether (TAME)	ND	100	200	10/08/2014 00:01
Benzene	**4500**	100	200	10/08/2014 00:01
Bromobenzene	ND	100	200	10/08/2014 00:01
Bromochloromethane	ND	100	200	10/08/2014 00:01
Bromodichloromethane	ND	100	200	10/08/2014 00:01
Bromoform	ND	100	200	10/08/2014 00:01
Bromomethane	ND	100	200	10/08/2014 00:01
2-Butanone (MEK)	ND	400	200	10/08/2014 00:01
t-Butyl alcohol (TBA)	**880**	400	200	10/08/2014 00:01
n-Butyl benzene	ND	100	200	10/08/2014 00:01
sec-Butyl benzene	ND	100	200	10/08/2014 00:01
tert-Butyl benzene	ND	100	200	10/08/2014 00:01
Carbon Disulfide	ND	100	200	10/08/2014 00:01
Carbon Tetrachloride	ND	100	200	10/08/2014 00:01
Chlorobenzene	ND	100	200	10/08/2014 00:01
Chloroethane	ND	100	200	10/08/2014 00:01
Chloroform	ND	100	200	10/08/2014 00:01
Chloromethane	ND	100	200	10/08/2014 00:01
2-Chlorotoluene	ND	100	200	10/08/2014 00:01
4-Chlorotoluene	ND	100	200	10/08/2014 00:01
Dibromochloromethane	ND	100	200	10/08/2014 00:01
1,2-Dibromo-3-chloropropane	ND	40	200	10/08/2014 00:01
1,2-Dibromoethane (EDB)	ND	100	200	10/08/2014 00:01
Dibromomethane	ND	100	200	10/08/2014 00:01
1,2-Dichlorobenzene	ND	100	200	10/08/2014 00:01
1,3-Dichlorobenzene	ND	100	200	10/08/2014 00:01
1,4-Dichlorobenzene	ND	100	200	10/08/2014 00:01
Dichlorodifluoromethane	ND	100	200	10/08/2014 00:01
1,1-Dichloroethane	ND	100	200	10/08/2014 00:01
1,2-Dichloroethane (1,2-DCA)	ND	100	200	10/08/2014 00:01
1,1-Dichloroethene	ND	100	200	10/08/2014 00:01
cis-1,2-Dichloroethene	ND	100	200	10/08/2014 00:01
trans-1,2-Dichloroethene	ND	100	200	10/08/2014 00:01
1,2-Dichloropropane	ND	100	200	10/08/2014 00:01
1,3-Dichloropropane	ND	100	200	10/08/2014 00:01
2,2-Dichloropropane	ND	100	200	10/08/2014 00:01
1,1-Dichloropropene	ND	100	200	10/08/2014 00:01

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
MW1	**1410124-001B**	**Water**	**10/03/2014 11:35**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	100	200	10/08/2014 00:01
trans-1,3-Dichloropropene	ND	100	200	10/08/2014 00:01
Diisopropyl ether (DIPE)	ND	100	200	10/08/2014 00:01
Ethylbenzene	**620**	100	200	10/08/2014 00:01
Ethyl tert-butyl ether (ETBE)	ND	100	200	10/08/2014 00:01
Freon 113	ND	100	200	10/08/2014 00:01
Hexachlorobutadiene	ND	100	200	10/08/2014 00:01
Hexachloroethane	ND	100	200	10/08/2014 00:01
2-Hexanone	ND	100	200	10/08/2014 00:01
Isopropylbenzene	ND	100	200	10/08/2014 00:01
4-Isopropyl toluene	ND	100	200	10/08/2014 00:01
Methyl-t-butyl ether (MTBE)	**600**	100	200	10/08/2014 00:01
Methylene chloride	ND	100	200	10/08/2014 00:01
4-Methyl-2-pentanone (MIBK)	ND	100	200	10/08/2014 00:01
Naphthalene	**150**	100	200	10/08/2014 00:01
n-Propyl benzene	**160**	100	200	10/08/2014 00:01
Styrene	ND	100	200	10/08/2014 00:01
1,1,1,2-Tetrachloroethane	ND	100	200	10/08/2014 00:01
1,1,2,2-Tetrachloroethane	ND	100	200	10/08/2014 00:01
Tetrachloroethene	ND	100	200	10/08/2014 00:01
Toluene	**150**	100	200	10/08/2014 00:01
1,2,3-Trichlorobenzene	ND	100	200	10/08/2014 00:01
1,2,4-Trichlorobenzene	ND	100	200	10/08/2014 00:01
1,1,1-Trichloroethane	ND	100	200	10/08/2014 00:01
1,1,2-Trichloroethane	ND	100	200	10/08/2014 00:01
Trichloroethene	ND	100	200	10/08/2014 00:01
Trichlorofluoromethane	ND	100	200	10/08/2014 00:01
1,2,3-Trichloropropane	ND	100	200	10/08/2014 00:01
1,2,4-Trimethylbenzene	**210**	100	200	10/08/2014 00:01
1,3,5-Trimethylbenzene	ND	100	200	10/08/2014 00:01
Vinyl Chloride	ND	100	200	10/08/2014 00:01
Xylenes, Total	**1200**	100	200	10/08/2014 00:01

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
MW1	**1410124-001B**	**Water**	**10/03/2014 11:35**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	113	70-130		10/08/2014 00:01
Toluene-d8	87	70-130		10/08/2014 00:01
4-BFB	85	70-130		10/08/2014 00:01

Analyst(s): KF

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
MW2	**1410124-002B**	**Water**	**10/03/2014 13:05**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Acetone	**30**	10	1	10/08/2014 00:44
tert-Amyl methyl ether (TAME)	ND	0.50	1	10/08/2014 00:44
Benzene	ND	0.50	1	10/08/2014 00:44
Bromobenzene	ND	0.50	1	10/08/2014 00:44
Bromochloromethane	ND	0.50	1	10/08/2014 00:44
Bromodichloromethane	ND	0.50	1	10/08/2014 00:44
Bromoform	ND	0.50	1	10/08/2014 00:44
Bromomethane	**1.2**	0.50	1	10/08/2014 00:44
2-Butanone (MEK)	ND	2.0	1	10/08/2014 00:44
t-Butyl alcohol (TBA)	**42**	2.0	1	10/08/2014 00:44
n-Butyl benzene	ND	0.50	1	10/08/2014 00:44
sec-Butyl benzene	ND	0.50	1	10/08/2014 00:44
tert-Butyl benzene	ND	0.50	1	10/08/2014 00:44
Carbon Disulfide	ND	0.50	1	10/08/2014 00:44
Carbon Tetrachloride	ND	0.50	1	10/08/2014 00:44
Chlorobenzene	ND	0.50	1	10/08/2014 00:44
Chloroethane	ND	0.50	1	10/08/2014 00:44
Chloroform	**3.2**	0.50	1	10/08/2014 00:44
Chloromethane	ND	0.50	1	10/08/2014 00:44
2-Chlorotoluene	ND	0.50	1	10/08/2014 00:44
4-Chlorotoluene	ND	0.50	1	10/08/2014 00:44
Dibromochloromethane	ND	0.50	1	10/08/2014 00:44
1,2-Dibromo-3-chloropropane	ND	0.20	1	10/08/2014 00:44
1,2-Dibromoethane (EDB)	ND	0.50	1	10/08/2014 00:44
Dibromomethane	ND	0.50	1	10/08/2014 00:44
1,2-Dichlorobenzene	ND	0.50	1	10/08/2014 00:44
1,3-Dichlorobenzene	ND	0.50	1	10/08/2014 00:44
1,4-Dichlorobenzene	ND	0.50	1	10/08/2014 00:44
Dichlorodifluoromethane	ND	0.50	1	10/08/2014 00:44
1,1-Dichloroethane	ND	0.50	1	10/08/2014 00:44
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	10/08/2014 00:44
1,1-Dichloroethene	ND	0.50	1	10/08/2014 00:44
cis-1,2-Dichloroethene	ND	0.50	1	10/08/2014 00:44
trans-1,2-Dichloroethene	ND	0.50	1	10/08/2014 00:44
1,2-Dichloropropane	ND	0.50	1	10/08/2014 00:44
1,3-Dichloropropane	ND	0.50	1	10/08/2014 00:44
2,2-Dichloropropane	ND	0.50	1	10/08/2014 00:44
1,1-Dichloropropene	ND	0.50	1	10/08/2014 00:44

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
MW2	**1410124-002B**	**Water**	**10/03/2014 13:05**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	10/08/2014 00:44
trans-1,3-Dichloropropene	ND	0.50	1	10/08/2014 00:44
Diisopropyl ether (DIPE)	ND	0.50	1	10/08/2014 00:44
Ethylbenzene	ND	0.50	1	10/08/2014 00:44
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	10/08/2014 00:44
Freon 113	ND	0.50	1	10/08/2014 00:44
Hexachlorobutadiene	ND	0.50	1	10/08/2014 00:44
Hexachloroethane	ND	0.50	1	10/08/2014 00:44
2-Hexanone	**0.87**	0.50	1	10/08/2014 00:44
Isopropylbenzene	ND	0.50	1	10/08/2014 00:44
4-Isopropyl toluene	ND	0.50	1	10/08/2014 00:44
Methyl-t-butyl ether (MTBE)	ND	0.50	1	10/08/2014 00:44
Methylene chloride	ND	0.50	1	10/08/2014 00:44
4-Methyl-2-pentanone (MIBK)	**1.2**	0.50	1	10/08/2014 00:44
Naphthalene	ND	0.50	1	10/08/2014 00:44
n-Propyl benzene	ND	0.50	1	10/08/2014 00:44
Styrene	ND	0.50	1	10/08/2014 00:44
1,1,1,2-Tetrachloroethane	ND	0.50	1	10/08/2014 00:44
1,1,2,2-Tetrachloroethane	ND	0.50	1	10/08/2014 00:44
Tetrachloroethene	ND	0.50	1	10/08/2014 00:44
Toluene	ND	0.50	1	10/08/2014 00:44
1,2,3-Trichlorobenzene	ND	0.50	1	10/08/2014 00:44
1,2,4-Trichlorobenzene	ND	0.50	1	10/08/2014 00:44
1,1,1-Trichloroethane	ND	0.50	1	10/08/2014 00:44
1,1,2-Trichloroethane	ND	0.50	1	10/08/2014 00:44
Trichloroethene	ND	0.50	1	10/08/2014 00:44
Trichlorofluoromethane	ND	0.50	1	10/08/2014 00:44
1,2,3-Trichloropropane	ND	0.50	1	10/08/2014 00:44
1,2,4-Trimethylbenzene	ND	0.50	1	10/08/2014 00:44
1,3,5-Trimethylbenzene	ND	0.50	1	10/08/2014 00:44
Vinyl Chloride	ND	0.50	1	10/08/2014 00:44
Xylenes, Total	ND	0.50	1	10/08/2014 00:44

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
MW2	**1410124-002B**	**Water**	**10/03/2014 13:05**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	113	70-130		10/08/2014 00:44
Toluene-d8	86	70-130		10/08/2014 00:44
4-BFB	89	70-130		10/08/2014 00:44

Analyst(s): KF

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
EW2	**1410124-003B**	**Water**	**10/03/2014 12:20**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	330	33	10/08/2014 01:27
tert-Amyl methyl ether (TAME)	ND	17	33	10/08/2014 01:27
Benzene	**670**	17	33	10/08/2014 01:27
Bromobenzene	ND	17	33	10/08/2014 01:27
Bromochloromethane	ND	17	33	10/08/2014 01:27
Bromodichloromethane	ND	17	33	10/08/2014 01:27
Bromoform	ND	17	33	10/08/2014 01:27
Bromomethane	ND	17	33	10/08/2014 01:27
2-Butanone (MEK)	ND	67	33	10/08/2014 01:27
t-Butyl alcohol (TBA)	ND	67	33	10/08/2014 01:27
n-Butyl benzene	ND	17	33	10/08/2014 01:27
sec-Butyl benzene	ND	17	33	10/08/2014 01:27
tert-Butyl benzene	ND	17	33	10/08/2014 01:27
Carbon Disulfide	ND	17	33	10/08/2014 01:27
Carbon Tetrachloride	ND	17	33	10/08/2014 01:27
Chlorobenzene	ND	17	33	10/08/2014 01:27
Chloroethane	ND	17	33	10/08/2014 01:27
Chloroform	ND	17	33	10/08/2014 01:27
Chloromethane	ND	17	33	10/08/2014 01:27
2-Chlorotoluene	ND	17	33	10/08/2014 01:27
4-Chlorotoluene	ND	17	33	10/08/2014 01:27
Dibromochloromethane	ND	17	33	10/08/2014 01:27
1,2-Dibromo-3-chloropropane	ND	6.7	33	10/08/2014 01:27
1,2-Dibromoethane (EDB)	ND	17	33	10/08/2014 01:27
Dibromomethane	ND	17	33	10/08/2014 01:27
1,2-Dichlorobenzene	ND	17	33	10/08/2014 01:27
1,3-Dichlorobenzene	ND	17	33	10/08/2014 01:27
1,4-Dichlorobenzene	ND	17	33	10/08/2014 01:27
Dichlorodifluoromethane	ND	17	33	10/08/2014 01:27
1,1-Dichloroethane	ND	17	33	10/08/2014 01:27
1,2-Dichloroethane (1,2-DCA)	ND	17	33	10/08/2014 01:27
1,1-Dichloroethene	ND	17	33	10/08/2014 01:27
cis-1,2-Dichloroethene	**52**	17	33	10/08/2014 01:27
trans-1,2-Dichloroethene	ND	17	33	10/08/2014 01:27
1,2-Dichloropropane	ND	17	33	10/08/2014 01:27
1,3-Dichloropropane	ND	17	33	10/08/2014 01:27
2,2-Dichloropropane	ND	17	33	10/08/2014 01:27
1,1-Dichloropropene	ND	17	33	10/08/2014 01:27

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
EW2	**1410124-003B**	**Water**	**10/03/2014 12:20**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	17	33	10/08/2014 01:27
trans-1,3-Dichloropropene	ND	17	33	10/08/2014 01:27
Diisopropyl ether (DIPE)	ND	17	33	10/08/2014 01:27
Ethylbenzene	**21**	17	33	10/08/2014 01:27
Ethyl tert-butyl ether (ETBE)	ND	17	33	10/08/2014 01:27
Freon 113	ND	17	33	10/08/2014 01:27
Hexachlorobutadiene	ND	17	33	10/08/2014 01:27
Hexachloroethane	ND	17	33	10/08/2014 01:27
2-Hexanone	ND	17	33	10/08/2014 01:27
Isopropylbenzene	**19**	17	33	10/08/2014 01:27
4-Isopropyl toluene	ND	17	33	10/08/2014 01:27
Methyl-t-butyl ether (MTBE)	**31**	17	33	10/08/2014 01:27
Methylene chloride	ND	17	33	10/08/2014 01:27
4-Methyl-2-pentanone (MIBK)	ND	17	33	10/08/2014 01:27
Naphthalene	ND	17	33	10/08/2014 01:27
n-Propyl benzene	**60**	17	33	10/08/2014 01:27
Styrene	ND	17	33	10/08/2014 01:27
1,1,1,2-Tetrachloroethane	ND	17	33	10/08/2014 01:27
1,1,2,2-Tetrachloroethane	ND	17	33	10/08/2014 01:27
Tetrachloroethene	**350**	17	33	10/08/2014 01:27
Toluene	ND	17	33	10/08/2014 01:27
1,2,3-Trichlorobenzene	ND	17	33	10/08/2014 01:27
1,2,4-Trichlorobenzene	ND	17	33	10/08/2014 01:27
1,1,1-Trichloroethane	ND	17	33	10/08/2014 01:27
1,1,2-Trichloroethane	ND	17	33	10/08/2014 01:27
Trichloroethene	**570**	17	33	10/08/2014 01:27
Trichlorofluoromethane	ND	17	33	10/08/2014 01:27
1,2,3-Trichloropropane	ND	17	33	10/08/2014 01:27
1,2,4-Trimethylbenzene	ND	17	33	10/08/2014 01:27
1,3,5-Trimethylbenzene	ND	17	33	10/08/2014 01:27
Vinyl Chloride	ND	17	33	10/08/2014 01:27
Xylenes, Total	ND	17	33	10/08/2014 01:27

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
EW2	**1410124-003B**	**Water**	**10/03/2014 12:20**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	113	70-130		10/08/2014 01:27
Toluene-d8	87	70-130		10/08/2014 01:27
4-BFB	87	70-130		10/08/2014 01:27

Analyst(s): KF

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
EW4	**1410124-004B**	**Water**	**10/03/2014 10:30**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	2000	200	10/08/2014 02:10
tert-Amyl methyl ether (TAME)	ND	100	200	10/08/2014 02:10
Benzene	**4000**	100	200	10/08/2014 02:10
Bromobenzene	ND	100	200	10/08/2014 02:10
Bromochloromethane	ND	100	200	10/08/2014 02:10
Bromodichloromethane	ND	100	200	10/08/2014 02:10
Bromoform	ND	100	200	10/08/2014 02:10
Bromomethane	ND	100	200	10/08/2014 02:10
2-Butanone (MEK)	ND	400	200	10/08/2014 02:10
t-Butyl alcohol (TBA)	**450**	400	200	10/08/2014 02:10
n-Butyl benzene	ND	100	200	10/08/2014 02:10
sec-Butyl benzene	ND	100	200	10/08/2014 02:10
tert-Butyl benzene	ND	100	200	10/08/2014 02:10
Carbon Disulfide	ND	100	200	10/08/2014 02:10
Carbon Tetrachloride	ND	100	200	10/08/2014 02:10
Chlorobenzene	ND	100	200	10/08/2014 02:10
Chloroethane	ND	100	200	10/08/2014 02:10
Chloroform	ND	100	200	10/08/2014 02:10
Chloromethane	ND	100	200	10/08/2014 02:10
2-Chlorotoluene	ND	100	200	10/08/2014 02:10
4-Chlorotoluene	ND	100	200	10/08/2014 02:10
Dibromochloromethane	ND	100	200	10/08/2014 02:10
1,2-Dibromo-3-chloropropane	ND	40	200	10/08/2014 02:10
1,2-Dibromoethane (EDB)	ND	100	200	10/08/2014 02:10
Dibromomethane	ND	100	200	10/08/2014 02:10
1,2-Dichlorobenzene	ND	100	200	10/08/2014 02:10
1,3-Dichlorobenzene	ND	100	200	10/08/2014 02:10
1,4-Dichlorobenzene	ND	100	200	10/08/2014 02:10
Dichlorodifluoromethane	ND	100	200	10/08/2014 02:10
1,1-Dichloroethane	ND	100	200	10/08/2014 02:10
1,2-Dichloroethane (1,2-DCA)	ND	100	200	10/08/2014 02:10
1,1-Dichloroethene	ND	100	200	10/08/2014 02:10
cis-1,2-Dichloroethene	ND	100	200	10/08/2014 02:10
trans-1,2-Dichloroethene	ND	100	200	10/08/2014 02:10
1,2-Dichloropropane	ND	100	200	10/08/2014 02:10
1,3-Dichloropropane	ND	100	200	10/08/2014 02:10
2,2-Dichloropropane	ND	100	200	10/08/2014 02:10
1,1-Dichloropropene	ND	100	200	10/08/2014 02:10

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
EW4	**1410124-004B**	**Water**	**10/03/2014 10:30**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	100	200	10/08/2014 02:10
trans-1,3-Dichloropropene	ND	100	200	10/08/2014 02:10
Diisopropyl ether (DIPE)	ND	100	200	10/08/2014 02:10
Ethylbenzene	**170**	100	200	10/08/2014 02:10
Ethyl tert-butyl ether (ETBE)	ND	100	200	10/08/2014 02:10
Freon 113	ND	100	200	10/08/2014 02:10
Hexachlorobutadiene	ND	100	200	10/08/2014 02:10
Hexachloroethane	ND	100	200	10/08/2014 02:10
2-Hexanone	ND	100	200	10/08/2014 02:10
Isopropylbenzene	ND	100	200	10/08/2014 02:10
4-Isopropyl toluene	ND	100	200	10/08/2014 02:10
Methyl-t-butyl ether (MTBE)	**360**	100	200	10/08/2014 02:10
Methylene chloride	ND	100	200	10/08/2014 02:10
4-Methyl-2-pentanone (MIBK)	ND	100	200	10/08/2014 02:10
Naphthalene	**280**	100	200	10/08/2014 02:10
n-Propyl benzene	**200**	100	200	10/08/2014 02:10
Styrene	ND	100	200	10/08/2014 02:10
1,1,1,2-Tetrachloroethane	ND	100	200	10/08/2014 02:10
1,1,2,2-Tetrachloroethane	ND	100	200	10/08/2014 02:10
Tetrachloroethene	ND	100	200	10/08/2014 02:10
Toluene	ND	100	200	10/08/2014 02:10
1,2,3-Trichlorobenzene	ND	100	200	10/08/2014 02:10
1,2,4-Trichlorobenzene	ND	100	200	10/08/2014 02:10
1,1,1-Trichloroethane	ND	100	200	10/08/2014 02:10
1,1,2-Trichloroethane	ND	100	200	10/08/2014 02:10
Trichloroethene	ND	100	200	10/08/2014 02:10
Trichlorofluoromethane	ND	100	200	10/08/2014 02:10
1,2,3-Trichloropropane	ND	100	200	10/08/2014 02:10
1,2,4-Trimethylbenzene	ND	100	200	10/08/2014 02:10
1,3,5-Trimethylbenzene	ND	100	200	10/08/2014 02:10
Vinyl Chloride	ND	100	200	10/08/2014 02:10
Xylenes, Total	ND	100	200	10/08/2014 02:10

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
EW4	**1410124-004B**	**Water**	**10/03/2014 10:30**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	113	70-130		10/08/2014 02:10
Toluene-d8	86	70-130		10/08/2014 02:10
4-BFB	89	70-130		10/08/2014 02:10

Analyst(s): KF

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
EW5	**1410124-005B**	**Water**	**10/03/2014 08:30**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	1000	100	10/08/2014 17:01
tert-Amyl methyl ether (TAME)	ND	50	100	10/08/2014 17:01
Benzene	**1800**	50	100	10/08/2014 17:01
Bromobenzene	ND	50	100	10/08/2014 17:01
Bromochloromethane	ND	50	100	10/08/2014 17:01
Bromodichloromethane	ND	50	100	10/08/2014 17:01
Bromoform	ND	50	100	10/08/2014 17:01
Bromomethane	ND	50	100	10/08/2014 17:01
2-Butanone (MEK)	ND	200	100	10/08/2014 17:01
t-Butyl alcohol (TBA)	**380**	200	100	10/08/2014 17:01
n-Butyl benzene	ND	50	100	10/08/2014 17:01
sec-Butyl benzene	ND	50	100	10/08/2014 17:01
tert-Butyl benzene	ND	50	100	10/08/2014 17:01
Carbon Disulfide	ND	50	100	10/08/2014 17:01
Carbon Tetrachloride	ND	50	100	10/08/2014 17:01
Chlorobenzene	ND	50	100	10/08/2014 17:01
Chloroethane	ND	50	100	10/08/2014 17:01
Chloroform	ND	50	100	10/08/2014 17:01
Chloromethane	ND	50	100	10/08/2014 17:01
2-Chlorotoluene	ND	50	100	10/08/2014 17:01
4-Chlorotoluene	ND	50	100	10/08/2014 17:01
Dibromochloromethane	ND	50	100	10/08/2014 17:01
1,2-Dibromo-3-chloropropane	ND	20	100	10/08/2014 17:01
1,2-Dibromoethane (EDB)	ND	50	100	10/08/2014 17:01
Dibromomethane	ND	50	100	10/08/2014 17:01
1,2-Dichlorobenzene	ND	50	100	10/08/2014 17:01
1,3-Dichlorobenzene	ND	50	100	10/08/2014 17:01
1,4-Dichlorobenzene	ND	50	100	10/08/2014 17:01
Dichlorodifluoromethane	ND	50	100	10/08/2014 17:01
1,1-Dichloroethane	ND	50	100	10/08/2014 17:01
1,2-Dichloroethane (1,2-DCA)	ND	50	100	10/08/2014 17:01
1,1-Dichloroethene	ND	50	100	10/08/2014 17:01
cis-1,2-Dichloroethene	ND	50	100	10/08/2014 17:01
trans-1,2-Dichloroethene	ND	50	100	10/08/2014 17:01
1,2-Dichloropropane	ND	50	100	10/08/2014 17:01
1,3-Dichloropropane	ND	50	100	10/08/2014 17:01
2,2-Dichloropropane	ND	50	100	10/08/2014 17:01
1,1-Dichloropropene	ND	50	100	10/08/2014 17:01

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
EW5	**1410124-005B**	**Water**	**10/03/2014 08:30**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	50	100	10/08/2014 17:01
trans-1,3-Dichloropropene	ND	50	100	10/08/2014 17:01
Diisopropyl ether (DIPE)	ND	50	100	10/08/2014 17:01
Ethylbenzene	**790**	50	100	10/08/2014 17:01
Ethyl tert-butyl ether (ETBE)	ND	50	100	10/08/2014 17:01
Freon 113	ND	50	100	10/08/2014 17:01
Hexachlorobutadiene	ND	50	100	10/08/2014 17:01
Hexachloroethane	ND	50	100	10/08/2014 17:01
2-Hexanone	ND	50	100	10/08/2014 17:01
Isopropylbenzene	ND	50	100	10/08/2014 17:01
4-Isopropyl toluene	ND	50	100	10/08/2014 17:01
Methyl-t-butyl ether (MTBE)	**310**	50	100	10/08/2014 17:01
Methylene chloride	ND	50	100	10/08/2014 17:01
4-Methyl-2-pentanone (MIBK)	ND	50	100	10/08/2014 17:01
Naphthalene	**190**	50	100	10/08/2014 17:01
n-Propyl benzene	**120**	50	100	10/08/2014 17:01
Styrene	ND	50	100	10/08/2014 17:01
1,1,1,2-Tetrachloroethane	ND	50	100	10/08/2014 17:01
1,1,2,2-Tetrachloroethane	ND	50	100	10/08/2014 17:01
Tetrachloroethene	ND	50	100	10/08/2014 17:01
Toluene	**100**	50	100	10/08/2014 17:01
1,2,3-Trichlorobenzene	ND	50	100	10/08/2014 17:01
1,2,4-Trichlorobenzene	ND	50	100	10/08/2014 17:01
1,1,1-Trichloroethane	ND	50	100	10/08/2014 17:01
1,1,2-Trichloroethane	ND	50	100	10/08/2014 17:01
Trichloroethene	ND	50	100	10/08/2014 17:01
Trichlorofluoromethane	ND	50	100	10/08/2014 17:01
1,2,3-Trichloropropane	ND	50	100	10/08/2014 17:01
1,2,4-Trimethylbenzene	**200**	50	100	10/08/2014 17:01
1,3,5-Trimethylbenzene	ND	50	100	10/08/2014 17:01
Vinyl Chloride	ND	50	100	10/08/2014 17:01
Xylenes, Total	**700**	50	100	10/08/2014 17:01

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8260B
Date Prepared:	10/8/14	**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
EW5	**1410124-005B**	**Water**	**10/03/2014 08:30**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	114	76-134		10/08/2014 17:01
Toluene-d8	87	77-101		10/08/2014 17:01
4-BFB	86	76-97		10/08/2014 17:01

Analyst(s): KF

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SM2320B
Date Received:	10/3/14 19:01	**Analytical Method:**	SM2320B
Date Prepared:	10/7/14	**Unit:**	mg $CaCO_3$/L

Total & Speciated Alkalinity as Calcium Carbonate

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW1	**1410124-001J**	**Water**	**10/03/2014 11:35**	**Titrino**	**96126**

Analytes	Result	RL	DF	Date Analyzed
Total	**496**	1.00	1	10/07/2014 11:01
Carbonate	ND	1.00	1	10/07/2014 11:01
Bicarbonate	**496**	1.00	1	10/07/2014 11:01
Hydroxide	ND	1.00	1	10/07/2014 11:01

Analyst(s): HN

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW2	**1410124-002J**	**Water**	**10/03/2014 13:05**	**Titrino**	**96126**

Analytes	Result	RL	DF	Date Analyzed
Total	**239**	1.00	1	10/07/2014 13:21
Carbonate	ND	1.00	1	10/07/2014 13:21
Bicarbonate	**239**	1.00	1	10/07/2014 13:21
Hydroxide	ND	1.00	1	10/07/2014 13:21

Analyst(s): HN

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1410124-003J**	**Water**	**10/03/2014 12:20**	**Titrino**	**96126**

Analytes	Result	RL	DF	Date Analyzed
Total	**292**	1.00	1	10/07/2014 13:27
Carbonate	ND	1.00	1	10/07/2014 13:27
Bicarbonate	**292**	1.00	1	10/07/2014 13:27
Hydroxide	ND	1.00	1	10/07/2014 13:27

Analyst(s): HN

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SM2320B
Date Received:	10/3/14 19:01	**Analytical Method:**	SM2320B
Date Prepared:	10/7/14	**Unit:**	mg $CaCO_3$/L

Total & Speciated Alkalinity as Calcium Carbonate

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1410124-004J**	**Water**	**10/03/2014 10:30**	**Titrino**	**96126**

Analytes	Result	RL	DF	Date Analyzed
Total	**436**	1.00	1	10/07/2014 13:34
Carbonate	ND	1.00	1	10/07/2014 13:34
Bicarbonate	**436**	1.00	1	10/07/2014 13:34
Hydroxide	ND	1.00	1	10/07/2014 13:34

Analyst(s): HN

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1410124-005J**	**Water**	**10/03/2014 08:30**	**Titrino**	**96126**

Analytes	Result	RL	DF	Date Analyzed
Total	**375**	1.00	1	10/07/2014 13:42
Carbonate	ND	1.00	1	10/07/2014 13:42
Bicarbonate	**375**	1.00	1	10/07/2014 13:42
Hydroxide	ND	1.00	1	10/07/2014 13:42

Analyst(s): HN

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SM3500-Fe B4c
Date Received:	10/3/14 19:01	**Analytical Method:**	SM3500-Fe B4c
Date Prepared:	10/3/14	**Unit:**	µg/L

Dissolved Ferrous Iron

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW1	**1410124-001C**	**Water/DISS.**	**10/03/2014 11:35**	**SPECTROPHOTOMETER**	**96061**

Analytes	Result	RL	DF	Date Analyzed
Ferrous Iron	**15,000**	500	10	10/03/2014 21:40

Analyst(s): RB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW2	**1410124-002C**	**Water/DISS.**	**10/03/2014 13:05**	**SPECTROPHOTOMETER**	**96061**

Analytes	Result	RL	DF	Date Analyzed
Ferrous Iron	ND	50	1	10/03/2014 21:45

Analyst(s): RB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1410124-003C**	**Water/DISS.**	**10/03/2014 12:20**	**SPECTROPHOTOMETER**	**96061**

Analytes	Result	RL	DF	Date Analyzed
Ferrous Iron	**5300**	250	5	10/03/2014 21:50

Analyst(s): RB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1410124-004C**	**Water/DISS.**	**10/03/2014 10:30**	**SPECTROPHOTOMETER**	**96061**

Analytes	Result	RL	DF	Date Analyzed
Ferrous Iron	**20,000**	1000	20	10/03/2014 22:00

Analyst(s): RB

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SM3500-Fe B4c
Date Received:	10/3/14 19:01	**Analytical Method:**	SM3500-Fe B4c
Date Prepared:	10/3/14	**Unit:**	µg/L

Dissolved Ferrous Iron

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1410124-005C**	**Water/DISS.**	**10/03/2014 08:30**	**SPECTROPHOTOMETER**	**96061**

Analytes	Result	RL	DF	Date Analyzed
Ferrous Iron	**16,000**	1000	20	10/03/2014 21:55

Analyst(s): RB

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/7/14-10/8/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW1	**1410124-001A**	**Water**	**10/03/2014 11:35**	**GC7**	**96127**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**22,000**	500	10	10/07/2014 02:06
MTBE	**---**	1500	10	10/07/2014 02:06
Benzene	**---**	50	100	10/07/2014 14:30
Toluene	**---**	5.0	10	10/07/2014 02:06
Ethylbenzene	**---**	5.0	10	10/07/2014 02:06
Xylenes	**---**	5.0	10	10/07/2014 02:06

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT_2	118	70-130		10/07/2014 02:06

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW2	**1410124-002A**	**Water**	**10/03/2014 13:05**	**GC3**	**96125**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**97**	50	1	10/07/2014 19:32
MTBE	**---**	5.0	1	10/07/2014 19:32
Benzene	**---**	0.50	1	10/07/2014 19:32
Toluene	**---**	0.50	1	10/07/2014 19:32
Ethylbenzene	**---**	0.50	1	10/07/2014 19:32
Xylenes	**---**	0.50	1	10/07/2014 19:32

Surrogates	REC (%)	Limits	Analytical Comments: d6	
aaa-TFT_2	103	70-130		10/07/2014 19:32

Analyst(s): IA

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/7/14-10/8/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1410124-003A**	**Water**	**10/03/2014 12:20**	**GC3**	**96125**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**3500**	50	1	10/07/2014 02:40
MTBE	**---**	90	1	10/07/2014 02:40
Benzene	**---**	5.0	10	10/07/2014 21:01
Toluene	**---**	0.50	1	10/07/2014 02:40
Ethylbenzene	**---**	0.50	1	10/07/2014 02:40
Xylenes	**---**	0.50	1	10/07/2014 02:40

Surrogates	REC (%)	Qualifiers	Limits	Analytical Comments: d1,c4	
aaa-TFT_2	2379	S	70-130		10/07/2014 02:40

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1410124-004A**	**Water**	**10/03/2014 10:30**	**GC7**	**96191**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**15,000**	500	10	10/08/2014 22:00
MTBE	**---**	900	10	10/08/2014 22:00
Benzene	**---**	50	100	10/07/2014 21:31
Toluene	**---**	5.0	10	10/08/2014 22:00
Ethylbenzene	**---**	5.0	10	10/08/2014 22:00
Xylenes	**---**	5.0	10	10/08/2014 22:00

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT_2	110	70-130		10/08/2014 22:00

Analyst(s): IA

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/7/14-10/8/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1410124-005A**	**Water**	**10/03/2014 08:30**	**GC3**	**96191**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**11,000**	1000	20	10/07/2014 22:00
MTBE	**---**	600	20	10/07/2014 22:00
Benzene	**---**	10	20	10/07/2014 22:00
Toluene	**---**	10	20	10/07/2014 22:00
Ethylbenzene	**---**	10	20	10/07/2014 22:00
Xylenes	**---**	10	20	10/07/2014 22:00

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT_2	111	70-130		10/07/2014 22:00

Analyst(s): IA

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E200.8
Date Received:	10/3/14 19:01	**Analytical Method:**	E200.8
Date Prepared:	10/3/14	**Unit:**	µg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW1	**1410124-001I**	**Water/DISS.**	**10/03/2014 11:35**	**ICP-MS2**	**96043**

Analytes	Result	RL	DF	Date Analyzed
Iron	**22,000**	200	10	10/03/2014 23:03

Analyst(s): AG

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW2	**1410124-002I**	**Water/DISS.**	**10/03/2014 13:05**	**ICP-MS2**	**96053**

Analytes	Result	RL	DF	Date Analyzed
Iron	ND	200	10	10/03/2014 23:09

Analytical Comments: a1

Analyst(s): AG

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1410124-003I**	**Water/DISS.**	**10/03/2014 12:20**	**ICP-MS2**	**96053**

Analytes	Result	RL	DF	Date Analyzed
Iron	**7400**	200	10	10/03/2014 23:28

Analyst(s): AG

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1410124-004I**	**Water/DISS.**	**10/03/2014 10:30**	**ICP-MS2**	**96053**

Analytes	Result	RL	DF	Date Analyzed
Iron	**27,000**	200	10	10/03/2014 23:34

Analyst(s): AG

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E200.8
Date Received:	10/3/14 19:01	**Analytical Method:**	E200.8
Date Prepared:	10/3/14	**Unit:**	µg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1410124-005I**	**Water/DISS.**	**10/03/2014 08:30**	**ICP-MS2**	**96053**

Analytes	Result	RL	DF	Date Analyzed
Iron	**22,000**	200	10	10/03/2014 23:40

Analyst(s): AG

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E200.8
Date Received:	10/3/14 19:01	**Analytical Method:**	E200.8
Date Prepared:	10/3/14	**Unit:**	µg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW1	**1410124-001H**	**Water/TOTAL**	**10/03/2014 11:35**	**ICP-MS1**	**96043**

Analytes	Result	RL	DF	Date Analyzed
Iron	**22,000**	200	10	10/07/2014 11:51

Surrogates	REC (%)	Limits	
Tb 350.917	104	70-130	10/07/2014 11:51

Analyst(s): DB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW2	**1410124-002H**	**Water/TOTAL**	**10/03/2014 13:05**	**ICP-MS1**	**96053**

Analytes	Result	RL	DF	Date Analyzed
Iron	**580**	20	1	10/06/2014 19:27

Surrogates	REC (%)	Limits	
Tb 350.917	91	70-130	10/06/2014 19:27

Analyst(s): DVH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1410124-003H**	**Water/TOTAL**	**10/03/2014 12:20**	**ICP-MS1**	**96053**

Analytes	Result	RL	DF	Date Analyzed
Iron	**7700**	200	10	10/07/2014 12:29

Surrogates	REC (%)	Limits	
Tb 350.917	104	70-130	10/07/2014 12:29

Analyst(s): DB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1410124-004H**	**Water/TOTAL**	**10/03/2014 10:30**	**ICP-MS1**	**96053**

Analytes	Result	RL	DF	Date Analyzed
Iron	**28,000**	200	10	10/07/2014 12:47

Surrogates	REC (%)	Limits	
Tb 350.917	103	70-130	10/07/2014 12:47

Analyst(s): DVH

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E200.8
Date Received:	10/3/14 19:01	**Analytical Method:**	E200.8
Date Prepared:	10/3/14	**Unit:**	µg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1410124-005H**	**Water/TOTAL**	**10/03/2014 08:30**	**ICP-MS1**	**96053**

Analytes	Result	RL	DF	Date Analyzed
Iron	**27,000**	200	10	10/07/2014 12:54

Surrogates	REC (%)	Limits	
Tb 350.917	101	70-130	10/07/2014 12:54

Analyst(s): DVH

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	RSK175
Date Received:	10/3/14 19:01	**Analytical Method:**	RSK175
Date Prepared:	10/6/14	**Unit:**	µg/L

Carbon Dioxide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW1	**1410124-001E**	**Water/DISS.**	**10/03/2014 11:35**	**GC26**	**96107**

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	**100,000**	5000	100	10/06/2014 13:35

Analyst(s): KBO

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW2	**1410124-002E**	**Water/DISS.**	**10/03/2014 13:05**	**GC26**	**96107**

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	**6700**	2500	50	10/06/2014 13:51

Analyst(s): KBO

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1410124-003E**	**Water/DISS.**	**10/03/2014 12:20**	**GC26**	**96107**

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	**41,000**	2500	50	10/06/2014 14:02

Analyst(s): KBO

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1410124-004E**	**Water/DISS.**	**10/03/2014 10:30**	**GC26**	**96107**

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	**96,000**	5000	100	10/06/2014 14:28

Analyst(s): KBO

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	RSK175
Date Received:	10/3/14 19:01	**Analytical Method:**	RSK175
Date Prepared:	10/6/14	**Unit:**	µg/L

Carbon Dioxide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1410124-005E**	**Water/DISS.**	**10/03/2014 08:30**	**GC26**	**96107**

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	**76,000**	2500	50	10/06/2014 14:41

Analyst(s): KBO

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	RSK175
Date Received:	10/3/14 19:01	**Analytical Method:**	RSK175
Date Prepared:	10/8/14	**Unit:**	µg/L

Light Gases

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW1	**1410124-001D**	**Water/DISS.**	**10/03/2014 11:35**	**GC26**	**96268**

Analytes	Result	RL	DF	Date Analyzed
Ethane	ND	20	100	10/08/2014 12:00
Ethene	ND	20	100	10/08/2014 12:00
Methane	**7400**	10	100	10/08/2014 12:00

Analyst(s): KBO

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW2	**1410124-002D**	**Water/DISS.**	**10/03/2014 13:05**	**GC26**	**96268**

Analytes	Result	RL	DF	Date Analyzed
Ethane	ND	0.20	1	10/08/2014 12:38
Ethene	ND	0.20	1	10/08/2014 12:38
Methane	**8.7**	0.10	1	10/08/2014 12:38

Analyst(s): KBO

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1410124-003D**	**Water/DISS.**	**10/03/2014 12:20**	**GC26**	**96268**

Analytes	Result	RL	DF	Date Analyzed
Ethane	ND	4.0	20	10/08/2014 16:22
Ethene	ND	4.0	20	10/08/2014 16:22
Methane	**1800**	2.0	20	10/08/2014 16:22

Analyst(s): KBO

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	RSK175
Date Received:	10/3/14 19:01	**Analytical Method:**	RSK175
Date Prepared:	10/8/14	**Unit:**	µg/L

Light Gases

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1410124-004D**	**Water/DISS.**	**10/03/2014 10:30**	**GC26**	**96268**

Analytes	Result	RL	DF	Date Analyzed
Ethane	ND	20	100	10/08/2014 15:25
Ethene	ND	20	100	10/08/2014 15:25
Methane	**6800**	10	100	10/08/2014 15:25

Analyst(s): KBO

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1410124-005D**	**Water/DISS.**	**10/03/2014 08:30**	**GC26**	**96268**

Analytes	Result	RL	DF	Date Analyzed
Ethane	ND	20	100	10/08/2014 15:54
Ethene	ND	20	100	10/08/2014 15:54
Methane	**5700**	10	100	10/08/2014 15:54

Analyst(s): KBO

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW3510C
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8015B
Date Prepared:	10/3/14	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW1	**1410124-001A**	**Water**	**10/03/2014 11:35**	**GC6A**	**96014**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**2600**	50	1	10/05/2014 21:40
TPH-Motor Oil (C18-C36)	ND	250	1	10/05/2014 21:40
Surrogates	REC (%)	Limits	Analytical Comments: e4	
C9	104	70-130		10/05/2014 21:40

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW2	**1410124-002A**	**Water**	**10/03/2014 13:05**	**GC11A**	**96014**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**370**	50	1	10/05/2014 17:39
TPH-Motor Oil (C18-C36)	ND	250	1	10/05/2014 17:39
Surrogates	REC (%)	Limits	Analytical Comments: e2/e8	
C9	114	70-130		10/05/2014 17:39

Analyst(s): MAM

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW2	**1410124-003A**	**Water**	**10/03/2014 12:20**	**GC6B**	**96014**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**540**	50	1	10/05/2014 20:27
TPH-Motor Oil (C18-C36)	ND	250	1	10/05/2014 20:27
Surrogates	REC (%)	Limits	Analytical Comments: e4	
C9	101	70-130		10/05/2014 20:27

Analyst(s): TK

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW3510C
Date Received:	10/3/14 19:01	**Analytical Method:**	SW8015B
Date Prepared:	10/3/14	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW4	**1410124-004A**	**Water**	**10/03/2014 10:30**	**GC6B**	**96014**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**2300**	50	1	10/05/2014 21:40
TPH-Motor Oil (C18-C36)	ND	250	1	10/05/2014 21:40

Surrogates	REC (%)	Limits	Analytical Comments: e4	
C9	106	70-130		10/05/2014 21:40

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EW5	**1410124-005A**	**Water**	**10/03/2014 08:30**	**GC11A**	**96014**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1600**	50	1	10/05/2014 21:05
TPH-Motor Oil (C18-C36)	ND	250	1	10/05/2014 21:05

Surrogates	REC (%)	Limits	Analytical Comments: e4	
C9	114	70-130		10/05/2014 21:05

Analyst(s): MAM

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/3/14	**BatchID:**	96068
Date Analyzed:	10/4/14	**Extraction Method:**	E218.6
Instrument:	IC2	**Analytical Method:**	E218.6
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96068 1410123-001GMS/MSD

QC Summary Report for E218.6

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Hexachrome	ND	23.7	0.20	25	-	95	90-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Hexachrome	22.2	22.6	25	ND	89,F1	90	90-110	1.61	10

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/3/14	**BatchID:**	96069
Date Analyzed:	10/4/14	**Extraction Method:**	E300.1
Instrument:	IC3	**Analytical Method:**	E300.1
Matrix:	Water	**Unit:**	mg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96069 1410123-001FMS/MSD

QC Summary Report for E300.1

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Nitrate as N	ND	0.973	0.10	1	-	97	85-115
Nitrate as $NO3^{-}$	ND	4.31	0.45	4.4	-	98	85-115
Sulfate	ND	1.07	0.10	1	-	107	85-115
Surrogate Recovery							
Formate	0.109	0.108		0.10	109	107	90-115

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Nitrate as N	0.935	0.955	1	ND	94	95	85-115	2.08	15
Nitrate as $NO3^{-}$	4.14	4.23	4.4	ND	94	96	85-115	2.08	15
Sulfate	NR	NR	1	95.02	NR	NR	85-115	NR	15
Surrogate Recovery									
Formate	0.106	0.106	0.10		106	106	90-115	0	10

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/8/14	**BatchID:**	96185
Date Analyzed:	10/7/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96185 1410123-002BMS/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	8.92	0.50	10	-	89	61-123
Benzene	ND	10.7	0.50	10	-	107	74-121
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	33.2	2.0	40	-	83	42-115
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	10.1	0.50	10	-	101	50-153
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	10.0	0.50	10	-	100	68-119
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	9.71	0.50	10	-	97	63-117
1,1-Dichloroethene	ND	10.4	0.50	10	-	104	78-110
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/8/14	**BatchID:**	96185
Date Analyzed:	10/7/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96185 1410123-002BMS/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	9.23	0.50	10	-	92	67-121
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.09	0.50	10	-	91	62-121
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	8.78	0.50	10	-	88	61-118
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	10.1	0.50	10	-	101	83-109
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	10.0	0.50	10	-	100	81-112
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	29.0	28.3		25	116	113	81-117
Toluene-d8	21.5	21.5		25	86	86	63-129
4-BFB	2.34	2.44		2.5	94	98	67-113

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/8/14	**BatchID:**	96185
Date Analyzed:	10/7/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96185 1410123-002BMS/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)	9.10	10.8	10	ND	91	108	70-130	16.9	20
Benzene	9.66	11.3	10	ND	97	113	70-130	15.6	20
t-Butyl alcohol (TBA)	37.3	46.7	40	ND	93	117	70-130	22.6,F1	20
Chlorobenzene	8.92	10.6	10	ND	89	105	70-130	16.8	20
1,2-Dibromoethane (EDB)	10.4	11.8	10	ND	104	118	70-130	12.4	20
1,2-Dichloroethane (1,2-DCA)	9.68	11.3	10	ND	97	113	70-130	15.3	20
1,1-Dichloroethene	9.10	10.6	10	ND	91	106	70-130	15.1	20
Diisopropyl ether (DIPE)	8.94	10.6	10	ND	89	106	70-130	16.5	20
Ethyl tert-butyl ether (ETBE)	9.10	10.8	10	ND	91	108	70-130	16.7	20
Methyl-t-butyl ether (MTBE)	9.29	10.8	10	ND	93	108	70-130	15.0	20
Toluene	8.87	10.6	10	ND	89	106	70-130	17.8	20
Trichloroethene	8.81	10.4	10	ND	85	101	70-130	16.2	20
Surrogate Recovery									
Dibromofluoromethane	28.8	28.7	25		115	115	70-130	0	20
Toluene-d8	21.6	21.5	25		86	86	70-130	0	20
4-BFB	2.24	2.25	2.5		90	90	70-130	0	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/7/14	**BatchID:**	96126
Date Analyzed:	10/7/14	**Extraction Method:**	SM2320B
Instrument:	Titrino	**Analytical Method:**	SM2320B
Matrix:	Water	**Test Method:**	SM2320B (Alkalinity)
Project:	#0058; Xtra Oil Co.		

QC Summary Report for Alkalinity

Lab ID	Analyte	Reporting Units	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	RPD	Acceptance Criteria (%)
1410124-001J	Total	mg $CaCO_3$/L	496	1	497	1	0.227	<20
1410124-002J	Total	mg $CaCO_3$/L	239	1	238	1	0.474	<20
1410124-003J	Total	mg $CaCO_3$/L	292	1	291	1	0.275	<20
1410124-004J	Total	mg $CaCO_3$/L	436	1	434	1	0.414	<20
1410124-005J	Total	mg $CaCO_3$/L	375	1	374	1	0.249	<20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/3/14	**BatchID:**	96061
Date Analyzed:	10/3/14	**Extraction Method:**	SM3500-Fe B4c
Instrument:	SPECTROPHOTOMETER	**Analytical Method:**	SM3500-Fe B4c
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96061 1410123-001CMS/MSD

QC Summary Report for SM3500 Fe B4c

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ferrous Iron	ND	188	50	200	-	94	80-120

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Ferrous Iron	934	935	200	708.7	113	113	70-130	0	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/6/14	**BatchID:**	96125
Date Analyzed:	10/6/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96125 1410034-001AMS/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	68.5	40	60	-	114	70-130
MTBE	ND	11.0	5.0	10	-	110	70-130
Benzene	ND	10.1	0.50	10	-	101	70-130
Toluene	ND	10.1	0.50	10	-	101	70-130
Ethylbenzene	ND	10.1	0.50	10	-	101	70-130
Xylenes	ND	30.7	0.50	30	-	102	70-130
Surrogate Recovery							
aaa-TFT_2	9.85	9.88		10	99	99	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	60.6	62.3	60	ND	101	104	70-130	2.78	20
MTBE	10.5	10.9	10	ND	105	109	70-130	3.68	20
Benzene	10.5	11.3	10	ND	105	113	70-130	6.88	20
Toluene	10.2	11.2	10	ND	102	112	70-130	9.62	20
Ethylbenzene	10.5	11.4	10	ND	105	114	70-130	8.31	20
Xylenes	32.6	35.3	30	ND	109	118	70-130	7.82	20
Surrogate Recovery									
aaa-TFT_2	9.08	9.76	10		91	98	70-130	7.12	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/6/14	**BatchID:**	96127
Date Analyzed:	10/6/14	**Extraction Method:**	SW5030B
Instrument:	GC7	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96127 1409B37-004AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	65.7	40	60	-	110	70-130
MTBE	ND	10.9	5.0	10	-	109	70-130
Benzene	ND	10.5	0.50	10	-	105	70-130
Toluene	ND	10.7	0.50	10	-	107	70-130
Ethylbenzene	ND	10.6	0.50	10	-	106	70-130
Xylenes	ND	33.1	0.50	30	-	110	70-130
Surrogate Recovery							
aaa-TFT_2	9.53	9.00		10	95	90	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR	0	33000	NR	NR	-	NR	
MTBE	NR	NR	0	ND	NR	NR	-	NR	
Benzene	NR	NR	0	8000	NR	NR	-	NR	
Toluene	NR	NR	0	11000	NR	NR	-	NR	
Ethylbenzene	NR	NR	0	2700	NR	NR	-	NR	
Xylenes	NR	NR	0	16000	NR	NR	-	NR	
Surrogate Recovery									
aaa-TFT_2	NR	NR	0		NR	NR	-	NR	

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/7/14	**BatchID:**	96191
Date Analyzed:	10/7/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96191 1410137-022AMS/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	65.6	40	60	-	109	70-130
MTBE	ND	11.1	5.0	10	-	111	70-130
Benzene	ND	10.3	0.50	10	-	103	70-130
Toluene	ND	10.3	0.50	10	-	103	70-130
Ethylbenzene	ND	10.4	0.50	10	-	104	70-130
Xylenes	ND	31.5	0.50	30	-	105	70-130
Surrogate Recovery							
aaa-TFT_2	10.1	9.49		10	101	95	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	71.4	69.4	60	ND	119	116	70-130	2.83	20
MTBE	10.4	10.3	10	ND	104	103	70-130	0.921	20
Benzene	9.69	9.85	10	ND	95	97	70-130	1.59	20
Toluene	9.81	9.75	10	ND	98	98	70-130	0	20
Ethylbenzene	9.65	9.69	10	ND	97	97	70-130	0	20
Xylenes	29.4	29.7	30	ND	98	98	70-130	0	20
Surrogate Recovery									
aaa-TFT_2	9.92	9.57	10		99	96	70-130	3.60	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/3/14	**BatchID:**	96043
Date Analyzed:	10/6/14	**Extraction Method:**	E200.8
Instrument:	ICP-MS1	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96043 1410102-001AMS/MSD

QC Summary Report for E200.8

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Iron	ND	548	20	500	-	110	85-115
Surrogate Recovery							
Tb 350.917	687	694		750	92	93	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Iron	586	583	500	74	102	102	70-130	0	20
Surrogate Recovery									
Tb 350.917	686	681	750		91	91	70-130	0	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/3/14	**BatchID:**	96053
Date Analyzed:	10/6/14	**Extraction Method:**	E200.8
Instrument:	ICP-MS1	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96053 1410124-002HMS/MSD

QC Summary Report for E200.8

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Iron	ND	544	20	500	-	109	85-115
Surrogate Recovery							
Tb 350.917	705	712		750	94	95	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Iron	1020	1050	500	583.5	87	93	70-130	3.00	20
Surrogate Recovery									
Tb 350.917	696	833	750		93	111	70-130	18.0	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/6/14	**BatchID:**	96107
Date Analyzed:	10/6/14	**Extraction Method:**	RSK175
Instrument:	GC26	**Analytical Method:**	RSK175
Matrix:	Air	**Unit:**	µL/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96107

QC Summary Report for RSK174/175

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Carbon Dioxide	ND	98.0	20	100	-	98	70-130

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/8/14	**BatchID:**	96268
Date Analyzed:	10/8/14	**Extraction Method:**	RSK175
Instrument:	GC26	**Analytical Method:**	RSK175
Matrix:	Air	**Unit:**	µL/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96268

QC Summary Report for RSK175

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethane	ND	11.9	0.50	10	-	119	70-130
Ethylene	ND	8.72	0.50	10	-	87	70-130
Methane	ND	10.4	0.50	10	-	104	70-130

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410124
Date Prepared:	10/2/14	**BatchID:**	96014
Date Analyzed:	10/3/14 - 10/4/14	**Extraction Method:**	SW3510C
Instrument:	GC9a, GC9b	**Analytical Method:**	SW8015B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96014

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	861	50	1000	-	86	61-157
Surrogate Recovery							
C9	628	560		625	100	90	70-134

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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1410124 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ 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: #0058; Xtra Oil Co.

Bill to:
Accounts Payable
Xtra Oil Company
2307 Pacific Avenue
Alameda, CA 94507
xtraoil@sbcglobal.net

Requested TAT: 5 days

Date Received: **10/03/2014**
Date Printed: **10/10/2014**

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
1410124-001	MW1	Water	10/3/2014 11:35	☐	G	F	B	J	C	A	I	H	E	D		
1410124-002	MW2	Water	10/3/2014 13:05	☐	G	F	B	J	C	A	I	H	E	D		
1410124-003	EW2	Water	10/3/2014 12:20	☐	G	F	B	J	C	A	I	H	E	D		
1410124-004	EW4	Water	10/3/2014 10:30	☐	G	F	B	J	C	A	I	H	E	D		
1410124-005	EW5	Water	10/3/2014 8:30	☐	G	F	B	J	C	A	I	H	E	D		

Test Legend:

1	218_6_W	2	300_1_W	3	8260B_W	4	Alka(spe)_W	5	FE2_FF_DISS
6	G-MBTEX_W	7	METALSMS_FF_DISS	8	METALSMS_W	9	RSK175_CO2_W	10	RSK175_W
11		12							

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

Prepared by: Jena Alfaro

Comments:

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

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: #0058; Xtra Oil Co.
Comments:

QC Level: LEVEL 2
Client Contact: Paul King
Contact's Email: lab@pdenviro.com

Work Order: 1410124
Date Received: 10/3/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1410124-001A	MW1	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	☐	10/3/2014 11:35	5 days	Present	☐	
1410124-001B	MW1	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	10/3/2014 11:35	5 days	Present	☐	
1410124-001C	MW1	Water	SM3500 Fe B4c (Ferrous Iron) (Dissolved-Field-Filtered)	2	VOA w/ HCl & Foil Wrapping	☐	10/3/2014 11:35	5 days	None	☐	
1410124-001D	MW1	Water	RSK175 <Ethane_4, Ethene_4, Methane_4>	2	aVOA w/ H2SO4	☐	10/3/2014 11:35	5 days	Present	☐	
1410124-001E	MW1	Water	RSK175 (CO2)	2	VOA	☐	10/3/2014 11:35	5 days	Present	☐	
1410124-001F	MW1	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as $NO3^{-}$, Sulfate>	1	250mL HDPE, unprsv.	☐	10/3/2014 11:35	5 days	Present	☐	
1410124-001G	MW1	Water	E218.6 (Hexachrome)	1	250mL HDPE, unprsv.	☐	10/3/2014 11:35	5 days	None	☐	
1410124-001H	MW1	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	☐	10/3/2014 11:35	5 days	Present	☐	
1410124-001I	MW1	Water	E200.8 (Metals) (Dissolved-Field Filtered) <Iron>	1	250mL HDPE w/ HNO3	☐	10/3/2014 11:35	5 days	None	☐	
1410124-001J	MW1	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	☐	10/3/2014 11:35	5 days	Present	☐	
1410124-002A	MW2	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	☐	10/3/2014 13:05	5 days	Present	☐	
1410124-002B	MW2	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	10/3/2014 13:05	5 days	Present	☐	
1410124-002C	MW2	Water	SM3500 Fe B4c (Ferrous Iron) (Dissolved-Field-Filtered)	2	VOA w/ HCl & Foil Wrapping	☐	10/3/2014 13:05	5 days	None	☐	
1410124-002D	MW2	Water	RSK175 <Ethane_4, Ethene_4, Methane_4>	2	aVOA w/ H2SO4	☐	10/3/2014 13:05	5 days	Present	☐	

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

Bottle Legend:

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3
250mL HDPE, unprsv. = 250mL HDPE Bottle, Unpreserved
500mL HDPE, unprsv. = 500mL HDPE Bottle, Unpreserved
aVOA w/ H2SO4 = 43mL Amber VOA w/ Sulfuric acid
VOA = 43mL VOA, Unpreserved
VOA w/ HCl = 43mL VOA w/ HCl

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: #0058; Xtra Oil Co.
Comments:

QC Level: LEVEL 2
Client Contact: Paul King
Contact's Email: lab@pdenviro.com

Work Order: 1410124
Date Received: 10/3/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1410124-002E	MW2	Water	RSK175 (CO2)	2	VOA	☐	10/3/2014 13:05	5 days	Present	☐	
1410124-002F	MW2	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as $NO3^-$, Sulfate>	1	250mL HDPE, unprsv.	☐	10/3/2014 13:05	5 days	Present	☐	
1410124-002G	MW2	Water	E218.6 (Hexachrome)	1	250mL HDPE, unprsv.	☐	10/3/2014 13:05	5 days	None	☐	
1410124-002H	MW2	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	☐	10/3/2014 13:05	5 days	Present	☐	
1410124-002I	MW2	Water	E200.8 (Metals) (Dissolved-Field Filtered) <Iron>	1	250mL HDPE w/ HNO3	☐	10/3/2014 13:05	5 days	None	☐	
1410124-002J	MW2	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	☐	10/3/2014 13:05	5 days	Present	☐	
1410124-003A	EW2	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	☐	10/3/2014 12:20	5 days	Present	☐	
1410124-003B	EW2	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	10/3/2014 12:20	5 days	Present	☐	
1410124-003C	EW2	Water	SM3500 Fe B4c (Ferrous Iron) (Dissolved-Field-Filtered)	2	VOA w/ HCl & Foil Wrapping	☐	10/3/2014 12:20	5 days	None	☐	
1410124-003D	EW2	Water	RSK175 <Ethane_4, Ethene_4, Methane_4>	2	aVOA w/ H2SO4	☐	10/3/2014 12:20	5 days	Present	☐	
1410124-003E	EW2	Water	RSK175 (CO2)	2	VOA	☐	10/3/2014 12:20	5 days	Present	☐	
1410124-003F	EW2	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as $NO3^-$, Sulfate>	1	250mL HDPE, unprsv.	☐	10/3/2014 12:20	5 days	Present	☐	
1410124-003G	EW2	Water	E218.6 (Hexachrome)	1	250mL HDPE, unprsv.	☐	10/3/2014 12:20	5 days	None	☐	
1410124-003H	EW2	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	☐	10/3/2014 12:20	5 days	Present	☐	

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

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250mL HDPE, unprsv. = 250mL HDPE Bottle, Unpreserved
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aVOA w/ H2SO4 = 43mL Amber VOA w/ Sulfuric acid
VOA = 43mL VOA, Unpreserved
VOA w/ HCl = 43mL VOA w/ HCl

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: #0058; Xtra Oil Co.
Comments:

QC Level: LEVEL 2
Client Contact: Paul King
Contact's Email: lab@pdenviro.com

Work Order: 1410124
Date Received: 10/3/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1410124-003I	EW2	Water	E200.8 (Metals) (Dissolved-Field Filtered) <Iron>	1	250mL HDPE w/ HNO3	☐	10/3/2014 12:20	5 days	None	☐	
1410124-003J	EW2	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	☐	10/3/2014 12:20	5 days	Present	☐	
1410124-004A	EW4	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	☐	10/3/2014 10:30	5 days	Present	☐	
1410124-004B	EW4	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	10/3/2014 10:30	5 days	Present	☐	
1410124-004C	EW4	Water	SM3500 Fe B4c (Ferrous Iron) (Dissolved-Field-Filtered)	2	VOA w/ HCl & Foil Wrapping	☐	10/3/2014 10:30	5 days	None	☐	
1410124-004D	EW4	Water	RSK175 <Ethane_4, Ethene_4, Methane_4>	2	aVOA w/ H2SO4	☐	10/3/2014 10:30	5 days	Present	☐	
1410124-004E	EW4	Water	RSK175 (CO2)	2	VOA	☐	10/3/2014 10:30	5 days	Present	☐	
1410124-004F	EW4	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as $NO3^{-}$, Sulfate>	1	250mL HDPE, unprsv.	☐	10/3/2014 10:30	5 days	Present	☐	
1410124-004G	EW4	Water	E218.6 (Hexachrome)	1	250mL HDPE, unprsv.	☐	10/3/2014 10:30	5 days	None	☐	
1410124-004H	EW4	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	☐	10/3/2014 10:30	5 days	Present	☐	
1410124-004I	EW4	Water	E200.8 (Metals) (Dissolved-Field Filtered) <Iron>	1	250mL HDPE w/ HNO3	☐	10/3/2014 10:30	5 days	None	☐	
1410124-004J	EW4	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	☐	10/3/2014 10:30	5 days	Present	☐	
1410124-005A	EW5	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	☐	10/3/2014 8:30	5 days	Present	☐	
1410124-005B	EW5	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	10/3/2014 8:30	5 days	Present	☐	

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

Bottle Legend:

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3
250mL HDPE, unprsv. = 250mL HDPE Bottle, Unpreserved
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aVOA w/ H2SO4 = 43mL Amber VOA w/ Sulfuric acid
VOA = 43mL VOA, Unpreserved
VOA w/ HCl = 43mL VOA w/ HCl

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: #0058; Xtra Oil Co.
Comments:

QC Level: LEVEL 2
Client Contact: Paul King
Contact's Email: lab@pdenviro.com

Work Order: 1410124
Date Received: 10/3/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1410124-005C	EW5	Water	SM3500 Fe B4c (Ferrous Iron) (Dissolved-Field-Filtered)	2	VOA w/ HCl & Foil Wrapping	☐	10/3/2014 8:30	5 days	None	☐	
1410124-005D	EW5	Water	RSK175 <Ethane_4, Ethene_4, Methane_4>	2	aVOA w/ H2SO4	☐	10/3/2014 8:30	5 days	Present	☐	
1410124-005E	EW5	Water	RSK175 (CO2)	2	VOA	☐	10/3/2014 8:30	5 days	Present	☐	
1410124-005F	EW5	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as $NO3^-$, Sulfate>	1	250mL HDPE, unprsv.	☐	10/3/2014 8:30	5 days	Present	☐	
1410124-005G	EW5	Water	E218.6 (Hexachrome)	1	250mL HDPE, unprsv.	☐	10/3/2014 8:30	5 days	None	☐	
1410124-005H	EW5	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	☐	10/3/2014 8:30	5 days	Present	☐	
1410124-005I	EW5	Water	E200.8 (Metals) (Dissolved-Field Filtered) <Iron>	1	250mL HDPE w/ HNO3	☐	10/3/2014 8:30	5 days	None	☐	
1410124-005J	EW5	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	☐	10/3/2014 8:30	5 days	Present	☐	

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

Bottle Legend:

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3
250mL HDPE, unprsv. = 250mL HDPE Bottle, Unpreserved
500mL HDPE, unprsv. = 500mL HDPE Bottle, Unpreserved
aVOA w/ H2SO4 = 43mL Amber VOA w/ Sulfuric acid
VOA = 43mL VOA, Unpreserved
VOA w/ HCl = 43mL VOA w/ HCl

CHAIN OF CUSTODY RECORD

1410129

PAGE 1 OF 1

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

PROJECT NUMBER: 0058

PROJECT NAME: Xtra Oil Co. 1701 Park Street Alameda

SAMPLED BY: (PRINTED & SIGNATURE) Steve Carmack

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	TPH-Multirange (6,D,MO)	8260 w/ Fuel Oxys + PL scavengers	Nitrates, Nitrogen & Sulfate	Total & Dissolved Iron	Dissolved Ferrous Iron	Alkalinity as Calcium Carbonate	Dissolved Methane, Ethane, Ethene & CO2	Dissolved Hexavalent Chromium	PRESERVATIVE	REMARKS
MW1	10/3/14	1135	H_2O		17	X	X	X	X	X	X	X	X	ICE	Normal Turnaround Time
MW2	"	1305	"		17	X	X	X	X	X	X	X	X	"	"
EW2	"	1220	"		17	X	X	X	X	X	X	X	X	"	"
EW4	"	1030	"		17	X	X	X	X	X	X	X	X	"	"
EW5	"	0830	"		17	X	X	X	X	X	X	X	X	"	"

ICE/t° 1.0
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
PRESERVATION
APPROPRIATE CONTAINERS
PRESERVED IN LAB
VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)	DATE 10/3/14	TIME 1510	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment): 5
RELINQUISHED BY: (SIGNATURE)	DATE 10/3/14	TIME 1730	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment): 85
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	

LABORATORY: McCampbell Analytical, Inc.

LABORATORY CONTACT: Angela Rydelius

LABORATORY PHONE NUMBER: (877) 252-9262

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

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

REMARKS:
1 bottle set: 4 HCL VOAs, 2 NP VOAs, 2 NP VOAs Amber, 1 500mL Poly NP, 1 250mL Poly NP, 2 H2SO4 VOAs, 2 250mL w/ HNO3, 2 VOAs w/ extra HCL (aromatics only), 1 250mL w/ NaBy...

SAMPLE REQUEST SHEET

P&D Environmental, Inc.
Project Number: 0058
Xtra Oil Company
1701 Park Street,
Alameda, California
06/20/2014

- Total Petroleum Hydrocarbons as Diesel (TPH-D) and Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) using EPA Method 3510C and EPA Method 3630C in conjunction with EPA Method 8015B,
- Total Petroleum Hydrocarbons as Gasoline (TPH-G) EPA Method 5030B in conjunction with modified EPA Method 8015B and EPA Method 8260B,
- VOC,s by EPA Method 8260 including MTBE, fuel oxygenates, and lead scavengers

- Inorganic anions nitrate as nitrogen and sulfate using EPA Method E300.1,
- Total and dissolved iron using EPA Method 200.8,
- Dissolved Ferrous Iron using method SM3500-Fe B4c,
- Alkalinity as calcium carbonate using Standard Method 2320B.

- Dissolved gases methane, ethane, ethene, and carbon dioxide using method RSK 175.
- Dissolved Hexavalent chromium using method E218.6.

NOTE: The bottles for dissolved iron, dissolved ferrous iron, and dissolved hexavalent chromium were field filtered in the field and the sample labels are marked as so. Additionally, the voas with extra HCL (for dissolved ferrous iron analysis) were wrapped in tin foil.

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

Sample Receipt Checklist

Client Name: **P & D Environmental**
Date and Time Received: **10/3/2014 7:01:41 PM**

Project Name: **#0058; Xtra Oil Co.**
LogIn Reviewed by: Jena Alfaro

WorkOrder №: **1410124** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 1°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: pH<2; 522: pH<4)?	Yes ☑	No ☐	NA ☐
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		
Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑

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

Comments:

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Analytical Report

WorkOrder: 1410123

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

Project Contact: Paul King
Project P.O.:
Project Name: #0058; Xtra Oil Co.

Project Received: 10/03/2014

Analytical Report reviewed & approved for release on 10/09/2014 by:

Question about your data?

Click here to email McCampbell

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.

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NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: #0058; Xtra Oil Co.
WorkOrder: 1410123

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifiers

a1	sample diluted due to matrix interference

Quality Control Qualifiers

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

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E218.6
Date Received:	10/3/14 18:12	**Analytical Method:**	E218.6
Date Prepared:	10/4/14	**Unit:**	µg/L

Hexachrome by IC

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP4	**1410123-001G**	**Water**	**10/02/2014 13:40**	**IC2**	**96068**

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	0.20	1	10/04/2014 06:08

Analyst(s): AE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP5	**1410123-002G**	**Water**	**10/02/2014 16:30**	**IC2**	**96068**

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	0.20	1	10/04/2014 11:37

Analyst(s): AE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP6	**1410123-003G**	**Water**	**10/02/2014 15:50**	**IC2**	**96068**

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	0.20	1	10/04/2014 11:55

Analyst(s): AE

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E300.1
Date Received:	10/3/14 18:12	**Analytical Method:**	E300.1
Date Prepared:	10/4/14-10/6/14	**Unit:**	mg/L

Inorganic Anions by IC

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP4	**1410123-001F**	**Water**	**10/02/2014 13:40**	**IC3**	**96069**

Analytes	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	10/04/2014 13:43
Nitrate as NO_3^-	ND	0.45	1	10/04/2014 13:43
Sulfate	**95**	2.0	20	10/06/2014 21:52
Surrogates	**REC (%)**	**Limits**		
Formate	104	90-115		10/04/2014 13:43

Analyst(s): AE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP5	**1410123-002F**	**Water**	**10/02/2014 16:30**	**IC3**	**96069**

Analytes	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	10/04/2014 15:39
Nitrate as NO_3^-	ND	0.45	1	10/04/2014 15:39
Sulfate	**93**	2.0	20	10/06/2014 21:14
Surrogates	**REC (%)**	**Limits**		
Formate	107	90-115		10/04/2014 15:39

Analyst(s): AE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP6	**1410123-003F**	**Water**	**10/02/2014 15:50**	**IC3**	**96069**

Analytes	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	10/04/2014 16:17
Nitrate as NO_3^-	ND	0.45	1	10/04/2014 16:17
Sulfate	**94**	2.0	20	10/06/2014 20:35
Surrogates	**REC (%)**	**Limits**		
Formate	105	90-115		10/04/2014 16:17

Analyst(s): AE

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8260B
Date Prepared:	10/7/14-10/8/14	**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
ASP4	**1410123-001B**	**Water**	**10/02/2014 13:40**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Acetone	**14**	10	1	10/08/2014 17:45
tert-Amyl methyl ether (TAME)	ND	0.50	1	10/08/2014 17:45
Benzene	ND	0.50	1	10/08/2014 17:45
Bromobenzene	ND	0.50	1	10/08/2014 17:45
Bromochloromethane	ND	0.50	1	10/08/2014 17:45
Bromodichloromethane	ND	0.50	1	10/08/2014 17:45
Bromoform	ND	0.50	1	10/08/2014 17:45
Bromomethane	ND	0.50	1	10/08/2014 17:45
2-Butanone (MEK)	ND	2.0	1	10/08/2014 17:45
t-Butyl alcohol (TBA)	**16**	2.0	1	10/08/2014 17:45
n-Butyl benzene	ND	0.50	1	10/08/2014 17:45
sec-Butyl benzene	ND	0.50	1	10/08/2014 17:45
tert-Butyl benzene	ND	0.50	1	10/08/2014 17:45
Carbon Disulfide	ND	0.50	1	10/08/2014 17:45
Carbon Tetrachloride	ND	0.50	1	10/08/2014 17:45
Chlorobenzene	ND	0.50	1	10/08/2014 17:45
Chloroethane	ND	0.50	1	10/08/2014 17:45
Chloroform	ND	0.50	1	10/08/2014 17:45
Chloromethane	ND	0.50	1	10/08/2014 17:45
2-Chlorotoluene	ND	0.50	1	10/08/2014 17:45
4-Chlorotoluene	ND	0.50	1	10/08/2014 17:45
Dibromochloromethane	ND	0.50	1	10/08/2014 17:45
1,2-Dibromo-3-chloropropane	ND	0.20	1	10/08/2014 17:45
1,2-Dibromoethane (EDB)	ND	0.50	1	10/08/2014 17:45
Dibromomethane	ND	0.50	1	10/08/2014 17:45
1,2-Dichlorobenzene	ND	0.50	1	10/08/2014 17:45
1,3-Dichlorobenzene	ND	0.50	1	10/08/2014 17:45
1,4-Dichlorobenzene	ND	0.50	1	10/08/2014 17:45
Dichlorodifluoromethane	ND	0.50	1	10/08/2014 17:45
1,1-Dichloroethane	ND	0.50	1	10/08/2014 17:45
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	10/08/2014 17:45
1,1-Dichloroethene	ND	0.50	1	10/08/2014 17:45
cis-1,2-Dichloroethene	ND	0.50	1	10/08/2014 17:45
trans-1,2-Dichloroethene	ND	0.50	1	10/08/2014 17:45
1,2-Dichloropropane	ND	0.50	1	10/08/2014 17:45
1,3-Dichloropropane	ND	0.50	1	10/08/2014 17:45
2,2-Dichloropropane	ND	0.50	1	10/08/2014 17:45
1,1-Dichloropropene	ND	0.50	1	10/08/2014 17:45

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8260B
Date Prepared:	10/7/14-10/8/14	**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
ASP4	**1410123-001B**	**Water**	**10/02/2014 13:40**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	10/08/2014 17:45
trans-1,3-Dichloropropene	ND	0.50	1	10/08/2014 17:45
Diisopropyl ether (DIPE)	ND	0.50	1	10/08/2014 17:45
Ethylbenzene	ND	0.50	1	10/08/2014 17:45
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	10/08/2014 17:45
Freon 113	ND	0.50	1	10/08/2014 17:45
Hexachlorobutadiene	ND	0.50	1	10/08/2014 17:45
Hexachloroethane	ND	0.50	1	10/08/2014 17:45
2-Hexanone	ND	0.50	1	10/08/2014 17:45
Isopropylbenzene	ND	0.50	1	10/08/2014 17:45
4-Isopropyl toluene	ND	0.50	1	10/08/2014 17:45
Methyl-t-butyl ether (MTBE)	**1.7**	0.50	1	10/08/2014 17:45
Methylene chloride	ND	0.50	1	10/08/2014 17:45
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	10/08/2014 17:45
Naphthalene	ND	0.50	1	10/08/2014 17:45
n-Propyl benzene	ND	0.50	1	10/08/2014 17:45
Styrene	ND	0.50	1	10/08/2014 17:45
1,1,1,2-Tetrachloroethane	ND	0.50	1	10/08/2014 17:45
1,1,2,2-Tetrachloroethane	ND	0.50	1	10/08/2014 17:45
Tetrachloroethene	ND	0.50	1	10/08/2014 17:45
Toluene	ND	0.50	1	10/08/2014 17:45
1,2,3-Trichlorobenzene	ND	0.50	1	10/08/2014 17:45
1,2,4-Trichlorobenzene	ND	0.50	1	10/08/2014 17:45
1,1,1-Trichloroethane	ND	0.50	1	10/08/2014 17:45
1,1,2-Trichloroethane	ND	0.50	1	10/08/2014 17:45
Trichloroethene	ND	0.50	1	10/08/2014 17:45
Trichlorofluoromethane	ND	0.50	1	10/08/2014 17:45
1,2,3-Trichloropropane	ND	0.50	1	10/08/2014 17:45
1,2,4-Trimethylbenzene	ND	0.50	1	10/08/2014 17:45
1,3,5-Trimethylbenzene	ND	0.50	1	10/08/2014 17:45
Vinyl Chloride	ND	0.50	1	10/08/2014 17:45
Xylenes, Total	ND	0.50	1	10/08/2014 17:45

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8260B
Date Prepared:	10/7/14-10/8/14	**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
ASP4	**1410123-001B**	**Water**	**10/02/2014 13:40**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	114	76-134		10/08/2014 17:45
Toluene-d8	86	77-101		10/08/2014 17:45
4-BFB	83	76-97		10/08/2014 17:45

Analyst(s): KF

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8260B
Date Prepared:	10/7/14-10/8/14	**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
ASP5	**1410123-002B**	**Water**	**10/02/2014 16:30**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	10/07/2014 13:42
tert-Amyl methyl ether (TAME)	ND	0.50	1	10/07/2014 13:42
Benzene	ND	0.50	1	10/07/2014 13:42
Bromobenzene	ND	0.50	1	10/07/2014 13:42
Bromochloromethane	ND	0.50	1	10/07/2014 13:42
Bromodichloromethane	ND	0.50	1	10/07/2014 13:42
Bromoform	ND	0.50	1	10/07/2014 13:42
Bromomethane	ND	0.50	1	10/07/2014 13:42
2-Butanone (MEK)	ND	2.0	1	10/07/2014 13:42
t-Butyl alcohol (TBA)	ND	2.0	1	10/07/2014 13:42
n-Butyl benzene	ND	0.50	1	10/07/2014 13:42
sec-Butyl benzene	ND	0.50	1	10/07/2014 13:42
tert-Butyl benzene	ND	0.50	1	10/07/2014 13:42
Carbon Disulfide	ND	0.50	1	10/07/2014 13:42
Carbon Tetrachloride	ND	0.50	1	10/07/2014 13:42
Chlorobenzene	ND	0.50	1	10/07/2014 13:42
Chloroethane	ND	0.50	1	10/07/2014 13:42
Chloroform	ND	0.50	1	10/07/2014 13:42
Chloromethane	ND	0.50	1	10/07/2014 13:42
2-Chlorotoluene	ND	0.50	1	10/07/2014 13:42
4-Chlorotoluene	ND	0.50	1	10/07/2014 13:42
Dibromochloromethane	ND	0.50	1	10/07/2014 13:42
1,2-Dibromo-3-chloropropane	ND	0.20	1	10/07/2014 13:42
1,2-Dibromoethane (EDB)	ND	0.50	1	10/07/2014 13:42
Dibromomethane	ND	0.50	1	10/07/2014 13:42
1,2-Dichlorobenzene	ND	0.50	1	10/07/2014 13:42
1,3-Dichlorobenzene	ND	0.50	1	10/07/2014 13:42
1,4-Dichlorobenzene	ND	0.50	1	10/07/2014 13:42
Dichlorodifluoromethane	ND	0.50	1	10/07/2014 13:42
1,1-Dichloroethane	ND	0.50	1	10/07/2014 13:42
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	10/07/2014 13:42
1,1-Dichloroethene	ND	0.50	1	10/07/2014 13:42
cis-1,2-Dichloroethene	ND	0.50	1	10/07/2014 13:42
trans-1,2-Dichloroethene	ND	0.50	1	10/07/2014 13:42
1,2-Dichloropropane	ND	0.50	1	10/07/2014 13:42
1,3-Dichloropropane	ND	0.50	1	10/07/2014 13:42
2,2-Dichloropropane	ND	0.50	1	10/07/2014 13:42
1,1-Dichloropropene	ND	0.50	1	10/07/2014 13:42

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8260B
Date Prepared:	10/7/14-10/8/14	**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
ASP5	**1410123-002B**	**Water**	**10/02/2014 16:30**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	10/07/2014 13:42
trans-1,3-Dichloropropene	ND	0.50	1	10/07/2014 13:42
Diisopropyl ether (DIPE)	ND	0.50	1	10/07/2014 13:42
Ethylbenzene	ND	0.50	1	10/07/2014 13:42
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	10/07/2014 13:42
Freon 113	ND	0.50	1	10/07/2014 13:42
Hexachlorobutadiene	ND	0.50	1	10/07/2014 13:42
Hexachloroethane	ND	0.50	1	10/07/2014 13:42
2-Hexanone	ND	0.50	1	10/07/2014 13:42
Isopropylbenzene	ND	0.50	1	10/07/2014 13:42
4-Isopropyl toluene	ND	0.50	1	10/07/2014 13:42
Methyl-t-butyl ether (MTBE)	ND	0.50	1	10/07/2014 13:42
Methylene chloride	ND	0.50	1	10/07/2014 13:42
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	10/07/2014 13:42
Naphthalene	ND	0.50	1	10/07/2014 13:42
n-Propyl benzene	ND	0.50	1	10/07/2014 13:42
Styrene	ND	0.50	1	10/07/2014 13:42
1,1,1,2-Tetrachloroethane	ND	0.50	1	10/07/2014 13:42
1,1,2,2-Tetrachloroethane	ND	0.50	1	10/07/2014 13:42
Tetrachloroethene	**3.1**	0.50	1	10/07/2014 13:42
Toluene	ND	0.50	1	10/07/2014 13:42
1,2,3-Trichlorobenzene	ND	0.50	1	10/07/2014 13:42
1,2,4-Trichlorobenzene	ND	0.50	1	10/07/2014 13:42
1,1,1-Trichloroethane	ND	0.50	1	10/07/2014 13:42
1,1,2-Trichloroethane	ND	0.50	1	10/07/2014 13:42
Trichloroethene	ND	0.50	1	10/07/2014 13:42
Trichlorofluoromethane	ND	0.50	1	10/07/2014 13:42
1,2,3-Trichloropropane	ND	0.50	1	10/07/2014 13:42
1,2,4-Trimethylbenzene	ND	0.50	1	10/07/2014 13:42
1,3,5-Trimethylbenzene	ND	0.50	1	10/07/2014 13:42
Vinyl Chloride	ND	0.50	1	10/07/2014 13:42
Xylenes, Total	ND	0.50	1	10/07/2014 13:42

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8260B
Date Prepared:	10/7/14-10/8/14	**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
ASP5	**1410123-002B**	**Water**	**10/02/2014 16:30**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	114	70-130		10/07/2014 13:42
Toluene-d8	86	70-130		10/07/2014 13:42
4-BFB	92	70-130		10/07/2014 13:42

Analyst(s): KF

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8260B
Date Prepared:	10/7/14-10/8/14	**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
ASP6	**1410123-003B**	**Water**	**10/02/2014 15:50**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	10/07/2014 15:08
tert-Amyl methyl ether (TAME)	ND	0.50	1	10/07/2014 15:08
Benzene	ND	0.50	1	10/07/2014 15:08
Bromobenzene	ND	0.50	1	10/07/2014 15:08
Bromochloromethane	ND	0.50	1	10/07/2014 15:08
Bromodichloromethane	ND	0.50	1	10/07/2014 15:08
Bromoform	ND	0.50	1	10/07/2014 15:08
Bromomethane	ND	0.50	1	10/07/2014 15:08
2-Butanone (MEK)	ND	2.0	1	10/07/2014 15:08
t-Butyl alcohol (TBA)	ND	2.0	1	10/07/2014 15:08
n-Butyl benzene	ND	0.50	1	10/07/2014 15:08
sec-Butyl benzene	ND	0.50	1	10/07/2014 15:08
tert-Butyl benzene	ND	0.50	1	10/07/2014 15:08
Carbon Disulfide	ND	0.50	1	10/07/2014 15:08
Carbon Tetrachloride	ND	0.50	1	10/07/2014 15:08
Chlorobenzene	ND	0.50	1	10/07/2014 15:08
Chloroethane	ND	0.50	1	10/07/2014 15:08
Chloroform	ND	0.50	1	10/07/2014 15:08
Chloromethane	ND	0.50	1	10/07/2014 15:08
2-Chlorotoluene	ND	0.50	1	10/07/2014 15:08
4-Chlorotoluene	ND	0.50	1	10/07/2014 15:08
Dibromochloromethane	ND	0.50	1	10/07/2014 15:08
1,2-Dibromo-3-chloropropane	ND	0.20	1	10/07/2014 15:08
1,2-Dibromoethane (EDB)	ND	0.50	1	10/07/2014 15:08
Dibromomethane	ND	0.50	1	10/07/2014 15:08
1,2-Dichlorobenzene	ND	0.50	1	10/07/2014 15:08
1,3-Dichlorobenzene	ND	0.50	1	10/07/2014 15:08
1,4-Dichlorobenzene	ND	0.50	1	10/07/2014 15:08
Dichlorodifluoromethane	ND	0.50	1	10/07/2014 15:08
1,1-Dichloroethane	ND	0.50	1	10/07/2014 15:08
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	10/07/2014 15:08
1,1-Dichloroethene	ND	0.50	1	10/07/2014 15:08
cis-1,2-Dichloroethene	ND	0.50	1	10/07/2014 15:08
trans-1,2-Dichloroethene	ND	0.50	1	10/07/2014 15:08
1,2-Dichloropropane	ND	0.50	1	10/07/2014 15:08
1,3-Dichloropropane	ND	0.50	1	10/07/2014 15:08
2,2-Dichloropropane	ND	0.50	1	10/07/2014 15:08
1,1-Dichloropropene	ND	0.50	1	10/07/2014 15:08

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8260B
Date Prepared:	10/7/14-10/8/14	**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
ASP6	**1410123-003B**	**Water**	**10/02/2014 15:50**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	10/07/2014 15:08
trans-1,3-Dichloropropene	ND	0.50	1	10/07/2014 15:08
Diisopropyl ether (DIPE)	ND	0.50	1	10/07/2014 15:08
Ethylbenzene	ND	0.50	1	10/07/2014 15:08
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	10/07/2014 15:08
Freon 113	ND	0.50	1	10/07/2014 15:08
Hexachlorobutadiene	ND	0.50	1	10/07/2014 15:08
Hexachloroethane	ND	0.50	1	10/07/2014 15:08
2-Hexanone	ND	0.50	1	10/07/2014 15:08
Isopropylbenzene	ND	0.50	1	10/07/2014 15:08
4-Isopropyl toluene	ND	0.50	1	10/07/2014 15:08
Methyl-t-butyl ether (MTBE)	ND	0.50	1	10/07/2014 15:08
Methylene chloride	ND	0.50	1	10/07/2014 15:08
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	10/07/2014 15:08
Naphthalene	ND	0.50	1	10/07/2014 15:08
n-Propyl benzene	ND	0.50	1	10/07/2014 15:08
Styrene	ND	0.50	1	10/07/2014 15:08
1,1,1,2-Tetrachloroethane	ND	0.50	1	10/07/2014 15:08
1,1,2,2-Tetrachloroethane	ND	0.50	1	10/07/2014 15:08
Tetrachloroethene	ND	0.50	1	10/07/2014 15:08
Toluene	**0.68**	0.50	1	10/07/2014 15:08
1,2,3-Trichlorobenzene	ND	0.50	1	10/07/2014 15:08
1,2,4-Trichlorobenzene	ND	0.50	1	10/07/2014 15:08
1,1,1-Trichloroethane	ND	0.50	1	10/07/2014 15:08
1,1,2-Trichloroethane	ND	0.50	1	10/07/2014 15:08
Trichloroethene	ND	0.50	1	10/07/2014 15:08
Trichlorofluoromethane	ND	0.50	1	10/07/2014 15:08
1,2,3-Trichloropropane	ND	0.50	1	10/07/2014 15:08
1,2,4-Trimethylbenzene	**1.3**	0.50	1	10/07/2014 15:08
1,3,5-Trimethylbenzene	ND	0.50	1	10/07/2014 15:08
Vinyl Chloride	ND	0.50	1	10/07/2014 15:08
Xylenes, Total	**3.3**	0.50	1	10/07/2014 15:08

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8260B
Date Prepared:	10/7/14-10/8/14	**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
ASP6	**1410123-003B**	**Water**	**10/02/2014 15:50**	**GC16**	**96185**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	117	70-130		10/07/2014 15:08
Toluene-d8	86	70-130		10/07/2014 15:08
4-BFB	93	70-130		10/07/2014 15:08

Analyst(s): KF

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SM2320B
Date Received:	10/3/14 18:12	**Analytical Method:**	SM2320B
Date Prepared:	10/7/14	**Unit:**	mg $CaCO_3$/L

Total & Speciated Alkalinity as Calcium Carbonate

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP4	**1410123-001J**	**Water**	**10/02/2014 13:40**	**Titrino**	**96126**

Analytes	Result	RL	DF	Date Analyzed
Total	**136**	1.00	1	10/07/2014 10:45
Carbonate	ND	1.00	1	10/07/2014 10:45
Bicarbonate	**136**	1.00	1	10/07/2014 10:45
Hydroxide	ND	1.00	1	10/07/2014 10:45

Analyst(s): HN

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP5	**1410123-002J**	**Water**	**10/02/2014 16:30**	**Titrino**	**96126**

Analytes	Result	RL	DF	Date Analyzed
Total	**148**	1.00	1	10/07/2014 10:49
Carbonate	ND	1.00	1	10/07/2014 10:49
Bicarbonate	**148**	1.00	1	10/07/2014 10:49
Hydroxide	ND	1.00	1	10/07/2014 10:49

Analyst(s): HN

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP6	**1410123-003J**	**Water**	**10/02/2014 15:50**	**Titrino**	**96126**

Analytes	Result	RL	DF	Date Analyzed
Total	**190**	1.00	1	10/07/2014 10:54
Carbonate	ND	1.00	1	10/07/2014 10:54
Bicarbonate	**190**	1.00	1	10/07/2014 10:54
Hydroxide	ND	1.00	1	10/07/2014 10:54

Analyst(s): HN

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SM3500-Fe B4c
Date Received:	10/3/14 18:12	**Analytical Method:**	SM3500-Fe B4c
Date Prepared:	10/3/14	**Unit:**	µg/L

Dissolved Ferrous Iron

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP4	**1410123-001C**	**Water/DISS.**	**10/02/2014 13:40**	**SPECTROPHOTOMETER**	**96061**

Analytes	Result	RL	DF	Date Analyzed
Ferrous Iron	**710**	50	1	10/03/2014 21:15

Analyst(s): RB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP5	**1410123-002C**	**Water/DISS.**	**10/02/2014 16:30**	**SPECTROPHOTOMETER**	**96061**

Analytes	Result	RL	DF	Date Analyzed
Ferrous Iron	**120**	50	1	10/03/2014 21:30

Analyst(s): RB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP6	**1410123-003C**	**Water/DISS.**	**10/02/2014 15:50**	**SPECTROPHOTOMETER**	**96061**

Analytes	Result	RL	DF	Date Analyzed
Ferrous Iron	**97**	50	1	10/03/2014 21:35

Analyst(s): RB

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/6/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP4	**1410123-001A**	**Water**	**10/02/2014 13:40**	**GC3**	**96125**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	10/06/2014 18:44
MTBE	---	5.0	1	10/06/2014 18:44
Benzene	---	0.50	1	10/06/2014 18:44
Toluene	---	0.50	1	10/06/2014 18:44
Ethylbenzene	---	0.50	1	10/06/2014 18:44
Xylenes	---	0.50	1	10/06/2014 18:44

Surrogates	REC (%)	Limits	
aaa-TFT_2	100	70-130	10/06/2014 18:44

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP5	**1410123-002A**	**Water**	**10/02/2014 16:30**	**GC3**	**96125**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	10/06/2014 19:14
MTBE	---	5.0	1	10/06/2014 19:14
Benzene	---	0.50	1	10/06/2014 19:14
Toluene	---	0.50	1	10/06/2014 19:14
Ethylbenzene	---	0.50	1	10/06/2014 19:14
Xylenes	---	0.50	1	10/06/2014 19:14

Surrogates	REC (%)	Limits	
aaa-TFT_2	101	70-130	10/06/2014 19:14

Analyst(s): IA

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW5030B
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/6/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP6	**1410123-003A**	**Water**	**10/02/2014 15:50**	**GC3**	**96125**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	10/06/2014 19:44
MTBE	---	5.0	1	10/06/2014 19:44
Benzene	---	0.50	1	10/06/2014 19:44
Toluene	---	0.50	1	10/06/2014 19:44
Ethylbenzene	---	0.50	1	10/06/2014 19:44
Xylenes	---	0.50	1	10/06/2014 19:44

Surrogates	REC (%)	Limits	
aaa-TFT_2	99	70-130	10/06/2014 19:44

Analyst(s): IA

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E200.8
Date Received:	10/3/14 18:12	**Analytical Method:**	E200.8
Date Prepared:	10/3/14	**Unit:**	µg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP4	**1410123-001I**	**Water/DISS.**	**10/02/2014 13:40**	**ICP-MS2**	**96043**

Analytes	Result	RL	DF	Date Analyzed
Iron	**1000**	200	10	10/03/2014 22:44

Analyst(s): AG

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP5	**1410123-002I**	**Water/DISS.**	**10/02/2014 16:30**	**ICP-MS2**	**96043**

Analytes	Result	RL	DF	Date Analyzed
Iron	**280**	200	10	10/03/2014 22:51

Analyst(s): AG

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP6	**1410123-003I**	**Water/DISS.**	**10/02/2014 15:50**	**ICP-MS2**	**96043**

Analytes	Result	RL	DF	Date Analyzed
Iron	ND	200	10	10/03/2014 22:57

Analytical Comments: a1

Analyst(s): AG

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	E200.8
Date Received:	10/3/14 18:12	**Analytical Method:**	E200.8
Date Prepared:	10/3/14	**Unit:**	µg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP4	**1410123-001H**	**Water/TOTAL**	**10/02/2014 13:40**	**ICP-MS1**	**96043**

Analytes	Result	RL	DF	Date Analyzed
Iron	**1300**	20	1	10/06/2014 23:52

Surrogates	REC (%)	Limits	
Tb 350.917	88	70-130	10/06/2014 23:52

Analyst(s): DB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP5	**1410123-002H**	**Water/TOTAL**	**10/02/2014 16:30**	**ICP-MS1**	**96043**

Analytes	Result	RL	DF	Date Analyzed
Iron	**110**	20	1	10/06/2014 23:58

Surrogates	REC (%)	Limits	
Tb 350.917	92	70-130	10/06/2014 23:58

Analyst(s): DB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP6	**1410123-003H**	**Water/TOTAL**	**10/02/2014 15:50**	**ICP-MS1**	**96043**

Analytes	Result	RL	DF	Date Analyzed
Iron	**11,000**	200	10	10/07/2014 11:45

Surrogates	REC (%)	Limits	
Tb 350.917	101	70-130	10/07/2014 11:45

Analyst(s): DB

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	RSK175
Date Received:	10/3/14 18:12	**Analytical Method:**	RSK175
Date Prepared:	10/6/14	**Unit:**	µg/L

Carbon Dioxide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP4	**1410123-001E**	**Water/DISS.**	**10/02/2014 13:40**	**GC26**	**96107**

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	**2700**	1200	25	10/06/2014 12:14

Analyst(s): KBO

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP5	**1410123-002E**	**Water/DISS.**	**10/02/2014 16:30**	**GC26**	**96107**

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	**3500**	1200	25	10/06/2014 12:39

Analyst(s): KBO

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP6	**1410123-003E**	**Water/DISS.**	**10/02/2014 15:50**	**GC26**	**96107**

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	**3900**	1200	25	10/06/2014 13:10

Analyst(s): KBO

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	RSK175
Date Received:	10/3/14 18:12	**Analytical Method:**	RSK175
Date Prepared:	10/8/14	**Unit:**	µg/L

Light Gases

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP4	**1410123-001D**	**Water/DISS.**	**10/02/2014 13:40**	**GC26**	**96268**

Analytes	Result	RL	DF	Date Analyzed
Ethane	ND	0.20	1	10/08/2014 10:26
Ethene	ND	0.20	1	10/08/2014 10:26
Methane	**5.7**	0.10	1	10/08/2014 10:26

Analyst(s): KBO

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP5	**1410123-002D**	**Water/DISS.**	**10/02/2014 16:30**	**GC26**	**96268**

Analytes	Result	RL	DF	Date Analyzed
Ethane	ND	0.20	1	10/08/2014 10:53
Ethene	ND	0.20	1	10/08/2014 10:53
Methane	**0.41**	0.10	1	10/08/2014 10:53

Analyst(s): KBO

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP6	**1410123-003D**	**Water/DISS.**	**10/02/2014 15:50**	**GC26**	**96268**

Analytes	Result	RL	DF	Date Analyzed
Ethane	ND	0.20	1	10/08/2014 11:11
Ethene	ND	0.20	1	10/08/2014 11:11
Methane	ND	0.10	1	10/08/2014 11:11

Analyst(s): KBO

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Project:	#0058; Xtra Oil Co.	**Extraction Method:**	SW3510C
Date Received:	10/3/14 18:12	**Analytical Method:**	SW8015B
Date Prepared:	10/3/14	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP4	**1410123-001A**	**Water**	**10/02/2014 13:40**	**GC6B**	**96014**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	10/05/2014 19:14
TPH-Motor Oil (C18-C36)	ND	250	1	10/05/2014 19:14
Surrogates	**REC (%)**	**Limits**		
C9	105	70-130		10/05/2014 19:14

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP5	**1410123-002A**	**Water**	**10/02/2014 16:30**	**GC11A**	**96014**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	10/05/2014 18:48
TPH-Motor Oil (C18-C36)	ND	250	1	10/05/2014 18:48
Surrogates	**REC (%)**	**Limits**		
C9	114	70-130		10/05/2014 18:48

Analyst(s): MAM

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
ASP6	**1410123-003A**	**Water**	**10/02/2014 15:50**	**GC11A**	**96014**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	10/05/2014 22:13
TPH-Motor Oil (C18-C36)	ND	250	1	10/05/2014 22:13
Surrogates	**REC (%)**	**Limits**		
C9	114	70-130		10/05/2014 22:13

Analyst(s): MAM

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/3/14	**BatchID:**	96068
Date Analyzed:	10/4/14	**Extraction Method:**	E218.6
Instrument:	IC2	**Analytical Method:**	E218.6
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96068 1410123-001GMS/MSD

QC Summary Report for E218.6

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Hexachrome	ND	23.7	0.20	25	-	95	90-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Hexachrome	22.2	22.6	25	ND	89,F1	90	90-110	1.61	10

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/3/14	**BatchID:**	96069
Date Analyzed:	10/4/14	**Extraction Method:**	E300.1
Instrument:	IC3	**Analytical Method:**	E300.1
Matrix:	Water	**Unit:**	mg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96069 1410123-001FMS/MSD

QC Summary Report for E300.1

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Nitrate as N	ND	0.973	0.10	1	-	97	85-115
Nitrate as $NO3^{-}$	ND	4.31	0.45	4.4	-	98	85-115
Sulfate	ND	1.07	0.10	1	-	107	85-115
Surrogate Recovery							
Formate	0.109	0.108		0.10	109	107	90-115

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Nitrate as N	0.935	0.955	1	ND	94	95	85-115	2.08	15
Nitrate as $NO3^{-}$	4.14	4.23	4.4	ND	94	96	85-115	2.08	15
Sulfate	NR	NR	1	95.02	NR	NR	85-115	NR	15
Surrogate Recovery									
Formate	0.106	0.106	0.10		106	106	90-115	0	10

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/8/14	**BatchID:**	96185
Date Analyzed:	10/7/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96185 1410123-002BMS/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	8.92	0.50	10	-	89	61-123
Benzene	ND	10.7	0.50	10	-	107	74-121
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	33.2	2.0	40	-	83	42-115
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	10.1	0.50	10	-	101	50-153
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	10.0	0.50	10	-	100	68-119
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	9.71	0.50	10	-	97	63-117
1,1-Dichloroethene	ND	10.4	0.50	10	-	104	78-110
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.)

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/8/14	**BatchID:**	96185
Date Analyzed:	10/7/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96185 1410123-002BMS/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	9.23	0.50	10	-	92	67-121
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.09	0.50	10	-	91	62-121
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	8.78	0.50	10	-	88	61-118
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	10.1	0.50	10	-	101	83-109
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	10.0	0.50	10	-	100	81-112
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	29.0	28.3		25	116	113	81-117
Toluene-d8	21.5	21.5		25	86	86	63-129
4-BFB	2.34	2.44		2.5	94	98	67-113

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/8/14	**BatchID:**	96185
Date Analyzed:	10/7/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96185 1410123-002BMS/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)	9.10	10.8	10	ND	91	108	70-130	16.9	20
Benzene	9.66	11.3	10	ND	97	113	70-130	15.6	20
t-Butyl alcohol (TBA)	37.3	46.7	40	ND	93	117	70-130	22.6,F1	20
Chlorobenzene	8.92	10.6	10	ND	89	105	70-130	16.8	20
1,2-Dibromoethane (EDB)	10.4	11.8	10	ND	104	118	70-130	12.4	20
1,2-Dichloroethane (1,2-DCA)	9.68	11.3	10	ND	97	113	70-130	15.3	20
1,1-Dichloroethene	9.10	10.6	10	ND	91	106	70-130	15.1	20
Diisopropyl ether (DIPE)	8.94	10.6	10	ND	89	106	70-130	16.5	20
Ethyl tert-butyl ether (ETBE)	9.10	10.8	10	ND	91	108	70-130	16.7	20
Methyl-t-butyl ether (MTBE)	9.29	10.8	10	ND	93	108	70-130	15.0	20
Toluene	8.87	10.6	10	ND	89	106	70-130	17.8	20
Trichloroethene	8.81	10.4	10	ND	85	101	70-130	16.2	20
Surrogate Recovery									
Dibromofluoromethane	28.8	28.7	25		115	115	70-130	0	20
Toluene-d8	21.6	21.5	25		86	86	70-130	0	20
4-BFB	2.24	2.25	2.5		90	90	70-130	0	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/7/14	**BatchID:**	96126
Date Analyzed:	10/7/14	**Extraction Method:**	SM2320B
Instrument:	Titrino	**Analytical Method:**	SM2320B
Matrix:	Water	**Test Method:**	SM2320B (Alkalinity)
Project:	#0058; Xtra Oil Co.		

QC Summary Report for Alkalinity

Lab ID	Analyte	Reporting Units	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	RPD	Acceptance Criteria (%)
1410123-001J	Total	mg $CaCO_3$/L	136	1	136	1	0.537	<20
1410123-002J	Total	mg $CaCO_3$/L	148	1	148	1	0.271	<20
1410123-003J	Total	mg $CaCO_3$/L	190	1	190	1	0.105	<20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/3/14	**BatchID:**	96061
Date Analyzed:	10/3/14	**Extraction Method:**	SM3500-Fe B4c
Instrument:	SPECTROPHOTOMETER	**Analytical Method:**	SM3500-Fe B4c
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96061 1410123-001CMS/MSD

QC Summary Report for SM3500 Fe B4c

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ferrous Iron	ND	188	50	200	-	94	80-120

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Ferrous Iron	934	935	200	708.7	113	113	70-130	0	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/6/14	**BatchID:**	96125
Date Analyzed:	10/6/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96125 1410034-001AMS/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	68.5	40	60	-	114	70-130
MTBE	ND	11.0	5.0	10	-	110	70-130
Benzene	ND	10.1	0.50	10	-	101	70-130
Toluene	ND	10.1	0.50	10	-	101	70-130
Ethylbenzene	ND	10.1	0.50	10	-	101	70-130
Xylenes	ND	30.7	0.50	30	-	102	70-130
Surrogate Recovery							
aaa-TFT_2	9.85	9.88		10	99	99	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	60.6	62.3	60	ND	101	104	70-130	2.78	20
MTBE	10.5	10.9	10	ND	105	109	70-130	3.68	20
Benzene	10.5	11.3	10	ND	105	113	70-130	6.88	20
Toluene	10.2	11.2	10	ND	102	112	70-130	9.62	20
Ethylbenzene	10.5	11.4	10	ND	105	114	70-130	8.31	20
Xylenes	32.6	35.3	30	ND	109	118	70-130	7.82	20
Surrogate Recovery									
aaa-TFT_2	9.08	9.76	10		91	98	70-130	7.12	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/3/14	**BatchID:**	96043
Date Analyzed:	10/6/14	**Extraction Method:**	E200.8
Instrument:	ICP-MS1	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96043 1410102-001AMS/MSD

QC Summary Report for E200.8

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Iron	ND	548	20	500	-	110	85-115
Surrogate Recovery							
Tb 350.917	687	694		750	92	93	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Iron	586	583	500	74	102	102	70-130	0	20
Surrogate Recovery									
Tb 350.917	686	681	750		91	91	70-130	0	20

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/6/14	**BatchID:**	96107
Date Analyzed:	10/6/14	**Extraction Method:**	RSK175
Instrument:	GC26	**Analytical Method:**	RSK175
Matrix:	Air	**Unit:**	µL/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96107

QC Summary Report for RSK174/175

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Carbon Dioxide	ND	98.0	20	100	-	98	70-130

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/8/14	**BatchID:**	96268
Date Analyzed:	10/8/14	**Extraction Method:**	RSK175
Instrument:	GC26	**Analytical Method:**	RSK175
Matrix:	Air	**Unit:**	µL/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96268

QC Summary Report for RSK175

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethane	ND	11.9	0.50	10	-	119	70-130
Ethylene	ND	8.72	0.50	10	-	87	70-130
Methane	ND	10.4	0.50	10	-	104	70-130

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1410123
Date Prepared:	10/2/14	**BatchID:**	96014
Date Analyzed:	10/3/14 - 10/4/14	**Extraction Method:**	SW3510C
Instrument:	GC9a, GC9b	**Analytical Method:**	SW8015B
Matrix:	Water	**Unit:**	µg/L
Project:	#0058; Xtra Oil Co.	**Sample ID:**	MB/LCS-96014

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	861	50	1000	-	86	61-157
Surrogate Recovery							
C9	628	560		625	100	90	70-134

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1410123 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ 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: #0058; Xtra Oil Co.

Bill to:
Accounts Payable
Xtra Oil Company
2307 Pacific Avenue
Alameda, CA 94507
xtraoil@sbcglobal.net

Requested TAT: 5 days

Date Received: **10/03/2014**
Date Printed: **10/10/2014**

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
1410123-001	ASP4	Water	10/2/2014 13:40	☐	G	F	B	J	C	A	I	H	E	D		
1410123-002	ASP5	Water	10/2/2014 16:30	☐	G	F	B	J	C	A	I	H	E	D		
1410123-003	ASP6	Water	10/2/2014 15:50	☐	G	F	B	J	C	A	I	H	E	D		

Test Legend:

1	218_6_W	2	300_1_W	3	8260B_W	4	Alka(spe)_W	5	FE2_FF_DISS
6	G-MBTEX_W	7	METALSMS_FF_DISS	8	METALSMS_W	9	RSK175_CO2_W	10	RSK175_W
11		12							

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

Prepared by: Jena Alfaro

Comments: Discrepancy in Iron results (dissolved vs. total) confirmed by re-running non-extracted samples of all 6.

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

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
QC Level: LEVEL 2
Work Order: 1410123
Project: #0058; Xtra Oil Co.
Client Contact: Paul King
Date Received: 10/3/2014
Comments: Discrepancy in Iron results (dissolved vs. total) confirmed by re-running non-extracted samples of all 6.
Contact's Email: lab@pdenviro.com

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1410123-001A	ASP4	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	☐	10/2/2014 13:40	5 days	Present	☐	
1410123-001B	ASP4	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	10/2/2014 13:40	5 days	Present	☐	
1410123-001C	ASP4	Water	SM3500 Fe B4c (Ferrous Iron) (Dissolved-Field-Filtered)	2	VOA w/ HCl & Foil Wrapping	☐	10/2/2014 13:40	5 days	None	☐	
1410123-001D	ASP4	Water	RSK175 <Ethane_4, Ethene_4, Methane_4>	2	aVOA w/ H2SO4	☐	10/2/2014 13:40	5 days	Present	☐	
1410123-001E	ASP4	Water	RSK175 (CO2)	2	VOA	☐	10/2/2014 13:40	5 days	Present	☐	
1410123-001F	ASP4	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as $NO3^{-}$, Sulfate>	1	250mL HDPE, unprsv.	☐	10/2/2014 13:40	5 days	Present	☐	
1410123-001G	ASP4	Water	E218.6 (Hexachrome)	1	250mL HDPE, unprsv.	☐	10/2/2014 13:40	5 days	None	☐	
1410123-001H	ASP4	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	☐	10/2/2014 13:40	5 days	Present	☐	
1410123-001I	ASP4	Water	E200.8 (Metals) (Dissolved-Field Filtered) <Iron>	1	250mL HDPE w/ HNO3	☐	10/2/2014 13:40	5 days	None	☐	
1410123-001J	ASP4	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	☐	10/2/2014 13:40	5 days	Present	☐	
1410123-002A	ASP5	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	☐	10/2/2014 16:30	5 days	Present	☐	
1410123-002B	ASP5	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	10/2/2014 16:30	5 days	Present	☐	
1410123-002C	ASP5	Water	SM3500 Fe B4c (Ferrous Iron) (Dissolved-Field-Filtered)	2	VOA w/ HCl & Foil Wrapping	☐	10/2/2014 16:30	5 days	None	☐	
1410123-002D	ASP5	Water	RSK175 <Ethane_4, Ethene_4, Methane_4>	2	aVOA w/ H2SO4	☐	10/2/2014 16:30	5 days	Present	☐	

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

Bottle Legend:

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3
250mL HDPE, unprsv. = 250mL HDPE Bottle, Unpreserved
500mL HDPE, unprsv. = 500mL HDPE Bottle, Unpreserved
aVOA w/ H2SO4 = 43mL Amber VOA w/ Sulfuric acid
VOA = 43mL VOA, Unpreserved
VOA w/ HCl = 43mL VOA w/ HCl

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"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
QC Level: LEVEL 2
Work Order: 1410123
Project: #0058; Xtra Oil Co.
Client Contact: Paul King
Date Received: 10/3/2014
Comments: Discrepancy in Iron results (dissolved vs. total) confirmed by re-running non-extracted samples of all 6.
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
1410123-002E	ASP5	Water	RSK175 (CO2)	2	VOA	☐	10/2/2014 16:30	5 days	Present	☐	
1410123-002F	ASP5	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as $NO3^-$, Sulfate>	1	250mL HDPE, unprsv.	☐	10/2/2014 16:30	5 days	Present	☐	
1410123-002G	ASP5	Water	E218.6 (Hexachrome)	1	250mL HDPE, unprsv.	☐	10/2/2014 16:30	5 days	None	☐	
1410123-002H	ASP5	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	☐	10/2/2014 16:30	5 days	Present	☐	
1410123-002I	ASP5	Water	E200.8 (Metals) (Dissolved-Field Filtered) <Iron>	1	250mL HDPE w/ HNO3	☐	10/2/2014 16:30	5 days	None	☐	
1410123-002J	ASP5	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	☐	10/2/2014 16:30	5 days	Present	☐	
1410123-003A	ASP6	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	☐	10/2/2014 15:50	5 days	Present	☐	
1410123-003B	ASP6	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	10/2/2014 15:50	5 days	Present	☐	
1410123-003C	ASP6	Water	SM3500 Fe B4c (Ferrous Iron) (Dissolved-Field-Filtered)	2	VOA w/ HCl & Foil Wrapping	☐	10/2/2014 15:50	5 days	None	☐	
1410123-003D	ASP6	Water	RSK175 <Ethane_4, Ethene_4, Methane_4>	2	aVOA w/ H2SO4	☐	10/2/2014 15:50	5 days	Present	☐	
1410123-003E	ASP6	Water	RSK175 (CO2)	2	VOA	☐	10/2/2014 15:50	5 days	Present	☐	
1410123-003F	ASP6	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as $NO3^-$, Sulfate>	1	250mL HDPE, unprsv.	☐	10/2/2014 15:50	5 days	Present	☐	
1410123-003G	ASP6	Water	E218.6 (Hexachrome)	1	250mL HDPE, unprsv.	☐	10/2/2014 15:50	5 days	None	☐	
1410123-003H	ASP6	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	☐	10/2/2014 15:50	5 days	Present	☐	

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

Bottle Legend:

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3
250mL HDPE, unprsv. = 250mL HDPE Bottle, Unpreserved
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aVOA w/ H2SO4 = 43mL Amber VOA w/ Sulfuric acid
VOA = 43mL VOA, Unpreserved
VOA w/ HCl = 43mL VOA w/ HCl

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
QC Level: LEVEL 2
Work Order: 1410123
Project: #0058; Xtra Oil Co.
Client Contact: Paul King
Date Received: 10/3/2014
Comments: Discrepancy in Iron results (dissolved vs. total) confirmed by re-running non-extracted samples of all 6.
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
1410123-003I	ASP6	Water	E200.8 (Metals) (Dissolved-Field Filtered) <Iron>	1	250mL HDPE w/ HNO3	☐	10/2/2014 15:50	5 days	None	☐	
1410123-003J	ASP6	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	☐	10/2/2014 15:50	5 days	Present	☐	

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

Bottle Legend:

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3
250mL HDPE, unprsv. = 250mL HDPE Bottle, Unpreserved
500mL HDPE, unprsv. = 500mL HDPE Bottle, Unpreserved
aVOA w/ H2SO4 = 43mL Amber VOA w/ Sulfuric acid
VOA = 43mL VOA, Unpreserved
VOA w/ HCl = 43mL VOA w/ HCl

CHAIN OF CUSTODY RECORD 1410123

PAGE 1 OF 1

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

PROJECT NUMBER: 0058

PROJECT NAME: Xtra Oil Co. 1701 Park Street Alameda

SAMPLED BY: (PRINTED & SIGNATURE) Steve Carmack

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	TPH-Methanol (6020 w/ Fuel Oxy)	8260 w/ Fuel Oxy + Pb Scavengers	Nitrate as Nitrogen & Sulfate	Total & Dissolved Iron	Dissolved Ferrous Iron	Alkalinity as Calcium Carbonate	Dissolved Methane/Ethane/Ethene + CO2	Dissolved Hexavalent Chromium	PRESERVATIVE	REMARKS
ASP4	10/2/14	1340	H_2O		17	X	X	X	X	X	X	X	X	ICE	Normal Turnaround Time
ASP5	↓	1630	↓		17	X	X	X	X	X	X	X	X	↓	↓
ASP6	↓	1550	↓		17	X	X	X	X	X	X	X	X	↓	↓

ICE / t° 10
GOOD CONDITION ___ APPROPRIATE
HEAD SPACE ABSENT ___ CONTAINERS
DECHLORINATED IN LAB ___ PRESERVED IN LAB ___
PRESERVATION VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)	DATE 10/3/14	TIME 1515	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment) 3	LABORATORY: McCampbell Analytical, Inc.
RELINQUISHED BY: (SIGNATURE)	DATE 10/3/14	TIME 1730	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment) 51	LABORATORY CONTACT: Angela Rydelius
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: (X) YES ( ) NO	LABORATORY PHONE NUMBER: (877) 252-9262

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

REMARKS: 1 bottle set: 4 HCL VOAs, 2 NP VOAs, 2 NP VOAs amber, 1 500mL Poly NP, 1 250mL Poly NA, 2 HaSty VOAs, 2-250mL w/ HNO_3, 2 VOAs w/ extra HCL (aluminum foil), 1 250mL w/ NaBy

SAMPLE REQUEST SHEET

P&D Environmental, Inc.
Project Number: 0058
Xtra Oil Company
1701 Park Street,
Alameda, California
06/20/2014

- Total Petroleum Hydrocarbons as Diesel (TPH-D) and Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) using EPA Method 3510C and EPA Method 3630C in conjunction with EPA Method 8015B,
- Total Petroleum Hydrocarbons as Gasoline (TPH-G) EPA Method 5030B in conjunction with modified EPA Method 8015B and EPA Method 8260B,
- VOC,s by EPA Method 8260 including MTBE, fuel oxygenates, and lead scavengers

- Inorganic anions nitrate as nitrogen and sulfate using EPA Method E300.1,
- Total and dissolved iron using EPA Method 200.8,
- Dissolved Ferrous Iron using method SM3500-Fe B4c,
- Alkalinity as calcium carbonate using Standard Method 2320B.

- Dissolved gases methane, ethane, ethene, and carbon dioxide using method RSK 175.
- Dissolved Hexavalent chromium using method E218.6.

NOTE: The bottles for dissolved iron, dissolved ferrous iron, and dissolved hexavalent chromium were field filtered in the field and the sample labels are marked as so. Additionally, the voas with extra HCL (for dissolved ferrous iron analysis) were wrapped in tin foil.

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

Sample Receipt Checklist

Client Name: **P & D Environmental**
Date and Time Received: **10/3/2014 6:12:08 PM**

Project Name: **#0058; Xtra Oil Co.**
LogIn Reviewed by: Jena Alfaro

WorkOrder №: **1410123** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 1°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: pH<2; 522: pH<4)?	Yes ☑	No ☐	NA ☐
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		
Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑

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

Comments: