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November 27, 2017

RECEIVED
By Alameda County Environmental Health 2:07 pm, Nov 28, 2017

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

SUBJECT: SEMIANNUAL 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:

- Semiannual Groundwater Monitoring and Sampling Report (January through June 2017) dated November 27, 2017 (document 0058.R33).

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

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

Sincerely,
Xtra Oil Company

Keith Simas

0058.L66

# P&D ENVIRONMENTAL, INC.

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


November 27, 2017
Report 0058.R33

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

SUBJECT: SEMIANNUAL GROUNDWATER MONITORING AND SAMPLING REPORT (JANUARY THROUGH JUNE 2017)
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 semiannual monitoring and sampling of the four historical groundwater monitoring wells (MW-1 through MW-4), the four wells installed in 2011 for proposed site remediation (EW-2, EW-4, EW-5, and OW-2), and the most recently installed ozone sparging well (IW1), which was installed on September 9, 2015. The semiannual monitoring and sampling was performed on July 27 and 28, 2017 for the reporting period of January through June 2017.

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

## BACKGROUND

The site is currently used as a retail gasoline station. In a letter from the 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 semiannual monitoring and sampling during those quarters (during either the first and third or the second and fourth quarters). Based on our review, semiannual 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 initated at well MW-2 beginning August 27, 2014 and operated continuously until mid-day on September 26, 2014. As part of the periodic monitoring that was performed during the pilot test, air samples were collected from the head space of groundwater wells located in the vicinity of well MW-2 on September 5, 2014. Following completion of air 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 a proposed new well (designated as IW1) located next to ASP-4. Documentation of the sampling and sample results is 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 adjacent to ASP-4 and recommended that ozone sparging be resumed at wells MW-2, EW-2 and the proposed new well (IW1) located adjacent to ASP-4. Documentation of the installation of ozone sparging well IW1 is provided in P&D's Ozone Injection Well Installation Report dated June 29, 2016 (document 0058.R29).

FIELD ACTIVITIES

Water levels were measured on July 27, 2017 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, OW-2,

and IW-1 for the semiannual well monitoring and sampling event. The water level monitoring data for the wells 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, OW-2, and IW-1 were purged using low flow purge procedures in accordance with U.S. EPA 1996 guidelines. Purging was performed with a peristaltic pump and new or dedicated polyethylene tubing for a minimum of fifteen minutes at each sampling location. None of the wells dewatered during purging, with the exception of well MW-4 which dewatered shortly before the end of 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.

Purging was performed at a flow rate of approximately 300 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 July 27 and 28, 2017 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 well MW-1, moderate petroleum hydrocarbon odors were detected on the purge water from well EW-5, and slight petroleum hydrocarbon odors were detected on the purge water from wells MW-2, MW-4, EW-2, and EW-4. No petroleum hydrocarbon odors were detected on the purge water from wells MW-3, OW-2 or IW-1.

Once the wells had been purged for a minimum of fifteen minutes, or dewatered, and the field parameters were observed to have stabilized, water samples were collected directly from the discharge tubing of the pump into 40-milliliter glass Volatile Organic Analysis (VOA) vials 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 July 27, 2017 for groundwater monitoring wells MW-1, MW-3, and MW-4 ranged from 7.05 to 7.27 feet, and the measured depth to groundwater in wells MW-2, EW-2, EW-4, EW-5, OW-2, and IW-1 was 8.16, 6.91, 5.75, 5.85, 5.97, and 6.86 feet, respectively. 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 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 Semiannual Monitoring and Samplng (January Through June 2014) and Baseline Groundwater Quality Report (document 0058.R25) dated October 1, 2014.

During the 2014 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 MW-2. 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 MW-2. Additionally, the most recently installed ozone injection well IW-1 has not been surveyed. The groundwater surface elevations for all of the other wells are shown in Figure 2, along with groundwater surface contours that are based on the July 27, 2017 groundwater surface elevations. Based on the groundwater surface contours, the groundwater flow direction on July 27, 2017 was southeasterly, consistent with historical calculated groundwater flow directions at the site.

The calculated groundwater flow direction on July 27, 2017 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 July 27, 2017 well water levels with the most recent well water level measurements from November 22, 2016 shows that the water levels were higher in all of the wells than on November 22, 2016 by amounts ranging from 0.07 to 0.12 feet, with the exception of well MW-3, where the water level was 0.02 feet lower than on November 22, 2016.

Well MW-4 is located in the landscaping on the north-northeast side of the property along the fence line. Historical similar changes in water levels 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 at the subject site were analyzed at McCampbell Analytical Inc. of Pittsburg, California. All of the samples were analyzed for the following analytes:

- 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.
- Volatile Organic Compounds (VOCs) including Methyl tertiary-Butyl Ether (MTBE), and benzene, toluene, ethylbenzene, total xylenes (BTEX), and fuel oxygenates and lead scavengers by EPA Method 5030B in conjunction with EPA Method 8260B.

The laboratory analytical results are summarized in Table 3, and a copy of the laboratory analytical report 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), the four wells related to historically proposed site remediation (EW-2, EW-4, EW-5, and OW-2), and the most recently installed ozone injection well IW-1 were monitored and sampled on July 27 and 28, 2017. Air sparge points ASP-2 through ASP-6 were not monitored and sampled on July 27 and 28, 2017. 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 3 shows the following site groundwater quality conditions associated with the November 22, 2016 semiannual 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-2, EW-5, and OW-2 at concentrations of 1,400, 3,000, 890, 110, 1,000, and 180 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, and EW-5 at concentrations of 15,000, 3,100, 3,300, 960, 220, and 5,400 ug/L, respectively.
- Benzene was detected in wells MW-1, MW-2, MW-4, EW-2, EW-4 and EW-5 at concentrations of 3,600, 360, 67, 150, 29, and 950 ug/L, respectively.
- The remaining BTEX compounds were detected at concentrations ranging from 6.9 to 220 ug/L.

- MTBE was detected in the groundwater samples collected from wells MW-1, MW-2, MW-4, EW-2, EW-4, EW-5, OW-2, and IW-1 at concentrations of 300, 75, 4.7, 14, 6.4, 61, 0.61, and 1.1 ug/L, respectively.
- Tert-Butyl Alcohol (TBA) was detected using EPA Method 8260B in the groundwater samples collected from wells MW-1, MW-2, MW-4, EW-5, and IW-1 at concentrations of 660, 150, 11, 210, and 2.0 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, EW-2, and EW-5 as consisting of gasoline-range compounds, the sample from well MW-2 as consisting of aged diesel-range compounds and/or diesel-range compounds with no recognizable pattern, and the sample from well OW-2 as consisting of gasoline-range and/or Stoddard solvent/ mineral spirits.

Comparison of the July 27 and 28, 2017 sample results with detected concentrations from the previous sampling event on November 22, 2016 shows that all analyte concentrations in well MW-3 have remained not detected. Additionally, all analyte concentrations in wells MW-1, MW-4, EW-2, EW-4, EW-5, and IW-1 remained not detected or decreased, with the following exceptions which all increased:

- Total xylenes in well MW-1.
- MTBE, naphthalene, Tetrachloroethene (PCE), Trichloroethene (TCE), cis-1,2-Dichloroethene (cis-1,2-DCE), and trans-1,2-Dichloroethene (trans-1,2-DCE) in well EW-2.
- PCE, TCE, cis-1,2-DCE, and trans-1,2-DCE in well EW4.
- Toluene in well EW-5.

In wells MW-2 and OW2 all of the analyte concentrations have remained not detected or increased with the following exceptions, which all decreased:

- TPH-G, TPH-MO, and naphthalene in well MW-2.
- TPH-G in well OW-2.

The source of the halogenated VOCs is unknown.

Based on the sample results, P&D recommends that groundwater remediation be resumed to reduce benzene concentrations in groundwater at the site to move the case to closure. P&D also recommends that the semiannual 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.

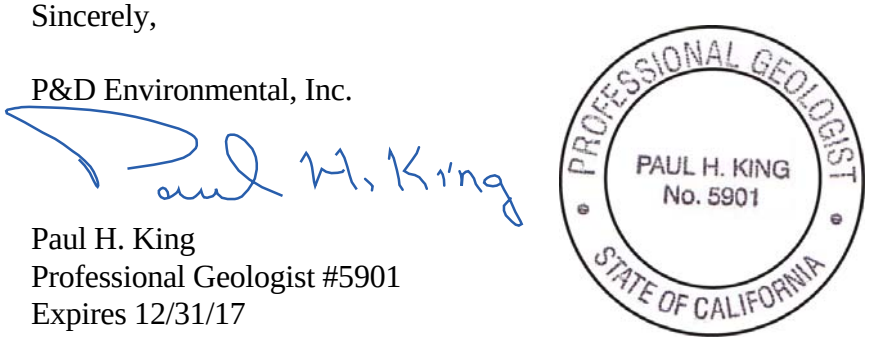
This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

November 27, 2017
Report 0058.R33

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 12/31/17

Attachments:

Table 1 - Summary of Well Water Level Monitoring Data
Table 2 - Summary of Well Water Quality Field Parameters
Table 3 - Summary of Well Groundwater Sample Laboratory Analytical Results

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

PHK/sjc
0058.R33

# TABLES

Table 1

Summary of Well 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 | 7/27/2017 | 22.36* | 7.16 | 15.20 |
| | 11/22/2016 | | 7.28 | 15.08 |
| | 6/27/2016 | | 7.20 | 15.16 |
| | 12/10/2015 | | 8.36 | 14.00 |
| | 6/18/2015 | | 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 |
| | 5/30/2007 | | 7.44 | 12.16 |
| | 3/12/2007 | | 6.34 | 13.26 |
| | 11/6/2006 | | 7.99 | 11.61 |
| | | | | |
| | | | | |
| | | | | |
| **Abbreviations and Notes:** | | | | |
| * = Surveyed by Kier & Wright on June 9, 2011. | | | | |
| ** = Surveyed by Andreas Deak in April 1997. | | | | |
| *** = Prior to well development. | | | | |
| # = 2.4 feet of PVC casing added to top of well MW-2 for ozone injection. | | | | |
| ft-MSL = feet above mean sea level | | | | |
| ft = feet | | | | |

Table 1
Summary of Well Water Level Monitoring Data

| Well Number | Date Monitored | Top of Casing Elevation (ft-msl.) | Depth to Water (ft) | Water Table Elevation (ft-MSL.) |
|---|---|---|---|---|
| | | | | |
| MW-2 | 7/27/2017 | Unknown | 8.16 | Unknown |
| | 11/22/2016 | | 8.24 | Unknown |
| | 6/27/2016 | | 8.21 | Unknown |
| | 12/10/2015 | | 9.23 | Unknown |
| | 6/18/2015 | | 8.60 | Unknown |
| | 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 |
| | 5/30/2007 | | 7.79 | 12.52 |
| | 3/12/2007 | | 6.82 | 13.49 |
| | 11/6/2006 | | 8.25 | 12.06 |
| | | | | |
| | | | | |
| | | | | |

**Abbreviations and Notes:**

* = Surveyed by Kier & Wright on June 9, 2011.

** = Surveyed by Andreas Deak in April 1997.

*** = Prior to well development.

ft-MSL = feet above mean sea level

ft = feet

Table 1
Summary of Well Water Level Monitoring Data

| Well Number | Date Monitored | Top of Casing Elevation (ft-msl.) | Depth to Water (ft) | Water Table Elevation (ft-MSL.) |
|---|---|---|---|---|
| | | | | |
| MW-3 | 7/27/2017 | 23.35* | 7.27 | 16.08 |
| | 11/22/2016 | | 7.25 | 16.10 |
| | 6/27/2016 | | 7.32 | 16.03 |
| | 12/10/2015 | | 8.69 | 14.66 |
| | 6/18/2015 | | 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 |
| | 5/30/2007 | | 7.26 | 13.31 |
| | 3/12/2007 | | 6.03 | 14.54 |
| | 11/6/2006 | | 8.09 | 12.48 |
| | | | | |
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**Abbreviations and Notes:**

* = Surveyed by Kier & Wright on June 9, 2011.

** = Surveyed by Andreas Deak in April 1997.

*** = Prior to well development.

# = 2.4 feet of PVC casing added to top of well MW-2 for ozone injection.

ft-MSL = feet above mean sea level

ft = feet

Table 1
Summary of Well 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 | 7/27/2017 | 22.48* | 7.05 | 15.43 |
| | 11/22/2016 | | 7.12 | 15.36 |
| | 6/27/2016 | | 7.09 | 15.39 |
| | 12/10/2015 | | 8.42 | 14.06 |
| | 6/18/2015 | | 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 |
| | 5/30/2007 | | 7.38 | 12.31 |
| | 3/12/2007 | | 5.30 | 14.39 |
| | 11/6/2006 | | 7.60 | 12.09 |
| | | | | |
| | | | | |
| | | | | |

**Abbreviations and Notes:**

* = Surveyed by Kier & Wright on June 9, 2011.

** = Surveyed by Andreas Deak in April 1997.

*** = Prior to well development.

# = 2.4 feet of PVC casing added to top of well MW-2 for ozone injection.

ft-MSL = feet above mean sea level

ft = feet

Table 1
Summary of Well Water Level Monitoring Data

| Well Number | Date Monitored | Top of Casing Elevation (ft-msl.) | Depth to Water (ft) | Water Table Elevation (ft-MSL.) |
|---|---|---|---|---|
| | | | | |
| EW-2 | 7/27/2017 | 22.13* | 6.91 | 15.22 |
| | 11/22/2016 | | 7.01 | 15.12 |
| | 6/27/2016 | | 6.93 | 15.20 |
| | 12/10/2015 | | 8.00 | 14.13 |
| | 6/18/2015 | | 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 | 7/27/2017 | 20.95* | 5.75 | 15.20 |
| | 11/22/2016 | | 5.87 | 15.08 |
| | 6/27/2016 | | 5.83 | 15.12 |
| | 12/10/2015 | | 7.00 | 13.95 |
| | 6/18/2015 | | 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 | 7/27/2017 | 21.20* | 5.85 | 15.35 |
| | 11/22/2016 | | 5.95 | 15.25 |
| | 6/27/2016 | | 5.91 | 15.29 |
| | 12/10/2015 | | 7.15 | 14.05 |
| | 6/18/2015 | | 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 |
| | | | | |
| | | | | |
| | | | | |

**Abbreviations and Notes:**

* = Surveyed by Kier & Wright on June 9, 2011.
** = Surveyed by Andreas Deak in April 1997.
*** = Prior to well development.
# = 2.4 feet of PVC casing added to top of well MW-2 for ozone injection.
ft-MSL = feet above mean sea level
ft = feet

Table 1
Summary of Well 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 | 7/27/2017 | 21.55* | 5.97 | 15.58 |
| | 11/22/2016 | | 6.09 | 15.46 |
| | 6/27/2016 | | 6.04 | 15.51 |
| | 12/10/2015 | | 7.42 | 14.13 |
| | 6/18/2015 | | 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 |
| | | | | |
| IW-1 | 7/27/2017 | Unknown | 6.86 | Unknown |
| | 11/22/2016 | Unknown | 6.95 | Unknown |
| | 6/27/2016 | Unknown | 6.04 | Unknown |
| | 12/10/2015 | Unknown | 8.07 | Unknown |
| | 10/23/2015*** | Unknown | 7.76 | Unknown |
| | | | | |
| | | | | |
| | | | | |
| **Abbreviations and Notes:** | | | | |
| * = Surveyed by Kier & Wright on June 9, 2011. | | | | |
| ** = Surveyed by Andreas Deak in April 1997. | | | | |
| *** = Prior to well development. | | | | |
| # = 2.4 feet of PVC casing added to top of well MW-2 for ozone injection. | | | | |
| ft-MSL = feet above mean sea level | | | | |
| ft = feet | | | | |

Table 2
Summary of Well Water Quality Field Parameters

| Sample ID | Sample Date | D.O. (mg/L) | O.R.P. (mV) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| MW-1 | 7/27/2017 | 0.49 | -127.5 | 6.36 | 1,090 | 23.0 | 0.00 |
| | 11/22/2016 | 0.29 | -107.3 | 6.48 | 1,096 | 22.6 | 0.00 |
| | 6/27/2016 | 0.86 | -163.2 | 6.74 | 1,047 | 22.2 | 0.00 |
| | 12/10/2015 | 0.71 | -176.3 | 6.93 | 1,143 | 22.3 | 0.00 |
| | 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 |
| | 6/19/2014 | 1.80* | -755.2 | 6.56 | 789 | 21.6 | 0.00 |
| | 11/19/2013 | 0.88 | -103.7 | 6.79 | 635 | 21.6 | 0.00 |
| | 5/16/2013 | 0.18 | -103.6 | 6.67 | 983 | 20.2 | 0.00 |
| | 12/11/2012 | 0.19 | -139.3 | 6.16 | 777.0 | 20.6 | 2.89 |
| | 6/21/2012 | 0.18 | -110.6 | 6.78 | 664 | 21.0 | 0.00 |
| | 11/29/2011 | -- | -- | 6.51 | 702 | 20.2 | -- |
| | 5/26/2011 | -- | -- | 6.82 | 678 | 20.5 | 0.00 |
| | 11/18/2010 | -- | -- | 6.69 | 1,206 | 22.0 | -- |
| | 4/28/2010 | -- | -- | 6.63 | 998 | 19.2 | -- |
| | 12/3/2009 | -- | -- | 6.42 | 953 | 21.2 | -- |
| | 2/25/2009 | -- | -- | 6.56 | 997 | 17.9 | -- |
| | 11/25/2008 | -- | -- | 6.60 | 1,143 | 21.9 | -- |
| | 8/27/2008 | -- | -- | 6.57 | 980 | 23.6 | -- |
| | 5/28/2008 | -- | -- | 6.84 | 903 | 20.6 | -- |
| | 2/27/2008 | -- | -- | 7.02 | 1,036 | 17.0 | -- |
| | 11/29/2007 | -- | -- | 5.73 | 10,350 | 14.8 | -- |
| | 8/29/2007 | -- | -- | 6.16 | 17,410 | 30.7 | -- |
| | 5/30/2001 | -- | -- | 7.12 | >20,000 | 17.3 | -- |
| | 3/12/2007 | -- | -- | 6.79 | 177 | 29.2 | -- |
| | 11/6/2006 | -- | -- | 6.69 | 66.9 | 27.2 | -- |
| | | | | | | | |
| MW-2 | 7/28/2017 | 0.57 | -122.4 | 6.31 | 944 | 23.5 | 0.00 |
| | 11/22/2016 | 0.46 | -105.1 | 6.31 | 977 | 22.4 | 0.00 |
| | 6/27/2016 | 0.90 | -208.5 | 6.74 | 984 | 22.7 | 0.00 |
| | 12/10/2015 | 0.83 | -187.4 | 6.76 | 1,040 | 21.9 | 0.10 |
| | 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 | -- |

Table 2
Summary of Well Water Quality Field Parameters

| Sample ID | Sample Date | D.O. (mg/L) | O.R.P. (mV) | pH | Electrical Conductivity (µS/cm) | Temperature (C°) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| MW-3 | 7/27/2017 | 0.80 | -82.9 | 5.98 | 348.8 | 21.4 | 0.00 |
| | 11/22/2016 | 0.46 | -1.6 | 6.04 | 376.9 | 21.1 | 0.00 |
| | 6/27/2016 | 1.33 | -58.0 | 6.35 | 380.2 | 20.4 | 0.00 |
| | 12/10/2015 | 1.74 | -20.1 | 6.41 | 284.4 | 21.4 | 9.81 |
| | 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 | -- |
| | | | | | | | |
| MW-4 | 7/27/2017 | 2.58 | -61.2 | 6.27 | 692 | 21.4 | 0.00 |
| | 11/22/2016 | 0.42 | -62.3 | 6.42 | 734 | 18.4 | 0.00 |
| | 6/27/2016 | 0.52 | -157.4 | 6.82 | 740 | 20.8 | 0.00 |
| | 12/10/2015 | 1.48 | -89.4 | 6.81 | 662 | 18.7 | 0.66 |
| | 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 | -- |

Table 2
Summary of Well 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) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| EW-2 | 7/28/2017 | 0.44 | -117.2 | 6.62 | 905 | 22.8 | 0.00 |
| | 11/22/2016 | 0.31 | -89.8 | 6.55 | 876 | 22.1 | 0.00 |
| | 6/27/2016 | 0.69 | -194.3 | 7.12 | 906 | 21.8 | 0.00 |
| | 12/10/2015 | 0.77 | -172.3 | 6.91 | 902 | 21.9 | 0.00 |
| | 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 | 7/27/2017 | 0.43 | -89.7 | 6.70 | 668 | 23.4 | 0.00 |
| | 11/22/2016 | 0.29 | -66.8 | 6.81 | 657 | 21.7 | 0.00 |
| | 6/27/2016 | 0.53 | -178.5 | 7.02 | 646 | 22.2 | 0.00 |
| | 12/10/2015 | 0.74 | -175.2 | 6.87 | 930 | 22.0 | 0.91 |
| | 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 | 7/27/2017 | 0.57 | -119.9 | 6.35 | 864 | 21.5 | 0.00 |
| | 11/22/2016 | 0.38 | -102.6 | 6.48 | 790 | 19.9 | 0.00 |
| | 6/27/2016 | 0.66 | -198.4 | 6.77 | 784 | 20.2 | 0.00 |
| | 12/10/2015 | 0.77 | -172.1 | 6.89 | 804 | 20.4 | 1.21 |
| | 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 | 7/27/2017 | 0.65 | -88.0 | 5.81 | 476.1 | 21.3 | 0.00 |
| | 11/22/2016 | 0.56 | 36.1 | 6.17 | 415.5 | 18.3 | 0.00 |
| | 6/27/2016 | 0.58 | -142.6 | 6.31 | 596 | 19.5 | 0.00 |
| | 12/10/2015 | 0.75 | -143.0 | 6.99 | 655 | 19.2 | 1.55 |
| | 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 |
| | | | | | | | |
| IW-1 | 7/28/2017 | 0.37 | -129.5 | 7.04 | 496.7 | 22.4 | 0.00 |
| | 11/22/2016 | 0.27 | -37.3 | 6.91 | 340.1 | 23.0 | 0.00 |
| | 6/27/2016 | 0.40 | -191.7 | 7.64 | 565.0 | 22.8 | 0.94 |
| | 12/10/2015 | 1.76 | -78.4 | 9.01 | 478.4 | 22.5 | 14.01 |
| | | | | | | | |
| | | | | | | | |

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 3
Summary of Well Groundwater Sample Laboratory Analytical Results

| 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 | 7/27/2017 | 15,000 | 1,400, c | ND<250 | 300 | 3,600 | ND<100 | 120 | 220 | ND, except TBA = 660, | ND |
| | 11/22/2016 | 18,000 | 1,700, c | ND<250 | ND<1,200 | 4,700 | 73 | 190 | 300 | ND, except TBA = 900, MTBE = 360 | ND, except Benzene = 3,900, Toluene = 59, Ethylbenzene = 130, Total Xylenes = 200, Naphthalene = 61, n-Propyl benzene = 120 |
| | 6/27/2016, e | 8,900 | 1,400, c | ND<250 | 260 | 1,900 | ND<50 | 120 | 210 | ND, except TBA = 650 | ND, except n-Propyl benzene = 60 |
| | 12/10/2015 | 18,000 | 2,400, c | ND<250 | ND<1,000 | 5,600 | 110 | 400 | 630 | ND, except TBA=2,100, MTBE = 580 | All ND |
| | 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 |
| | 8/21/2014 | Samples only analyzed for Dissolved Hexavalent Chromium. | | | | | | | | | |
| | 6/19/2014 | 15,000 | 4,200, b,c | ND<250 | -- | 3,100 | 230 | 500 | 1,300 | ND, except MTBE = 350 | -- |
| | 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 | -- |
| | 5/16/2013 | 18,000 | 1,800, c | ND<250 | ND<800 | 4,400 | 320 | 510 | 1,100 | ND, except TBA = 180 MTBE = 240 | -- |
| | 12/11/2012 | 15,000 | 2,400, c | ND<250 | ND<600 | 3,300 | 330 | 410 | 1,100 | ND, except TBA = 190 MTBE = 100 | -- |
| | 6/21/2012 | 17,000 | 2,100, c | ND<250 | ND<500 | 1,800 | 420 | 500 | 1,500 | ND, except TBA = 110 MTBE = 49 | -- |
| | 11/29/2011 | 18,000 | 2,600, c | ND<250 | ND<600 | 2,600 | 410 | 410 | 1,200 | ND, except TBA = 460, MTBE = 210 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 8/27/2008 | 46,000 | 5,200, c | ND<250 | 1,300 | 4,600 | 1,800 | 2,000 | 5,200 | -- | -- |
| | 5/28/2008 | 40,000 | 6,100, c | 290 | 1,600 | 4,200 | 2,600 | 1,700 | 5,900 | -- | -- |
| | 2/27/2008 | 45,000 | 4,900, c | 310 | 2,600 | 6,200 | 3,100 | 1,300 | 5,100 | -- | -- |
| | 11/29/2007 | 27,000 | 3,100, b,c | ND<250 | 2,600 | 4,700 | 930 | 770 | 2,600 | -- | -- |
| | 8/29/2007 | 26,000 | 3,900, b,c | 470 | 3,200 | 5,400 | 1,400 | 810 | 3,000 | -- | -- |
| | 5/30/2007 | 22,000 | 3300, c | ND<250 | ND<750 | 400 | 380 | 1,100 | 3,600 | -- | -- |
| | 3/12/2007 | 38,000 | 3,500, b,c | 300 | 3,500 | 5,400 | 2,900 | 1,300 | 5,100 | -- | -- |
| | 11/6/2006 | 44,000,a | 3,400, a,c | 360 | 3,900 | 5,600 | 2,300 | 920 | 3,000 | -- | -- |
| | | | | | | | | | | | |
| MW-2 | 7/28/2017 | 3,100 | 3,000, n,c | 890, n,c | 75 | 360 | ND<10 | ND<10 | ND<10 | ND, except TBA = 150 | ND, except Naphthalene = 34, n-butyl benzene = 19, Isopropylbenzene = 35, n-Propyl benzene = 99 |
| | 11/22/2016 | 3,500 | 2,900, n | 1,200, n | ND<12 | 25 | 8.2 | 8.5 | 5.8 | ND, except TBA = 16, MTBE = 3.9 | ND, except Benzene = 13, Toluene = 3.1, Ethylbenzene = 6.7, Total Xylenes = 3.5, Naphthalene = 42, n-butyl benzene = 12, sec-butyl benzene = 5.3, Isopropylbenzene = 25, n-Propyl benzene = 69, 1,3,5-Trimethylbenzene = 2.7 |
| | 6/27/2016, e | 5,300 | 3,400, c,n | 1,700, c,n | 25 | 210 | 9.6 | 12 | 15 | ND, except TBA = 140 | ND, except Naphthalene = 53, n-butyl benzene = 17, sec-butyl benzene = 7.2, Isopropylbenzene = 35, n-Propyl benzene = 100, 1,3,5-Trimethylbenzene = 6.6 |
| | 12/10/2015 | 1,400 | 3,300, c,f | 1,800, c,f | ND<10 | 25 | 4.6 | 5.8 | 4.2 | ND, except TBA = 16, MTBE = 6.1 | All ND |
| | 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-Propyl benzene = 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-Propyl benzene = 10 |
| | 10/3/2014, e | 97, g | 370, h | ND<250 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND, except TBA = 42 | ND, except Bromomethane = 1.2, Chloroform = 3.2, MIBK = 1.2, MBK = 0.87 |
| | 8/21/2014 | Samples only analyzed for Dissolved Hexavalent Chromium. | | | | | | | | | |
| | 6/19/2014 | 4,700 | 2,700, b,c | 350, b,c | -- | 210 | 13 | 18 | 12 | ND, except MTBE = 24 | -- |
| | 11/19/2013 | 6,600 | 3,000, b,c | ND<250 | ND<17 | 160 | 9.6 | 36 | 10 | ND | -- |

Table 3
Summary of Well Groundwater Sample Laboratory Analytical Results

| 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-2 (Continued) | 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 | -- |
| | 12/11/2012 | 3,900 | 2,700, c,d | 590 | 110 | 290 | 15 | 27 | 16 | ND, except TBA = 190, MTBE = 99 | -- |
| | 6/21/2012 | 4,900 | 1,600, b,c | ND<250 | 180 | 560 | 14 | 36 | 12 | ND, except TBA = 340, MTBE = 160 | -- |
| | 11/29/2011 | 4,900 | 2,900, c,d | 420, c,d | ND<50 | 400 | 11 | 39 | 7.7 | ND, except TBA = 72, MTBE = 29 | -- |
| | 5/26/2011 | 6,600 | 1,900, b,c | ND<250 | ND<350 | 1,000 | 39 | 36 | 97 | ND, except TBA = 480, MTBE = 210 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 8/27/2008 | 13,000, a | 9,200, a,c,d | 2,200 | ND<200 | 990 | 14 | 93 | 19 | -- | -- |
| | 5/28/2008 | 12,000, a | 25,000 a,c,d | 7,200 | ND<210 | 2,000 | 77 | 77 | 90 | -- | -- |
| | 2/27/2008 | 11,000, a | 21,000, a,c,d | 6,800 | ND<150 | 940 | 36 | ND<10 | 22 | -- | -- |
| | 11/29/2007 | 11,000, a | 32,000, a,c,d | 11,000 | ND<50 | 1,000 | 28 | 120 | 31 | -- | -- |
| | 8/29/2007 | 8,600, a | 6,300, a, b, c | 2,600 | ND<100 | 1,300 | 36 | 48 | 48 | -- | -- |
| | 5/30/2007 | 14,000, a | 22,000, a,c,d | 5,800 | ND<210 | 2,200 | 51 | 100 | 99 | -- | -- |
| | 3/12/2007 | 8,500, a | 74,000, a, c,d | 21,000 | ND< 80 | 1,200 | 34 | 140 | 69 | -- | -- |
| | 11/6/2006 | 14,000,a | 45,000, a,c | 11,000 | ND<120 | 1,400 | 27 | 200 | 37 | -- | -- |
| | | | | | | | | | | | |
| MW-3 | 7/27/2017 | ND<50 | ND<50 | ND<250 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND | ND |
| | 11/22/2016 | ND<50 | ND<50 | ND<250 | ND<5.0 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.5 | ND | ND, except 4-Isopropyl toluene = 0.82 |
| | 6/27/2016, e | ND<50 | ND<50 | ND<250 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND | All ND |
| | 12/10/2015 | ND<50 | ND<50 | ND<250 | ND<5.0 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND | All ND |
| | 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 | Not Sampled. | | | | | | | | | |
| | 10/3/2014 | Not Sampled. | | | | | | | | | |
| | 8/20/2014 | Samples only analyzed for Dissolved Hexavalent Chromium. | | | | | | | | | |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 12/11/2012 | ND<50 | ND<50 | ND<250 | ND<5.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 8/27/2008 | ND<50 | ND<50 | ND<250 | ND<5.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- |
| | 5/28/2008 | ND<50 | ND<50 | ND<250 | ND<5.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- |
| | 2/27/2008 | ND<50 | ND<50 | ND<250 | 15 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- |
| | 11/29/2007 | ND<50 | ND<50 | ND<250 | ND<5.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- |
| | 8/29/2007 | ND<50 | ND<50 | ND<250 | ND<5.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- |
| | 5/30/2007 | ND<50 | ND<50 | ND< 250 | ND< 5.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- |
| | 3/12/2007 | ND< 50 | ND< 50 | ND< 250 | ND< 5.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- |
| | 11/6/2006 | ND<50 | ND<50 | ND<250 | ND<5.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- |
| | | | | | | | | | | | |
| MW-4 | 7/27/2017 | 3,300 | 890, c | ND<250 | 4.7 | 67 | 6.9 | 47 | 190 | ND, except TBA = 11 | ND, except Naphthalene = 29, n-butyl benzene = 5.9, sec-Butyl benzene = 3.0, Isopropylbenzene = 20, n-Propyl benzene = 47, 1,2,4-Trimethylbenzene = 72, 1,3,5-Trimethylbenzene = 20 |
| | 11/22/2016 | 7,200 | 1,300, c | ND<250 | ND<150 | 560 | 13 | 100 | 450 | ND, except TBA = 74 MTBE = 52 | ND, except Benzene = 410, Toluene = 14, Ethylbenzene = 82, Total Xylenes = 330, Naphthalene = 44, n-butyl benzene = 10, Isopropylbenzene = 28, n-Propyl benzene = 67, 1,2,4-Trimethylbenzene = 110, 1,3,5-Trimethylbenzene = 30 |
| | 6/27/2016, e | 4,400 | 1,100, c | ND<250 | 35 | 300 | 23 | 83 | 210 | ND, except TBA = 70 | ND, except Naphthalene = 44, n-butyl benzene = 11, sec-butyl benzene = 5.8, Isopropylbenzene = 38, n-Propyl benzene = 95, 1,2,4-Trimethylbenzene = 54, 1,3,5-Trimethylbenzene = 21 |
| | 12/10/2015 | 4,100 | 1,200, c | ND<250 | ND<150 | 560 | 6 | 39 | 87 | ND, except TBA = 92, MTBE = 36 | All ND |
| | 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-Trimethylbenzene = 14 |
| | 11/3/2014 | Not Sampled. | | | | | | | | | |
| | 10/3/2014 | Not Sampled. | | | | | | | | | |
| | 8/20/2014 | Samples only analyzed for Dissolved Hexavalent Chromium. | | | | | | | | | |

Table 3
Summary of Well Groundwater Sample Laboratory Analytical Results

| 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-4 (Continued) | 6/19/2014 | 6,000 | 1,400, c | ND<250 | -- | 940 | 22 | 95 | 200 | ND, except MTBE = 70 | -- |
| | 11/19/2013 | 9,400 | 2,100, c | ND<250 | ND<150 | 1,100 | 24 | 210 | 610 | ND, except TBA = 82, MTBE = 83 | -- |
| | 5/16/2013 | 6,700 | 1,500, c | ND<250 | ND<60 | 310 | 42 | 220 | 560 | ND, except TBA = 43, MTBE = 21 | -- |
| | 12/11/2012 | 17,000 | 2,700, c | ND<250 | ND<170 | 88 | 120 | 670 | 2,100 | ND, except TBA = 12 | -- |
| | 6/21/2012 | 12,000 | 2,700, c | ND<250 | ND<90 | 49 | 83 | 540 | 1,700 | ND | -- |
| | 11/28/2011 | 6,000 | 2,200, c | ND<250 | ND<50 | 86 | 63 | 350 | 1,200 | ND, except TBA = 11, MTBE = 12 | -- |
| | 5/26/2011 | 7,300 | 2,400, b,c | ND<250 | ND<210 | 230 | 64 | 450 | 1,100 | ND, except TBA = 74, MTBE = 80 | -- |
| | 11/18/2010 | 5,900 | 1,100, b,c | ND<250 | 470 | 1,100 | 28 | 150 | 390 | ND, except TBA = 690, MTBE = 540 | -- |
| | 4/28/2010 | 6,300 | 1,400, c | ND<250 | 470 | 480 | 74 | 280 | 750 | ND, except TBA = 350, MTBE = 360 | -- |
| | 12/3/2009 | 6,300 | 1,200, c | ND<250 | 640 | 1,100 | 35 | 120 | 390 | ND, except TBA = 600, MTBE = 390 | -- |
| | 2/25/2009 | 11,000 | 2,200, c | ND<250 | ND<300 | 350 | 120 | 490 | 1,400 | ND, except TBA = 160, MTBE = 130 | -- |
| | 11/25/2008 | 10,000 | 1,900, c | ND<250 | 270 | 630 | 130 | 390 | 1,500 | ND, except TBA = 190, MTBE = 250 | -- |
| | 8/27/2008 | 9,300 | 830, c | ND<250 | ND<250 | 260 | 85 | 370 | 1,300 | -- | -- |
| | 5/28/2008 | 2,200 | 1,400, c | ND<250 | ND<30 | 16 | 38 | 100 | 320 | -- | -- |
| | 2/27/2008 | 8,000 | 1,900, c | ND<250 | ND<50 | 47 | 110 | 270 | 1,300 | -- | -- |
| | 11/29/2007 | 12,000 | 2,800, c | ND<250 | ND<180 | 260 | 230 | 580 | 2,500 | -- | -- |
| | 8/29/2007 | 12,000, a | 560, c | ND<250 | 660 | 910 | 200 | 750 | 2,200 | -- | -- |
| | 5/30/2007 | 43,000 | 4,500, c | 610 | 3,600 | 5,800 | 3,700 | 1,400 | 5,400 | -- | -- |
| | 3/12/2007 | 19,000 | 3,100, c | ND< 250 | 370 | 560 | 450 | 1,100 | 4,400 | -- | -- |
| | 11/6/2006 | 23,000 | 4,300,c | 850 | ND<900 | 680 | 250 | 930 | 3,100 | -- | -- |
| EW-2 | 7/28/2017 | 960 | 110, c | ND<250 | 14 | 150 | ND<10 | 20 | ND<10 | All ND | ND, except Naphthalene = 15, PCE = 360, TCE = 560, cis-1,2-DCE = 130, trans-1,2-DCE = 34 |
| | 11/22/2016 | 2,000 | 210, c | ND<250 | ND<150 | 270 | 8.2 | 44 | ND<15 | ND, except MTBE = 11 | ND, except Benzene = 220, Ethylbenzene = 36, PCE = 270, TCE = 440, cis-1,2-DCE = 110, trans-1,2-DCE = 25, MIBK = 11, n-Propyl benzene = 17, |
| | 6/27/2016, e | 760 | 87, c | ND<250 | ND<10 | 170 | ND<10 | ND<10 | ND<10 | ND | ND, except PCE = 670, TCE =340, cis-1,2-DCE = 41, trans-1,2-DCE = 15 |
| | 12/10/2015 | 3,600 | 1,100, c | ND<250 | ND<120 | 650 | 9.2 | 47 | ND<7.5 | ND, except TBA = 81, MTBE = 30 | All ND |
| | 6/18/2015 | 510, g | ND<50 | ND<250 | ND<25 | ND<25 | ND<25 | ND<25 | ND<25 | ND<25 | ND, except PCE = 1,000, TCE = 150 |
| | 11/3/2014 | Not Sampled. | | | | | | | | | |
| | 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 |
| | 8/21/2014 | Samples only analyzed for Dissolved Hexavalent Chromium. | | | | | | | | | |
| | 6/19/2014 | 650, g | ND<50 | ND<250 | -- | 47 | 0.87 | 1.1 | ND<0.50 | ND, except TBA = 8.6, MTBE = 6.0 | -- |
| | 11/19/2013 | 11,000 | 1,400, c | ND<250 | ND<350 | 3,300 | 19 | 96 | 76 | ND, except TBA = 190, MTBE = 89 | -- |
| | 5/16/2013 | 2,000 | 210, c | ND<250 | 83 | 580 | 4.9 | 32 | 7.3 | ND, except TBA = 55, MTBE = 63 | -- |
| | 12/11/2012 | 2,500 | 160, c | ND<250 | ND<120 | 470 | 3.6 | 31 | 5.1 | ND, except TBA = 74, MTBE = 66 | -- |
| | 6/21/2012 | 3,700 | 280, c | ND< 250 | 180 | 960 | 9.5 | 20 | 16 | ND, except TBA = 140, MTBE = 120 | -- |
| | 11/29/2011 | 4,600 | 960, c | ND< 250 | 260 | 1,600 | 15 | 62 | 38 | ND, except TBA = 270, MTBE = 270 | -- |
| | 5/26/2011 | 2,700 | 560, b,c | ND< 250 | ND<150 | 580 | 7.9 | 10 | 80 | ND, except TBA = 290, MTBE = 97 | -- |

Table 3
Summary of Well Groundwater Sample Laboratory Analytical Results

| 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 | 7/27/2017 | 220 | ND<50 | ND<250 | 6.4 | 29 | ND<1.0 | ND<1.0 | ND<1.0 | All ND | ND, except PCE = 50, TCE = 54, cis-1,2-DCE = 1.7, trans-1,2-Dichloroethene = 1.2 |
| | 11/22/2016 | 350 | ND<50 | ND<250 | ND<30 | 67 | ND<1.0 | 4.1 | ND<3.0 | ND, except TBA = 9.1, MTBE = 7.5 | ND, except Benzene = 49, Ethylbenzene = 2.2, PCE = 27, TCE = 26 cis-1,2-DCE = 1.2, Carbon Disulfide = 2.1, Isopropylbenzene = 1.6, n-Propyl benzene = 4.0, |
| | 6/27/2016, e | 67 | ND<50 | ND<250 | ND<5.0 | ND<5.0 | ND<5.0 | ND<5.0 | ND<5.0 | ND | ND, except PCE = 120, TCE = 19 |
| | 12/10/2015 | 15,000 | 1,800, c | ND<250 | 710 | 4,400 | 41 | 250 | ND<75 | ND, except TBA = 760, MTBE = 480 | All ND |
| | 6/18/2015 | 87, g | ND<50 | ND<250 | 7.7 | ND<5.0 | ND<5.0 | ND<5.0 | ND<5.0 | ND | ND, except PCE = 86, TCE = 11 |
| | 11/3/2014 | Not Sampled. | | | | | | | | | |
| | 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 |
| | 8/21/2014 | Samples only analyzed for Dissolved Hexavalent Chromium. | | | | | | | | | |
| | 6/19/2014 | 4,800 | 940, c | ND<250 | -- | 1,200 | 12 | 110 | 21 | ND, except TBA = 290, MTBE = 190 | -- |
| | 11/19/2013 | 18,000 | 3,000, c | ND<250 | ND<700 | 4,200 | 79 | 480 | 120 | ND, except TBA = 320, MTBE = 270 | -- |
| | 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 | -- |
| | 12/11/2012 | 340 | 150, b,c | ND< 250 | ND<30 | 28 | 1.5 | 6.9 | 0.91 | ND, except TBA = 26, MTBE = 20 | -- |
| | 6/21/2012 | 9,600 | 2,200, c | ND< 250 | ND<75 | 270 | 22 | 340 | 290 | ND, except TBA = 18, MTBE = 6.7 | -- |
| | 11/28/2011 | 8,300 | 2,000, c | ND< 250 | ND<150 | 520 | 40 | 510 | 530 | ND, except TBA = 89, MTBE = 16 | -- |
| | 5/26/2011 | 2,800 | 500, b,c | ND< 250 | ND<150 | 99 | 9.9 | 20 | 300 | ND, except TBA = 110, MTBE = 83 | -- |
| | | | | | | | | | | | |
| EW-5 | 7/27/2017 | 5,400 | 1,000, c | ND<250 | 61 | 950 | 32 | 62 | 20 | ND, except TBA = 210 | ND, except Naphthalene = 40, Isopropylbenzene = 55, n-Propyl benzene = 140 |
| | 11/22/2016 | 5,700 | 1,200, c | ND<250 | ND<500 | 1,400 | 42 | 190 | 68 | ND, except TBA = 340, MTBE = 230 | ND, except Benzene = 1,000, Toluene = 27, Ethylbenzene = 150, Total Xylenes = 48, Naphthalene = 57, Isopropylbenzene = 39, n-Propyl benzene = 100 |
| | 6/27/2016, e | 940 | 200, k,o | ND<250 | 59 | 140 | ND<2.5 | 19 | 3.3 | ND, except TBA = 420 | ND, except Naphthalene = 4.1, trans-1,3-Dichloropropene = 3.4, Hexachloroethane = 13, Isopropylbenzene = 9.1, n-Propyl benzene = 22 |
| | 12/10/2015 | 11,000 | 1,300, c | ND<250 | 480 | 2,000 | 50 | 430 | 220 | ND, except TBA = 500, MTBE = 340 | All ND |
| | 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 | Not Sampled. | | | | | | | | | |
| | 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 |
| | 8/20/2014 | Samples only analyzed for Dissolved Hexavalent Chromium. | | | | | | | | | |
| | 6/19/2014 | 16,000 | 2,200, c | ND< 250 | -- | 1,200 | 140 | 950 | 1,100 | ND, except TBA = 310, MTBE = 230 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | | | | | | | | | | | |
| OW-2 | 7/27/2017 | ND<50 | 180, o | ND<250 | 0.61 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | All ND | ND, except sec-Butyl benzene = 0.88, tert-Butyl benzene = 0.95, Isopropylbenzene = 0.98, n-Propyl benzene = 1.3, 1,2,4-Trimethylbenzene = 2.3 |
| | 11/22/2016 | 66 | ND<50 | ND<250 | ND<5.0 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.5 | All ND | All ND |
| | 6/27/2016, e | 59, i | ND<50 | ND<250 | 0.64 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND | ND, except Naphthalene = 1.0, Carbon Disulfide = 0.65, tert-Butyl benzene = 0.64, n-Propyl benzene = 0.69 |
| | 12/10/2015 | 1,000 | 330, c | ND<250 | ND<10 | 2.8 | 1.6 | 37 | 58 | ND, except TBA = 20, MTBE = 5.7 | All ND |
| | 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 | Not Sampled. | | | | | | | | | |

Table 3
Summary of Well Groundwater Sample Laboratory Analytical Results

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OW-2 (Continued) | 10/3/2014 | Not Sampled. | | | | | | | | | |
| | 8/20/2014 | Samples only analyzed for Dissolved Hexavalent Chromium. | | | | | | | | | |
| | 6/20/2014 | 200 | 150, c | ND<250 | -- | 0.62 | 0.70 | 6.7 | 6.8 | ND, except TBA = 2.4, MTBE = 1.5 | -- |
| | 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 | -- |
| | 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 | -- |
| | 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 | -- |
| | 6/21/2012 | 4,600 | 840, c | ND< 250 | ND<45 | 110 | 46 | 160 | 590 | ND, except TBA = 60, MTBE = 5.4 | -- |
| | 11/28/2011 | 5,300 | 1,100, b,c | ND< 250 | ND<130 | 350 | 170 | 24 | 790 | ND, except TBA = 210, MTBE = 50 | -- |
| | 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 | -- |
| | | | | | | | | | | | |
| IW-1 | 7/28/2017 | ND<50 | ND<50 | ND<250 | 1.1 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND, except TBA = 2.0 | ND, except 1,2,4-Trimethylbenzene = 0.56 |
| | 11/22/2016 | 120 | ND<50 | ND<250 | ND<5.0 | ND<0.50 | 1.2 | ND<0.50 | ND<1.5 | ND, except TBA = 2.9, MTBE = 1.5 | ND, except 1,2,4-Trimethylbenzene = 0.61 |
| | 6/27/2016, e | 160, i, m | 81, k,o | ND<250 | 2.3 | ND<0.5 | ND<0.5 | 1.3 | 1.5 | ND, except TBA = 10 | ND, except Naphthalene = 0.76, MEK = 21, n-butyl benzene = 1.4, sec-butyl benzene = 0.51, Isopropylbenzene = 0.52, n-Propyl benzene = 1.7, 1,2,4-Trimethylbenzene = 2.7, 1,3,5-Trimethylbenzene = 1.2 |
| | 12/10/2015 | 2,200 | 500, c, l | ND<250 | ND<15 | 57 | 4.3 | 64 | 140 | ND, except TBA = 53, MTBE = 5.7 | All 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 tertiary-butyl ether
TBA = tert-Butyl alcohol
1,2-DCA = 1,2-Dichloroethane
PCE = Tetrachloroethene
TCE = Trichloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
MIBK = Methyl Iso-butyl Ketone (4-Methyl-2-pentanone).
MBK = Methyl Butyl Ketone (2-hexanone).
MEK = Methyl Ethyl Ketone (2-butanone).
ND = Not Detected.
-- = 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.
l = Laboratory Note: Stoddard solvent/mineral spirit (?)
m = Laboratory Note: No recognizable pattern.
n = Laboratory Note: aged diesel is significant; and/or diesel-range compounds are significant; no recognizable pattern.
o = Laboratory Note: Gasoline range compounds are significant; and/or Stoddard solvent/mineral spirit (?)
Results are in micrograms per liter (µg/L), unless otherwise noted.

# FIGURES

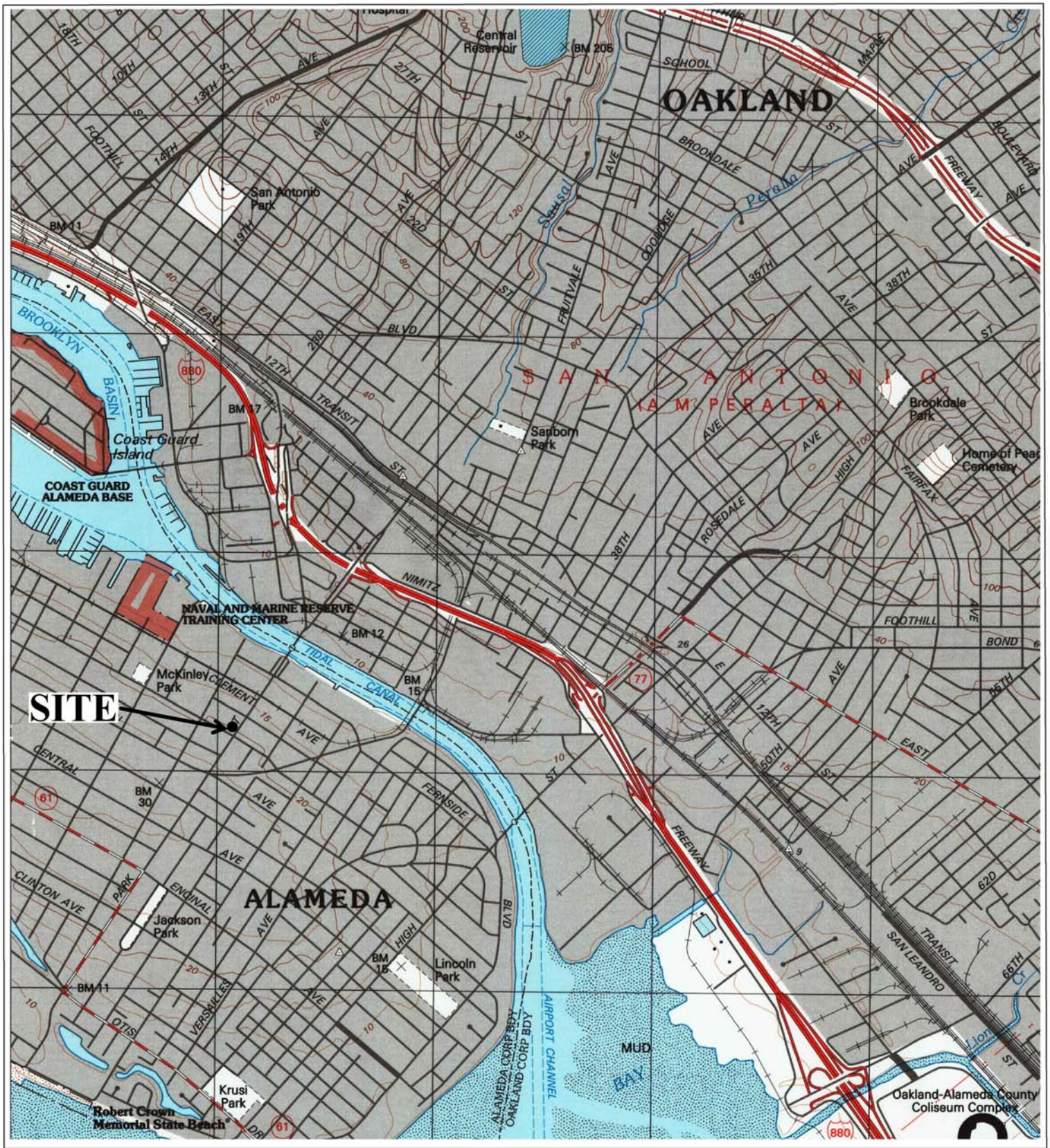


Figure 1
Site Location Map
Xtra Oil Company
1701 Park Street
Alameda, California

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

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

0 1,000 2,000
Approximate Scale in Feet

N

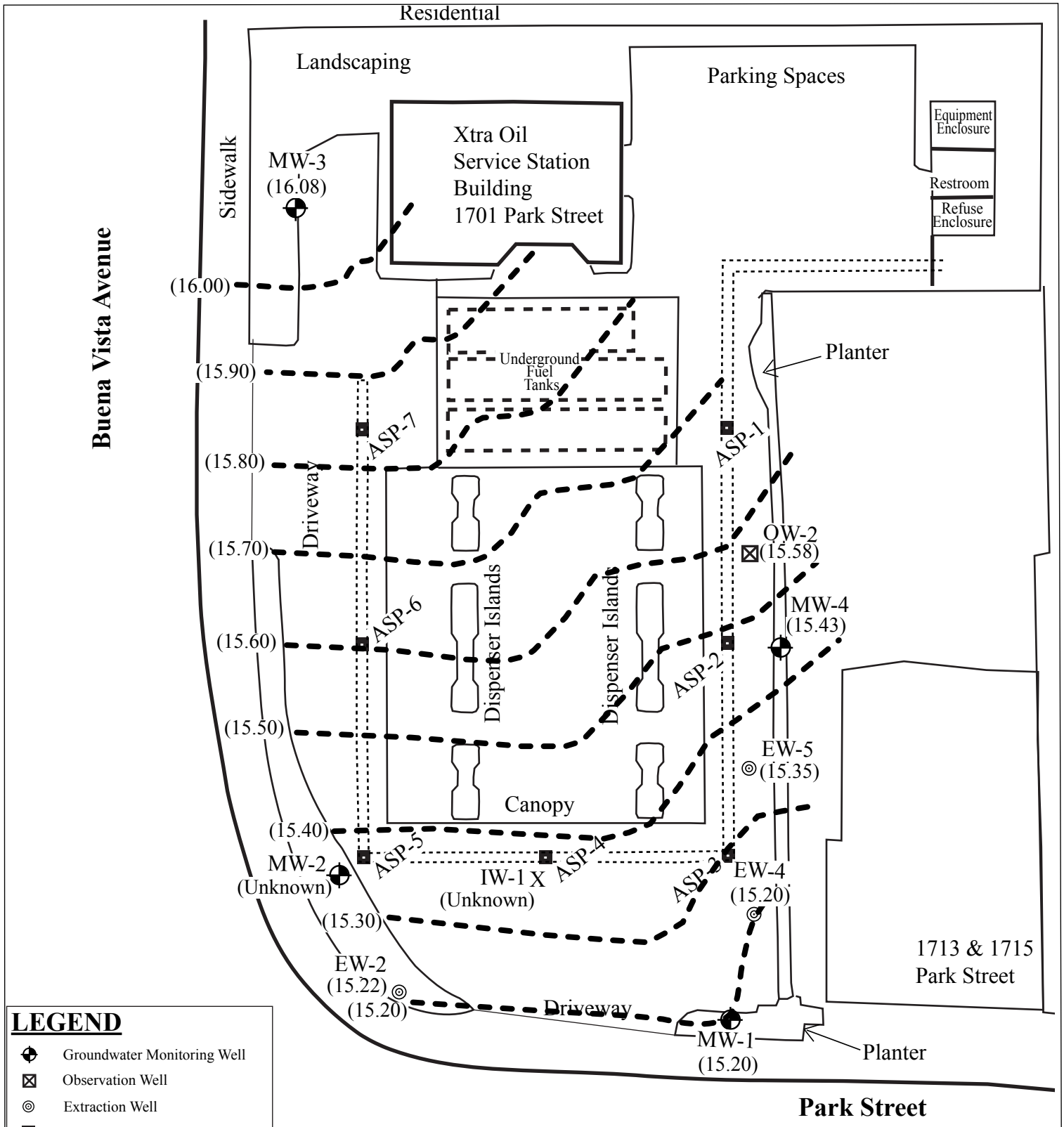


Figure 2
Site Plan Showing Well Locations and Groundwater Surface Elevations
Xtra Oil Company
1701 Park Street
Alameda, California

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

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

0 12.5 25
Approximate Scale in Feet

N

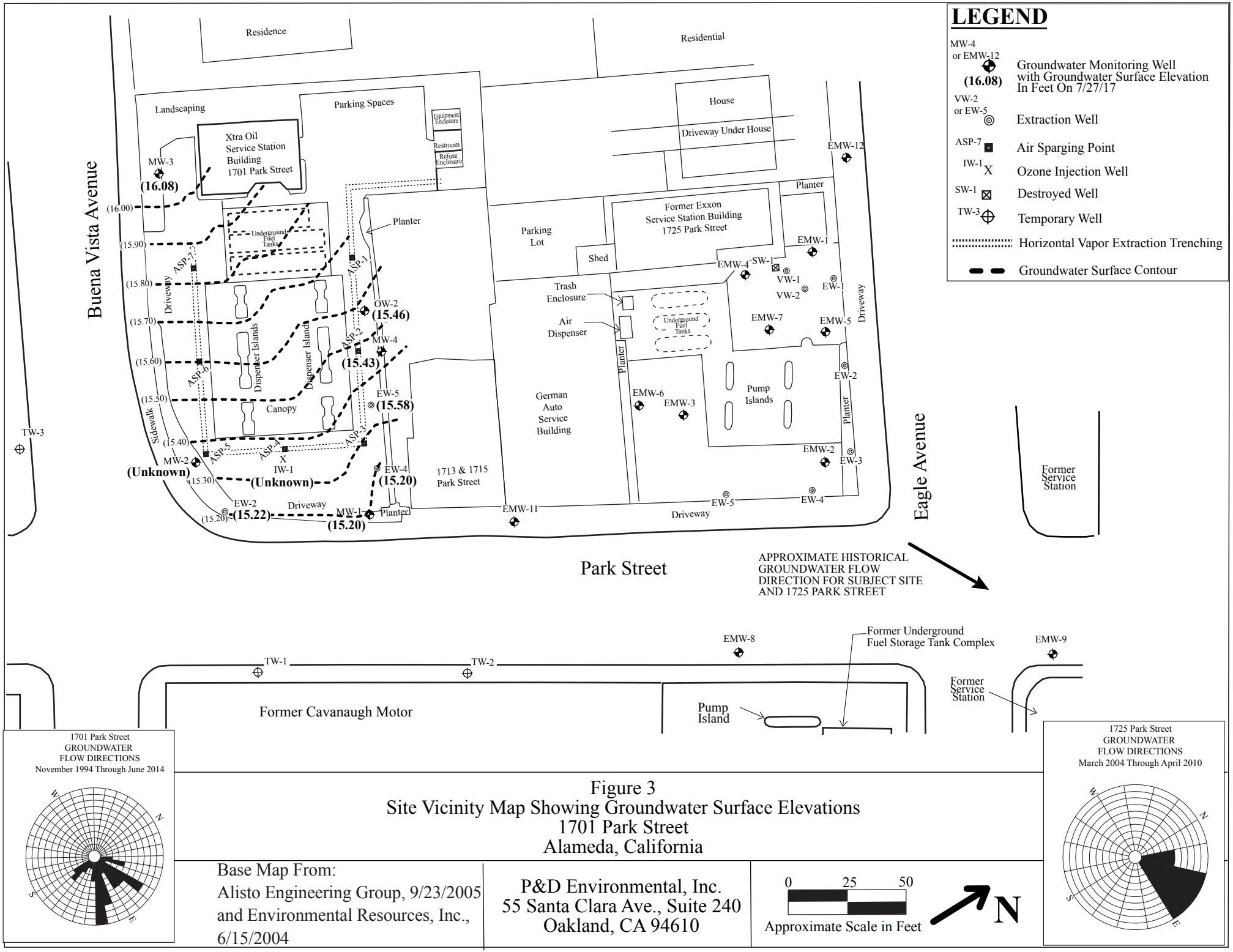


Figure 3
Site Vicinity Map Showing Groundwater Surface Elevations
1701 Park Street
Alameda, California

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

# 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 (a) (Feet) | DEPTH TO WATER (Feet) | PRODUCT THICKNESS (Feet) | GROUNDWATER ELEVATION (b) (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) | NAPTHALENE (ug/l) | BENZO-PYRENE (ug/l) | DO (ppm) | LAB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 11/04/94 | 19.60 | 8.8 | --- | 10.96 | 60000 | 6400 | 13000 | 4900 | 1300 | 5500 | --- | --- | --- | --- | --- | MCC |
| QC-1 (c) | 11/04/94 | --- | --- | --- | --- | 54000 | --- | 12000 | 4500 | 1200 | 5200 | --- | --- | --- | --- | --- | MCC |
| MW-1 | 01/11/95 | 19.60 | 6.10 | --- | 13.50 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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 | 970 | 3300 | --- | --- | --- | --- | --- | MCC |
| MW-1 | 05/25/95 | 19.60 | 6.54 | --- | 13.06 | 53000 | 4700 | 11000 | 5700 | 1200 | 4000 | --- | --- | --- | --- | 4.3 | MCC |
| QC-1 (c) | 05/25/95 | --- | --- | --- | --- | 48000 | --- | 11000 | 5300 | 1200 | 3800 | --- | --- | --- | --- | --- | MCC |
| MW-1 | 08/30/95 | 19.60 | 8.15 | --- | 11.45 | 14000 | 3700 | 5000 | 1100 | 3900 | 103 | --- | --- | --- | --- | 2.8 | MCC |
| QC-1 (c) | 08/30/95 | --- | --- | --- | --- | 57000 | --- | 17000 | 7000 | 1500 | 5200 | --- | --- | --- | --- | --- | MCC |
| MW-1 | 11/16/95 | 19.60 | 8.79 | --- | 10.81 | 100000 | 5900 | 22000 | 17000 | 2100 | 8500 | --- | --- | --- | --- | --- | MCC |
| QC-1 (c) | 11/16/95 | --- | --- | --- | --- | 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 | 5500 | 1100 | 4000 | 19000 | --- | --- | --- | --- | MCC |
| QC-1 (c) | 06/13/96 | --- | --- | --- | --- | 48000 | --- | 9300 | 5600 | 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 | 5500 | 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 | 19000 | 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 | --- | --- | --- | 6 | 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 | 2700 | 11000 | ND<100 | --- | --- | --- | 8.3 | MCC |
| QC-1 (c) | 12/31/99 | --- | --- | --- | --- | 67000 | 4900 | 2900 | 9700 | 2800 | 12000 | ND<100 | --- | --- | --- | --- | MCC |
| MW-1 | 03/31/00 | 19.60 | 5.85 | --- | 13.75 | 48000 | 490 | 3200 | 5500 | 2000 | 6700 | 520 | --- | --- | --- | 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 | 2400 | 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 | 1500 | 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 | 1300 | 5200 | 1700 | 6300 | ND<1000 | --- | --- | --- | 4.3 | MCC |
| QC-1 (c) | 05/07/02 | --- | --- | --- | --- | 40000 | --- | 1300 | 5200 | 1700 | 6400 | ND<500 | --- | --- | --- | --- | MCC |
| MW-1 | 08/22/02 | 19.60 | 6.91 | --- | 12.69 | 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 | 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 | 4600 | 1100 | 5900 | 1800 | 7300 | ND<1000 | --- | --- | --- | --- | MCC |
| QC-1 (c) | 05/02/03 | --- | --- | --- | --- | --- | --- | 1200 | 5800 | 1800 | 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 | 9200 | 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 | 1600 | 5700 | ND<150 | --- | --- | --- | 2.7 | MCC |
| QC-1 (c) | 10/26/04 | --- | --- | --- | --- | --- | --- | 450 | 2700 | 1600 | 5500 | ND<150 | --- | --- | --- | --- | MCC |
| MW-1 | 03/24/05 | 19.60 | 5.04 | --- | 14.56 | 29000 | 3300 | 1300 | 5500 | 1200 | 4900 | ND<500 | --- | --- | --- | 2.7 | MCC |
| QC-1 (c) | 03/24/05 | --- | --- | --- | --- | 31000 | --- | 830 | 3800 | 1000 | 4500 | ND<210 | --- | --- | --- | --- | MCC |
| MW-1 | 06/14/05 | 19.60 | 5.45 | --- | 14.15 | 23000 | 4300 | 1300 | 2700 | 810 | 2700 | ND<500 | --- | --- | --- | 2.9 | MCC |
| QC-1 (c) | 06/14/05 | --- | --- | --- | --- | --- | --- | 1400 | 3100 | 810 | 2900 | ND<250 | --- | --- | --- | --- | MCC |
| MW-1 | 09/12/05 | 19.60 | 7.89 | --- | 11.71 | 60000 | 4600 | 4900 | 8200 | 1900 | 7300 | 2300 | --- | --- | --- | 2.6 | MCC |
| QC-1 (c) | 09/12/05 | --- | --- | --- | --- | 58000 | --- | 5000 | 8500 | 1900 | 7300 | 2200 | --- | --- | --- | --- | MCC |
| MW-1 | 01/04/06 (g) | 19.60 | 6.09 | --- | 13.51 | 54000 | 2900 | 8800 | 3500 | 970 | 3700 | 5400 | --- | --- | --- | --- | MCC |
| QC-1 (c) | 01/04/06 (g) | --- | --- | --- | --- | 46000 | --- | 8500 | 3500 | 970 | 3700 | 5200 | --- | --- | --- | --- | MCC |
| MW-1 | 04/04/06 (h) | 19.60 | 5.71 | <0.01 | 13.89 | 31000 | 2500 | 6700 | 2800 | 980 | 2800 | 5400 | --- | --- | --- | --- | MCC |
| QC-1 (c) | 04/04/06 (h) | --- | --- | --- | --- | 31000 | --- | 6900 | 2900 | 1000 | 2800 | 5800 | --- | --- | --- | --- | MCC |
| MW-1 | 06/12/06 | 19.60 | 6.66 | sheen | 12.94 | 31000 | 3100 | 4800 | 2200 | 910 | 2600 | 3900 | --- | --- | --- | --- | MCC |
| QC-1 (c) | 06/12/06 | --- | --- | --- | --- | 31000 | --- | 5700 | 2300 | 850 | 2400 | 4900 | --- | --- | --- | --- | MCC |
| **MW-1** | **09/08/06** | **19.60** | **7.78** | **sheen** | **11.82** | **34000** | **3000** | **7900** | **1800** | **760** | **2300** | **6200** | **---** | **---** | **---** | **---** | **MCC** |
| **QC-1 (c)** | **09/08/06** | **---** | **---** | **---** | **---** | **39000** | **---** | **6300** | **1600** | **680** | **2000** | **5200** | **---** | **---** | **---** | **---** | **MCC** |

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 (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) | NAPTHALENE (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 | 8.58 | 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) | 09/23/96 | — | — | — | — | 33000 | — | 4700 | 170 | 1600 | 3900 | 2400 | — | — | — | — | MCC |
| MW-2 | 12/19/96 | 20.31 | 7.37 | 0.01 | 12.95 | 29000 | — | 1800 | 240 | 1400 | 5400 | — | (d) | 420 | ND<10 | — | MCC |
| QC-1 (c) | 12/19/96 | — | — | — | — | 29000 | — | 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 | 8300 | 920 | — | — | — | — | MCC |
| MW-2 | 12/15/97 | 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 | 08/16/99 | 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 | 97 | 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 | 7.96 | — | 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 | 80 | ND<400 | — | — | — | 0.9 | 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 | 1800 | — | — | — | 0.42 | MCC |
| MW-2 | 06/30/04 (e) | 20.31 | 7.61 | — | 12.70 | 14000 | 12000 | 3800 | 33 | 390 | 72 | 1900 | — | — | — | 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 | 3000 | ND<25 | 400 | 58 | ND<900 | — | — | — | — | MCC |
| MW-2 | 06/14/05 | 20.31 | 6.92 | — | 13.39 | 15000 | 53000 | 2100 | 31 | 310 | 49 | 530 | — | — | — | 0.8 | MCC |
| MW-2 | 09/12/05 | 20.31 | 8.25 | 0.01 | 12.06 | 10000 | 11000 | 2600 | 30 | 200 | ND<10 | 660 | — | — | — | 2.6 | MCC |
| MW-2 | 01/04/06 (g) | 20.31 | 6.45 | <0.01 | 13.86 | 7300 | 14000 | 1500 | 18 | 180 | 47 | ND<250 | — | — | — | — | MCC |
| MW-2 | 04/04/06 (h) | 20.31 | 6.14 | — | 14.17 | 9500 | 130000 | 2200 | 35 | 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 | — | — | — | — | — | MCC |
| MW-3 | 01/11/95 | 20.57 | 5.67 | — | 14.90 | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | — | — | — | — | — | MCC |
| MW-3 | 05/25/95 | 20.57 | 6.24 | — | 14.33 | 91 | ND<50 | 28.0 | 12.0 | 2.1 | 6.5 | — | — | — | — | 4.6 | MCC |
| MW-3 | 08/30/95 | 20.57 | 8.27 | — | 12.30 | ND<50 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | — | — | — | MCC |
| MW-3 | 11/16/95 | 20.57 | 8.82 | — | 11.75 | ND<50 | ND<50 | 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 | — | — | — | — | — | 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<5.0 | — | — | — | — | 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<5.0 | — | — | — | 4.9 | MCC |
| MW-3 | 12/19/96 | 20.57 | 6.59 | — | 13.98 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | — | — | — | 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<5.0 | — | — | — | 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<5.0 | — | — | — | 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<5.0 | — | — | — | 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<5.0 | — | — | — | 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<5.0 | — | — | — | 5.7 | MCC |
| MW-3 | 12/01/98 | 20.57 | 6.74 | — | 13.83 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5.0 | — | — | — | 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<5.0 | — | — | — | 4.6 | MCC |
| MW-3 | 08/16/99 | 20.57 | 7.67 | — | 12.90 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5.0 | — | — | — | 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<5.0 | — | — | — | 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<5.0 | — | — | — | 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<5.0 | — | — | — | 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<5.0 | — | — | — | 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<5.0 | — | — | — | 1.4 | MCC |
| MW-3 | 04/13/01 | 20.57 | 6.38 | — | 14.19 | ND<50 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5.0 | — | — | — | 1.3 | MCC |
| MW-3 | 06/27/01 | 20.57 | 7.37 | — | 13.20 | ND<50 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5.0 | — | — | — | 1.9 | MCC |
| MW-3 | 09/20/01 | 20.57 | 8.25 | — | 12.32 | ND<50 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5.0 | — | — | — | 2.1 | MCC |
| MW-3 | 12/21/01 | 20.57 | 5.72 | — | 14.85 | ND<50 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5.0 | — | — | — | 2.9 | MCC |
| MW-3 | 02/04/02 | 20.57 | 5.85 | — | 14.72 | ND<50 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5.0 | — | — | — | 4.1 | MCC |
| MW-3 | 05/07/02 | 20.57 | 6.49 | — | 14.08 | ND<50 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5.0 | — | — | — | 4.0 | MCC |
| MW-3 | 08/22/02 | 20.57 | 7.93 | — | 12.64 | ND<50 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5.0 | — | — | — | 4.6 | MCC |
| MW-3 | 11/08/02 | 20.57 | 7.67 | — | 12.90 | ND<50 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5.0 | — | — | — | — | MCC |

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 (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) | NAPTHALENE (ug/l) | BENZO-PYRENE (ug/l) | DO (ppm) | 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 | --- | --- | --- | 0.8 | MCC |
| MW-3 | 03/01/04 | 20.57 | 5.17 | --- | 15.40 | ND<50 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | --- | --- | --- | 0.92 | MCC |
| MW-3 | 06/30/04 (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** | **20.57** | **7.81** | **---** | **12.76** | **ND<50** | **ND<50** | **ND<0.5** | **ND<0.5** | **ND<0.5** | **ND<0.5** | **ND<5.0** | **---** | **---** | **---** | **---** | **MCC** |
| MW-4 | 05/09/97 | 19.69 | 7.17 | --- | 12.52 | 31000 | 15000 | 540 | 1300 | 1000 | 4500 | 1900 | ND | 2.1 | ND<2 | 3.1 | MCC/CHR |
| MW-4 | 09/11/97 | 19.69 | 7.71 | --- | 11.98 | 40000 | 6500 | 2000 | 3100 | 1700 | 7700 | 3400 | --- | --- | --- | 6.4 | MCC |
| MW-4 | 12/15/97 | 19.69 | 7.87 | --- | 11.82 | 14000 | 2100 | 910 | 690 | 390 | 2700 | 1700 | --- | --- | --- | 6 | MCC |
| MW-4 | 03/11/98 | 19.69 | 3.51 | --- | 16.18 | 2800 | 780 | 68 | 94 | 72 | 430 | 140 | --- | --- | --- | 5.5 | MCC |
| MW-4 | 06/23/98 | 19.69 | 5.21 | --- | 14.48 | 15000 | 2800 | 240 | 630 | 720 | 2700 | 370 | --- | --- | --- | 5.4 | MCC |
| MW-4 | 12/01/98 | 19.69 | 6.45 | --- | 13.24 | 21000 | --- | 580 | 1000 | 530 | 3600 | 1700 | --- | --- | --- | 4.4 | MCC |
| MW-4 | 03/30/99 | 19.69 | 5.41 | --- | 14.28 | 41000 | 3600 | 3100 | 3400 | 1700 | 6700 | 5700 | --- | --- | --- | 4.6 | MCC |
| MW-4 | 08/16/99 | 19.69 | 7.35 | --- | 12.34 | 24000 | --- | 4600 | 940 | 1200 | 2700 | 9700 | --- | --- | --- | 3.4 | MCC |
| MW-4 | 12/31/99 | 19.69 | 7.71 | --- | 11.98 | 14000 | 2000 | 510 | 630 | 600 | 3100 | 3500 | --- | --- | --- | 10.1 | MCC |
| MW-4 | 03/31/00 | 19.69 | 5.22 | --- | 14.47 | 14000 | 1400 | 470 | 480 | 580 | 2200 | 2000 | --- | --- | --- | 6.8 | MCC |
| MW-4 | 07/14/00 | 19.69 | 7.31 | --- | 12.38 | 37000 | 4300 | 770 | 1500 | 1800 | 7200 | 1700 | --- | --- | --- | 3.3 | MCC |
| MW-4 | 10/04/00 | 19.69 | 7.11 | --- | 12.58 | 47000 | 3200 | 870 | 2000 | 2600 | 9800 | ND<1500 | --- | --- | --- | 1.7 | MCC |
| MW-4 | 12/21/00 | 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 | 62 | 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<500 | --- | --- | --- | 2.1 | MCC |
| MW-4 | 09/12/05 | 19.69 | 7.84 | --- | 11.85 | 24000 | 4000 | 1400 | 640 | 1400 | 3900 | 1400 | --- | --- | --- | 2.2 | MCC |
| MW-4 | 01/04/06 (g) | 19.69 | 4.65 | --- | 15.04 | 20000 | 2800 | 740 | 350 | 930 | 2900 | 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 | 390 | 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) | 11/04/94 | --- | --- | --- | --- | ND<50 | --- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | --- | --- | --- | --- | --- | MCC |
| QC-2 (f) | 02/24/95 | --- | --- | --- | --- | ND<50 | --- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | --- | --- | --- | --- | --- | MCC |
| QC-2 (f) | 05/25/95 | --- | --- | --- | --- | ND<50 | --- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | --- | --- | --- | --- | --- | MCC |
| QC-2 (f) | 08/30/95 | --- | --- | --- | --- | ND<50 | --- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | --- | --- | --- | --- | --- | MCC |
| QC-2 (f) | 11/16/95 | --- | --- | --- | --- | ND<50 | --- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | --- | --- | --- | --- | --- | MCC |
| QC-2 (f) | 03/20/96 | --- | --- | --- | --- | ND<50 | --- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | --- | --- | --- | --- | --- | MCC |
| QC-2 (f) | 06/13/96 | --- | --- | --- | --- | ND<50 | --- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | --- | --- | --- | --- | --- | MCC |

ABBREVIATIONS:

| | |
|---|---|
| TPH-G | Total petroleum hydrocarbons as gasoline using EPA Methods 5030/8015 |
| TPH-D | Total petroleum hydrocarbons as diesel using EPA Methods 3510/8015 |
| B | Benzene using EPA Methods 5030/8020 |
| T | Toluene using EPA Methods 5030/8020 |
| E | Ethylbenzene using EPA Methods 5030/8020 |
| X | Total xylenes using EPA Methods 5030/8020 |
| MTBE | Methyl tert butyl ether using EPA Methods 5030/8020 |
| SVOCs | Semivolatile organic compounds using EPA Method 8270 |
| DO | Dissolved oxygen |
| ug/l | Micrograms per liter |
| ppm | Parts per million |
| --- | Not analyzed/applicable/measurable |
| ND | Not detected above reported detection limit |
| MCC | McCampbell Analytical, Inc. |
| CHR | Chromalab, Inc. |

NOTES:

| | |
|---|---|
| (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-methylnapthalene 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 exceedingl 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.) 7.16
Well Depth (ft.) 19.2
Well Diameter 2"
Flow Rate (mL/minute) 300
Start Purge Time 17:01

Well No. MW1
Date 7/27/17
Sheen Yes
Free Product Thickness Ø
Sample Collection Method Peristaltic Pump & Dedicated PE Tubing
Personnel Initials LKD

| 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) |
|---|---|---|---|---|---|---|---|---|
| 17:02 | 300 | 7.31 | 6.29 | 1094 | 22.2 | 1.77 | -101.5 | 0.00 |
| 17:05 | 1,200 | 7.45 | 6.31 | 1093 | 22.4 | 0.95 | -113.9 | 0.00 |
| 17:08 | 2,100 | ~~6.33~~ 7.51 | 6.33 | 1091 | 22.5 | 0.68 | -120.3 | 0.00 |
| 17:11 | 3,000 | 7.52 | 6.34 | 1090 | 22.7 | 0.57 | -124.1 | 0.00 |
| 17:14 | 3,900 | 7.53 | 6.36 | 1090 | 23.0 | 0.49 | -127.5 | 0.00 |

**NOTES**

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

PE Tubing inlet set at 15.0 ft
MW1 collected at 17:20
Strong odor and sheen

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

~~FP~~

Site Name Xtra Oil, 1701 Park St., Alameda
Well No. MW2
Job Number 0058
Date 7/28/17
TOC to Water (ft.) 8.16
Sheen None
Well Depth (ft.) 15.8 (with added coupling)
Free Product Thickness Ø
Well Diameter 2"
Sample Collection Method Peristaltic Pump + New unused PE tubing
Flow Rate (mL/minute) 300
Start Purge Time 11:13
Personnel Initials LKD

| 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) |
|---|---|---|---|---|---|---|---|---|
| 11:14 | 300 | 8.34 | 6.02 | 967 | 23.3 | 1.88 | -93.3 | 0.00 |
| 11:17 | 1,200 | 8.42 | 6.20 | 971 | 23.4 | 1.15 | -109.3 | 0.00 |
| 11:20 | 2,100 | 8.51 | 6.30 | 964 | 23.4 | 0.72 | -116.5 | 0.00 |
| 11:23 | 3,000 | 8.56 | 6.30 | 958 | 23.4 | 0.62 | -118.9 | 0.00 |
| 11:26 | 3,900 | 8.59 | 6.31 | 952 | 23.5 | 0.58 | -120.9 | 0.00 |
| 11:29 | 4,800 | 8.61 | 6.31 | 944 | 23.5 | 0.57 | -122.4 | 0.00 |

**NOTES**

PE tubing inlet at 12.0 ft
MW2 sample collected at 11:35
Slight odor, no sheen

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

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

Site Name Xtra Oil, 1701 Park St., Alameda
Job Number 0058
TOC to Water (ft.) 7.27
Well Depth (ft.) 19.1
Well Diameter 2"
Flow Rate (mL/minute) 300
Start Purge Time 12:39

Well No. MW3
Date 7/27/17
Sheen None
Free Product Thickness 0
Sample Collection Method Peristaltic Pump + Dedicated PE Tubing
Personnel Initials LKD

| 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) |
|---|---|---|---|---|---|---|---|---|
| 12:40 | 300 | 7.50 | 6.12 | 69.9 | 21.2 | 5.14 | 70.0 | 0.00 |
| 12:43 | 1200 | 7.70 | 5.93 | 350.9 | 21.1 | 2.06 | -24.9 | 0.00 |
| 12:46 | 2,100 | 7.87 | 6.05 | 350.0 | 21.2 | 1.44 | -47.3 | 0.00 |
| 12:49 | 3,000 | 8.01 | 6.04 | 349.1 | 21.3 | 1.10 | -62.1 | 0.00 |
| 12:52 | 3,900 | 8.26 | 6.00 | 348.8 | 21.3 | 0.91 | -67.6 | 0.00 |
| 12:55 | 4,800 | 8.50 | 5.98 | 348.8 | 21.4 | 0.80 | -82.9 | 0.00 |

**NOTES**

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

PE Tubing inlet set at 16 ft.
MW3 collected at 12:59
No odor or sheen

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

Site Name Zbra Oil, 1701 Park St., Alameda
Job Number 0058
TOC to Water (ft.) 7.05
Well Depth (ft.) 10.8
Well Diameter 2"
Flow Rate (mL/minute) 300
Start Purge Time 15:01

Well No. MW4
Date 7/27/17
Sheen Yes ~~No~~
Free Product Thickness 0
Sample Collection Method Peristaltic Pump + dedicated PE Tubing
Personnel Initials LKD

| 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) |
|---|---|---|---|---|---|---|---|---|
| 15:02 | 300 | 7.70 | 6.11 | 740 | 21.2 | 2.10 | -110.8 | 0.00 |
| 15:05 | 1,200 | 8.85 | 6.19 | 737 | 21.3 | 1.33 | -121.9 | 0.00 |
| 15:08 | 2,100 | 9.68 | 6.23 | 736 | 21.4 | 1.08 | -122.8 | 0.00 |
| 15:11 | 3,000 | 10.43 | 6.25 | 731 | 21.2 | 0.86 | -122.4 | 0.00 |
| 15:14 | 3,900 | — | 6.27 | 692 | 21.4 | 2.58 | -61.2 | 0.00 |

well dewatered

**NOTES**

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

PE Tubing inlet at 10.0 ft.
MW4 collected at 15:17
Slight odor, slight sheen

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

Site Name Xtra Oil, 1707 Park St., Alameda
Job Number 0058
TOC to Water (ft.) 6.91
Well Depth (ft.) 23.5
Well Diameter 4"
Flow Rate (mL/minute) 300
Start Purge Time 9:59

Well No. EW2
Date 7/28/17
Sheen None
Free Product Thickness Ø
Sample Collection Method Peristaltic Pump + new unused PE tubing
Personnel Initials LKD

| 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) |
|---|---|---|---|---|---|---|---|---|
| 10:00 | 300 | 7.01 | 6.68 | 911 | 22.5 | 0.88 | -84.9 | 0.00 |
| 10:03 | 1,200 | 7.05 | 6.70 | 909 | 22.7 | 0.76 | -101.3 | 0.00 |
| 10:06 | 2,100 | 7.16 | 6.65 | 908 | 22.7 | 0.59 | -108.2 | 0.00 |
| 10:09 | 3,000 | 7.21 | 6.63 | 907 | 22.6 | 0.51 | -113.2 | 0.00 |
| 10:12 | 3,900 | 7.25 | 6.61 | 904 | 22.8 | 0.48 | -114.3 | 0.00 |
| 10:15 | 4,800 | 7.28 | 6.62 | 905 | 22.8 | 0.44 | -117.2 | 0.00 |

**NOTES**

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

PE tubing inlet set at 20.0 ft
EW2 collected at 10:20
Slight odor, no sheen

**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.) 5.75
Well Depth (ft.) 21.8
Well Diameter 4"
Flow Rate (mL/minute) 300
Start Purge Time 16:18

Well No. EW4
Date 7/27/17
Sheen None
Free Product Thickness Ø
Sample Collection Method Peristaltic Pump + New unused PE Tubing
Personnel Initials LKD

| 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) |
|---|---|---|---|---|---|---|---|---|
| 16:19 | 300 | 5.85 | 7.10 | 672 | 23.6 | 0.90 | -62.5 | 0.00 |
| 16:22 | 1,200 | 5.94 | 6.88 | 669 | 23.6 | 0.63 | -78.0 | 0.00 |
| 16:25 | 2,100 | 6.00 | 6.80 | 668 | 23.6 | 0.52 | -84.4 | 0.00 |
| 16:28 | 3,000 | 6.07 | 6.71 | 668 | 23.6 | 0.46 | -85.6 | 0.00 |
| 16:31 | 3,900 | 6.10 | 6.70 | 668 | 23.4 | 0.43 | -89.7 | 0.00 |

**NOTES**

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

PE Tubing Set at 19.0 ft
EW4 collected at 16:36
Slight odor, no sheen

**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.) 5.85
Well Depth (ft.) 23.7
Well Diameter 4"
Flow Rate (mL/minute) 300
Start Purge Time 15:36

Well No. EW5
Date 7/27/17
Sheen None
Free Product Thickness Ø
Sample Collection Method Peristaltic Pump + new unused PE tubing
Personnel Initials LKD

| 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) |
|---|---|---|---|---|---|---|---|---|
| 15:37 | 300 | 5.92 | 6.14 | 855 | 21.7 | 2.96 | -92.5 | 0.00 |
| 15:40 | 1,200 | 5.98 | 6.28 | 857 | 21.6 | 1.40 | -102.5 | 0.00 |
| 15:43 | 2,100 | 6.02 | 6.32 | 859 | 21.5 | 0.87 | -110.5 | 0.00 |
| 15:46 | 3,000 | 6.05 | 6.34 | 861 | 21.6 | 0.68 | -115.7 | 0.00 |
| 15:49 | 3,900 | 6.07 | 6.35 | 864 | 21.5 | 0.57 | -119.9 | 0.00 |

**NOTES**

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

PE Tubing inlet set at 20.0 ft
EW5 collected at 15:55
Moderate odor, no sheen

**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.) 5.97
Well Depth (ft.) 18.5
Well Diameter 4"
Flow Rate (mL/minute) 300
Start Purge Time 13:46

Well No. OW2
Date 7/27/17
Sheen None
Free Product Thickness 0
Sample Collection Method Peristaltic Pump + New unused PE tubing
Personnel Initials LKD

| 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) |
|---|---|---|---|---|---|---|---|---|
| 13:47 | 300 | 6.04 | 6.08 | 446.0 | 22.2 | 2.26 | -32.7 | 1.47 |
| 13:50 | 1,200 | 6.11 | 5.85 | 442.5 | 22.0 | 1.57 | -44.4 | 0.00 |
| 13:53 | 2,100 | 6.18 | 5.81 | 446.5 | 21.9 | 1.14 | -51.0 | 0.00 |
| 13:56 | 3,000 | 6.22 | 5.82 | 457.3 | 21.8 | 0.89 | -60.8 | 0.42 |
| 13:59 | 3,900 | 6.25 | 5.82 | 464.3 | 21.6 | 0.74 | -72.6 | 0.28 |
| 14:02 | 4,800 | 6.27 | 5.82 | 476.6 | 21.5 | 0.68 | -81.8 | 0.00 |
| 14:05 | 5,700 | 6.31 | 5.81 | 476.1 | 21.3 | 0.65 | -88.0 | 0.00 |

**NOTES**

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

PE Tubing set at 7.6 ft
OW2 collected at 13:12
No odor or sheen

**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.) 6.86
Well Depth (ft.) 23.1
Well Diameter 2"
Flow Rate (mL/minute) 300
Start Purge Time 8:42

Well No. IW1
Date 7/28/17
Sheen None
Free Product Thickness Ø
Sample Collection Method Peristaltic Pump + Dedicated PE Tubing
Personnel Initials LKD

| 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) |
|---|---|---|---|---|---|---|---|---|
| 8:43 | 300 | 7.70 | 6.63 | 139.6 | 22.7 | 0.94 | -202.5 | 0.00 |
| 8:46 | 1,200 | 8.58 | 6.71 | 128.9 | 22.9 | 0.71 | -219.9 | 0.00 |
| 8:49 | 2,100 | 9.28 | 6.92 | 175.5 | 22.7 | 0.55 | -321.1 | 0.00 |
| 8:52 | 3,000 | 9.76 | 7.03 | 366.3 | 22.6 | 0.44 | -249.1 | 0.00 |
| 8:55 | 3,900 | 10.04 | 7.15 | 429.7 | 22.5 | 0.37 | -199.3 | 0.00 |
| 8:58 | 4,800 | 10.23 | 7.12 | 464.3 | 22.4 | 0.36 | -150.2 | 0.00 |
| 9:01 | 5,700 | 10.32 | 7.04 | 496.7 | 22.4 | 0.37 | -129.5 | 0.00 |

**NOTES**

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

PE Tubing inlet set at 20.0 ft
IW1 collected at 9:05
No odor or sheen

# APPENDIX C

# LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

McCampbell Analytical, Inc.
*"When Quality Counts"*

# Analytical Report

**WorkOrder:** 1707B52

**Report Created for:** P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

**Project Contact:** Accounts Payable
**Project P.O.:**
**Project Name:** 0058; Xtra Oil Co.

**Project Received:** 07/28/2017

Analytical Report reviewed & approved for release on 08/07/2017 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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CA ELAP 1644 ♦ NELAP 4033ORELAP

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

# Glossary of Terms & Qualifier Definitions

**Client:** P & D Environmental
**Project:** 0058; Xtra Oil Co.
**WorkOrder:** 1707B52

## Glossary Abbreviation

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

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# Glossary of Terms & Qualifier Definitions

**Client:** P & D Environmental
**Project:** 0058; Xtra Oil Co.
**WorkOrder:** 1707B52

## Analytical Qualifiers

| | |
|---|---|
| S | Surrogate spike recovery outside accepted recovery limits |
| 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 |
| d17 | Reporting limit for MTBE raised due to co-elution with non-target peaks. |
| e2/e3 | Diesel range compounds are significant; no recognizable pattern; and/or Aged diesel is significant |
| e4 | Gasoline range compounds are significant. |
| e11/e4 | Pattern resembles stoddard solvent/mineral spirit; and/or Gasoline range compounds are significant. |

## Quality Control Qualifiers

| | |
|---|---|
| F2 | LCS/LCSD recovery and/or RPD is out of acceptance criteria. |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW1** | **1707B52-001B** | **Water** | **07/27/2017 17:20** | **GC38** | **143044** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Acetone | ND | 2000 | 200 | 08/03/2017 23:19 |
| tert-Amyl methyl ether (TAME) | ND | 100 | 200 | 08/03/2017 23:19 |
| Benzene | **3600** | 100 | 200 | 08/03/2017 23:19 |
| Bromobenzene | ND | 100 | 200 | 08/03/2017 23:19 |
| Bromochloromethane | ND | 100 | 200 | 08/03/2017 23:19 |
| Bromodichloromethane | ND | 100 | 200 | 08/03/2017 23:19 |
| Bromoform | ND | 100 | 200 | 08/03/2017 23:19 |
| Bromomethane | ND | 100 | 200 | 08/03/2017 23:19 |
| 2-Butanone (MEK) | ND | 400 | 200 | 08/03/2017 23:19 |
| t-Butyl alcohol (TBA) | **660** | 400 | 200 | 08/03/2017 23:19 |
| n-Butyl benzene | ND | 100 | 200 | 08/03/2017 23:19 |
| sec-Butyl benzene | ND | 100 | 200 | 08/03/2017 23:19 |
| tert-Butyl benzene | ND | 100 | 200 | 08/03/2017 23:19 |
| Carbon Disulfide | ND | 100 | 200 | 08/03/2017 23:19 |
| Carbon Tetrachloride | ND | 100 | 200 | 08/03/2017 23:19 |
| Chlorobenzene | ND | 100 | 200 | 08/03/2017 23:19 |
| Chloroethane | ND | 100 | 200 | 08/03/2017 23:19 |
| Chloroform | ND | 100 | 200 | 08/03/2017 23:19 |
| Chloromethane | ND | 100 | 200 | 08/03/2017 23:19 |
| 2-Chlorotoluene | ND | 100 | 200 | 08/03/2017 23:19 |
| 4-Chlorotoluene | ND | 100 | 200 | 08/03/2017 23:19 |
| Dibromochloromethane | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,2-Dibromo-3-chloropropane | ND | 40 | 200 | 08/03/2017 23:19 |
| 1,2-Dibromoethane (EDB) | ND | 100 | 200 | 08/03/2017 23:19 |
| Dibromomethane | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,2-Dichlorobenzene | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,3-Dichlorobenzene | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,4-Dichlorobenzene | ND | 100 | 200 | 08/03/2017 23:19 |
| Dichlorodifluoromethane | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,1-Dichloroethane | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,1-Dichloroethene | ND | 100 | 200 | 08/03/2017 23:19 |
| cis-1,2-Dichloroethene | ND | 100 | 200 | 08/03/2017 23:19 |
| trans-1,2-Dichloroethene | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,2-Dichloropropane | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,3-Dichloropropane | ND | 100 | 200 | 08/03/2017 23:19 |
| 2,2-Dichloropropane | ND | 100 | 200 | 08/03/2017 23:19 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW1** | **1707B52-001B** | **Water** | **07/27/2017 17:20** | **GC38** | **143044** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 100 | 200 | 08/03/2017 23:19 |
| cis-1,3-Dichloropropene | ND | 100 | 200 | 08/03/2017 23:19 |
| trans-1,3-Dichloropropene | ND | 100 | 200 | 08/03/2017 23:19 |
| Diisopropyl ether (DIPE) | ND | 100 | 200 | 08/03/2017 23:19 |
| Ethylbenzene | **120** | 100 | 200 | 08/03/2017 23:19 |
| Ethyl tert-butyl ether (ETBE) | ND | 100 | 200 | 08/03/2017 23:19 |
| Freon 113 | ND | 100 | 200 | 08/03/2017 23:19 |
| Hexachlorobutadiene | ND | 100 | 200 | 08/03/2017 23:19 |
| Hexachloroethane | ND | 100 | 200 | 08/03/2017 23:19 |
| 2-Hexanone | ND | 100 | 200 | 08/03/2017 23:19 |
| Isopropylbenzene | ND | 100 | 200 | 08/03/2017 23:19 |
| 4-Isopropyl toluene | ND | 100 | 200 | 08/03/2017 23:19 |
| Methyl-t-butyl ether (MTBE) | **300** | 100 | 200 | 08/03/2017 23:19 |
| Methylene chloride | ND | 100 | 200 | 08/03/2017 23:19 |
| 4-Methyl-2-pentanone (MIBK) | ND | 100 | 200 | 08/03/2017 23:19 |
| Naphthalene | ND | 100 | 200 | 08/03/2017 23:19 |
| n-Propyl benzene | ND | 100 | 200 | 08/03/2017 23:19 |
| Styrene | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,1,1,2-Tetrachloroethane | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,1,2,2-Tetrachloroethane | ND | 100 | 200 | 08/03/2017 23:19 |
| Tetrachloroethene | ND | 100 | 200 | 08/03/2017 23:19 |
| Toluene | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,2,3-Trichlorobenzene | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,2,4-Trichlorobenzene | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,1,1-Trichloroethane | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,1,2-Trichloroethane | ND | 100 | 200 | 08/03/2017 23:19 |
| Trichloroethene | ND | 100 | 200 | 08/03/2017 23:19 |
| Trichlorofluoromethane | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,2,3-Trichloropropane | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,2,4-Trimethylbenzene | ND | 100 | 200 | 08/03/2017 23:19 |
| 1,3,5-Trimethylbenzene | ND | 100 | 200 | 08/03/2017 23:19 |
| Vinyl Chloride | ND | 100 | 200 | 08/03/2017 23:19 |
| Xylenes, Total | **220** | 100 | 200 | 08/03/2017 23:19 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW1** | **1707B52-001B** | **Water** | **07/27/2017 17:20** | **GC38** | **143044** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Surrogates | REC (%) | Limits | | |
| Dibromofluoromethane | 114 | 70-130 | | 08/03/2017 23:19 |
| Toluene-d8 | 102 | 70-130 | | 08/03/2017 23:19 |
| 4-BFB | 84 | 70-130 | | 08/03/2017 23:19 |

Analyst(s): HK

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW2** | **1707B52-002B** | **Water** | **07/28/2017 11:35** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Acetone | ND | 200 | 20 | 08/03/2017 23:57 |
| tert-Amyl methyl ether (TAME) | ND | 10 | 20 | 08/03/2017 23:57 |
| Benzene | **360** | 10 | 20 | 08/03/2017 23:57 |
| Bromobenzene | ND | 10 | 20 | 08/03/2017 23:57 |
| Bromochloromethane | ND | 10 | 20 | 08/03/2017 23:57 |
| Bromodichloromethane | ND | 10 | 20 | 08/03/2017 23:57 |
| Bromoform | ND | 10 | 20 | 08/03/2017 23:57 |
| Bromomethane | ND | 10 | 20 | 08/03/2017 23:57 |
| 2-Butanone (MEK) | ND | 40 | 20 | 08/03/2017 23:57 |
| t-Butyl alcohol (TBA) | **150** | 40 | 20 | 08/03/2017 23:57 |
| n-Butyl benzene | **19** | 10 | 20 | 08/03/2017 23:57 |
| sec-Butyl benzene | ND | 10 | 20 | 08/03/2017 23:57 |
| tert-Butyl benzene | ND | 10 | 20 | 08/03/2017 23:57 |
| Carbon Disulfide | ND | 10 | 20 | 08/03/2017 23:57 |
| Carbon Tetrachloride | ND | 10 | 20 | 08/03/2017 23:57 |
| Chlorobenzene | ND | 10 | 20 | 08/03/2017 23:57 |
| Chloroethane | ND | 10 | 20 | 08/03/2017 23:57 |
| Chloroform | ND | 10 | 20 | 08/03/2017 23:57 |
| Chloromethane | ND | 10 | 20 | 08/03/2017 23:57 |
| 2-Chlorotoluene | ND | 10 | 20 | 08/03/2017 23:57 |
| 4-Chlorotoluene | ND | 10 | 20 | 08/03/2017 23:57 |
| Dibromochloromethane | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,2-Dibromo-3-chloropropane | ND | 4.0 | 20 | 08/03/2017 23:57 |
| 1,2-Dibromoethane (EDB) | ND | 10 | 20 | 08/03/2017 23:57 |
| Dibromomethane | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,2-Dichlorobenzene | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,3-Dichlorobenzene | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,4-Dichlorobenzene | ND | 10 | 20 | 08/03/2017 23:57 |
| Dichlorodifluoromethane | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,1-Dichloroethane | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,1-Dichloroethene | ND | 10 | 20 | 08/03/2017 23:57 |
| cis-1,2-Dichloroethene | ND | 10 | 20 | 08/03/2017 23:57 |
| trans-1,2-Dichloroethene | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,2-Dichloropropane | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,3-Dichloropropane | ND | 10 | 20 | 08/03/2017 23:57 |
| 2,2-Dichloropropane | ND | 10 | 20 | 08/03/2017 23:57 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW2** | **1707B52-002B** | **Water** | **07/28/2017 11:35** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 10 | 20 | 08/03/2017 23:57 |
| cis-1,3-Dichloropropene | ND | 10 | 20 | 08/03/2017 23:57 |
| trans-1,3-Dichloropropene | ND | 10 | 20 | 08/03/2017 23:57 |
| Diisopropyl ether (DIPE) | ND | 10 | 20 | 08/03/2017 23:57 |
| Ethylbenzene | ND | 10 | 20 | 08/03/2017 23:57 |
| Ethyl tert-butyl ether (ETBE) | ND | 10 | 20 | 08/03/2017 23:57 |
| Freon 113 | ND | 10 | 20 | 08/03/2017 23:57 |
| Hexachlorobutadiene | ND | 10 | 20 | 08/03/2017 23:57 |
| Hexachloroethane | ND | 10 | 20 | 08/03/2017 23:57 |
| 2-Hexanone | ND | 10 | 20 | 08/03/2017 23:57 |
| Isopropylbenzene | **35** | 10 | 20 | 08/03/2017 23:57 |
| 4-Isopropyl toluene | ND | 10 | 20 | 08/03/2017 23:57 |
| Methyl-t-butyl ether (MTBE) | **75** | 10 | 20 | 08/03/2017 23:57 |
| Methylene chloride | ND | 10 | 20 | 08/03/2017 23:57 |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 20 | 08/03/2017 23:57 |
| Naphthalene | **34** | 10 | 20 | 08/03/2017 23:57 |
| n-Propyl benzene | **99** | 10 | 20 | 08/03/2017 23:57 |
| Styrene | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,1,1,2-Tetrachloroethane | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,1,2,2-Tetrachloroethane | ND | 10 | 20 | 08/03/2017 23:57 |
| Tetrachloroethene | ND | 10 | 20 | 08/03/2017 23:57 |
| Toluene | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,2,3-Trichlorobenzene | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,2,4-Trichlorobenzene | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,1,1-Trichloroethane | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,1,2-Trichloroethane | ND | 10 | 20 | 08/03/2017 23:57 |
| Trichloroethene | ND | 10 | 20 | 08/03/2017 23:57 |
| Trichlorofluoromethane | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,2,3-Trichloropropane | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,2,4-Trimethylbenzene | ND | 10 | 20 | 08/03/2017 23:57 |
| 1,3,5-Trimethylbenzene | ND | 10 | 20 | 08/03/2017 23:57 |
| Vinyl Chloride | ND | 10 | 20 | 08/03/2017 23:57 |
| Xylenes, Total | ND | 10 | 20 | 08/03/2017 23:57 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW2** | **1707B52-002B** | **Water** | **07/28/2017 11:35** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Surrogates | REC (%) | Limits | | |
| Dibromofluoromethane | 114 | 70-130 | | 08/03/2017 23:57 |
| Toluene-d8 | 102 | 70-130 | | 08/03/2017 23:57 |
| 4-BFB | 84 | 70-130 | | 08/03/2017 23:57 |

Analyst(s): HK

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| MW3 | 1707B52-003B | Water | 07/27/2017 12:59 | GC38 | 143164 |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Acetone | ND | 10 | 1 | 08/04/2017 00:35 |
| tert-Amyl methyl ether (TAME) | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Benzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Bromobenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Bromochloromethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Bromodichloromethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Bromoform | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Bromomethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 2-Butanone (MEK) | ND | 2.0 | 1 | 08/04/2017 00:35 |
| t-Butyl alcohol (TBA) | ND | 2.0 | 1 | 08/04/2017 00:35 |
| n-Butyl benzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| sec-Butyl benzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| tert-Butyl benzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Carbon Disulfide | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Carbon Tetrachloride | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Chlorobenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Chloroethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Chloroform | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Chloromethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 2-Chlorotoluene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 4-Chlorotoluene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Dibromochloromethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,2-Dibromo-3-chloropropane | ND | 0.20 | 1 | 08/04/2017 00:35 |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Dibromomethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,2-Dichlorobenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,3-Dichlorobenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,4-Dichlorobenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Dichlorodifluoromethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,1-Dichloroethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,1-Dichloroethene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| cis-1,2-Dichloroethene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| trans-1,2-Dichloroethene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,2-Dichloropropane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,3-Dichloropropane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 2,2-Dichloropropane | ND | 0.50 | 1 | 08/04/2017 00:35 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW3** | **1707B52-003B** | **Water** | **07/27/2017 12:59** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| cis-1,3-Dichloropropene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| trans-1,3-Dichloropropene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Diisopropyl ether (DIPE) | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Ethylbenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Ethyl tert-butyl ether (ETBE) | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Freon 113 | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Hexachlorobutadiene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Hexachloroethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 2-Hexanone | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Isopropylbenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 4-Isopropyl toluene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Methyl-t-butyl ether (MTBE) | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Methylene chloride | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Naphthalene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| n-Propyl benzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Styrene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Tetrachloroethene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Toluene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,2,3-Trichlorobenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,2,4-Trichlorobenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,1,1-Trichloroethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,1,2-Trichloroethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Trichloroethene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Trichlorofluoromethane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,2,3-Trichloropropane | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,2,4-Trimethylbenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| 1,3,5-Trimethylbenzene | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Vinyl Chloride | ND | 0.50 | 1 | 08/04/2017 00:35 |
| Xylenes, Total | ND | 0.50 | 1 | 08/04/2017 00:35 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW3** | **1707B52-003B** | **Water** | **07/27/2017 12:59** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Surrogates | REC (%) | Limits | | |
| Dibromofluoromethane | 115 | 70-130 | | 08/04/2017 00:35 |
| Toluene-d8 | 102 | 70-130 | | 08/04/2017 00:35 |
| 4-BFB | 82 | 70-130 | | 08/04/2017 00:35 |

Analyst(s): HK

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW4** | **1707B52-004B** | **Water** | **07/27/2017 15:17** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Acetone | ND | 50 | 5 | 08/04/2017 01:13 |
| tert-Amyl methyl ether (TAME) | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Benzene | **67** | 2.5 | 5 | 08/04/2017 01:13 |
| Bromobenzene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Bromochloromethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Bromodichloromethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Bromoform | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Bromomethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 2-Butanone (MEK) | ND | 10 | 5 | 08/04/2017 01:13 |
| t-Butyl alcohol (TBA) | **11** | 10 | 5 | 08/04/2017 01:13 |
| n-Butyl benzene | **5.9** | 2.5 | 5 | 08/04/2017 01:13 |
| sec-Butyl benzene | **3.0** | 2.5 | 5 | 08/04/2017 01:13 |
| tert-Butyl benzene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Carbon Disulfide | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Carbon Tetrachloride | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Chlorobenzene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Chloroethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Chloroform | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Chloromethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 2-Chlorotoluene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 4-Chlorotoluene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Dibromochloromethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,2-Dibromo-3-chloropropane | ND | 1.0 | 5 | 08/04/2017 01:13 |
| 1,2-Dibromoethane (EDB) | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Dibromomethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,2-Dichlorobenzene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,3-Dichlorobenzene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,4-Dichlorobenzene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Dichlorodifluoromethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,1-Dichloroethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,1-Dichloroethene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| cis-1,2-Dichloroethene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| trans-1,2-Dichloroethene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,2-Dichloropropane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,3-Dichloropropane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 2,2-Dichloropropane | ND | 2.5 | 5 | 08/04/2017 01:13 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW4** | **1707B52-004B** | **Water** | **07/27/2017 15:17** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| cis-1,3-Dichloropropene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| trans-1,3-Dichloropropene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Diisopropyl ether (DIPE) | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Ethylbenzene | **47** | 2.5 | 5 | 08/04/2017 01:13 |
| Ethyl tert-butyl ether (ETBE) | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Freon 113 | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Hexachlorobutadiene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Hexachloroethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 2-Hexanone | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Isopropylbenzene | **20** | 2.5 | 5 | 08/04/2017 01:13 |
| 4-Isopropyl toluene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Methyl-t-butyl ether (MTBE) | **4.7** | 2.5 | 5 | 08/04/2017 01:13 |
| Methylene chloride | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Naphthalene | **29** | 2.5 | 5 | 08/04/2017 01:13 |
| n-Propyl benzene | **47** | 2.5 | 5 | 08/04/2017 01:13 |
| Styrene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,1,1,2-Tetrachloroethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,1,2,2-Tetrachloroethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Tetrachloroethene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Toluene | **6.9** | 2.5 | 5 | 08/04/2017 01:13 |
| 1,2,3-Trichlorobenzene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,2,4-Trichlorobenzene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,1,1-Trichloroethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,1,2-Trichloroethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Trichloroethene | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Trichlorofluoromethane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,2,3-Trichloropropane | ND | 2.5 | 5 | 08/04/2017 01:13 |
| 1,2,4-Trimethylbenzene | **72** | 2.5 | 5 | 08/04/2017 01:13 |
| 1,3,5-Trimethylbenzene | **20** | 2.5 | 5 | 08/04/2017 01:13 |
| Vinyl Chloride | ND | 2.5 | 5 | 08/04/2017 01:13 |
| Xylenes, Total | **190** | 2.5 | 5 | 08/04/2017 01:13 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW4** | **1707B52-004B** | **Water** | **07/27/2017 15:17** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Surrogates | REC (%) | Limits | | |
| Dibromofluoromethane | 117 | 70-130 | | 08/04/2017 01:13 |
| Toluene-d8 | 102 | 70-130 | | 08/04/2017 01:13 |
| 4-BFB | 86 | 70-130 | | 08/04/2017 01:13 |

Analyst(s): HK

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW2** | **1707B52-005B** | **Water** | **07/28/2017 10:20** | **GC16** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Acetone | ND | 200 | 20 | 08/04/2017 14:46 |
| tert-Amyl methyl ether (TAME) | ND | 10 | 20 | 08/04/2017 14:46 |
| Benzene | **150** | 10 | 20 | 08/04/2017 14:46 |
| Bromobenzene | ND | 10 | 20 | 08/04/2017 14:46 |
| Bromochloromethane | ND | 10 | 20 | 08/04/2017 14:46 |
| Bromodichloromethane | ND | 10 | 20 | 08/04/2017 14:46 |
| Bromoform | ND | 10 | 20 | 08/04/2017 14:46 |
| Bromomethane | ND | 10 | 20 | 08/04/2017 14:46 |
| 2-Butanone (MEK) | ND | 40 | 20 | 08/04/2017 14:46 |
| t-Butyl alcohol (TBA) | ND | 40 | 20 | 08/04/2017 14:46 |
| n-Butyl benzene | ND | 10 | 20 | 08/04/2017 14:46 |
| sec-Butyl benzene | ND | 10 | 20 | 08/04/2017 14:46 |
| tert-Butyl benzene | ND | 10 | 20 | 08/04/2017 14:46 |
| Carbon Disulfide | ND | 10 | 20 | 08/04/2017 14:46 |
| Carbon Tetrachloride | ND | 10 | 20 | 08/04/2017 14:46 |
| Chlorobenzene | ND | 10 | 20 | 08/04/2017 14:46 |
| Chloroethane | ND | 10 | 20 | 08/04/2017 14:46 |
| Chloroform | ND | 10 | 20 | 08/04/2017 14:46 |
| Chloromethane | ND | 10 | 20 | 08/04/2017 14:46 |
| 2-Chlorotoluene | ND | 10 | 20 | 08/04/2017 14:46 |
| 4-Chlorotoluene | ND | 10 | 20 | 08/04/2017 14:46 |
| Dibromochloromethane | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,2-Dibromo-3-chloropropane | ND | 4.0 | 20 | 08/04/2017 14:46 |
| 1,2-Dibromoethane (EDB) | ND | 10 | 20 | 08/04/2017 14:46 |
| Dibromomethane | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,2-Dichlorobenzene | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,3-Dichlorobenzene | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,4-Dichlorobenzene | ND | 10 | 20 | 08/04/2017 14:46 |
| Dichlorodifluoromethane | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,1-Dichloroethane | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,1-Dichloroethene | ND | 10 | 20 | 08/04/2017 14:46 |
| cis-1,2-Dichloroethene | **130** | 10 | 20 | 08/04/2017 14:46 |
| trans-1,2-Dichloroethene | **34** | 10 | 20 | 08/04/2017 14:46 |
| 1,2-Dichloropropane | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,3-Dichloropropane | ND | 10 | 20 | 08/04/2017 14:46 |
| 2,2-Dichloropropane | ND | 10 | 20 | 08/04/2017 14:46 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW2** | **1707B52-005B** | **Water** | **07/28/2017 10:20** | **GC16** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 10 | 20 | 08/04/2017 14:46 |
| cis-1,3-Dichloropropene | ND | 10 | 20 | 08/04/2017 14:46 |
| trans-1,3-Dichloropropene | ND | 10 | 20 | 08/04/2017 14:46 |
| Diisopropyl ether (DIPE) | ND | 10 | 20 | 08/04/2017 14:46 |
| Ethylbenzene | **20** | 10 | 20 | 08/04/2017 14:46 |
| Ethyl tert-butyl ether (ETBE) | ND | 10 | 20 | 08/04/2017 14:46 |
| Freon 113 | ND | 10 | 20 | 08/04/2017 14:46 |
| Hexachlorobutadiene | ND | 10 | 20 | 08/04/2017 14:46 |
| Hexachloroethane | ND | 10 | 20 | 08/04/2017 14:46 |
| 2-Hexanone | ND | 10 | 20 | 08/04/2017 14:46 |
| Isopropylbenzene | ND | 10 | 20 | 08/04/2017 14:46 |
| 4-Isopropyl toluene | ND | 10 | 20 | 08/04/2017 14:46 |
| Methyl-t-butyl ether (MTBE) | **14** | 10 | 20 | 08/04/2017 14:46 |
| Methylene chloride | ND | 10 | 20 | 08/04/2017 14:46 |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 20 | 08/04/2017 14:46 |
| Naphthalene | **15** | 10 | 20 | 08/04/2017 14:46 |
| n-Propyl benzene | ND | 10 | 20 | 08/04/2017 14:46 |
| Styrene | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,1,1,2-Tetrachloroethane | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,1,2,2-Tetrachloroethane | ND | 10 | 20 | 08/04/2017 14:46 |
| Tetrachloroethene | **360** | 10 | 20 | 08/04/2017 14:46 |
| Toluene | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,2,3-Trichlorobenzene | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,2,4-Trichlorobenzene | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,1,1-Trichloroethane | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,1,2-Trichloroethane | ND | 10 | 20 | 08/04/2017 14:46 |
| Trichloroethene | **560** | 10 | 20 | 08/04/2017 14:46 |
| Trichlorofluoromethane | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,2,3-Trichloropropane | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,2,4-Trimethylbenzene | ND | 10 | 20 | 08/04/2017 14:46 |
| 1,3,5-Trimethylbenzene | ND | 10 | 20 | 08/04/2017 14:46 |
| Vinyl Chloride | ND | 10 | 20 | 08/04/2017 14:46 |
| Xylenes, Total | ND | 10 | 20 | 08/04/2017 14:46 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW2** | **1707B52-005B** | **Water** | **07/28/2017 10:20** | **GC16** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Surrogates | REC (%) | Limits | | |
| Dibromofluoromethane | 109 | 70-130 | | 08/04/2017 14:46 |
| Toluene-d8 | 106 | 70-130 | | 08/04/2017 14:46 |
| 4-BFB | 120 | 70-130 | | 08/04/2017 14:46 |

Analyst(s): HK

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW4** | **1707B52-006B** | **Water** | **07/27/2017 16:36** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Acetone | ND | 20 | 2 | 08/04/2017 02:28 |
| tert-Amyl methyl ether (TAME) | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Benzene | **29** | 1.0 | 2 | 08/04/2017 02:28 |
| Bromobenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Bromochloromethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Bromodichloromethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Bromoform | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Bromomethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 2-Butanone (MEK) | ND | 4.0 | 2 | 08/04/2017 02:28 |
| t-Butyl alcohol (TBA) | ND | 4.0 | 2 | 08/04/2017 02:28 |
| n-Butyl benzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| sec-Butyl benzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| tert-Butyl benzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Carbon Disulfide | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Carbon Tetrachloride | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Chlorobenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Chloroethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Chloroform | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Chloromethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 2-Chlorotoluene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 4-Chlorotoluene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Dibromochloromethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,2-Dibromo-3-chloropropane | ND | 0.40 | 2 | 08/04/2017 02:28 |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Dibromomethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,2-Dichlorobenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,3-Dichlorobenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,4-Dichlorobenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Dichlorodifluoromethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,1-Dichloroethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,1-Dichloroethene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| cis-1,2-Dichloroethene | **1.7** | 1.0 | 2 | 08/04/2017 02:28 |
| trans-1,2-Dichloroethene | **1.2** | 1.0 | 2 | 08/04/2017 02:28 |
| 1,2-Dichloropropane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,3-Dichloropropane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 2,2-Dichloropropane | ND | 1.0 | 2 | 08/04/2017 02:28 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW4** | **1707B52-006B** | **Water** | **07/27/2017 16:36** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| cis-1,3-Dichloropropene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| trans-1,3-Dichloropropene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Diisopropyl ether (DIPE) | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Ethylbenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Ethyl tert-butyl ether (ETBE) | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Freon 113 | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Hexachlorobutadiene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Hexachloroethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 2-Hexanone | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Isopropylbenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 4-Isopropyl toluene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Methyl-t-butyl ether (MTBE) | **6.4** | 1.0 | 2 | 08/04/2017 02:28 |
| Methylene chloride | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 4-Methyl-2-pentanone (MIBK) | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Naphthalene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| n-Propyl benzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Styrene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Tetrachloroethene | **50** | 1.0 | 2 | 08/04/2017 02:28 |
| Toluene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,2,3-Trichlorobenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,1,1-Trichloroethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,1,2-Trichloroethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Trichloroethene | **54** | 1.0 | 2 | 08/04/2017 02:28 |
| Trichlorofluoromethane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,2,3-Trichloropropane | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Vinyl Chloride | ND | 1.0 | 2 | 08/04/2017 02:28 |
| Xylenes, Total | ND | 1.0 | 2 | 08/04/2017 02:28 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW4** | **1707B52-006B** | **Water** | **07/27/2017 16:36** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Surrogates | REC (%) | Limits | | |
| Dibromofluoromethane | 116 | 70-130 | | 08/04/2017 02:28 |
| Toluene-d8 | 101 | 70-130 | | 08/04/2017 02:28 |
| 4-BFB | 86 | 70-130 | | 08/04/2017 02:28 |

Analyst(s): HK

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW5** | **1707B52-007B** | **Water** | **07/27/2017 15:55** | **GC16** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Acetone | ND | 330 | 33 | 08/04/2017 15:28 |
| tert-Amyl methyl ether (TAME) | ND | 17 | 33 | 08/04/2017 15:28 |
| Benzene | **950** | 17 | 33 | 08/04/2017 15:28 |
| Bromobenzene | ND | 17 | 33 | 08/04/2017 15:28 |
| Bromochloromethane | ND | 17 | 33 | 08/04/2017 15:28 |
| Bromodichloromethane | ND | 17 | 33 | 08/04/2017 15:28 |
| Bromoform | ND | 17 | 33 | 08/04/2017 15:28 |
| Bromomethane | ND | 17 | 33 | 08/04/2017 15:28 |
| 2-Butanone (MEK) | ND | 67 | 33 | 08/04/2017 15:28 |
| t-Butyl alcohol (TBA) | **210** | 67 | 33 | 08/04/2017 15:28 |
| n-Butyl benzene | ND | 17 | 33 | 08/04/2017 15:28 |
| sec-Butyl benzene | ND | 17 | 33 | 08/04/2017 15:28 |
| tert-Butyl benzene | ND | 17 | 33 | 08/04/2017 15:28 |
| Carbon Disulfide | ND | 17 | 33 | 08/04/2017 15:28 |
| Carbon Tetrachloride | ND | 17 | 33 | 08/04/2017 15:28 |
| Chlorobenzene | ND | 17 | 33 | 08/04/2017 15:28 |
| Chloroethane | ND | 17 | 33 | 08/04/2017 15:28 |
| Chloroform | ND | 17 | 33 | 08/04/2017 15:28 |
| Chloromethane | ND | 17 | 33 | 08/04/2017 15:28 |
| 2-Chlorotoluene | ND | 17 | 33 | 08/04/2017 15:28 |
| 4-Chlorotoluene | ND | 17 | 33 | 08/04/2017 15:28 |
| Dibromochloromethane | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,2-Dibromo-3-chloropropane | ND | 6.7 | 33 | 08/04/2017 15:28 |
| 1,2-Dibromoethane (EDB) | ND | 17 | 33 | 08/04/2017 15:28 |
| Dibromomethane | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,2-Dichlorobenzene | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,3-Dichlorobenzene | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,4-Dichlorobenzene | ND | 17 | 33 | 08/04/2017 15:28 |
| Dichlorodifluoromethane | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,1-Dichloroethane | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,1-Dichloroethene | ND | 17 | 33 | 08/04/2017 15:28 |
| cis-1,2-Dichloroethene | ND | 17 | 33 | 08/04/2017 15:28 |
| trans-1,2-Dichloroethene | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,2-Dichloropropane | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,3-Dichloropropane | ND | 17 | 33 | 08/04/2017 15:28 |
| 2,2-Dichloropropane | ND | 17 | 33 | 08/04/2017 15:28 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW5** | **1707B52-007B** | **Water** | **07/27/2017 15:55** | **GC16** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 17 | 33 | 08/04/2017 15:28 |
| cis-1,3-Dichloropropene | ND | 17 | 33 | 08/04/2017 15:28 |
| trans-1,3-Dichloropropene | ND | 17 | 33 | 08/04/2017 15:28 |
| Diisopropyl ether (DIPE) | ND | 17 | 33 | 08/04/2017 15:28 |
| Ethylbenzene | **62** | 17 | 33 | 08/04/2017 15:28 |
| Ethyl tert-butyl ether (ETBE) | ND | 17 | 33 | 08/04/2017 15:28 |
| Freon 113 | ND | 17 | 33 | 08/04/2017 15:28 |
| Hexachlorobutadiene | ND | 17 | 33 | 08/04/2017 15:28 |
| Hexachloroethane | ND | 17 | 33 | 08/04/2017 15:28 |
| 2-Hexanone | ND | 17 | 33 | 08/04/2017 15:28 |
| Isopropylbenzene | **55** | 17 | 33 | 08/04/2017 15:28 |
| 4-Isopropyl toluene | ND | 17 | 33 | 08/04/2017 15:28 |
| Methyl-t-butyl ether (MTBE) | **61** | 17 | 33 | 08/04/2017 15:28 |
| Methylene chloride | ND | 17 | 33 | 08/04/2017 15:28 |
| 4-Methyl-2-pentanone (MIBK) | ND | 17 | 33 | 08/04/2017 15:28 |
| Naphthalene | **40** | 17 | 33 | 08/04/2017 15:28 |
| n-Propyl benzene | **140** | 17 | 33 | 08/04/2017 15:28 |
| Styrene | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,1,1,2-Tetrachloroethane | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,1,2,2-Tetrachloroethane | ND | 17 | 33 | 08/04/2017 15:28 |
| Tetrachloroethene | ND | 17 | 33 | 08/04/2017 15:28 |
| Toluene | **32** | 17 | 33 | 08/04/2017 15:28 |
| 1,2,3-Trichlorobenzene | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,2,4-Trichlorobenzene | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,1,1-Trichloroethane | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,1,2-Trichloroethane | ND | 17 | 33 | 08/04/2017 15:28 |
| Trichloroethene | ND | 17 | 33 | 08/04/2017 15:28 |
| Trichlorofluoromethane | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,2,3-Trichloropropane | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,2,4-Trimethylbenzene | ND | 17 | 33 | 08/04/2017 15:28 |
| 1,3,5-Trimethylbenzene | ND | 17 | 33 | 08/04/2017 15:28 |
| Vinyl Chloride | ND | 17 | 33 | 08/04/2017 15:28 |
| Xylenes, Total | **20** | 17 | 33 | 08/04/2017 15:28 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW5** | **1707B52-007B** | **Water** | **07/27/2017 15:55** | **GC16** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Surrogates | REC (%) | Limits | | |
| Dibromofluoromethane | 109 | 70-130 | | 08/04/2017 15:28 |
| Toluene-d8 | 105 | 70-130 | | 08/04/2017 15:28 |
| 4-BFB | 114 | 70-130 | | 08/04/2017 15:28 |

Analyst(s): HK

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **OW2** | **1707B52-008B** | **Water** | **07/27/2017 13:12** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Acetone | ND | 10 | 1 | 08/04/2017 03:43 |
| tert-Amyl methyl ether (TAME) | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Benzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Bromobenzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Bromochloromethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Bromodichloromethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Bromoform | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Bromomethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 2-Butanone (MEK) | ND | 2.0 | 1 | 08/04/2017 03:43 |
| t-Butyl alcohol (TBA) | ND | 2.0 | 1 | 08/04/2017 03:43 |
| n-Butyl benzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| sec-Butyl benzene | **0.88** | 0.50 | 1 | 08/04/2017 03:43 |
| tert-Butyl benzene | **0.95** | 0.50 | 1 | 08/04/2017 03:43 |
| Carbon Disulfide | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Carbon Tetrachloride | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Chlorobenzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Chloroethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Chloroform | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Chloromethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 2-Chlorotoluene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 4-Chlorotoluene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Dibromochloromethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,2-Dibromo-3-chloropropane | ND | 0.20 | 1 | 08/04/2017 03:43 |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Dibromomethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,2-Dichlorobenzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,3-Dichlorobenzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,4-Dichlorobenzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Dichlorodifluoromethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,1-Dichloroethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,1-Dichloroethene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| cis-1,2-Dichloroethene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| trans-1,2-Dichloroethene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,2-Dichloropropane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,3-Dichloropropane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 2,2-Dichloropropane | ND | 0.50 | 1 | 08/04/2017 03:43 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| OW2 | 1707B52-008B | Water | 07/27/2017 13:12 | GC38 | 143164 |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| cis-1,3-Dichloropropene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| trans-1,3-Dichloropropene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Diisopropyl ether (DIPE) | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Ethylbenzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Ethyl tert-butyl ether (ETBE) | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Freon 113 | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Hexachlorobutadiene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Hexachloroethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 2-Hexanone | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Isopropylbenzene | **0.98** | 0.50 | 1 | 08/04/2017 03:43 |
| 4-Isopropyl toluene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Methyl-t-butyl ether (MTBE) | **0.61** | 0.50 | 1 | 08/04/2017 03:43 |
| Methylene chloride | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Naphthalene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| n-Propyl benzene | **1.3** | 0.50 | 1 | 08/04/2017 03:43 |
| Styrene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Tetrachloroethene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Toluene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,2,3-Trichlorobenzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,2,4-Trichlorobenzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,1,1-Trichloroethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,1,2-Trichloroethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Trichloroethene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Trichlorofluoromethane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,2,3-Trichloropropane | ND | 0.50 | 1 | 08/04/2017 03:43 |
| 1,2,4-Trimethylbenzene | **2.3** | 0.50 | 1 | 08/04/2017 03:43 |
| 1,3,5-Trimethylbenzene | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Vinyl Chloride | ND | 0.50 | 1 | 08/04/2017 03:43 |
| Xylenes, Total | ND | 0.50 | 1 | 08/04/2017 03:43 |

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

# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **OW2** | **1707B52-008B** | **Water** | **07/27/2017 13:12** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Surrogates | REC (%) | Limits | | |
| Dibromofluoromethane | 116 | 70-130 | | 08/04/2017 03:43 |
| Toluene-d8 | 102 | 70-130 | | 08/04/2017 03:43 |
| 4-BFB | 87 | 70-130 | | 08/04/2017 03:43 |

Analyst(s): HK

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| IW1 | 1707B52-009B | Water | 07/28/2017 09:05 | GC38 | 143164 |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Acetone | ND | 10 | 1 | 08/04/2017 04:21 |
| tert-Amyl methyl ether (TAME) | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Benzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Bromobenzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Bromochloromethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Bromodichloromethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Bromoform | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Bromomethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 2-Butanone (MEK) | ND | 2.0 | 1 | 08/04/2017 04:21 |
| t-Butyl alcohol (TBA) | **2.0** | 2.0 | 1 | 08/04/2017 04:21 |
| n-Butyl benzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| sec-Butyl benzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| tert-Butyl benzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Carbon Disulfide | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Carbon Tetrachloride | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Chlorobenzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Chloroethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Chloroform | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Chloromethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 2-Chlorotoluene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 4-Chlorotoluene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Dibromochloromethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,2-Dibromo-3-chloropropane | ND | 0.20 | 1 | 08/04/2017 04:21 |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Dibromomethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,2-Dichlorobenzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,3-Dichlorobenzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,4-Dichlorobenzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Dichlorodifluoromethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,1-Dichloroethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,1-Dichloroethene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| cis-1,2-Dichloroethene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| trans-1,2-Dichloroethene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,2-Dichloropropane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,3-Dichloropropane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 2,2-Dichloropropane | ND | 0.50 | 1 | 08/04/2017 04:21 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **IW1** | **1707B52-009B** | **Water** | **07/28/2017 09:05** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| cis-1,3-Dichloropropene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| trans-1,3-Dichloropropene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Diisopropyl ether (DIPE) | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Ethylbenzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Ethyl tert-butyl ether (ETBE) | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Freon 113 | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Hexachlorobutadiene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Hexachloroethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 2-Hexanone | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Isopropylbenzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 4-Isopropyl toluene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Methyl-t-butyl ether (MTBE) | **1.1** | 0.50 | 1 | 08/04/2017 04:21 |
| Methylene chloride | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Naphthalene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| n-Propyl benzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Styrene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Tetrachloroethene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Toluene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,2,3-Trichlorobenzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,2,4-Trichlorobenzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,1,1-Trichloroethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,1,2-Trichloroethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Trichloroethene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Trichlorofluoromethane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,2,3-Trichloropropane | ND | 0.50 | 1 | 08/04/2017 04:21 |
| 1,2,4-Trimethylbenzene | **0.56** | 0.50 | 1 | 08/04/2017 04:21 |
| 1,3,5-Trimethylbenzene | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Vinyl Chloride | ND | 0.50 | 1 | 08/04/2017 04:21 |
| Xylenes, Total | ND | 0.50 | 1 | 08/04/2017 04:21 |

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/3/17-8/4/17 | **Analytical Method:** | SW8260B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

## Volatile Organics

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **IW1** | **1707B52-009B** | **Water** | **07/28/2017 09:05** | **GC38** | **143164** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| Surrogates | REC (%) | Limits | | |
| Dibromofluoromethane | 117 | 70-130 | | 08/04/2017 04:21 |
| Toluene-d8 | 102 | 70-130 | | 08/04/2017 04:21 |
| 4-BFB | 87 | 70-130 | | 08/04/2017 04:21 |

Analyst(s): HK

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/1/17-8/2/17 | **Analytical Method:** | SW8021B/8015Bm |
| **Project:** | 0058; Xtra Oil Co. | **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** | **1707B52-001A** | **Water** | **07/27/2017 17:20** | **GC3** | **142903** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH(g) (C6-C12) | **15,000** | 2500 | 50 | 08/01/2017 02:48 |
| MTBE | --- | 250 | 50 | 08/01/2017 02:48 |
| Benzene | --- | 25 | 50 | 08/01/2017 02:48 |
| Toluene | --- | 25 | 50 | 08/01/2017 02:48 |
| Ethylbenzene | --- | 25 | 50 | 08/01/2017 02:48 |
| Xylenes | --- | 75 | 50 | 08/01/2017 02:48 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| aaa-TFT | 107 | 89-115 | 08/01/2017 02:48 |

Analyst(s): IA  Analytical Comments: d1

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW2** | **1707B52-002A** | **Water** | **07/28/2017 11:35** | **GC3** | **142953** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH(g) (C6-C12) | **3100** | 170 | 3.3 | 08/02/2017 20:47 |
| MTBE | --- | 150 | 3.3 | 08/02/2017 20:47 |
| Benzene | --- | 5.0 | 10 | 08/01/2017 21:28 |
| Toluene | --- | 1.7 | 3.3 | 08/02/2017 20:47 |
| Ethylbenzene | --- | 1.7 | 3.3 | 08/02/2017 20:47 |
| Xylenes | --- | 5.0 | 3.3 | 08/02/2017 20:47 |

| Surrogates | REC (%) | Qualifiers | Limits | |
|---|---|---|---|---|
| aaa-TFT | 150 | S | 89-115 | 08/02/2017 20:47 |

Analyst(s): IA  Analytical Comments: d1,d1,d17,c4

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/1/17-8/2/17 | **Analytical Method:** | SW8021B/8015Bm |
| **Project:** | 0058; Xtra Oil Co. | **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** | **1707B52-003A** | **Water** | **07/27/2017 12:59** | **GC3** | **142953** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH(g) (C6-C12) | ND | 50 | 1 | 08/01/2017 19:15 |
| MTBE | --- | 5.0 | 1 | 08/01/2017 19:15 |
| Benzene | --- | 0.50 | 1 | 08/01/2017 19:15 |
| Toluene | --- | 0.50 | 1 | 08/01/2017 19:15 |
| Ethylbenzene | --- | 0.50 | 1 | 08/01/2017 19:15 |
| Xylenes | --- | 1.5 | 1 | 08/01/2017 19:15 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| aaa-TFT | 98 | 89-115 | 08/01/2017 19:15 |

Analyst(s): IA

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW4** | **1707B52-004A** | **Water** | **07/27/2017 15:17** | **GC3** | **142953** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH(g) (C6-C12) | **3300** | 500 | 10 | 08/01/2017 23:36 |
| MTBE | --- | 50 | 10 | 08/01/2017 23:36 |
| Benzene | --- | 5.0 | 10 | 08/01/2017 23:36 |
| Toluene | --- | 5.0 | 10 | 08/01/2017 23:36 |
| Ethylbenzene | --- | 5.0 | 10 | 08/01/2017 23:36 |
| Xylenes | --- | 15 | 10 | 08/01/2017 23:36 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| aaa-TFT | 112 | 89-115 | 08/01/2017 23:36 |

Analyst(s): IA Analytical Comments: d1

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/1/17-8/2/17 | **Analytical Method:** | SW8021B/8015Bm |
| **Project:** | 0058; Xtra Oil Co. | **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** | **1707B52-005A** | **Water** | **07/28/2017 10:20** | **GC3** | **142953** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH(g) (C6-C12) | **960** | 50 | 1 | 08/01/2017 19:49 |
| MTBE | **---** | 30 | 1 | 08/01/2017 19:49 |
| Benzene | **---** | 0.50 | 1 | 08/01/2017 19:49 |
| Toluene | **---** | 0.50 | 1 | 08/01/2017 19:49 |
| Ethylbenzene | **---** | 0.50 | 1 | 08/01/2017 19:49 |
| Xylenes | **---** | 1.5 | 1 | 08/01/2017 19:49 |

| Surrogates | REC (%) | Qualifiers | Limits | |
|---|---|---|---|---|
| aaa-TFT | 1129 | S | 89-115 | 08/01/2017 19:49 |

Analyst(s): IA  Analytical Comments: d1,c4,d17

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW4** | **1707B52-006A** | **Water** | **07/27/2017 16:36** | **GC3** | **142953** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH(g) (C6-C12) | **220** | 50 | 1 | 08/01/2017 20:23 |
| MTBE | **---** | 10 | 1 | 08/01/2017 20:23 |
| Benzene | **---** | 0.50 | 1 | 08/01/2017 20:23 |
| Toluene | **---** | 0.50 | 1 | 08/01/2017 20:23 |
| Ethylbenzene | **---** | 0.50 | 1 | 08/01/2017 20:23 |
| Xylenes | **---** | 1.5 | 1 | 08/01/2017 20:23 |

| Surrogates | REC (%) | Qualifiers | Limits | |
|---|---|---|---|---|
| aaa-TFT | 479 | S | 89-115 | 08/01/2017 20:23 |

Analyst(s): IA  Analytical Comments: d1,c4,d17

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/1/17-8/2/17 | **Analytical Method:** | SW8021B/8015Bm |
| **Project:** | 0058; Xtra Oil Co. | **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** | **1707B52-007A** | **Water** | **07/27/2017 15:55** | **GC3** | **142953** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH(g) (C6-C12) | **5400** | 500 | 10 | 08/02/2017 04:47 |
| MTBE | --- | 150 | 10 | 08/02/2017 04:47 |
| Benzene | --- | 5.0 | 10 | 08/02/2017 04:47 |
| Toluene | --- | 5.0 | 10 | 08/02/2017 04:47 |
| Ethylbenzene | --- | 5.0 | 10 | 08/02/2017 04:47 |
| Xylenes | --- | 15 | 10 | 08/02/2017 04:47 |

| Surrogates | REC (%) | Qualifiers | Limits | |
|---|---|---|---|---|
| aaa-TFT | 125 | S | 89-115 | 08/02/2017 04:47 |

Analyst(s): IA  Analytical Comments: d1,c4,d17

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **OW2** | **1707B52-008A** | **Water** | **07/27/2017 13:12** | **GC3** | **142953** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH(g) (C6-C12) | ND | 50 | 1 | 08/01/2017 20:56 |
| MTBE | --- | 5.0 | 1 | 08/01/2017 20:56 |
| Benzene | --- | 0.50 | 1 | 08/01/2017 20:56 |
| Toluene | --- | 0.50 | 1 | 08/01/2017 20:56 |
| Ethylbenzene | --- | 0.50 | 1 | 08/01/2017 20:56 |
| Xylenes | --- | 1.5 | 1 | 08/01/2017 20:56 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| aaa-TFT | 104 | 89-115 | 08/01/2017 20:56 |

Analyst(s): IA

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW5030B |
| **Date Prepared:** | 8/1/17-8/2/17 | **Analytical Method:** | SW8021B/8015Bm |
| **Project:** | 0058; Xtra Oil Co. | **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 |
|---|---|---|---|---|---|
| **IW1** | **1707B52-009A** | **Water** | **07/28/2017 09:05** | **GC3** | **142953** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH(g) (C6-C12) | ND | 50 | 1 | 08/02/2017 22:23 |
| MTBE | --- | 5.0 | 1 | 08/02/2017 22:23 |
| Benzene | --- | 0.50 | 1 | 08/02/2017 22:23 |
| Toluene | --- | 0.50 | 1 | 08/02/2017 22:23 |
| Ethylbenzene | --- | 0.50 | 1 | 08/02/2017 22:23 |
| Xylenes | --- | 1.5 | 1 | 08/02/2017 22:23 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| aaa-TFT | 109 | 89-115 | 08/02/2017 22:23 |

Analyst(s): IA

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW3510C |
| **Date Prepared:** | 7/28/17 | **Analytical Method:** | SW8015B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

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

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW1** | **1707B52-001A** | **Water** | **07/27/2017 17:20** | **GC9a** | **142790** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH-Diesel (C10-C23) | **1400** | 50 | 1 | 07/30/2017 22:34 |
| TPH-Motor Oil (C18-C36) | ND | 250 | 1 | 07/30/2017 22:34 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| C9 | 109 | 66-138 | 07/30/2017 22:34 |

Analyst(s): TK  Analytical Comments: e4

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW2** | **1707B52-002A** | **Water** | **07/28/2017 11:35** | **GC9a** | **142790** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH-Diesel (C10-C23) | **3000** | 50 | 1 | 08/03/2017 15:17 |
| TPH-Motor Oil (C18-C36) | **890** | 250 | 1 | 08/03/2017 15:17 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| C9 | 113 | 66-138 | 08/03/2017 15:17 |

Analyst(s): TK  Analytical Comments: e2/e3,e4

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW3** | **1707B52-003A** | **Water** | **07/27/2017 12:59** | **GC11B** | **142790** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH-Diesel (C10-C23) | ND | 50 | 1 | 07/29/2017 19:14 |
| TPH-Motor Oil (C18-C36) | ND | 250 | 1 | 07/29/2017 19:14 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| C9 | 103 | 66-138 | 07/29/2017 19:14 |

Analyst(s): TK

*(Cont.)*

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW3510C |
| **Date Prepared:** | 7/28/17 | **Analytical Method:** | SW8015B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

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

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **MW4** | **1707B52-004A** | **Water** | **07/27/2017 15:17** | **GC11B** | **142790** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH-Diesel (C10-C23) | **890** | 50 | 1 | 07/29/2017 15:56 |
| TPH-Motor Oil (C18-C36) | ND | 250 | 1 | 07/29/2017 15:56 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| C9 | 109 | 66-138 | 07/29/2017 15:56 |

Analyst(s): TK  Analytical Comments: e4

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW2** | **1707B52-005A** | **Water** | **07/28/2017 10:20** | **GC11B** | **142790** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH-Diesel (C10-C23) | **110** | 50 | 1 | 07/29/2017 17:16 |
| TPH-Motor Oil (C18-C36) | ND | 250 | 1 | 07/29/2017 17:16 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| C9 | 107 | 66-138 | 07/29/2017 17:16 |

Analyst(s): TK  Analytical Comments: e4

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW4** | **1707B52-006A** | **Water** | **07/27/2017 16:36** | **GC11B** | **142790** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH-Diesel (C10-C23) | ND | 50 | 1 | 07/29/2017 17:56 |
| TPH-Motor Oil (C18-C36) | ND | 250 | 1 | 07/29/2017 17:56 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| C9 | 107 | 66-138 | 07/29/2017 17:56 |

Analyst(s): TK

*(Cont.)*

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# Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Received:** | 7/28/17 14:50 | **Extraction Method:** | SW3510C |
| **Date Prepared:** | 7/28/17 | **Analytical Method:** | SW8015B |
| **Project:** | 0058; Xtra Oil Co. | **Unit:** | µg/L |

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

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **EW5** | **1707B52-007A** | **Water** | **07/27/2017 15:55** | **GC11B** | **142790** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH-Diesel (C10-C23) | **1000** | 50 | 1 | 07/29/2017 12:41 |
| TPH-Motor Oil (C18-C36) | ND | 250 | 1 | 07/29/2017 12:41 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| C9 | 103 | 66-138 | 07/29/2017 12:41 |

Analyst(s): TK  Analytical Comments: e4

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **OW2** | **1707B52-008A** | **Water** | **07/27/2017 13:12** | **GC11B** | **142790** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH-Diesel (C10-C23) | **180** | 50 | 1 | 07/29/2017 11:23 |
| TPH-Motor Oil (C18-C36) | ND | 250 | 1 | 07/29/2017 11:23 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| C9 | 98 | 66-138 | 07/29/2017 11:23 |

Analyst(s): TK  Analytical Comments: e11/e4

| Client ID | Lab ID | Matrix | Date Collected | Instrument | Batch ID |
|---|---|---|---|---|---|
| **IW1** | **1707B52-009A** | **Water** | **07/28/2017 09:05** | **GC11B** | **142790** |

| Analytes | Result | RL | DF | Date Analyzed |
|---|---|---|---|---|
| TPH-Diesel (C10-C23) | ND | 50 | 1 | 07/29/2017 15:17 |
| TPH-Motor Oil (C18-C36) | ND | 250 | 1 | 07/29/2017 15:17 |

| Surrogates | REC (%) | Limits | |
|---|---|---|---|
| C9 | 101 | 66-138 | 07/29/2017 15:17 |

Analyst(s): TK

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/2/17 | **BatchID:** | 143044 |
| **Date Analyzed:** | 8/2/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143044<br>1707972-002AMS/MSD |

## QC Summary Report for SW8260B

| Analyte | MB Result | LCS Result | RL | SPK Val | MB SS %REC | LCS %REC | LCS Limits |
|---|---|---|---|---|---|---|---|
| Acetone | ND | 183 | 10 | 200 | - | 92 | 46-155 |
| tert-Amyl methyl ether (TAME) | ND | 7.77 | 0.50 | 10 | - | 78 | 54-140 |
| Benzene | ND | 9.01 | 0.50 | 10 | - | 90 | 47-158 |
| Bromobenzene | ND | 8.33 | 0.50 | 10 | - | 83 | 50-155 |
| Bromochloromethane | ND | 8.73 | 0.50 | 10 | - | 87 | 48-160 |
| Bromodichloromethane | ND | 8.37 | 0.50 | 10 | - | 84 | 60-156 |
| Bromoform | ND | 8.07 | 0.50 | 10 | - | 81 | 43-149 |
| Bromomethane | ND | 12.4 | 0.50 | 10 | - | 124 | 61-159 |
| 2-Butanone (MEK) | ND | 35.5 | 2.0 | 40 | - | 89 | 61-124 |
| t-Butyl alcohol (TBA) | ND | 29.5 | 2.0 | 40 | - | 74 | 42-140 |
| n-Butyl benzene | ND | 9.52 | 0.50 | 10 | - | 95 | 74-138 |
| sec-Butyl benzene | ND | 10.0 | 0.50 | 10 | - | 101 | 72-142 |
| tert-Butyl benzene | ND | 9.20 | 0.50 | 10 | - | 92 | 74-140 |
| Carbon Disulfide | ND | 8.82 | 0.50 | 10 | - | 88 | 64-127 |
| Carbon Tetrachloride | ND | 8.69 | 0.50 | 10 | - | 87 | 61-158 |
| Chlorobenzene | ND | 8.63 | 0.50 | 10 | - | 86 | 43-157 |
| Chloroethane | ND | 10.3 | 0.50 | 10 | - | 103 | 50-127 |
| Chloroform | ND | 8.60 | 0.50 | 10 | - | 86 | 56-154 |
| Chloromethane | ND | 11.7 | 0.50 | 10 | - | 117 | 41-132 |
| 2-Chlorotoluene | ND | 8.82 | 0.50 | 10 | - | 88 | 50-155 |
| 4-Chlorotoluene | ND | 8.48 | 0.50 | 10 | - | 85 | 53-153 |
| Dibromochloromethane | ND | 7.55 | 0.50 | 10 | - | 75 | 49-156 |
| 1,2-Dibromo-3-chloropropane | ND | 3.02 | 0.20 | 4 | - | 75 | 46-149 |
| 1,2-Dibromoethane (EDB) | ND | 8.19 | 0.50 | 10 | - | 82 | 44-155 |
| Dibromomethane | ND | 8.43 | 0.50 | 10 | - | 84 | 50-157 |
| 1,2-Dichlorobenzene | ND | 8.67 | 0.50 | 10 | - | 87 | 48-156 |
| 1,3-Dichlorobenzene | ND | 8.99 | 0.50 | 10 | - | 90 | 49-159 |
| 1,4-Dichlorobenzene | ND | 8.93 | 0.50 | 10 | - | 89 | 51-151 |
| Dichlorodifluoromethane | ND | 15.6 | 0.50 | 10 | - | 156, F2 | 61-117 |
| 1,1-Dichloroethane | ND | 9.45 | 0.50 | 10 | - | 94 | 53-153 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 8.74 | 0.50 | 10 | - | 87 | 66-125 |
| 1,1-Dichloroethene | ND | 9.10 | 0.50 | 10 | - | 91 | 47-149 |
| cis-1,2-Dichloroethene | ND | 8.00 | 0.50 | 10 | - | 80 | 54-155 |
| trans-1,2-Dichloroethene | ND | 10.4 | 0.50 | 10 | - | 104 | 46-151 |
| 1,2-Dichloropropane | ND | 8.85 | 0.50 | 10 | - | 88 | 54-153 |
| 1,3-Dichloropropane | ND | 7.98 | 0.50 | 10 | - | 80 | 49-150 |
| 2,2-Dichloropropane | ND | 8.72 | 0.50 | 10 | - | 87 | 74-147 |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/2/17 | **BatchID:** | 143044 |
| **Date Analyzed:** | 8/2/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143044<br>1707972-002AMS/MSD |

## QC Summary Report for SW8260B

| Analyte | MB Result | LCS Result | RL | SPK Val | MB SS %REC | LCS %REC | LCS Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 9.48 | 0.50 | 10 | - | 95 | 54-150 |
| cis-1,3-Dichloropropene | ND | 7.88 | 0.50 | 10 | - | 79 | 55-159 |
| trans-1,3-Dichloropropene | ND | 8.11 | 0.50 | 10 | - | 81 | 74-131 |
| Diisopropyl ether (DIPE) | ND | 8.72 | 0.50 | 10 | - | 87 | 57-136 |
| Ethylbenzene | ND | 8.75 | 0.50 | 10 | - | 87 | 60-152 |
| Ethyl tert-butyl ether (ETBE) | ND | 8.64 | 0.50 | 10 | - | 86 | 55-137 |
| Freon 113 | ND | 9.21 | 0.50 | 10 | - | 92 | 47-138 |
| Hexachlorobutadiene | ND | 8.33 | 0.50 | 10 | - | 83 | 66-160 |
| Hexachloroethane | ND | 8.36 | 0.50 | 10 | - | 84 | 75-130 |
| 2-Hexanone | ND | 8.10 | 0.50 | 10 | - | 81 | 70-115 |
| Isopropylbenzene | ND | 8.61 | 0.50 | 10 | - | 86 | 59-156 |
| 4-Isopropyl toluene | ND | 9.71 | 0.50 | 10 | - | 97 | 75-138 |
| Methyl-t-butyl ether (MTBE) | ND | 8.13 | 0.50 | 10 | - | 81 | 53-139 |
| Methylene chloride | ND | 8.27 | 0.50 | 10 | - | 83 | 66-127 |
| 4-Methyl-2-pentanone (MIBK) | ND | 7.52 | 0.50 | 10 | - | 75 | 42-153 |
| Naphthalene | ND | 8.24 | 0.50 | 10 | - | 82 | 66-127 |
| n-Propyl benzene | ND | 9.56 | 0.50 | 10 | - | 96 | 54-155 |
| Styrene | ND | 8.91 | 0.50 | 10 | - | 89 | 51-152 |
| 1,1,1,2-Tetrachloroethane | ND | 8.22 | 0.50 | 10 | - | 82 | 58-159 |
| 1,1,2,2-Tetrachloroethane | ND | 8.04 | 0.50 | 10 | - | 80 | 51-150 |
| Tetrachloroethene | ND | 8.39 | 0.50 | 10 | - | 84 | 55-145 |
| Toluene | ND | 8.42 | 0.50 | 10 | - | 84 | 52-137 |
| 1,2,3-Trichlorobenzene | ND | 8.55 | 0.50 | 10 | - | 86 | 70-136 |
| 1,2,4-Trichlorobenzene | ND | 8.59 | 0.50 | 10 | - | 86 | 74-137 |
| 1,1,1-Trichloroethane | ND | 8.86 | 0.50 | 10 | - | 89 | 57-156 |
| 1,1,2-Trichloroethane | ND | 8.21 | 0.50 | 10 | - | 82 | 51-150 |
| Trichloroethene | ND | 8.82 | 0.50 | 10 | - | 88 | 43-157 |
| Trichlorofluoromethane | ND | 9.59 | 0.50 | 10 | - | 96 | 50-147 |
| 1,2,3-Trichloropropane | ND | 8.69 | 0.50 | 10 | - | 87 | 41-152 |
| 1,2,4-Trimethylbenzene | ND | 9.52 | 0.50 | 10 | - | 95 | 57-157 |
| 1,3,5-Trimethylbenzene | ND | 9.26 | 0.50 | 10 | - | 93 | 56-159 |
| Vinyl Chloride | ND | 11.8 | 0.50 | 10 | - | 118 | 42-137 |
| Xylenes, Total | ND | 27.3 | 0.50 | 30 | - | 91 | 70-130 |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/2/17 | **BatchID:** | 143044 |
| **Date Analyzed:** | 8/2/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143044<br>1707972-002AMS/MSD |

## QC Summary Report for SW8260B

| Analyte | MB Result | LCS Result | RL | SPK Val | MB SS %REC | LCS %REC | LCS Limits |
|---|---|---|---|---|---|---|---|
| **Surrogate Recovery** | | | | | | | |
| Dibromofluoromethane | 28.05 | 28.8 | | 25 | 112 | 115 | 70-130 |
| Toluene-d8 | 26.09 | 26.0 | | 25 | 104 | 104 | 70-130 |
| 4-BFB | 2.115 | 2.20 | | 2.5 | 85 | 88 | 70-130 |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/2/17 | **BatchID:** | 143044 |
| **Date Analyzed:** | 8/2/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143044<br>1707972-002AMS/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 |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | NR | NR | | 48000000 | NR | NR | - | NR | - |
| tert-Amyl methyl ether (TAME) | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Benzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Bromobenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Bromochloromethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Bromodichloromethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Bromoform | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Bromomethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 2-Butanone (MEK) | NR | NR | | ND<10000 | NR | NR | - | NR | - |
| t-Butyl alcohol (TBA) | NR | NR | | ND<10000 | NR | NR | - | NR | - |
| n-Butyl benzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| sec-Butyl benzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| tert-Butyl benzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Carbon Disulfide | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Carbon Tetrachloride | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Chlorobenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Chloroethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Chloroform | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Chloromethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 2-Chlorotoluene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 4-Chlorotoluene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Dibromochloromethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,2-Dibromo-3-chloropropane | NR | NR | | ND<10000 | NR | NR | - | NR | - |
| 1,2-Dibromoethane (EDB) | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Dibromomethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,2-Dichlorobenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,3-Dichlorobenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,4-Dichlorobenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Dichlorodifluoromethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,1-Dichloroethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,2-Dichloroethane (1,2-DCA) | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,1-Dichloroethene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| cis-1,2-Dichloroethene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| trans-1,2-Dichloroethene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,2-Dichloropropane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,3-Dichloropropane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 2,2-Dichloropropane | NR | NR | | ND<25000 | NR | NR | - | NR | - |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/2/17 | **BatchID:** | 143044 |
| **Date Analyzed:** | 8/2/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143044<br>1707972-002AMS/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 |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| cis-1,3-Dichloropropene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| trans-1,3-Dichloropropene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Diisopropyl ether (DIPE) | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Ethylbenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Ethyl tert-butyl ether (ETBE) | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Freon 113 | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Hexachlorobutadiene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Hexachloroethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 2-Hexanone | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Isopropylbenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 4-Isopropyl toluene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Methyl-t-butyl ether (MTBE) | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Methylene chloride | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 4-Methyl-2-pentanone (MIBK) | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Naphthalene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| n-Propyl benzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Styrene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,1,1,2-Tetrachloroethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,1,2,2-Tetrachloroethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Tetrachloroethene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Toluene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,2,3-Trichlorobenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,2,4-Trichlorobenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,1,1-Trichloroethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,1,2-Trichloroethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Trichloroethene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Trichlorofluoromethane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,2,3-Trichloropropane | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,2,4-Trimethylbenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| 1,3,5-Trimethylbenzene | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Vinyl Chloride | NR | NR | | ND<25000 | NR | NR | - | NR | - |
| Xylenes, Total | NR | NR | | ND<25000 | NR | NR | - | NR | - |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/2/17 | **BatchID:** | 143044 |
| **Date Analyzed:** | 8/2/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143044<br>1707972-002AMS/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 |
|---|---|---|---|---|---|---|---|---|---|
| **Surrogate Recovery** | | | | | | | | | |
| Dibromofluoromethane | NR | NR | | | NR | NR | - | NR | - |
| Toluene-d8 | NR | NR | | | NR | NR | - | NR | - |
| 4-BFB | NR | NR | | | NR | NR | - | NR | - |

*(Cont.)*

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/3/17 | **BatchID:** | 143164 |
| **Date Analyzed:** | 8/3/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143164<br>1708144-001AMS/MSD |

## QC Summary Report for SW8260B

| Analyte | MB Result | LCS Result | RL | SPK Val | MB SS %REC | LCS %REC | LCS Limits |
|---|---|---|---|---|---|---|---|
| Acetone | ND | 189 | 10 | 200 | - | 95 | 46-155 |
| tert-Amyl methyl ether (TAME) | ND | 7.99 | 0.50 | 10 | - | 80 | 54-140 |
| Benzene | ND | 9.25 | 0.50 | 10 | - | 93 | 47-158 |
| Bromobenzene | ND | 8.46 | 0.50 | 10 | - | 85 | 50-155 |
| Bromochloromethane | ND | 8.91 | 0.50 | 10 | - | 89 | 48-160 |
| Bromodichloromethane | ND | 8.57 | 0.50 | 10 | - | 86 | 60-156 |
| Bromoform | ND | 8.14 | 0.50 | 10 | - | 81 | 43-149 |
| Bromomethane | ND | 12.4 | 0.50 | 10 | - | 124 | 61-159 |
| 2-Butanone (MEK) | ND | 36.5 | 2.0 | 40 | - | 91 | 61-124 |
| t-Butyl alcohol (TBA) | ND | 30.0 | 2.0 | 40 | - | 75 | 42-140 |
| n-Butyl benzene | ND | 9.66 | 0.50 | 10 | - | 97 | 74-138 |
| sec-Butyl benzene | ND | 10.3 | 0.50 | 10 | - | 103 | 72-142 |
| tert-Butyl benzene | ND | 9.34 | 0.50 | 10 | - | 93 | 74-140 |
| Carbon Disulfide | ND | 8.98 | 0.50 | 10 | - | 90 | 64-127 |
| Carbon Tetrachloride | ND | 8.85 | 0.50 | 10 | - | 89 | 61-158 |
| Chlorobenzene | ND | 8.85 | 0.50 | 10 | - | 88 | 43-157 |
| Chloroethane | ND | 10.4 | 0.50 | 10 | - | 104 | 50-127 |
| Chloroform | ND | 8.81 | 0.50 | 10 | - | 88 | 56-154 |
| Chloromethane | ND | 11.7 | 0.50 | 10 | - | 117 | 41-132 |
| 2-Chlorotoluene | ND | 8.93 | 0.50 | 10 | - | 89 | 50-155 |
| 4-Chlorotoluene | ND | 8.64 | 0.50 | 10 | - | 86 | 53-153 |
| Dibromochloromethane | ND | 7.70 | 0.50 | 10 | - | 77 | 49-156 |
| 1,2-Dibromo-3-chloropropane | ND | 2.98 | 0.20 | 4 | - | 75 | 46-149 |
| 1,2-Dibromoethane (EDB) | ND | 8.43 | 0.50 | 10 | - | 84 | 44-155 |
| Dibromomethane | ND | 8.64 | 0.50 | 10 | - | 86 | 50-157 |
| 1,2-Dichlorobenzene | ND | 8.95 | 0.50 | 10 | - | 89 | 48-156 |
| 1,3-Dichlorobenzene | ND | 9.15 | 0.50 | 10 | - | 91 | 49-159 |
| 1,4-Dichlorobenzene | ND | 9.10 | 0.50 | 10 | - | 91 | 51-151 |
| Dichlorodifluoromethane | ND | 6.56 | 0.50 | 10 | - | 66 | 61-117 |
| 1,1-Dichloroethane | ND | 9.75 | 0.50 | 10 | - | 97 | 53-153 |
| 1,2-Dichloroethane (1,2-DCA) | ND | 8.95 | 0.50 | 10 | - | 90 | 66-125 |
| 1,1-Dichloroethene | ND | 9.38 | 0.50 | 10 | - | 94 | 47-149 |
| cis-1,2-Dichloroethene | ND | 8.23 | 0.50 | 10 | - | 82 | 54-155 |
| trans-1,2-Dichloroethene | ND | 10.7 | 0.50 | 10 | - | 107 | 46-151 |
| 1,2-Dichloropropane | ND | 9.08 | 0.50 | 10 | - | 91 | 54-153 |
| 1,3-Dichloropropane | ND | 8.26 | 0.50 | 10 | - | 83 | 49-150 |
| 2,2-Dichloropropane | ND | 8.87 | 0.50 | 10 | - | 89 | 74-147 |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/3/17 | **BatchID:** | 143164 |
| **Date Analyzed:** | 8/3/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143164<br>1708144-001AMS/MSD |

## QC Summary Report for SW8260B

| Analyte | MB Result | LCS Result | RL | SPK Val | MB SS %REC | LCS %REC | LCS Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 9.71 | 0.50 | 10 | - | 97 | 54-150 |
| cis-1,3-Dichloropropene | ND | 8.13 | 0.50 | 10 | - | 81 | 55-159 |
| trans-1,3-Dichloropropene | ND | 8.34 | 0.50 | 10 | - | 83 | 74-131 |
| Diisopropyl ether (DIPE) | ND | 9.07 | 0.50 | 10 | - | 91 | 57-136 |
| Ethylbenzene | ND | 8.98 | 0.50 | 10 | - | 90 | 60-152 |
| Ethyl tert-butyl ether (ETBE) | ND | 8.92 | 0.50 | 10 | - | 89 | 55-137 |
| Freon 113 | ND | 9.45 | 0.50 | 10 | - | 95 | 47-138 |
| Hexachlorobutadiene | ND | 8.37 | 0.50 | 10 | - | 84 | 66-160 |
| Hexachloroethane | ND | 8.50 | 0.50 | 10 | - | 85 | 75-130 |
| 2-Hexanone | ND | 8.46 | 0.50 | 10 | - | 85 | 70-115 |
| Isopropylbenzene | ND | 8.70 | 0.50 | 10 | - | 87 | 59-156 |
| 4-Isopropyl toluene | ND | 9.85 | 0.50 | 10 | - | 98 | 75-138 |
| Methyl-t-butyl ether (MTBE) | ND | 8.42 | 0.50 | 10 | - | 84 | 53-139 |
| Methylene chloride | ND | 8.55 | 0.50 | 10 | - | 86 | 66-127 |
| 4-Methyl-2-pentanone (MIBK) | ND | 7.68 | 0.50 | 10 | - | 77 | 42-153 |
| Naphthalene | ND | 8.39 | 0.50 | 10 | - | 84 | 66-127 |
| n-Propyl benzene | ND | 9.72 | 0.50 | 10 | - | 97 | 54-155 |
| Styrene | ND | 9.15 | 0.50 | 10 | - | 91 | 51-152 |
| 1,1,1,2-Tetrachloroethane | ND | 8.47 | 0.50 | 10 | - | 85 | 58-159 |
| 1,1,2,2-Tetrachloroethane | ND | 8.19 | 0.50 | 10 | - | 82 | 51-150 |
| Tetrachloroethene | ND | 8.64 | 0.50 | 10 | - | 86 | 55-145 |
| Toluene | ND | 8.66 | 0.50 | 10 | - | 87 | 52-137 |
| 1,2,3-Trichlorobenzene | ND | 8.64 | 0.50 | 10 | - | 86 | 70-136 |
| 1,2,4-Trichlorobenzene | ND | 8.73 | 0.50 | 10 | - | 87 | 74-137 |
| 1,1,1-Trichloroethane | ND | 9.08 | 0.50 | 10 | - | 91 | 57-156 |
| 1,1,2-Trichloroethane | ND | 8.53 | 0.50 | 10 | - | 85 | 51-150 |
| Trichloroethene | ND | 9.07 | 0.50 | 10 | - | 91 | 43-157 |
| Trichlorofluoromethane | ND | 9.80 | 0.50 | 10 | - | 98 | 50-147 |
| 1,2,3-Trichloropropane | ND | 8.81 | 0.50 | 10 | - | 88 | 41-152 |
| 1,2,4-Trimethylbenzene | ND | 9.76 | 0.50 | 10 | - | 98 | 57-157 |
| 1,3,5-Trimethylbenzene | ND | 9.34 | 0.50 | 10 | - | 93 | 56-159 |
| Vinyl Chloride | ND | 11.8 | 0.50 | 10 | - | 118 | 42-137 |
| Xylenes, Total | ND | 28.0 | 0.50 | 30 | - | 93 | 70-130 |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/3/17 | **BatchID:** | 143164 |
| **Date Analyzed:** | 8/3/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143164<br>1708144-001AMS/MSD |

## QC Summary Report for SW8260B

| Analyte | MB Result | LCS Result | RL | SPK Val | MB SS %REC | LCS %REC | LCS Limits |
|---|---|---|---|---|---|---|---|
| **Surrogate Recovery** | | | | | | | |
| Dibromofluoromethane | 28.23 | 28.9 | | 25 | 113 | 116 | 70-130 |
| Toluene-d8 | 26.05 | 26.0 | | 25 | 104 | 104 | 70-130 |
| 4-BFB | 2.068 | 2.16 | | 2.5 | 83 | 86 | 70-130 |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/3/17 | **BatchID:** | 143164 |
| **Date Analyzed:** | 8/3/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143164<br>1708144-001AMS/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 |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 232 | 238 | 200 | ND | 113 | 116 | 66-158 | 2.50 | 20 |
| tert-Amyl methyl ether (TAME) | 9.36 | 10.4 | 10 | ND | 94 | 104 | 69-139 | 10.7 | 20 |
| Benzene | 9.57 | 10.1 | 10 | ND | 96 | 101 | 69-141 | 5.59 | 20 |
| Bromobenzene | 9.17 | 9.74 | 10 | ND | 92 | 97 | 70-127 | 6.01 | 20 |
| Bromochloromethane | 10.0 | 10.7 | 10 | ND | 100 | 107 | 72-142 | 6.40 | 20 |
| Bromodichloromethane | 9.34 | 9.90 | 10 | ND | 93 | 99 | 75-141 | 5.81 | 20 |
| Bromoform | 9.76 | 10.3 | 10 | ND | 98 | 103 | 72-126 | 5.78 | 20 |
| Bromomethane | 11.1 | 11.6 | 10 | ND | 111 | 116 | 50-160 | 4.39 | 20 |
| 2-Butanone (MEK) | 46.4 | 48.4 | 40 | ND | 116 | 121 | 69-154 | 4.22 | 20 |
| t-Butyl alcohol (TBA) | 38.2 | 40.4 | 40 | ND | 95 | 101 | 41-152 | 5.71 | 20 |
| n-Butyl benzene | 9.88 | 10.5 | 10 | ND | 99 | 105 | 70-134 | 6.22 | 20 |
| sec-Butyl benzene | 9.83 | 10.4 | 10 | ND | 98 | 104 | 73-131 | 5.30 | 20 |
| tert-Butyl benzene | 9.32 | 9.87 | 10 | ND | 93 | 99 | 71-125 | 5.83 | 20 |
| Carbon Disulfide | 8.46 | 9.00 | 10 | ND | 85 | 90 | 63-158 | 6.15 | 20 |
| Carbon Tetrachloride | 8.98 | 9.58 | 10 | ND | 90 | 96 | 72-143 | 6.39 | 20 |
| Chlorobenzene | 9.29 | 9.87 | 10 | ND | 93 | 99 | 77-120 | 5.97 | 20 |
| Chloroethane | 9.35 | 9.71 | 10 | ND | 94 | 97 | 54-131 | 3.75 | 20 |
| Chloroform | 9.32 | 9.82 | 10 | ND | 93 | 98 | 75-139 | 5.26 | 20 |
| Chloromethane | 8.36 | 8.59 | 10 | ND | 84 | 86 | 40-130 | 2.71 | 20 |
| 2-Chlorotoluene | 9.19 | 9.78 | 10 | ND | 92 | 98 | 70-122 | 6.23 | 20 |
| 4-Chlorotoluene | 8.94 | 9.62 | 10 | ND | 89 | 96 | 71-123 | 7.32 | 20 |
| Dibromochloromethane | 8.94 | 9.48 | 10 | ND | 89 | 95 | 78-132 | 5.90 | 20 |
| 1,2-Dibromo-3-chloropropane | 3.74 | 3.88 | 4 | ND | 93 | 97 | 59-143 | 3.79 | 20 |
| 1,2-Dibromoethane (EDB) | 9.79 | 10.2 | 10 | ND | 98 | 102 | 76-135 | 4.48 | 20 |
| Dibromomethane | 9.94 | 10.4 | 10 | ND | 99 | 104 | 78-135 | 4.35 | 20 |
| 1,2-Dichlorobenzene | 9.70 | 10.3 | 10 | ND | 97 | 103 | 68-133 | 5.79 | 20 |
| 1,3-Dichlorobenzene | 9.72 | 10.3 | 10 | ND | 97 | 103 | 78-122 | 5.53 | 20 |
| 1,4-Dichlorobenzene | 9.61 | 10.2 | 10 | ND | 96 | 102 | 80-117 | 5.97 | 20 |
| Dichlorodifluoromethane | 7.17 | 7.28 | 10 | ND | 72 | 73 | 38-125 | 1.53 | 20 |
| 1,1-Dichloroethane | 10.0 | 10.6 | 10 | ND | 100 | 106 | 65-152 | 5.25 | 20 |
| 1,2-Dichloroethane (1,2-DCA) | 10.0 | 10.6 | 10 | ND | 100 | 106 | 73-139 | 5.53 | 20 |
| 1,1-Dichloroethene | 9.14 | 9.62 | 10 | ND | 91 | 96 | 59-140 | 5.15 | 20 |
| cis-1,2-Dichloroethene | 9.80 | 10.4 | 10 | ND | 96 | 102 | 50-154 | 5.83 | 20 |
| trans-1,2-Dichloroethene | 9.38 | 9.90 | 10 | ND | 94 | 99 | 69-136 | 5.30 | 20 |
| 1,2-Dichloropropane | 9.87 | 10.4 | 10 | ND | 99 | 104 | 78-132 | 5.58 | 20 |
| 1,3-Dichloropropane | 9.68 | 10.2 | 10 | ND | 97 | 102 | 77-131 | 4.78 | 20 |
| 2,2-Dichloropropane | 9.03 | 9.52 | 10 | ND | 90 | 95 | 61-160 | 5.28 | 20 |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/3/17 | **BatchID:** | 143164 |
| **Date Analyzed:** | 8/3/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143164<br>1708144-001AMS/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 |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 9.28 | 9.78 | 10 | ND | 93 | 98 | 70-137 | 5.16 | 20 |
| cis-1,3-Dichloropropene | 8.84 | 9.32 | 10 | ND | 88 | 93 | 78-135 | 5.26 | 20 |
| trans-1,3-Dichloropropene | 9.33 | 9.85 | 10 | ND | 93 | 99 | 78-131 | 5.49 | 20 |
| Diisopropyl ether (DIPE) | 9.98 | 10.6 | 10 | ND | 100 | 106 | 72-140 | 5.81 | 20 |
| Ethylbenzene | 9.23 | 9.68 | 10 | ND | 92 | 97 | 73-128 | 4.81 | 20 |
| Ethyl tert-butyl ether (ETBE) | 10.1 | 10.7 | 10 | ND | 101 | 107 | 71-140 | 5.74 | 20 |
| Freon 113 | 9.14 | 9.63 | 10 | ND | 91 | 96 | 60-136 | 5.24 | 20 |
| Hexachlorobutadiene | 8.34 | 8.85 | 10 | ND | 83 | 89 | 56-132 | 5.93 | 20 |
| Hexachloroethane | 8.41 | 9.09 | 10 | ND | 84 | 91 | 61-129 | 7.77 | 20 |
| 2-Hexanone | 10.6 | 11.1 | 10 | ND | 107 | 111 | 57-149 | 3.82 | 20 |
| Isopropylbenzene | 9.08 | 9.65 | 10 | ND | 91 | 97 | 69-130 | 6.10 | 20 |
| 4-Isopropyl toluene | 9.54 | 10.2 | 10 | ND | 95 | 102 | 75-124 | 6.96 | 20 |
| Methyl-t-butyl ether (MTBE) | 9.84 | 10.4 | 10 | ND | 98 | 104 | 73-139 | 5.92 | 20 |
| Methylene chloride | 9.00 | 9.52 | 10 | ND | 90 | 95 | 74-128 | 5.62 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 9.68 | 10.0 | 10 | ND | 97 | 100 | 61-145 | 3.49 | 20 |
| Naphthalene | 9.58 | 10.1 | 10 | ND | 96 | 101 | 54-148 | 5.26 | 20 |
| n-Propyl benzene | 9.46 | 10.1 | 10 | ND | 95 | 101 | 71-121 | 6.84 | 20 |
| Styrene | 9.58 | 10.0 | 10 | ND | 96 | 100 | 56-140 | 4.45 | 20 |
| 1,1,1,2-Tetrachloroethane | 9.16 | 9.70 | 10 | ND | 92 | 97 | 74-127 | 5.81 | 20 |
| 1,1,2,2-Tetrachloroethane | 9.80 | 10.2 | 10 | ND | 98 | 102 | 63-142 | 4.36 | 20 |
| Tetrachloroethene | 8.83 | 9.32 | 10 | ND | 88 | 93 | 71-125 | 5.38 | 20 |
| Toluene | 8.88 | 9.35 | 10 | ND | 88 | 93 | 71-128 | 5.07 | 20 |
| 1,2,3-Trichlorobenzene | 9.28 | 9.93 | 10 | ND | 93 | 99 | 59-135 | 6.75 | 20 |
| 1,2,4-Trichlorobenzene | 9.32 | 10.0 | 10 | ND | 93 | 100 | 60-132 | 7.10 | 20 |
| 1,1,1-Trichloroethane | 9.19 | 9.76 | 10 | ND | 92 | 98 | 75-138 | 5.99 | 20 |
| 1,1,2-Trichloroethane | 9.82 | 10.3 | 10 | ND | 98 | 103 | 78-129 | 4.66 | 20 |
| Trichloroethene | 9.10 | 9.63 | 10 | ND | 91 | 96 | 64-132 | 5.70 | 20 |
| Trichlorofluoromethane | 9.11 | 9.55 | 10 | ND | 91 | 96 | 53-159 | 4.74 | 20 |
| 1,2,3-Trichloropropane | 10.5 | 11.0 | 10 | ND | 105 | 110 | 68-130 | 4.69 | 20 |
| 1,2,4-Trimethylbenzene | 9.67 | 10.4 | 10 | ND | 97 | 104 | 76-124 | 6.88 | 20 |
| 1,3,5-Trimethylbenzene | 9.40 | 10.0 | 10 | ND | 94 | 100 | 77-124 | 6.30 | 20 |
| Vinyl Chloride | 9.02 | 9.24 | 10 | ND | 90 | 92 | 43-142 | 2.39 | 20 |
| Xylenes, Total | 28.7 | 30.3 | 30 | ND | 96 | 101 | 70-130 | 5.38 | 20 |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/3/17 | **BatchID:** | 143164 |
| **Date Analyzed:** | 8/3/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC38 | **Analytical Method:** | SW8260B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-143164<br>1708144-001AMS/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 |
|---|---|---|---|---|---|---|---|---|---|
| **Surrogate Recovery** | | | | | | | | | |
| Dibromofluoromethane | 29.6 | 29.8 | 25 | | 118 | 119 | 73-131 | 0.896 | 20 |
| Toluene-d8 | 25.6 | 25.4 | 25 | | 102 | 101 | 72-117 | 0.761 | 20 |
| 4-BFB | 2.18 | 2.23 | 2.5 | | 87 | 89 | 74-116 | 2.24 | 20 |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 7/31/17 | **BatchID:** | 142903 |
| **Date Analyzed:** | 7/31/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC3 | **Analytical Method:** | SW8021B/8015Bm |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-142903<br>1707B87-001AMS/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 | 56.9 | 40 | 60 | - | 95 | 78-116 |
| MTBE | ND | 8.15 | 5.0 | 10 | - | 82 | 72-122 |
| Benzene | ND | 8.72 | 0.50 | 10 | - | 87 | 81-123 |
| Toluene | ND | 9.21 | 0.50 | 10 | - | 92 | 83-129 |
| Ethylbenzene | ND | 9.72 | 0.50 | 10 | - | 97 | 88-126 |
| Xylenes | ND | 30.4 | 1.5 | 30 | - | 101 | 87-131 |
| **Surrogate Recovery** | | | | | | | |
| aaa-TFT | 9.949 | 9.79 | | 10 | 99 | 98 | 89-116 |

| Analyte | MS Result | MSD Result | SPK Val | SPKRef Val | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| TPH(btex) | 57.7 | 56.7 | 60 | ND | 96 | 95 | 63-133 | 1.80 | 20 |
| MTBE | 8.33 | 8.30 | 10 | ND | 83 | 83 | 69-122 | 0 | 20 |
| Benzene | 8.79 | 8.74 | 10 | ND | 88 | 87 | 84-125 | 0.576 | 20 |
| Toluene | 9.33 | 9.25 | 10 | ND | 93 | 92 | 87-131 | 0.901 | 20 |
| Ethylbenzene | 9.81 | 9.69 | 10 | ND | 98 | 97 | 92-126 | 1.23 | 20 |
| Xylenes | 30.6 | 30.2 | 30 | ND | 102 | 101 | 88-132 | 1.18 | 20 |
| **Surrogate Recovery** | | | | | | | | | |
| aaa-TFT | 9.85 | 9.80 | 10 | | 99 | 98 | 90-117 | 0.562 | 20 |

*(Cont.)*

NELAP 4033ORELAP

QA/QC Officer

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

# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 8/1/17 | **BatchID:** | 142953 |
| **Date Analyzed:** | 8/1/17 | **Extraction Method:** | SW5030B |
| **Instrument:** | GC3 | **Analytical Method:** | SW8021B/8015Bm |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS-142953<br>1707B52-003AMS/MSD |

## QC Summary Report for SW8021B/8015Bm

| Analyte | MB Result | LCS Result | RL | SPK Val | MB SS %REC | LCS %REC | LCS Limits |
|---|---|---|---|---|---|---|---|
| TPH(btex) | ND | 59.4 | 40 | 60 | - | 99 | 78-116 |
| MTBE | ND | 9.11 | 5.0 | 10 | - | 91 | 72-122 |
| Benzene | ND | 9.05 | 0.50 | 10 | - | 90 | 81-123 |
| Toluene | ND | 9.51 | 0.50 | 10 | - | 95 | 83-129 |
| Ethylbenzene | ND | 10.0 | 0.50 | 10 | - | 100 | 88-126 |
| Xylenes | ND | 31.3 | 1.5 | 30 | - | 104 | 87-131 |
| **Surrogate Recovery** | | | | | | | |
| aaa-TFT | 9.853 | 9.65 | | 10 | 99 | 96 | 89-116 |

| Analyte | MS Result | MSD Result | SPK Val | SPKRef Val | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| TPH(btex) | 58.8 | 58.2 | 60 | ND | 98 | 97 | 63-133 | 1.08 | 20 |
| MTBE | 8.74 | 8.92 | 10 | ND | 87 | 89 | 69-122 | 2.02 | 20 |
| Benzene | 8.78 | 9.07 | 10 | ND | 88 | 91 | 84-125 | 3.29 | 20 |
| Toluene | 9.24 | 9.55 | 10 | ND | 92 | 95 | 87-131 | 3.28 | 20 |
| Ethylbenzene | 9.82 | 10.1 | 10 | ND | 98 | 101 | 92-126 | 2.94 | 20 |
| Xylenes | 30.7 | 31.7 | 30 | ND | 102 | 106 | 88-132 | 3.19 | 20 |
| **Surrogate Recovery** | | | | | | | | | |
| aaa-TFT | 9.53 | 9.70 | 10 | | 95 | 97 | 90-117 | 1.75 | 20 |

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# Quality Control Report

| | | | |
|---|---|---|---|
| **Client:** | P & D Environmental | **WorkOrder:** | 1707B52 |
| **Date Prepared:** | 7/28/17 | **BatchID:** | 142790 |
| **Date Analyzed:** | 7/28/17 - 7/31/17 | **Extraction Method:** | SW3510C |
| **Instrument:** | GC11B, GC39A | **Analytical Method:** | SW8015B |
| **Matrix:** | Water | **Unit:** | µg/L |
| **Project:** | 0058; Xtra Oil Co. | **Sample ID:** | MB/LCS/LCSD-142790 |

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

| Analyte | MB Result | RL | SPK Val | MB SS %REC | MB SS Limits |
|---|---|---|---|---|---|
| TPH-Diesel (C10-C23) | ND | 50 | - | - | - |
| **Surrogate Recovery** | | | | | |
| C9 | 689.4 | | 625 | 110 | 79-111 |

| Analyte | LCS Result | LCSD Result | SPK Val | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| TPH-Diesel (C10-C23) | 1220 | 1240 | 1000 | 122 | 124 | 88-134 | 2.02 | 30 |
| **Surrogate Recovery** | | | | | | | | |
| C9 | 665 | 646 | 625 | 106 | 103 | 79-111 | 2.82 | 30 |

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

# CHAIN-OF-CUSTODY RECORD



**WorkOrder: 1707B52** **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ■ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag
■ Detection Summary ■ Dry-Weight

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

Email: lab@pdenviro.com; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0058; Xtra Oil Co.

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

**Requested TAT:** **5 days;**

***Date Received:*** **07/28/2017**
***Date Logged:*** **07/28/2017**

| 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 |
| 1707B52-001 | MW1 | Water | 7/27/2017 17:20 | ☐ | B | A | A | | | | | | | | | |
| 1707B52-002 | MW2 | Water | 7/28/2017 11:35 | ☐ | B | A | A | | | | | | | | | |
| 1707B52-003 | MW3 | Water | 7/27/2017 12:59 | ☐ | B | A | A | | | | | | | | | |
| 1707B52-004 | MW4 | Water | 7/27/2017 15:17 | ☐ | B | A | A | | | | | | | | | |
| 1707B52-005 | EW2 | Water | 7/28/2017 10:20 | ☐ | B | A | A | | | | | | | | | |
| 1707B52-006 | EW4 | Water | 7/27/2017 16:36 | ☐ | B | A | A | | | | | | | | | |
| 1707B52-007 | EW5 | Water | 7/27/2017 15:55 | ☐ | B | A | A | | | | | | | | | |
| 1707B52-008 | OW2 | Water | 7/27/2017 13:12 | ☐ | B | A | A | | | | | | | | | |
| 1707B52-009 | IW1 | Water | 7/28/2017 09:05 | ☐ | B | A | A | | | | | | | | | |

**Test Legend:**

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

**Prepared by: Kena Ponce**

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A contain testgroup Multi Range_W.

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

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

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# WORK ORDER SUMMARY

**Client Name:** P & D ENVIRONMENTAL
**Client Contact:** Accounts Payable
**Contact's Email:** lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

**Project:** 0058; Xtra Oil Co.
**Comments:** Always send reports to: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

**Work Order:** 1707B52
**QC Level:** LEVEL 2
**Date Logged:** 7/28/2017

☐ 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1707B52-001A | MW1 | Water | Multi-Range TPH(g,d,mo) by EPA 8015Bm | 4 | 2 VOAs w/HCL + 2-aVOAs (multi-range) | ☐ | 7/27/2017 17:20 | 5 days | Present | ☐ | |
| 1707B52-001B | MW1 | Water | SW8260B (VOCs) | 2 | VOA w/ HCl | ☐ | 7/27/2017 17:20 | 5 days | Present | ☐ | |
| 1707B52-002A | MW2 | Water | Multi-Range TPH(g,d,mo) by EPA 8015Bm | 4 | 2 VOAs w/HCL + 2-aVOAs (multi-range) | ☐ | 7/28/2017 11:35 | 5 days | Present | ☐ | |
| 1707B52-002B | MW2 | Water | SW8260B (VOCs) | 2 | VOA w/ HCl | ☐ | 7/28/2017 11:35 | 5 days | Present | ☐ | |
| 1707B52-003A | MW3 | Water | Multi-Range TPH(g,d,mo) by EPA 8015Bm | 4 | 2 VOAs w/HCL + 2-aVOAs (multi-range) | ☐ | 7/27/2017 12:59 | 5 days | Present | ☐ | |
| 1707B52-003B | MW3 | Water | SW8260B (VOCs) | 2 | VOA w/ HCl | ☐ | 7/27/2017 12:59 | 5 days | Present | ☐ | |
| 1707B52-004A | MW4 | Water | Multi-Range TPH(g,d,mo) by EPA 8015Bm | 4 | 2 VOAs w/HCL + 2-aVOAs (multi-range) | ☐ | 7/27/2017 15:17 | 5 days | Present | ☐ | |
| 1707B52-004B | MW4 | Water | SW8260B (VOCs) | 2 | VOA w/ HCl | ☐ | 7/27/2017 15:17 | 5 days | Present | ☐ | |
| 1707B52-005A | EW2 | Water | Multi-Range TPH(g,d,mo) by EPA 8015Bm | 4 | 2 VOAs w/HCL + 2-aVOAs (multi-range) | ☐ | 7/28/2017 10:20 | 5 days | Present | ☐ | |
| 1707B52-005B | EW2 | Water | SW8260B (VOCs) | 2 | VOA w/ HCl | ☐ | 7/28/2017 10:20 | 5 days | Present | ☐ | |
| 1707B52-006A | EW4 | Water | Multi-Range TPH(g,d,mo) by EPA 8015Bm | 4 | 2 VOAs w/HCL + 2-aVOAs (multi-range) | ☐ | 7/27/2017 16:36 | 5 days | Present | ☐ | |
| 1707B52-006B | EW4 | Water | SW8260B (VOCs) | 2 | VOA w/ HCl | ☐ | 7/27/2017 16:36 | 5 days | Present | ☐ | |
| 1707B52-007A | EW5 | Water | Multi-Range TPH(g,d,mo) by EPA 8015Bm | 4 | 2 VOAs w/HCL + 2-aVOAs (multi-range) | ☐ | 7/27/2017 15:55 | 5 days | Present | ☐ | |
| 1707B52-007B | EW5 | Water | SW8260B (VOCs) | 2 | VOA w/ HCl | ☐ | 7/27/2017 15:55 | 5 days | Present | ☐ | |

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

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

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# WORK ORDER SUMMARY

**Client Name:** P & D ENVIRONMENTAL
**Client Contact:** Accounts Payable
**Contact's Email:** lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

**Project:** 0058; Xtra Oil Co.
**Comments:** Always send reports to: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

**Work Order:** 1707B52
**QC Level:** LEVEL 2
**Date Logged:** 7/28/2017

☐ 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1707B52-008A | OW2 | Water | Multi-Range TPH(g,d,mo) by EPA 8015Bm | 4 | 2 VOAs w/HCL + 2-aVOAs (multi-range) | ☐ | 7/27/2017 13:12 | 5 days | Present | ☐ | |
| 1707B52-008B | OW2 | Water | SW8260B (VOCs) | 2 | VOA w/ HCl | ☐ | 7/27/2017 13:12 | 5 days | Present | ☐ | |
| 1707B52-009A | IW1 | Water | Multi-Range TPH(g,d,mo) by EPA 8015Bm | 4 | 2 VOAs w/HCL + 2-aVOAs (multi-range) | ☐ | 7/28/2017 9:05 | 5 days | Present | ☐ | |
| 1707B52-009B | IW1 | Water | SW8260B (VOCs) | 2 | VOA w/ HCl | ☐ | 7/28/2017 9:05 | 5 days | Present | ☐ | |

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

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

# CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

1707B52

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

PROJECT NUMBER: 0058

PROJECT NAME: Xtra Oil Co. 1701 Park Street Alameda, CA

SAMPLED BY: (PRINTED & SIGNATURE) Lindsey Deschenes

| SAMPLE NUMBER | DATE | TIME | TYPE | SAMPLE LOCATION | NUMBER OF CONTAINERS | ANALYSIS(ES): TPH-Multirange (G,D,mo) | 8260 with Fuel Oxys and Lead Scavengers | PRESERVATIVE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| MW1 | 7/27/17 | 17:20 | $H_2O$ | | 6 | X | X | ICE | Normal Turnaround Time |
| MW2 | 7/28/17 | 11:35 | | | 6 | X | X | | |
| MW3 | 7/27/17 | 12:59 | | | 6 | X | X | | |
| MW4 | 7/27/17 | 15:17 | | | 6 | X | X | | |
| EW2 | 7/28/17 | 10:20 | | | 6 | X | X | | |
| EW4 | 7/27/17 | 16:36 | | | 6 | X | X | | |
| EW5 | 7/27/17 | 15:55 | | | 6 | X | X | | |
| OW2 | 7/27/17 | 13:12 | | | 6 | X | X | | |
| IW1 | 7/28/17 | 9:05 | | | 6 | X | X | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| RELINQUISHED BY: (SIGNATURE) | DATE 7/28/17 | TIME | RECEIVED BY: (SIGNATURE) PD | 7/28/17 1307 | Total No. of Samples (This Shipment): 9<br>Total No. of Containers (This Shipment): 54 | LABORATORY: McCampbell Analytical |
| RELINQUISHED BY: (SIGNATURE) PD | DATE 7/28/17 | TIME 1450 | RECEIVED BY: (SIGNATURE) | | LABORATORY CONTACT: Angela Rydelius | LABORATORY PHONE NUMBER: (877) 252-9262 |
| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RECEIVED FOR LABORATORY BY: (SIGNATURE) | | SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (✓) NO | |

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

REMARKS:

7.4

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# Sample Receipt Checklist

Client Name: **P & D Environmental**
Project Name: **0058; Xtra Oil Co.**

WorkOrder №: **1707B52** Matrix: Water
Carrier: Patrick Johnson (MAI Courier)

Date and Time Received **7/28/2017 14:50**
Date Logged: **7/28/2017**
Received by: Kena Ponce
Logged by: Kena Ponce

## 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 ☐ | NA ☐ |
| Sample/Temp Blank temperature | Temp: 7.4°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 ) | | |

UCMR Samples:

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

Comments: