

# Xtra OIL COMPANY

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July 14, 2015

**RECEIVED**

By Alameda County Environmental Health 3:08 pm, Jul 15, 2015

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

SUBJECT: SEMI-ANNUAL GROUNDWATER MONITORING AND SAMPLING 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 Monitoring and Sampling Report (January Through June 2015) dated July 14, 2015 (document 0058.R28).

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.L60

# P&D ENVIRONMENTAL, INC.

55 Santa Clara Avenue, Suite 240

Oakland, CA 94610

(510) 658-6916

July 14, 2015  
Report 0058.R28

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

SUBJECT: SEMI-ANNUAL GROUNDWATER MONITORING AND SAMPLING REPORT  
(JANUARY THROUGH JUNE 2015)  
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 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). The semi-annual monitoring and sampling was performed on June 17 and 18 2015 for the reporting period of January through June 2015. At the time of the semi-annual monitoring event, the wells were also sampled for baseline water quality analysis in preparation for the resumption of site remediation. Five air sparge points (ASP-2 through ASP-6) that had historically been installed for site remediation were also sampled during the June 2015 sampling event for baseline water quality determination in preparation for the resumption of site remediation. The baseline water quality sampling of the wells was performed in accordance with P&D's In Situ Chemical Oxidation Feasibility Test Work Plan dated February 7, 2014 (document 0058.W6).

No analysis was performed for hexavalent chromium during the June 2015 sampling event based on the historical analysis for hexavalent chromium in the wells and the documented absence of hexavalent chromium in groundwater following completion of P&D's 2014 ozone sparging pilot test. A Site Location Map (Figure 1) and Site Vicinity Map (Figure 2) are attached with this report.

## BACKGROUND

The site is currently used as a retail gasoline station. In a letter from the Alameda County Department of Environmental Health (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 is 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).

Ozone sparging was initiated 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 sparging on September 26, 2014 post-sparging groundwater monitoring and sample collection was performed on October 2 and 3, 2014. Documentation of the ozone sparging system start up, monitoring, and post-sparging groundwater sampling for a 30 day ozone sparging pilot test is provided in P&D's Ozone Sparging Pilot Test Report dated October 13, 2014 (document 0058.R26).

On November 3, 2014 P&D personnel purged and sampled groundwater well MW-2 at the subject site to evaluate rebound of petroleum hydrocarbon and associated Volatile Organic Compound (VOC) groundwater concentrations and also the presence of dissolved hexavalent chromium in groundwater following completion of the groundwater remediation pilot test. Based on the detected petroleum hydrocarbon concentrations and the absence of dissolved hexavalent chromium, P&D recommended that one additional sparging well be installed at the site next to ASP-4 and that ozone sparging be resumed at wells MW-2, EW-2 and the proposed new well located next to ASP-4. Documentation of the sampling and sample results are provided in P&D's Post-Ozone Sparging Pilot Test Rebound Evaluation Report dated November 13, 2014 (document 0058.R27).

In an e-mail dated June 2, 2015 from the ACDEH an ISCO Feasibility Test Work Plan Addendum was requested. In response to the e-mail P&D provided a Well Installation and Ozone Sparging Work Plan dated July 6, 2015 (document 0058.W7) for installation of one additional sparging well at the site next to ASP-4 and that ozone sparging be resumed at wells MW-2, EW-2 and the proposed new well located next to ASP-4.

## FIELD ACTIVITIES

Water levels were measured on June 17 and 18, 2015 to the nearest 0.01 foot using an electric water level indicator in monitoring wells MW-1 through MW-4, and in wells EW-2, EW-4, EW-5, and OW-2 for the semi-annual well monitoring and sampling event. In addition, the air sparge points ASP-2 through ASP-6 were monitored and sampled on June 17 and 18, 2015 in preparation for the resumption of site remediation. The air sparge points ASP-2 through ASP-6 were sampled on June 17, 2015 and all of the wells were sampled on June 18, 2015.

In addition to semi-annual well sampling analysis, the samples collected in June 2015 were also analyzed for baseline analytes in preparation for the resumption of site remediation. The water level monitoring data for the wells and air sparge points are summarized in Table 1. Historical monitoring and sampling data obtained by others for the subject site are attached with this report as Appendix A.

Prior to sampling, wells MW-1 through MW-4, EW-2, EW-4, EW-5, and OW-2, and air sparge points ASP-2 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 polyethylene tubing for a minimum of fifteen minutes at each sampling location or until dewatered conditions were encountered (all of the air sparge points except ASP-3 dewatered during purging). New 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, with the exception of MW-4, where it was set near the bottom of the well because the well has historically dewatered during purging. Similarly, the bottom of the tubing was set near the bottom of the air sparging points because of historical dewatering during purging.

Purging was performed at a flow rate of approximately 200 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. Field parameters are summarized in Table 2, and copies of the groundwater monitoring/well purging data sheet for each well are attached with this report as Appendix B.

During the June 2015 monitoring and sampling event petroleum hydrocarbon sheen was detected on the purge water from wells MW-1 and MW-4. In addition, strong petroleum hydrocarbon odors were detected on the purge water from wells MW-1, MW-4, and EW-5, and slight petroleum hydrocarbon odors were detected on the purge water from well MW-2. No petroleum hydrocarbon odors were detected on the purge water from wells MW-3, EW-2, EW-4, and OW-2 or any of the the air sparging points.

Once the wells 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 2015 sample collection event the samples were collected into 40-milliliter glass Volatile Organic Analysis (VOA) vials and 250-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. 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 B, and also are summarized in Table 2 with historical water quality field parameter data.

## HYDROGEOLOGY

The measured depth to water on June 18, 2015 for groundwater monitoring wells MW-1 through MW-4 ranged from 7.53 to 8.60 feet, and the measured depth to groundwater in wells EW-2, EW-4, EW-5, and OW-2 was 7.35, 6.24, 6.28, and 6.51 feet, respectively. Additionally, the water levels on June 17, 2015 in air sparge points ASP-2 through ASP-6 ranged from 6.36 to 6.65 feet. Groundwater level data collected during the monitoring period are presented in Table 1.

Monitoring wells MW-1, MW-2, and MW-3 were installed in 1994, and well MW-4 was installed in 1997. These four wells were surveyed in 1997, however the datum used for the survey is unknown. In June 2011 these four wells were resurveyed relative to the North American Vertical Datum of 1988 (NAVD 88) along with new wells EW-2, EW-4, EW-5, and OW-2. All of the calculated groundwater surface elevations in Table 1 beginning in 2011 are relative to the NAVD 88 datum. All of the calculated groundwater surface elevations for wells MW-1 through MW-4 prior to 2011 are relative to the unknown datum, which is presumed to be relative to the North American Geodetic Vertical Datum of 1929 (NGVD 29).

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 Sampling (January Through June 2014) and Baseline Groundwater Quality Report (document 0058.R25) dated October 1, 2014.

During the groundwater ozone sparging pilot test system installation, approximately 2.4 feet of PVC pipe was added to the top of the well pipe at well MW2. For this reason the elevation of the top of well MW-2 is not presently known to an accuracy of 0.01 feet, and a groundwater surface elevation is not provided in Table 1 for well MW2. The groundwater surface elevations for all of the other wells are shown in Figure 2, along with groundwater surface contours that are based on those groundwater surface elevations. Based on the groundwater surface contours, the groundwater flow direction on June 17 and 18, 2015 was easterly, consistent with historical groundwater flow directions at the site.

The calculated groundwater flow direction on June 17 and 18, 2015 was consistent with the historical northeasterly to southeasterly groundwater flow direction obtained using the groundwater surface elevation information from the nearby 1725 Park Street Exxon/Valero site in conjunction with groundwater surface elevation data from the subject site. The locations of the subject site and the nearby 1725 Park Street Exxon/Valero site are shown in Figure 3.

Historical groundwater flow direction information for both sites is shown in rose diagrams in the figure. In addition, the approximate historical northeasterly groundwater flow direction obtained using the groundwater surface elevation information from the 1725 Park Street Exxon/Valero site in conjunction with groundwater surface elevation data from the subject site is shown in Figure 3.

Comparison of the June 17 and 18, 2015 well water levels with available October 3, 2014 well water levels shows that the water levels were higher on June 17 and 18, 2015 in all of the wells by amounts ranging from 0.44 to 0.66 feet. Well MW-4 is located in the landscaping on the north-northeast side of the property along the fence line. Historical smaller changes in water level in well MW-4 relative to the other wells may have been the result of landscape irrigation water preferentially draining to groundwater in the immediate vicinity of the well MW-4 location.

## LABORATORY RESULTS

The groundwater samples collected from all of the wells and air sparging points at the subject site were analyzed at McCampbell Analytical Inc. of Pittsburg, California. For the June 2015 semi-annual well sampling event all of the samples were analyzed 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) using EPA Method 5030B in conjunction with modified EPA Method 8015B and EPA Method 8021B; and for VOCs including benzene, toluene, ethylbenzene, total xylenes (BTEX), fuel oxygenates, and lead scavengers by EPA Method 5030B in conjunction with EPA Method 8260B. Additionally, for the June 2015 baseline sampling event all of the groundwater samples were analyzed for the dissolved gases 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; and for dissolved and total iron using EPA Method E200.8.

The laboratory analytical results are summarized in Tables 3A through 3C. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report as Appendix C.

## DISCUSSION AND RECOMMENDATIONS

The four historical groundwater monitoring wells at the subject site (MW-1 through MW-4) and the four wells related to historically proposed site remediation (EW-2, EW-4, EW-5, and OW-2) were monitored for water levels and sampled on June 18, 2015, and air sparge points ASP-1 through ASP-6 were monitored and sampled on June 17, 2015. Monitoring and sampling historically was performed at the subject site in conjunction with the monitoring and sampling event performed by ERI for the Exxon/Valero facility located at 1725 Park Street. However the case for the Exxon/Valero facility located at 1725 Park Street was closed October 25, 2012.

Review of Table 3A shows the following site groundwater quality conditions associated with the semi-annual well sampling event:

- No analytes were detected in the groundwater sample collected from well MW-3.

- TPH-D was detected in the groundwater samples collected from wells MW-1, MW-2, MW-4, EW-5, and OW-2 at concentrations of 2,000, 3,100, 1,000, 290, and 90 micrograms per liter (ug/L), respectively;
- TPH-G was detected in the groundwater samples collected from wells MW-1, MW-2, MW-4, EW-2, EW-4, EW-5, and OW-2 at concentrations of 19,000, 2,700, 5,400, 510, 87, 940, and 260 ug/L, respectively;
- Benzene was detected in wells MW-1, MW-2, MW-4, and EW-5 at concentrations of 4,100, 140, 340, and 89 ug/L, respectively.
- The remaining BTEX compounds were detected at concentrations ranging from 0.57 to 570 ug/L.
- MTBE was detected using EPA Method 8260B in the groundwater samples collected from wells MW-1, MW-2, MW-4, EW-4, EW-5, and OW-2 at concentrations of 430, 27, 32, 7.7, 30, and 0.76 ug/L, respectively.
- Tert-Butyl Alcohol (TBA) was detected in the groundwater samples collected from wells MW-1, MW-2, MW-4, EW-5, and OW-2 at concentrations of 1,100, 180, 61, 760, and 2.4 ug/L, respectively.

Review of the laboratory analytical report shows that the laboratory described the detected TPH-D results for the samples from wells MW-1, MW-4, and EW-5 as consisting of gasoline-range compounds, the sample from well MW-2 as consisting of gasoline-range compounds, diesel-range compounds with no recognizable pattern, and oil range compounds, and the sample from well OW-2 as consisting of kerosene-range or jet-fuel range compounds.

For most of the wells and air sparge points, the previous sampling event was on October 3, 2014; but for wells MW-3, MW-4, OW-2, and air sparge points ASP-2 and ASP-3 the previous sampling event was on June 19, 20, and 23, 2014. Comparison of the June 2015 sample results with detected concentrations from the previous event show that all analyte concentrations in well MW-3 have remained not detected, all analyte concentrations in wells MW-1, MW-4, EW-2, EW-4, EW-5, and OW-2 remained not detected or decreased (with the exceptions of TPH-G in well OW-2, TBA, in wells MW-1, MW-4, and EW-5, which all increased). In well MW-2 all analyte concentrations remained not detected or increased.

Additionally, PCE in wells EW-2 and EW-4, and TCE in well EW-4 also all increased. The source of the PCE and TCE is unknown, and is interpreted to not originate from the subject site.

Review of Table 3A also shows the following site conditions associated with the June 2015 baseline water quality well sampling event for the air sparging points:

- The only analytes detected in any of the groundwater samples collected from air sparging points ASP-1 through ASP-6 were TBA in the samples collected from ASP-2 and ASP-4 at concentrations of 2,600 and 7.5 ug/L, respectively, and MTBE in the sample collected from ASP-4 at a concentration of 0.98 ug/L. Additionally, PCE was detected in the sample collected from ASP-5 at a concentration of 2.7 ug/L.

Review of Table 3B shows that the following site conditions associated with the June 2015 baseline water quality well sampling event:

- Ethane was detected in the groundwater samples collected from wells MW-1, MW-2, MW-4, EW-4, and EW-5 at concentrations of 3.1, 8.7, 3.2, and 0.30 ug/L, respectively, and was not detected in any of the other wells or air sparging points.
- Ethene was not detected in any of the groundwater samples collected from any of the wells or air sparging points.
- Methane was detected in all of the samples, at concentrations ranging from 0.25 to 8,400 ug/L.
- Carbon dioxide was detected in all of the samples ranging in concentration from 3,300 to 79,000 ug/L.

Review of Table 3C shows the following site conditions associated with the June 2015 baseline water quality well sampling event:

- Carbonate and hydroxide were not detected in any of the samples.
- Nitrate as nitrogen and Nitrate as nitrate ( $\text{NO}_3^-$ ) were only detected in well EW-4 at concentrations of 180 and 810 ug/L, respectively.
- Sulfate was detected in all of the samples at concentrations ranging from 500 to 100,000 ug/L;
- Total alkalinity as calcium carbonate and also as bicarbonate were detected in all of the samples at concentrations ranging from 117 to 508 milligrams of Calcium Carbonate per Liter,
- Dissolved iron was detected only in wells MW-1 through MW-4, EW-5, and OW-2 at concentrations ranging from 72 to 24,000 ug/L, and
- Total iron was detected in all of the samples at concentrations ranging from 370 to 20,000.

Based on the sample results, P&D recommends that groundwater remediation be resumed at the site to move the case to closure. P&D also recommends that the semi-annual well sampling be continued.

#### 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.

July 14, 2015  
Report 0058.R28

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 Well and Air Sparge Point Water Level Monitoring Data

Table 2 - Summary of Well and Air Sparge Point Water Quality Field Parameters

Table 3A - Summary of Well and Air Sparge Point Groundwater Sample Laboratory Analytical Results - TPH and VOCs

Table 3B - Summary of Well and Air Sparge Point Groundwater Sample Laboratory Analytical Results - Ethane, Ethene, Methane, and Carbon Dioxide

Table 3C - Summary of Well and Air Sparge Point Groundwater Sample Laboratory Analytical Results - Inorganic Analytes

Figure 1 - Site Location Map

Figure 2 - Site Plan Showing Well Locations and Groundwater Surface Elevations

Figure 3 - Site Vicinity Map Showing Groundwater Surface Elevations

Appendix A - Historical Water Level and Water Quality Data for the Subject Site

Appendix B - Groundwater Monitoring/Well Purging Data Sheets

Appendix C - Laboratory Analytical Reports and Chain of Custody Documentation

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## **TABLES**

Table 1  
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	6/18/2015	22.36*	7.58	14.78
	11/3/2014			Not monitored
	10/3/2014		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	6/18/2015	Unknown	8.60	16.90
	11/3/2014			Not monitored
	10/3/2014		9.04	16.46
	8/21/2014	23.10*	8.51	16.99
	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	6/18/2015	23.35*	7.82	15.53
	11/3/2014			Not monitored
	10/3/2014			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 1  
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	6/18/2015	22.48*	7.53	14.95
	11/3/2014			Not monitored
	10/3/2014			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	6/18/2015	22.13*	7.35	14.78
	11/3/2014			Not monitored
	10/3/2014		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	6/18/2015	20.95*	6.24	14.71
	11/3/2014			Not monitored
	10/3/2014		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	6/18/2015	21.20*	6.28	14.92
	11/3/2014			Not monitored
	10/3/2014		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

Table 1  
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.)
OW-2	6/18/2015	21.55*	6.51	15.04
	11/3/2014			Not monitored
	10/3/2014			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
ASP-2	6/18/2015	Unknown	6.40	Unknown
	11/3/2014			Not monitored
	10/2/2014			Not monitored
	8/20/2014		7.13	Unknown
	6/23/2014		6.56	Unknown
ASP-3	6/18/2015	Unknown	6.65	Unknown
	11/3/2014			Not monitored
	10/2/2014			Not monitored
	8/20/2014		7.23	Unknown
	6/23/2014		6.73	Unknown
ASP-4	6/18/2015	Unknown	6.62	Unknown
	11/3/2014			Not monitored
	10/2/2014		7.68	Unknown
	8/21/2014		7.45	Unknown
	6/23/2014		6.70	Unknown
ASP-5	6/18/2015	Unknown	6.36	Unknown
	11/3/2014			Not monitored
	10/2/2014		7.36	Unknown
	8/21/2014		7.13	Unknown
	6/23/2014		6.52	Unknown
ASP-6	6/18/2015	Unknown	6.54	Unknown
	11/3/2014			Not monitored
	10/2/2014		7.51	Unknown
	8/21/2014		7.46	Unknown
	6/23/2014		6.68	Unknown

**Abbreviations and Notes:**

\* = Surveyed by Kier &amp; 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 2**  
Summary of Water Quality Field Parameters

Sample ID	Sample Date	D.O. (mg/L)	O.R.P. (mV)	pH	Electrical Conductivity ( $\mu$ S/cm)	Temperature (C°)	Turbidity (NTU)
MW-1	6/18/2015	0.11	-161.2	6.83	1,000	21.7	1.12
	11/3/2014				Not Monitored		
	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
	6/19/2013	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	6/18/2015	0.17	-176.2	6.76	972	22.2	0.00
	11/3/2014	0.24	-46.1	7.53	1,206	24.6	0.00
	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	6/18/2015	0.34	-30.8	6.41	451	19.9	5.60
	11/3/2014				Not Monitored		
	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 2  
Summary of Water Quality Field Parameters

Sample ID	Sample Date	D.O. (mg/L)	O.R.P. (mV)	pH	Electrical Conductivity ( $\mu$ S/cm)	Temperature (C°)	Turbidity (NTU)
MW-4	6/18/2015	0.28	-113.5	6.83	618	19.7	5.64
	11/3/2014				Not Monitored		
	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	6/18/2015	0.17	-133.5	7.28	896	21.3	2.72
	11/3/2014				Not Monitored		
	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	6/18/2015	0.15	-137.7	7.16	645	21.9	0.91
	11/3/2014				Not Monitored		
	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	6/18/2015	0.16	-153.9	6.80	787	20.0	0.00
	11/3/2014				Not Monitored		
	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	6/18/2015	0.19	-137.0	6.83	661	18.9	6.10
	11/3/2014				Not Monitored		
	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

Table 2  
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)
ASP-2	6/17/2015	1.61	-55.8	7.12	802	19.9	60.00
	11/3/2014				Not Monitored		
	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	6/17/2015	0.50	-16.1	7.48	692	21.2	16.81
	11/3/2014						
	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	6/17/2015	2.29	24.0	6.92	651	22.9	18.70
	11/3/2014				Not Monitored		
	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	6/17/2015	2.37	-32.1	7.39	662	22.8	113.00
	11/3/2014				Not Monitored		
	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	6/17/2015	1.06	-17.1	7.46	728	22.8	298.00
	11/3/2014				Not Monitored		
	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 3A**  
**Summary of Well and Air Sparge Point Groundwater Sample Laboratory Analytical Results - TPH and VOCs**

Well Number	Sample Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Fuel Oxygenates & Lead Scavengers	Other VOCs by EPA Method 8260
MW-1	6/18/2015, e	19,000	2,000, c	ND<250	430	4,100	ND<100	280	570	ND, except TBA = 1,100	ND, except Isopropylbenzene = 110, n-Propyl benzene = 130, 1,2,4-Trimethylbenzene = 100,
	11/3/2014						Not Sampled				
	10/3/2014, e	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, NA
	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 = 10	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	3,300, 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	6/18/2015, e	2,700	3,100, b,c,j	1,600, b,c,j	27	140	ND<5.0	8.6	19	ND, except TBA = 180	ND, except Naphthalene = 13, n-butyl benzene = 6.5, Isopropylbenzene = 12, n-Pronylbenzene = 23
	11/3/2014, e	480	2,500, c,f,i	1,300, c,f,i	ND<0.50	1.0	ND<0.50	1.4	0.96	ND, except TBA = 28	ND, except Acetone = 190, MEK = 56, Chloroform = 0.96, MBK = 12, MIBK = 8.8, n-butyl benzene = 3.1, sec-Butyl benzene = 1.2, Isopropylbenzene = 4.0, n-Pronylbenzene = 10
	10/3/2014, e	97, g	370, h	ND<250	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	NA
	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	3,000	36	48	48	NA	NA
	5/30/2007	14,000, a	22,000, a,c,d	5,800	ND<210	2,300	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 3A**  
**Summary of Well and Air Sparge Point Groundwater Sample Laboratory Analytical Results - TPH and VOCs**

Well Number	Sample Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Fuel Oxygenates & Lead Scavengers	Other VOCs by EPA Method 8260
MW-3	6/18/2015, e	ND<50	ND<50	ND<250	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND	All ND
	11/3/2014										
	10/3/2014										
	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
	12/1/2012	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	ND	NA
	5/26/2008	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	NA
	2/27/2008	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND	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	ND	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	ND	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	ND	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	ND	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	ND	NA
MW-4	6/18/2015	5,400	1,000, c	ND<250	32	340	12	34	120	ND, except TBA = 61	ND, except Naphthalene = 33, n-butyl benzene = 12, Isopropylbenzene = 34, n-Propyl benzene = 88, 1,2,4-Trimethylbenzene = 41, 1,3,5-Triisobutylbenzene = 14
	11/3/2014										
	10/3/2014										
	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 = 17	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 = 600, 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
	5/26/2008	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	6/18/2015	510, g	ND<50	ND<250	ND<25	ND<25	ND<25	ND<25	ND<25	ND, except PCE = 1,000, TCE = 150	
	11/3/2014										
	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 3A**  
**Summary of Well and Air Sparge Point Groundwater Sample Laboratory Analytical Results - TPH and VOCs**

Well Number	Sample Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Fuel Oxygenates & Lead Scavengers	Other VOCs by EPA Method 8260
EW-4	6/18/2015	87, g	ND<50	ND<250	7.7	ND<5.0	ND<5.0	ND<5.0	ND<5.0	All ND	ND, except PCE = 86, TCE = 11
	11/3/2014										
	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 = 39, 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	6/18/2015	940	290, c	ND< 250	30	89	ND<5.0	30	ND<5.0	ND, except TBA = 760	ND, except Naphthalene = 5.5, Isopropylbenzene = 12, n-Propyl benzene = 25
	11/3/2014										
	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	6/18/2015	260, i	90, k	ND<250	0.76	ND<0.50	ND<0.50	0.70	0.57	ND, except TBA = 2.4	ND, except Carbon Disulfide = 1.2, Isopropyl benzene = 0.77, n-Propyl benzene = 0.76
	11/3/2014										
	10/3/2014										
	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	6/17/2015	ND<50	ND<50	ND<250	ND<25	ND<25	ND<25	ND<25	ND<25	ND, except TBA = 2,600	All ND
	11/3/2014										
	10/2/2014										
	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

Table 3A  
Summary of Well and Air Sparge Point Groundwater Sample Laboratory Analytical Results - TPH and VOCs

Well Number	Sample Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Fuel Oxygenates & Lead Scavengers	Other VOCs by EPA Method 8260
ASP-3	6/17/2015	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND	All ND
	11/3/2014					Not Sampled.					
	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	6/17/2015	ND<50	ND<50	ND<250	0.98	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND, except TBA = 7.5	All ND
	11/3/2014					Not Sampled.					
	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	6/17/2015	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 = 2.7, Carbon Disulfide = 0.55
	11/3/2014					Not Sampled.					
	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	6/17/2015	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND	ND, except Carbon Disulfide = 1.3
	11/3/2014					Not Sampled.					
	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, NA
	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	

**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 tert-butyl ether

TBA = tert-Butyl alcohol

1,2-DCA = 1,2-Dichloroethane

PCE = Tetrachloroethene

TCE = Trichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

MBK = 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. 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.

i = Laboratory Note: strongly aged gasoline or diesel range compounds are significant in the TPH-G chromatogram.

j = Laboratory Note: oil range compounds are significant.

k = Laboratory Note: kerosene/kerosene range/ jet fuel range.

Results are in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted.

Table 3B

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

Well Number	Sample Date	Ethane	Ethene	Methane	Carbon Dioxide
MW-1	6/18/2015	3.1	ND<0.30	8,400	68,000
	11/3/2014			Not Sampled.	
	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	6/18/2015	8.7	ND<0.30	4,900	26,000
	11/3/2014	NA	NA	NA	NA
	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	6/18/2015	ND<0.20	ND<0.30	9.3	44,000
	11/3/2014			Not Sampled.	
	10/3/2014			Not Sampled.	
	6/19/2014	ND<0.20	ND<0.20	2.5	59,000
MW-4	6/18/2015	3.2	ND<0.30	7,000	51,000
	11/3/2014			Not Sampled.	
	10/3/2014			Not Sampled.	
	6/19/2014	ND<0.20	0.59	2,500	63,000
EW-2	6/18/2015	ND<0.20	ND<0.30	140	79,000
	11/3/2014			Not Sampled.	
	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	6/18/2015	ND<0.20	ND<0.30	27	7,200
	11/3/2014			Not Sampled.	
	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	6/18/2015	ND<0.20	ND<0.30	1,400	12,000
	11/3/2014			Not Sampled.	
	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	6/18/2015	0.30	ND<0.30	250	26,000
	11/3/2014			Not Sampled.	
	10/3/2014			Not Sampled.	
	6/20/2014	ND<0.20	ND<0.20	17	36,000
ASP-2	6/17/2015	ND<0.20	ND<0.20	8.8	15,000
	11/3/2014			Not Sampled.	
	10/2/2014			Not Sampled.	
	6/23/2014	ND<0.20	ND<0.20	1.9	12,000
ASP-3	6/17/2015	ND<0.20	ND<0.20	0.25	3,300
	11/3/2014			Not Sampled.	
	10/2/2014			Not Sampled.	
	6/23/2014	ND<0.20	ND<0.20	0.13	2,800
ASP-4	6/17/2015	ND<0.20	ND<0.20	2.9	12,000
	11/3/2014			Not Sampled.	
	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	6/17/2015	ND<0.20	ND<0.20	0.57	4,800
	11/3/2014			Not Sampled.	
	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	6/17/2015	ND<0.20	ND<0.20	0.46	3,400
	11/3/2014			Not Sampled.	
	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 ( $\mu\text{g/L}$ ), unless otherwise noted.

Table 3C  
Summary of Well Groundwater Sample Laboratory Analytical Results - Inorganic Analytes

Well Number	Sample Date	Nitrate as N	Nitrate as NO <sub>3</sub> -	Sulfate	Total Alkalinity as Calcium Carbonate (mg CaCO <sub>3</sub> /L)	Carbonate (mg CaCO <sub>3</sub> /L)	Bicarbonate (mg CaCO <sub>3</sub> /L)	Hydroxide (mg CaCO <sub>3</sub> /L)	Dissolved Iron	Total Iron	Dissolved Ferrous Iron	Dissolved Hexavalent Chromium
MW-1	6/18/2015	ND<100	ND<450	500	508	ND<1.00	508	ND<1.00	4,700	20,000	NA	NA
	11/3/2014							Not Sampled.				
	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	6/18/2015	ND<100	ND<450	20,000	475	ND<1.00	475	ND<1.00	5,600	17,000	NA	NA
	11/3/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.20
	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	6/18/2015	ND<100	ND<450	49,000	117	ND<1.00	117	ND<1.00	63	2,600	NA	NA
	11/3/2014							Not Sampled.				
	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	6/18/2015	ND<100	ND<450	650	350	ND<1.00	350	ND<1.00	2,100	8,300	NA	NA
	11/3/2014							Not Sampled.				
	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	6/18/2015	ND<100	ND<450	120,000	180	ND<1.00	180	ND<1.00	ND<20	1,300	NA	NA
	11/3/2014							Not Sampled.				
	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	6/18/2015	180	810	89,000	136	ND<1.00	136	ND<1.00	ND<20	2,100	NA	NA
	11/3/2014							Not Sampled.				
	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	6/18/2015	ND<100	ND<450	71,000	261	ND<1.00	261	ND<1.00	4,200	15,000	NA	NA
	11/3/2014							Not Sampled.				
	10/3/2014	ND<100	ND<450	2,500	375	ND<1.00	375	ND<1.00	22,000	15,000	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	6/18/2015	ND<100	ND<450	28,000	307	ND<1.00	307	ND<1.00	2,500	9,900	NA	NA
	11/3/2014							Not Sampled.				
	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	6/17/2015	ND<100	ND<450	100,000	231	ND<1.00	231	ND<1.00	ND<20	2,400	NA	NA
	11/3/2014							Not Sampled.				
	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	6/17/2015	ND<100	ND<450	100,000	169	ND<1.00	169	ND<1.00	ND<20	370	NA	NA
	11/3/2014							Not Sampled.				
	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	6/17/2015	ND<100	ND<450	100,000	133	ND<1.00	133	ND<1.00	ND<20	4,100	NA	NA
	11/3/2014							Not Sampled.				
	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	6/17/2015	ND<100	ND<450	100,000	147	ND<1.00	147	ND<1.00	ND<20	2,100	NA	NA
	11/3/2014							Not Sampled.				
	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	6/17/2015	ND<100	ND<450	100,000	190	ND<1.00	190	ND<1.00	ND<20	3,700	NA	NA
	11/3/2014							Not Sampled.				
	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.

CaCO<sub>3</sub> = Calcium Carbonate

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

## **FIGURES**

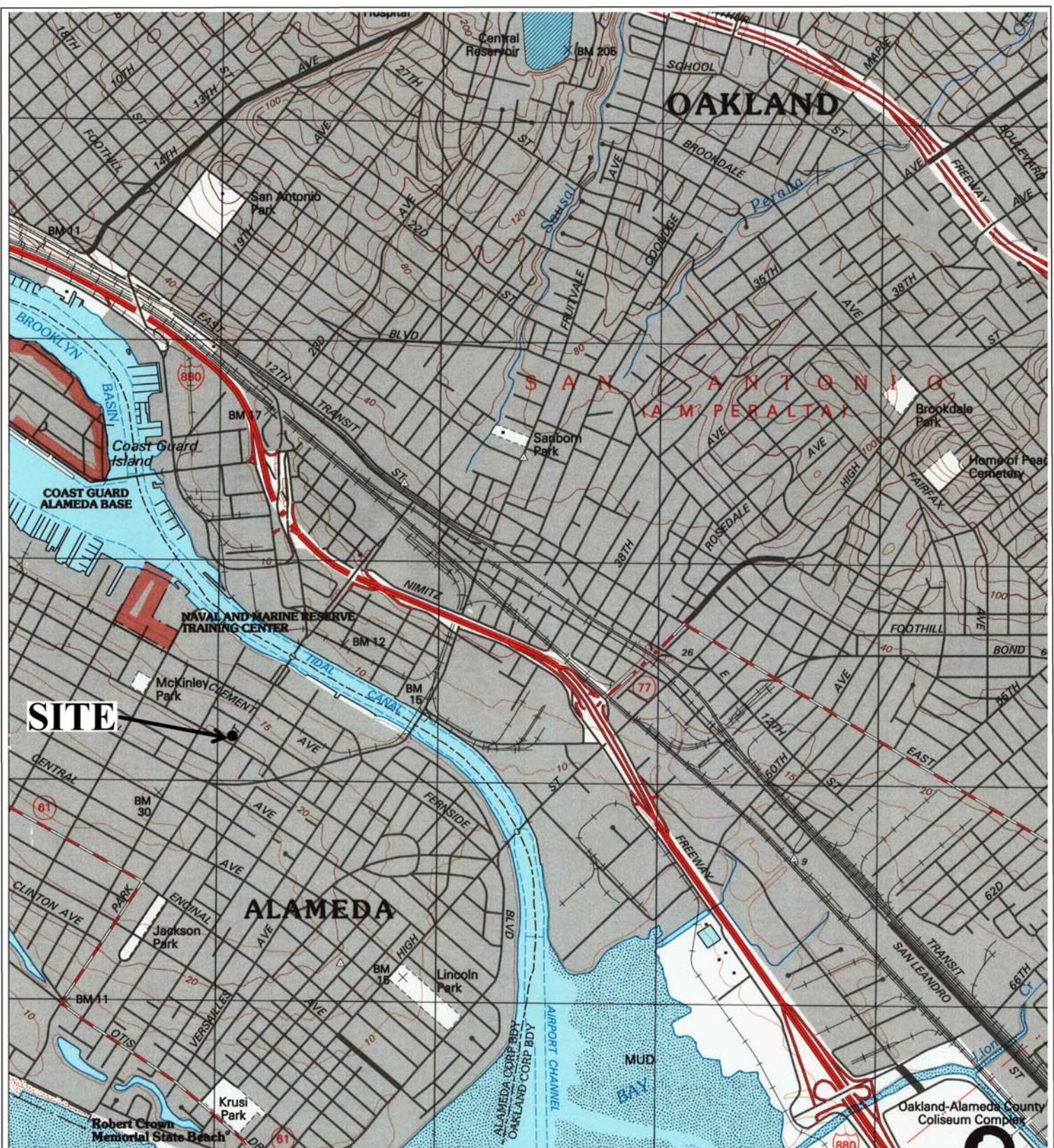


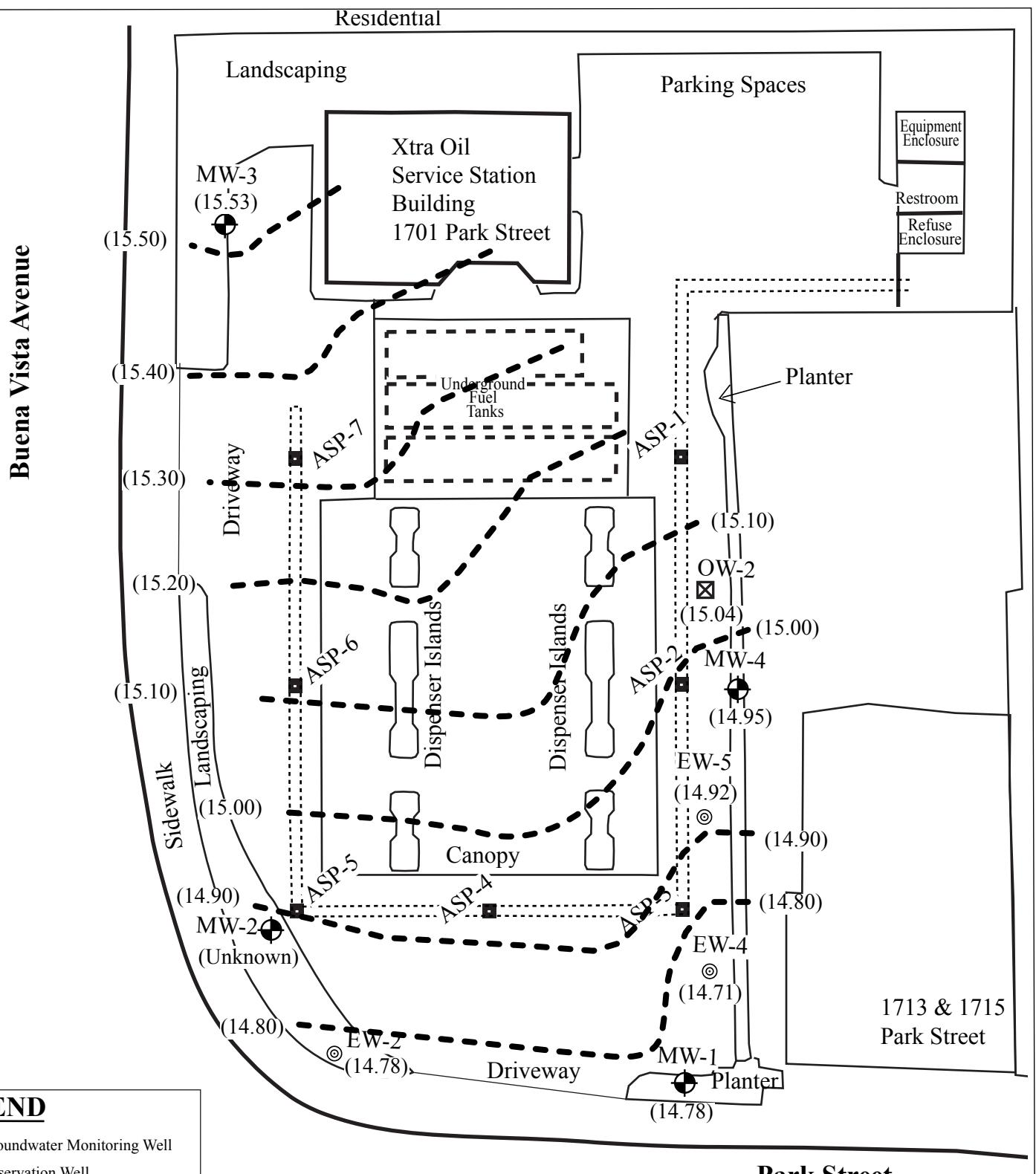
Figure 1  
Site Location Map  
Xtra Oil Company  
1701 Park Street  
Alameda, California

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

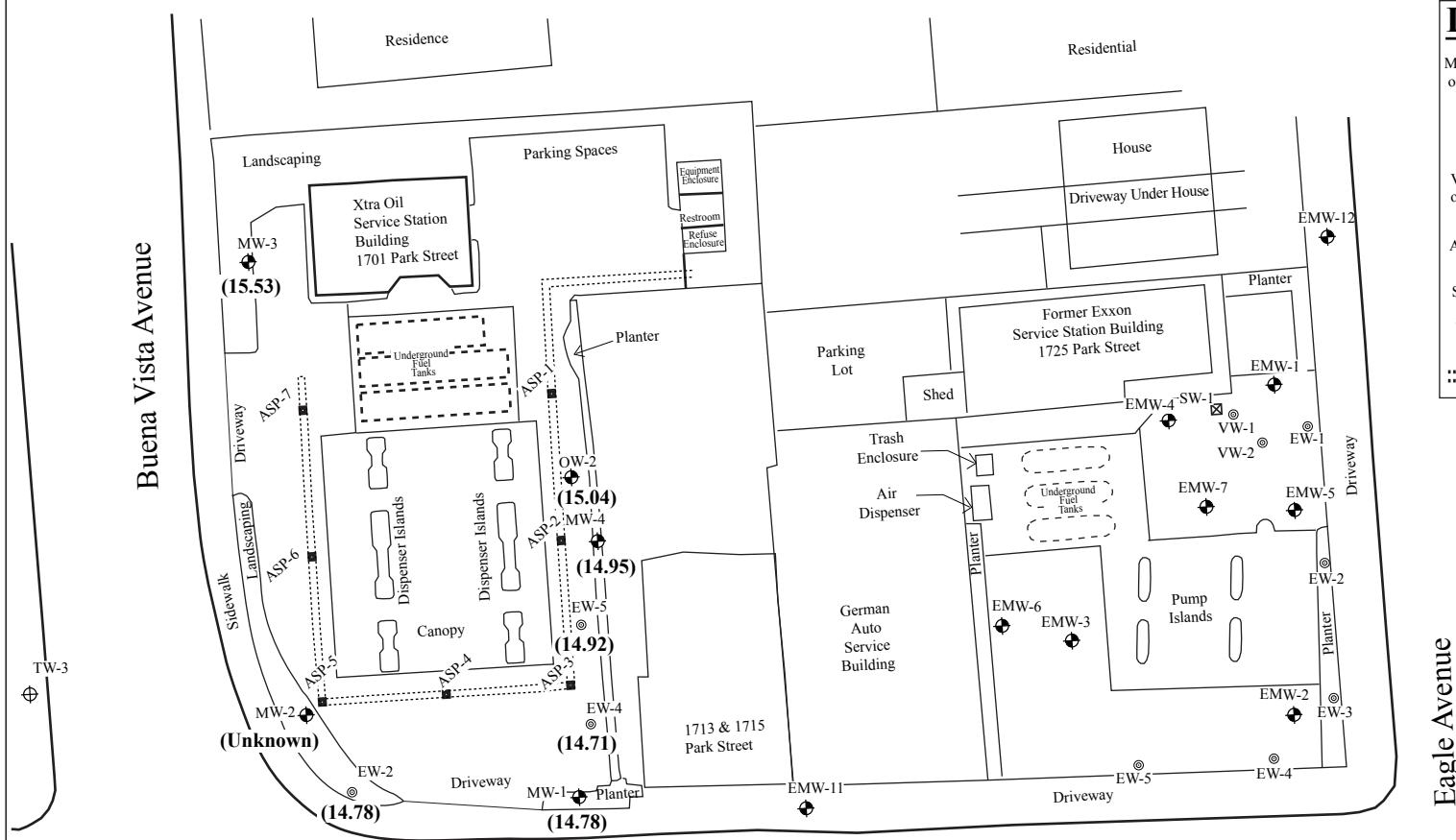
0 1,000 2,000  
Approximate Scale in Feet





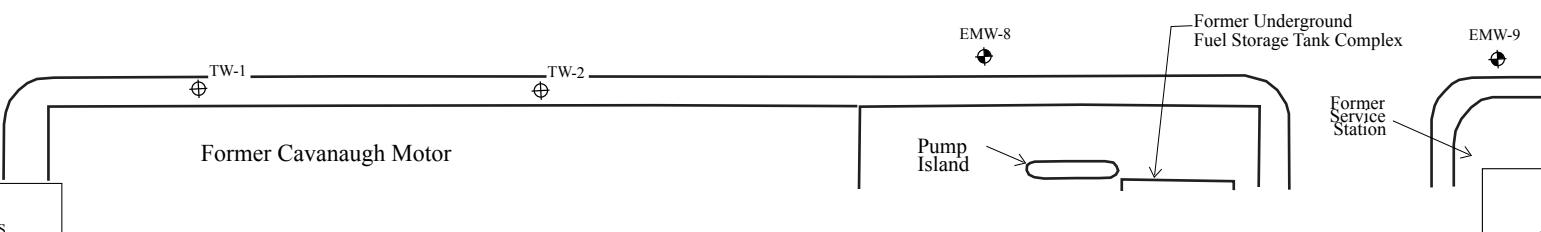
## LEGEND

MW-4 or EMW-12 <b>(15.53)</b>	Groundwater Monitoring Well with Groundwater Surface Elevation In Feet On 6/17-18/15
VW-2 or EW-5	Extraction Well
ASP-7	Air Sparging Point
SW-1	Destroyed Well
TW-3	Temporary Well
.....	Horizontal Vapor Extraction Trenching



CALCULATED GROUNDWATER FLOW DIRECTION FOR SUBJECT SITE

APPROXIMATE HISTORICAL GROUNDWATER FLOW DIRECTION FOR SUBJECT SITE AND 1725 PARK STREET



1725 Park Street GROUNDWATER FLOW DIRECTIONS March 2004 Through April 2010

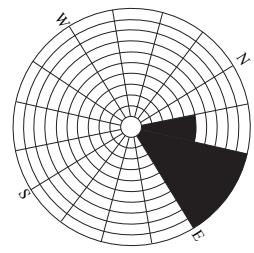
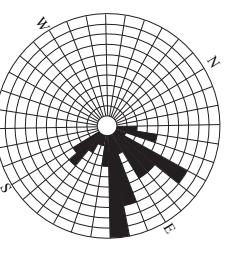


Figure 3  
Site Vicinity Map Showing Groundwater Surface Elevations  
1701 Park Street  
Castro Valley, California

Base Map From:  
Alisto Engineering Group, 9/23/2005  
and Environmental Resources, Inc.,  
6/15/2004

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

0 25 50  
Approximate Scale in Feet



## **APPENDIX A**

### **HISTORICAL WATER LEVEL AND WATER QUALITY DATA FOR THE SUBJECT SITE**

TABLE 1 - SUMMARY OF GROUNDWATER SAMPLING  
XTRA OIL COMPANY SERVICE STATION  
1701 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-210

WELL ID	DATE OF MONITORING/SAMPLING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	OTHER SVOCs (ug/l)	NAPHTHALENE (ug/l)	BENZO-PYRENE (ug/l)	DO (ppm)	LAB		
MW-1	11/04/94	19.60	8.5	—	10.96	60000	6400	13000	4900	1300	5500	—	—	—	—	—	MCC		
QC-1 (c)	11/04/94	—	—	—	—	54000	—	12000	4500	1200	5200	—	—	—	—	—	MCC		
MW-1	01/19/95	19.60	6.10	—	13.50	—	—	—	—	—	—	—	—	—	—	—	MCC		
MW-1	02/24/95	19.60	6.57	—	13.03	56000	4400	13000	7000	1400	5100	—	—	—	—	—	MCC		
QC-1 (c)	02/24/95	—	—	—	—	43000	—	8900	4600	670	3300	—	—	—	—	—	MCC		
MW-1	05/25/95	19.60	6.54	—	13.06	53000	4700	11000	5700	1200	4000	—	—	—	—	—	MCC		
QC-1 (c)	05/25/95	—	—	—	—	48000	—	11000	5300	1200	3800	—	—	—	—	—	MCC		
MV4-1	08/30/95	19.60	8.15	—	11.45	14000	3700	5000	1100	3900	103	—	—	—	—	—	MCC		
QC-1 (c)	08/30/95	—	—	—	—	57000	—	17000	700	1500	5200	—	—	—	—	—	MCC		
MW-1	11/18/95	19.60	8.79	—	10.81	100000	5900	22000	17000	2100	8500	—	—	—	—	—	MCC		
QC-1 (c)	11/18/95	—	—	—	—	95000	—	20000	15000	1800	7800	—	—	—	—	—	MCC		
MW-1	03/20/96	19.60	6.45	—	13.15	46000	3300	10000	6200	1100	3200	—	—	—	—	—	MCC		
QC-1 (c)	03/20/96	—	—	—	—	42000	—	9800	5800	970	3000	—	—	—	—	—	MCC		
MW-1	06/13/96	19.60	7.14	—	12.46	44000	5400	9500	550	1100	4000	19000	—	—	—	—	—	MCC	
QC-1 (c)	06/13/96	—	—	—	—	48000	—	9300	560	1000	3800	17000	—	—	—	—	—	MCC	
MW-1	09/23/96	19.60	7.56	—	12.04	76000	14000	14000	11000	1600	7100	17000	—	—	—	—	—	6.1	MCC
MW-1	12/19/96	19.60	7.08	—	12.52	46000	—	12000	550	1200	4100	—	—	—	—	—	—	MCC	
MW-1	05/09/97	19.60	7.39	—	12.21	80000	7500	14000	12000	1700	7600	14000	ND	280	ND-2	2.7	MCC/CHR		
MW-1	09/11/97	19.60	7.50	—	12.10	100000	7700	19000	1900	2400	11000	ND<2100	—	—	—	7.2	MCC		
MW-1	12/15/97	19.60	7.61	—	11.99	45000	3500	11000	5300	1500	5200	13000	—	—	—	6.8	MCC		
QC-1 (c)	12/15/97	—	—	—	—	45000	—	11000	5400	1400	5100	14000	—	—	—	—	—	MCC	
MW-1	03/11/98	19.60	5.35	—	14.25	40000	3600	5900	3900	1300	4900	8700	—	—	—	—	—	MCC	
QC-1 (c)	03/11/98	—	—	—	—	43000	—	7200	5000	1400	5300	14000	—	—	—	—	—	MCC	
MW-1	06/23/98	19.60	6.63	—	12.97	44000	3700	5900	6200	1800	6200	870	—	—	—	—	—	6.2	MCC
QC-1 (c)	06/23/98	—	—	—	—	47000	—	6000	6400	1800	6300	1000	—	—	—	—	—	MCC	
MW-1	12/01/98	19.60	6.48	—	13.12	57000	—	7400	12000	2100	8200	7200	—	—	—	—	—	2.4	MCC
QC-1 (c)	12/01/98	—	—	—	—	57000	—	6800	11000	1900	7500	8300	—	—	—	—	—	MCC	
MW-1	03/30/99	19.60	5.74	—	13.86	67000	6500	5700	9400	2500	9400	3200	—	—	—	—	—	2.1	MCC
QC-1 (c)	03/30/99	—	—	—	—	64000	6400	5500	9000	2400	9100	3100	—	—	—	—	—	MCC	
MW-1	08/16/99	19.60	7.02	—	12.58	63000	—	3800	9100	2800	11000	ND<1700	—	—	—	—	—	1.3	MCC
QC-1 (c)	08/16/99	—	—	—	—	64000	—	3700	8800	2800	11000	ND<1400	—	—	—	—	—	MCC	
MW-1	12/31/99	19.60	7.45	—	12.15	62000	5100	2900	9400	2800	12000	ND<1000	—	—	—	—	—	8.3	MCC
QC-1 (c)	12/31/99	—	—	—	—	67000	4900	2900	9700	2800	12000	ND<1000	—	—	—	—	—	MCC	
MW-1	03/31/00	19.60	5.85	—	13.75	48000	490	3700	5500	2200	7000	730	—	—	—	—	—	7.9	MCC
QC-1 (c)	03/31/00	—	—	—	—	54000	3300	3500	6000	2300	7300	730	—	—	—	—	—	MCC	
MW-1	07/14/00	19.60	7.00	—	12.60	78000	5700	5600	14000	2300	9500	ND<200	—	—	—	—	—	3.2	MCC
QC-1 (c)	07/14/00	—	—	—	—	72000	—	4900	14000	2100	9200	ND<200	—	—	—	—	—	MCC	
MW-1	10/04/00	19.60	7.60	—	12.00	65000	2900	3800	11000	2500	8200	ND<100	—	—	—	—	—	1.4	MCC
QC-1 (c)	10/04/00	—	—	—	—	68000	—	3900	13000	2400	9300	ND<100	—	—	—	—	—	MCC	
MW-1	12/21/00	19.60	6.91	—	12.69	74000	2500	3800	17000	3400	15000	ND<200	—	—	—	—	—	1.3	MCC
QC-1 (c)	12/21/00	—	—	—	—	69000	—	2700	12000	2400	11000	ND<550	—	—	—	—	—	MCC	
MW-1	04/13/01	19.60	6.06	—	13.54	55000	2400	2900	7800	2400	9400	ND<900	—	—	—	—	—	0.8	MCC
QC-1 (c)	04/13/01	—	—	—	—	51000	—	2300	6100	2000	7900	ND<350	—	—	—	—	—	MCC	
MW-1	06/27/01	19.60	6.54	—	13.06	80000	3600	2800	13000	2300	10000	ND<250	—	—	—	—	—	1.1	MCC
QC-1 (c)	06/27/01	—	—	—	—	76000	—	3100	13000	2300	10000	ND<250	—	—	—	—	—	MCC	
MW-1	09/20/01	19.60	7.08	—	12.52	74000	6600	1600	7700	2500	10000	ND<200	—	—	—	—	—	0.8	MCC
QC-1 (c)	09/20/01	—	—	—	—	67000	—	1600	7800	2600	10000	ND<200	—	—	—	—	—	MCC	
MW-1	12/21/01	19.60	5.71	—	13.89	58000	5500	2100	11000	2400	10000	ND<720	—	—	—	—	—	1.4	MCC
QC-1 (c)	12/21/01	—	—	—	—	56000	—	2100	11000	2300	10000	ND<620	—	—	—	—	—	MCC	
MW-1	02/04/02	19.60	5.01	—	14.59	6500	1800	74	100	230	150	140	—	—	—	—	—	4.1	MCC
QC-1 (c)	02/04/02	—	—	—	—	8000	—	90	130	270	1800	ND<500	—	—	—	—	—	MCC	
MW-1	05/07/02	19.60	6.10	—	13.50	41000	7900	13000	5200	1700	6300	ND<1000	—	—	—	—	—	4.3	MCC
QC-1 (c)	05/07/02	—	—	—	—	40000	—	13000	5200	1700	6400	ND<500	—	—	—	—	—	MCC	
MW-1	08/22/02	19.60	6.91	—	12.89	42000	4800	1100	6300	1900	7900	ND<500	—	—	—	—	—	4.9	MCC
QC-1 (c)	08/22/02	—	—	—	—	40000	—	1000	6100	1800	7500	ND<500	—	—	—	—	—	MCC	
MW-1	11/08/02	19.60	6.46	—	13.14	38000	6800	6800	770	4600	1600	6600	ND<1000	—	—	—	—	—	MCC
QC-1 (c)	11/08/02	—	—	—	—	49000	—	880	4800	1800	6700	ND<1700	—	—	—	—	—	MCC	
MW-1	02/07/03	19.60	5.80	—	13.80	43000	3700	1600	6100	2100	9700	ND<500	—	—	—	—	—	1.1	MCC
MW-1	05/02/03	19.60	5.60	—	14.00	48000	4500	1100	5900	1600	7300	ND<1000	—	—	—	—	—	MCC	
QC-1 (c)	05/02/03	—	—	—	—	1200	—	5800	1600	7100	ND<500	—	—	—	—	—	MCC		
MW-1	08/14/03	19.60	6.81	—	12.79	42000	3800	1000	4700	2000	8100	ND<500	—	—	—	—	—	1.3	MCC
QC-1 (c)	08/14/03	—	—	—	—	43000	—	1000	4600	2000	7900	ND<500	—	—	—	—	—	MCC	
MW-1	11/14/03	19.60	6.71	—	12.89	40000	3000	610	4900	1900	7600	ND<500	—	—	—	—	—	0.8	MCC
MW-1	03/01/04	19.60	5.22	—	14.38	20000	3000	540	2500	720	2900	ND<50	—	—	—	—	—	0.01	MCC
MW-1	06/30/04 (e)	19.60	6.38	—	13.22	39000	3000	570	2900	2100	8200	ND<500	—	—	—	—	—	MCC	
QC-1 (c)	06/30/04	—	—	—	—	6800	550	3200	2100	9100	ND<500	—	—	—	—	—	MCC		
MW-1	10/26/04	19.60	6.00	—	13.60	35000	4400	510	2900	1500	5700	ND<400	—	—	—	—	—	2.7	MCC
QC-1 (c)	10/26/04	—	—	—	—	450	—	2700	1600	5500	ND<150	—	—	—	—	—	MCC		
MW-1																			

TABLE 1 - SUMMARY OF GROUNDWATER SAMPLING  
XTRA OIL COMPANY SERVICE STATION  
1701 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-210

WELL ID	DATE OF MONITORING/SAMPLING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	OTHER SVOCs (ug/l)	NAPHTHALENE (ug/l)	BENZO-PYRENE (ug/l)	DO (ppm)	LAB
MW-2	11/04/94	20.31	9.12	0.16	11.31	—	—	—	—	—	—	—	—	—	—	—	
MW-2	01/11/95	20.31	6.75	—	13.56	—	—	—	—	—	—	—	—	—	—	—	
MW-2	02/24/95	20.31	7.11	0.18	13.34	—	—	—	—	—	—	—	—	—	—	—	
MW-2	05/25/95	20.31	7.01	0.01	13.31	—	—	—	—	—	—	—	—	—	—	—	
MW-2	08/30/95	20.31	6.58	0.12	11.82	—	—	—	—	—	—	—	—	—	—	—	
MW-2	11/16/95	20.31	9.07	0.01	11.25	—	—	—	—	—	—	—	—	—	—	—	
MW-2	03/20/96	20.31	6.79	0.01	13.53	—	—	—	—	—	—	—	—	—	—	—	
MW-2	06/13/96	20.31	7.41	0.01	12.91	—	—	—	—	—	—	—	—	—	—	—	
MW-2	09/23/96	20.31	7.83	0.01	12.49	30000	19000	4600	180	1500	4100	2600	—	—	5.5	MCC	
QC-1 (c)	09/27/96	—	—	—	—	33000	—	4700	170	1600	3900	2400	—	—	—	MCC	
MW-2	12/1/96	20.31	7.37	0.01	12.95	25000	—	1800	240	1400	5400	—	(d)	420	ND<10	MCC	
QC-1 (c)	12/1/96	—	—	—	—	28000	—	580	210	1300	5100	—	—	—	—	MCC	
MW-2	05/09/97	20.31	6.11	0.21	14.36	34000	6700000	4600	260	1500	4300	1600	—	—	3.7	MCC	
MW-2	09/11/97	20.31	7.70	0.03	12.63	44000	1200000	3900	250	2400	7400	ND<610	—	—	6.5	MCC	
QC-1 (c)	09/11/97	—	—	—	—	47000	1100000	4000	420	2700	6300	920	—	—	—	MCC	
MW-2	12/1/97	20.31	7.87	0.03	12.46	32000	68000	4600	130	2200	5400	ND<470	—	—	6	MCC	
MW-2	03/11/98	20.31	5.61	0.18	14.84	44000	3800	5200	220	2000	5000	1100	—	—	6.2	MCC	
MW-2	06/23/98	20.31	6.74	0.02	13.59	75000	570000	5900	390	3100	8300	8400	—	—	6.3	MCC	
MW-2	12/01/98	20.31	7.30	—	13.01	36000	—	3800	73	1500	3900	2000	—	—	1.9	MCC	
MW-2	03/30/99	20.31	6.51	0.13	13.90	23000	23000	5000	100	610	870	21000	—	—	1.7	MCC	
MW-2	06/16/99	20.31	8.04	0.21	12.43	30000	—	5200	67	1100	1800	6000	—	—	2.6	MCC	
MW-2	12/31/99	20.31	8.20	0.01	12.12	43000	340000	7600	87	1400	2500	4300	—	—	9.0	MCC	
MW-2	03/31/00	20.31	6.29	0.01	14.03	26000	200000	4000	58	1100	1500	13000	—	—	8.1	MCC	
MW-2	07/14/00	20.31	8.02	—	12.29	35000	170000	5000	76	1100	2500	4900	—	—	3.9	MCC	
MW-2	10/04/00	20.31	8.62	—	11.69	22000	67000	4700	97	1300	1000	1900	—	—	1.8	MCC	
MW-2	12/21/00	20.31	7.70	—	12.61	23000	16000	7500	65	770	490	8600	220	ND<10	0.6	MCC	
MW-2	04/13/01	20.31	7.05	—	13.26	25000	21000	6400	79	790	670	8300	—	—	1.1	MCC	
MW-2	06/27/01	20.31	7.50	—	12.81	34000	10000	5400	100	520	370	6800	—	—	0.7	MCC	
MW-2	09/20/01	20.31	8.10	—	12.21	28000	64000	4600	78	670	500	2000	—	—	0.4	MCC	
MW-2	12/21/01	20.31	6.66	—	13.65	30000	18000	3000	52	1700	970	ND<100	—	—	0.9	MCC	
MW-2	02/04/02	20.31	6.75	—	13.56	17000	35000	3600	ND<50	960	500	1200	—	—	1.3	MCC	
MW-2	05/07/02	20.31	7.20	—	13.11	16000	59000	3500	43	520	220	3100	—	—	1.0	MCC	
MW-2	08/22/02	20.31	7.98	—	12.35	15000	60000	2700	30	460	220	700	—	—	4.2	MCC	
MW-2	11/08/02	20.31	7.69	—	12.62	15000	100000	2100	60	1100	150	ND<250	—	—	—	MCC	
MW-2	02/07/03	20.31	6.52	—	13.79	11000	—	4400	24	ND<12	77	1900	—	—	0.7	MCC	
MW-2	05/02/03	20.31	6.40	—	13.91	16000	79000	1800	23	860	210	ND<350	—	—	—	MCC	
MW-2	08/14/03	20.31	7.77	—	12.54	13000	4300	1600	21	450	86	ND<400	—	—	0.8	MCC	
MW-2	11/14/03	20.31	7.85	—	12.46	12000	13000	1700	29	600	100	ND<600	—	—	0.7	MCC	
MW-2	03/01/04	20.31	6.10	—	14.21	17000	43000	3900	100	670	430	1900	—	—	0.42	MCC	
MW-2	06/30/04 (e)	20.31	7.61	—	12.70	14000	12000	3800	33	380	72	1800	—	—	0.42	MCC	
MW-2	10/26/04	20.31	7.12	—	13.19	14000	7900	3700	47	300	100	1700	—	—	—	MCC	
MW-2	03/24/05	20.31	5.78	—	14.53	15000	57000	3600	ND<25	400	58	ND<900	—	—	0.8	MCC	
MW-2	06/14/05	20.31	6.92	—	13.38	15000	53000	2100	31	310	49	530	—	—	2.6	MCC	
MW-2	09/12/05	20.31	8.25	0.01	12.05	10000	11000	2600	30	200	ND<10	660	—	—	—	MCC	
MW-2	01/04/06 (g)	20.31	6.45	<0.01	13.28	7300	14000	1600	18	180	47	ND<250	—	—	—	MCC	
MW-2	04/04/06 (h)	20.31	6.14	—	14.17	9500	130000	2200	25	170	52	ND<250	—	—	—	MCC	
MW-2	06/12/06	20.31	7.15	0.01	13.16	10000	29000	2200	46	74	59	460	—	—	—	MCC	
MW-2	09/08/06	20.31	8.22	—	sheen	12.09	12000	7400	1800	25	130	38	ND<300	—	—	—	MCC
MW-3	11/04/94	20.57	8.92	—	11.65	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
MW-3	01/11/95	20.57	5.67	—	14.90	ND<50	—	—	—	—	—	—	—	—	—	MCC	
MW-3	02/24/95	20.57	6.11	—	14.46	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
MW-3	05/26/96	20.57	6.24	—	14.33	91	ND<50	28.0	12.0	2.1	6.5	—	—	—	—	MCC	
MW-3	08/30/96	20.57	8.27	—	12.30	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	4.6	MCC	
MW-3	11/16/96	20.57	8.82	—	11.75	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
MW-3	03/20/96	20.57	5.44	—	15.13	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
MW-3	06/13/96	20.57	6.17	—	14.40	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
MW-3	09/23/96	20.57	6.57	—	14.00	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	4.9	MCC	
MW-3	12/19/96	20.57	6.59	—	13.98	ND<50	—	—	—	—	—	—	—	—	—	MCC	
MW-3	05/09/97	20.57	7.00	—	13.57	ND<50	59	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	3.3	MCC	
MW-3	09/11/97	20.57	6.92	—	13.65	ND<50	82	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	7	MCC	
MW-3	12/15/97	20.57	7.03	—	13.54	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	6.5	MCC	
MW-3	03/11/98	20.57	4.71	—	15.86	ND<50	ND<50	ND<0.5	1.8	0.6	3.1	ND<50	—	—	6.1	MCC	
MW-3	06/23/98	20.57	6.33	—	14.24	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	5.7	MCC	
MW-3	12/01/98	20.57	6.74	—	13.83	ND<50	—	—	—	—	—	—	—	—	4	MCC	
MW-3	03/30/99	20.57	5.68	—	14.89	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	4.6	MCC	
MW-3	08/16/99	20.57	7.67	—	12.90	ND<50	—	—	—	—	—	—	—	—	2.7	MCC	
MW-3	12/31/99	20.57	8.07	—	12.50	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	9.0	MCC	
MW-3	03/31/00	20.57	5.59	—	14.98	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	2.8	MCC	
MW-3	07/14/00	20.57	7.64	—	12.93	68	ND<50	0.89	1.7	2.1	9.5	ND<50	—	—	2.1	MCC	
MW-3	10/04/00	20.57	8.34	—	12.23	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	2.0	MCC	
MW-3	12/21/00	20.57	7.00	—	13.57	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	1.4	MCC	
MW-3	04/19/01	20.57	6.38	—	14.19	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	1.3	MCC	
MW-3	06/																

TABLE 1 - SUMMARY OF GROUNDWATER SAMPLING  
XTRA OIL COMPANY SERVICE STATION  
1701 PARK STREET ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-210

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G	TPH-D	B	T	E	X	MTBE	OTHER SVOCs	NAPHTHALENE	BENZO-PYRENE	DO	LAB
MW-3	02/07/03	20.57	5.95	—	14.62	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	2.8	MCC
MW-3	05/02/03	20.57	5.75	—	14.82	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	—	MCC
MW-3	08/14/03	20.57	7.74	—	12.83	ND<50	ND<50	1.6	ND<0.5	0.82	3.2	ND<5.0	—	—	—	2.1	MCC
MW-3	11/14/03	20.57	7.75	—	12.82	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	0.6	MCC
MW-3	03/10/04	20.57	5.17	—	15.40	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	0.92	MCC
MW-3	05/30/04 (e)	20.57	7.48	—	13.09	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	0.92	MCC
MW-3	10/26/04	20.57	6.47	—	14.10	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	3.0	MCC
MW-3	03/24/05	20.57	4.70	—	15.87	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	3.0	MCC
MW-3	06/14/05	20.57	5.99	—	14.58	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	2.7	MCC
MW-3	09/12/05	20.57	7.89	—	12.68	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	3.3	MCC
MW-3	01/04/06 (g)	20.57	5.10	—	15.47	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	—	MCC
MW-3	04/04/06 (h)	20.57	4.93	—	15.64	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	—	MCC
MW-3	06/12/06	20.57	6.20	—	14.37	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	—	—	—	—	MCC
MW-3	09/08/06	<b>20.57</b>	<b>7.81</b>	—	<b>12.76</b>	<b>ND&lt;50</b>	<b>ND&lt;50</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;5.0</b>	—	—	—	—	MCC
MW-4	05/09/07	19.69	7.17	—	12.52	31000	540	1300	1000	4500	1900	ND	2.1	ND<2	3.1	MCC/CHR	
MW-4	09/11/07	19.69	7.71	—	11.98	40000	6500	2000	3100	1700	7700	3400	—	—	6.4	MCC	
MW-4	12/15/07	19.69	7.87	—	11.82	14000	2100	910	690	390	2700	1700	—	—	6	MCC	
MW-4	03/11/08	19.69	3.51	—	16.18	2800	780	68	94	72	430	140	—	—	5.5	MCC	
MW-4	06/23/08	19.69	5.21	—	14.48	15000	2800	240	630	720	2700	370	—	—	5.4	MCC	
MW-4	12/01/08	19.69	6.45	—	13.24	21000	—	580	1000	530	3600	1700	—	—	4.4	MCC	
MW-4	03/08/09	19.69	5.41	—	14.28	41000	3600	3100	3400	1700	6700	5700	—	—	4.6	MCC	
MW-4	08/16/09	19.69	7.35	—	12.34	24000	—	4600	940	1200	2700	9700	—	—	3.4	MCC	
MW-4	12/21/09	19.69	7.71	—	11.98	14000	2000	510	630	600	3100	3500	—	—	10.1	MCC	
MW-4	03/01/10	19.69	5.22	—	14.47	14000	1400	470	480	580	2200	2000	—	—	6.8	MCC	
MW-4	07/14/10	19.69	7.31	—	12.38	37000	4300	770	1500	1800	7200	1700	—	—	3.3	MCC	
MW-4	10/04/10	19.69	7.11	—	12.58	47000	3200	870	2000	2800	9600	ND<1500	—	—	—	1.7	MCC
MW-4	12/21/10	19.69	6.86	—	12.83	13000	1800	370	410	460	2300	1500	—	88	ND<10	0.6	MCC
MW-4	04/13/01	19.69	6.02	—	13.67	20000	2800	710	640	620	2900	2300	—	—	1.0	MCC	
MW-4	06/27/01	19.69	6.72	—	12.97	23000	2100	510	1100	1100	4300	1400	—	—	1.0	MCC	
MW-4	09/20/01	19.69	7.30	—	12.39	36000	4400	460	1300	1700	6700	1000	—	—	2.0	MCC	
MW-4	12/21/01	19.69	4.55	—	15.14	11000	5600	130	250	480	2400	ND<320	—	—	1.6	MCC	
MW-4	02/04/02	19.69	5.82	—	13.87	50000	12000	3000	8100	1900	7600	ND<500	—	—	2.0	MCC	
MW-4	05/07/02	19.69	6.08	—	13.61	17000	3200	270	820	870	3700	ND<500	—	—	2.6	MCC	
MW-4	08/22/02	19.69	7.45	—	12.24	26000	3800	720	920	1500	6500	2100	—	—	4.6	MCC	
MW-4	11/08/02	19.69	6.74	—	12.95	20000	3600	290	630	1200	5100	670	—	—	—	MCC	
MW-4	02/07/03	19.69	4.86	—	14.83	13000	—	520	1300	ND<25	3600	420	—	—	2.1	MCC	
QC-1 (c)	02/07/03	—	—	—	—	13000	—	510	1200	83	3100	420	—	—	—	MCC	
MW-4	05/02/03	19.69	5.45	—	14.24	19000	3600	280	550	810	3600	470	—	—	—	MCC	
MW-4	08/14/03	19.69	7.20	—	12.49	31000	4100	720	810	1300	6400	1100	—	—	1.2	MCC	
MW-4	11/14/03	19.69	6.92	—	12.77	18000	3300	400	320	1000	4500	ND<1000	—	—	0.7	MCC	
QC-1 (c)	11/14/03	—	—	—	—	—	—	440	310	1100	4500	ND<1000	—	—	—	MCC	
MW-4	03/01/04	19.69	5.10	—	14.59	15000	2500	110	210	580	2700	240	—	—	0.61	MCC	
QC-1 (c)	03/01/04	—	—	—	—	15000	—	110	220	610	2800	250	—	—	—	MCC	
MW-4	06/30/04 (e)	19.69	6.70	—	12.99	23000	5800	330	550	1300	5200	ND<900	—	—	—	0.61	MCC
MW-4	10/26/04	19.69	6.05	—	13.64	19000	3800	150	380	950	3800	ND<300	—	—	—	2.0	MCC
MW-4	03/24/05	19.69	4.23	—	15.46	6600	1900	29	190	960	ND<120	—	—	—	2.0	MCC	
MW-4	06/14/05	19.69	5.58	—	14.11	23000	5600	160	510	1200	4000	ND<400	—	—	2.1	MCC	
MW-4	09/12/05	19.69	7.84	—	11.85	24000	4600	1400	600	350	9300	1100	—	—	2.2	MCC	
MW-4	01/04/06 (g)	19.69	4.65	—	15.04	20000	2800	740	350	9300	29000	1100	—	—	—	MCC	
MW-4	04/04/06 (h)	19.69	4.62	—	15.07	8100	2000	300	64	490	1200	530	—	—	—	MCC	
MW-4	06/12/06	19.69	6.07	sheen	13.62	24000	4500	270	380	1300	3600	340	—	—	—	MCC	
MW-4	09/08/06 [i]	19.69	7.42	sheen	12.27	20000	3100	1700	240	930	2000	1800	—	—	—	MCC	
QC-2 (f)	11/04/04	—	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
QC-2 (f)	02/24/05	—	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
QC-2 (f)	05/25/05	—	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
QC-2 (f)	08/30/05	—	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
QC-2 (f)	11/16/05	—	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
QC-2 (f)	03/20/06	—	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	
QC-2 (f)	06/13/06	—	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	MCC	

**ABBREVIATIONS:**

- (a) Top of casing surveyed relative to mean sea level.
- (b) Groundwater elevations expressed in feet above mean sea level, and adjusted assuming a specific gravity of 0.75 for free product.
- (c) Blind duplicate.
- (d) Other SVOCs detected at concentrations of 200 ug/l 2-methylnaphthalene and 14 ug/l phenanthrene.
- (e) Wells monitored 6/15/04.
- (f) Travel blank.
- (g) 4th Quarter 2005 sampling.
- (h) 1st Quarter 2006 sampling.
- [i] Well recharge was exceeding slow, not to be used in preparing contours.

**APPENDIX B**

**GROUNDWATER MONITORING/  
WELL PURGING DATA SHEETS**

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

Site Name Xtra Oil / 1701 Park St. Alameda

Job Number 0058

TOC to Water (ft.) 7.58

Well Depth (ft.) 19.2

Well Diameter 2"

Flow Rate (mL/minute) 200

Start Purge Time 1046

Well No. MW 1

Date 6/18/15

Sheen YES

Free Product Thickness 0

Sample Collection Method Pesistotile  
Purged and dedicated pe tubing

Time	Vol. Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity ( $\mu$ S/cm)	Temperature ( $^{\circ}$ C)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
1047	200	7.79	6.77	1006	21.3	0.56	-142.8	4.41
1050	200	7.83	6.78	1004	21.3	0.28	-147.5	3.61
1053	1,400	7.85	6.80	1005	21.4	0.17	-152.6	2.97
1056	2,000	7.89	6.81	1002	21.6	0.14	-156.1	2.26
1059	2,600	7.91	6.82	1001	21.6	0.12	-158.1	2.08
1102	3,200	7.93	6.83	1000	21.7	0.11	-161.2	1.12

**NOTES**

Stability Parameters

p.H. = +/- 0.1

Sp. Conductivity = +/- 3%

Turbidity = +/- 10%

D.O. = +/- 10%

MW 1 collected at 1105; strong odor and sheen

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

Site Name Xtra off 17th Park st. Alameda

Job Number 0058

TOC to Water (ft.) 8.60

Well Depth (ft.) 15.8 (with added coupling)

Well Diameter 2"

Flow Rate (mL/minute) 200

Start Purge Time 0903

Well No. MW2

Date 6/18/15

Sheen *nine*

Free Product Thickness

Sample Collection Method peristaltic pump  
of new unused PE tubing

## NOTES

### Stability Parameters

pH = +/- 0.1

Sp. Conductivity = +/- 3%

Turbidity = +/- 10%

Turbidity = +/- 10%

D.O. = +/- 10%

MW2 collected at 0925; slight drizzle seen

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

Site Name xtra oil / 1701 Park St. Alameda

Job Number 0058

TOC to Water (ft.) 7.82

Well Depth (ft.) 19.1 ft

Well Diameter 2"

Flow Rate (mL/minute) 200

Start Purge Time 0809

Well No. MW3

Date 6/18/15

Sheen none

Free Product Thickness 1/8"

Sample Collection Method Surf

and dedicated PET tubing

<u>Time</u>	<u>Vol. Purged (mL)</u>	<u>Depth to Water (ft.)</u>	<u>pH</u>	<u>Electrical Conductivity (µS/cm)</u>	<u>Temperature (C°)</u>	<u>Dissolved Oxygen (mg/L)</u>	<u>Oxidation/ Reduction Potential (mV)</u>	<u>Turbidity (NTU)</u>
0810	200	8.00	6.62	509.0	19.7	1.64	-104.4	226
0813	800	8.04	6.57	479.5	19.9	1.06	-80.4	13.23
0816	1,400	8.25	6.50	461.7	19.7	0.66	-55.8	14.30
0819	2,000	8.36	6.45	455.6	19.9	0.49	-41.7	4.85
0822	2,600	8.46	6.42	452.8	19.9	0.38	-34.6	7.18
0825	3,200	8.48	6.41	451.0	19.9	0.34	-30.8	5.60

## **NOTES**

### Stability Parameters

pH = +/- 0.1

Sp. Conductivity = +/- 3%

Turbidity = ± 10%

Purity = +/-

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

Site Name xtra oil/1701 Park st.alameda

Job Number 0058

TOC to Water (ft.) 2.53

Well Depth (ft.) 10.8

Well Diameter 2"

Flow Rate (mL/minute) 200

Start Purge Time 1133

Start Purge Time \_\_\_\_\_

Well No. MWY

Date 6/18/15

Sheen YES

Free Product Thickness

Sample Collection Method Peristaltic pump  
and 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)
1134	200	8.18	6.72	581	20.1	1.45	-89.6	3.12
1137	800	8.43	6.89	621	19.9	0.88	-92.8	3.34
1140	1,400	8.81	6.91	611	19.9	0.76	-99.2	0.83
1143	2,000	9.47	6.73	604	19.8	0.58	-103.0	6.25
1146	2,600	10.19	6.79	611	19.7	0.36	-110.5	10.39
1149	3,200	10.45	6.83	618	19.7	0.28	-113.5	5.64

## NOTES

### Stability Parameters

pH = ± 0.1

Sp. Conductivity = +/- 3%

Turbidity =  $\pm 10\%$

Turbidity = +/-

MW4 collected at 1155; strong odor and sheen.

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

Site Name Xtra oil

Job Number 0058

TOC to Water (ft.) 7.35

Well Depth (ft.) 23.5'

Well Diameter 4"

Flow Rate (mL/minute) 200

Start Purge Time 1105

Well No. EW 2

Date 6/18/15

Sheen none

Free Product Thickness \_\_\_\_\_

Sample Collection Method Peristaltic pump  
and new unused PE-tubing

## NOTES

### Stability Parameters

p.H. = +/- 0.1

Sp. Conductivity = +/- 3%

Turbidity = +/- 10%

D.O. = +/- 10%

EW2 collected at 1125; no odor or sheen

RGA Environmental, Inc.  
Groundwater Monitoring/Well Purging Data Sheet

Site Name 1701 Park St. Alameda

Job Number 0058

TOC to Water (ft.) 6.24

Well Depth (ft.) 21.8

Well Diameter 4"

Flow Rate (mL/minute) 200

Start Purge Time 1259

Start Purge Time 1259

Well No. EW4

Date 6/18/15

Sheen none

Free Product Thickness 1/8

Sample Collection Method *Beris teltic*

pump & new unused PE tubing

Time	Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity (µS/cm)	Temperature (C°)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
1300	200	6.28	7.42	648	22.1	1.28	-96.1	4.29
1303	800	6.33	7.36	647	21.9	0.39	-119.8	2.89
1306	1400	6.43	7.25	645	21.8	0.24	-130.3	7.89
1309	2000	6.46	7.18	645	21.8	0.19	-133.7	2.58
1312	2600	6.59	7.14	645	21.8	0.17	-135.4	2.53
1315	3200	6.62	7.16	645	21.9	0.15	-137.7	0.91

## NOTES

## Stability Parameters

Stability limit

Sp. Conductivity = +/- 3%

Turbidity = +/- 10%

DΩ ≈ ±/± 10%

EW 4 collected at 1320; no odor or sheen.

**RGA Environmental, Inc.**

Site Name Xha iel (170) Park st. Alameda

Job Number 0058

TOC to Water (ft.) 6,28

Well Depth (ft.) 23.7

Well Diameter 4"

Flow Rate (mL/minute) 300

Start Purge Time 1342

Well No. EW15

Date 6/18/15

Sheen 'none'

Free Product Thickness \_\_\_\_\_

#### Sample Collection Method

and new unused PE tubing.

and new unused P-tubing

Time	Vol. Purged (mL)	Depth to Water (ft.)	pH	Electrical Conductivity ( $\mu$ S/cm)	Temperature ( $^{\circ}$ C)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Turbidity (NTU)
1343	200	6.39	6.73	787	20.1	0.81	-132.4	0.22
1346	800	6.44	6.73	786	20.1	0.37	-139.5	2.16
1349	1400	6.46	6.73	787	20.1	0.31	-141.5	0.00
1352	2000	6.52	6.76	786	20.0	0.24	-145.3	0.00
1355	2600	6.53	6.78	786	20.0	0.19	-149.6	0.00
1358	3200	6.57	6.80	787	20.0	0.16	-153.9	0.00

## NOTES

### Stability Parameters

pH = +/- 0.1

### Sn Conductivity

Turbidity =  $\pm$  10%

D.O.  $\equiv \pm/ \pm 10\%$

D.O. = +/- 10%

EW5 collected at 1405; strong odor, no sheen

RGA Environmental, Inc.  
Groundwater Monitoring/Well Purging Data Sheet

Site Name xtroid  
Job Number 0058  
TOC to Water (ft.) 6.51  
Well Depth (ft.) 18.5  
Well Diameter 4"  
Flow Rate (mL/minute) 200  
Start Purge Time 1436

Well No. 0W2  
Date 6/18/15  
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)
1437	200	6.58	6.78	661	19.0	1.41	-117.8	2.33
1440	800	6.64	6.78	662	19.0	0.54	+123.8	11.67
1443	1400	6.68	6.78	661	18.9	0.32	+128.2	5.91
1446	2,000	6.72	6.80	661	18.9	0.23	-133.0	13.24
1449	2,600	6.76	6.82	661	18.9	0.21	-135.0	5.37
1452	3,200	6.78	6.83	661	18.9	0.19	-137.0	6.10

NOTES

Stability Parameters

p.H. = +/- 0.1

Sp. Conductivity = +/- 3%

Turbidity = +/- 10%

D.O. = +/- 10%

0W2 collected at 1500 ; no odor or sheen

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

Site Name XTRA OIL-PARK ST. ALAMEDA

Well No. ASP2

Job Number 0058

Date 6/17/15

TOC to Water (ft.) 6.40

Sheen none

Well Depth (ft.) 24.8

Free Product Thickness  

Well Diameter / "

Sample Collection Method PERISCOPE

Flow Rate (mL/minute) 200

## AND NEW LICENSED PET TUBING

Start Purge Time 1052

Start Purge Time 1052

## NOTES

### Stability Parameters

pH = +/- 0.1

Sn Conductivity = +/- 3%

Turbidity =  $\pm$  10%

Furiosity = +/-  
D.O. = +/- 10%

ASP 2 collected at 1230 ; no other, or, seen

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

Site Name XTRD OIL - PARK ST. ALAMEDA

Job Number 0058

TOC to Water (ft.) 6.65

Well Depth (ft.) 39.5

Well Diameter 1"

Flow Rate (mL/minute) 200

Start Purge Time 1134

Well No. *ASP 3*

Date 6/17/15

Sheen      NONE

Free Product Thickness

Sample Collection Method Pneumatic Pump  
a new unused PE tubing.

## **NOTES**

## Stability Parameters

Stability limit

Sn 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.) 6.62

Well Depth (ft.) 24.9

Well Diameter 1"

Flow Rate (mL/minute) 200

Start Purge Time 1333

Well No. ASP 4

Date 6/17/15

Sheen NONE

Free Product Thickness 0

Sample Collection Method PERISTALTIC PUMP +  
NEW UNUSED PET 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)
1334	200	10.20	7.31	651	23.0	2.23	19.0	10.04
1337	800	15.89	7.03	649	22.8	2.03	24.6	6.72
1340	1,400	21.75	6.92	651	22.9	2.29	24.0	18.70
1341	well dewatered.							

NOTES

Stability Parameters

p.H. = +/- 0.1

Sp. Conductivity = +/- 3%

Turbidity = +/- 10%

D.O. = +/- 10%

ASP 4 collected at 1530: no odor or sheen

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

Site Name The oil Park St. Alawoda

Well No. ASP 5

Job Number 0078

Date 6/17/15

TOC to Water (ft.) 6.36

Sheen      ~~None~~

Well Depth (ft.) 29.2

Free Product Thickness

Well Diameter      1"

Sample Collection Method Perist

Flow Rate (mL/minute) 200

+ new unused PÉtu

Start Purge Time 1357

## NOTES

### Stability Parameters

Stability Para

Sp. Conductivity = +/- 3%

Turbidity =  $\pm 10\%$

D.O. = +/- 10%

ASP5 collected at 1455; no odor or sheen

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

Site Name Xtra oil Park st. Alameda

Job Number 0058

TOC to Water (ft.) 6.54

Well Depth (ft.) 27.9

Well Diameter 1"

Flow Rate (mL/minute) 200

Start Purge Time 1426

Well No. ASP 6

Date 6/17/15

Sheen JONE

Free Product Thickness 0

Sample Collection Method Peristaltic Pump  
& new unused PE tubing

## NOTES

#### Stability Parameters

$nH = +/- 0.1$

Sp. Conductivity = +/- 3%

Turbidity = +/- 10%

D.O. = +/- 10%

## **APPENDIX C**

### **LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION**

- McCampbell Work Order #1506871: MW-1 through MW-4, EW-2, EW-4, EW-5, and OW-2 Groundwater Sample Results - TPH, MBTEX, inorganic ions, total and dissolved iron, alkalinity, and dissolved gases
- McCampbell Work Order #1506825: ASP-1 through ASP-6 Groundwater Sample Results TPH, MBTEX, inorganic ions, total and dissolved iron, alkalinity, and dissolved gases



# McCampbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1506871

**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., 1701 Park St., Alameda

**Project Received:** 06/19/2015

Analytical Report reviewed & approved for release on 06/29/2015 by:

Angela Rydelius,  
Laboratory Manager

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



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



## Glossary of Terms & Qualifier Definitions

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**WorkOrder:** 1506871

### Glossary Abbreviation

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



## Glossary of Terms & Qualifier Definitions

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**WorkOrder:** 1506871

### Analytical Qualifiers

- B analyte detected in the associated Method Blank and in the sample
- S spike recovery outside accepted recovery limits
- F sample was filtered upon arrival to the lab
- 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
- d7 strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
- d17 Reporting limit for MTBE raised due to co-elution with non-target peaks.
- e2 diesel range compounds are significant; no recognizable pattern
- e4 gasoline range compounds are significant.
- e7 oil range compounds are significant
- e8 kerosene/kerosene range/jet fuel range



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/20/15-6/22/15

**WorkOrder:** 1506871  
**Extraction Method:** E300.1  
**Analytical Method:** E300.1  
**Unit:** mg/L

### Inorganic Anions by IC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001E	Water	06/18/2015 11:05	IC3	106597

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Nitrate as N	ND	0.10	1	06/20/2015 07:14
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/20/2015 07:14
Sulfate	<b>0.50</b>	0.10	1	06/20/2015 07:14
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Formate	107	90-115		06/20/2015 07:14
<u>Analyst(s):</u>	TD			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002E	Water	06/18/2015 09:25	IC3	106597

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Nitrate as N	ND	0.10	1	06/20/2015 08:02
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/20/2015 08:02
Sulfate	<b>20</b>	1.0	10	06/20/2015 17:27
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Formate	111	90-115		06/20/2015 08:02
<u>Analyst(s):</u>	TD			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003E	Water	06/18/2015 08:30	IC3	106597

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Nitrate as N	ND	0.10	1	06/20/2015 08:49
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/20/2015 08:49
Sulfate	<b>49</b>	1.0	10	06/20/2015 18:14
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Formate	103	90-115		06/20/2015 08:49
<u>Analyst(s):</u>	TD			

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/20/15-6/22/15

**WorkOrder:** 1506871  
**Extraction Method:** E300.1  
**Analytical Method:** E300.1  
**Unit:** mg/L

### Inorganic Anions by IC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004E	Water	06/18/2015 11:55	IC3	106597

Analyses	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	06/20/2015 09:36
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/20/2015 09:36
Sulfate	0.65	0.10	1	06/20/2015 09:36
Surrogates	REC (%)	Limits		
Formate	102	90-115		06/20/2015 09:36

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005E	Water	06/18/2015 11:25	IC3	106597

Analyses	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	06/20/2015 10:23
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/20/2015 10:23
Sulfate	120	10	100	06/22/2015 16:52
Surrogates	REC (%)	Limits		
Formate	108	90-115		06/20/2015 10:23

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006E	Water	06/18/2015 13:20	IC3	106597

Analyses	Result	RL	DF	Date Analyzed
Nitrate as N	0.18	0.10	1	06/20/2015 11:10
Nitrate as NO <sub>3</sub> <sup>-</sup>	0.81	0.45	1	06/20/2015 11:10
Sulfate	89	10	100	06/22/2015 17:39
Surrogates	REC (%)	Limits		
Formate	107	90-115		06/20/2015 11:10

Analyst(s): TD

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/20/15-6/22/15

**WorkOrder:** 1506871  
**Extraction Method:** E300.1  
**Analytical Method:** E300.1  
**Unit:** mg/L

### Inorganic Anions by IC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007E	Water	06/18/2015 14:05	IC3	106597

Analyses	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	06/20/2015 11:57
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/20/2015 11:57
Sulfate	71	5.0	50	06/22/2015 18:26
Surrogates	REC (%)	Limits		
Formate	106	90-115		06/20/2015 11:57

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008E	Water	06/18/2015 15:00	IC3	106597

Analyses	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	06/20/2015 12:44
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/20/2015 12:44
Sulfate	28	2.0	20	06/22/2015 19:13
Surrogates	REC (%)	Limits		
Formate	105	90-115		06/20/2015 12:44

Analyst(s): TD



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001B	Water	06/18/2015 11:05	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		2000	200	06/25/2015 22:39
tert-Amyl methyl ether (TAME)	ND		100	200	06/25/2015 22:39
Benzene	<b>4100</b>		100	200	06/25/2015 22:39
Bromobenzene	ND		100	200	06/25/2015 22:39
Bromochloromethane	ND		100	200	06/25/2015 22:39
Bromodichloromethane	ND		100	200	06/25/2015 22:39
Bromoform	ND		100	200	06/25/2015 22:39
Bromomethane	ND		100	200	06/25/2015 22:39
2-Butanone (MEK)	ND		400	200	06/25/2015 22:39
t-Butyl alcohol (TBA)	<b>1100</b>		400	200	06/25/2015 22:39
n-Butyl benzene	ND		100	200	06/25/2015 22:39
sec-Butyl benzene	ND		100	200	06/25/2015 22:39
tert-Butyl benzene	ND		100	200	06/25/2015 22:39
Carbon Disulfide	ND		100	200	06/25/2015 22:39
Carbon Tetrachloride	ND		100	200	06/25/2015 22:39
Chlorobenzene	ND		100	200	06/25/2015 22:39
Chloroethane	ND		100	200	06/25/2015 22:39
Chloroform	ND		100	200	06/25/2015 22:39
Chloromethane	ND		100	200	06/25/2015 22:39
2-Chlorotoluene	ND		100	200	06/25/2015 22:39
4-Chlorotoluene	ND		100	200	06/25/2015 22:39
Dibromochloromethane	ND		100	200	06/25/2015 22:39
1,2-Dibromo-3-chloropropane	ND		40	200	06/25/2015 22:39
1,2-Dibromoethane (EDB)	ND		100	200	06/25/2015 22:39
Dibromomethane	ND		100	200	06/25/2015 22:39
1,2-Dichlorobenzene	ND		100	200	06/25/2015 22:39
1,3-Dichlorobenzene	ND		100	200	06/25/2015 22:39
1,4-Dichlorobenzene	ND		100	200	06/25/2015 22:39
Dichlorodifluoromethane	ND		100	200	06/25/2015 22:39
1,1-Dichloroethane	ND		100	200	06/25/2015 22:39
1,2-Dichloroethane (1,2-DCA)	ND		100	200	06/25/2015 22:39
1,1-Dichloroethene	ND		100	200	06/25/2015 22:39
cis-1,2-Dichloroethene	ND		100	200	06/25/2015 22:39
trans-1,2-Dichloroethene	ND		100	200	06/25/2015 22:39
1,2-Dichloropropane	ND		100	200	06/25/2015 22:39
1,3-Dichloropropane	ND		100	200	06/25/2015 22:39
2,2-Dichloropropane	ND		100	200	06/25/2015 22:39
1,1-Dichloropropene	ND		100	200	06/25/2015 22:39

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001B	Water	06/18/2015 11:05	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		100	200	06/25/2015 22:39
trans-1,3-Dichloropropene	ND		100	200	06/25/2015 22:39
Diisopropyl ether (DIPE)	ND		100	200	06/25/2015 22:39
Ethylbenzene	<b>280</b>		100	200	06/25/2015 22:39
Ethyl tert-butyl ether (ETBE)	ND		100	200	06/25/2015 22:39
Freon 113	ND		100	200	06/25/2015 22:39
Hexachlorobutadiene	ND		100	200	06/25/2015 22:39
Hexachloroethane	ND		100	200	06/25/2015 22:39
2-Hexanone	ND		100	200	06/25/2015 22:39
Isopropylbenzene	<b>110</b>		100	200	06/25/2015 22:39
4-Isopropyl toluene	ND		100	200	06/25/2015 22:39
Methyl-t-butyl ether (MTBE)	<b>430</b>		100	200	06/25/2015 22:39
Methylene chloride	ND		100	200	06/25/2015 22:39
4-Methyl-2-pentanone (MIBK)	ND		100	200	06/25/2015 22:39
Naphthalene	ND		100	200	06/25/2015 22:39
n-Propyl benzene	<b>130</b>		100	200	06/25/2015 22:39
Styrene	ND		100	200	06/25/2015 22:39
1,1,1,2-Tetrachloroethane	ND		100	200	06/25/2015 22:39
1,1,2,2-Tetrachloroethane	ND		100	200	06/25/2015 22:39
Tetrachloroethene	ND		100	200	06/25/2015 22:39
Toluene	ND		100	200	06/25/2015 22:39
1,2,3-Trichlorobenzene	ND		100	200	06/25/2015 22:39
1,2,4-Trichlorobenzene	ND		100	200	06/25/2015 22:39
1,1,1-Trichloroethane	ND		100	200	06/25/2015 22:39
1,1,2-Trichloroethane	ND		100	200	06/25/2015 22:39
Trichloroethene	ND		100	200	06/25/2015 22:39
Trichlorofluoromethane	ND		100	200	06/25/2015 22:39
1,2,3-Trichloropropane	ND		100	200	06/25/2015 22:39
1,2,4-Trimethylbenzene	<b>100</b>		100	200	06/25/2015 22:39
1,3,5-Trimethylbenzene	ND		100	200	06/25/2015 22:39
Vinyl Chloride	ND		100	200	06/25/2015 22:39
Xylenes, Total	<b>570</b>		100	200	06/25/2015 22:39

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## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001B	Water	06/18/2015 11:05	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	108		70-130		06/25/2015 22:39
Toluene-d8	105		70-130		06/25/2015 22:39
4-BFB	105		70-130		06/25/2015 22:39
<u>Analyst(s):</u>	KF				

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002B	Water	06/18/2015 09:25	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		100	10	06/25/2015 23:17
tert-Amyl methyl ether (TAME)	ND		5.0	10	06/25/2015 23:17
Benzene	140		5.0	10	06/25/2015 23:17
Bromobenzene	ND		5.0	10	06/25/2015 23:17
Bromochloromethane	ND		5.0	10	06/25/2015 23:17
Bromodichloromethane	ND		5.0	10	06/25/2015 23:17
Bromoform	ND		5.0	10	06/25/2015 23:17
Bromomethane	ND		5.0	10	06/25/2015 23:17
2-Butanone (MEK)	ND		20	10	06/25/2015 23:17
t-Butyl alcohol (TBA)	180		20	10	06/25/2015 23:17
n-Butyl benzene	6.5		5.0	10	06/25/2015 23:17
sec-Butyl benzene	ND		5.0	10	06/25/2015 23:17
tert-Butyl benzene	ND		5.0	10	06/25/2015 23:17
Carbon Disulfide	ND		5.0	10	06/25/2015 23:17
Carbon Tetrachloride	ND		5.0	10	06/25/2015 23:17
Chlorobenzene	ND		5.0	10	06/25/2015 23:17
Chloroethane	ND		5.0	10	06/25/2015 23:17
Chloroform	ND		5.0	10	06/25/2015 23:17
Chloromethane	ND		5.0	10	06/25/2015 23:17
2-Chlorotoluene	ND		5.0	10	06/25/2015 23:17
4-Chlorotoluene	ND		5.0	10	06/25/2015 23:17
Dibromochloromethane	ND		5.0	10	06/25/2015 23:17
1,2-Dibromo-3-chloropropane	ND		2.0	10	06/25/2015 23:17
1,2-Dibromoethane (EDB)	ND		5.0	10	06/25/2015 23:17
Dibromomethane	ND		5.0	10	06/25/2015 23:17
1,2-Dichlorobenzene	ND		5.0	10	06/25/2015 23:17
1,3-Dichlorobenzene	ND		5.0	10	06/25/2015 23:17
1,4-Dichlorobenzene	ND		5.0	10	06/25/2015 23:17
Dichlorodifluoromethane	ND		5.0	10	06/25/2015 23:17
1,1-Dichloroethane	ND		5.0	10	06/25/2015 23:17
1,2-Dichloroethane (1,2-DCA)	ND		5.0	10	06/25/2015 23:17
1,1-Dichloroethene	ND		5.0	10	06/25/2015 23:17
cis-1,2-Dichloroethene	ND		5.0	10	06/25/2015 23:17
trans-1,2-Dichloroethene	ND		5.0	10	06/25/2015 23:17
1,2-Dichloropropane	ND		5.0	10	06/25/2015 23:17
1,3-Dichloropropane	ND		5.0	10	06/25/2015 23:17
2,2-Dichloropropane	ND		5.0	10	06/25/2015 23:17
1,1-Dichloropropene	ND		5.0	10	06/25/2015 23:17

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002B	Water	06/18/2015 09:25	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		5.0	10	06/25/2015 23:17
trans-1,3-Dichloropropene	ND		5.0	10	06/25/2015 23:17
Diisopropyl ether (DIPE)	ND		5.0	10	06/25/2015 23:17
Ethylbenzene	<b>8.6</b>		5.0	10	06/25/2015 23:17
Ethyl tert-butyl ether (ETBE)	ND		5.0	10	06/25/2015 23:17
Freon 113	ND		5.0	10	06/25/2015 23:17
Hexachlorobutadiene	ND		5.0	10	06/25/2015 23:17
Hexachloroethane	ND		5.0	10	06/25/2015 23:17
2-Hexanone	ND		5.0	10	06/25/2015 23:17
Isopropylbenzene	<b>12</b>		5.0	10	06/25/2015 23:17
4-Isopropyl toluene	ND		5.0	10	06/25/2015 23:17
Methyl-t-butyl ether (MTBE)	<b>27</b>		5.0	10	06/25/2015 23:17
Methylene chloride	ND		5.0	10	06/25/2015 23:17
4-Methyl-2-pentanone (MIBK)	ND		5.0	10	06/25/2015 23:17
Naphthalene	<b>13</b>		5.0	10	06/25/2015 23:17
n-Propyl benzene	<b>23</b>		5.0	10	06/25/2015 23:17
Styrene	ND		5.0	10	06/25/2015 23:17
1,1,1,2-Tetrachloroethane	ND		5.0	10	06/25/2015 23:17
1,1,2,2-Tetrachloroethane	ND		5.0	10	06/25/2015 23:17
Tetrachloroethene	ND		5.0	10	06/25/2015 23:17
Toluene	ND		5.0	10	06/25/2015 23:17
1,2,3-Trichlorobenzene	ND		5.0	10	06/25/2015 23:17
1,2,4-Trichlorobenzene	ND		5.0	10	06/25/2015 23:17
1,1,1-Trichloroethane	ND		5.0	10	06/25/2015 23:17
1,1,2-Trichloroethane	ND		5.0	10	06/25/2015 23:17
Trichloroethene	ND		5.0	10	06/25/2015 23:17
Trichlorofluoromethane	ND		5.0	10	06/25/2015 23:17
1,2,3-Trichloropropane	ND		5.0	10	06/25/2015 23:17
1,2,4-Trimethylbenzene	ND		5.0	10	06/25/2015 23:17
1,3,5-Trimethylbenzene	ND		5.0	10	06/25/2015 23:17
Vinyl Chloride	ND		5.0	10	06/25/2015 23:17
Xylenes, Total	<b>19</b>		5.0	10	06/25/2015 23:17

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002B	Water	06/18/2015 09:25	GC28	106809
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane		108	70-130		06/25/2015 23:17
Toluene-d8		108	70-130		06/25/2015 23:17
4-BFB		110	70-130		06/25/2015 23:17
<u>Analyst(s): KF</u>					

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003B	Water	06/18/2015 08:30	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	06/25/2015 23:55
tert-Amyl methyl ether (TAME)	ND		0.50	1	06/25/2015 23:55
Benzene	ND		0.50	1	06/25/2015 23:55
Bromobenzene	ND		0.50	1	06/25/2015 23:55
Bromochloromethane	ND		0.50	1	06/25/2015 23:55
Bromodichloromethane	ND		0.50	1	06/25/2015 23:55
Bromoform	ND		0.50	1	06/25/2015 23:55
Bromomethane	ND		0.50	1	06/25/2015 23:55
2-Butanone (MEK)	ND		2.0	1	06/25/2015 23:55
t-Butyl alcohol (TBA)	ND		2.0	1	06/25/2015 23:55
n-Butyl benzene	ND		0.50	1	06/25/2015 23:55
sec-Butyl benzene	ND		0.50	1	06/25/2015 23:55
tert-Butyl benzene	ND		0.50	1	06/25/2015 23:55
Carbon Disulfide	ND		0.50	1	06/25/2015 23:55
Carbon Tetrachloride	ND		0.50	1	06/25/2015 23:55
Chlorobenzene	ND		0.50	1	06/25/2015 23:55
Chloroethane	ND		0.50	1	06/25/2015 23:55
Chloroform	ND		0.50	1	06/25/2015 23:55
Chloromethane	ND		0.50	1	06/25/2015 23:55
2-Chlorotoluene	ND		0.50	1	06/25/2015 23:55
4-Chlorotoluene	ND		0.50	1	06/25/2015 23:55
Dibromochloromethane	ND		0.50	1	06/25/2015 23:55
1,2-Dibromo-3-chloropropane	ND		0.20	1	06/25/2015 23:55
1,2-Dibromoethane (EDB)	ND		0.50	1	06/25/2015 23:55
Dibromomethane	ND		0.50	1	06/25/2015 23:55
1,2-Dichlorobenzene	ND		0.50	1	06/25/2015 23:55
1,3-Dichlorobenzene	ND		0.50	1	06/25/2015 23:55
1,4-Dichlorobenzene	ND		0.50	1	06/25/2015 23:55
Dichlorodifluoromethane	ND		0.50	1	06/25/2015 23:55
1,1-Dichloroethane	ND		0.50	1	06/25/2015 23:55
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	06/25/2015 23:55
1,1-Dichloroethene	ND		0.50	1	06/25/2015 23:55
cis-1,2-Dichloroethene	ND		0.50	1	06/25/2015 23:55
trans-1,2-Dichloroethene	ND		0.50	1	06/25/2015 23:55
1,2-Dichloropropane	ND		0.50	1	06/25/2015 23:55
1,3-Dichloropropane	ND		0.50	1	06/25/2015 23:55
2,2-Dichloropropane	ND		0.50	1	06/25/2015 23:55
1,1-Dichloropropene	ND		0.50	1	06/25/2015 23:55

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003B	Water	06/18/2015 08:30	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.50	1	06/25/2015 23:55
trans-1,3-Dichloropropene	ND		0.50	1	06/25/2015 23:55
Diisopropyl ether (DIPE)	ND		0.50	1	06/25/2015 23:55
Ethylbenzene	ND		0.50	1	06/25/2015 23:55
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	06/25/2015 23:55
Freon 113	ND		0.50	1	06/25/2015 23:55
Hexachlorobutadiene	ND		0.50	1	06/25/2015 23:55
Hexachloroethane	ND		0.50	1	06/25/2015 23:55
2-Hexanone	ND		0.50	1	06/25/2015 23:55
Isopropylbenzene	ND		0.50	1	06/25/2015 23:55
4-Isopropyl toluene	ND		0.50	1	06/25/2015 23:55
Methyl-t-butyl ether (MTBE)	ND		0.50	1	06/25/2015 23:55
Methylene chloride	ND		0.50	1	06/25/2015 23:55
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	06/25/2015 23:55
Naphthalene	ND		0.50	1	06/25/2015 23:55
n-Propyl benzene	ND		0.50	1	06/25/2015 23:55
Styrene	ND		0.50	1	06/25/2015 23:55
1,1,1,2-Tetrachloroethane	ND		0.50	1	06/25/2015 23:55
1,1,2,2-Tetrachloroethane	ND		0.50	1	06/25/2015 23:55
Tetrachloroethene	ND		0.50	1	06/25/2015 23:55
Toluene	ND		0.50	1	06/25/2015 23:55
1,2,3-Trichlorobenzene	ND		0.50	1	06/25/2015 23:55
1,2,4-Trichlorobenzene	ND		0.50	1	06/25/2015 23:55
1,1,1-Trichloroethane	ND		0.50	1	06/25/2015 23:55
1,1,2-Trichloroethane	ND		0.50	1	06/25/2015 23:55
Trichloroethene	ND		0.50	1	06/25/2015 23:55
Trichlorofluoromethane	ND		0.50	1	06/25/2015 23:55
1,2,3-Trichloropropane	ND		0.50	1	06/25/2015 23:55
1,2,4-Trimethylbenzene	ND		0.50	1	06/25/2015 23:55
1,3,5-Trimethylbenzene	ND		0.50	1	06/25/2015 23:55
Vinyl Chloride	ND		0.50	1	06/25/2015 23:55
Xylenes, Total	ND		0.50	1	06/25/2015 23:55

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003B	Water	06/18/2015 08:30	GC28	106809
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane		107	70-130		06/25/2015 23:55
Toluene-d8		110	70-130		06/25/2015 23:55
4-BFB		105	70-130		06/25/2015 23:55
<u>Analyst(s): KF</u>					

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004B	Water	06/18/2015 11:55	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		200	20	06/26/2015 00:33
tert-Amyl methyl ether (TAME)	ND		10	20	06/26/2015 00:33
Benzene	340		10	20	06/26/2015 00:33
Bromobenzene	ND		10	20	06/26/2015 00:33
Bromochloromethane	ND		10	20	06/26/2015 00:33
Bromodichloromethane	ND		10	20	06/26/2015 00:33
Bromoform	ND		10	20	06/26/2015 00:33
Bromomethane	ND		10	20	06/26/2015 00:33
2-Butanone (MEK)	ND		40	20	06/26/2015 00:33
t-Butyl alcohol (TBA)	61		40	20	06/26/2015 00:33
n-Butyl benzene	12		10	20	06/26/2015 00:33
sec-Butyl benzene	ND		10	20	06/26/2015 00:33
tert-Butyl benzene	ND		10	20	06/26/2015 00:33
Carbon Disulfide	ND		10	20	06/26/2015 00:33
Carbon Tetrachloride	ND		10	20	06/26/2015 00:33
Chlorobenzene	ND		10	20	06/26/2015 00:33
Chloroethane	ND		10	20	06/26/2015 00:33
Chloroform	ND		10	20	06/26/2015 00:33
Chloromethane	ND		10	20	06/26/2015 00:33
2-Chlorotoluene	ND		10	20	06/26/2015 00:33
4-Chlorotoluene	ND		10	20	06/26/2015 00:33
Dibromochloromethane	ND		10	20	06/26/2015 00:33
1,2-Dibromo-3-chloropropane	ND		4.0	20	06/26/2015 00:33
1,2-Dibromoethane (EDB)	ND		10	20	06/26/2015 00:33
Dibromomethane	ND		10	20	06/26/2015 00:33
1,2-Dichlorobenzene	ND		10	20	06/26/2015 00:33
1,3-Dichlorobenzene	ND		10	20	06/26/2015 00:33
1,4-Dichlorobenzene	ND		10	20	06/26/2015 00:33
Dichlorodifluoromethane	ND		10	20	06/26/2015 00:33
1,1-Dichloroethane	ND		10	20	06/26/2015 00:33
1,2-Dichloroethane (1,2-DCA)	ND		10	20	06/26/2015 00:33
1,1-Dichloroethene	ND		10	20	06/26/2015 00:33
cis-1,2-Dichloroethene	ND		10	20	06/26/2015 00:33
trans-1,2-Dichloroethene	ND		10	20	06/26/2015 00:33
1,2-Dichloropropane	ND		10	20	06/26/2015 00:33
1,3-Dichloropropane	ND		10	20	06/26/2015 00:33
2,2-Dichloropropane	ND		10	20	06/26/2015 00:33
1,1-Dichloropropene	ND		10	20	06/26/2015 00:33

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004B	Water	06/18/2015 11:55	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		10	20	06/26/2015 00:33
trans-1,3-Dichloropropene	ND		10	20	06/26/2015 00:33
Diisopropyl ether (DIPE)	ND		10	20	06/26/2015 00:33
Ethylbenzene	<b>34</b>		10	20	06/26/2015 00:33
Ethyl tert-butyl ether (ETBE)	ND		10	20	06/26/2015 00:33
Freon 113	ND		10	20	06/26/2015 00:33
Hexachlorobutadiene	ND		10	20	06/26/2015 00:33
Hexachloroethane	ND		10	20	06/26/2015 00:33
2-Hexanone	ND		10	20	06/26/2015 00:33
Isopropylbenzene	<b>34</b>		10	20	06/26/2015 00:33
4-Isopropyl toluene	ND		10	20	06/26/2015 00:33
Methyl-t-butyl ether (MTBE)	<b>32</b>		10	20	06/26/2015 00:33
Methylene chloride	ND		10	20	06/26/2015 00:33
4-Methyl-2-pentanone (MIBK)	ND		10	20	06/26/2015 00:33
Naphthalene	<b>33</b>		10	20	06/26/2015 00:33
n-Propyl benzene	<b>88</b>		10	20	06/26/2015 00:33
Styrene	ND		10	20	06/26/2015 00:33
1,1,1,2-Tetrachloroethane	ND		10	20	06/26/2015 00:33
1,1,2,2-Tetrachloroethane	ND		10	20	06/26/2015 00:33
Tetrachloroethene	ND		10	20	06/26/2015 00:33
Toluene	<b>12</b>		10	20	06/26/2015 00:33
1,2,3-Trichlorobenzene	ND		10	20	06/26/2015 00:33
1,2,4-Trichlorobenzene	ND		10	20	06/26/2015 00:33
1,1,1-Trichloroethane	ND		10	20	06/26/2015 00:33
1,1,2-Trichloroethane	ND		10	20	06/26/2015 00:33
Trichloroethene	ND		10	20	06/26/2015 00:33
Trichlorofluoromethane	ND		10	20	06/26/2015 00:33
1,2,3-Trichloropropane	ND		10	20	06/26/2015 00:33
1,2,4-Trimethylbenzene	<b>41</b>		10	20	06/26/2015 00:33
1,3,5-Trimethylbenzene	<b>14</b>		10	20	06/26/2015 00:33
Vinyl Chloride	ND		10	20	06/26/2015 00:33
Xylenes, Total	<b>120</b>		10	20	06/26/2015 00:33

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004B	Water	06/18/2015 11:55	GC28	106809
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane		114	70-130		06/26/2015 00:33
Toluene-d8		108	70-130		06/26/2015 00:33
4-BFB		109	70-130		06/26/2015 00:33
<u>Analyst(s): KF</u>					

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005B	Water	06/18/2015 11:25	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		500	50	06/29/2015 13:42
tert-Amyl methyl ether (TAME)	ND		25	50	06/29/2015 13:42
Benzene	ND		25	50	06/29/2015 13:42
Bromobenzene	ND		25	50	06/29/2015 13:42
Bromochloromethane	ND		25	50	06/29/2015 13:42
Bromodichloromethane	ND		25	50	06/29/2015 13:42
Bromoform	ND		25	50	06/29/2015 13:42
Bromomethane	ND		25	50	06/29/2015 13:42
2-Butanone (MEK)	ND		100	50	06/29/2015 13:42
t-Butyl alcohol (TBA)	ND		100	50	06/29/2015 13:42
n-Butyl benzene	ND		25	50	06/29/2015 13:42
sec-Butyl benzene	ND		25	50	06/29/2015 13:42
tert-Butyl benzene	ND		25	50	06/29/2015 13:42
Carbon Disulfide	ND		25	50	06/29/2015 13:42
Carbon Tetrachloride	ND		25	50	06/29/2015 13:42
Chlorobenzene	ND		25	50	06/29/2015 13:42
Chloroethane	ND		25	50	06/29/2015 13:42
Chloroform	ND		25	50	06/29/2015 13:42
Chloromethane	ND		25	50	06/29/2015 13:42
2-Chlorotoluene	ND		25	50	06/29/2015 13:42
4-Chlorotoluene	ND		25	50	06/29/2015 13:42
Dibromochloromethane	ND		25	50	06/29/2015 13:42
1,2-Dibromo-3-chloropropane	ND		10	50	06/29/2015 13:42
1,2-Dibromoethane (EDB)	ND		25	50	06/29/2015 13:42
Dibromomethane	ND		25	50	06/29/2015 13:42
1,2-Dichlorobenzene	ND		25	50	06/29/2015 13:42
1,3-Dichlorobenzene	ND		25	50	06/29/2015 13:42
1,4-Dichlorobenzene	ND		25	50	06/29/2015 13:42
Dichlorodifluoromethane	ND		25	50	06/29/2015 13:42
1,1-Dichloroethane	ND		25	50	06/29/2015 13:42
1,2-Dichloroethane (1,2-DCA)	ND		25	50	06/29/2015 13:42
1,1-Dichloroethene	ND		25	50	06/29/2015 13:42
cis-1,2-Dichloroethene	ND		25	50	06/29/2015 13:42
trans-1,2-Dichloroethene	ND		25	50	06/29/2015 13:42
1,2-Dichloropropane	ND		25	50	06/29/2015 13:42
1,3-Dichloropropane	ND		25	50	06/29/2015 13:42
2,2-Dichloropropane	ND		25	50	06/29/2015 13:42
1,1-Dichloropropene	ND		25	50	06/29/2015 13:42

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005B	Water	06/18/2015 11:25	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		25	50	06/29/2015 13:42
trans-1,3-Dichloropropene	ND		25	50	06/29/2015 13:42
Diisopropyl ether (DIPE)	ND		25	50	06/29/2015 13:42
Ethylbenzene	ND		25	50	06/29/2015 13:42
Ethyl tert-butyl ether (ETBE)	ND		25	50	06/29/2015 13:42
Freon 113	ND		25	50	06/29/2015 13:42
Hexachlorobutadiene	ND		25	50	06/29/2015 13:42
Hexachloroethane	ND		25	50	06/29/2015 13:42
2-Hexanone	ND		25	50	06/29/2015 13:42
Isopropylbenzene	ND		25	50	06/29/2015 13:42
4-Isopropyl toluene	ND		25	50	06/29/2015 13:42
Methyl-t-butyl ether (MTBE)	ND		25	50	06/29/2015 13:42
Methylene chloride	ND		25	50	06/29/2015 13:42
4-Methyl-2-pentanone (MIBK)	ND		25	50	06/29/2015 13:42
Naphthalene	ND		25	50	06/29/2015 13:42
n-Propyl benzene	ND		25	50	06/29/2015 13:42
Styrene	ND		25	50	06/29/2015 13:42
1,1,1,2-Tetrachloroethane	ND		25	50	06/29/2015 13:42
1,1,2,2-Tetrachloroethane	ND		25	50	06/29/2015 13:42
Tetrachloroethene	1000		25	50	06/29/2015 13:42
Toluene	ND		25	50	06/29/2015 13:42
1,2,3-Trichlorobenzene	ND		25	50	06/29/2015 13:42
1,2,4-Trichlorobenzene	ND		25	50	06/29/2015 13:42
1,1,1-Trichloroethane	ND		25	50	06/29/2015 13:42
1,1,2-Trichloroethane	ND		25	50	06/29/2015 13:42
Trichloroethene	150		25	50	06/29/2015 13:42
Trichlorofluoromethane	ND		25	50	06/29/2015 13:42
1,2,3-Trichloropropane	ND		25	50	06/29/2015 13:42
1,2,4-Trimethylbenzene	ND		25	50	06/29/2015 13:42
1,3,5-Trimethylbenzene	ND		25	50	06/29/2015 13:42
Vinyl Chloride	ND		25	50	06/29/2015 13:42
Xylenes, Total	ND		25	50	06/29/2015 13:42

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## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005B	Water	06/18/2015 11:25	GC28	106809
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane		100	70-130		06/29/2015 13:42
Toluene-d8		112	70-130		06/29/2015 13:42
4-BFB		102	70-130		06/29/2015 13:42
<u>Analyst(s): KF</u>					

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006B	Water	06/18/2015 13:20	GC10	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		100	10	06/26/2015 15:22
tert-Amyl methyl ether (TAME)	ND		5.0	10	06/26/2015 15:22
Benzene	ND		5.0	10	06/26/2015 15:22
Bromobenzene	ND		5.0	10	06/26/2015 15:22
Bromochloromethane	ND		5.0	10	06/26/2015 15:22
Bromodichloromethane	ND		5.0	10	06/26/2015 15:22
Bromoform	ND		5.0	10	06/26/2015 15:22
Bromomethane	ND		5.0	10	06/26/2015 15:22
2-Butanone (MEK)	ND		20	10	06/26/2015 15:22
t-Butyl alcohol (TBA)	ND		20	10	06/26/2015 15:22
n-Butyl benzene	ND		5.0	10	06/26/2015 15:22
sec-Butyl benzene	ND		5.0	10	06/26/2015 15:22
tert-Butyl benzene	ND		5.0	10	06/26/2015 15:22
Carbon Disulfide	ND		5.0	10	06/26/2015 15:22
Carbon Tetrachloride	ND		5.0	10	06/26/2015 15:22
Chlorobenzene	ND		5.0	10	06/26/2015 15:22
Chloroethane	ND		5.0	10	06/26/2015 15:22
Chloroform	ND		5.0	10	06/26/2015 15:22
Chloromethane	ND		5.0	10	06/26/2015 15:22
2-Chlorotoluene	ND		5.0	10	06/26/2015 15:22
4-Chlorotoluene	ND		5.0	10	06/26/2015 15:22
Dibromochloromethane	ND		5.0	10	06/26/2015 15:22
1,2-Dibromo-3-chloropropane	ND		2.0	10	06/26/2015 15:22
1,2-Dibromoethane (EDB)	ND		5.0	10	06/26/2015 15:22
Dibromomethane	ND		5.0	10	06/26/2015 15:22
1,2-Dichlorobenzene	ND		5.0	10	06/26/2015 15:22
1,3-Dichlorobenzene	ND		5.0	10	06/26/2015 15:22
1,4-Dichlorobenzene	ND		5.0	10	06/26/2015 15:22
Dichlorodifluoromethane	ND		5.0	10	06/26/2015 15:22
1,1-Dichloroethane	ND		5.0	10	06/26/2015 15:22
1,2-Dichloroethane (1,2-DCA)	ND		5.0	10	06/26/2015 15:22
1,1-Dichloroethene	ND		5.0	10	06/26/2015 15:22
cis-1,2-Dichloroethene	ND		5.0	10	06/26/2015 15:22
trans-1,2-Dichloroethene	ND		5.0	10	06/26/2015 15:22
1,2-Dichloropropane	ND		5.0	10	06/26/2015 15:22
1,3-Dichloropropane	ND		5.0	10	06/26/2015 15:22
2,2-Dichloropropane	ND		5.0	10	06/26/2015 15:22
1,1-Dichloropropene	ND		5.0	10	06/26/2015 15:22

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006B	Water	06/18/2015 13:20	GC10	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		5.0	10	06/26/2015 15:22
trans-1,3-Dichloropropene	ND		5.0	10	06/26/2015 15:22
Diisopropyl ether (DIPE)	ND		5.0	10	06/26/2015 15:22
Ethylbenzene	ND		5.0	10	06/26/2015 15:22
Ethyl tert-butyl ether (ETBE)	ND		5.0	10	06/26/2015 15:22
Freon 113	ND		5.0	10	06/26/2015 15:22
Hexachlorobutadiene	ND		5.0	10	06/26/2015 15:22
Hexachloroethane	ND		5.0	10	06/26/2015 15:22
2-Hexanone	ND		5.0	10	06/26/2015 15:22
Isopropylbenzene	ND		5.0	10	06/26/2015 15:22
4-Isopropyl toluene	ND		5.0	10	06/26/2015 15:22
Methyl-t-butyl ether (MTBE)	7.7		5.0	10	06/26/2015 15:22
Methylene chloride	ND		5.0	10	06/26/2015 15:22
4-Methyl-2-pentanone (MIBK)	ND		5.0	10	06/26/2015 15:22
Naphthalene	ND		5.0	10	06/26/2015 15:22
n-Propyl benzene	ND		5.0	10	06/26/2015 15:22
Styrene	ND		5.0	10	06/26/2015 15:22
1,1,1,2-Tetrachloroethane	ND		5.0	10	06/26/2015 15:22
1,1,2,2-Tetrachloroethane	ND		5.0	10	06/26/2015 15:22
Tetrachloroethene	86		5.0	10	06/26/2015 15:22
Toluene	ND		5.0	10	06/26/2015 15:22
1,2,3-Trichlorobenzene	ND		5.0	10	06/26/2015 15:22
1,2,4-Trichlorobenzene	ND		5.0	10	06/26/2015 15:22
1,1,1-Trichloroethane	ND		5.0	10	06/26/2015 15:22
1,1,2-Trichloroethane	ND		5.0	10	06/26/2015 15:22
Trichloroethene	11		5.0	10	06/26/2015 15:22
Trichlorofluoromethane	ND		5.0	10	06/26/2015 15:22
1,2,3-Trichloropropane	ND		5.0	10	06/26/2015 15:22
1,2,4-Trimethylbenzene	ND		5.0	10	06/26/2015 15:22
1,3,5-Trimethylbenzene	ND		5.0	10	06/26/2015 15:22
Vinyl Chloride	ND		5.0	10	06/26/2015 15:22
Xylenes, Total	ND		5.0	10	06/26/2015 15:22

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006B	Water	06/18/2015 13:20	GC10	106809
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane		111	70-130		06/26/2015 15:22
Toluene-d8		96	70-130		06/26/2015 15:22
4-BFB		121	70-130		06/26/2015 15:22
<u>Analyst(s): KF</u>					

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007B	Water	06/18/2015 14:05	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		100	10	06/26/2015 02:25
tert-Amyl methyl ether (TAME)	ND		5.0	10	06/26/2015 02:25
Benzene	89		5.0	10	06/26/2015 02:25
Bromobenzene	ND		5.0	10	06/26/2015 02:25
Bromochloromethane	ND		5.0	10	06/26/2015 02:25
Bromodichloromethane	ND		5.0	10	06/26/2015 02:25
Bromoform	ND		5.0	10	06/26/2015 02:25
Bromomethane	ND		5.0	10	06/26/2015 02:25
2-Butanone (MEK)	ND		20	10	06/26/2015 02:25
t-Butyl alcohol (TBA)	760		20	10	06/26/2015 02:25
n-Butyl benzene	ND		5.0	10	06/26/2015 02:25
sec-Butyl benzene	ND		5.0	10	06/26/2015 02:25
tert-Butyl benzene	ND		5.0	10	06/26/2015 02:25
Carbon Disulfide	ND		5.0	10	06/26/2015 02:25
Carbon Tetrachloride	ND		5.0	10	06/26/2015 02:25
Chlorobenzene	ND		5.0	10	06/26/2015 02:25
Chloroethane	ND		5.0	10	06/26/2015 02:25
Chloroform	ND		5.0	10	06/26/2015 02:25
Chloromethane	ND		5.0	10	06/26/2015 02:25
2-Chlorotoluene	ND		5.0	10	06/26/2015 02:25
4-Chlorotoluene	ND		5.0	10	06/26/2015 02:25
Dibromochloromethane	ND		5.0	10	06/26/2015 02:25
1,2-Dibromo-3-chloropropane	ND		2.0	10	06/26/2015 02:25
1,2-Dibromoethane (EDB)	ND		5.0	10	06/26/2015 02:25
Dibromomethane	ND		5.0	10	06/26/2015 02:25
1,2-Dichlorobenzene	ND		5.0	10	06/26/2015 02:25
1,3-Dichlorobenzene	ND		5.0	10	06/26/2015 02:25
1,4-Dichlorobenzene	ND		5.0	10	06/26/2015 02:25
Dichlorodifluoromethane	ND		5.0	10	06/26/2015 02:25
1,1-Dichloroethane	ND		5.0	10	06/26/2015 02:25
1,2-Dichloroethane (1,2-DCA)	ND		5.0	10	06/26/2015 02:25
1,1-Dichloroethene	ND		5.0	10	06/26/2015 02:25
cis-1,2-Dichloroethene	ND		5.0	10	06/26/2015 02:25
trans-1,2-Dichloroethene	ND		5.0	10	06/26/2015 02:25
1,2-Dichloropropane	ND		5.0	10	06/26/2015 02:25
1,3-Dichloropropane	ND		5.0	10	06/26/2015 02:25
2,2-Dichloropropane	ND		5.0	10	06/26/2015 02:25
1,1-Dichloropropene	ND		5.0	10	06/26/2015 02:25

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007B	Water	06/18/2015 14:05	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		5.0	10	06/26/2015 02:25
trans-1,3-Dichloropropene	ND		5.0	10	06/26/2015 02:25
Diisopropyl ether (DIPE)	ND		5.0	10	06/26/2015 02:25
Ethylbenzene	<b>30</b>		5.0	10	06/26/2015 02:25
Ethyl tert-butyl ether (ETBE)	ND		5.0	10	06/26/2015 02:25
Freon 113	ND		5.0	10	06/26/2015 02:25
Hexachlorobutadiene	ND		5.0	10	06/26/2015 02:25
Hexachloroethane	ND		5.0	10	06/26/2015 02:25
2-Hexanone	ND		5.0	10	06/26/2015 02:25
Isopropylbenzene	<b>12</b>		5.0	10	06/26/2015 02:25
4-Isopropyl toluene	ND		5.0	10	06/26/2015 02:25
Methyl-t-butyl ether (MTBE)	<b>30</b>		5.0	10	06/26/2015 02:25
Methylene chloride	ND		5.0	10	06/26/2015 02:25
4-Methyl-2-pentanone (MIBK)	ND		5.0	10	06/26/2015 02:25
Naphthalene	<b>5.5</b>		5.0	10	06/26/2015 02:25
n-Propyl benzene	<b>25</b>		5.0	10	06/26/2015 02:25
Styrene	ND		5.0	10	06/26/2015 02:25
1,1,1,2-Tetrachloroethane	ND		5.0	10	06/26/2015 02:25
1,1,2,2-Tetrachloroethane	ND		5.0	10	06/26/2015 02:25
Tetrachloroethene	ND		5.0	10	06/26/2015 02:25
Toluene	ND		5.0	10	06/26/2015 02:25
1,2,3-Trichlorobenzene	ND		5.0	10	06/26/2015 02:25
1,2,4-Trichlorobenzene	ND		5.0	10	06/26/2015 02:25
1,1,1-Trichloroethane	ND		5.0	10	06/26/2015 02:25
1,1,2-Trichloroethane	ND		5.0	10	06/26/2015 02:25
Trichloroethene	ND		5.0	10	06/26/2015 02:25
Trichlorofluoromethane	ND		5.0	10	06/26/2015 02:25
1,2,3-Trichloropropane	ND		5.0	10	06/26/2015 02:25
1,2,4-Trimethylbenzene	ND		5.0	10	06/26/2015 02:25
1,3,5-Trimethylbenzene	ND		5.0	10	06/26/2015 02:25
Vinyl Chloride	ND		5.0	10	06/26/2015 02:25
Xylenes, Total	ND		5.0	10	06/26/2015 02:25

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007B	Water	06/18/2015 14:05	GC28	106809
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane		108	70-130		06/26/2015 02:25
Toluene-d8		108	70-130		06/26/2015 02:25
4-BFB		109	70-130		06/26/2015 02:25
<u>Analyst(s): KF</u>					

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008B	Water	06/18/2015 15:00	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	06/26/2015 03:03
tert-Amyl methyl ether (TAME)	ND		0.50	1	06/26/2015 03:03
Benzene	ND		0.50	1	06/26/2015 03:03
Bromobenzene	ND		0.50	1	06/26/2015 03:03
Bromochloromethane	ND		0.50	1	06/26/2015 03:03
Bromodichloromethane	ND		0.50	1	06/26/2015 03:03
Bromoform	ND		0.50	1	06/26/2015 03:03
Bromomethane	ND		0.50	1	06/26/2015 03:03
2-Butanone (MEK)	ND		2.0	1	06/26/2015 03:03
t-Butyl alcohol (TBA)	2.4		2.0	1	06/26/2015 03:03
n-Butyl benzene	ND		0.50	1	06/26/2015 03:03
sec-Butyl benzene	ND		0.50	1	06/26/2015 03:03
tert-Butyl benzene	ND		0.50	1	06/26/2015 03:03
Carbon Disulfide	1.2		0.50	1	06/26/2015 03:03
Carbon Tetrachloride	ND		0.50	1	06/26/2015 03:03
Chlorobenzene	ND		0.50	1	06/26/2015 03:03
Chloroethane	ND		0.50	1	06/26/2015 03:03
Chloroform	ND		0.50	1	06/26/2015 03:03
Chloromethane	ND		0.50	1	06/26/2015 03:03
2-Chlorotoluene	ND		0.50	1	06/26/2015 03:03
4-Chlorotoluene	ND		0.50	1	06/26/2015 03:03
Dibromochloromethane	ND		0.50	1	06/26/2015 03:03
1,2-Dibromo-3-chloropropane	ND		0.20	1	06/26/2015 03:03
1,2-Dibromoethane (EDB)	ND		0.50	1	06/26/2015 03:03
Dibromomethane	ND		0.50	1	06/26/2015 03:03
1,2-Dichlorobenzene	ND		0.50	1	06/26/2015 03:03
1,3-Dichlorobenzene	ND		0.50	1	06/26/2015 03:03
1,4-Dichlorobenzene	ND		0.50	1	06/26/2015 03:03
Dichlorodifluoromethane	ND		0.50	1	06/26/2015 03:03
1,1-Dichloroethane	ND		0.50	1	06/26/2015 03:03
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	06/26/2015 03:03
1,1-Dichloroethene	ND		0.50	1	06/26/2015 03:03
cis-1,2-Dichloroethene	ND		0.50	1	06/26/2015 03:03
trans-1,2-Dichloroethene	ND		0.50	1	06/26/2015 03:03
1,2-Dichloropropane	ND		0.50	1	06/26/2015 03:03
1,3-Dichloropropane	ND		0.50	1	06/26/2015 03:03
2,2-Dichloropropane	ND		0.50	1	06/26/2015 03:03
1,1-Dichloropropene	ND		0.50	1	06/26/2015 03:03

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## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008B	Water	06/18/2015 15:00	GC28	106809
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.50	1	06/26/2015 03:03
trans-1,3-Dichloropropene	ND		0.50	1	06/26/2015 03:03
Diisopropyl ether (DIPE)	ND		0.50	1	06/26/2015 03:03
Ethylbenzene	<b>0.70</b>		0.50	1	06/26/2015 03:03
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	06/26/2015 03:03
Freon 113	ND		0.50	1	06/26/2015 03:03
Hexachlorobutadiene	ND		0.50	1	06/26/2015 03:03
Hexachloroethane	ND		0.50	1	06/26/2015 03:03
2-Hexanone	ND		0.50	1	06/26/2015 03:03
Isopropylbenzene	<b>0.77</b>		0.50	1	06/26/2015 03:03
4-Isopropyl toluene	ND		0.50	1	06/26/2015 03:03
Methyl-t-butyl ether (MTBE)	<b>0.76</b>		0.50	1	06/26/2015 03:03
Methylene chloride	ND		0.50	1	06/26/2015 03:03
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	06/26/2015 03:03
Naphthalene	ND		0.50	1	06/26/2015 03:03
n-Propyl benzene	<b>0.76</b>		0.50	1	06/26/2015 03:03
Styrene	ND		0.50	1	06/26/2015 03:03
1,1,1,2-Tetrachloroethane	ND		0.50	1	06/26/2015 03:03
1,1,2,2-Tetrachloroethane	ND		0.50	1	06/26/2015 03:03
Tetrachloroethene	ND		0.50	1	06/26/2015 03:03
Toluene	ND		0.50	1	06/26/2015 03:03
1,2,3-Trichlorobenzene	ND		0.50	1	06/26/2015 03:03
1,2,4-Trichlorobenzene	ND		0.50	1	06/26/2015 03:03
1,1,1-Trichloroethane	ND		0.50	1	06/26/2015 03:03
1,1,2-Trichloroethane	ND		0.50	1	06/26/2015 03:03
Trichloroethene	ND		0.50	1	06/26/2015 03:03
Trichlorofluoromethane	ND		0.50	1	06/26/2015 03:03
1,2,3-Trichloropropane	ND		0.50	1	06/26/2015 03:03
1,2,4-Trimethylbenzene	ND		0.50	1	06/26/2015 03:03
1,3,5-Trimethylbenzene	ND		0.50	1	06/26/2015 03:03
Vinyl Chloride	ND		0.50	1	06/26/2015 03:03
Xylenes, Total	<b>0.57</b>		0.50	1	06/26/2015 03:03

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## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/25/15-6/29/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008B	Water	06/18/2015 15:00	GC28	106809
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane		108	70-130		06/26/2015 03:03
Toluene-d8		107	70-130		06/26/2015 03:03
4-BFB		110	70-130		06/26/2015 03:03
<u>Analyst(s): KF</u>					



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/22/15

**WorkOrder:** 1506871  
**Extraction Method:** SM2320 B-1997  
**Analytical Method:** SM2320 B-1997  
**Unit:** mg CaCO<sub>3</sub>/L

### Total & Speciated Alkalinity as Calcium Carbonate

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001H	Water	06/18/2015 11:05	Titrino	106651
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	508		1.00	1	06/22/2015 14:30
Carbonate	ND		1.00	1	06/22/2015 14:30
Bicarbonate	508		1.00	1	06/22/2015 14:30
Hydroxide	ND		1.00	1	06/22/2015 14:30

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002H	Water	06/18/2015 09:25	Titrino	106651
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	475		1.00	1	06/22/2015 14:38
Carbonate	ND		1.00	1	06/22/2015 14:38
Bicarbonate	475		1.00	1	06/22/2015 14:38
Hydroxide	ND		1.00	1	06/22/2015 14:38

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003H	Water	06/18/2015 08:30	Titrino	106651
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	117		1.00	1	06/22/2015 14:43
Carbonate	ND		1.00	1	06/22/2015 14:43
Bicarbonate	117		1.00	1	06/22/2015 14:43
Hydroxide	ND		1.00	1	06/22/2015 14:43

Analyst(s): HN

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/22/15

**WorkOrder:** 1506871  
**Extraction Method:** SM2320 B-1997  
**Analytical Method:** SM2320 B-1997  
**Unit:** mg CaCO<sub>3</sub>/L

### Total & Speciated Alkalinity as Calcium Carbonate

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004H	Water	06/18/2015 11:55	Titrino	106651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	350		1.00	1	06/22/2015 14:49
Carbonate	ND		1.00	1	06/22/2015 14:49
Bicarbonate	350		1.00	1	06/22/2015 14:49
Hydroxide	ND		1.00	1	06/22/2015 14:49

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005H	Water	06/18/2015 11:25	Titrino	106651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	180		1.00	1	06/22/2015 15:00
Carbonate	ND		1.00	1	06/22/2015 15:00
Bicarbonate	180		1.00	1	06/22/2015 15:00
Hydroxide	ND		1.00	1	06/22/2015 15:00

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006H	Water	06/18/2015 13:20	Titrino	106651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	136		1.00	1	06/22/2015 15:05
Carbonate	ND		1.00	1	06/22/2015 15:05
Bicarbonate	136		1.00	1	06/22/2015 15:05
Hydroxide	ND		1.00	1	06/22/2015 15:05

Analyst(s): HN

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/22/15

**WorkOrder:** 1506871  
**Extraction Method:** SM2320 B-1997  
**Analytical Method:** SM2320 B-1997  
**Unit:** mg CaCO<sub>3</sub>/L

### Total & Speciated Alkalinity as Calcium Carbonate

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007H	Water	06/18/2015 14:05	Titrino	106651
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	261		1.00	1	06/22/2015 15:12
Carbonate	ND		1.00	1	06/22/2015 15:12
Bicarbonate	261		1.00	1	06/22/2015 15:12
Hydroxide	ND		1.00	1	06/22/2015 15:12

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008H	Water	06/18/2015 15:00	Titrino	106651
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	307		1.00	1	06/22/2015 15:17
Carbonate	ND		1.00	1	06/22/2015 15:17
Bicarbonate	307		1.00	1	06/22/2015 15:17
Hydroxide	ND		1.00	1	06/22/2015 15:17

Analyst(s): HN



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/24/15-6/26/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001A	Water	06/18/2015 11:05	GC19	106823

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	19,000	5000	100	06/25/2015 21:44
MTBE	---	900	100	06/25/2015 21:44
Benzene	---	50	100	06/25/2015 21:44
Toluene	---	50	100	06/25/2015 21:44
Ethylbenzene	---	50	100	06/25/2015 21:44
Xylenes	---	50	100	06/25/2015 21:44
Surrogates	REC (%)	Limits		
aaa-TFT	92	70-130		06/25/2015 21:44
Analyst(s):	IA	Analytical Comments: d1,d17		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002A	Water	06/18/2015 09:25	GC19	106823
Analyses	Result	RL	DF	Date Analyzed	
TPH(g)	2700	50	1	06/26/2015 12:43	
MTBE	---	60	1	06/26/2015 12:43	
Benzene	---	0.50	1	06/26/2015 12:43	
Toluene	---	0.50	1	06/26/2015 12:43	
Ethylbenzene	---	0.50	1	06/26/2015 12:43	
Xylenes	---	0.50	1	06/26/2015 12:43	
Surrogates	REC (%)	Qualifiers	Limits		
aaa-TFT	274	S	70-130	06/26/2015 12:43	
Analyst(s):	IA	Analytical Comments: d1,c4,d17			

(Cont.)



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/24/15-6/26/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003A	Water	06/18/2015 08:30	GC19	106823
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	06/26/2015 15:50
MTBE	---		5.0	1	06/26/2015 15:50
Benzene	---		0.50	1	06/26/2015 15:50
Toluene	---		0.50	1	06/26/2015 15:50
Ethylbenzene	---		0.50	1	06/26/2015 15:50
Xylenes	---		0.50	1	06/26/2015 15:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	89		70-130		06/26/2015 15:50
<u>Analyst(s):</u>	IA				

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004A	Water	06/18/2015 11:55	GC7	106742
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	5400		500	10	06/24/2015 04:15
MTBE	---		90	10	06/24/2015 04:15
Benzene	---		5.0	10	06/24/2015 04:15
Toluene	---		5.0	10	06/24/2015 04:15
Ethylbenzene	---		5.0	10	06/24/2015 04:15
Xylenes	---		5.0	10	06/24/2015 04:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	122		70-130		06/24/2015 04:15
<u>Analyst(s):</u>	IA		<u>Analytical Comments:</u>	d1	

(Cont.)



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/24/15-6/26/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005A	Water	06/18/2015 11:25	GC19	106823

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	510	50	1	06/26/2015 16:21
MTBE	---	15	1	06/26/2015 16:21
Benzene	---	0.50	1	06/26/2015 16:21
Toluene	---	0.50	1	06/26/2015 16:21
Ethylbenzene	---	0.50	1	06/26/2015 16:21
Xylenes	---	0.50	1	06/26/2015 16:21
Surrogates	REC (%)	Qualifiers	Limits	
aaa-TFT	1474	S	70-130	06/26/2015 16:21
Analyst(s):	IA	Analytical Comments: d1,d6		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006A	Water	06/18/2015 13:20	GC19	106823
Analyses	Result	RL	DF	Date Analyzed	
TPH(g)	87	50	1	06/26/2015 16:53	
MTBE	---	5.0	1	06/26/2015 16:53	
Benzene	---	0.50	1	06/26/2015 16:53	
Toluene	---	0.50	1	06/26/2015 16:53	
Ethylbenzene	---	0.50	1	06/26/2015 16:53	
Xylenes	---	0.50	1	06/26/2015 16:53	
Surrogates	REC (%)	Qualifiers	Limits		
aaa-TFT	192	S	70-130		06/26/2015 16:53
Analyst(s):	IA	Analytical Comments: d1,d6			

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/24/15-6/26/15

**WorkOrder:** 1506871  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007A	Water	06/18/2015 14:05	GC19	106823

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	940	50	1	06/26/2015 13:14
MTBE	---	5.0	1	06/26/2015 13:14
Benzene	---	0.50	1	06/26/2015 13:14
Toluene	---	0.50	1	06/26/2015 13:14
Ethylbenzene	---	0.50	1	06/26/2015 13:14
Xylenes	---	0.50	1	06/26/2015 13:14
Surrogates	REC (%)	Limits		
aaa-TFT	121	70-130		06/26/2015 13:14
Analyst(s):	IA	Analytical Comments: d1		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008A	Water	06/18/2015 15:00	GC19	106823

Analyses	Result	RL	DF	Date Analyzed
TPH(g)	260	50	1	06/25/2015 20:13
MTBE	---	5.0	1	06/25/2015 20:13
Benzene	---	0.50	1	06/25/2015 20:13
Toluene	---	0.50	1	06/25/2015 20:13
Ethylbenzene	---	0.50	1	06/25/2015 20:13
Xylenes	---	0.50	1	06/25/2015 20:13
Surrogates	REC (%)	Limits		
aaa-TFT	99	70-130		06/25/2015 20:13
Analyst(s):	IA	Analytical Comments: d7		



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506871  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### Dissolved Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001G	Water	06/18/2015 11:05	ICP-MS1	106569
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	4700	F	20	1	06/22/2015 17:19

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002G	Water	06/18/2015 09:25	ICP-MS1	106569
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	5600	F	20	1	06/22/2015 17:25

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003G	Water	06/18/2015 08:30	ICP-MS1	106569
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	63	F	20	1	06/22/2015 17:32

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004G	Water	06/18/2015 11:55	ICP-MS1	106606
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	2100	F	20	1	06/22/2015 17:38

Analyst(s): DVH

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## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506871  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### Dissolved Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005G	Water	06/18/2015 11:25	ICP-MS1	106606
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	ND	F	20	1	06/22/2015 17:44

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006G	Water	06/18/2015 13:20	ICP-MS1	106606
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	ND	F	20	1	06/22/2015 17:51

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007G	Water	06/18/2015 14:05	ICP-MS1	106606
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	4200	F	20	1	06/22/2015 17:57

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008G	Water	06/18/2015 15:00	ICP-MS1	106606
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	2500	F	20	1	06/22/2015 18:03

Analyst(s): DVH



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506871  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001F	Water	06/18/2015 11:05	ICP-MS2	106569

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	20,000	20	1	06/23/2015 14:41
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	105	70-130		06/23/2015 14:41

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002F	Water	06/18/2015 09:25	ICP-MS2	106569

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	17,000	20	1	06/23/2015 14:35
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	106	70-130		06/23/2015 14:35

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003F	Water	06/18/2015 08:30	ICP-MS2	106569

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	2600	20	1	06/23/2015 14:29
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	102	70-130		06/23/2015 14:29

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004F	Water	06/18/2015 11:55	ICP-MS2	106569

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	8300	20	1	06/22/2015 20:45
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	102	70-130		06/22/2015 20:45

Analyst(s): BBO

(Cont.)



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506871  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005F	Water	06/18/2015 11:25	ICP-MS2	106606

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	1300	20	1	06/22/2015 17:41
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	103	70-130		06/22/2015 17:41
<u>Analyst(s):</u>	DVH			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006F	Water	06/18/2015 13:20	ICP-MS2	106606

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	2100	20	1	06/22/2015 20:51
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	104	70-130		06/22/2015 20:51
<u>Analyst(s):</u>	BBO			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007F	Water	06/18/2015 14:05	ICP-MS2	106606

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	15,000	20	1	06/22/2015 20:57
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	103	70-130		06/22/2015 20:57
<u>Analyst(s):</u>	BBO			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008F	Water	06/18/2015 15:00	ICP-MS2	106606

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	9900	20	1	06/22/2015 21:15
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	104	70-130		06/22/2015 21:15
<u>Analyst(s):</u>	BBO			



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/22/15

**WorkOrder:** 1506871  
**Extraction Method:** RSK175  
**Analytical Method:** RSK175  
**Unit:**  $\mu\text{g/L}$

### Carbon Dioxide

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001D	Water	06/18/2015 11:05	GC26	106690

Analyses	Result	RL	DF	Date Analyzed
Carbon Dioxide	68,000	2500	50	06/22/2015 10:45

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002D	Water	06/18/2015 09:25	GC26	106690

Analyses	Result	RL	DF	Date Analyzed
Carbon Dioxide	26,000	2500	50	06/22/2015 11:17

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003D	Water	06/18/2015 08:30	GC26	106690

Analyses	Result	RL	DF	Date Analyzed
Carbon Dioxide	44,000	2500	50	06/22/2015 11:32

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004D	Water	06/18/2015 11:55	GC26	106690

Analyses	Result	RL	DF	Date Analyzed
Carbon Dioxide	51,000	2500	50	06/22/2015 11:56

Analyst(s): KBO

(Cont.)



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/22/15

**WorkOrder:** 1506871  
**Extraction Method:** RSK175  
**Analytical Method:** RSK175  
**Unit:**  $\mu\text{g/L}$

### Carbon Dioxide

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005D	Water	06/18/2015 11:25	GC26	106690

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Carbon Dioxide	79,000	5000	100	06/22/2015 12:27

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006D	Water	06/18/2015 13:20	GC26	106690

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Carbon Dioxide	7200	2500	50	06/22/2015 12:40

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007D	Water	06/18/2015 14:05	GC26	106690

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Carbon Dioxide	12,000	2500	50	06/22/2015 12:55

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008D	Water	06/18/2015 15:00	GC26	106690

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Carbon Dioxide	26,000	2500	50	06/22/2015 13:06

Analyst(s): KBO



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/24/15-6/25/15

**WorkOrder:** 1506871  
**Extraction Method:** RSK175  
**Analytical Method:** RSK175  
**Unit:** µg/L

### Light Gases

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001C	Water	06/18/2015 11:05	GC26	106883
Analyses	Result	Qualifiers	RL	DF	Date Analyzed
Ethane	3.1		0.20	1	06/25/2015 15:56
Ethylene	ND		0.30	1	06/25/2015 15:56
Methane	8400	B	10	100	06/24/2015 11:07

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002C	Water	06/18/2015 09:25	GC26	106883
Analyses	Result	Qualifiers	RL	DF	Date Analyzed
Ethane	8.7		0.20	1	06/25/2015 15:24
Ethylene	ND		0.30	1	06/25/2015 15:24
Methane	4900	B	5.0	50	06/24/2015 11:23

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003C	Water	06/18/2015 08:30	GC26	106883
Analyses	Result	Qualifiers	RL	DF	Date Analyzed
Ethane	ND		0.20	1	06/24/2015 11:35
Ethylene	ND		0.30	1	06/24/2015 11:35
Methane	9.3	B	0.10	1	06/24/2015 11:35

Analyst(s): KBO

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/24/15-6/25/15

**WorkOrder:** 1506871  
**Extraction Method:** RSK175  
**Analytical Method:** RSK175  
**Unit:** µg/L

### Light Gases

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004C	Water	06/18/2015 11:55	GC26	106883
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Ethane	3.2		0.20	1	06/25/2015 15:06
Ethylene	ND		0.30	1	06/25/2015 15:06
Methane	7000	B	10	100	06/24/2015 11:50

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005C	Water	06/18/2015 11:25	GC26	106883
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Ethane	ND		0.20	1	06/25/2015 14:48
Ethylene	ND		0.30	1	06/25/2015 14:48
Methane	140	B	1.0	10	06/24/2015 12:23

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006C	Water	06/18/2015 13:20	GC26	106883
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Ethane	ND		0.20	1	06/24/2015 12:35
Ethylene	ND		0.30	1	06/24/2015 12:35
Methane	27	B	0.10	1	06/24/2015 12:35

Analyst(s): KBO

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/24/15-6/25/15

**WorkOrder:** 1506871  
**Extraction Method:** RSK175  
**Analytical Method:** RSK175  
**Unit:** µg/L

### Light Gases

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007C	Water	06/18/2015 14:05	GC26	106883
Analyst(s)	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Ethane	ND		0.20	1	06/25/2015 14:13
Ethylene	ND		0.30	1	06/25/2015 14:13
Methane	1400	B	2.0	20	06/24/2015 13:19

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008C	Water	06/18/2015 15:00	GC26	106883
Analyst(s)	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Ethane	0.30		0.20	1	06/25/2015 13:56
Ethylene	ND		0.30	1	06/25/2015 13:56
Methane	250	B	0.50	5	06/24/2015 13:53

Analyst(s): KBO



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506871  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW1	1506871-001A	Water	06/18/2015 11:05	GC2A	106598
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	2000		50	1	06/22/2015 04:49
TPH-Motor Oil (C18-C36)	ND		250	1	06/22/2015 04:49
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	108		70-130		06/22/2015 04:49
<u>Analyst(s):</u>	TK		<u>Analytical Comments:</u>	e4	
Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW2	1506871-002A	Water	06/18/2015 09:25	GC2A	106598
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	3100		50	1	06/22/2015 18:28
TPH-Motor Oil (C18-C36)	1600		250	1	06/22/2015 18:28
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	102		70-130		06/22/2015 18:28
<u>Analyst(s):</u>	TK		<u>Analytical Comments:</u>	e2,e4,e7	
Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW3	1506871-003A	Water	06/18/2015 08:30	GC2B	106598
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		50	1	06/22/2015 02:20
TPH-Motor Oil (C18-C36)	ND		250	1	06/22/2015 02:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	96		70-130		06/22/2015 02:20
<u>Analyst(s):</u>	TK				

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506871  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW4	1506871-004A	Water	06/18/2015 11:55	GC2B	106598
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	1000		50	1	06/22/2015 04:49
TPH-Motor Oil (C18-C36)	ND		250	1	06/22/2015 04:49
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	96		70-130		06/22/2015 04:49
<u>Analyst(s):</u>	TK		<u>Analytical Comments:</u>	e4	
Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW2	1506871-005A	Water	06/18/2015 11:25	GC2B	106598
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		50	1	06/21/2015 18:52
TPH-Motor Oil (C18-C36)	ND		250	1	06/21/2015 18:52
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	94		70-130		06/21/2015 18:52
<u>Analyst(s):</u>	TK				
Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW4	1506871-006A	Water	06/18/2015 13:20	GC2B	106598
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		50	1	06/21/2015 21:22
TPH-Motor Oil (C18-C36)	ND		250	1	06/21/2015 21:22
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	95		70-130		06/21/2015 21:22
<u>Analyst(s):</u>	TK				

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## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/19/15 17:47  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506871  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EW5	1506871-007A	Water	06/18/2015 14:05	GC2A	106598
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	290		50	1	06/22/2015 02:20
TPH-Motor Oil (C18-C36)	ND		250	1	06/22/2015 02:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	103		70-130		06/22/2015 02:20
<u>Analyst(s):</u>	TK		<u>Analytical Comments:</u>	e4	
Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OW2	1506871-008A	Water	06/18/2015 15:00	GC2A	106598
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	90		50	1	06/22/2015 22:14
TPH-Motor Oil (C18-C36)	ND		250	1	06/22/2015 22:14
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	102		70-130		06/22/2015 22:14
<u>Analyst(s):</u>	TK		<u>Analytical Comments:</u>	e8	



## Quality Control Report

**Client:** P & D Environmental

**WorkOrder:** 1506871

**Date Prepared:** 6/19/15

**BatchID:** 106597

**Date Analyzed:** 6/19/15 - 6/20/15

**Extraction Method:** E300.1

**Instrument:** IC3

**Analytical Method:** E300.1

**Matrix:** Water

**Unit:** mg/L

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Sample ID:** MB/LCS-106597  
1506856-001DMS/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	0.924	0.10	1	-	92	85-115
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	4.09	0.45	4.4	-	93	85-115
Sulfate	ND	1.12	0.10	1	-	112	85-115

#### Surrogate Recovery

Formate	0.106	0.101	0.10	106	101	90-115
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Nitrate as N	1.12	1.17	1	0.1751	94	99	85-115	4.54	15
Nitrate as NO <sub>3</sub> <sup>-</sup>	4.94	5.17	4.4	0.7750	95	100	85-115	4.54	15
Sulfate	NR	NR	1	100	NR	NR	85-115	NR	15

#### Surrogate Recovery

Formate	0.108	0.106	0.10	108	106	90-115	2.69	10
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## Quality Control Report

**Client:** P & D Environmental  
**Date Prepared:** 6/25/15  
**Date Analyzed:** 6/25/15  
**Instrument:** GC28  
**Matrix:** Water  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**WorkOrder:** 1506871  
**BatchID:** 106809  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-106809  
1506A48-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	10.2	0.50	10	-	102	54-140
Benzene	ND	10.7	0.50	10	-	107	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	34.0	2.0	40	-	85	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	10.3	0.50	10	-	103	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	9.57	0.50	10	-	96	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	9.97	0.50	10	-	100	66-125
1,1-Dichloroethene	ND	10.7	0.50	10	-	107	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
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  
**Date Prepared:** 6/25/15  
**Date Analyzed:** 6/25/15  
**Instrument:** GC28  
**Matrix:** Water  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**WorkOrder:** 1506871  
**BatchID:** 106809  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-106809  
1506A48-001AMS/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	10.8	0.50	10	-	108	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.90	0.50	10	-	99	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	9.67	0.50	10	-	97	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	10.6	0.50	10	-	106	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	10.3	0.50	10	-	103	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	26.3	26.3	25	105	105	70-130
Toluene-d8	27.6	27.5	25	110	110	70-130
4-BFB	2.52	2.53	2.5	101	101	70-130

(Cont.)



## Quality Control Report

**Client:** P & D Environmental  
**Date Prepared:** 6/25/15  
**Date Analyzed:** 6/25/15  
**Instrument:** GC28  
**Matrix:** Water  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**WorkOrder:** 1506871  
**BatchID:** 106809  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-106809  
1506A48-001AMS/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)	10.8	11.2	10	ND	108	112	69-139	4.15	20
Benzene	9.85	10.2	10	ND	98	102	69-141	3.83	20
t-Butyl alcohol (TBA)	44.6	48.4	40	ND	111	121	41-152	8.25	20
Chlorobenzene	9.50	9.90	10	ND	95	99	77-120	4.13	20
1,2-Dibromoethane (EDB)	10.1	10.5	10	ND	101	105	76-135	4.20	20
1,2-Dichloroethane (1,2-DCA)	10.2	10.5	10	ND	102	105	73-139	3.07	20
1,1-Dichloroethene	9.86	10.3	10	ND	99	103	59-140	4.53	20
Diisopropyl ether (DIPE)	10.4	10.7	10	ND	104	107	72-140	3.20	20
Ethyl tert-butyl ether (ETBE)	9.87	10.3	10	ND	99	103	71-140	3.81	20
Methyl-t-butyl ether (MTBE)	10.9	11.3	10	ND	106	110	73-139	3.58	20
Toluene	9.40	9.92	10	ND	94	99	71-128	5.36	20
Trichloroethylene	9.45	9.88	10	ND	94	99	64-132	4.40	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	27.0	26.8	25		108	107	70-130	0.781	20
Toluene-d8	26.4	26.9	25		106	108	70-130	1.66	20
4-BFB	2.47	2.48	2.5		99	99	70-130	0	20



## Quality Control Report

**Client:** P & D Environmental      **WorkOrder:** 1506871  
**Date Prepared:** 6/22/15      **BatchID:** 106651  
**Date Analyzed:** 6/22/15      **Extraction Method:** SM2320 B-1997  
**Instrument:** Titrino      **Analytical Method:** SM2320 B-1997  
**Matrix:** Water      **Test Method:** SM2320B (Alkalinity)  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

### 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 (%)
1506871-001H	Total	mg CaCO <sub>3</sub> /L	508	1	488	1	3.85	<20
1506871-002H	Total	mg CaCO <sub>3</sub> /L	475	1	469	1	1.38	<20
1506871-003H	Total	mg CaCO <sub>3</sub> /L	117	1	117	1	0.282	<20
1506871-004H	Total	mg CaCO <sub>3</sub> /L	350	1	351	1	0.285	<20
1506871-005H	Total	mg CaCO <sub>3</sub> /L	180	1	178	1	1.4	<20
1506871-006H	Total	mg CaCO <sub>3</sub> /L	136	1	135	1	0.495	<20
1506871-007H	Total	mg CaCO <sub>3</sub> /L	261	1	254	1	2.79	<20
1506871-008H	Total	mg CaCO <sub>3</sub> /L	307	1	305	1	0.761	<20



## Quality Control Report

**Client:** P & D Environmental

**WorkOrder:** 1506871

**Date Prepared:** 6/23/15

**BatchID:** 106742

**Date Analyzed:** 6/23/15

**Extraction Method:** SW5030B

**Instrument:** GC7

**Analytical Method:** SW8021B/8015Bm

**Matrix:** Water

**Unit:**  $\mu\text{g/L}$

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Sample ID:** MB/LCS-106742  
1506759-002AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	51.9	40	60	-	87	70-130
MTBE	ND	10.7	5.0	10	-	98	70-130
Benzene	ND	10.6	0.50	10	-	106	70-130
Toluene	ND	10.8	0.50	10	-	108	70-130
Ethylbenzene	ND	10.9	0.50	10	-	108	70-130
Xylenes	ND	34.0	0.50	30	-	113	70-130

#### Surrogate Recovery

aaa-TFT	9.92	10.2	10	99	102	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR	640	NR	NR	-	NR	NR	NR
MTBE	NR	NR	ND<50	NR	NR	-	NR	NR	NR
Benzene	NR	NR	180	NR	NR	-	NR	NR	NR
Toluene	NR	NR	100	NR	NR	-	NR	NR	NR
Ethylbenzene	NR	NR	26	NR	NR	-	NR	NR	NR
Xylenes	NR	NR	170	NR	NR	-	NR	NR	NR

#### Surrogate Recovery

aaa-TFT	NR	NR	NR	NR	-	NR
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## Quality Control Report

<b>Client:</b>	P & D Environmental	<b>WorkOrder:</b>	1506871
<b>Date Prepared:</b>	6/25/15	<b>BatchID:</b>	106823
<b>Date Analyzed:</b>	6/25/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC19	<b>Analytical Method:</b>	SW8021B/8015Bm
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#0058; Xtra Oil Co., 1701 Park St., Alameda	<b>Sample ID:</b>	MB/LCS-106823 1506A34-002AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	54.8	40	60	-	91	70-130
MTBE	ND	11.1	5.0	10	-	111	70-130
Benzene	ND	11.0	0.50	10	-	110	70-130
Toluene	ND	11.2	0.50	10	-	111	70-130
Ethylbenzene	ND	11.6	0.50	10	-	116	70-130
Xylenes	ND	37.3	0.50	30	-	124	70-130

**Surrogate Recovery**

aaa-TFT	8.91	8.97	10	89	90	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR		6700	NR	NR	-	NR	
MTBE	NR	NR		ND<500	NR	NR	-	NR	
Benzene	NR	NR		180	NR	NR	-	NR	
Toluene	NR	NR		570	NR	NR	-	NR	
Ethylbenzene	NR	NR		130	NR	NR	-	NR	
Xylenes	NR	NR		750	NR	NR	-	NR	

**Surrogate Recovery**

aaa-TFT	NR	NR	NR	NR	-	NR
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## Quality Control Report

<b>Client:</b>	P & D Environmental	<b>WorkOrder:</b>	1506871
<b>Date Prepared:</b>	6/19/15	<b>BatchID:</b>	106569
<b>Date Analyzed:</b>	6/22/15	<b>Extraction Method:</b>	E200.8
<b>Instrument:</b>	ICP-MS2	<b>Analytical Method:</b>	E200.8
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#0058; Xtra Oil Co., 1701 Park St., Alameda	<b>Sample ID:</b>	MB/LCS-106569 1506846-001GMS/MSD

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### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Iron	ND	533	20	500	-	107	85-115

**Surrogate Recovery**

Terbium	776	781	750	104	104	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Iron	NR	NR	500	9300	NR	NR	70-130	NR	20

**Surrogate Recovery**

Terbium	794	811	750	106	108	70-130	2.13	20
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## Quality Control Report

**Client:** P & D Environmental

**WorkOrder:** 1506871

**Date Prepared:** 6/19/15

**BatchID:** 106606

**Date Analyzed:** 6/22/15

**Extraction Method:** E200.8

**Instrument:** ICP-MS2

**Analytical Method:** E200.8

**Matrix:** Water

**Unit:** µg/L

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Sample ID:** MB/LCS-106606  
1506871-005FMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Iron	ND	513	20	500	-	103	85-115

#### Surrogate Recovery

Terbium	775	804		750	103	107	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Iron	NR	NR	500	1287	NR	NR	70-130	NR	20
<b>Surrogate Recovery</b>									
Terbium	810	806	750		108	107	70-130	0.421	20



## Quality Control Report

**Client:** P & D Environmental

**WorkOrder:** 1506871

**Date Prepared:** 6/22/15

**BatchID:** 106690

**Date Analyzed:** 6/22/15

**Extraction Method:** RSK175

**Instrument:** GC26

**Analytical Method:** RSK175

**Matrix:** Air

**Unit:**  $\mu\text{L/L}$

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Sample ID:** MB/LCS-106690

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### QC Summary Report for RSK174/175

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Carbon Dioxide	ND	87.5	20	100	-	87	70-130

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## Quality Control Report

**Client:** P & D Environmental

**WorkOrder:** 1506871

**Date Prepared:** 6/24/15

**BatchID:** 106883

**Date Analyzed:** 6/24/15

**Extraction Method:** RSK175

**Instrument:** GC26

**Analytical Method:** RSK175

**Matrix:** Air

**Unit:**  $\mu\text{L/L}$

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Sample ID:** MB/LCS-106883

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### QC Summary Report for RSK175

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethane	ND	10.9	0.50	10	-	109	70-130
Ethylene	ND	7.92	0.50	10	-	79	70-130
Methane	0.518	10.5	0.50	10	-	100	70-130

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## Quality Control Report

**Client:** P & D Environmental

**WorkOrder:** 1506871

**Date Prepared:** 6/19/15

**BatchID:** 106598

**Date Analyzed:** 6/19/15 - 6/23/15

**Extraction Method:** SW3510C

**Instrument:** GC2A, GC2B

**Analytical Method:** SW8015B

**Matrix:** Water

**Unit:** µg/L

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Sample ID:** MB/LCS-106598

---

### QC Report for SW8015B w/out SG Clean-Up

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1060	50	1000	-	106	61-157
TPH-Motor Oil (C18-C36)	ND	-	250	-	-	-	-

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#### Surrogate Recovery

C9	564	602	625	90	96	70-134
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# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1506871

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., 1701 Park St.,  
Alameda

## Bill to:

Accounts Payable  
Xtra Oil Company  
2307 Pacific Avenue  
Alameda, CA 94501  
xtraoil@sbcglobal.net

Requested TAT: 5 days

Date Received: 06/19/2015

Date Printed: 06/29/2015

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
1506871-001	MW1	Water	6/18/2015 11:05	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506871-002	MW2	Water	6/18/2015 9:25	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506871-003	MW3	Water	6/18/2015 8:30	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506871-004	MW4	Water	6/18/2015 11:55	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506871-005	EW2	Water	6/18/2015 11:25	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506871-006	EW4	Water	6/18/2015 13:20	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506871-007	EW5	Water	6/18/2015 14:05	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506871-008	OW2	Water	6/18/2015 15:00	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		

Test Legend:

1	300_1_W	2	8260B_W	3	Alka(spe)_W	4	G-MBTEX_W	5	METALSMS_DISS
6	METALSMS_W	7	PRDISSOLVED	8	RSK175_CO2_W	9	RSK175_W	10	TPH(DMO)_W
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A 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.



## WORK ORDER SUMMARY

**Client Name:** P & D ENVIRONMENTAL

**QC Level:** LEVEL 2

**Work Order:** 1506871

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Client Contact:** Paul King

**Date Received:** 6/19/2015

**Comments:**

**Contact's Email:** lab@pdenviro.com

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1506871-001A	MW1	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/18/2015 11:05	5 days	Trace	<input type="checkbox"/>	
1506871-001B	MW1	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/18/2015 11:05	5 days	Trace	<input type="checkbox"/>	
1506871-001C	MW1	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/18/2015 11:05	5 days	Trace	<input type="checkbox"/>	
1506871-001D	MW1	Water	RSK175 (CO2)	1	aVOA	<input type="checkbox"/>	6/18/2015 11:05	5 days	Trace	<input type="checkbox"/>	
1506871-001E	MW1	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as NO3-, Sulfate>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 11:05	5 days	Trace	<input type="checkbox"/>	
1506871-001F	MW1	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	6/18/2015 11:05	5 days	Trace	<input type="checkbox"/>	
1506871-001G	MW1	Water	E200.8 (Metals) (Dissolved-Lab Filtered) <Iron>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 11:05	5 days	Trace	<input type="checkbox"/>	
1506871-001H	MW1	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 11:05	5 days	Trace	<input type="checkbox"/>	
1506871-002A	MW2	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/18/2015 9:25	5 days	Trace	<input type="checkbox"/>	
1506871-002B	MW2	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/18/2015 9:25	5 days	Trace	<input type="checkbox"/>	
1506871-002C	MW2	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/18/2015 9:25	5 days	Trace	<input type="checkbox"/>	
1506871-002D	MW2	Water	RSK175 (CO2)	1	aVOA	<input type="checkbox"/>	6/18/2015 9:25	5 days	Trace	<input type="checkbox"/>	
1506871-002E	MW2	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as NO3-, Sulfate>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 9:25	5 days	Trace	<input type="checkbox"/>	
1506871-002F	MW2	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	6/18/2015 9:25	5 days	Trace	<input type="checkbox"/>	

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

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## WORK ORDER SUMMARY

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**QC Level:** LEVEL 2

**Work Order:** 1506871

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Client Contact:** Paul King

**Date Received:** 6/19/2015

**Comments:**

**Contact's Email:** lab@pdenviro.com

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
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1506871-003A	MW3	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/18/2015 8:30	5 days	Present	<input type="checkbox"/>	
1506871-003B	MW3	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/18/2015 8:30	5 days	Present	<input type="checkbox"/>	
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1506871-003H	MW3	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 8:30	5 days	Present	<input type="checkbox"/>	
1506871-004A	MW4	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/18/2015 11:55	5 days	Trace	<input type="checkbox"/>	
1506871-004B	MW4	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/18/2015 11:55	5 days	Trace	<input type="checkbox"/>	
1506871-004C	MW4	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/18/2015 11:55	5 days	Trace	<input type="checkbox"/>	
1506871-004D	MW4	Water	RSK175 (CO2)	1	aVOA	<input type="checkbox"/>	6/18/2015 11:55	5 days	Trace	<input type="checkbox"/>	

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**Work Order:** 1506871

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Client Contact:** Paul King

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**Comments:**

**Contact's Email:** lab@pdenviro.com

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

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1506871-004F	MW4	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO <sub>3</sub>	<input type="checkbox"/>	6/18/2015 11:55	5 days	Trace	<input type="checkbox"/>	
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1506871-005A	EW2	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/18/2015 11:25	5 days	Present	<input type="checkbox"/>	
1506871-005B	EW2	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/18/2015 11:25	5 days	Present	<input type="checkbox"/>	
1506871-005C	EW2	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H <sub>2</sub> SO <sub>4</sub>	<input type="checkbox"/>	6/18/2015 11:25	5 days	Present	<input type="checkbox"/>	
1506871-005D	EW2	Water	RSK175 (CO <sub>2</sub> )	1	aVOA	<input type="checkbox"/>	6/18/2015 11:25	5 days	Present	<input type="checkbox"/>	
1506871-005E	EW2	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as NO <sub>3</sub> <sup>-</sup> , Sulfate>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 11:25	5 days	Present	<input type="checkbox"/>	
1506871-005F	EW2	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO <sub>3</sub>	<input type="checkbox"/>	6/18/2015 11:25	5 days	Present	<input type="checkbox"/>	
1506871-005G	EW2	Water	E200.8 (Metals) (Dissolved-Lab Filtered) <Iron>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 11:25	5 days	Present	<input type="checkbox"/>	
1506871-005H	EW2	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 11:25	5 days	Present	<input type="checkbox"/>	
1506871-006A	EW4	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/18/2015 13:20	5 days	Present	<input type="checkbox"/>	
1506871-006B	EW4	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/18/2015 13:20	5 days	Present	<input type="checkbox"/>	

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**QC Level:** LEVEL 2

**Work Order:** 1506871

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Client Contact:** Paul King

**Date Received:** 6/19/2015

**Comments:**

**Contact's Email:** lab@pdenviro.com

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1506871-006C	EW4	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/18/2015 13:20	5 days	Present	<input type="checkbox"/>	
1506871-006D	EW4	Water	RSK175 (CO2)	1	aVOA	<input type="checkbox"/>	6/18/2015 13:20	5 days	Present	<input type="checkbox"/>	
1506871-006E	EW4	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as NO3-, Sulfate>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 13:20	5 days	Present	<input type="checkbox"/>	
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1506871-006H	EW4	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 13:20	5 days	Present	<input type="checkbox"/>	
1506871-007A	EW5	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/18/2015 14:05	5 days	Trace	<input type="checkbox"/>	
1506871-007B	EW5	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/18/2015 14:05	5 days	Trace	<input type="checkbox"/>	
1506871-007C	EW5	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/18/2015 14:05	5 days	Trace	<input type="checkbox"/>	
1506871-007D	EW5	Water	RSK175 (CO2)	1	aVOA	<input type="checkbox"/>	6/18/2015 14:05	5 days	Trace	<input type="checkbox"/>	
1506871-007E	EW5	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as NO3-, Sulfate>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 14:05	5 days	Trace	<input type="checkbox"/>	
1506871-007F	EW5	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	6/18/2015 14:05	5 days	Trace	<input type="checkbox"/>	
1506871-007G	EW5	Water	E200.8 (Metals) (Dissolved-Lab Filtered) <Iron>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 14:05	5 days	Trace	<input type="checkbox"/>	
1506871-007H	EW5	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 14:05	5 days	Trace	<input type="checkbox"/>	

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## WORK ORDER SUMMARY

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**QC Level:** LEVEL 2

**Work Order:** 1506871

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Client Contact:** Paul King

**Date Received:** 6/19/2015

**Comments:**

**Contact's Email:** lab@pdenviro.com

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1506871-008A	OW2	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/18/2015 15:00	5 days	Present	<input type="checkbox"/>	
1506871-008B	OW2	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/18/2015 15:00	5 days	Present	<input type="checkbox"/>	
1506871-008C	OW2	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/18/2015 15:00	5 days	Present	<input type="checkbox"/>	
1506871-008D	OW2	Water	RSK175 (CO2)	1	aVOA	<input type="checkbox"/>	6/18/2015 15:00	5 days	Present	<input type="checkbox"/>	
1506871-008E	OW2	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as NO3-, Sulfate>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 15:00	5 days	Present	<input type="checkbox"/>	
1506871-008F	OW2	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	6/18/2015 15:00	5 days	Present	<input type="checkbox"/>	
1506871-008G	OW2	Water	E200.8 (Metals) (Dissolved-Lab Filtered) <Iron>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 15:00	5 days	Present	<input type="checkbox"/>	
1506871-008H	OW2	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/18/2015 15:00	5 days	Present	<input type="checkbox"/>	

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## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

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

1506871

PROJECT NUMBER: 0058		PROJECT NAME: XTRA OIL CO. 1701 PARK ST. ALAMEDA		NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-MULTI RANGE (G.D.M) 8260's FUEL OXYS + Pb-SCAVENgers NITRATE AS " NITROGEN SULFATE TOTAL AND DISSOLVED IRON *	PRESERVATIVE Dissolved Methane, Ethane, Ethene, CO <sub>2</sub>	REMARKS	
SAMPLE NUMBER		DATE	TIME					TYPE
MW1		6/18/15	1105	H <sub>2</sub> O		X X X X X X X X	ICE	NORMAL TAT
MW2			0925			X X X X X X X X		
MW3			0830			X X X X X X X X		
MW4			1155			X X X X X X X X		
EW2			1125			X X X X X X X X		
EW4			1320			X X X X X X X X		
EW5			1405			X X X X X X X X		
OW2			1500			X X X X X X X X		
RELINQUISHED BY: (SIGNATURE) <i>Michael Bass-Deschenes</i>		DATE	TIME	RECEIVED BY: (SIGNATURE)		Total No. of Samples (This Shipment)	8	LABORATORY:
		6-19-15	1200	<i>12</i>		Total No. of Containers (This Shipment)	96	<i>MC CAMPBELL ANALYTICAL, INC.</i>
RELINQUISHED BY: (SIGNATURE) <i>R. L.</i>		DATE	TIME	RECEIVED BY: (SIGNATURE)		LABORATORY CONTACT: ANGELA RIDEHUS (877) 252-9262		LABORATORY PHONE NUMBER:
RELINQUISHED BY: (SIGNATURE)		6-19-15	1605	<i>J</i>				
Results and billing to: P&D Environmental, Inc. lab@pdenviro.com				REMARKS: * FILTER & PRESERVE UNFILTERED & UNPRESERVED 250 mL POLY UPON RECEIPT. 4 VOCs w/ HCl 2 VOCs AMBER IN H <sub>2</sub> SO <sub>4</sub> 1-250 POLY TO HNO <sub>3</sub> 2 AMBER VOCs UNPRESERVED 2-250 mL POLY UNPRESERVED 1-500 mL POLY UNPRESERVED				

Analyte(s)	Minimum Number of Containers	Container	Preservative	Comments
TPH-G	2	Clear VOA	HCL	
TPH-D and TPH-MO	2	Amber VOA	None	
VOCs (8260)	2	Clear VOA	HCL	
Nitrate (as N) and Sulfate	1	250 mL Poly	None	
Total Iron	1	250 mL Poly	HNO3	
Dissolved Iron	1	250 mL Poly	None	Note provided on sample label that sample is unfiltered and unpreserved, and note provided on COC asking lab to filter and preserve upon receipt.
Alkalinity as Calcium Carbonate	1	500 mL Poly	None	
Dissolved Gases by RSK175	2	Amber VOA	H2SO4	



## Sample Receipt Checklist

Client Name: **P & D Environmental** Date and Time Received: **6/19/2015 5:47:37 PM**  
Project Name: **#0058; Xtra Oil Co., 1701 Park St., Alameda** LogIn Reviewed by: **Jena Alfaro**  
WorkOrder No: **1506871** Matrix: **Water** Carrier: **Benjamin Yslas (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   
Sample/Temp Blank temperature Temp: 2.1°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: <2; 522: <4; 218.7: >8)? Yes  No  NA   
Samples Received on Ice? Yes  No   
(Ice Type: WET ICE )

### UCMR3 Samples:

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

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

Comments:



# McCampbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1506825

**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., 1701 Park St., Alameda

**Project Received:** 06/18/2015

Analytical Report reviewed & approved for release on 06/25/2015 by:

Angela Rydelius,  
Laboratory Manager

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



1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ [www.mccampbell.com](http://www.mccampbell.com)  
NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3



## Glossary of Terms & Qualifier Definitions

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**WorkOrder:** 1506825

### Glossary Abbreviation

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

### Analytical Qualifiers

F sample was filtered upon arrival to the lab



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/18/15-6/20/15

**WorkOrder:** 1506825  
**Extraction Method:** E300.1  
**Analytical Method:** E300.1  
**Unit:** mg/L

### Inorganic Anions by IC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001E	Water	06/17/2015 12:30	IC1	106487

Analyses	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	06/18/2015 21:28
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/18/2015 21:28
Sulfate	100	10	100	06/19/2015 22:52
Surrogates	REC (%)	Limits		
Formate	93	90-115		06/18/2015 21:28

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002E	Water	06/17/2015 12:00	IC1	106487

Analyses	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	06/18/2015 21:55
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/18/2015 21:55
Sulfate	100	10	100	06/19/2015 23:19
Surrogates	REC (%)	Limits		
Formate	91	90-115		06/18/2015 21:55

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003E	Water	06/17/2015 15:30	IC1	106487

Analyses	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	06/18/2015 22:23
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/18/2015 22:23
Sulfate	100	10	100	06/19/2015 23:47
Surrogates	REC (%)	Limits		
Formate	90	90-115		06/18/2015 22:23

Analyst(s): TD

(Cont.)

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/18/15-6/20/15

**WorkOrder:** 1506825  
**Extraction Method:** E300.1  
**Analytical Method:** E300.1  
**Unit:** mg/L

### Inorganic Anions by IC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004E	Water	06/17/2015 14:55	IC1	106487

Analyses	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	06/18/2015 22:50
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/18/2015 22:50
Sulfate	100	10	100	06/20/2015 12:14
Surrogates	REC (%)	Limits		
Formate	92	90-115		06/18/2015 22:50

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005E	Water	06/17/2015 15:15	IC1	106487

Analyses	Result	RL	DF	Date Analyzed
Nitrate as N	ND	0.10	1	06/18/2015 23:17
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	0.45	1	06/18/2015 23:17
Sulfate	100	10	100	06/20/2015 00:41
Surrogates	REC (%)	Limits		
Formate	91	90-115		06/18/2015 23:17

Analyst(s): TD



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001B	Water	06/17/2015 12:30	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		500	50	06/23/2015 14:06
tert-Amyl methyl ether (TAME)	ND		25	50	06/23/2015 14:06
Benzene	ND		25	50	06/23/2015 14:06
Bromobenzene	ND		25	50	06/23/2015 14:06
Bromochloromethane	ND		25	50	06/23/2015 14:06
Bromodichloromethane	ND		25	50	06/23/2015 14:06
Bromoform	ND		25	50	06/23/2015 14:06
Bromomethane	ND		25	50	06/23/2015 14:06
2-Butanone (MEK)	ND		100	50	06/23/2015 14:06
t-Butyl alcohol (TBA)	2600		100	50	06/23/2015 14:06
n-Butyl benzene	ND		25	50	06/23/2015 14:06
sec-Butyl benzene	ND		25	50	06/23/2015 14:06
tert-Butyl benzene	ND		25	50	06/23/2015 14:06
Carbon Disulfide	ND		25	50	06/23/2015 14:06
Carbon Tetrachloride	ND		25	50	06/23/2015 14:06
Chlorobenzene	ND		25	50	06/23/2015 14:06
Chloroethane	ND		25	50	06/23/2015 14:06
Chloroform	ND		25	50	06/23/2015 14:06
Chloromethane	ND		25	50	06/23/2015 14:06
2-Chlorotoluene	ND		25	50	06/23/2015 14:06
4-Chlorotoluene	ND		25	50	06/23/2015 14:06
Dibromochloromethane	ND		25	50	06/23/2015 14:06
1,2-Dibromo-3-chloropropane	ND		10	50	06/23/2015 14:06
1,2-Dibromoethane (EDB)	ND		25	50	06/23/2015 14:06
Dibromomethane	ND		25	50	06/23/2015 14:06
1,2-Dichlorobenzene	ND		25	50	06/23/2015 14:06
1,3-Dichlorobenzene	ND		25	50	06/23/2015 14:06
1,4-Dichlorobenzene	ND		25	50	06/23/2015 14:06
Dichlorodifluoromethane	ND		25	50	06/23/2015 14:06
1,1-Dichloroethane	ND		25	50	06/23/2015 14:06
1,2-Dichloroethane (1,2-DCA)	ND		25	50	06/23/2015 14:06
1,1-Dichloroethene	ND		25	50	06/23/2015 14:06
cis-1,2-Dichloroethene	ND		25	50	06/23/2015 14:06
trans-1,2-Dichloroethene	ND		25	50	06/23/2015 14:06
1,2-Dichloropropane	ND		25	50	06/23/2015 14:06
1,3-Dichloropropane	ND		25	50	06/23/2015 14:06
2,2-Dichloropropane	ND		25	50	06/23/2015 14:06
1,1-Dichloropropene	ND		25	50	06/23/2015 14:06

(Cont.)



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001B	Water	06/17/2015 12:30	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		25	50	06/23/2015 14:06
trans-1,3-Dichloropropene	ND		25	50	06/23/2015 14:06
Diisopropyl ether (DIPE)	ND		25	50	06/23/2015 14:06
Ethylbenzene	ND		25	50	06/23/2015 14:06
Ethyl tert-butyl ether (ETBE)	ND		25	50	06/23/2015 14:06
Freon 113	ND		25	50	06/23/2015 14:06
Hexachlorobutadiene	ND		25	50	06/23/2015 14:06
Hexachloroethane	ND		25	50	06/23/2015 14:06
2-Hexanone	ND		25	50	06/23/2015 14:06
Isopropylbenzene	ND		25	50	06/23/2015 14:06
4-Isopropyl toluene	ND		25	50	06/23/2015 14:06
Methyl-t-butyl ether (MTBE)	ND		25	50	06/23/2015 14:06
Methylene chloride	ND		25	50	06/23/2015 14:06
4-Methyl-2-pentanone (MIBK)	ND		25	50	06/23/2015 14:06
Naphthalene	ND		25	50	06/23/2015 14:06
n-Propyl benzene	ND		25	50	06/23/2015 14:06
Styrene	ND		25	50	06/23/2015 14:06
1,1,1,2-Tetrachloroethane	ND		25	50	06/23/2015 14:06
1,1,2,2-Tetrachloroethane	ND		25	50	06/23/2015 14:06
Tetrachloroethene	ND		25	50	06/23/2015 14:06
Toluene	ND		25	50	06/23/2015 14:06
1,2,3-Trichlorobenzene	ND		25	50	06/23/2015 14:06
1,2,4-Trichlorobenzene	ND		25	50	06/23/2015 14:06
1,1,1-Trichloroethane	ND		25	50	06/23/2015 14:06
1,1,2-Trichloroethane	ND		25	50	06/23/2015 14:06
Trichloroethene	ND		25	50	06/23/2015 14:06
Trichlorofluoromethane	ND		25	50	06/23/2015 14:06
1,2,3-Trichloropropane	ND		25	50	06/23/2015 14:06
1,2,4-Trimethylbenzene	ND		25	50	06/23/2015 14:06
1,3,5-Trimethylbenzene	ND		25	50	06/23/2015 14:06
Vinyl Chloride	ND		25	50	06/23/2015 14:06
Xylenes, Total	ND		25	50	06/23/2015 14:06

(Cont.)

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001B	Water	06/17/2015 12:30	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	105		70-130		06/23/2015 14:06
Toluene-d8	109		70-130		06/23/2015 14:06
4-BFB	100		70-130		06/23/2015 14:06

Analyst(s): KBO

(Cont.)

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002B	Water	06/17/2015 12:00	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	06/22/2015 12:54
tert-Amyl methyl ether (TAME)	ND		0.50	1	06/22/2015 12:54
Benzene	ND		0.50	1	06/22/2015 12:54
Bromobenzene	ND		0.50	1	06/22/2015 12:54
Bromochloromethane	ND		0.50	1	06/22/2015 12:54
Bromodichloromethane	ND		0.50	1	06/22/2015 12:54
Bromoform	ND		0.50	1	06/22/2015 12:54
Bromomethane	ND		0.50	1	06/22/2015 12:54
2-Butanone (MEK)	ND		2.0	1	06/22/2015 12:54
t-Butyl alcohol (TBA)	ND		2.0	1	06/22/2015 12:54
n-Butyl benzene	ND		0.50	1	06/22/2015 12:54
sec-Butyl benzene	ND		0.50	1	06/22/2015 12:54
tert-Butyl benzene	ND		0.50	1	06/22/2015 12:54
Carbon Disulfide	ND		0.50	1	06/22/2015 12:54
Carbon Tetrachloride	ND		0.50	1	06/22/2015 12:54
Chlorobenzene	ND		0.50	1	06/22/2015 12:54
Chloroethane	ND		0.50	1	06/22/2015 12:54
Chloroform	ND		0.50	1	06/22/2015 12:54
Chloromethane	ND		0.50	1	06/22/2015 12:54
2-Chlorotoluene	ND		0.50	1	06/22/2015 12:54
4-Chlorotoluene	ND		0.50	1	06/22/2015 12:54
Dibromochloromethane	ND		0.50	1	06/22/2015 12:54
1,2-Dibromo-3-chloropropane	ND		0.20	1	06/22/2015 12:54
1,2-Dibromoethane (EDB)	ND		0.50	1	06/22/2015 12:54
Dibromomethane	ND		0.50	1	06/22/2015 12:54
1,2-Dichlorobenzene	ND		0.50	1	06/22/2015 12:54
1,3-Dichlorobenzene	ND		0.50	1	06/22/2015 12:54
1,4-Dichlorobenzene	ND		0.50	1	06/22/2015 12:54
Dichlorodifluoromethane	ND		0.50	1	06/22/2015 12:54
1,1-Dichloroethane	ND		0.50	1	06/22/2015 12:54
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	06/22/2015 12:54
1,1-Dichloroethene	ND		0.50	1	06/22/2015 12:54
cis-1,2-Dichloroethene	ND		0.50	1	06/22/2015 12:54
trans-1,2-Dichloroethene	ND		0.50	1	06/22/2015 12:54
1,2-Dichloropropane	ND		0.50	1	06/22/2015 12:54
1,3-Dichloropropane	ND		0.50	1	06/22/2015 12:54
2,2-Dichloropropane	ND		0.50	1	06/22/2015 12:54
1,1-Dichloropropene	ND		0.50	1	06/22/2015 12:54

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002B	Water	06/17/2015 12:00	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.50	1	06/22/2015 12:54
trans-1,3-Dichloropropene	ND		0.50	1	06/22/2015 12:54
Diisopropyl ether (DIPE)	ND		0.50	1	06/22/2015 12:54
Ethylbenzene	ND		0.50	1	06/22/2015 12:54
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	06/22/2015 12:54
Freon 113	ND		0.50	1	06/22/2015 12:54
Hexachlorobutadiene	ND		0.50	1	06/22/2015 12:54
Hexachloroethane	ND		0.50	1	06/22/2015 12:54
2-Hexanone	ND		0.50	1	06/22/2015 12:54
Isopropylbenzene	ND		0.50	1	06/22/2015 12:54
4-Isopropyl toluene	ND		0.50	1	06/22/2015 12:54
Methyl-t-butyl ether (MTBE)	ND		0.50	1	06/22/2015 12:54
Methylene chloride	ND		0.50	1	06/22/2015 12:54
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	06/22/2015 12:54
Naphthalene	ND		0.50	1	06/22/2015 12:54
n-Propyl benzene	ND		0.50	1	06/22/2015 12:54
Styrene	ND		0.50	1	06/22/2015 12:54
1,1,1,2-Tetrachloroethane	ND		0.50	1	06/22/2015 12:54
1,1,2,2-Tetrachloroethane	ND		0.50	1	06/22/2015 12:54
Tetrachloroethene	ND		0.50	1	06/22/2015 12:54
Toluene	ND		0.50	1	06/22/2015 12:54
1,2,3-Trichlorobenzene	ND		0.50	1	06/22/2015 12:54
1,2,4-Trichlorobenzene	ND		0.50	1	06/22/2015 12:54
1,1,1-Trichloroethane	ND		0.50	1	06/22/2015 12:54
1,1,2-Trichloroethane	ND		0.50	1	06/22/2015 12:54
Trichloroethene	ND		0.50	1	06/22/2015 12:54
Trichlorofluoromethane	ND		0.50	1	06/22/2015 12:54
1,2,3-Trichloropropane	ND		0.50	1	06/22/2015 12:54
1,2,4-Trimethylbenzene	ND		0.50	1	06/22/2015 12:54
1,3,5-Trimethylbenzene	ND		0.50	1	06/22/2015 12:54
Vinyl Chloride	ND		0.50	1	06/22/2015 12:54
Xylenes, Total	ND		0.50	1	06/22/2015 12:54

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002B	Water	06/17/2015 12:00	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	108		70-130		06/22/2015 12:54
Toluene-d8	112		70-130		06/22/2015 12:54
4-BFB	109		70-130		06/22/2015 12:54

Analyst(s): KF

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003B	Water	06/17/2015 15:30	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	06/22/2015 13:32
tert-Amyl methyl ether (TAME)	ND		0.50	1	06/22/2015 13:32
Benzene	ND		0.50	1	06/22/2015 13:32
Bromobenzene	ND		0.50	1	06/22/2015 13:32
Bromochloromethane	ND		0.50	1	06/22/2015 13:32
Bromodichloromethane	ND		0.50	1	06/22/2015 13:32
Bromoform	ND		0.50	1	06/22/2015 13:32
Bromomethane	ND		0.50	1	06/22/2015 13:32
2-Butanone (MEK)	ND		2.0	1	06/22/2015 13:32
t-Butyl alcohol (TBA)	7.5		2.0	1	06/22/2015 13:32
n-Butyl benzene	ND		0.50	1	06/22/2015 13:32
sec-Butyl benzene	ND		0.50	1	06/22/2015 13:32
tert-Butyl benzene	ND		0.50	1	06/22/2015 13:32
Carbon Disulfide	ND		0.50	1	06/22/2015 13:32
Carbon Tetrachloride	ND		0.50	1	06/22/2015 13:32
Chlorobenzene	ND		0.50	1	06/22/2015 13:32
Chloroethane	ND		0.50	1	06/22/2015 13:32
Chloroform	ND		0.50	1	06/22/2015 13:32
Chloromethane	ND		0.50	1	06/22/2015 13:32
2-Chlorotoluene	ND		0.50	1	06/22/2015 13:32
4-Chlorotoluene	ND		0.50	1	06/22/2015 13:32
Dibromochloromethane	ND		0.50	1	06/22/2015 13:32
1,2-Dibromo-3-chloropropane	ND		0.20	1	06/22/2015 13:32
1,2-Dibromoethane (EDB)	ND		0.50	1	06/22/2015 13:32
Dibromomethane	ND		0.50	1	06/22/2015 13:32
1,2-Dichlorobenzene	ND		0.50	1	06/22/2015 13:32
1,3-Dichlorobenzene	ND		0.50	1	06/22/2015 13:32
1,4-Dichlorobenzene	ND		0.50	1	06/22/2015 13:32
Dichlorodifluoromethane	ND		0.50	1	06/22/2015 13:32
1,1-Dichloroethane	ND		0.50	1	06/22/2015 13:32
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	06/22/2015 13:32
1,1-Dichloroethene	ND		0.50	1	06/22/2015 13:32
cis-1,2-Dichloroethene	ND		0.50	1	06/22/2015 13:32
trans-1,2-Dichloroethene	ND		0.50	1	06/22/2015 13:32
1,2-Dichloropropane	ND		0.50	1	06/22/2015 13:32
1,3-Dichloropropane	ND		0.50	1	06/22/2015 13:32
2,2-Dichloropropane	ND		0.50	1	06/22/2015 13:32
1,1-Dichloropropene	ND		0.50	1	06/22/2015 13:32

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003B	Water	06/17/2015 15:30	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.50	1	06/22/2015 13:32
trans-1,3-Dichloropropene	ND		0.50	1	06/22/2015 13:32
Diisopropyl ether (DIPE)	ND		0.50	1	06/22/2015 13:32
Ethylbenzene	ND		0.50	1	06/22/2015 13:32
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	06/22/2015 13:32
Freon 113	ND		0.50	1	06/22/2015 13:32
Hexachlorobutadiene	ND		0.50	1	06/22/2015 13:32
Hexachloroethane	ND		0.50	1	06/22/2015 13:32
2-Hexanone	ND		0.50	1	06/22/2015 13:32
Isopropylbenzene	ND		0.50	1	06/22/2015 13:32
4-Isopropyl toluene	ND		0.50	1	06/22/2015 13:32
Methyl-t-butyl ether (MTBE)	<b>0.98</b>		0.50	1	06/22/2015 13:32
Methylene chloride	ND		0.50	1	06/22/2015 13:32
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	06/22/2015 13:32
Naphthalene	ND		0.50	1	06/22/2015 13:32
n-Propyl benzene	ND		0.50	1	06/22/2015 13:32
Styrene	ND		0.50	1	06/22/2015 13:32
1,1,1,2-Tetrachloroethane	ND		0.50	1	06/22/2015 13:32
1,1,2,2-Tetrachloroethane	ND		0.50	1	06/22/2015 13:32
Tetrachloroethene	ND		0.50	1	06/22/2015 13:32
Toluene	ND		0.50	1	06/22/2015 13:32
1,2,3-Trichlorobenzene	ND		0.50	1	06/22/2015 13:32
1,2,4-Trichlorobenzene	ND		0.50	1	06/22/2015 13:32
1,1,1-Trichloroethane	ND		0.50	1	06/22/2015 13:32
1,1,2-Trichloroethane	ND		0.50	1	06/22/2015 13:32
Trichloroethene	ND		0.50	1	06/22/2015 13:32
Trichlorofluoromethane	ND		0.50	1	06/22/2015 13:32
1,2,3-Trichloropropane	ND		0.50	1	06/22/2015 13:32
1,2,4-Trimethylbenzene	ND		0.50	1	06/22/2015 13:32
1,3,5-Trimethylbenzene	ND		0.50	1	06/22/2015 13:32
Vinyl Chloride	ND		0.50	1	06/22/2015 13:32
Xylenes, Total	ND		0.50	1	06/22/2015 13:32

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003B	Water	06/17/2015 15:30	GC28	106682
<u>Analytes</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane		106	70-130		06/22/2015 13:32
Toluene-d8		112	70-130		06/22/2015 13:32
4-BFB		113	70-130		06/22/2015 13:32
<u>Analyst(s): KF</u>					

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004B	Water	06/17/2015 14:55	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	06/22/2015 14:10
tert-Amyl methyl ether (TAME)	ND		0.50	1	06/22/2015 14:10
Benzene	ND		0.50	1	06/22/2015 14:10
Bromobenzene	ND		0.50	1	06/22/2015 14:10
Bromochloromethane	ND		0.50	1	06/22/2015 14:10
Bromodichloromethane	ND		0.50	1	06/22/2015 14:10
Bromoform	ND		0.50	1	06/22/2015 14:10
Bromomethane	ND		0.50	1	06/22/2015 14:10
2-Butanone (MEK)	ND		2.0	1	06/22/2015 14:10
t-Butyl alcohol (TBA)	ND		2.0	1	06/22/2015 14:10
n-Butyl benzene	ND		0.50	1	06/22/2015 14:10
sec-Butyl benzene	ND		0.50	1	06/22/2015 14:10
tert-Butyl benzene	ND		0.50	1	06/22/2015 14:10
Carbon Disulfide	<b>0.55</b>		0.50	1	06/22/2015 14:10
Carbon Tetrachloride	ND		0.50	1	06/22/2015 14:10
Chlorobenzene	ND		0.50	1	06/22/2015 14:10
Chloroethane	ND		0.50	1	06/22/2015 14:10
Chloroform	ND		0.50	1	06/22/2015 14:10
Chloromethane	ND		0.50	1	06/22/2015 14:10
2-Chlorotoluene	ND		0.50	1	06/22/2015 14:10
4-Chlorotoluene	ND		0.50	1	06/22/2015 14:10
Dibromochloromethane	ND		0.50	1	06/22/2015 14:10
1,2-Dibromo-3-chloropropane	ND		0.20	1	06/22/2015 14:10
1,2-Dibromoethane (EDB)	ND		0.50	1	06/22/2015 14:10
Dibromomethane	ND		0.50	1	06/22/2015 14:10
1,2-Dichlorobenzene	ND		0.50	1	06/22/2015 14:10
1,3-Dichlorobenzene	ND		0.50	1	06/22/2015 14:10
1,4-Dichlorobenzene	ND		0.50	1	06/22/2015 14:10
Dichlorodifluoromethane	ND		0.50	1	06/22/2015 14:10
1,1-Dichloroethane	ND		0.50	1	06/22/2015 14:10
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	06/22/2015 14:10
1,1-Dichloroethene	ND		0.50	1	06/22/2015 14:10
cis-1,2-Dichloroethene	ND		0.50	1	06/22/2015 14:10
trans-1,2-Dichloroethene	ND		0.50	1	06/22/2015 14:10
1,2-Dichloropropane	ND		0.50	1	06/22/2015 14:10
1,3-Dichloropropane	ND		0.50	1	06/22/2015 14:10
2,2-Dichloropropane	ND		0.50	1	06/22/2015 14:10
1,1-Dichloropropene	ND		0.50	1	06/22/2015 14:10

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004B	Water	06/17/2015 14:55	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.50	1	06/22/2015 14:10
trans-1,3-Dichloropropene	ND		0.50	1	06/22/2015 14:10
Diisopropyl ether (DIPE)	ND		0.50	1	06/22/2015 14:10
Ethylbenzene	ND		0.50	1	06/22/2015 14:10
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	06/22/2015 14:10
Freon 113	ND		0.50	1	06/22/2015 14:10
Hexachlorobutadiene	ND		0.50	1	06/22/2015 14:10
Hexachloroethane	ND		0.50	1	06/22/2015 14:10
2-Hexanone	ND		0.50	1	06/22/2015 14:10
Isopropylbenzene	ND		0.50	1	06/22/2015 14:10
4-Isopropyl toluene	ND		0.50	1	06/22/2015 14:10
Methyl-t-butyl ether (MTBE)	ND		0.50	1	06/22/2015 14:10
Methylene chloride	ND		0.50	1	06/22/2015 14:10
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	06/22/2015 14:10
Naphthalene	ND		0.50	1	06/22/2015 14:10
n-Propyl benzene	ND		0.50	1	06/22/2015 14:10
Styrene	ND		0.50	1	06/22/2015 14:10
1,1,1,2-Tetrachloroethane	ND		0.50	1	06/22/2015 14:10
1,1,2,2-Tetrachloroethane	ND		0.50	1	06/22/2015 14:10
Tetrachloroethene	2.7		0.50	1	06/22/2015 14:10
Toluene	ND		0.50	1	06/22/2015 14:10
1,2,3-Trichlorobenzene	ND		0.50	1	06/22/2015 14:10
1,2,4-Trichlorobenzene	ND		0.50	1	06/22/2015 14:10
1,1,1-Trichloroethane	ND		0.50	1	06/22/2015 14:10
1,1,2-Trichloroethane	ND		0.50	1	06/22/2015 14:10
Trichloroethene	ND		0.50	1	06/22/2015 14:10
Trichlorofluoromethane	ND		0.50	1	06/22/2015 14:10
1,2,3-Trichloropropane	ND		0.50	1	06/22/2015 14:10
1,2,4-Trimethylbenzene	ND		0.50	1	06/22/2015 14:10
1,3,5-Trimethylbenzene	ND		0.50	1	06/22/2015 14:10
Vinyl Chloride	ND		0.50	1	06/22/2015 14:10
Xylenes, Total	ND		0.50	1	06/22/2015 14:10

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 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004B	Water	06/17/2015 14:55	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	106		70-130		06/22/2015 14:10
Toluene-d8	109		70-130		06/22/2015 14:10
4-BFB	106		70-130		06/22/2015 14:10

Analyst(s): KF

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005B	Water	06/17/2015 15:15	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	06/22/2015 14:48
tert-Amyl methyl ether (TAME)	ND		0.50	1	06/22/2015 14:48
Benzene	ND		0.50	1	06/22/2015 14:48
Bromobenzene	ND		0.50	1	06/22/2015 14:48
Bromochloromethane	ND		0.50	1	06/22/2015 14:48
Bromodichloromethane	ND		0.50	1	06/22/2015 14:48
Bromoform	ND		0.50	1	06/22/2015 14:48
Bromomethane	ND		0.50	1	06/22/2015 14:48
2-Butanone (MEK)	ND		2.0	1	06/22/2015 14:48
t-Butyl alcohol (TBA)	ND		2.0	1	06/22/2015 14:48
n-Butyl benzene	ND		0.50	1	06/22/2015 14:48
sec-Butyl benzene	ND		0.50	1	06/22/2015 14:48
tert-Butyl benzene	ND		0.50	1	06/22/2015 14:48
Carbon Disulfide	1.3		0.50	1	06/22/2015 14:48
Carbon Tetrachloride	ND		0.50	1	06/22/2015 14:48
Chlorobenzene	ND		0.50	1	06/22/2015 14:48
Chloroethane	ND		0.50	1	06/22/2015 14:48
Chloroform	ND		0.50	1	06/22/2015 14:48
Chloromethane	ND		0.50	1	06/22/2015 14:48
2-Chlorotoluene	ND		0.50	1	06/22/2015 14:48
4-Chlorotoluene	ND		0.50	1	06/22/2015 14:48
Dibromochloromethane	ND		0.50	1	06/22/2015 14:48
1,2-Dibromo-3-chloropropane	ND		0.20	1	06/22/2015 14:48
1,2-Dibromoethane (EDB)	ND		0.50	1	06/22/2015 14:48
Dibromomethane	ND		0.50	1	06/22/2015 14:48
1,2-Dichlorobenzene	ND		0.50	1	06/22/2015 14:48
1,3-Dichlorobenzene	ND		0.50	1	06/22/2015 14:48
1,4-Dichlorobenzene	ND		0.50	1	06/22/2015 14:48
Dichlorodifluoromethane	ND		0.50	1	06/22/2015 14:48
1,1-Dichloroethane	ND		0.50	1	06/22/2015 14:48
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	06/22/2015 14:48
1,1-Dichloroethene	ND		0.50	1	06/22/2015 14:48
cis-1,2-Dichloroethene	ND		0.50	1	06/22/2015 14:48
trans-1,2-Dichloroethene	ND		0.50	1	06/22/2015 14:48
1,2-Dichloropropane	ND		0.50	1	06/22/2015 14:48
1,3-Dichloropropane	ND		0.50	1	06/22/2015 14:48
2,2-Dichloropropane	ND		0.50	1	06/22/2015 14:48
1,1-Dichloropropene	ND		0.50	1	06/22/2015 14:48

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005B	Water	06/17/2015 15:15	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.50	1	06/22/2015 14:48
trans-1,3-Dichloropropene	ND		0.50	1	06/22/2015 14:48
Diisopropyl ether (DIPE)	ND		0.50	1	06/22/2015 14:48
Ethylbenzene	ND		0.50	1	06/22/2015 14:48
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	06/22/2015 14:48
Freon 113	ND		0.50	1	06/22/2015 14:48
Hexachlorobutadiene	ND		0.50	1	06/22/2015 14:48
Hexachloroethane	ND		0.50	1	06/22/2015 14:48
2-Hexanone	ND		0.50	1	06/22/2015 14:48
Isopropylbenzene	ND		0.50	1	06/22/2015 14:48
4-Isopropyl toluene	ND		0.50	1	06/22/2015 14:48
Methyl-t-butyl ether (MTBE)	ND		0.50	1	06/22/2015 14:48
Methylene chloride	ND		0.50	1	06/22/2015 14:48
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	06/22/2015 14:48
Naphthalene	ND		0.50	1	06/22/2015 14:48
n-Propyl benzene	ND		0.50	1	06/22/2015 14:48
Styrene	ND		0.50	1	06/22/2015 14:48
1,1,1,2-Tetrachloroethane	ND		0.50	1	06/22/2015 14:48
1,1,2,2-Tetrachloroethane	ND		0.50	1	06/22/2015 14:48
Tetrachloroethene	ND		0.50	1	06/22/2015 14:48
Toluene	ND		0.50	1	06/22/2015 14:48
1,2,3-Trichlorobenzene	ND		0.50	1	06/22/2015 14:48
1,2,4-Trichlorobenzene	ND		0.50	1	06/22/2015 14:48
1,1,1-Trichloroethane	ND		0.50	1	06/22/2015 14:48
1,1,2-Trichloroethane	ND		0.50	1	06/22/2015 14:48
Trichloroethene	ND		0.50	1	06/22/2015 14:48
Trichlorofluoromethane	ND		0.50	1	06/22/2015 14:48
1,2,3-Trichloropropane	ND		0.50	1	06/22/2015 14:48
1,2,4-Trimethylbenzene	ND		0.50	1	06/22/2015 14:48
1,3,5-Trimethylbenzene	ND		0.50	1	06/22/2015 14:48
Vinyl Chloride	ND		0.50	1	06/22/2015 14:48
Xylenes, Total	ND		0.50	1	06/22/2015 14:48

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/22/15-6/23/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005B	Water	06/17/2015 15:15	GC28	106682
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	107		70-130		06/22/2015 14:48
Toluene-d8	110		70-130		06/22/2015 14:48
4-BFB	107		70-130		06/22/2015 14:48

Analyst(s): KF



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506825  
**Extraction Method:** SM2320 B-1997  
**Analytical Method:** SM2320 B-1997  
**Unit:** mg CaCO<sub>3</sub>/L

### Total & Speciated Alkalinity as Calcium Carbonate

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001H	Water	06/17/2015 12:30	Titrino	106579
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	231		1.00	1	06/19/2015 14:08
Carbonate	ND		1.00	1	06/19/2015 14:08
Bicarbonate	231		1.00	1	06/19/2015 14:08
Hydroxide	ND		1.00	1	06/19/2015 14:08

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002H	Water	06/17/2015 12:00	Titrino	106579
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	169		1.00	1	06/19/2015 14:17
Carbonate	ND		1.00	1	06/19/2015 14:17
Bicarbonate	169		1.00	1	06/19/2015 14:17
Hydroxide	ND		1.00	1	06/19/2015 14:17

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003H	Water	06/17/2015 15:30	Titrino	106579
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	133		1.00	1	06/19/2015 14:23
Carbonate	ND		1.00	1	06/19/2015 14:23
Bicarbonate	133		1.00	1	06/19/2015 14:23
Hydroxide	ND		1.00	1	06/19/2015 14:23

Analyst(s): HN

(Cont.)



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506825  
**Extraction Method:** SM2320 B-1997  
**Analytical Method:** SM2320 B-1997  
**Unit:** mg CaCO<sub>3</sub>/L

### Total & Speciated Alkalinity as Calcium Carbonate

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004H	Water	06/17/2015 14:55	Titrino	106579
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	147		1.00	1	06/19/2015 14:32
Carbonate	ND		1.00	1	06/19/2015 14:32
Bicarbonate	147		1.00	1	06/19/2015 14:32
Hydroxide	ND		1.00	1	06/19/2015 14:32

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005H	Water	06/17/2015 15:15	Titrino	106579
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total	190		1.00	1	06/19/2015 15:08
Carbonate	ND		1.00	1	06/19/2015 15:08
Bicarbonate	190		1.00	1	06/19/2015 15:08
Hydroxide	ND		1.00	1	06/19/2015 15:08

Analyst(s): HN



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/19/15-6/20/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001A	Water	06/17/2015 12:30	GC3	106625
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	06/19/2015 23:41
MTBE	---		5.0	1	06/19/2015 23:41
Benzene	---		0.50	1	06/19/2015 23:41
Toluene	---		0.50	1	06/19/2015 23:41
Ethylbenzene	---		0.50	1	06/19/2015 23:41
Xylenes	---		0.50	1	06/19/2015 23:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	109		70-130		06/19/2015 23:41
<u>Analyst(s):</u>	IA				

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002A	Water	06/17/2015 12:00	GC3	106625
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	06/20/2015 00:11
MTBE	---		5.0	1	06/20/2015 00:11
Benzene	---		0.50	1	06/20/2015 00:11
Toluene	---		0.50	1	06/20/2015 00:11
Ethylbenzene	---		0.50	1	06/20/2015 00:11
Xylenes	---		0.50	1	06/20/2015 00:11
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	105		70-130		06/20/2015 00:11
<u>Analyst(s):</u>	IA				

(Cont.)



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/19/15-6/20/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003A	Water	06/17/2015 15:30	GC3	106625
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	06/20/2015 00:41
MTBE	---		5.0	1	06/20/2015 00:41
Benzene	---		0.50	1	06/20/2015 00:41
Toluene	---		0.50	1	06/20/2015 00:41
Ethylbenzene	---		0.50	1	06/20/2015 00:41
Xylenes	---		0.50	1	06/20/2015 00:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	108		70-130		06/20/2015 00:41
<u>Analyst(s):</u>	IA				

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004A	Water	06/17/2015 14:55	GC3	106625
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	06/20/2015 02:40
MTBE	---		5.0	1	06/20/2015 02:40
Benzene	---		0.50	1	06/20/2015 02:40
Toluene	---		0.50	1	06/20/2015 02:40
Ethylbenzene	---		0.50	1	06/20/2015 02:40
Xylenes	---		0.50	1	06/20/2015 02:40
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	112		70-130		06/20/2015 02:40
<u>Analyst(s):</u>	IA				

(Cont.)



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/19/15-6/20/15

**WorkOrder:** 1506825  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005A	Water	06/17/2015 15:15	GC3	106625
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	06/20/2015 03:40
MTBE	---		5.0	1	06/20/2015 03:40
Benzene	---		0.50	1	06/20/2015 03:40
Toluene	---		0.50	1	06/20/2015 03:40
Ethylbenzene	---		0.50	1	06/20/2015 03:40
Xylenes	---		0.50	1	06/20/2015 03:40
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	112		70-130		06/20/2015 03:40
<u>Analyst(s):</u>	IA				



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/18/15

**WorkOrder:** 1506825  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### Dissolved Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001G	Water	06/17/2015 12:30	ICP-MS2	106536
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	ND	F	20	1	06/19/2015 13:35

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002G	Water	06/17/2015 12:00	ICP-MS2	106536
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	ND	F	20	1	06/19/2015 13:41

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003G	Water	06/17/2015 15:30	ICP-MS2	106536
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	ND	F	20	1	06/19/2015 13:48

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004G	Water	06/17/2015 14:55	ICP-MS2	106536
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	ND	F	20	1	06/19/2015 13:54

Analyst(s): DVH

(Cont.)



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/18/15

**WorkOrder:** 1506825  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### Dissolved Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005G	Water	06/17/2015 15:15	ICP-MS2	106536
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	ND	F	20	1	06/19/2015 14:00

Analyst(s): DVH



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/18/15

**WorkOrder:** 1506825  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001F	Water	06/17/2015 12:30	ICP-MS2	106536

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	2400	20	1	06/19/2015 14:06
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	114	70-130		06/19/2015 14:06

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002F	Water	06/17/2015 12:00	ICP-MS2	106536

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	370	20	1	06/19/2015 14:24
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	110	70-130		06/19/2015 14:24

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003F	Water	06/17/2015 15:30	ICP-MS2	106536

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	4100	20	1	06/19/2015 14:31
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	118	70-130		06/19/2015 14:31

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004F	Water	06/17/2015 14:55	ICP-MS2	106536

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	2100	20	1	06/19/2015 14:37
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Terbium	112	70-130		06/19/2015 14:37

Analyst(s): DVH

(Cont.)



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/18/15

**WorkOrder:** 1506825  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005F	Water	06/17/2015 15:15	ICP-MS2	106536
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Iron	3700		20	1	06/19/2015 14:43
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	113		70-130		06/19/2015 14:43
<u>Analyst(s):</u>	DVH				



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506825  
**Extraction Method:** RSK175  
**Analytical Method:** RSK175  
**Unit:**  $\mu\text{g/L}$

### Carbon Dioxide

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001D	Water	06/17/2015 12:30	GC26	106687

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Carbon Dioxide	15,000	2500	50	06/19/2015 16:32

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002D	Water	06/17/2015 12:00	GC26	106687

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Carbon Dioxide	3300	500	10	06/19/2015 16:43

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003D	Water	06/17/2015 15:30	GC26	106687

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Carbon Dioxide	12,000	500	10	06/19/2015 16:56

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004D	Water	06/17/2015 14:55	GC26	106687

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Carbon Dioxide	4800	500	10	06/19/2015 17:16

Analyst(s): KBO

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CDPH ELAP 1644 ♦ NELAP 4033ORELAP

Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/19/15

**WorkOrder:** 1506825  
**Extraction Method:** RSK175  
**Analytical Method:** RSK175  
**Unit:**  $\mu\text{g/L}$

### Carbon Dioxide

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005D	Water	06/17/2015 15:15	GC26	106687
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Carbon Dioxide	3400		500	10	06/19/2015 17:28

Analyst(s): KBO



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/25/15

**WorkOrder:** 1506825  
**Extraction Method:** RSK175  
**Analytical Method:** RSK175  
**Unit:** µg/L

### Light Gases

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001C	Water	06/17/2015 12:30	GC26	106816
Analyses	Result		RL	DF	Date Analyzed
Ethane	ND		0.20	1	06/25/2015 10:12
Ethylene	ND		0.30	1	06/25/2015 10:12
Methane	8.8		0.10	1	06/25/2015 10:12

Analyst(s): AK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002C	Water	06/17/2015 12:00	GC26	106816
Analyses	Result		RL	DF	Date Analyzed
Ethane	ND		0.20	1	06/25/2015 10:44
Ethylene	ND		0.30	1	06/25/2015 10:44
Methane	0.25		0.10	1	06/25/2015 10:44

Analyst(s): AK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003C	Water	06/17/2015 15:30	GC26	106816
Analyses	Result		RL	DF	Date Analyzed
Ethane	ND		0.20	1	06/25/2015 11:03
Ethylene	ND		0.30	1	06/25/2015 11:03
Methane	2.9		0.10	1	06/25/2015 11:03

Analyst(s): AK

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/25/15

**WorkOrder:** 1506825  
**Extraction Method:** RSK175  
**Analytical Method:** RSK175  
**Unit:**  $\mu\text{g/L}$

### Light Gases

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004C	Water	06/17/2015 14:55	GC26	106816
Analyses	Result		RL	DF	Date Analyzed
Ethane	ND		0.20	1	06/25/2015 11:15
Ethylene	ND		0.30	1	06/25/2015 11:15
Methane	0.57		0.10	1	06/25/2015 11:15

Analyst(s): AK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005C	Water	06/17/2015 15:15	GC26	106816
Analyses	Result		RL	DF	Date Analyzed
Ethane	ND		0.20	1	06/25/2015 11:40
Ethylene	ND		0.30	1	06/25/2015 11:40
Methane	0.46		0.10	1	06/25/2015 11:40

Analyst(s): AK



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/18/15

**WorkOrder:** 1506825  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP2	1506825-001A	Water	06/17/2015 12:30	GC2A	106528

<u>Analyses</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	06/21/2015 12:36
TPH-Motor Oil (C18-C36)	ND	250	1	06/21/2015 12:36

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	107	70-130	06/21/2015 12:36

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP3	1506825-002A	Water	06/17/2015 12:00	GC2A	106528

<u>Analyses</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	06/21/2015 15:06
TPH-Motor Oil (C18-C36)	ND	250	1	06/21/2015 15:06

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	110	70-130	06/21/2015 15:06

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP4	1506825-003A	Water	06/17/2015 15:30	GC2A	106528

<u>Analyses</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	50	1	06/21/2015 17:37
TPH-Motor Oil (C18-C36)	ND	250	1	06/21/2015 17:37

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
C9	101	70-130	06/21/2015 17:37

Analyst(s): TK

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** P & D Environmental  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda  
**Date Received:** 6/18/15 17:44  
**Date Prepared:** 6/18/15

**WorkOrder:** 1506825  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP5	1506825-004A	Water	06/17/2015 14:55	GC2A	106528
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		50	1	06/21/2015 20:07
TPH-Motor Oil (C18-C36)	ND		250	1	06/21/2015 20:07
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	103		70-130		06/21/2015 20:07
<u>Analyst(s):</u>	TK				
Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
ASP6	1506825-005A	Water	06/17/2015 15:15	GC2A	106528
<u>Analyses</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		50	1	06/21/2015 22:37
TPH-Motor Oil (C18-C36)	ND		250	1	06/21/2015 22:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	110		70-130		06/21/2015 22:37
<u>Analyst(s):</u>	TK				



## Quality Control Report

Client:	P & D Environmental	WorkOrder:	1506825
Date Prepared:	6/17/15	BatchID:	106487
Date Analyzed:	6/18/15	Extraction Method:	E300.1
Instrument:	IC1	Analytical Method:	E300.1
Matrix:	Water	Unit:	mg/L
Project:	#0058; Xtra Oil Co., 1701 Park St., Alameda	Sample ID:	MB/LCS-106487 1506745-001CMS/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	0.932	0.10	1	-	93	85-115
Nitrate as NO <sub>3</sub> <sup>-</sup>	ND	4.13	0.45	4.4	-	94	85-115
Sulfate	ND	1.08	0.10	1	-	108	85-115

**Surrogate Recovery**

Formate	0.0986	0.0915	0.10	99	91	90-115
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Nitrate as N	1.11	1.10	1	ND	111	110	85-115	0.890	15
Nitrate as NO <sub>3</sub> <sup>-</sup>	4.91	4.86	4.4	ND	112	111	85-115	0.890	15
Sulfate	1.15	1.15	1	ND	107	108	85-115	0.434	15

**Surrogate Recovery**

Formate	0.0919	0.0949	0.10	92	95	90-115	3.17	10
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## Quality Control Report

**Client:** P & D Environmental  
**Date Prepared:** 6/22/15  
**Date Analyzed:** 6/22/15  
**Instrument:** GC28  
**Matrix:** Water  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**WorkOrder:** 1506825  
**BatchID:** 106682  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-106682  
1506844-001BMS/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	9.49	0.50	10	-	95	54-140
Benzene	ND	9.80	0.50	10	-	98	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	31.9	2.0	40	-	80	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	9.77	0.50	10	-	98	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	8.91	0.50	10	-	89	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	9.19	0.50	10	-	92	66-125
1,1-Dichloroethene	ND	9.94	0.50	10	-	99	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** P & D Environmental  
**Date Prepared:** 6/22/15  
**Date Analyzed:** 6/22/15  
**Instrument:** GC28  
**Matrix:** Water  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**WorkOrder:** 1506825  
**BatchID:** 106682  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-106682  
1506844-001BMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	9.94	0.50	10	-	99	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.10	0.50	10	-	91	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	9.03	0.50	10	-	90	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	9.82	0.50	10	-	98	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	9.52	0.50	10	-	95	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	25.6	25.7	25	102	103	70-130
Toluene-d8	27.6	27.5	25	110	110	70-130
4-BFB	2.53	2.54	2.5	101	102	70-130

(Cont.)



## Quality Control Report

**Client:** P & D Environmental  
**Date Prepared:** 6/22/15  
**Date Analyzed:** 6/22/15  
**Instrument:** GC28  
**Matrix:** Water  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**WorkOrder:** 1506825  
**BatchID:** 106682  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-106682  
1506844-001BMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	10.2	10.7	10	ND	102	107	69-139	4.57	20
Benzene	10.2	10.6	10	ND	102	106	69-141	3.62	20
t-Butyl alcohol (TBA)	36.4	38.1	40	ND	91	95	41-152	4.71	20
Chlorobenzene	10.2	10.6	10	ND	102	106	77-120	3.26	20
1,2-Dibromoethane (EDB)	9.69	10.1	10	ND	97	101	76-135	4.07	20
1,2-Dichloroethane (1,2-DCA)	9.93	10.3	10	ND	99	103	73-139	3.51	20
1,1-Dichloroethene	10.4	10.7	10	ND	104	107	59-140	3.55	20
Diisopropyl ether (DIPE)	10.6	11.1	10	ND	105	111	72-140	4.85	20
Ethyl tert-butyl ether (ETBE)	9.80	10.2	10	ND	98	102	71-140	4.13	20
Methyl-t-butyl ether (MTBE)	9.91	10.4	10	ND	99	104	73-139	4.96	20
Toluene	10.3	10.7	10	ND	102	107	71-128	4.17	20
Trichloroethylene	9.91	10.4	10	ND	99	104	64-132	4.97	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	26.4	26.2	25		106	105	70-130	0.682	20
Toluene-d8	27.5	27.4	25		110	109	70-130	0.401	20
4-BFB	2.48	2.54	2.5		99	102	70-130	2.41	20



## Quality Control Report

**Client:** P & D Environmental      **WorkOrder:** 1506825  
**Date Prepared:** 6/19/15      **BatchID:** 106579  
**Date Analyzed:** 6/19/15      **Extraction Method:** SM2320 B-1997  
**Instrument:** Titrino      **Analytical Method:** SM2320 B-1997  
**Matrix:** Water      **Test Method:** SM2320B (Alkalinity)  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

### 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 (%)
1506825-001H	Total	mg CaCO <sub>3</sub> /L	231	1	228	1	1.38	<20
1506825-002H	Total	mg CaCO <sub>3</sub> /L	169	1	168	1	0.398	<20
1506825-003H	Total	mg CaCO <sub>3</sub> /L	133	1	134	1	0.375	<20
1506825-004H	Total	mg CaCO <sub>3</sub> /L	147	1	148	1	0.34	<20
1506825-005H	Total	mg CaCO <sub>3</sub> /L	190	1	188	1	1.32	<20



## Quality Control Report

<b>Client:</b>	P & D Environmental	<b>WorkOrder:</b>	1506825
<b>Date Prepared:</b>	6/19/15	<b>BatchID:</b>	106625
<b>Date Analyzed:</b>	6/19/15	<b>Extraction Method:</b>	SW5030B
<b>Instrument:</b>	GC3, GC7	<b>Analytical Method:</b>	SW8021B/8015Bm
<b>Matrix:</b>	Water	<b>Unit:</b>	µg/L
<b>Project:</b>	#0058; Xtra Oil Co., 1701 Park St., Alameda	<b>Sample ID:</b>	MB/LCS-106625 1506825-001AMS/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	66.4	40	60	-	111	70-130
MTBE	ND	12.3	5.0	10	-	123	70-130
Benzene	ND	11.3	0.50	10	-	113	70-130
Toluene	ND	11.4	0.50	10	-	114	70-130
Ethylbenzene	ND	11.7	0.50	10	-	117	70-130
Xylenes	ND	35.5	0.50	30	-	118	70-130

**Surrogate Recovery**

aaa-TFT	10.3	9.95	10	103	99	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	60.0	63.1	60	ND	100	105	70-130	5.04	20
MTBE	12.2	11.7	10	ND	122	117	70-130	4.31	20
Benzene	12.5	11.9	10	ND	125	119	70-130	4.55	20
Toluene	12.7	12.3	10	ND	127	123	70-130	2.88	20
Ethylbenzene	12.5	12.4	10	ND	125	124	70-130	1.12	20
Xylenes	38.0	37.4	30	ND	127	125	70-130	1.85	20

**Surrogate Recovery**

aaa-TFT	10.2	9.96	10	102	100	70-130	2.50	20
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## Quality Control Report

**Client:** P & D Environmental      **WorkOrder:** 1506825  
**Date Prepared:** 6/18/15      **BatchID:** 106536  
**Date Analyzed:** 6/19/15      **Extraction Method:** E200.8  
**Instrument:** ICP-MS1      **Analytical Method:** E200.8  
**Matrix:** Water      **Unit:** µg/L  
**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda      **Sample ID:** MB/LCS-106536  
1506803-001BMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Iron	ND	503	20	500	-	101	85-115

#### Surrogate Recovery

Terbium	720	759		750	96	101	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Iron	516	498	500	ND	101	97	70-130	3.69	20

#### Surrogate Recovery

Terbium	792	776	750		106	103	70-130	2.09	20
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## Quality Control Report

**Client:** P & D Environmental

**WorkOrder:** 1506825

**Date Prepared:** 6/19/15

**BatchID:** 106687

**Date Analyzed:** 6/19/15

**Extraction Method:** RSK175

**Instrument:** GC26

**Analytical Method:** RSK175

**Matrix:** Air

**Unit:**  $\mu\text{L/L}$

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Sample ID:** MB/LCS-106687

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### QC Summary Report for RSK174/175

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Carbon Dioxide	ND	96.5	20	100	-	96	70-130

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## Quality Control Report

**Client:** P & D Environmental

**WorkOrder:** 1506825

**Date Prepared:** 6/25/15

**BatchID:** 106816

**Date Analyzed:** 6/25/15

**Extraction Method:** RSK175

**Instrument:** GC26

**Analytical Method:** RSK175

**Matrix:** Air

**Unit:**  $\mu\text{L/L}$

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Sample ID:** MB/LCS-106816

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### QC Summary Report for RSK175

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethane	ND	10.8	0.50	10	-	108	70-130
Ethylene	ND	7.92	0.50	10	-	79	70-130
Methane	ND	10.6	0.50	10	-	106	70-130

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## Quality Control Report

**Client:** P & D Environmental

**WorkOrder:** 1506825

**Date Prepared:** 6/18/15

**BatchID:** 106528

**Date Analyzed:** 6/18/15

**Extraction Method:** SW3510C

**Instrument:** GC9a, GC9b

**Analytical Method:** SW8015B

**Matrix:** Water

**Unit:** µg/L

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Sample ID:** MB/LCS-106528

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### QC Report for SW8015B w/out SG Clean-Up

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1130	50	1000	-	113	61-157
TPH-Motor Oil (C18-C36)	ND	-	250	-	-	-	-

**Surrogate Recovery**

C9	714	657	625	114	105	70-134
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# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1506825

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., 1701 Park St.,  
Alameda

## Bill to:

Accounts Payable  
Xtra Oil Company  
2307 Pacific Avenue  
Alameda, CA 94501  
xtraoil@sbcglobal.net

Requested TAT: 5 days

Date Received: 06/18/2015

Date Printed: 06/25/2015

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
1506825-001	ASP2	Water	6/17/2015 12:30	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506825-002	ASP3	Water	6/17/2015 12:00	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506825-003	ASP4	Water	6/17/2015 15:30	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506825-004	ASP5	Water	6/17/2015 14:55	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		
1506825-005	ASP6	Water	6/17/2015 15:15	<input type="checkbox"/>	E	B	H	A	G	F	G	D	C	A		

Test Legend:

1	300_1_W	2	8260B_W	3	Alka(spe)_W	4	G-MBTEX_W	5	METALSMS_DISS
6	METALSMS_W	7	PRDISSOLVED	8	RSK175_CO2_W	9	RSK175_W	10	TPH(DMO)_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.



## WORK ORDER SUMMARY

**Client Name:** P & D ENVIRONMENTAL

**QC Level:** LEVEL 2

**Work Order:** 1506825

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Client Contact:** Paul King

**Date Received:** 6/18/2015

**Comments:**

**Contact's Email:** lab@pdenviro.com

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1506825-001A	ASP2	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/17/2015 12:30	5 days	Present	<input type="checkbox"/>	
1506825-001B	ASP2	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/17/2015 12:30	5 days	Present	<input type="checkbox"/>	
1506825-001C	ASP2	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/17/2015 12:30	5 days	Present	<input type="checkbox"/>	
1506825-001D	ASP2	Water	RSK175 (CO2)	1	aVOA	<input type="checkbox"/>	6/17/2015 12:30	5 days	Present	<input type="checkbox"/>	
1506825-001E	ASP2	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as NO3-, Sulfate>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 12:30	5 days	Present	<input type="checkbox"/>	
1506825-001F	ASP2	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	6/17/2015 12:30	5 days	Present	<input type="checkbox"/>	
1506825-001G	ASP2	Water	E200.8 (Metals) (Dissolved-Lab Filtered) <Iron>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 12:30	5 days	Present	<input type="checkbox"/>	
1506825-001H	ASP2	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 12:30	5 days	Present	<input type="checkbox"/>	
1506825-002A	ASP3	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/17/2015 12:00	5 days	Present	<input type="checkbox"/>	
1506825-002B	ASP3	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/17/2015 12:00	5 days	Present	<input type="checkbox"/>	
1506825-002C	ASP3	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/17/2015 12:00	5 days	Present	<input type="checkbox"/>	
1506825-002D	ASP3	Water	RSK175 (CO2)	1	aVOA	<input type="checkbox"/>	6/17/2015 12:00	5 days	Present	<input type="checkbox"/>	
1506825-002E	ASP3	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as NO3-, Sulfate>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 12:00	5 days	Present	<input type="checkbox"/>	
1506825-002F	ASP3	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	6/17/2015 12:00	5 days	Present	<input type="checkbox"/>	

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## WORK ORDER SUMMARY

**Client Name:** P & D ENVIRONMENTAL

**QC Level:** LEVEL 2

**Work Order:** 1506825

**Project:** #0058; Xtra Oil Co., 1701 Park St., Alameda

**Client Contact:** Paul King

**Date Received:** 6/18/2015

**Comments:**

**Contact's Email:** lab@pdenviro.com

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1506825-002G	ASP3	Water	E200.8 (Metals) (Dissolved-Lab Filtered) <Iron>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 12:00	5 days	Present	<input type="checkbox"/>	
1506825-002H	ASP3	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 12:00	5 days	Present	<input type="checkbox"/>	
1506825-003A	ASP4	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/17/2015 15:30	5 days	Present	<input type="checkbox"/>	
1506825-003B	ASP4	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/17/2015 15:30	5 days	Present	<input type="checkbox"/>	
1506825-003C	ASP4	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/17/2015 15:30	5 days	Present	<input type="checkbox"/>	
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1506825-003H	ASP4	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 15:30	5 days	Present	<input type="checkbox"/>	
1506825-004A	ASP5	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/17/2015 14:55	5 days	Present	<input type="checkbox"/>	
1506825-004B	ASP5	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/17/2015 14:55	5 days	Present	<input type="checkbox"/>	
1506825-004C	ASP5	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/17/2015 14:55	5 days	Present	<input type="checkbox"/>	
1506825-004D	ASP5	Water	RSK175 (CO2)	1	aVOA	<input type="checkbox"/>	6/17/2015 14:55	5 days	Present	<input type="checkbox"/>	

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1506825-004H	ASP5	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 14:55	5 days	Present	<input type="checkbox"/>	
1506825-005A	ASP6	Water	Multi-Range TPH(g,d,mo)	3	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	6/17/2015 15:15	5 days	Present	<input type="checkbox"/>	
1506825-005B	ASP6	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	6/17/2015 15:15	5 days	Present	<input type="checkbox"/>	
1506825-005C	ASP6	Water	RSK175 <Ethane_4, Ethylene_4, Methane_4>	2	aVOA w/ H2SO4	<input type="checkbox"/>	6/17/2015 15:15	5 days	Present	<input type="checkbox"/>	
1506825-005D	ASP6	Water	RSK175 (CO2)	1	aVOA	<input type="checkbox"/>	6/17/2015 15:15	5 days	Present	<input type="checkbox"/>	
1506825-005E	ASP6	Water	E300.1 (Inorganic Anions) <Nitrate as N, Nitrate as NO3-, Sulfate>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 15:15	5 days	Present	<input type="checkbox"/>	
1506825-005F	ASP6	Water	E200.8 (Metals) <Iron>	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	6/17/2015 15:15	5 days	Present	<input type="checkbox"/>	
1506825-005G	ASP6	Water	E200.8 (Metals) (Dissolved-Lab Filtered) <Iron>	1	250mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 15:15	5 days	Present	<input type="checkbox"/>	
1506825-005H	ASP6	Water	SM2320B (Alkalinity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	6/17/2015 15:15	5 days	Present	<input type="checkbox"/>	

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## **CHAIN OF CUSTODY RECORD**

15060825

PAGE 1 OF 1

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

Analyte(s)	Minimum Number of Containers	Container	Preservative	Comments
TPH-G	2	Clear VOA	HCL	
TPH-D and TPH-MO	2	Amber VOA	None	
VOCs (8260)	2	Clear VOA	HCL	
Nitrate (as N) and Sulfate	1	250 mL Poly	None	
Total Iron	1	250 mL Poly	HNO3	
Dissolved Iron	1	250 mL Poly	None	Note provided on sample label that sample is unfiltered and unpreserved, and note provided on COC asking lab to filter and preserve upon receipt.
Alkalinity as Calcium Carbonate	1	500 mL Poly	None	
Dissolved Gases by RSK175	2	Amber VOA	H2SO4	



## Sample Receipt Checklist

Client Name: **P & D Environmental** Date and Time Received: **6/18/2015 5:44:07 PM**  
Project Name: **#0058; Xtra Oil Co., 1701 Park St., Alameda** LogIn Reviewed by: **Jena Alfaro**  
WorkOrder No: **1506825** Matrix: **Water** Carrier: **Bernie Cummins (MAI Courier)**

### Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

### Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

### Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample/Temp Blank temperature	Temp: 1.8°C		NA <input type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE )

### UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes	<input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

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

Comments: