Xtra OIL COMPANY

2307 PACIFIC AVENUE
ALAMEDA, CA 94501
(510) 865-9503 FAX (510) 865-1889

July 11, 2011

RECEIVED

9:06 am, Jul 21, 2011
Alameda County
Environmental Health

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

SUBJECT: WELL INSTALLATION REPORT CERTIFICATION
County Case # RO 191
Xtra Oil Company
1701 Park Street
Alameda, CA

Dear Ms. Jakub:

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

- Well Installation Report (EW2, EW4, EW5, and OW2) dated July 11, 2011 (document 0058.R17).

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

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

Sincerely,
Xtra Oil Company

Keith Simas

0058.L43

P&D ENVIRONMENTAL, INC.

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

July 11, 2011
Report 0058.R17

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

SUBJECT: WELL INSTALLATION REPORT
(EW2 EW4, EW5, OW2)
County Case # RO 191
Xtra Oil Company
1701 Park Street
Alameda, CA

Gentlemen:

P&D Environmental, Inc. (P&D) is pleased to present this report documenting the installation of three extraction wells (EW1, EW4, and EW5) and one observation well (OW2) at the subject site. Well installation was performed on May 18 and 19, 2011. The wells were developed on May 24, 2011 and groundwater samples were collected from the wells on May 26, 2011 in conjunction with the semi-annual monitoring and sampling event for on site wells MW1 through MW4. A Site Location Map is attached as Figure 1, and a Site Plan showing the well locations is attached as Figure 2.

Well installation was performed in accordance with methods and procedures set forth in P&D's Remedial Action Work Plan (RAWP) dated October 24, 2007 (document 0058.W2). The Alameda County Department of Environmental Health (ACDEH) approved installation of the wells identified in the RAWP in a letter dated August 20, 2008 and also in an e-mail dated February 7, 2011 from Ms. Barbara Jakub of the ACDEH. A limited number of wells identified in the RAWP was installed to evaluate groundwater extraction feasibility in accordance with P&D's Groundwater Extraction Feasibility Test Work Plan dated April 15, 2011 (document 0058.W4).

All work was performed under the direct supervision of a California professional geologist. This investigation was performed in accordance with guidelines set forth in the document "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" dated August 10, 1990 and "Appendix A - Workplan for Initial Subsurface Investigation" dated August 20, 1991; and California Code of Regulations Title 23 Sections 2720-2728.

BACKGROUND

A detailed discussion of the site background, historical monitoring and sampling, and historical investigations are provided in P&D's Remedial Action Work Plan (RAWP) dated October 24, 2007 (document 0058.W2), P&D's Corrective Action Plan (CAP) dated October 11, 2010 (document 0058.W3), and P&D's Site Conceptual Model Report dated October 8, 2010 (document 0058.R10). As an interim step for implementation of the CAP, P&D prepared a Groundwater Extraction Feasibility Work Plan dated April 15, 2011 (document 0058.W4) to verify the feasibility of groundwater extraction at the site with a selected number of wells identified in the RAWP.

FIELD ACTIVITIES

Prior to performing field activities, permit W2011-0294 for groundwater extraction wells EW2, EW4, and EW5, and permit W2011-0295 for observation well OW2 were obtained from the Alameda County Public Works Agency (ACPWA), drilling locations were marked with white paint, Underground Service Alert was notified for underground utility location, and a health and safety plan was prepared. Notification of the drilling dates was also provided to the ACDEH.

Well Installation

On May 18 and 19, 2011 P&D personnel oversaw the installation of three dual phase extraction wells (EW2, EW4 and EW5) and one observation well (OW2) at the subject site. Exploration Geoservices, Inc. of San Jose, California performed the well installation. The locations of the wells at the site are shown in Figure 2.

The boreholes for dual-phase groundwater/soil vapor extraction wells EW2, EW4 and EW5 were each drilled to a total depth of 25.0 feet below the ground surface (bgs). The borehole for observation wells (OW2) was drilled to total depth of 20.0 feet bgs.

Each borehole was drilled using a truck-mounted drill rig with 12-inch outside diameter hollow stem augers. Soil samples were collected at geologic contacts (as defined by boring logs for nearby boreholes) for lithologic logging purposes using a Standard Penetration Test (SPT) split-spoon sampler driven by a 140-pound hammer falling 30 inches. Blow counts were recorded every six inches. The soil in the SPT split spoon sampler and the soil cuttings from drilling were classified lithologically in the field in accordance with standard geologic field techniques and the Unified Soil Classification System (USCS). No soil samples were retained for laboratory analysis. Copies of the boring logs are attached with this report as Appendix A.

The extraction wells were constructed using 4-inch diameter Schedule 40 PVC pipe with the lowermost 20 feet of the well casing consisting of 0.020-inch width factory slotted pipe. The observation well was constructed using 4-inch diameter Schedule 40 PVC pipe with the lowermost 15 feet of the well casing consisting of 0.020-inch width factory slotted pipe. A screw-on cap was placed on the bottom of each well. The annular space surrounding the screen for each well was filled with Lonestar # 3 sack sand to a height of one foot above the top of the screen. A one-foot thick layer of bentonite pellets was placed above the sand and hydrated. The remaining annular space was filled with a neat cement grout sanitary seal to approximately one half foot below the ground surface. The top of each of the PVC well pipes was secured with a watertight locking plug

and covered with a traffic-rated watertight well vault. Well construction diagrams for all of the wells are attached with this report as Appendix B.

Soil cuttings were screened in the field at the time of drilling for organic vapors with a photoionization detector (PID) that was calibrated with a 100 part per million by volume isobutylene gas, and for petroleum hydrocarbon odors by P&D personnel. Table 1 provides a graphical summary of hydrocarbon odor intervals and PID values.

All drilling and sampling equipment was either previously unused clean material, or was cleaned by steam cleaning or with an Alconox solution followed by a clean water rinse prior to use in each borehole. All well construction materials were new. Soil and water generated during drilling activities were stored in drums onsite, pending analysis and appropriate disposal.

Well Surveying

The vertical elevations and horizontal locations for the top of the PVC casing for each of the new wells and the four previously existing monitoring wells (MW1 through MW4) were surveyed in accordance with GeoTracker requirements by Kier & Wright Engineers Surveyors, Inc. of Livermore, California on June 6, 2011. In addition, the ground surface elevation adjacent to each well was also surveyed. The surveyed top of casing elevations for each well are provided in Table 2 and a copy of the June 2011 survey information provided by the surveyor is attached with this report as Appendix C.

Well Development

On May 24, 2011 wells EW2, EW4, EW5, and OW2 were developed by over-pumping by P&D personnel. Prior to development, the wells and previously existing wells MW1 through MW4 were monitored for depth to water to the nearest 0.01 feet using an electric water level indicator. The measured depth to groundwater prior to development on May 24, 2011 in wells EW2, EW4, EW5, and OW2 was 6.12, 4.75, 4.74, and 4.79 feet, respectively. The depth-to-water measurements are summarized in Table 2.

During development of the wells P&D personnel observed petroleum hydrocarbon sheen on the water removed from wells EW4 and EW2. No sheen was observed in water removed from from wells EW5 and OW2. A slight to moderate petroleum hydrocarbon odor was detected on the water purged from wells OW2, EW4, and EW5, and a moderate petroleum hydrocarbon odor was detected on the water purged from well EW2. Approximately 50, 65, 65, and 50 gallons of water was removed during development from wells EW2, EW4, EW5, and OW2, respectively. Water removed from the wells during development was stored in drums onsite, pending characterization and appropriate disposal. Well development data sheets are attached with this report as Appendix D.

Well Sampling

On May 26, 2011 P&D personnel monitored and sampled historical groundwater monitoring wells MW1 through MW4, and recently installed wells EW2, EW4, EW5, and OW2 at the subject site. Prior to sampling the wells were monitored for depth to water to the nearest 0.01 foot using an

electric water level indicator and for the presence of free product or sheen using a transparent bailer. No free product or sheen was observed in any of the wells. The measured depth to groundwater on May 26, 2011 prior to purging in wells MW1, MW2, MW3, and MW4 was 5.86, 6.90, 6.19, and 6.41 feet, respectively; and in wells EW2, EW4, EW5, and OW2 was 6.14, 4.77, 4.88, and 4.82 feet, respectively. Depth-to-water level measurements are presented in Table 2.

Following determination of the depth to water, the wells were evaluated for the presence of free product or sheen using a transparent bailer. No measurable free product was detected in any of the wells. Prior to sampling, wells MW1 through MW4, EW2, EW4, EW5, and OW2 were purged using low flow purge procedures in accordance with U.S. EPA 1996 guidelines. Purging was performed with a peristaltic pump and new polyethylene tubing for a minimum of fifteen minutes at each sampling location. 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 feet below the static water level in the well. Purging was performed at low flow rates of approximately 450 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, turbidity, and depth to water were monitored and recorded on a groundwater monitoring/well purging data sheet for each well.

Petroleum hydrocarbon sheen was detected only on the purge water from well MW2. Strong petroleum hydrocarbon odors were detected on the purge water from wells MW1 and MW2; moderate to strong petroleum hydrocarbon odors were detected on the purge water from wells MW4 and EW5; slight petroleum hydrocarbon odors were detected on the purge water from wells EW2 and EW4; possible slight petroleum hydrocarbon odors were detected on the purge water from well OW2; and no petroleum hydrocarbon odors were detected on the purge water from well MW3.

Once the wells had been purged for a minimum of fifteen minutes 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 and 1-liter amber glass bottles which were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to ensure that no air bubbles were present.

Once the field parameters were observed to stabilize, and the wells had been purged for a minimum of 15 minutes, water samples were collected from the discharge tubing to the pump. New tubing was used for each sample collection location. The VOA vials and bottles were then 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 as Appendix E. Water purged from the wells during purging operations was stored in 55-gallon drums at the site pending characterization and appropriate disposal.

Soil and Water Disposal

One composite soil sample designated as COMP A was collected from the drummed soil for characterization of the soil for disposal purposes. A total of 10 drums of soil generated during well drilling were removed from the site as non-hazardous waste and a total of 6 drums of water

generated during well development and well purging for well sampling were removed from the site on May 27, 2011 by Clearwater Environmental of Newark, California (Clearwater). Clearwater is a State-licensed hazardous waste transporter. The drums of soil were transported to the Alviso Independent Oil facility in Alviso, California using non-hazardous waste manifest 08554. The Alviso Independent Oil facility is a State-licensed Transfer Storage and Disposal Facility for hazardous waste. The drums of groundwater were transported to the Crosby & Overton facility in Long Beach, California as federal hazardous waste using uniform hazardous waste manifest 007275639 JJK. Copies of the soil disposal non-hazardous waste manifest and the groundwater disposal uniform hazardous waste manifest are attached with this report as Appendix F. Copies of the laboratory analytical reports and chain of custody documentation associated with the characterization of the soil for disposal is attached with this report as Appendix G.

GEOLOGY AND HYDROGEOLOGY

Based on review of the Geologic map and map database of the Oakland metropolitan area, Alameda, Contra Costa, and San Francisco Counties, California, by R.W. Graymer (2000) of the U. S. Geological Survey, the subject site is underlain by Holocene and Pleistocene age dune sand (Qds) which consists of fine-grained, very well-sorted and well-drained eolian deposits. Buried paleosols encountered in the dunes are considered indicative of periods of non-deposition.

Review of the boring logs attached with this report as Appendix A shows that the subsurface materials encountered in the boreholes for the dual phase extraction wells and observation well are consistent with the Qpa description provided above.

A Site Vicinity Map showing the location of the wells and geologic cross sections A-A' and B-B' is attached with this report as Figure 3. Revised geologic cross sections A-A' and B-B' that incorporate borehole information obtained during installation of wells EW2, EW4, EW5, and OW2 are attached with this report as Figures 4 and 5, respectively.

In continuously cored borehole EW2, EW4, EW5 and OW2, groundwater was initially encountered during drilling at a depth of 9.0 feet bgs. Groundwater was subsequently measured in the boreholes for the wells at depths of 9.7, 8.5, 9.3, 8.9 feet bgs, respectively, once the boreholes had been drilled to a depth of 10 feet bgs. Projected boring logs for EW2 and EW4 on geologic cross section A-A' (see Figure 4) shows that the subsurface materials encountered in the boreholes is consistent with the sandy units consisting of fine sand, silty sand, and clayey sand to the total depth explored of 25 feet bgs. The boring log for OW2 projected on geologic cross section B-B' (see Figure 5) shows that the subsurface materials encountered in the borehole is consistent with the sandy units encountered previously in projected soil boring B6.

Monitoring wells MW1, MW2, and MW3 were installed in 1994, and well MW4 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 the new wells (EW2, EW4, EW5, and OW2). 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 MW1 through MW4 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).

Following installation and sampling of the new wells, all of the wells were subsequently monitored for depth to water on June 16, 2011 using procedures described above. Based on the water levels measured in wells MW1, MW2 and MW3 on June 16, 2011 the calculated groundwater flow direction was to the east-southeast with a gradient of 0.0039. Since the previous monitoring and sampling event on November 18, 2011 the groundwater flow direction has shifted towards the south and the gradient has increased from 0.0047. The calculated groundwater flow direction on June 16, 2011 was not consistent with the historical northeasterly 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 both 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.

LABORATORY ANALYSIS

The groundwater samples collected from wells MW1 through MW4, EW2, EW4, EW5, and OW2, were analyzed at McCampbell Analytical, Inc. in Pittsburg, California for Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) and Total Petroleum Hydrocarbons as Diesel (TPH-D) using EPA Method 3510C in conjunction with EPA Method 8015B; Total Petroleum Hydrocarbons as Gasoline (TPH-G), and methyl-tert-butyl ether (MTBE), benzene, toluene, ethylbenzene, and xylenes (MBTEX), using EPA Method 8021B in conjunction with modified EPA Method 8015B; and for Fuel Oxygenates and Lead Scavengers by EPA Method 5030B in conjunction with EPA Method 8260B. The laboratory analytical results are summarized in Table 3. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report as Appendix G.

TPH-MO was not detected in any of the groundwater samples collected from any of the wells, and no analytes were detected in the groundwater sample collected from well MW3. TPH-D was detected in the groundwater samples collected from wells MW1, MW2, MW4, EW2, EW4, EW5, and OW2 at concentrations of 2,400, 1,900, 2,400, 560, 500, 3,600, and 430 micrograms per liter (ug/L), respectively; TPH-G was detected at concentrations of 15,000, 6,600, 7,300, 2,700, 2,800, 35,000, and 450 ug/L, respectively; and benzene was detected at concentrations of 2,000, 1,000, 230, 580, 99, 1,000, and 0.87 ug/L, respectively. The remaining BTEX compounds were detected at concentrations ranging from 0.71 to 11,000 ug/L. While MTBE was not detected in any of the groundwater samples using EPA Method 8021B, it was detected using EPA Method 8260B in the groundwater samples collected from wells MW1, MW2, MW4, EW2, EW4, EW5, and OW2 at concentrations of 120, 210, 80, 97, 83, 86, and 3.6 ug/L, respectively, and tert-Butyl Alcohol (TBA) was detected in the same samples at concentrations of 570, 480, 74, 290, 110, 250, and 350 ug/L, respectively.

Review of the laboratory analytical report shows that the laboratory described the detected TPH-D results for all of the samples from all the wells as consisting of both gasoline-range

compounds and diesel-range compounds, with no recognizable pattern. The laboratory analytical results are summarized in Table 3. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

Since the previous sampling event on November 18, 2010 all analyte concentrations in well MW3 have remained not detected; all analyte concentrations in well MW1 remained not detected or decreased with the exceptions of TPH-D, toluene, ethylbenzene, and total xylenes which increased; all analyte concentrations in well MW2 increased or remained not detected with the exceptions of TPH-MO, TPH-D, TPH-G, and ethylbenzene, which decreased; and all analyte concentrations in well MW4 increased or remained not detected, with the exceptions of benzene, MTBE using EPA Method 8021B, MTBE using EPA Method 8260B, and TBA, which decreased.

DISCUSSION AND RECOMMENDATIONS

Figure 3 shows benzene isoconcentration contours for first-encountered groundwater that include the results of the samples collected from all of the onsite wells on May 26, 2011. Based on the May 26, 2011 sample results the benzene isoconcentration contours have been amended to show that the benzene plume does not extend as far north as has been shown in previous report.

P&D recommends that the groundwater extraction feasibility test identified in P&D's Groundwater Extraction Feasibility Work Plan dated April 15, 2011 (document 0058.W4) be performed using the recently installed groundwater monitoring wells.

DISTRIBUTION

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

LIMITATIONS

This report was prepared solely for the use of Xtra Oil Company. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

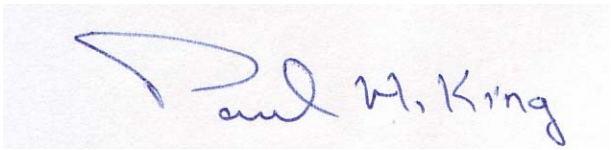
This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

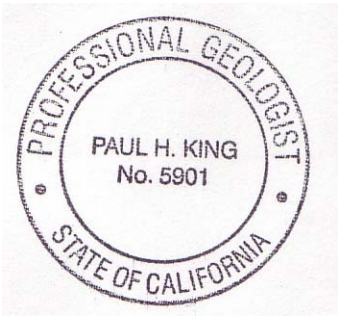
This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities, which are used in this report.

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

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,
P&D Environmental, Inc.





Paul H. King
Professional Geologist # 5901
Expires: 12/31/11

Attachments:

Table 1 - Summary of Well Borehole Petroleum Hydrocarbon Odor Intervals and PID Values
Table 2 - Summary of Well Monitoring Data
Table 3 - Summary of Laboratory Analytical Results

Figure 1 - Site Location Map
Figure 2 - Site Plan Showing Well Locations
Figure 3 - Site Vicinity Map Showing Well, Geologic Cross Section Locations, and Benzene in Groundwater
Figure 4 - Geologic Cross Section A-A'
Figure 5 - Geologic Cross Section B-B'

Appendix A - Boring Logs
Appendix B - Well Construction Diagrams
Appendix C - Survey Data
Appendix D - Well Development Data Sheets
Appendix E - Well Monitoring/Purge Data Sheets
Appendix F - Drum Disposal Documentation
Appendix G - Laboratory Analytical Reports and Chain of Custody Documentation

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TABLES

TABLE 1

SUMMARY OF WELL BOREHOLE PETROLEUM HYDROCARBON ODOR INTERVALS AND PID VALUES

Feet bgs	WELL NUMBER				Feet bgs
	EW2	EW4	EW5	OW2	
0					0
1		16		0	1
2	14		12		2
3		118			3
4				0	4
5	116		164		5
6					6
7					7
8					8
9					9
10	4	2	15	3	10
11					11
12					12
13					13
14					14
15	0	0	0	0	15
16					16
17					17
18					18
19				0	19
20	0	0	0	20.0	20
21					21
22					22
23					23
24	0	0	0		24
25	25.0	25.0	25.0		25
26					26
27					27
28					28
29					29
30					30

NOTES:

bgs = below ground surface.

Borehole depth provided at bottom of borehole.

Bottom of boreholes and odor intervals are graphically rounded to the

PID value in ppm is reported to right of boring log odor information.

Color Code

Slight petroleum hydrocarbon odor.

Stong petroleum hydrocarbon odor.

Xtra Oil Company Site
1701 Park Street
Alameda, CA

Table 2. Summary of Well Monitoring Data

Well Number	Date Monitored	Top of Casing Elevation (ft-msl.)	Depth to Water (ft)	Water Table Elevation (ft-MSL.)
MW1	6/16/2011	22.36*	6.41	15.95
	5/26/2011		5.86	16.50
	5/24/2011		6.43	15.93
	11/18/2010	19.60**	7.78	11.82
	4/28/2010		6.35	13.25
	12/3/2009		7.84	11.76
	2/25/2009		6.07	13.53
	11/25/2008		7.91	11.69
	8/27/2008		8.03	11.57
	5/28/2008		7.28	12.32
	2/27/2008		6.15	13.45
	11/29/2007		7.82	11.78
	8/29/2007		8.29	11.31
	5/29/2007		7.44	12.16
	3/12/2007		6.34	13.26
	11/6/2006		7.99	11.61
MW2	6/16/2011	23.10*	6.89	16.21
	5/26/2011		6.90	16.20
	5/24/2011		6.90	16.20
	11/18/2010	20.31**	8.17	12.14
	4/28/2010		6.76	13.55
	12/3/2009		8.23	12.08
	2/25/2009		6.37	13.94
	11/25/2008		8.21	12.10
	8/27/2008		8.40	11.91
	5/28/2008		7.72	12.59
	2/27/2008		6.49	13.82
	11/29/2007		8.15	12.16
	8/29/2007		8.55	11.76
	5/29/2007		7.79	12.52
	3/12/2007		6.82	13.49
	11/6/2006		8.25	12.06
MW3	6/16/2011	23.35*	6.17	17.18
	5/26/2011		6.19	17.16
	5/24/2011		6.16	17.19
	11/18/2010	20.57**	7.93	12.64
	4/28/2010		6.00	14.57
	12/3/2009		7.83	12.74
	2/25/2009		5.42	15.15
	11/25/2008		7.83	12.74
	8/27/2008		8.23	12.34
	5/28/2008		7.36	13.21
	2/27/2008		5.75	14.82
	11/29/2007		7.88	12.69
	8/29/2007		8.31	12.26
	5/29/2007		7.26	13.31
	3/12/2007		6.03	14.54
	11/6/2006		8.09	12.48
MW4	6/16/2011	22.48*	5.79	16.69
	5/26/2011		6.41	16.07
	5/24/2011		5.82	16.66
	11/18/2010	19.69**	7.69	12.00
	4/28/2010		5.82	13.87
	12/3/2009		7.60	12.09
	2/25/2009		5.32	14.37
	11/25/2008		7.61	12.08
	8/27/2008		7.91	11.78
	5/28/2008		6.97	12.72
	2/27/2008		5.38	14.31
	11/29/2007		7.57	12.12
	8/29/2007		8.07	11.62
	5/29/2007		7.38	12.31
	3/12/2007		5.30	14.39
	11/6/2006		7.60	12.09
EW2	6/16/2011	22.13*	6.09	16.04
	5/26/2011		6.14	15.99
	5/24/2011***		6.12	16.01
EW4	6/16/2011	20.95*	4.72	16.23
	5/26/2011		4.77	16.18
	5/24/2011***		4.75	16.20
EW5	6/16/2011	21.20*	4.71	16.49
	5/26/2011		4.88	16.32
	5/24/2011***		4.74	16.46
OW2	6/16/2011	21.55*	4.80	16.75
	5/26/2011		4.82	16.73
	5/24/2011***		4.79	16.76

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

Xtra Oil Company Site
1701 Park Street
Alameda, CA

Table 3. Summary of Laboratory Analytical Results

Well Number	Sample Date	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Fuel Oxygenates & Lead Scavengers
MW1	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	NA
	5/28/2008	40,000	6,100, c	290	1,600	4,200	2,600	1,700	5,900	NA
	2/27/2008	45,000	4,900, c	310	2,600	6,200	3,100	1,300	5,100	NA
	11/29/2007	27,000	3,100, b,c	ND<250	2,600	4,700	930	770	2,600	NA
	8/29/2007	26,000	3,900, b,c	470	3,200	5,400	1,400	810	3,000	NA
	5/30/2007	22,000	3300, c	ND<250	ND<750	400	380	1,100	3,600	NA
	3/12/2007	38,000	3,500, b,c	300	3,500	5,400	2,900	1,300	5,100	NA
	11/6/2006	44,000,a	3,400, a,c	360	3,900	5,600	2,300	920	3,000	NA
MW2	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	NA
	5/28/2008	12,000, a	25,000 a,c,d	7,200	ND<210	2,000	77	77	90	NA
	2/27/2008	11,000, a	21,000, a,c,d	6,800	ND<150	940	36	ND<10	22	NA
	11/29/2007	11,000, a	32,000, a,c,d	11,000	ND<50	1,000	28	120	31	NA
	8/29/2007	8,600, a	6,300, a, b, c	2,600	ND<100	1,300	36	48	48	NA
	5/30/2007	14,000, a	22,000, a,c,d	5,800	ND<210	2,200	51	100	99	NA
	3/12/2007	8,500, a	74,000, a, c,d	21,000	ND< 80	1,200	34	140	69	NA
	11/6/2006	14,000,a	45,000, a,c	11,000	ND<120	1,400	27	200	37	NA
MW3	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	NA
	5/28/2008	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA
	2/27/2008	ND<50	ND<50	ND<250	15	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA
	11/29/2007	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA
	8/29/2007	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA
	5/30/2007	ND<50	ND<50	ND< 250	ND< 5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA
	3/12/2007	ND< 50	ND< 50	ND< 250	ND< 5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA
	11/6/2006	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NA
MW4	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	NA
	5/28/2008	2,200	1,400, c	ND<250	ND<30	16	38	100	320	NA
	2/27/2008	8,000	1,900, c	ND<250	ND<50	47	110	270	1,300	NA
	11/29/2007	12,000	2,800, c	ND<250	ND<180	260	230	580	2,500	NA
	8/29/2007	12,000, a	560, c	ND<250	660	910	200	750	2,200	NA
	5/30/2007	43,000	4,500, c	610	3,600	5,800	3,700	1,400	5,400	NA
	3/12/2007	19,000	3,100, c	ND< 250	370	560	450	1,100	4,400	NA
	11/6/2006	23,000	4,300,c	850	ND<900	680	250	930	3,100	NA
EW2	5/26/2011	2,700	560, b,c	ND< 250	ND<150	580	7.9	10	80	ND, except TBA = 290, MTBE = 97
EW4	5/26/2011	2,800	500, b,c	ND< 250	ND<150	99	9.9	20	300	ND, except TBA = 110, MTBE = 83
EW5	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
OW2	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

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
ND = Not Detected.
NA = Not Analyzed.
a = Laboratory Note: lighter than water immiscible sheen/ product is present
b = Laboratory Note: diesel range compounds are significant; no recognizable pattern
c = Laboratory Note: gasoline range compounds are significant
d = Laboratory Note: unmodified or weakly modified diesel range compounds are significant
e = Analysis by EPA 8260B as part of fuel oxygenate analysis. All other results for MTBE and all results for BTEX are by EPA 8021B.
Results are in micrograms per liter (µg/L), unless otherwise noted.

FIGURES

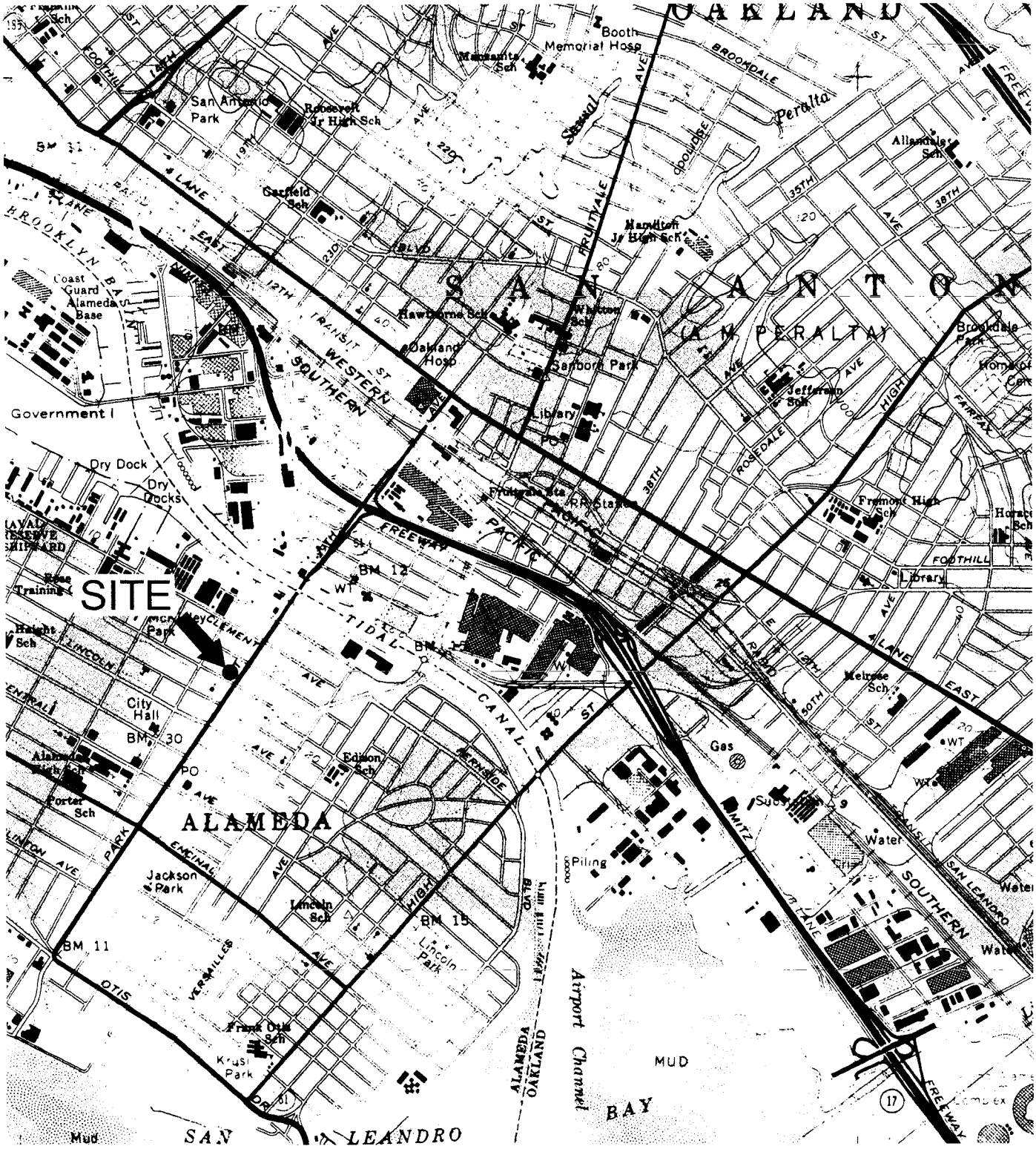


FIGURE 1
Site Location Map
1701 Park Street
Alameda, CA

N

Base Map From:
USGS Topographic Map, 7.5 minute series, Oakland East, Calif. quadrangle, 1980

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

0 1000 2000
SCALE IN FEET

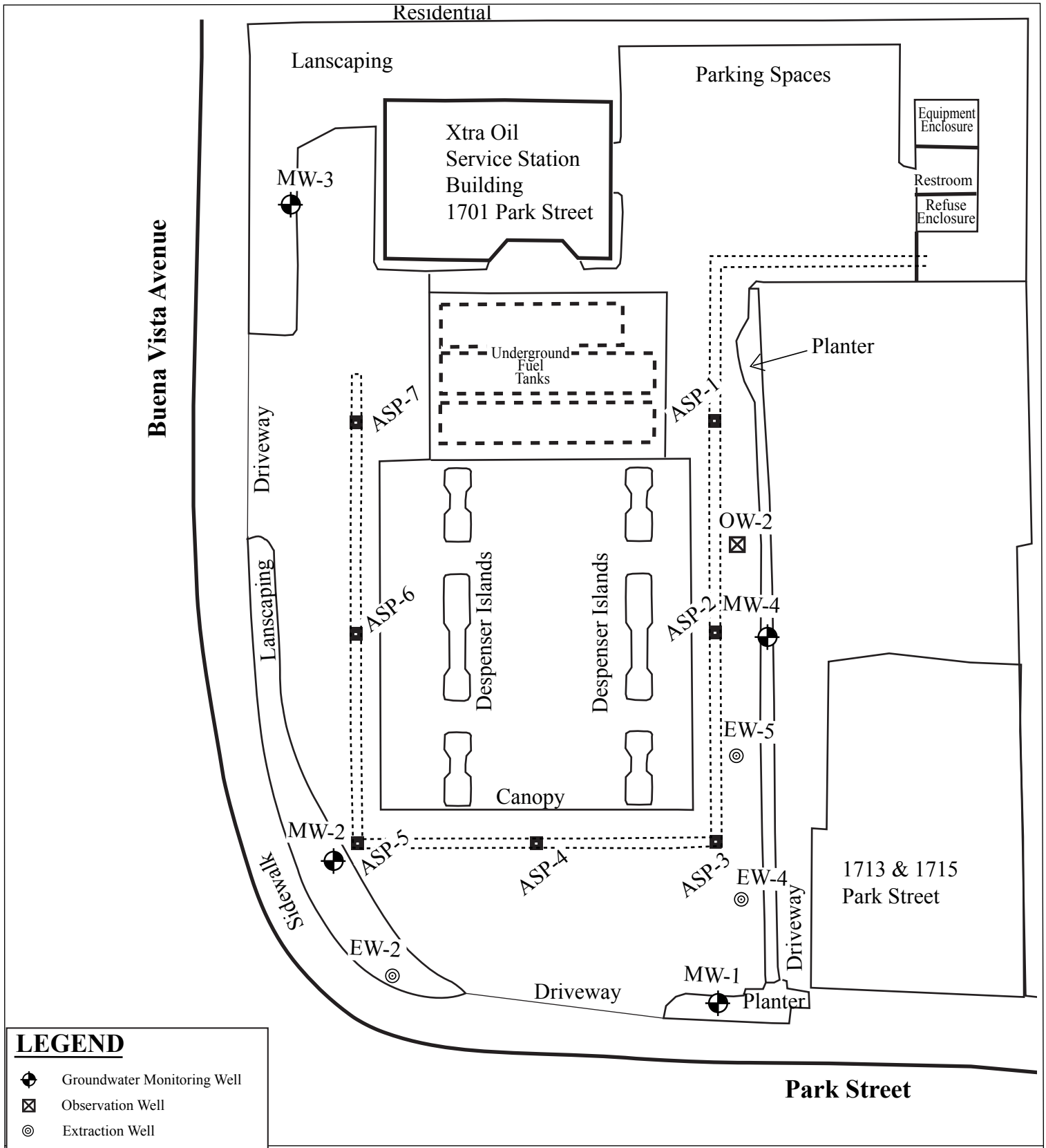


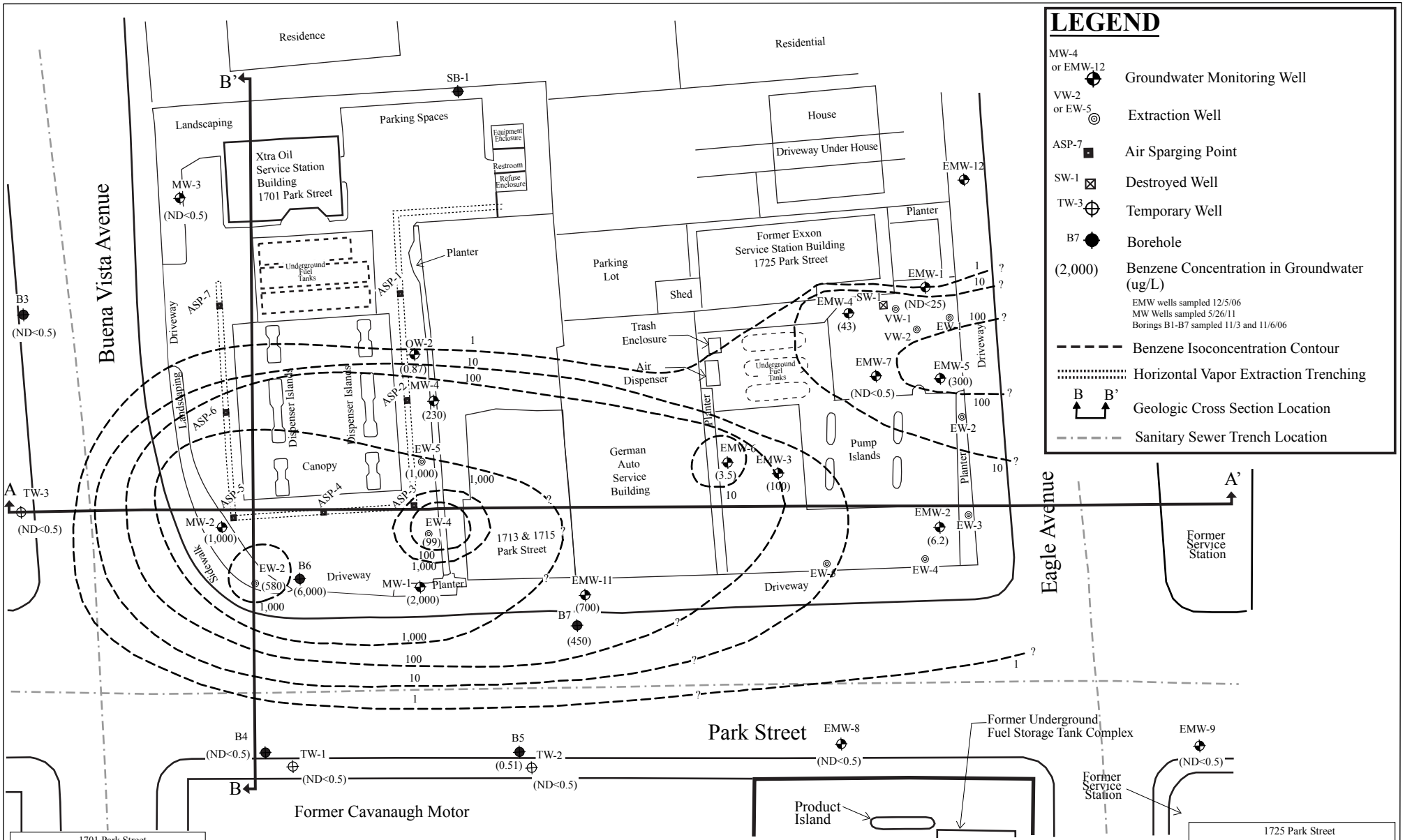
Figure 2
Site Plan Showing Well Locations
Xtra Oil Company
1701 Park Street
Alameda, California

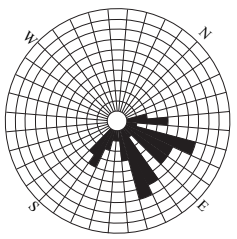
Basemap from: Alisto Engineering Group September 2005, and Google Earth October 2009

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

0 12.5 25
Approximate Scale in Feet

N





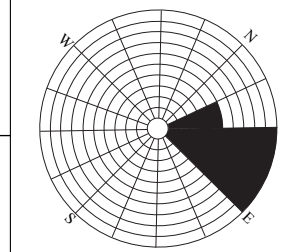


Figure 3
Site Vicinity Map Showing Well, Geologic Cross Section Locations, and Benzene in Groundwater
3889 Castro Valley Boulevard
Castro Valley, California

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

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

0 25 50
Approximate Scale in Feet

N

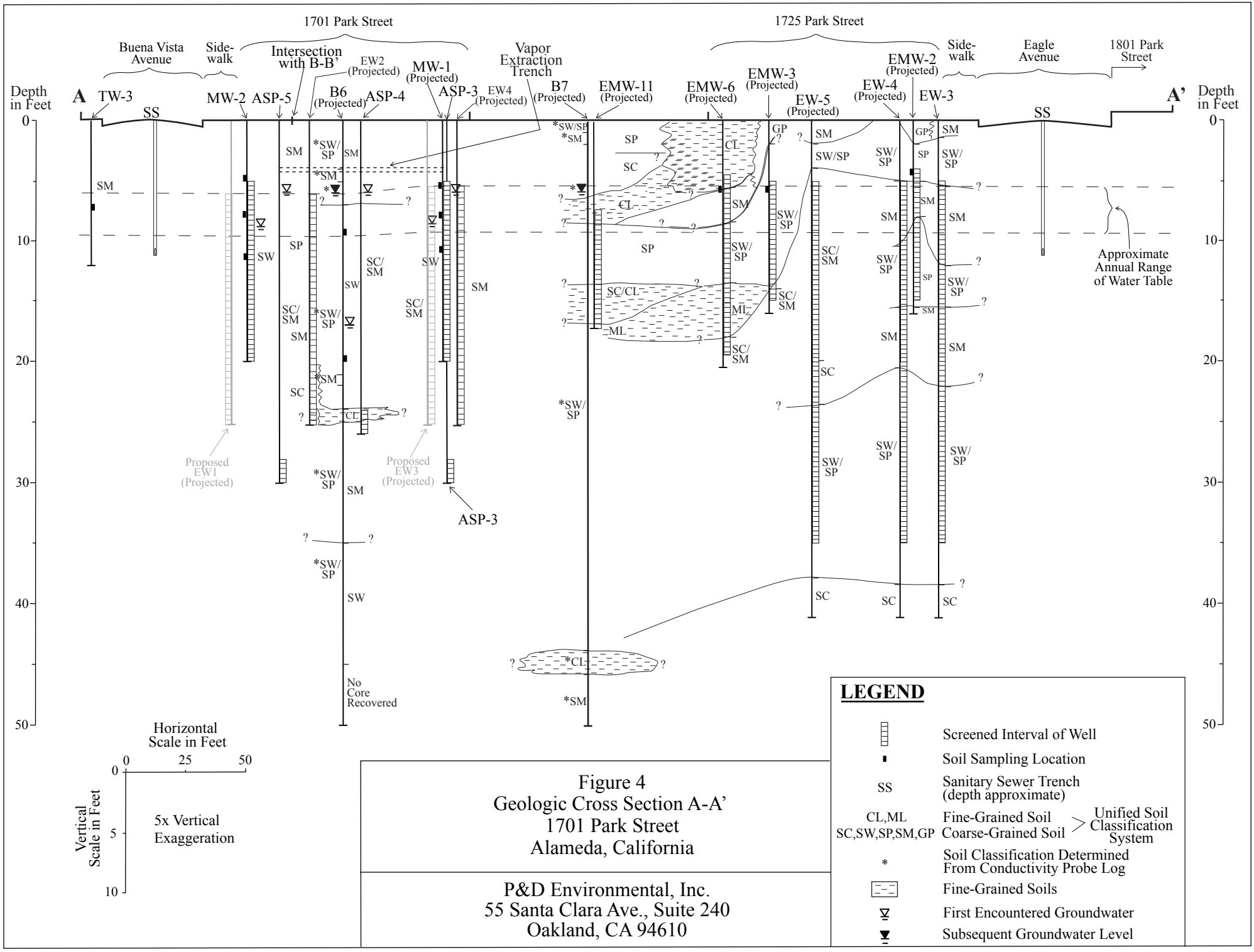
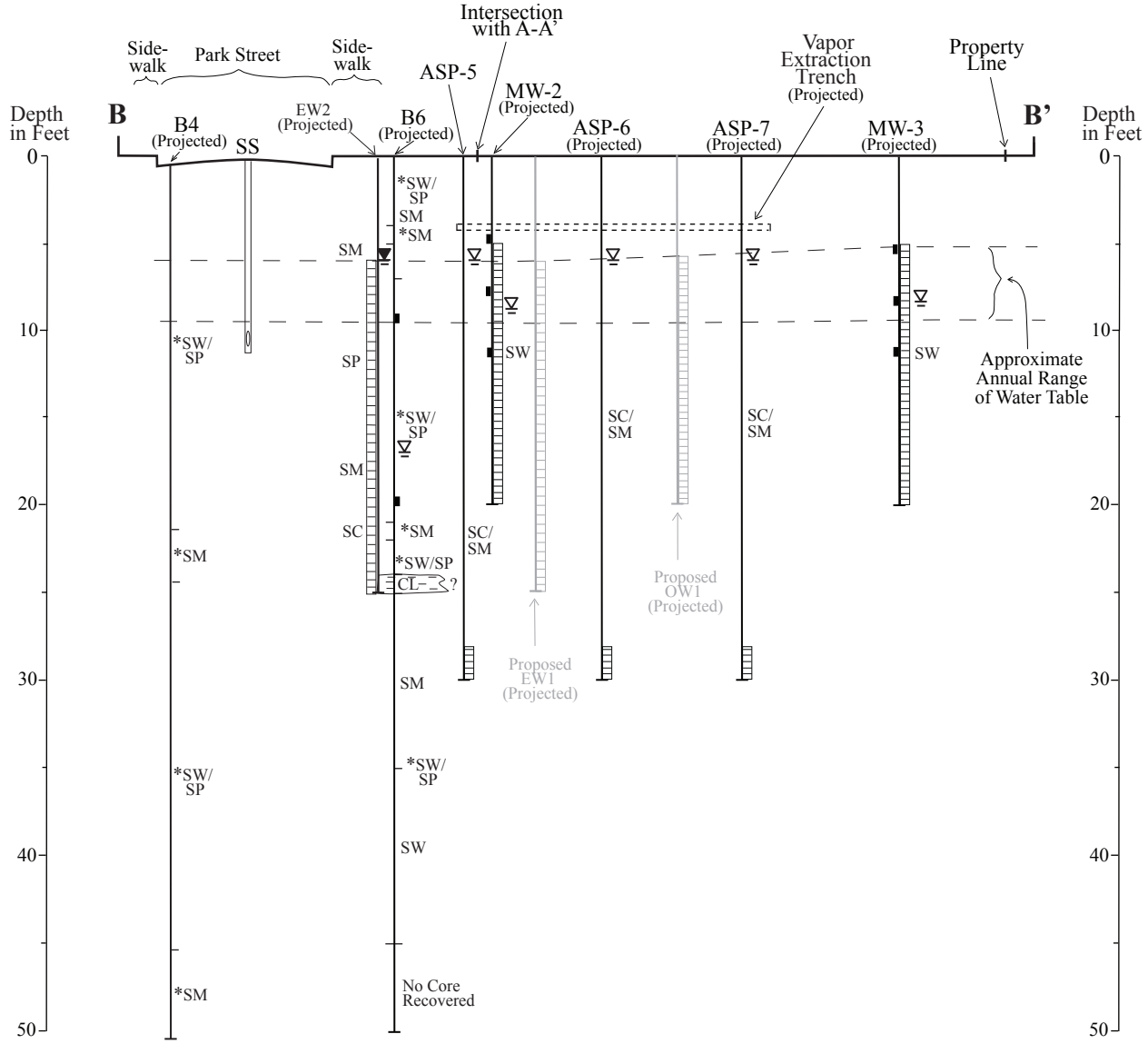


Figure 4
Geologic Cross Section A-A'
1701 Park Street
Alameda, California

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



LEGEND

- Screened Interval of Well
- Soil Sampling Location
- SS — Sanitary Sewer Trench
- CL — Fine-Grained Soil
- SC,SW,SM,SP — Coarse-Grained Soil
- (CL; SC,SW,SM,SP) > Unified Soil Classification System
- * — Soil Classification Determined From Conductivity Probe Log
- Fine-Grained Soil
- First Encountered Groundwater
- Subsequent Groundwater Level

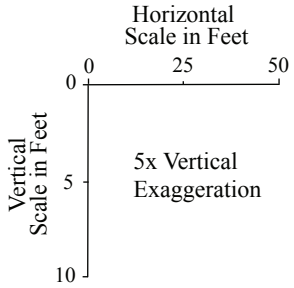


Figure 5
Geologic Cross Section B-B'
1701 Park Street
Alameda, California

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

APPENDIX A

Boring Logs

P&D ENVIRONMENTAL, INC.

BORING NO.: EW2	PROJECT NO.: 0058	PROJECT NAME: Xtra Oil, 1701 Park St., Alameda	
BORING LOCATION: In lanscaped area, approx. 9 ft. northwest of Park St. & 15 ft. east of Buena Vista Ave.		ELEVATION AND DATUM: 22.13 ft. MSL NAVD 88	
DRILLING AGENCY: Exploration Geoservices, Inc.	DRILLER: Dave	DATE & TIME STARTED: 5/18/11 1015	DATE & TIME FINISHED: 5/19/11 1130
DRILLING EQUIPMENT: Mobile B-61 Hollow Stem Auger Drill Rig			
COMPLETION DEPTH: 25.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLD	CHECKED BY: PMK
FIRST WATER DEPTH: 9.0 Feet	NO. OF SAMPLES: None		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 2.5 ft. Brown silty sand (SM); loose, moist. No Petroleum Hydrocarbon (PHC) odor.			See Well Construction Diagram	14	Borehole hand augered from 0.0 to 3.0 ft. using a 3.5-inch O.D. stainless steel hand auger. Borehole drilled from 3.0 to 25.0 ft. using a truck-mounted 12-inch O.D. hollow stem auger drill rig.
	2.5 to 5.0 ft. Grayish-black silty sand (SM); loose, moist, with some coarse angular gravel to 0.25-inch diameter. Slight PHC odor.	SM				
5	5.0 to 8.0 ft. Bluish-green silty sand (SM); loose, moist to wet. Strong PHC odor. Wet at 7.0 ft.		3 3 3		116	Soil collected for lithologic logging using a 1-1/2-inch O.D. SPT split spoon sampler driven by a 140-pound down-hole hammer falling 30 inches.
	Saturated at 9.0 ft.			▽		Water encountered during drilling at 9.0 ft.
10	8.0 to 15.0 ft. Bluish-green fine sand (SP); medium dense. Slight PHC odor at 10.0 ft.	SP	3 7 8	▼	4	Water level in borehole measured at 9.7 ft. at 1105, when borehole was drilled to 10.0 ft.
15			9 11 15		0	
	15.0 to 20.0 ft. Brown silty fine sand (SM); medium dense, saturated, with orange mottling. No PHC odor.	SM				
20			9 13 14		0	
	20.0 to 25.0 ft. Gray clayey fine sand (SC); medium dense, saturated, with orange mottling. No PHC odor.	SC				
25			11		0	
						Borehole terminated at 25.0 ft. on 5/18/11. Well constructed in borehole on 5/18/11. Mr. James Yoo, with Alameda County Public Works Agency, onsite to observe and document pouring of the sanitary seal on 5/19/11.
30						

P&D ENVIRONMENTAL, INC.

BORING NO.: EW4	PROJECT NO.: 0058	PROJECT NAME: Xtra Oil, 1701 Park St., Alameda	
BORING LOCATION: Approximately 30 ft. northwest of Park St. & 4 ft. southwest of planter curb			ELEVATION AND DATUM: 21.96 ft. MSL NAVD 88
DRILLING AGENCY: Exploration Geoservices, Inc.	DRILLER: Dave	DATE & TIME STARTED: 5/18/11 1340	DATE & TIME FINISHED: 5/19/11 1100
DRILLING EQUIPMENT: Mobile B-61 Hollow Stem Auger Drill Rig			
COMPLETION DEPTH: 25.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLD	CHECKED BY: PMK
FIRST WATER DEPTH: 9.0 Feet	NO. OF SAMPLES: None		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 0.3 ft. Concrete slab.			See Well Construction Diagram		
	0.3 to 3.0 ft. Dark grayish-black gravelly clayey sand (FILL); loose, moist, with brick fragments. Slight Petroleum Hydrocarbon (PHC) odor.	FILL			16	Borehole hand augered from 0.0 to 2.0 ft. using a 3.5-inch O.D. stainless steel hand auger. Borehole drilled from 2.0 to 25.0 ft. using a truck-mounted 12-inch O.D. hollow stem auger drill rig.
5	3.0 to 9.0 ft. Dark gray silty fine sand (SM); medium dense, moist. Strong PHC odor.		2 5 7		118	Soil collected for lithologic logging using a 1-1/2-inch O.D. SPT split spoon sampler driven by a 140-pound down-hole hammer falling 30 inches.
	Wet at 8.0 ft.			▼ ▽		Water encountered during drilling at 9.0 ft.
10	Saturated at 9.0 ft. Color change to bluish-gray at 9.0 ft. Slight PHC odor.		6 9 12		2	Water level in borehole measured at 8.5 ft. at 1440, when borehole was drilled to 10.0 ft.
		SM				
15	Color change to brown, with orange mottling at 15.0 ft. No PHC odor.		9 11 10		0	
20	Color change to gray, with orange mottling at 20.0 ft. No PHC odor.		9 13 14		0	
25	Color change to brown, with gray mottling at 22.0 ft. No PHC odor.		13		0	
						Borehole terminated at 25.0 ft. on 5/18/11. Well constructed in borehole on 5/18/11. Mr. James Yoo, with Alameda County Public Works Agency, onsite to observe and document pouring of the sanitary seal on 5/19/11.
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P&D ENVIRONMENTAL, INC.

BORING NO.: EW5	PROJECT NO.: 0058	PROJECT NAME: Xtra Oil, 1701 Park St., Alameda	
BORING LOCATION: Approximately 57 ft. northwest of Park St. & 4 ft. southwest of planter curb		ELEVATION AND DATUM: 22.19 ft. MSL NAVD 88	
DRILLING AGENCY: Exploration Geoservices, Inc.	DRILLER: Dave	DATE & TIME STARTED: 5/19/11 0745	DATE & TIME FINISHED: 5/19/11 1100
DRILLING EQUIPMENT: Mobile B-61 Hollow Stem Auger Drill Rig			
COMPLETION DEPTH: 25.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLD	CHECKED BY: PMK
FIRST WATER DEPTH: 9.0 Feet	NO. OF SAMPLES: None		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 0.3 ft. Concrete slab.			See Well Construction Diagram		Borehole drilled from 0.0 to 25.0 ft. using a truck-mounted 12-inch O.D. hollow stem auger drill rig.
	0.3 to 3.0 ft. Dark grayish-black gravelly sand (FILL); loose, moist. Slight Petroleum Hydrocarbon (PHC) odor.	FILL			12	
5	3.0 to 10.0 ft. Bluish-gray clayey fine sand (SC); medium dense, moist. Strong PHC odor.	SC	5 7 9		164	Soil collected for lithologic logging using a 1-1/2-inch O.D. SPT split spoon sampler driven by a 140-pound down-hole hammer falling 30 inches.
	Wet at 8.0 ft. Saturated at 9.0 ft.			▼		Water encountered during drilling at 9.0 ft.
10			5 9 7		15	Water level in borehole measured at 9.3 ft. at 0750, when borehole was drilled to 10.0 ft.
	10.0 to 24.0 ft. Bluish-green silty fine sand (SM); medium dense, saturated. Slight PHC odor.					
15			5 7 9		0	
	Color change to brown with orange mottling at 14.0 ft. No PHC odor.	SM				
20			7 9 11		0	
	Color change to bluish-gray with dark brown mottling at 20.0 ft. No PHC odor.					
	Color change to brown, with gray mottling at 24.0 ft. No PHC odor.				0	
25			9			
						Borehole terminated at 25.0 ft. on 5/19/11. Well constructed in borehole on 5/19/11. Mr. James Yoo, with Alameda County Public Works Agency, onsite to observe and document pouring of the sanitary seal on 5/19/11.
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P&D ENVIRONMENTAL, INC.

BORING NO.: OW2	PROJECT NO.: 0058	PROJECT NAME: Xtra Oil, 1701 Park St., Alameda	
BORING LOCATION:	Approximately 98 ft. northwest of Park St., and 4 ft. southwest of planter	ELEVATION AND DATUM:	22.55 ft. MSL NAVD 88
DRILLING AGENCY:	Exploration Geoservices, Inc.	DRILLER: Dave	DATE & TIME STARTED: 5/19/11 0940 / DATE & TIME FINISHED: 5/19/11 1100
DRILLING EQUIPMENT:	Mobile B-61 Hollow Stem Auger Drill Rig		
COMPLETION DEPTH: 20.0 Feet	BEDROCK DEPTH: Not Encountered		LOGGED BY: MLD / CHECKED BY: PHK
FIRST WATER DEPTH: 9.0 Feet	NO. OF SAMPLES: None		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 0.3 ft. Concrete slab.			See Well Construction Diagram		Borehole drilled from 0.0 to 20.0 ft. using a truck-mounted 12-inch O.D. hollow stem auger drill rig.
	0.3 to 3.0 ft. Dark grayish-black gravelly sand (FILL); loose, moist. No Petroleum Hydrocarbon (PHC) odor.	FILL			0	Soil collected for lithologic logging using a 1-1/2-inch O.D. SPT split spoon sampler driven by a 140-pound down-hole hammer falling 30 inches.
5	3.0 to 10.0 ft. Brown silty fine sand (SM); loose, moist, with orange mottling. No PHC odor.		3 4 5		0	
	Wet at 8.0 ft.			▼		
	Saturated at 9.0 ft.			▽		Water encountered during drilling at 9.0 ft.
10	Color change to bluish-gray at 10.0 ft. Slight PHC odor.	SM	9 10 11		3	Water level in borehole measured at 8.9 ft. at 0950, when borehole was drilled to 10.0 ft.
15	Color change to brown, with gray and orange mottling at 15.0 ft. No PHC odor.		5 5 6		0	
	Color change to bluish-gray, with orange mottling at 19.0 ft. No PHC odor.		10		0	
20						Borehole terminated at 20.0 ft. on 5/19/11. Well constructed in borehole on 5/19/11. Mr. James Yoo, with Alameda County Public Works Agency, onsite to observe and document pouring of the sanitary seal on 5/19/11.
25						
30						

APPENDIX B

Well Construction Diagrams

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

WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER 0058

PROJECT NAME Xtra Oil, Alameda

COUNTY Alameda

WELL PERMIT NO. 2011-0294

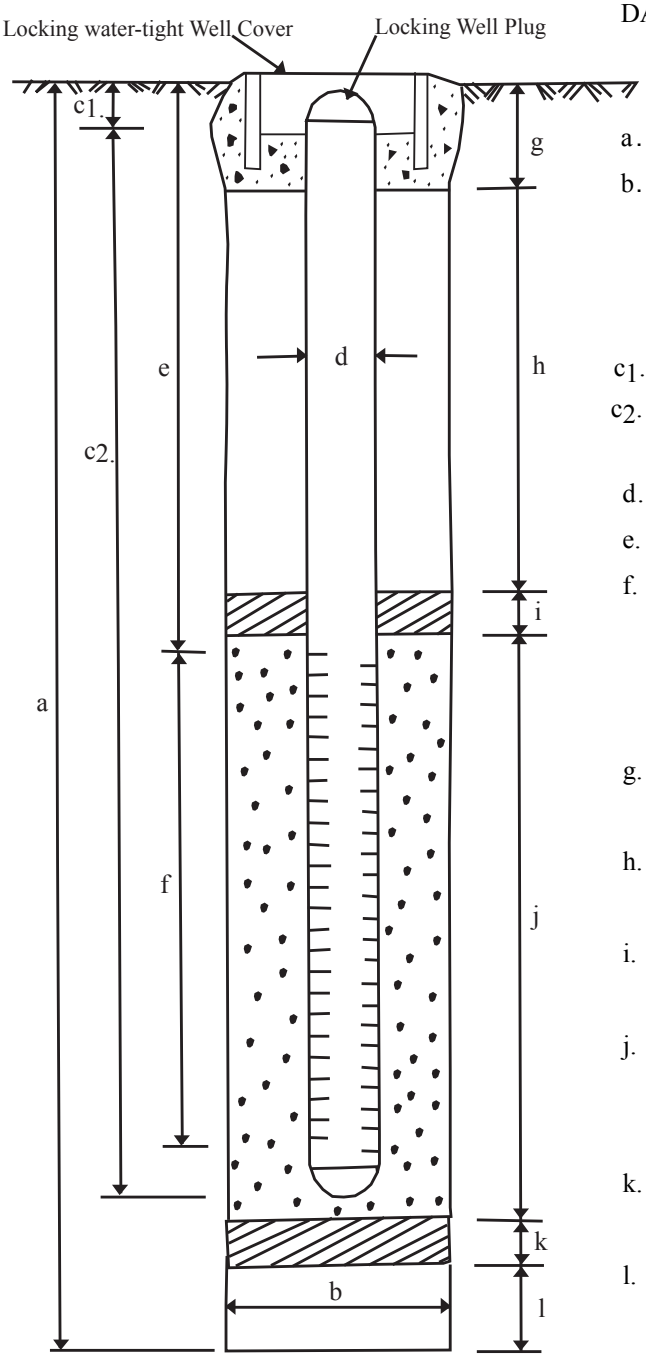
BORING/WELL NO. EW2

TOP OF CASING ELEV. 22.13 ft.

GROUND SURFACE ELEVATION 23.04 ft.

DATUM 30.87 ft., NAVD88

DATE(S) CONSTRUCTED 5/18/11



EXPLORATORY BORING

a. Total depth 25.0 ft.

b. Diameter 12.0 in.

Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

c_1. Distance to Casing length 1.0 ft.

c_2. Casing length 24.0 ft.

Material PVC Schedule 40

d. Diameter 4.0 in.

e. Depth to top of perforations 5.0 ft.

f. Perforated length 20.0 ft.

Perforated interval from 5.0 to 25.0 ft.

Perforation type Factory Slotted PVC

Perforation size 0.020 in.

g. Surface sanitary seal 1.0 ft.

Seal material Concrete

h. Sanitary seal 2.0 ft.

Seal material Portland cement type I-II

i. Filter pack seal 1.0 ft.

Seal material Bentonite

j. Filter pack length 21.0 ft.

Filter pack interval from 4.0 to 25.0 ft.

Pack material # 3 sand

k. Bottom seal 0 ft.

Seal material None

l. Sluff in bottom of borehole 0 ft.

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

WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER 0058

PROJECT NAME Xtra Oil, Alameda

COUNTY Alameda

WELL PERMIT NO. 2011-0294

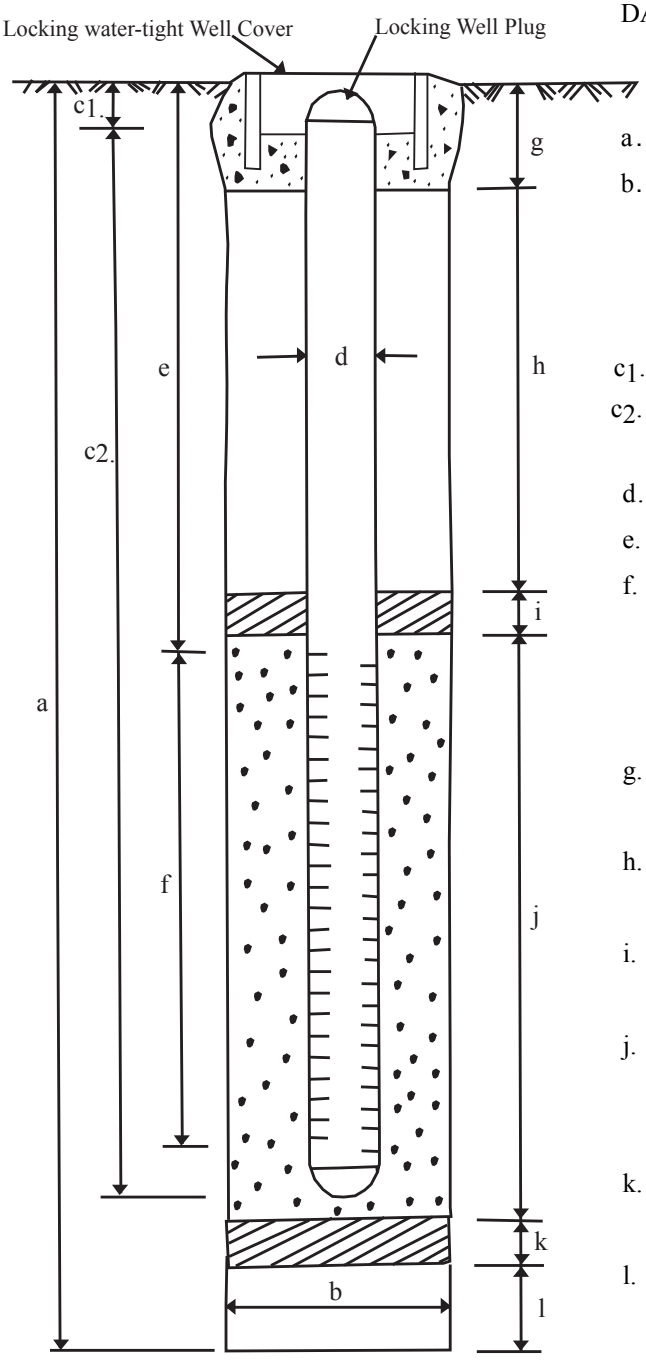
BORING/WELL NO. EW4

TOP OF CASING ELEV. 20.95 ft.

GROUND SURFACE ELEVATION 21.96 ft.

DATUM 30.87 ft., NAVD88

DATE(S) CONSTRUCTED 5/18/11



EXPLORATORY BORING

a. Total depth 25.0 ft.

b. Diameter 12.0 in.

Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

c_1. Distance to Casing length 1.0 ft.

c_2. Casing length 24.0 ft.

Material PVC Schedule 40

d. Diameter 4.0 in.

e. Depth to top of perforations 5.0 ft.

f. Perforated length 20.0 ft.

Perforated interval from 5.0 to 25.0 ft.

Perforation type Factory Slotted PVC

Perforation size 0.020 in.

g. Surface sanitary seal 1.0 ft.

Seal material Concrete

h. Sanitary seal 2.0 ft.

Seal material Portland cement type I-II

i. Filter pack seal 1.0 ft.

Seal material Bentonite

j. Filter pack length 21.0 ft.

Filter pack interval from 4.0 to 25.0 ft.

Pack material # 3 sand

k. Bottom seal 0 ft.

Seal material None

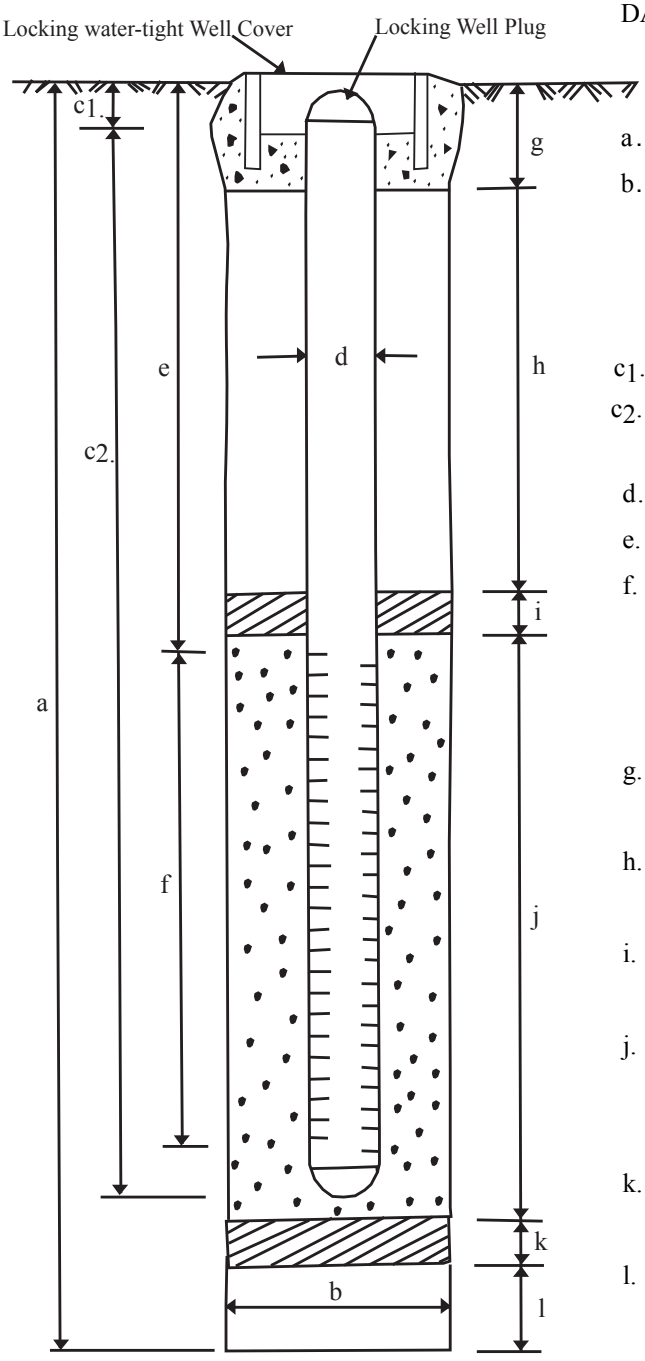
l. Sluff in bottom of borehole 0 ft.

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

WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER 0058
PROJECT NAME Xtra Oil, Alameda
COUNTY Alameda
WELL PERMIT NO. 2011-0294

BORING/WELL NO. EW5
TOP OF CASING ELEV. 21.20 ft.
GROUND SURFACE ELEVATION 22.19 ft.
DATUM 30.87 ft., NAVD88
DATE(S) CONSTRUCTED 5/18/11



EXPLORATORY BORING

a. Total depth 25.0 ft.
b. Diameter 12.0 in.
Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

c_1. Distance to Casing length 1.0 ft.
c_2. Casing length 24.0 ft.
Material PVC Schedule 40
d. Diameter 4.0 in.
e. Depth to top of perforations 5.0 ft.
f. Perforated length 20.0 ft.
Perforated interval from 5.0 to 25.0 ft.
Perforation type Factory Slotted PVC
Perforation size 0.020 in.
g. Surface sanitary seal 1.0 ft.
Seal material Concrete
h. Sanitary seal 2.0 ft.
Seal material Portland cement type I-II
i. Filter pack seal 1.0 ft.
Seal material Bentonite
j. Filter pack length 21.0 ft.
Filter pack interval from 4.0 to 25.0 ft.
Pack material # 3 sand
k. Bottom seal 0 ft.
Seal material None
l. Sluff in bottom of borehole 0 ft.

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

WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER 0058

PROJECT NAME Xtra Oil, Alameda

COUNTY Alameda

WELL PERMIT NO. 2011-0295

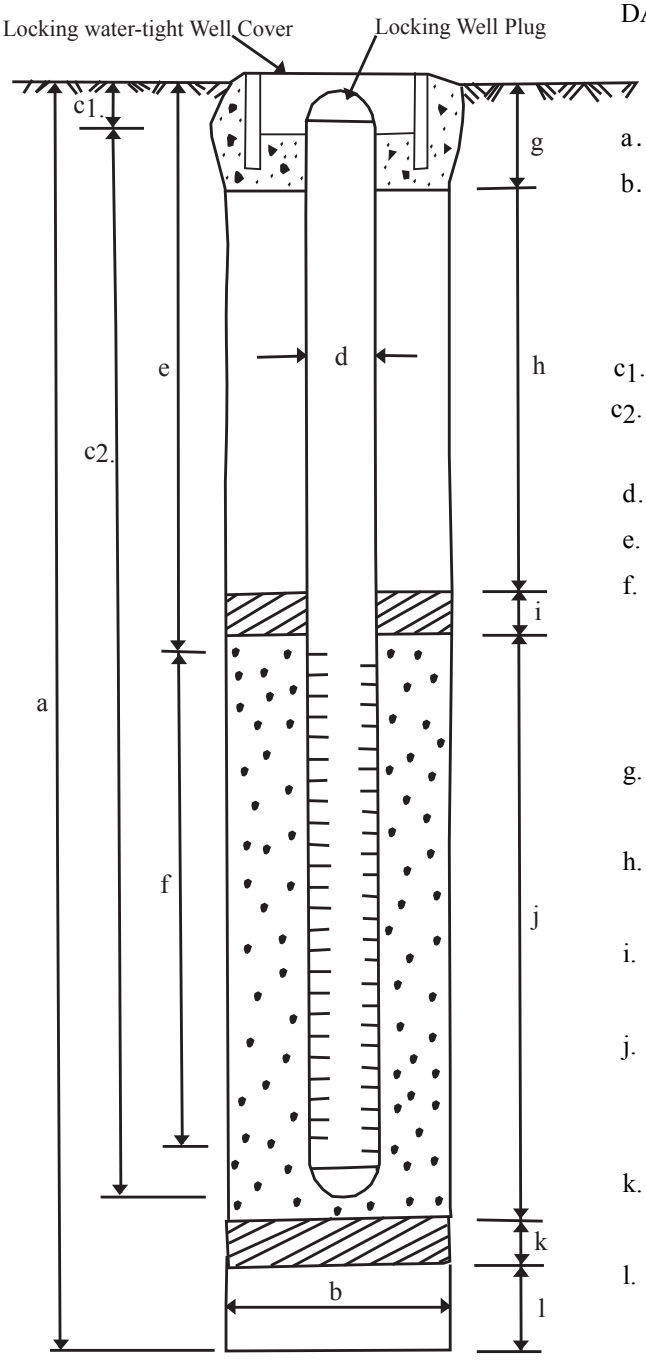
BORING/WELL NO. OW2

TOP OF CASING ELEV. 21.55 ft.

GROUND SURFACE ELEVATION 22.55 ft.

DATUM 30.87 ft., NAVD88

DATE(S) CONSTRUCTED 5/19/11



EXPLORATORY BORING

a. Total depth 20.0 ft.

b. Diameter 12.0 in.

Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

c_1. Distance to Casing length 1.0 ft.

c_2. Casing length 19.0 ft.

Material PVC Schedule 40

d. Diameter 4.0 in.

e. Depth to top of perforations 5.0 ft.

f. Perforated length 15.0 ft.

Perforated interval from 5.0 to 20.0 ft.

Perforation type Factory Slotted PVC

Perforation size 0.020 in.

g. Surface sanitary seal 1.0 ft.

Seal material Concrete

h. Sanitary seal 2.0 ft.

Seal material Portland cement type I-II

i. Filter pack seal 1.0 ft.

Seal material Bentonite

j. Filter pack length 16.0 ft.

Filter pack interval from 4.0 to 20.0 ft.

Pack material # 3 sand

k. Bottom seal 0 ft.

Seal material None

l. Sluff in bottom of borehole 0 ft.

APPENDIX C

Survey Data

TABLE OF ELEVATIONS & COORDINATES
ON MONITORING WELLS

XTRA OIL COMPANY
1701 PARK STREET, ALAMEDA

WELL ID #	NORTHING (FT.) / LATITUDE (D.M.S.)	EASTING (FT.) / LONGITUDE (D.M.S.)	ELEVATION (FT.)	DESCRIPTION
MW-1	2106943.0594	6058921.0074	22.36	2" PVC NORTH SIDE
	N 37° 46' 06.40845"	W 122° 14' 21.91970"	22.74	RIM OF WELL
			22.28	GROUND SOUTH SIDE
MW-2	2106893.6652	6058860.6336	23.10	2" PVC NORTH SIDE
	N 37° 46' 05.90909"	W 122° 14' 22.66008"	23.34	RIM OF WELL
			23.60	GROUND SOUTH SIDE
MW-3	2106949.1626	6058746.9405	23.35	2" PVC NORTH SIDE
	N 37° 46' 06.43679"	W 122° 14' 24.08870"	23.65	RIM OF WELL
			23.50	GROUND SOUTH SIDE
MW-4	2106986.1784	6058867.3859	22.48	2" PVC NORTH SIDE
	N 37° 46' 06.82484"	W 122° 14' 22.59741"	22.86	RIM OF WELL
			22.68	GROUND SOUTH SIDE
OW2	2106989.9881	6058848.5323	21.55	4" PVC NORTH SIDE
	N 37° 46' 06.85903"	W 122° 14' 22.83307"	22.50	RIM OF WELL
			22.55	CONC. SOUTH SIDE
EW2	2106892.5317	6058885.6701	22.13	4" PVC NORTH SIDE
	N 37° 46' 05.90249"	W 122° 14' 22.34804"	23.03	RIM OF WELL
			23.04	GROUND SOUTH SIDE
EW4	2106956.5276	6058906.9120	20.95	4" PVC NORTH SIDE
	N 37° 46' 06.53900"	W 122° 14' 22.09834"	21.95	RIM OF WELL
			21.96	CONC. SOUTH SIDE
EW5	2106969.6498	6058883.9952	21.20	4" PVC NORTH SIDE
	N 37° 46' 06.66450"	W 122° 14' 22.38675"	22.18	RIM OF WELL
			22.19	CONC. SOUTH SIDE

Kier & Wright Civil Engineers & Surveyors
2850 Collier Canyon Road, Livermore, CA 94551
Phone: (925) 245-8788
Fax: (925) 245-8796

TABLE OF ELEVATIONS & COORDINATES
ON MONITORING WELLS

XTRA OIL COMPANY
1701 PARK STREET, ALAMEDA

BENCHMARK: NGS BENCHMARK PID HT0031
DESCRIBED BY COAST AND GEODETIC SURVEY 1947

AT ALAMEDA, AT THE NORTHWEST CORNER OF THE INTERSECTION OF SANTA CLARA AND PARK STREET, 5.8 FEET NORTH OF THE PROLONGATION OF THE NORTH CURB OF THE AVENUE, 3.8 FEET WEST OF THE PROLONGATION OF THE WEST CURB OF THE STREET, 0.8 FOOT BELOW THE SURFACE OF THE SIDEWALK, AND ENCASED IN AN 8-INCH IRON PIPE WITH A CAST IRON COVER FLUSH WITH THE SIDEWALK.

ELEVATION = 30.87 NAVD 88 VERTCON

HORIZONTAL CONTROL:
PID: HT2358
NORTHING: 2106567.18, EASTING: 6058662.00, EPOCH DATE: 1991.35

PID: HT2543
NORTHING: 2107412.38, EASTING: 6059254.40, EPOCH DATE: 1991.35

Coordinate values are based on the California Coordinate System, Zone III NAD 83 Datum.

Kier & Wright Civil Engineers & Surveyors
2850 Collier Canyon Road, Livermore, CA 94551
Phone: (925) 245-8788
Fax: (925) 245-8796

APPENDIX D

Well Development Data Sheets

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil - 1701 Park St., Alameda
Well No. ~~0058~~ sic EW-2
Job No. 0058
Date 5/24/11
Pre-Development
TOC to Water (ft.) 6.12
Sheen yes
Well Depth (ft.) 23.4
Free Product Thickness Ø
Well Diameter 4"
Sample Collection Method No
Gal./Casing Vol. —
Samples collected; well development only

TIME	GAL. PURGED	pH	TEMPERATURE	ELECTRICAL CONDUCTIVITY
1515	Purged a total of ~50 gallons		sediments started out heavy & ~~end~~ were light-moderate by end purge.	
1629	DTW ⇒ 7.64		TD ⇒ 23.7' (from TOC)	
			hard bottom	

NOTES: Sheen & moderate phc odor.

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil - 1701 Park St, Alameda
Job No. 0058
Pre-Development
TOC to Water (ft.) 4.75
Well Depth (ft.) 20.1
Well Diameter 4"
Gal./Casing Vol. —

Well No. EW-4
Date 5/24/11
Sheen yes
Free Product Thickness 0
Sample Collection Method ~~0~~ SC
No samples collected; well development only

TIME	GAL. PURGED	pH	TEMPERATURE	ELECTRICAL CONDUCTIVITY
1330	Purged a total of ~65 gallons, sediments started very heavy & were still moderate to heavy at end purge.			
		soft bottom		
1631	DTW => 5.05	TD => 22.4 (from TOC)		

NOTES: ~~As~~ Sheen & light-mod phc odor.

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil - 1701 Park St., Alameda
Well No. ~~0~~ EW-5
Job No. 0058
Date 5/24/11
Pre-development → TOC to Water (ft.) 4.74
Sheen No
Well Depth (ft.) 22.0
Free Product Thickness Ø
Well Diameter 4"
Sample Collection Method No
Gal./Casing Vol. —
Samples Collected; well development only

TIME	GAL. PURGED	pH	TEMPERATURE	ELECTRICAL CONDUCTIVITY
1235	Purged a total of ~65 gallons; sediments started out very heavy & ended up light-moderate by end purge.			
1634	DTW ⇒ 4.99		TD ⇒ 23.7 (from TOC)	
		hard bottom		

NOTES: No sheen; light-moderate phc odor.

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil - 1701 Park St. Alameda
Well No. OW-2
Job No. 0058
Date 5/24/11
Pre development
TOC to Water (ft.) 4.79
Sheen No
Well Depth (ft.) 17.0
Free Product Thickness 0
Well Diameter 4"
Sample Collection Method
Gal./Casing Vol. —
No Samples Collected - Well development only

TIME	GAL. PURGED	pH	TEMPERATURE	ELECTRICAL CONDUCTIVITY
1130	Purged 25 gallons		very heavy sediments	
	Purged additional 25 gallons		mod-heavy sediments	
	Purged a total of ~60 gallons		light-moderate sediments	
1637	DTW ⇒ 4.85		TD ⇒ 19.7 (from TOC)	
	can feel some silt at bottom of well & hard bottom as well			

NOTES: No sheen; light-moderate phc odor.

PURGE10.92

APPENDIX E

Well Monitoring/Purge Data Sheets

P&D Environmental
Groundwater Monitoring/Well Purging Data Sheet

Site Name: Xtra Oil - 1701 Park St., Alameda
Well No.: ~~MW-3~~ s/c MW-1
Job Number: 0058
Date: 5/26/11
TOC to Water (ft.): 5.86
Sheen: No
Well Depth (ft.): ~~19.3~~ s/c 19.2
Free Product Thickness: Ø
Well Diameter: 2"
Sample Collection Method: Peri pump + new unused PE tubing
Flow Rate (mL/minute): ~450
Start Purge Time: 1525

Time	Vol. Purged (mL)	pH	Depth to Water (ft.)	Temperature (C°)	Electrical Conductivity (µS/cm)	Turbidity (NTU)
1528	1,350	7.06	6.87	22.8	710	0
1530	2,250	6.99	6.99	21.4	671	0
1533	3,600	6.96	7.07	20.9	670	0
1535	4,500	6.94	7.11	20.6	677	0
1538	5,850	6.90	7.12	20.6	685	0
1540	6,750	6.82	7.13	20.5	678	0
			End Purge			

NOTES

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

No sheen; strong phc odor.

Sample time ⇒ 1555

P&D Environmental
Groundwater Monitoring/Well Purging Data Sheet

Site Name Xtra Oil - 1701 Pack St., Alameda
Well No. MW-2
Job Number 0058
Date 5/26/11
TOC to Water (ft.) 6.90
Sheen yes
Well Depth (ft.) 13.4
Free Product Thickness Ø
Well Diameter 2"
Sample Collection Method
Flow Rate (mL/minute) ~450 Peri-pump & new unused PE tubing
Start Purge Time 1635

Time	Vol. Purged (mL)	pH	Depth to Water (ft.)	Temperature (C°)	Electrical Conductivity (µS/cm)	Turbidity (NTU)
1638	1,350	6.58	7.30	20.4	817	0
1641	2,700	6.51	7.47	20.2	802	0
1644	4,050	6.49	7.54	20.3	780	0
1646	4,950	6.48	7.59	20.3	778	0
1650	6,750	6.47	7.64	20.2	763	0
		end purge				

NOTES

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

sheen, strong phc odor
Sample time => 1700

P&D Environmental
Groundwater Monitoring/Well Purging Data Sheet

Site Name Xtra Oil - 170 Park St., Alameda
Well No. MW-B
Job Number 0058
Date 5/26/11
TOC to Water (ft.) 6.19
Sheen No
Well Depth (ft.) ~~19.7~~ Sic 19.3
Free Product Thickness Ø
Well Diameter 2"
Sample Collection Method
Flow Rate (mL/minute) ~450 ml/min Peri pump. & new unused PE tubing
Start Purge Time 1142

Time	Vol. Purged (mL)	pH	Depth to Water (ft.)	Temperature (C°)	Electrical Conductivity (µS/cm)	Turbidity (NTU)
1145	1,350	5.08	6.70	20.2	588	5.64
1148	2,700	4.89	6.90	19.5	368	0
1151	4,050	5.00	7.06	19.3	364	0
1153	4,950	5.12	7.19	19.1	332	0
1156	6,300	5.20	7.27	19.0	326	0
1158	7,200	5.27	7.34	19.0	327	0
1200	8,100	5.30	7.37	19.2	327	0
			end purge			

NOTES

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

Sample Collected @ 1215hrs

No odor & no sheen.

P&D Environmental
Groundwater Monitoring/Well Purging Data Sheet

Site Name Xtra Oil - 1701 Poplar St., Alameda
Well No. MW-4
Job Number 0058
Date 5/26/11
TOC to Water (ft.) 6.41
Sheen No.
Well Depth (ft.) 10.7
Free Product Thickness 0
Well Diameter 2"
Sample Collection Method
Flow Rate (mL/minute) ~450 mL
Peri pump & new unused PE tubing
Start Purge Time 1349

Time	Vol. Purged (mL)	pH	Depth to Water (ft.)	Temperature (C°)	Electrical Conductivity (µS/cm)	Turbidity (NTU)
1351		7.10	7.81	20.3	482	0
1357	Rate dropped to decrease	7.10	7.80	20.6	471	0.06
1404		7.10	7.80	20.9	466	0
		End purge		Total purged ~ 1,300 mL		

NOTES

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

No sheen, mod. strong phc odo.
Sample time => 1415 hrs

P&D Environmental
Groundwater Monitoring/Well Purging Data Sheet

Site Name: Xtra Oil - 1701 Park St., Alameda
Well No.: EW-7
Job Number: 0058
Date: 5/26/11
TOC to Water (ft.): 6.14
Sheen: No
Well Depth (ft.): 23.6
Free Product Thickness: Ø
Well Diameter: 4"
Sample Collection Method: Peri pump & new unused PE tubing
Flow Rate (mL/minute): ~450
Start Purge Time: 1601

Time	Vol. Purged (mL)	pH	Depth to Water (ft.)	Temperature (C°)	Electrical Conductivity (µS/cm)	Turbidity (NTU)
1604	1,350	6.66	6.36	19.6	900	0
1607	2,700	6.76	6.49	19.7	882	0
1610	4,050	6.82	6.57	19.5	882	0
1613	5,400	6.86	6.63	19.5	892	0
1616	6,750	6.87	6.66	19.5	888	0
		end purge				

NOTES

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

light phc odor, no sheen

Sample time => 1625

P&D Environmental
Groundwater Monitoring/Well Purging Data Sheet

Site Name: Xtra Oil - 1701 Park St, Alameda
Well No.: EW-4
Job Number: 0058
Date: 5/26/11
TOC to Water (ft.): 4.77
Sheen: N.D
Well Depth (ft.): 21.8
Free Product Thickness: 0
Well Diameter: 4"
Sample Collection Method: Peri. pump + new unused PE tubing
Flow Rate (mL/minute): ~450
Start Purge Time: 1450

Time	Vol. Purged (mL)	pH	Depth to Water (ft.)	Temperature (C°)	Electrical Conductivity (µS/cm)	Turbidity (NTU)
1453 ~~1450~~ sc	1,350	7.21	5.08	23.4	613	9.87
1456	2,700	7.33	5.21	21.4	595	3.21
1458	3,600	7.30	5.29	21.0	600	3.79
1501	4,950	7.20	5.34	20.5	588	2.44
1503	6,750	7.15	5.39	20.3	585	2.32
			End purge			

NOTES

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

No sheen, light phc odor
Sample time = 1515

P&D Environmental
Groundwater Monitoring/Well Purging Data Sheet

Site Name: Xtra Oil - 1701 Park St., Alameda
Well No.: EW5
Job Number: 0058
Date: 5/26/11
TOC to Water (ft.): 4.88
Sheen: No
Well Depth (ft.): 23.7
Free Product Thickness: Ø
Well Diameter: 4"
Sample Collection Method: Peri. pump + new tubing
Flow Rate (mL/minute): ~450
Start Purge Time: 1310

Time	Vol. Purged (mL)	pH	Depth to Water (ft.)	Temperature (C°)	Electrical Conductivity (µS/cm)	Turbidity (NTU)
1312	900	7.24	4.89	21.0	619	1.06
1315	2,250	7.08	5.06	19.2	533	0.96
1318	3,600	7.04	5.15	18.7	541	0.78
1321	4,950	6.89	5.71	18.3	549	0.56
1323	5,850	6.84	5.24	18.3	572	0.94
1326	7,200	6.83	5.27	18.3	589	1.75
			End purge			

NOTES

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

mod - strong phe odor; No sheen

Sample time => 1345hrs

P&D Environmental
Groundwater Monitoring/Well Purging Data Sheet

Site Name Xtra Oil - 1701 Park St., Alameda
Well No. OW-2
Job Number 0058
Date 5/26/11
TOC to Water (ft.) 4.82
Sheen No
Well Depth (ft.) 18.7
Free Product Thickness Ø
Well Diameter 4"
Sample Collection Method
Flow Rate (mL/minute) ~450.
Peri. pump & new unused PE tubing
Start Purge Time 1227

Time	Vol. Purged (mL)	pH	Depth to Water (ft.)	Temperature (C°)	Electrical Conductivity (µS/cm)	Turbidity (NTU)
1230	1,350	6.11	4.99	17.8	772	1.69
1234	3,150	6.30	5.11	17.9	665	4.81
1237	4,500	6.38	5.17	17.8	650	4.43
1240	5,850	6.46	5.22	17.8	655	4.37
1242	6,750	6.52	5.25	17.7	653	4.74
1244	7,650	6.56	5.28	17.5	652	1.73
			End purge			

NOTES

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

No sheen possible very light phenol odor.
Sample time ⇒ 1300

APPENDIX F

Drum Disposal Manifests

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	2. Page 1 of 1	3. Document Number
		08554

GENERATOR

4. Generator's Name and Mailing Address
Xtra Oil Company
1201 the Alameda
Berkeley, CA 94709
510-658-6916
Generator's Phone

Site:
1701 Park Street
Alameda, CA

5. Transporter Company Name	6. US EPA ID Number	7. Transporter Phone
CLEARWATER ENVIRONMENTAL	CAR000007013	(510) 476-1740

8. Designated Facility Name and Site Address	9. US EPA ID Number	10. Facility's Phone
Alviso Independent Oil 5002 Archer Street Alviso, CA 95002	CAL 000 161 743	510-476-1740

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non-Hazardous waste	10	Dm	10,000	P
b.				

15. Special Handling Instructions and Additional Information
Wear PPE
Emergency Contact
(510) 476-1740
Attn: Charles Seaton

Handling Codes for Wastes Listed Above
11a. | 11b.

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: X Ai T. L. WAN
Signature:
Month: 5 Day: 27 Year: 11

TRANSPORTER

17. Transporter Acknowledgement of Receipt of Materials

Printed/Typed Name: RENARD WILLIAMS
Signature:
Month: 5 Day: 27 Year: 11

FACILITY

18. Discrepancy Indication Space

19. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 18.

Printed/Typed Name: Charles Seaton
Signature:
Month: 05 Day: 27 Year: 11

WHITE–ORIGINAL (Return to Generator) YELLOW–TSDF (Retain Copy) PINK–TRANSPORTER COPY GOLDENROD–GENERATOR'S COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAL000115450
2. Page 1 of: 1
3. Emergency Response Phone: (510)476-1740
4. Manifest Tracking Number: 007275639 JJK

5. Generator's Name and Mailing Address:
XTRA OIL (SHELL) ALAMEDA
2307 PACIFIC AVENUE
ALAMEDA CA 945012918

Generator's Site Address (if different than mailing address):
1701 PARK STREET
ALAMEDA CA 94502

Generator's Phone: 510-658-6916

6. Transporter 1 Company Name: UNI WASTE — U.S. EPA ID Number: CAL000317320

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
CROSBY & OVERTON
1630 W. 17TH STREET
LONG BEACH CA 90813
Facility's Phone: (562)432-5445
U.S. EPA ID Number: CAD028409019

GENERATOR

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, NOS 9, UN 3082, PG III (WATER WITH TRACE BENZENE)	06	DM	300	G	D018 F001 343
	2					
	3					
	4					

14. Special Handling Instructions and Additional Information

WEAR PPE ERG # 171 EMERGENCY CONTACT: CHARLES SEATON 510-476-1740. PROFILE# 80905

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Ai Thuc(Ai Wan) — Signature: [signature] — Month 5 Day 27 Year 11

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ronald Williams — Signature: [signature] — Month 5 Day 27 Year 11
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1 | 2 | 3 | 4

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name — Signature — Month Day Year

APPENDIX G

Laboratory Analytical Reports and Chain of Custody Documentation

- **McCampbell Work Order #1105580 Composite soil sample Comp A results for soil drum disposal**
- **McCampbell Work Order #1105877 Well groundwater sample results**

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0058; Xtra Oil 1701 Park St. Alameda	Date Sampled: 05/19/11
55 Santa Clara, Ste.240		Date Received: 05/19/11
	Client Contact: Michael Deschenes	Date Reported: 05/23/11
Oakland, CA 94610	Client P.O.:	Date Completed: 05/23/11

WorkOrder: 1105580

May 23, 2011

Dear Michael:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#0058; Xtra Oil 1701 Park St. Alameda,**
2) A QC report for the above sample,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

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

1105580

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

RUSH

PROJECT NUMBER:	PROJECT NAME:
0058	XTRA OIL 1701 PARK ST. ALAMEDA

SAMPLED BY: (PRINTED AND SIGNATURE)
MICHAEL DESCHENES Michael Deschenes

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH (G,D,MO)	BTEX	LUFT 5 METALS			PRESERVATIVE	REMARKS
COMP A	5/19/11	0930	SOIL	PLEASE COMPOSITE PRIOR TO ANALYSIS.	4	X	X	X			ICE	"NORMAL TURN AROUND" changed to 48hr rush per email

ICE/ºC 26
GOOD CONDITION ____ APPROPRIATE CONTAINERS ____
HEAD SPACE ABSENT ____ PRESERVED IN LAB ____
DECHLORINATED IN LAB ____
PRESERVATION ____ VOAS | O&G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Michael Deschenes	5/19/11	1615	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
	5/19/11	1700	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 1
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 4
LABORATORY: MC CAMPBELL ANALYTICAL
LABORATORY CONTACT: ANGELA RYDELIUS
LABORATORY PHONE NUMBER: (877) 252-9262
SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO

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

REMARKS: * PLEASE COMPOSITE PRIOR TO ANALYSIS

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1105580 **ClientCode: PDEO**

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

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

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0058; Xtra Oil 1701 Park St. Alameda

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

Requested TAT: 2 days

Date Received: **05/19/2011**
Date Printed: **05/19/2011**

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
1105580-001	Comp A	Soil	5/19/2011 9:30	☐	A	A	A									

Test Legend:

1	G-MBTEX_S	2	LUFT_S	3	TPH(DMO)_S	4		5	
6		7		8		9		10	
11		12							

Prepared by: Zoraida Cortez

Comments:

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

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Sample Receipt Checklist

Client Name: **P & D Environmental**

Date and Time Received: **5/19/2011 5:39:24 PM**

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

Checklist completed and reviewed by: Zoraida Cortez

WorkOrder N°: **1105580** Matrix Soil

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 2.6°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Client contacted: Date contacted: Contacted by:

Comments:

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0058; Xtra Oil 1701 Park St. Alameda	Date Sampled: 05/19/11
		Date Received: 05/19/11
55 Santa Clara, Ste.240	Client Contact: Michael Deschenes	Date Extracted: 05/19/11
Oakland, CA 94610	Client P.O.:	Date Analyzed: 05/23/11

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1105580

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	Comp A	S	110	---	ND<0.10	0.21	1.2	3.6	20	90	d2

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

d2) heavier gasoline range compounds are significant (aged gasoline?)

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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P & D Environmental	Client Project ID: #0058; Xtra Oil 1701 Park St. Alameda	Date Sampled: 05/19/11
		Date Received: 05/19/11
55 Santa Clara, Ste.240	Client Contact: Michael Deschenes	Date Extracted: 05/19/11
Oakland, CA 94610	Client P.O.:	Date Analyzed: 05/23/11

LUFT 5 Metals*

Extraction method: SW3050B Analytical methods: SW6010B Work Order: 1105580

Lab ID	Client ID	Matrix	Extraction Type	Cadmium	Chromium	Lead	Nickel	Zinc	DF	% SS	Comments
001A	Comp A	S	TOTAL	ND	49.58	ND	36	30	1	95	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	NA	NA	NA	NA	NA
	S	TOTAL	1.5	1.5	5.0	1.5	5.0	mg/Kg

*water samples are reported in µg/L, product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0058; Xtra Oil 1701 Park St. Alameda	Date Sampled: 05/19/11
		Date Received: 05/19/11
55 Santa Clara, Ste.240	Client Contact: Michael Deschenes	Date Extracted: 05/19/11
Oakland, CA 94610	Client P.O.:	Date Analyzed: 05/23/11

Total Extractable Petroleum Hydrocarbons*

Extraction method: SW3550B Analytical methods: SW8015B Work Order: 1105580

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1105580-001A	Comp A	S	32	11	1	100	e4,e2,e6

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	ug/L
	S	1.0	5.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

e2) diesel range compounds are significant; no recognizable pattern
e4) gasoline range compounds are significant.
e6) one to a few isolated peaks present in the THP(d/mo) chromatogram

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Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 58479 WorkOrder 1105580

EPA Method SW8021B/8015Bm **Extraction SW5030B** **Spiked Sample ID: 1105576-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Benzene	ND	0.10	92.1	91.4	0.672	98.4	97.3	1.13	70 - 130	20	70 - 130	20
Toluene	ND	0.10	87.5	87.3	0.303	94.9	94.8	0.201	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	92.4	91.5	1.02	96.6	96.6	0	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	91.5	90.5	1.06	96	96.2	0.173	70 - 130	20	70 - 130	20
%SS:	105	0.10	79	79	0	84	89	5.41	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 58479 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105580-001A	05/19/11 9:30 AM	05/19/11	05/23/11 10:09 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR 6010B

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 1105580

EPA Method SW6010B	Extraction SW3050B	BatchID: 58393	Spiked Sample ID: 1105428-001A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	Spiked	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	mg/Kg	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Cadmium	ND	50	109	106	2.65	10	98.3	102	3.79	75 - 125	25	75 - 125	25
Chromium	31	50	101	96.2	3.06	10	103	103	0	75 - 125	25	75 - 125	25
Lead	ND	50	113	110	2.20	10	77.9	89.7	14.1	75 - 125	25	75 - 125	25
Nickel	42	50	102	102	0	10	103	108	5.25	75 - 125	25	75 - 125	25
Zinc	150	500	104	103	1.01	100	104	107	2.67	75 - 125	25	75 - 125	25
%SS:	121	500	117	119	1.91	500	102	108	6.20	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 58393 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105580-001A	05/19/11 9:30 AM	05/19/11	05/23/11 3:50 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 58392 WorkOrder 1105580

EPA Method SW8015B **Extraction SW3550B** **Spiked Sample ID: 1105428-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	830	40	NR	NR	NR	101	103	1.51	70 - 130	30	70 - 130	30
%SS:	---#	25	89	93	4.78	84	81	4.43	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 58392 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105580-001A	05/19/11 9:30 AM	05/19/11	05/23/11 1:00 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

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"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

P & D Environmental	Client Project ID: #0058; Xtra Oil 1701 Park St., Alameda	Date Sampled: 05/26/11
55 Santa Clara, Ste.240		Date Received: 05/27/11
	Client Contact: Steve Carmack	Date Reported: 06/03/11
Oakland, CA 94610	Client P.O.:	Date Completed: 06/02/11

WorkOrder: 1105877

June 03, 2011

Dear Steve:

Enclosed within are:

1) The results of the **8** analyzed samples from your project: **#0058; Xtra Oil 1701 Park St., Alameda,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

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

1105877

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
0058	Xtra Oil 1701 Park St., Alameda

SAMPLED BY: (PRINTED AND SIGNATURE) Steve Carmack

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Multirange (G,P,MO)	MBTEX by 8021B	Fuel Oxys + Pb Scavengers by 8260B			PRESERVATIVE	REMARKS
(4) MW-1	5/06/11	1555	H2O		7	X	X	X			ICE	Normal Turnaround
MW-2		1700			7	X	X	X				
MW-3		1315			7	X	X	X				
MW-4		1415			6	X	X	X				
EW-2		1625			7	X	X	X				
EW-4		1515			7	X	X	X				
EW-5		1345			7	X	X	X				
OW-2		1300			7	X	X	X				

ICE/T 3.8
GOOD CONDITION ✓ APPROPRIATE ✓
HEAD SPACE ABSENT ___ CONTAINERS ___
DECHLORINATED IN LAB ___ PRESERVED IN LAB ___
VOAS | O&G | METALS | OTHER
PRESERVATION ___

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT)	8	LABORATORY:
	5/06/11	1820		TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	55	McCampbell
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT:		LABORATORY PHONE NUMBER:
	5/7/11	1700		Angela Rydelius		(877)252-9262
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO		

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

REMARKS: All bottles preserved w/ HCl.

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1105877 **ClientCode: PDEO**

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

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

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0058; Xtra Oil 1701 Park St., Alameda

Bill to:
Accounts Payable
Xtra Oil Company
2307 Pacific Avenue
Alameda, CA 94501

Requested TAT: 5 days

Date Received: **05/27/2011**
Date Printed: **05/27/2011**

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
1105877-001	MW-1	Water	5/26/2011 15:55	☐	B	A	C									
1105877-002	MW-2	Water	5/26/2011 17:00	☐	B	A	C									
1105877-003	MW-3	Water	5/26/2011 12:15	☐	B	A	C									
1105877-004	MW-4	Water	5/26/2011 14:15	☐	B	A	C									
1105877-005	EW-2	Water	5/26/2011 16:25	☐	B	A	C									
1105877-006	EW-4	Water	5/26/2011 15:15	☐	B	A	C									
1105877-007	EW-5	Water	5/26/2011 13:45	☐	B	A	C									
1105877-008	OW-2	Water	5/26/2011 13:00	☐	B	A	C									

Test Legend:

1	5-OXYS+PBSCV_W	2	G-MBTEX_W	3	TPH(DMO)_W	4		5	
6		7		8		9		10	
11		12							

Prepared by: Zoraida Cortez

Comments:

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

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Sample Receipt Checklist

Client Name: **P & D Environmental**

Date and Time Received: **5/27/2011 5:04:50 PM**

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

Checklist completed and reviewed by: Zoraida Cortez

WorkOrder N°: **1105877** Matrix Water

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 3.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Client contacted: Date contacted: Contacted by:

Comments:

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P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0058; Xtra Oil 1701 Park St., Alameda	Date Sampled: 05/26/11
		Date Received: 05/27/11
	Client Contact: Steve Carmack	Date Extracted: 05/27/11
	Client P.O.:	Date Analyzed: 06/01/11-06/02/11

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1105877

Lab ID	1105877-005B	1105877-006B	1105877-007B	1105877-008B	Reporting Limit for DF =1	
Client ID	EW-2	EW-4	EW-5	OW-2		
Matrix	W	W	W	W		
DF	3.3	3.3	50	5	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND<1.7	ND<1.7	ND<25	ND<2.5	NA	0.5
t-Butyl alcohol (TBA)	290	110	250	350	NA	2.0
1,2-Dibromoethane (EDB)	ND<1.7	ND<1.7	ND<25	ND<2.5	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<1.7	ND<1.7	ND<25	ND<2.5	NA	0.5
Diisopropyl ether (DIPE)	ND<1.7	ND<1.7	ND<25	ND<2.5	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<1.7	ND<1.7	ND<25	ND<2.5	NA	0.5
Methyl-t-butyl ether (MTBE)	97	83	86	3.6	NA	0.5
Surrogate Recoveries (%)						
%SS1:	103	101	102	99		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0058; Xtra Oil 1701 Park St., Alameda	Date Sampled: 05/26/11
		Date Received: 05/27/11
	Client Contact: Steve Carmack	Date Extracted: 05/27/11
	Client P.O.:	Date Analyzed: 06/01/11-06/02/11

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1105877

Lab ID	1105877-001B	1105877-002B	1105877-003B	1105877-004B	Reporting Limit for DF =1	
Client ID	MW-1	MW-2	MW-3	MW-4		
Matrix	W	W	W	W		
DF	10	10	1	5	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND<5.0	ND<5.0	ND	ND<2.5	NA	0.5
t-Butyl alcohol (TBA)	570	480	ND	74	NA	2.0
1,2-Dibromoethane (EDB)	ND<5.0	ND<5.0	ND	ND<2.5	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<5.0	ND<5.0	ND	ND<2.5	NA	0.5
Diisopropyl ether (DIPE)	ND<5.0	ND<5.0	ND	ND<2.5	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<5.0	ND<5.0	ND	ND<2.5	NA	0.5
Methyl-t-butyl ether (MTBE)	120	210	ND	80	NA	0.5
Surrogate Recoveries (%)						
%SS1:	101	102	101	102		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

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P & D Environmental	Client Project ID: #0058; Xtra Oil 1701 Park St., Alameda	Date Sampled: 05/26/11
		Date Received: 05/27/11
55 Santa Clara, Ste.240	Client Contact: Steve Carmack	Date Extracted: 05/31/11-06/02/11
Oakland, CA 94610	Client P.O.:	Date Analyzed: 05/31/11-06/02/11

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1105877

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	MW-1	W	15,000	ND<500	2000	430	400	1300	100	103	d1
002A	MW-2	W	6600	ND<350	1000	39	36	97	10	114	d1
003A	MW-3	W	ND	ND	ND	ND	ND	ND	1	107	
004A	MW-4	W	7300	ND<210	230	64	450	1100	10	101	d1
005A	EW-2	W	2700	ND<150	580	7.9	10	80	1	87	d1
006A	EW-4	W	2800	ND<150	99	9.9	20	300	10	116	d1
007A	EW-5	W	35,000	ND<450	1000	2700	850	11,000	20	108	d1
008A	OW-2	W	450	ND	0.87	0.71	ND	7.7	1	115	d1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant

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P & D Environmental	Client Project ID: #0058; Xtra Oil 1701 Park St., Alameda	Date Sampled: 05/26/11
		Date Received: 05/27/11
55 Santa Clara, Ste.240	Client Contact: Steve Carmack	Date Extracted: 05/27/11
Oakland, CA 94610	Client P.O.:	Date Analyzed: 05/28/11-05/30/11

Total Extractable Petroleum Hydrocarbons*

Extraction method: SW3510C Analytical methods: SW8015B Work Order: 1105877

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1105877-001C	MW-1	W	2400	ND	1	85	e4,e2
1105877-002C	MW-2	W	1900	ND	1	89	e4,e2
1105877-003C	MW-3	W	ND	ND	1	92	
1105877-004C	MW-4	W	2400	ND	1	91	e4,e2
1105877-005C	EW-2	W	560	ND	1	86	e4,e2
1105877-006C	EW-4	W	500	ND	1	91	e4,e2
1105877-007C	EW-5	W	3600	ND	1	90	e4,e2
1105877-008C	OW-2	W	430	ND	1	90	e4,e2

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

e2) diesel range compounds are significant; no recognizable pattern
e4) gasoline range compounds are significant.

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Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 58672 WorkOrder 1105877

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 1105877-003B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	92.8	91.9	0.944	73.8	70.2	5.10	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	111	112	0.786	85.5	83.8	1.94	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	106	106	0	88.6	86	3.00	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	100	100	0	103	97.5	5.08	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	106	105	0.974	107	100	7.00	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	106	105	1.30	94.1	88.1	6.57	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	109	110	0.390	111	106	4.42	70 - 130	30	70 - 130	30
%SS1:	101	25	92	93	0.595	99	99	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 58672 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105877-001B	05/26/11 3:55 PM	06/01/11	06/01/11 8:21 PM	1105877-002B	05/26/11 5:00 PM	06/01/11	06/01/11 9:08 PM
1105877-003B	05/26/11 12:15 PM	06/01/11	06/01/11 9:59 PM	1105877-004B	05/26/11 2:15 PM	06/01/11	06/01/11 10:47 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 58688 WorkOrder 1105877

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 1105877-006B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND<1.7	10	88.7	91.5	3.10	94.8	95.6	0.825	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	110	50	NR	NR	NR	98.7	102	3.67	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND<1.7	10	88.9	92.4	3.43	104	104	0	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND<1.7	10	108	99.3	8.20	105	106	1.37	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND<1.7	10	104	109	4.03	111	113	1.11	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND<1.7	10	88.9	92.2	3.20	111	111	0	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	83	10	NR	NR	NR	118	120	1.40	70 - 130	30	70 - 130	30
%SS1:	101	25	85	85	0	94	93	1.22	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 58688 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105877-005B	05/26/11 4:25 PM	06/01/11	06/01/11 11:34 PM	1105877-006B	05/26/11 3:15 PM	06/02/11	06/02/11 12:21 AM
1105877-007B	05/26/11 1:45 PM	06/02/11	06/02/11 1:09 AM	1105877-008B	05/26/11 1:00 PM	06/02/11	06/02/11 9:39 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 58679 WorkOrder 1105877

EPA Method SW8021B/8015Bm **Extraction SW5030B** **Spiked Sample ID: 1105879-007A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	87.7	95.4	8.37	97.3	95.2	2.14	70 - 130	20	70 - 130	20
MTBE	ND	10	99.7	106	6.59	107	105	2.32	70 - 130	20	70 - 130	20
Benzene	ND	10	88.5	97.7	9.95	101	95.3	6.11	70 - 130	20	70 - 130	20
Toluene	ND	10	88.8	97.4	9.31	101	95.5	5.98	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	88.7	96.5	8.48	101	95.3	6.07	70 - 130	20	70 - 130	20
Xylenes	ND	30	91.5	98.8	7.67	104	97.9	6.22	70 - 130	20	70 - 130	20
%SS:	106	10	97	97	0	100	98	2.86	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 58679 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105877-001A	05/26/11 3:55 PM	05/31/11	05/31/11 9:06 PM	1105877-002A	05/26/11 5:00 PM	06/01/11	06/01/11 9:48 PM
1105877-003A	05/26/11 12:15 PM	06/02/11	06/02/11 1:46 AM	1105877-004A	05/26/11 2:15 PM	06/02/11	06/02/11 12:47 AM
1105877-005A	05/26/11 4:25 PM	06/01/11	06/01/11 3:32 AM	1105877-005A	05/26/11 4:25 PM	06/02/11	06/02/11 1:16 AM
1105877-006A	05/26/11 3:15 PM	06/01/11	06/01/11 4:02 AM	1105877-007A	05/26/11 1:45 PM	06/01/11	06/01/11 4:31 AM
1105877-008A	05/26/11 1:00 PM	06/02/11	06/02/11 4:14 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

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QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 58616 WorkOrder 1105877

EPA Method SW8015B **Extraction SW3510C** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	117	116	0.654	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	95	98	3.63	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 58616 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105877-001C	05/26/11 3:55 PM	05/27/11	05/30/11 7:59 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 58689 WorkOrder 1105877

EPA Method SW8015B **Extraction SW3510C** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	119	119	0	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	93	93	0	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 58689 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105877-002C	05/26/11 5:00 PM	05/27/11	05/29/11 4:53 AM	1105877-003C	05/26/11 12:15 PM	05/27/11	05/28/11 9:08 PM
1105877-004C	05/26/11 2:15 PM	05/27/11	05/30/11 9:07 AM	1105877-005C	05/26/11 4:25 PM	05/27/11	05/30/11 6:53 AM
1105877-006C	05/26/11 3:15 PM	05/27/11	05/30/11 12:13 AM	1105877-007C	05/26/11 1:45 PM	05/27/11	05/29/11 1:34 AM
1105877-008C	05/26/11 1:00 PM	05/27/11	05/29/11 12:28 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644 QA/QC Officer