

Alameda County

JAN 10 2006

2307 Pacific Ave.  
Alameda, CA 94552  
Phone: 510-865-9503  
Fax: 510-865-1889  
E-Mail: xtraoil@sbcglobal.net

Environmental Health

Xtra Oil Company

R = 285

January 9, 2006

Mr. Amir Gholami  
Alameda County Environmental Health Department  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

SUBJECT: QUARTERLY GROUNDWATER MONITORING AND SAMPLING  
REPORT TRANSMITTAL AND CERTIFICATION  
Xtra Oil Company  
3495 Castro Valley Blvd.  
Castro Valley, CA

Dear Mr. Gholami:

You will find enclosed one copy of the following document prepared by P&D  
Environmental.

- Quarterly Groundwater Monitoring and Sampling Report (April through July 2005)  
dated September 15, 2005 (Report 0014.R58).

I declare under penalty of perjury that the contents and conclusions in the report 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-  
9503.

Sincerely,  
Xtra Oil Company

  
Keith Simas

Enclosures

JAN 10 2005

Environmental Services  
September 15, 2005  
Report 0014.R58

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

SUBJECT: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT  
(APRIL THROUGH JULY 2005)  
Xtra Oil Company  
3495 Castro Valley Blvd.  
Castro Valley, California

Gentlemen:

P&D Environmental, a division of Paul H. King, Inc. (P&D) is pleased to present this report documenting the results of quarterly monitoring and sampling of both the on- and off-site wells for the subject property. This work was performed in accordance with P&D's proposal 020599.P1 dated February 5, 1999. Offsite observation wells OW1 and OW2 and onsite wells MW1, MW3, MW4, and EW1 were monitored and all of the wells except OW2 were sampled on July 28, 2005. The reporting period for this report is for April through July 2005. A Site Location Map (Figure 1), a Site Plan showing onsite well locations (Figure 2), and a Site Vicinity Map showing offsite observation well locations (Figure 3) are attached with this report.

### BACKGROUND

The site is currently used as a gasoline station. Four 12,000 gallon underground fuel storage tanks are present at the site. Three of the tanks contain gasoline and the fourth tank contains diesel fuel. A 550 gallon waste oil tank was removed from the site in November 1988. The fuel tanks were replaced during August 1992.

Three monitoring wells, designated as MW1, MW2 and MW3 were installed at the site on February 14 and 15, 1990 by Western Geo-Engineers. The subsurface materials encountered in the boreholes consisted primarily of silt and clay. The locations of the monitoring wells are shown in Figure 2. Soil samples collected during drilling of the boreholes for the monitoring wells revealed the presence of total petroleum hydrocarbons as gasoline (TPH-G) and total petroleum hydrocarbons as diesel (TPH-D). TPH-G was encountered in borehole MW1 at depths of 5 and 10 feet below grade at concentrations of 40 and 1,400 mg/kg, respectively; in borehole MW2 at depths of 10 and 15 feet below grade at concentrations of 230 and 95 mg/kg, respectively; and in borehole MW3 at depths of 5, 10 and 15 feet at concentrations of 140, 250 and 25 mg/kg, respectively. In addition, 120 mg/kg TPH-D was detected in borehole MW3 at a depth of 5 feet. Soil samples collected at a depth of 20 feet in borehole MW1 and at a depth of 18 feet in boreholes in MW2 and MW3 did not show any detectable concentrations of TPH-G or TPH-D. Groundwater was encountered in the boreholes at depths of approximately 15 to 16 feet below grade.

On February 15, 1990 Western Geo-Engineers drilled three exploratory boreholes at the site designated as SB1, SB2 and SB3. The subsurface materials encountered in the boreholes consisted primarily of silt and clay. The approximate locations of the boreholes are shown on Figure 2. It is P&D's understanding that soil samples were collected from the exploratory boreholes at depths of 10 and 12 feet and evaluated in the field using a photo ionization detector. In borehole SB1, TPH-G was detected at the depths of 10 and 12 feet at concentrations of 1,700 and 450 mg/kg, respectively. In boreholes SB2 and SB3, TPH-G was detected at the depths of 10 and 12 feet in both boreholes at concentrations of 800 mg/kg and greater than 2,000 mg/kg, respectively. A groundwater monitoring and sampling program was initiated at the site on February 20, 1990.

It is P&D's understanding that during fuel tank replacement activities in August, 1992 soil surrounding the tank pit was removed and disposed of offsite. An extraction well, designated as EW1, was designed and constructed in one corner of the new tank pit by K&B Environmental at the time of installation of the new tanks. The location of EW1 is shown on Figure 2.

On February 7, 1996 well MW2 was destroyed for the purpose of widening Redwood Road. The destruction was overseen by ACC Environmental Consultants of Oakland, California.

On August 15, 1997 P&D personnel oversaw the installation of one groundwater monitoring well, designated as MW4 at the subject site. The location of the monitoring well is shown on the attached Site Plan, Figure 2. This work was performed in accordance with P&D's work plan 0014.W4 dated June 27, 1997. The work plan was approved by the Alameda County Department of Environmental Health (ACDEH) in a telephone conversation with Mr. Scott Seery on August 14, 1997. During the conversation, Mr. Seery indicated that he would record his approval of the work plan in the county file for the site. In accordance with an October 25, 2002 letter from Mr. Seery, groundwater samples are to be analyzed for fuel oxygenates (MTBE, TAME, ETBE, TAME and TBA), and lead scavengers (EDB, 1,2-DCA/EDC) using EPA Method 8260; and data for observation wells OW1 and OW2, located in Redwood Road, are to be incorporated into monitoring and sampling reports for the subject site.

#### FIELD ACTIVITIES

Offsite observation wells OW1 and OW2 and onsite wells MW1, MW3, MW4, and EW1 were monitored and all of the wells except OW2 were sampled on July 28, 2005. It is P&D's understanding that monitoring of the wells at the neighboring site on the southeast corner of the intersection of Redwood Road and Castro Valley Boulevard was conducted by others on July 13, 2005.

The wells at the subject site were monitored for depth to water and the presence of free product or sheen. In wells MW4, OW1 and OW2 the depth to water and depth to free product was measured to the nearest 1/32-inch with a steel tape and water-finding or product-finding paste. In wells MW1, MW3, and EW1, the depth to water was measured to the nearest 0.01 foot using an electric water level indicator. The presence of free product and sheen was evaluated using a transparent bailer in wells MW1, MW3, and EW1. Free product was measured in well OW1 with a thickness of 0.01 feet, free product was measured in well OW3 with a thickness of 0.005 feet, and a sheen was measured in well MW4. During well purging, free product was encountered in wells MW3 and MW4.

After monitoring, well OW1 was sampled on July 28, 2005 using a vacuum pump and 0.25-inch diameter polyethylene tubing. The water sample from the well was decanted to sample bottles and managed as described below. Because of the small sample volume in the well, the well was not purged prior to sampling. No sample was recoverable from well OW2 due to insufficient liquid in the well casing.

Prior to well sampling on July 28, 2005, onsite wells MW1, MW3, MW4, and EW1 were purged of a minimum of three casing volumes of water, or until the wells had been purged dry. In well MW3, a light brown frothy free product was detected on the purge water. Measurements were made in well MW4 following removal of the passive hydrocarbon collection device from the well. In well MW4, no free product was detected by product-finding paste, and no free product was observed in the passive hydrocarbon collection device, however free product was detected on the purge water. Petroleum hydrocarbon odors were detected from the purge water from wells MW1 and EW1.

During purging operations, the field parameters of electrical conductivity, temperature, and pH were monitored. Due to equipment malfunction, field parameters were not monitored for all wells. Once the field parameters were observed to stabilize, a minimum of three casing volumes had been purged, or the wells had purged dry and partially recovered, water samples were collected using a clean Teflon bailer.

The water samples were transferred to 40-milliliter glass Volatile Organic Analysis (VOA) vials and 1-liter amber glass bottles that were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to assure that no air bubbles were present.

The VOA vials and bottles were then transferred to a cooler with ice, until they were transported to McCampbell Analytical, Inc. in Pacheco, California. McCampbell Analytical, Inc. is a State-certified hazardous waste testing 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.

## HYDROGEOLOGY

Water levels were measured in all of the wells once during the quarter. The measured depth to water in offsite observation wells OW1 and OW2 on July 28, 2005 was 7.06 and 7.27 feet, respectively. The separate phase hydrocarbon layer in well OW1 was 0.01 feet in thickness. Using a specific gravity of 0.75, the corrected depth to water in well OW1 is 7.05 feet. The measured depth to water in onsite wells MW1, MW3, MW4 and EW1 on July 28, 2005 was 7.98, 7.58, 7.59, and 6.94 feet, respectively. No separate phase hydrocarbon layer was measurable in well MW4. Since the previous quarter, the water levels have decreased in offsite wells OW1 and OW2 by 0.07 and 0.21 feet, respectively, and in onsite wells MW1, MW3, MW4 and EW1 by 1.08, 1.23, 0.82 and 1.71 feet, respectively.

Based on the groundwater surface elevations in monitoring wells MW1, MW3 and MW4, the groundwater flow direction at the site on July 28, 2005 was calculated to be to the southeast with a gradient of 0.0068. Since the previous monitoring event the groundwater flow direction at the site has shifted to the east and the gradient has decreased. The groundwater flow direction on July 28, 2005 is shown on Figure 2.

## LABORATORY RESULTS

The groundwater sample collected from offsite wells OW1 and OW2 and onsite wells MW1, MW3 and EW1 on July 28, 2005 were analyzed for TPH-D and TPH-G using EPA Methods 5030B and 3510C in conjunction with Modified EPA Method 8015C; for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 5030B in conjunction with EPA Method 8021B; and for fuel oxygenates (MTBE, TAME, ETBE, TAME, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC) using EPA Method 5030B in conjunction with EPA Method 8260B.

No sample was recovered from well OW2. The laboratory analytical results of the samples from well OW1 shows that TPH-D, TPH-G, and benzene were detected at concentrations of 230, 10 and 1.3 mg/L, respectively. No fuel oxygenates or lead scavengers were detected in well OW1. Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel- and gasoline-range compounds.

The laboratory analytical results of the samples from wells MW1, MW3, MW4, and EW1 show TPH-D concentrations of 16, 77, 94 and 1.8 mg/L, respectively. Review of the laboratory analytical reports indicates that the TPH-D results for each of the wells consist of both diesel- and gasoline-range compounds. In addition, laboratory results from MW1, MW3, MW4, and EW1 show TPH-G concentrations of 30, 100, 130 and 1.2 mg/L, respectively; and benzene concentrations of 2.5, 30, 32 and 0.033 mg/L, respectively. MTBE was detected at concentrations of 0.26, 32, 27 and 17 mg/L, respectively. No other fuel oxygenates or lead scavengers were detected except for t-butyl alcohol (TBA) at concentrations of 13, 8.4 and 22 mg/L in wells MW3, MW4 and EW1, respectively.

Since the previous sampling on April 13, 2005 in well OW1, TPH-D, TPH-G and benzene concentrations have decreased, and MTBE has remained not detected. In well MW1, TPH-D and BTEX concentrations have increased, the TPH-G concentration remained the same, and the MTBE concentration decreased. In well MW3, TPH-D, TPH-G, and MTBE concentrations have increased, and the benzene concentration decreased. Well MW4 had not been sampled since June 22, 2001 due to the presence of free product. Since that date, TPH-D and TPH-G concentrations have decreased in well MW4, and MTBE, has increased. In well EW1, the TPH-D concentration decreased, while the TPH-G and MTBE concentrations have increased since the last sampling event on April 13, 2005. The laboratory analytical results for the groundwater samples are summarized in Table 2. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

## DISCUSSION AND RECOMMENDATIONS

Offsite observation wells OW1 and OW2 and onsite wells MW1, MW3, MW4, and EW1 were monitored and all of the wells except OW2 were sampled on July 28, 2005. A 0.01-foot thick floating separate phase layer was measured in well OW1. Due to the small volume of liquid in wells OW1 and OW2, well OW1 was not purged prior to sample collection, and well OW2 was not sampled.

It is P&D's understanding that the hydrocarbon collection device in well MW4 is maintained by Xtra Oil Company personnel. P&D recommends that a log be maintained of product removed. P&D recommends that use of petroleum hydrocarbon absorbent socks in well MW1 be continued.

The presence of petroleum hydrocarbons in offsite observation wells OW1 and OW2 during previous quarters, followed by the absence of an adequate volume of liquid in well OW2 during the present quarter suggests that petroleum hydrocarbons could be preferentially migrating on a seasonal basis in the sanitary sewer trench where the observation wells are located. The presence of separate phase hydrocarbons in well OW1 during previous quarters indicates that separate phase hydrocarbons previously detected in well MW4 are migrating eastward seasonally.

The laboratory analytical results for the groundwater samples from wells MW1, MW3, MW4, and EW1 showed that TPH-D concentrations ranging from 1.8 to 94 mg/L, TPH-G concentrations ranging from 1.2 to 130 mg/L, and benzene concentrations ranging from 0.033 to 32 mg/L. Review of the results for the fuel oxygenate and lead scavenger analysis shows that MTBE was detected in wells MW1, MW3, MW4 and EW1, with concentrations ranging from 0.26 to 32 mg/L, and TBA was detected in wells MW3, MW4 and EW1 at concentrations of 13, 8.4 and 22 mg/L, respectively. No other fuel oxygenates or lead scavengers were detected in any other wells. In well OW1, the TPH-D concentration was 230 mg/L, and TPH-G, BTEX, and MTBE were also detected.

Based on the laboratory analytical results of the water samples collected from the monitoring wells, P&D recommends that groundwater monitoring and sampling be continued. In addition, P&D recommends that future monitoring and sampling efforts be coordinated with other sites in the vicinity of the subject site that are presently being monitored and sampled.

#### DISTRIBUTION

Copies of this report should be sent to Mr. Amir Gholami at the Alameda County Department of Environmental Health. Copies of the report should be accompanied by a transmittal letter signed by an authorized representative of Xtra Oil Company.

#### 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.

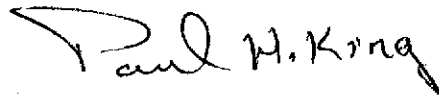
September 15, 2005  
Report 0014.R58

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

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

Sincerely,

P&D Environmental



Paul H. King  
President  
Professional Geologist #5901  
Expires: 12/31/05

Attachments: Tables 1 & 2  
Site Location Map (Figure 1)  
Site Plan (Figure 2)  
Site Vicinity Map (Figure 3)  
Field Parameter Forms  
Laboratory Analytical Results  
Chain of Custody Documentation

PHK/wrw/efo  
0014.R58

TABLE 1  
WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1	07/28/05	177.37*	7.98	169.39
	04/13/05		6.90	170.47
	01/31/05		7.20	170.17
	10/15/04		8.52	168.85
	07/13/04		8.33	169.04
	04/06/04		7.93	169.44
	12/18/03		7.65	169.72
	09/18/03		8.15	169.22
	06/19/03		8.13	169.24
	03/18/03		7.77	169.60
	12/21/02		5.74	171.63
	9/10/02		8.28	169.09
	3/30/02		7.43	169.94
	12/22/01		6.92	170.45
	9/23/01		8.53	168.84
	6/22/01		8.30	169.07
	4/22/01		7.77	169.60
	12/14/00		8.49	168.88
	9/18/00		8.56	168.81
	6/08/00		7.97	169.40
	3/09/00		6.68	170.69
	12/09/99		8.15	169.22
	8/31/99		8.36	169.01
	4/29/99		7.68	169.69

NOTES:

\* = Surveyed on August 20, 1997



TABLE 1  
 WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1 (Continued)	1/29/99	177.37*	6.99	170.38
	4/26/98		7.50	169.87
	1/24/98		6.61	170.76
	11/06/97		8.79	168.58
	8/26/97	177.37*	8.51	168.86
	7/24/97		8.71	168.72
	4/25/97		7.98	169.45
	1/20/97		7.12	170.31
	7/26/96		8.39	169.04
	7/09/96		8.16	169.27
	4/23/96		7.47	169.96
	2/07/96		6.09	171.34
	1/29/96		6.17	171.26
	10/26/95		8.45	168.98
	7/28/95		8.27	169.16
	5/02/95		6.96	170.47
	2/23/95		7.72	169.71
	11/18/94		7.14	170.29
	8/22/94		8.67	168.76
	5/19/94	177.43**	8.05	169.38
	2/28/94		7.44	169.99
	11/24/93		8.74	168.69
	8/30/93		8.78	168.65
	5/18/93		8.12	169.31
	2/23/93		7.34	170.09
	11/13/92	200.00***	9.13	190.87
	5/29/92	175.73	8.59	167.14
	1/14/92		8.57	167.16
	12/23/91		9.65	166.08
	11/25/91		9.41	166.32
10/10/91		9.70	166.03	
9/17/91		9.50	166.23	
8/19/91		9.31	166.42	

NOTES:

- \* = Surveyed on August 20, 1997
- \*\* = Surveyed on March 24, 1993
- \*\*\* = Surveyed on December 5, 1992

TABLE 1  
WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW2	NOT MEASURED (DESTROYED ON FEBRUARY 7, 1996)			
	2/07/96	176.04**	5.70	170.34
	1/29/96		5.16	170.88
	10/26/95		8.21	167.83
	7/28/95		7.99	168.05
	5/02/95		6.79	169.25
	2/23/95		7.51	168.53
	11/18/94		6.92	169.12
	8/22/94		8.59	167.45
	5/19/94		7.70	168.34
	2/28/94		6.99	169.05
	11/24/93		8.47	167.57
	8/30/93		8.64	167.40
	5/18/93		7.73	168.31
	2/23/93		6.39	169.65
	11/13/92	198.61***	8.70	189.91
	5/29/92	175.45	9.31	166.14
	1/14/92		8.97	166.48
	12/23/91		10.39	165.06
	11/25/91		9.81	165.64
	10/10/91		10.39	165.06
	9/17/91		10.23	165.22
	8/19/91		9.60	165.85

NOTES:

\* = Surveyed on August 20, 1997

\*\* = Surveyed on March 24, 1993

\*\*\* = Surveyed on December 5, 1992

TABLE 1  
 WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW3	07/28/05	176.40*	7.58	168.82
	04/13/05		6.35	170.05
	01/31/05		6.79	169.61
	10/15/04		8.28	168.12
	07/13/04		8.11	168.29
	04/06/04		7.41	168.99
	12/18/03		6.99	169.41
	09/18/03		7.91	168.49
	06/19/03		7.60	168.80
	03/18/03		7.35	169.05
	12/21/02		5.43	170.97
	9/10/02		7.97	168.43
	3/30/02		6.97	169.43
	12/22/01		6.44	169.96
	9/23/01		8.17	168.23
	6/22/01		8.06	168.34
	4/22/01		7.50	168.90
	12/14/00		8.13	168.27
	9/18/00		7.83	168.57
	9/26/00		7.77	168.63
6/08/00		7.50	168.90	
3/09/00		6.08	170.32	
12/09/99		7.90	168.50	

NOTES:

- \* = Surveyed on August 20, 1997
- \*\* = Surveyed on March 24, 1993
- \*\*\* = Surveyed on December 5, 1992

TABLE 1  
 WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW3 (Continued)	8/31/99	176.41**	7.95	168.45
	4/29/99		7.09	169.31
	1/29/99		6.42	169.98
	4/26/98		6.85	169.55
	1/24/98		5.90	170.50
	11/06/97		7.80	168.80
	8/26/97		7.67	168.93
	7/24/97	176.41**	7.90	168.51
	4/25/97		7.12	169.29
	1/20/97		6.35	170.06
	7/26/96		7.84	169.57
	7/09/96		7.61	168.80
	4/23/96		6.81	169.60
	2/07/96		5.05	170.36
	1/29/96		5.77	170.64
	10/26/95		7.72	168.69
	7/28/95		7.80	168.61
	5/02/95		6.50	169.91
	2/23/95		7.24	169.17
	11/18/94		6.05	170.36
	8/22/94	190.97***	7.65	168.76
	5/19/94		7.15	169.26
	2/24/94		6.68	169.73
	11/24/93		7.55	168.86
	8/30/93		7.64	168.77
	5/18/93		7.12	169.29
	2/23/93		8.01	168.40
	11/13/92		7.86	191.12
	5/29/92	175.00	8.45	166.55
	1/14/92		8.24	166.55
	12/23/91		9.37	165.63
11/25/91		9.19	165.81	
10/10/91		9.43	165.57	
9/17/91		9.20	165.80	
8/19/91		8.95	166.05	

NOTES:

\* = Surveyed on August 20, 1997

\*\* = Surveyed on March 24, 1993

\*\*\* = Surveyed on December 5, 1992

TABLE 1  
 WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW4	07/28/05	176.35*	7.59	168.76
	04/13/05		6.78 (0.01)#	169.58
	01/31/05		7.34 (0.19)#	169.15
	10/15/04		8.73 (0.15)#	167.73
	07/13/04		8.44 (0.03)#	167.93
	04/06/04		9.58 (2.83)#	168.89
	02/11/04		9.43 (2.70)#	168.95
	12/18/03		9.75 (1.51)#	167.73
	9/18/03		9.13 (1.80)#	168.57
	6/19/03		8.56 (0.31)#	168.02
	3/18/03		7.49 (0.06)#	168.91
	12/21/02		8.58 (4.39)#	171.06
	9/10/02		9.09 (1.60)#	168.46
	3/30/02		9.86 (2.49)#	168.36
	12/22/01		7.79 (1.75)#	169.87
	9/23/01		8.97 (1.17)#	168.26
	6/22/01		7.79	168.56
	4/22/01		9.07 (2.20)#	168.93
	12/14/00		8.87 (0.72)#	168.02
	9/18/00		8.50 (0.45)#	168.19
	6/08/00		7.34	169.01
	3/09/00		6.61 (0.46)#	170.08
	12/09/99		8.80	167.55
	8/31/99		8.28	168.07
	4/29/99		7.14	169.21
	1/29/99		6.68	169.67
	4/26/98		6.87	169.48
	1/24/98		6.61	169.74
	11/06/97		9.16	167.19
	8/26/97		8.92	167.43
	8/20/97		7.66 (prior to development)	

**NOTES:**

\* = Surveyed on August 20, 1997

# = Indicates free product thickness in feet. The water table elevation has been corrected for the presence of free product by assuming a free product specific gravity of 0.75.

TABLE 1  
WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)
EW1	07/28/05	Not Surveyed	6.94
	04/13/05		5.23
	01/31/05		6.25
	10/15/04		7.65
	07/13/04		7.51
	04/06/04		6.63
	12/18/03		6.72
	09/18/03		7.29

TABLE 1  
 WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Total Well Depth (ft.)
OW1	07/28/05	Not Surveyed	7.06 (0.01)#	7.45
	04/13/05		6.99	7.44
	01/31/05		7.03	7.44
	10/15/04		7.19 (0.08)#	7.44
	07/14/04		7.02	7.44
	04/06/04		7.01	7.44
	02/11/04		7.01	7.44
	10/06/03		7.07 (0.01)#	7.44
	11/02/00		7.12,+	
	12/09/99		7.27	
	01/29/99		7.12	
	OW2		07/28/05	Not Surveyed
04/13/05		7.06	7.35	
01/31/05		7.29	7.37	
10/15/04		No Water or Product	7.35	
07/14/04		No Water or Product	7.35	
04/06/04		7.27	7.33	
02/11/04		7.19	7.33	
10/06/03		7.29	7.34	
11/02/00		7.19		
12/09/99		7.17		
01/29/99		7.19		

NOTES:

# = Indicates free product thickness in feet.

+ = Petroleum hydrocarbon odor reported on probe for water level indicator.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 Well MW1

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Other Fuel Additives by 8260*
7/28/05	16,a,b	30,a	0.26,+	2.5	0.76	2.1	4.8	ND<0.05, TBA ND<0.5
4/13/05	9.3,b	30	0.3	1.9	0.6	1.7	3	ND<0.05, TBA ND<0.5
1/31/05	14,b	29	0.27	2.2	1.2	1.9	5.0	ND<0.05, TBA ND<0.5
10/15/04	16,a,b	36,a	ND<0.05	1.5	1.0	2.1	5.1	ND<0.05, TBA ND<0.5
7/13/04	22a,b	34,a	0.053	2.1	0.59	2.1	4.4	ND<0.5, TBA ND<0.5
4/6/04	18,a,b	28,a	0.11	2.3	0.8	0.99	4.5	ND<0.1 TBA ND<1
12/18/03	13,b	33	0.038	2.1	0.77	1.8	4.4	ND<0.005 TBA ND<0.05

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

- = Not Analyzed.

a = Laboratory analytical report note: lighter than water immiscible sheen present on the sample.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

+ = Analyzed by EPA Method 8260.

\* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, DIPE, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

Results in milligrams per liter (mg/L), unless otherwise indicated.



TABLE 2  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
Well MW1 (continued)

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other Fuel Additives by 8260* , TBA ND<0.17
9/18/03	15,a,b	32	0.052	2.2	0.62	1.8	3.8	ND<0.017
6/26/03	67,a,b	45	ND<0.05	2.1	0.72	2.3	5.5	ND
3/18/03	7.3,a,b	33	ND<0.05	2.4	0.9	1.6	1.0	ND
12/21/02	11,a,b	32	ND<0.1	2.6	0.98	2.2	5.5	ND
9/10/02	18,c	31	ND<0.25	2.2	0.65	1.7	4.8	--
3/30/02	12,a,b	99	ND	4.1	1.2	2.5	6.4	--
12/22/01	22,a,b	60	ND	3.2	1.9	2	6.2	--
9/23/01	16,a,c	49	ND	4	1.4	2.2	6.2	--
6/22/01	85,a,b	35	ND	3.1	0.75	1.2	4.0	--
4/22/01	16,a	43	ND	3.6	1.2	1.6	5.8	--
12/14/00	11,a,d	49	ND	5.8	1.6	2	6.9	--
9/18/00	15,a,b	86	ND	7.2	2	3.2	13	--
6/8/00	6.5,a,c	50	ND	5.7	1.5	1.8	7	--
3/9/00	7.4,a,b	48	ND	5.3	3.1	1.6	8.1	--
12/9/99	12,a,b	65	ND	9.3	2.9	2.2	8.8	--
8/31/99	22,b	66	0.71	8.7	2.7	2.4	10	--
4/29/99	22,b	48	ND	8.4	2.8	2.0	8.1	--
1/29/99	9.1,b	47	ND	9.0	2.9	1.9	8.0	--
4/26/98	7.8,c	60	ND	9.3	5.7	2.1	9.1	--
1/24/98	24,b	57	ND	6.9	5.5	2.0	8.7	--
11/6/97	17,c	63	ND	7.4	6.7	2.3	9.9	--
7/27/97	28,c	66	1.8	8.6	8.1	2.2	10	--
4/25/97	170,b	77	ND	7.4	7.9	2.1	9.8	--
1/21/97	57,c	80	0.25	7.8	8.3	1.9	8.9	--
7/26/96	11,c	76	ND	11	13	2.4	10	--
4/23/96	5.7,c	73	ND	8.6	12	2.2	9.8	--
1/29/96	6.6,c	81	0.25	7.6	13	1.9	8.9	--
10/26/95	62,c	89	ND	7.8	12	2.4	11	--

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

-- = Not Analyzed.

a = Laboratory analytical report note: lighter than water immiscible sheen present on the sample.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

c = Laboratory analytical report note: TPH-D results consist of gasoline-range compounds.

d = Laboratory analytical report note: TPH-D results consist of both oil-range and gasoline-range compounds.

\* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, DIPE, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

Results in milligrams per liter (mg/L), unless otherwise indicated.

TABLE 2  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
Well MW1 (Continued)

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Other Fuel Additives by 8260*
7/28/95	2.0,c	35	--	3.8	8.7	1.1	6.5	--
5/2/95	6.5,c	86	--	8.9	14	2.3	11	--
2/24/95	9.1	90	--	7.5	12	1.5	11	--
11/18/94	10	96	--	9.3	14	2.5	11	--
8/22/94	8.3	100	--	9.0	11	2.1	9.4	--
5/19/94	30	100	--	12	14	3.5	17	--
2/28/94	110	90	--	11	9.6	2.1	9.9	--
11/24/93	8.2	66	--	8.3	8.9	2.0	121	--
8/30/93	9.4	77	--	6.4	11	2.2	12	--
5/18/93	30	92	--	4.0	11	2.5	15	--
2/23/93	14	100	--	4.5	11	2.1	12	--
11/13/92	4.4	120	--	5.8	10	2.1	13	--
5/27/92	11	120	--	8.8	16	2.3	15	--
1/24/92	19	39	--	7.3	8.7	1.3	8.9	--
12/23/91	34	78	--	9.3	7.3	0.54	13	--
11/25/91	36	170	--	5.5	5.6	1.6	8.4	--
10/10/91	19	28	--	4.1	4.7	1.0	4.8	--
9/17/91	19	39	--	4.9	4.1	1.2	5.9	--
8/19/91	47	48	--	13	8.4	0.99	29	--
7/20/91	49	100	--	11	14	2.3	17	--
6/20/91	42	76	--	4.7	7.1	1.5	9.8	--
5/17/91	26	72	--	7.7	9.9	ND	11	--
4/15/91	--	56	--	6.5	8.5	0.41	9.9	--
3/21/91	--	36	--	4.5	5.7	0.087	7.3	--
2/15/91	--	120	--	7.4	6.6	ND	13	--
1/15/91	--	33	--	3.9	2.9	0.21	5.3	--
9/27/90	--	28	--	3.7	3.5	0.01	6.5	--
8/23/90	--	40	--	5.1	4.9	0.35	6.0	--
7/20/90	44	--	--	5.1	4.2	ND	9.1	--
3/19/90	--	40	--	3.7	1.1	ND	3.3	--
2/20/90**	--	7.6	--	1.6	ND	ND	1.3	--

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

-- = Not Analyzed.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

c = Laboratory analytical report note: TPH-D results consist of gasoline-range compounds.

\* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, DIPE, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

\*\* Inorganic lead not detected in sample.

Results in milligrams per liter (mg/L), unless otherwise indicated.

TABLE 2  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
Well MW2

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Other Fuel Additives by 8260*
2/7/96				MW2 Destroyed				
1/29/96	4.6,c	38	0.0071	1.9	5.7	1.1	5.9	--
10/26/95	900	74	ND	2.9	5.9	2.0	10	--
7/28/95	2.0,c	15	--	1.4	2.3	0.62	3.2	--
5/2/95	6.6,b	55	--	3.3	10	1.8	10	--
2/24/95	22	67	--	4.9	11	1.8	11	--
11/18/94	5.0	86	--	11	17	1.8	12	--
8/22/94	4.1	91	--	10	13	1.5	9.0	--
5/19/94	5.8	62	--	92	13	1.3	8.4	--
2/28/94	13	91	--	13	16	1.5	9.0	--
11/24/93	79	12	--	13	17	2.5	17	--
8/30/93	110	110	--	11	14	1.8	11	--
5/18/93	44	67	--	9.2	12	1.4	9.3	--
2/23/93	7.0	76	--	12	17	1.6	9.6	--
11/13/92	8.2	79	--	10	13	1.4	8.6	--
5/27/92	130	89	--	18	19	1.7	14	--
1/14/92	1600	59	--	17	14	1.8	15	--
12/23/91	700	2100	--	36	130	79	560	--
11/25/91	130	230	--	11	9.7	1.4	9.7	--
10/10/91	360	85	--	21	25	2.1	14	--
9/17/91	56	74	--	10	11	1.4	8.1	--
8/19/91	19	69	--	26	22	2.1	18	--
7/20/91	100	51	--	9.9	7.7	1.2	7.5	--
6/20/91	69	87	--	8.1	8.4	1.1	8.9	--
5/17/91	33	62	--	5.9	6.3	1.2	9.0	--
4/15/91	--	82	--	5.3	7.4	1.0	9.4	--
3/21/91	--	62	--	9.3	11	0.35	9.7	--
2/15/91	--	200	--	12	12	1.7	14	--
1/14/91	--	78	--	11	8.7	0.58	8.0	--
9/27/90	--	59	--	8.4	12	0.88	9.0	--
8/23/90	--	96	--	8.1	8.4	1.5	8.6	--
7/20/90	86	--	--	9.1	14	0.94	13	--
3/19/90	--	50	--	7.7	8.7	0.075	5.6	--
2/20/90**	--	38	--	7.3	3.1	0.075	6.8	--

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

-- = Not Analyzed.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

c = Laboratory analytical report note: TPH-D results consist of gasoline-range compounds.

\* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, DIPE, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

\*\* Inorganic lead not detected in sample.

Results in milligrams per liter (mg/L), unless otherwise indicated.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 Well MW3

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other Fuel Additives by 8260*
7/28/05	77,a,b	100,a	32,+	30	1.1	2.3	12	ND<0.5, except TBA = 13
4/13/05	19,a,b	96,a	28	31	4	2.3	12	ND<0.5, except TBA = 12
1/31/05	13,a,b	93,a	31	36	1.5	2.5	11	ND<1, except TBA = 24
10/15/04	13,a,b	76,a	24	28	ND<0.5	1.1	3.6	ND<0.5, except TBA = 18
7/13/04	57,a,b	98,a	15	28	2.9	1.7	8.9	ND<0.5, except TBA = 11
4/6/04	32,a,b	81,a	17	34	5.9	1.5	9.9	ND<0.5, except TBA = 8.8
12/18/03	32,a,b	130,a	32	33	5.4	0.72	11	ND<0.5, except TBA = 17
9/18/03	140,a,b	130	23	34	11	2.5	14	ND<0.5, except TBA = 10

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

-- = Not Analyzed.

a = Laboratory analytical report note: lighter than water immiscible sheen present on the sample.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

+ = Analyzed by EPA Method 8260.

\* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, DIPE, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

Results in milligrams per liter (mg/L), unless otherwise indicated.

TABLE 2  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
Well MW3 (Continued)

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Other Fuel Additives by 8260*
6/26/03	27,a,b	96	21	29	5.2	2.0	10	ND, except TBA = 8.9
3/18/03	11,a,b	120	16	36	12	1.8	2.4	ND, except TBA = 5.1
12/21/02	21,a,b	110	33	34	9.3	2.0	13	ND, except TBA = 14
9/10/02	43,b	70	19	21	2.2	1.6	7.6	--
3/30/02	8.5,a,b	170	26	40	17	2.6	16	--
12/22/01	9.2,a,b	140	27	37	20	2.6	15	--
9/23/01	47,a,b	130	26	32	9.1	2.4	12	--
6/22/01	33,a,b	110	25	31	7.2	1.9	11	--
4/22/01	61,a	140	24	25	5.4	1.7	11	--
12/14/00	120,a,b	140	35	37	16	2.4	15	--
9/18/00	43,a,b	130	33	39	91	2.3	14	--
7/26/00	--	--	21	--	--	--	--	ND***, except tert-butanol = 19
6/8/00	74,a,b	130	23	41	16	1.9	13	--
3/9/00	14,a,b	180	24	39	22	2.5	16	--
12/9/99	17,a,b	120	16	35	6.7	2.4	12	--
8/31/99	22,b	120	4.7	35	3.7	2.4	14	--
4/29/99	48,b	100	2.5	33	8.0	2.1	14	--
1/29/99	240,b	84	1.3	31	2.8	1.8	12	--
4/26/98	380,b	100	9.7	29	7.1	1.8	14	--
1/24/98	77,b	97	ND	28	7.1	1.8	11	--
11/6/97	120,b	140	ND	37	19	2.4	14	--
7/24/97	91,c	120	1.4	33	17	2.2	12	--
4/25/97	760,b	240	1.6	24	18	4.1	24	--
1/21/97	34,c	150	1.3	40	14	2.6	12	--
7/26/96	24,c	130	0.89	40	22	2.4	12	--
4/23/96	280,c	170	0.72	34	22	2.2	14	--

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

-- = Not Analyzed.

a = Laboratory analytical report note: lighter than water immiscible sheen present on the sample.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

c = Laboratory analytical report note: TPH-D results consist of gasoline-range compounds.

\* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, DIPE, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

\*\*\*Review of laboratory analytical reports indicate that oxygenated volatile organic compounds (including TAME, DIPE, ETBE, methanol, ethanol, EDB, and 1,2-DCA) were not detected except MTBE at 21 ppm and tert-butanol at 19 ppm. Results in milligrams per liter (mg/L), unless otherwise indicated.

TABLE 2  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
Well MW3 (Continued)

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Other Fuel Additives by 8260*
1/29/96	45,c	150	0.54	32	21	1.9	12	--
10/26/95	33	130	0.69	37	21	0.21	11	--
7/28/95	1.9,b	86	--	1.4	2.3	0.62	3.2	--
5/2/95	9.7,b	170	--	43	30	2.5	14	--
2/24/95	9.2	130	--	31	19	1.8	10	--
11/18/94	23	140	--	38	22	2.0	11	--
7/22/94	5.3	170	--	35	20	1.8	10	--
5/19/94	30	150	--	38	25	2.4	14	--
2/28/94	210	110	--	36	21	1.9	11	--
11/24/93	24	160	--	48	26	2.2	12	--
7/30/93	32	130	--	36	21	1.9	8.2	--
5/18/93	7.2	130	--	36	21	2.1	12	--
2/23/93	8.1	110	--	31	18	1.9	11	--
11/13/92	4.7	140	--	38	24	2.0	12	--
5/27/92	27	370	--	91	57	3.0	21	--
7/14/92	270	130	--	76	30	3.4	21	--
12/23/91	540	740	--	30	61	31	180	--
11/25/91	74	150	--	65	31	3.4	18	--
10/10/91	39	140	--	57	31	2.2	14	--
9/17/91	140	180	--	47	25	2.6	15	--
8/19/91	150	170	--	82	31	4.4	22	--
7/20/91	270	450	--	46	29	3.5	21	--
6/20/91	210	920	--	39	49	13	69	--
5/17/91	70	170	--	32	22	2.2	18	--
4/15/91	--	110	--	31	15	0.88	7.4	--
3/21/91	--	87	--	30	14	0.69	5.4	--
2/15/91	--	230	--	44	40	ND	31	--
1/14/91	--	160	--	48	25	1.0	16	--
9/27/90	--	25	--	7.2	6.4	0.42	3.4	--
8/23/90	--	220	--	67	46	27	18	--
7/20/90	86	--	--	9.1	14	0.94	13	--
3/19/90	--	210	--	38	28	1.8	12	--
2/20/90**	--	46	--	20	15	1.8	9.7	--

NOTES:

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

-- = Not Analyzed.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

c = Laboratory analytical report note: TPH-D results consist of gasoline-range compounds.

\* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, DIPE, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

\*\* Inorganic lead not detected in sample.

Results in milligrams per liter (mg/L), unless otherwise indicated.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 Well MW4

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Other Fuel Additives by 8260* ND<0.5, except TBA = 8.4
7/28/05	94,a,b,f	130,a	27,+	32	8.9	2.9	14	
4/13/05			Not Sampled (Free Product Present in Well)					
1/31/05			Not Sampled (Free Product Present in Well)					
10/15/04			Not Sampled (Free Product Present in Well)					
7/13/04			Not Sampled (Free Product Present in Well)					
2/11/04	Free Product sampled. Laboratory fuel fingerprint notes a pattern resembling diesel, with a less significant gasoline-range pattern.							
12/18/03			Not Sampled (Free Product Present in Well)					
9/18/03			Not Sampled (Free Product Present in Well)					
6/26/03			Not Sampled (Free Product Present in Well)					
3/18/03			Not Sampled (Free Product Present in Well)					
12/21/02			Not Sampled (Free Product Present in Well)					
9/10/02			Not Sampled (Free Product Present in Well)					
3/30/02			Not Sampled (Free Product Present in Well)					
12/22/01			Not Sampled (Free Product Present in Well)					
9/23/01			Not Sampled (Free Product Present in Well)					
6/22/01	440,a,b	140	15	35	19	2.0	10	--
4/22/01			Not Sampled (Free Product Present in Well)					
12/14/00			Not Sampled (Free Product Present in Well)					
9/18/00			Not Sampled (Free Product Present in Well)					
6/8/00			Not Sampled (Free Product Present in Well)					
3/9/00	2,100,a,b	130	6.9	35	13	2.1	11	--
12/9/99	9,000,a,b	120	8.1	33	6	2.4	12	--
8/31/99	9.4,b	190	4.4	46	30	2.8	15	--
4/29/99	9.4,b	210	3.2	42	35	2.8	15	--
1/29/99	7.3,b	190	2.4	44	40	3.1	17	--
4/26/98	13,b	190	ND	49	37	3.2	18	--
1/24/98	20,b	200	ND	50	40	3.1	17	--
11/6/97	110,b	160	ND	48	30	2.8	16	--
8/26/97	5.5,b	210	1.7	48	42	3.4	19	--
8/15/97			MW4 Installed					

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

-- = Not Analyzed.

a = Laboratory analytical report note: lighter than water immiscible sheen present on the sample.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

f = Laboratory analytical report note: liquid sample that contains more than ~1 vol. % sediment.

+ = Analyzed by EPA Method 8260.

\* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, DIPE, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

Results in milligrams per liter (mg/L), unless otherwise indicated.

TABLE 2  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
Well EW1

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other Fuel Additives by 8260*	
7/28/05	1.8,b	1.2	17,+	0.033	0.0051	0.00056	0.0059	ND<0.25, except TBA = 22	
4/13/05	2.2,b	0.38	2.7	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05, except TBA = 1.6	
1/31/05	3.4,b	1.9	38	ND<1	ND<1	ND<1	ND<1	ND<1, except TBA = 32	
10/15/04	4.1,a,b	ND<5.0,a,e	96	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7, except TBA = 97	
7/13/04	3.3,a,b	2.6,a	73	ND<1.2	ND<1.2	ND<1.2	ND<1.2	ND<1.2, except TBA = 40	
4/6/04	3.4,a,b	2.6,a	72	ND<1	ND<1	ND<1	ND<1	ND<1, except TBA = 34	
12/18/03	3.0,b	ND<5.0,e	160	0.22	ND<50	ND<50	0.073	ND<5, except TBA = 64	
9/18/03	8.2,a,b	7.5	220	0.33	ND<0.05	ND<0.05	ND<0.05	ND<2.5, except TBA = 51	
2/23/93	9.6	66	--	14	8.5	1.4	9.8	--	
11/13/92	13	62	--	11	9.2	1.1	9.6	--	
8/92				EW1 Installed					

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

-- = Not Analyzed.

+ = Analyzed by EPA Method 8260.

a = Laboratory analytical report note: lighter than water immiscible sheen present on the sample.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

c = Laboratory analytical report note: reporting limit raised due to high MTBE content

\* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, DIPE, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

Results in milligrams per liter (mg/L), unless otherwise indicated.



TABLE 2  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
Well OW1

Date	TPH-D	TPH-G	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other Fuel Additives by 8260, including MTBE**
7/28/05	230,a,b	10,a	--	1.3	0.03	0.19	0.072	ND<0.05, TBA ND<0.5
4/13/05	590a,b,d	35,a	--	2	ND<0.05	0.46	0.14	ND<0.05, TBA ND<0.5
1/31/05				No sample recovered				
10/15/04				No sample recovered				
7/14/04	240,a,b	66,a	ND<0.05	1.8	ND<0.05	1.8	0.056	ND<0.05, TBA ND<0.5
4/6/04	74,a,b	50,a	--	3.1	ND<0.1	0.21	0.14	ND<0.1, TBA ND<1
2/11/04	450,a,b	15,a	130	2.2	0.031	0.16	0.054	ND<0.025, TBA ND<0.25
11/21/03	1,900,a,b	38,e	570	2.0	0.059	0.19	0.095	ND<0.05, TBA ND<0.5
6/10/98				OW1 Installed				

NOTES:

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

-- = Not Analyzed.

a = Laboratory analytical report note: lighter than water immiscible sheen present on the sample.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

d = Laboratory analytical report note: oil range compounds are significant.

e = Laboratory analytical report note: unmodified or weakly modified gasoline is significant.

\*\* = This column summarizes results for analysis using EPA Method 8260 for fuel oxygenates (MTBE, TAME, DIPE,

ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

Results in milligrams per liter (mg/L), unless otherwise indicated.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 Well OW2

Date	TPH-D	TPH-G	TPH-MO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Other Fuel Additives by 8260, incl. MTBE**
7/28/05				No sample recovered				
4/13/05	0.22,b	0.065	--	ND <0.0005	ND <0.0005	ND <0.0005	ND <0.0005	ND<0.0005, except MTBE = 0.0097
1/31/05				No sample recovered				
10/15/04				No sample recovered				
07/14/04				No sample recovered				
4/6/04	--	0.069,a	--	ND <0.00062	ND <0.00062	ND <0.00062	ND <0.00062	--
2/11/04	--	0.21	--	ND <0.0005	ND <0.0005	ND <0.0005	ND <0.0005	ND<0.0005, except MTBE = 0.0064 TBA = 0.0070
11/21/03				No sample recovered.				
6/10/98				OW2 Installed				

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

-- = Not Analyzed.

a = Laboratory analytical report note: lighter than water immiscible sheen present on the sample.

b = Laboratory analytical report note: TPH-D results consist of both diesel-range and gasoline-range compounds.

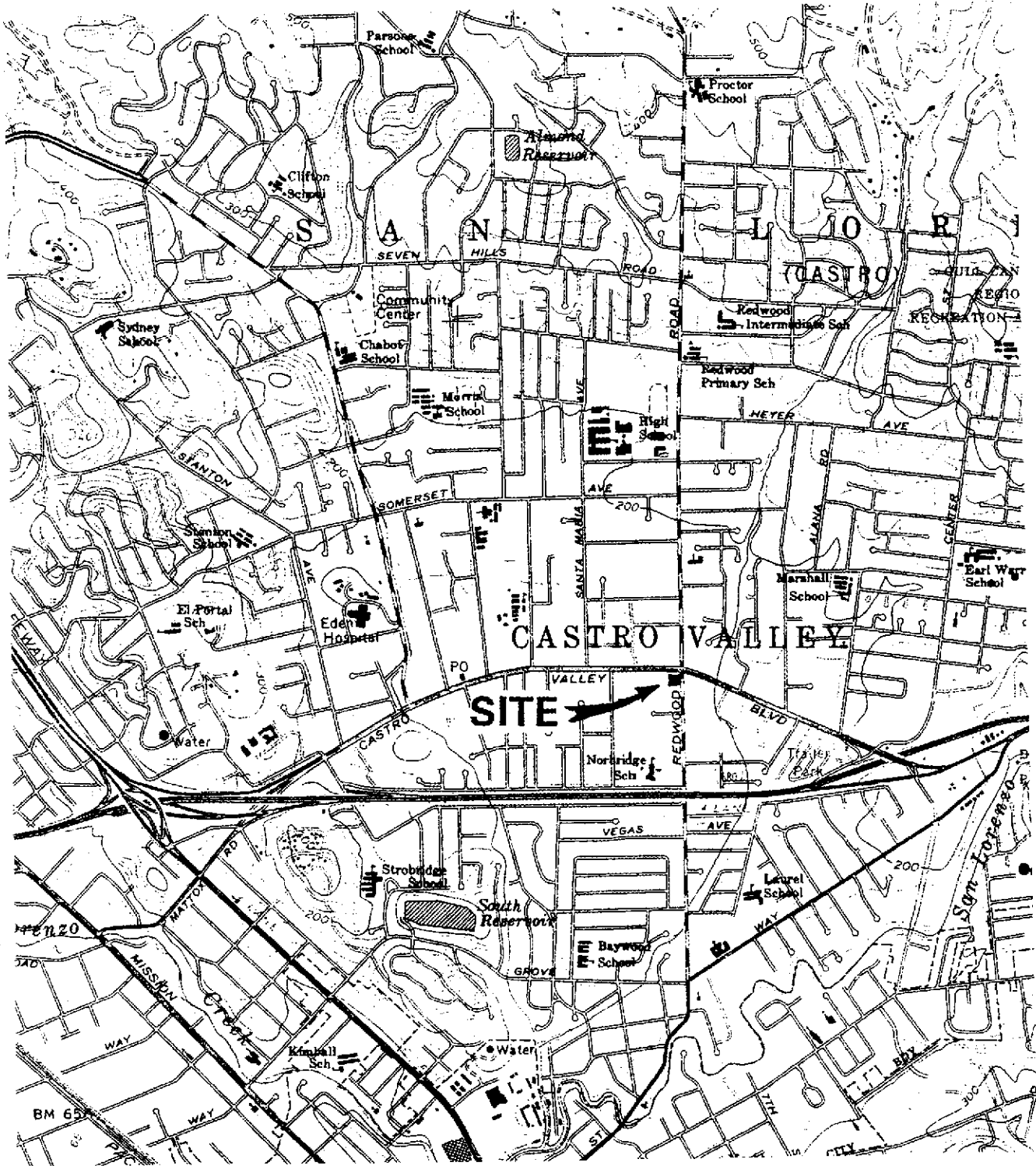
e = Laboratory analytical report note: unmodified or weakly modified gasoline is significant.

\* = This column summarizes results for analysis using EPA Method 8260 for fuel oxygenates (MTBE, TAME, DIPE, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).

Results in milligrams per liter (mg/L), unless otherwise indicated.

# P & D ENVIRONMENTAL

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



Base Map From:  
U.S. Geological Survey  
Hayward, Calif.  
7.5 Minute Quadrangle  
Photorevised 1980

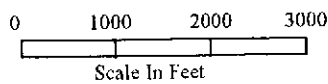
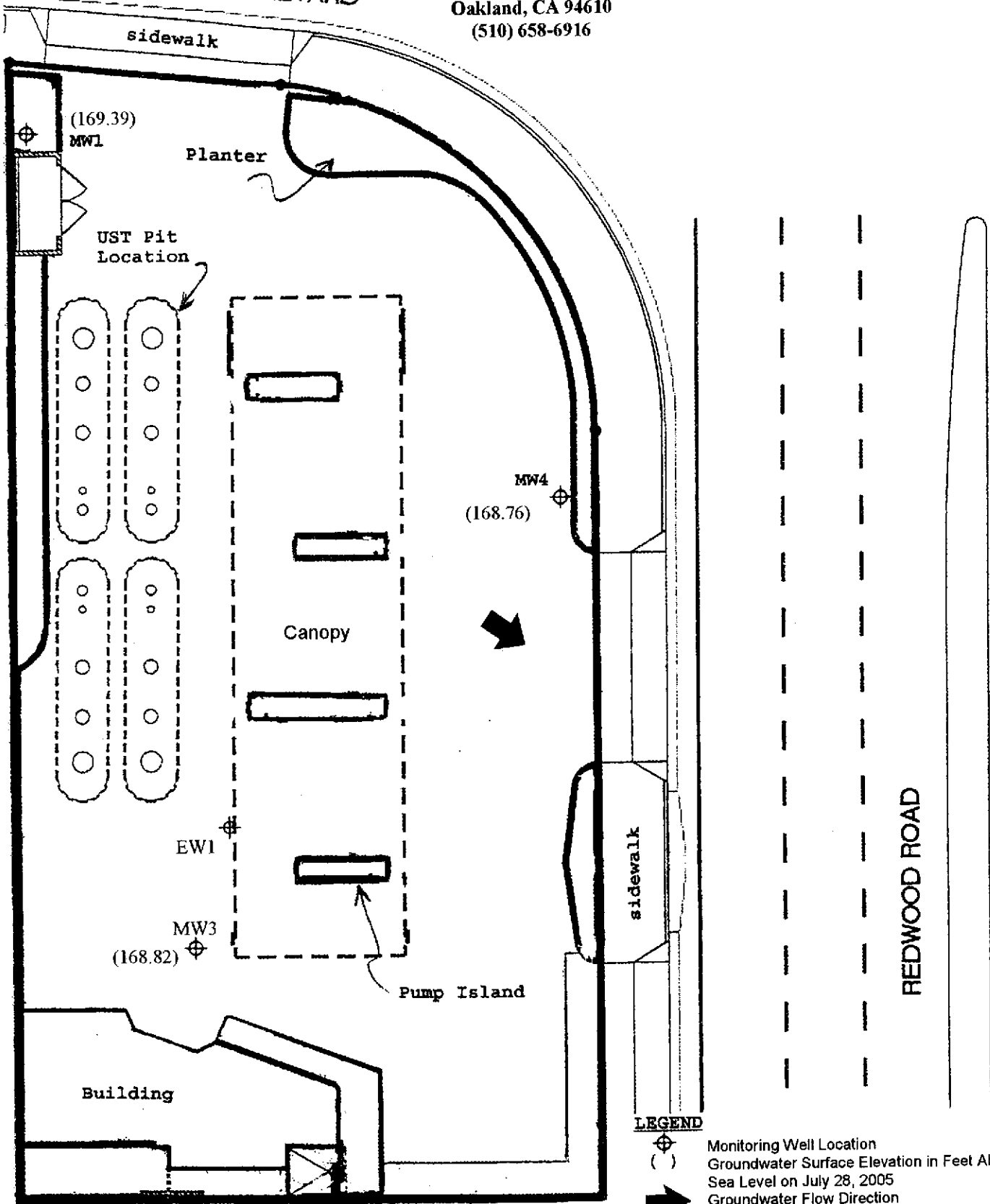


Figure 1  
SITE LOCATION MAP  
Xtra Oil Company  
3495 Castro Valley Blvd.  
Castro Valley, California

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

CASTRO VALLEY BOULEVARD

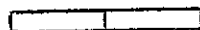


Base Map From:  
RHL Design Group, Inc.  
June, 1997

North



0 20



Scale in Feet

Figure 2  
SITE PLAN  
Xtra Oil Company  
3495 Castro Valley Blvd  
Castro Valley, CA

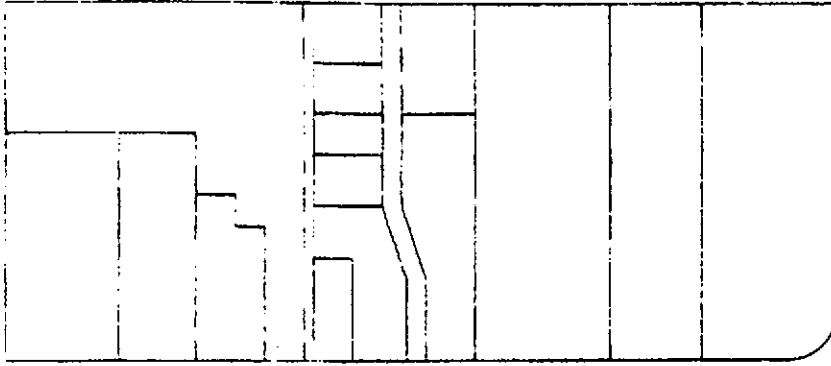
# P & D ENVIRONMENTAL

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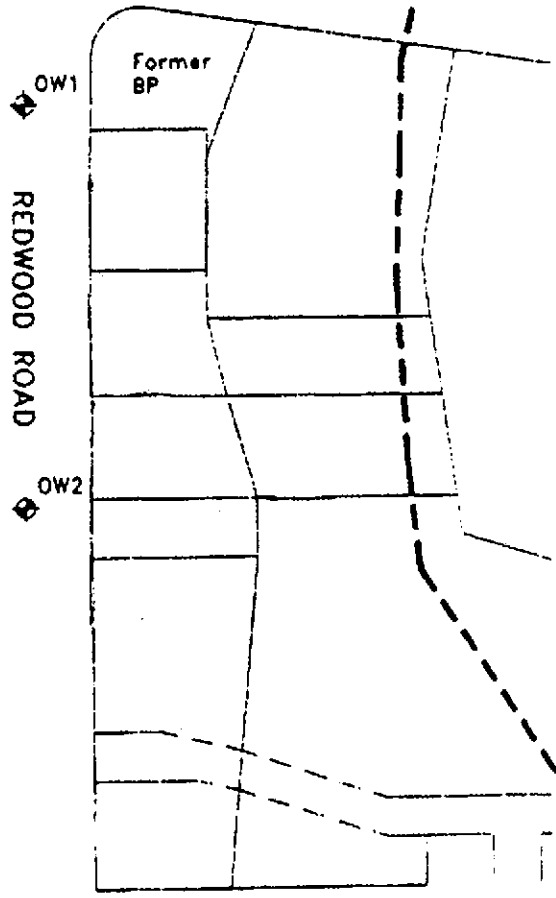
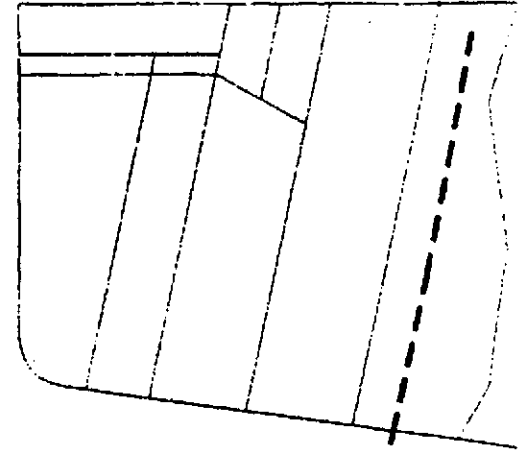
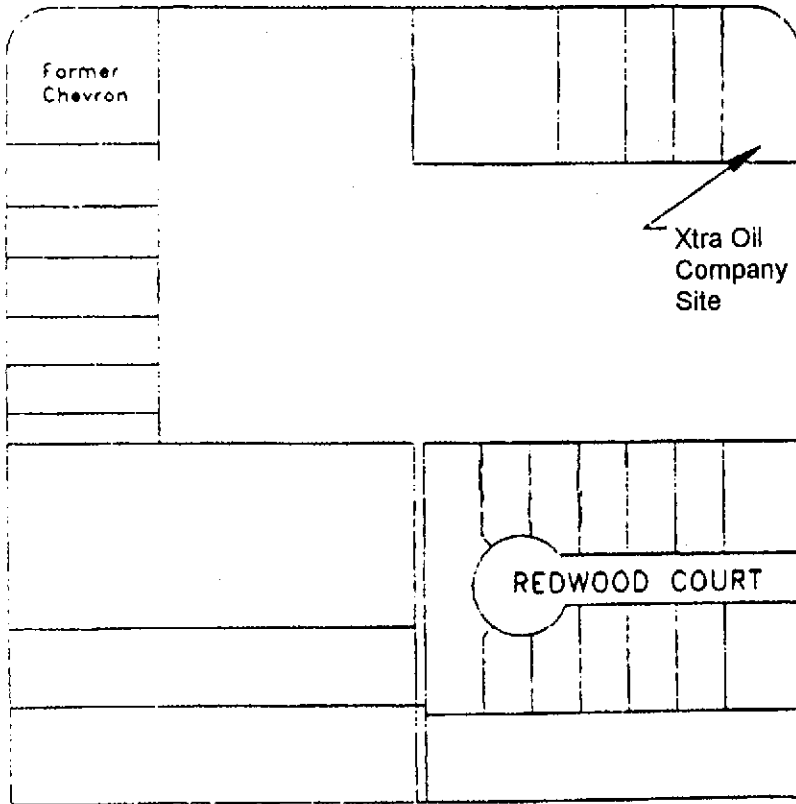
4020 Panama Court

Oakland, CA 94611

(510) 658-6916



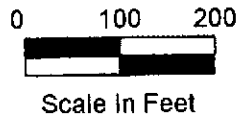
CASTRO VALLEY BOULEVARD



### LEGEND

- ◆ Observation Well Location
- - - - - Approximate Creek Location

Base Map From:  
Castro Valley Sanitation District  
Undated



North



Figure 3  
SITE VICINITY MAP  
Xtra Oil Company  
3495 Castro Valley Blvd.  
Castro Valley, CA

P&D ENVIRONMENTAL  
GROUNDWATER MONITORING/WELL PURGING  
DATA SHEET

Site Name XO-Castro Valley Well No. MW1  
 Job No. 0014 Date 7/28/05  
 TOC to Water (ft.) 7.98 Sheen None  
 Well Depth (ft.) 20 Free Product Thickness Ø  
 Well Diameter 4 in (0.646 gal/ft.) Sample Collection Method teflon bailer  
 Gal./Casing Vol. 8.5 7.8 23.4 (°C) ELECTRICAL CONDUCTIVITY (µS)

TIME	GAL. PURGED	DH	TEMPERATURE	ELECTRICAL CONDUCTIVITY
-	<u>2</u>	-	-	-
<u>14:00</u>	<u>5</u>	<u>6.69</u>	<u>24.8</u>	<u>1191</u>
<u>14:16</u>	<u>10</u>	<u>pumped dry</u>		
<u>14:20</u>	<u>15</u>	<u>Sampling time</u>		
	<u>20</u>			
	<u>25</u>			

NOTES: Moderate H<sub>2</sub>S odor, but no sheen on purge water.

P&D ENVIRONMENTAL  
GROUNDWATER MONITORING/WELL PURGING  
DATA SHEET

Site Name XO-Castro Valley  
 Job No. 0014  
 TOC to Water (ft.) 7.58  
 Well Depth (ft.) 18.7  
 Well Diameter 4 in. (0.646 gal/ft.)  
 Gal./Casing Vol. 7.2  
21.6

Well No. MW3  
 Date 7/28/05  
 Sheen F.P. ↓ < 1/16 in.  
 Free Product Thickness ~~0.01 ft.~~  
 Sample Collection Method Teflon bottle

TIME	GAL. PURGED	pH	TEMPERATURE	ELECTRICAL CONDUCTIVITY
	<del>2.0</del>			
	<del>5.0</del>			
	<del>10.0</del>	No physical parameters measured. pumped dry		
15:13	15.0			
	<del>20.0</del>			
	<del>22.0</del>			

NOTES: Light brown Botly free product on purge water.

P&D ENVIRONMENTAL  
GROUNDWATER MONITORING/WELL PURGING  
DATA SHEET

Site Name XO-Castro Valley  
 Job No. 0014  
 TOC to Water (ft.) 7.59  
 Well Depth (ft.) 19 ft  
 Well Diameter 2 in.  
 Gal./Casing Vol. 1.9  
5.7

Well No. MW4  
 Date ~~7/28~~ 7/28/05  
 Sheen Slight Free Product  
 Free Product Thickness Trace  
 Sample Collection Method Teflon bailer

TIME	GAL. PURGED	pH	TEMPERATURE	ELECTRICAL CONDUCTIVITY
	1			
	2			
	3			
	4			
	5			
4:52	6			
4:55	Sampling time			

No physical parameters measured.  
 Purged ~~bailed~~  $\frac{1}{2}$  w mechanical pump +  $\frac{1}{2}$  w bailer

NOTES: No free product by product finding paste (see Page 2), however light free product thinner than on MW3 observed. No free product observed in product recovery device.



P&D ENVIRONMENTAL  
GROUNDWATER MONITORING/WELL PURGING  
DATA SHEET

Site Name XO - Castro Valley  
Job No. 0014  
TOC to Water (ft.) 7.59  
Well Depth (ft.) \_\_\_\_\_  
Well Diameter 2 in.

Well No. MW4  
Date 7/28/05  
Sheen \_\_\_\_\_  
Free Product Thickness ∅  
Sample Collection Method \_\_\_\_\_

Gal./Casing Vol. \_\_\_\_\_

TIME	Length of Steel Tape (in)	Feature	ELECTRICAL CONDUCTIVITY
	102		
	(None encountered)	Top of product is gasoline-finding pos	
	10 7/8	Top of water is water-finding paste	
	∅	bottom of Tape	

NOTES:  
\_\_\_\_\_  
\_\_\_\_\_

P&D ENVIRONMENTAL  
GROUNDWATER MONITORING/WELL PURGING  
DATA SHEET

Site Name XO. Castro Valley  
 Job No. 0014  
 TOC to Water (ft.) 6.94  
 Well Depth (ft.) 13.2  
 Well Diameter 8 in. (2.584 g/d/ft.)  
 Gal./Casing Vol. 16.3

Well No. EW1  
 Date 7/28/05  
 Sheen None  
 Free Product Thickness 0  
 Sample Collection Method Teflon Wafer

TIME	GAL. PURGED	pH	TEMPERATURE (°C)	ELECTRICAL CONDUCTIVITY (µS)
12:50	5	6.14	25.4	585
12:52	10	6.06	25.4	583
12:57	20	<del>6.0</del> 5.99	25.3	586
13:02	30	6.08	25.4	587
13:07	40	6.17	25.5	589
13:11	50	6.19	25.5	588
13:15	Sampling time			

NOTES: Moderate PTHC odor, but no sheen  
on purge water

P&D ENVIRONMENTAL  
GROUNDWATER MONITORING/WELL PURGING  
DATA SHEET

Site Name XO. Castro Valley

Well No. DW1

Job No. 0014

Date 7/28/05

TOC to Water (ft.) 7.06

Sheen F.P. →

Well Depth (ft.) 7.45

Free Product Thickness 0.01 ft.

Well Diameter 4 in.

Sample Collection Method \_\_\_\_\_

Gal./Casing Vol. \_\_\_\_\_ Vacuum pump

Calculated Feet Length on Steel Tape (ft.)

TIME	GAL. PURGED	DH	Feature TEMPERATURE	ELECTRICAL CONDUCTIVITY
<u>7.45</u>	<u>89 <sup>3</sup>/<sub>8</sub></u>		<u>T.O.C</u>	
	<u>4 <sup>3</sup>/<sub>16</sub> in.</u>		<u>Top of Product to Gasline-finding probe</u>	
<u>0.39</u>	<u>4 <sup>11</sup>/<sub>16</sub> in.</u>		<u>Top of water-to-water-finding probe</u>	
	<u>Ø</u>		<u>Bottom of well</u>	

NOTES: Water in Christie box above T.O.C.

P&D ENVIRONMENTAL  
GROUNDWATER MONITORING/WELL PURGING  
DATA SHEET

Site Name XO - Castro Valley  
 Job No. 0014  
 TOC to Water (ft.) ~~6.70~~ 7.27  
 Well Depth (ft.) 7.32  
 Well Diameter 1 in.  
 Gal./Casing Vol. NA

Well No. OW2  
 Date 7/28/05  
 Sheen Unknown None  
 Free Product Thickness 0  
 Sample Collection Method None (see notes)

Reading on Steel tape	<del>Depth (ft.)</del> GAL. PURGED	<del>PH</del>	<del>feature TEMPERATURE</del>	ELECTRICAL CONDUCTIVITY
	<u><del>87 7/8</del> in.</u>		<u>T.O.C.</u>	
	<u>5/8 in.</u>		<u>Top of water to water-finding</u>	<u>paste</u>
	<u>0 in.</u>		<u>Bottom of well</u>	

NOTES: Water in Christie box below T.O.C.  
~10 ml of ~~the~~ sample recoverable to vacuum pump.



# McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
Website: www.mcccampbell.com E-mail: main@mcccampbell.com

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

Client Project ID: #0014; Xtra Oil, Castro Valley

Client Contact: Wilhelm Welzenbach

Client P.O.:

Date Sampled: 07/28/05

Date Received: 07/29/05

Date Extracted: 07/29/05

Date Analyzed: 07/30/05-08/03/05

## Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel\*

Extraction method: SW3510C

Analytical methods: SW8015C

Work Order: 0507510


Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0507510-001A	MW1	W	16,000,d,b,h	10	105
0507510-002A	MW3	W	77,000,a,d,h	20	113
0507510-003A	MW4	W	94,000,d,a,h,i	10	94
0507510-004A	EW1	W	1800,d,b	1	97
0507510-005A	OW1	W	230,000,d,a,h	20	102

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

\* 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.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

 Angela Rydelius, Lab Manager



# McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
 Telephone : 925-798-1620 Fax : 925-798-1622  
 Website: www.mcccampbell.com E-mail: main@mcccampbell.com

P & D Environmental  55 Santa Clara, Ste.240  Oakland, CA 94610	Client Project ID: #0014; Xtra Oil, Castro Valley	Date Sampled: 07/28/05
	Client Contact: Wilhelm Welzenbach	Date Received: 07/29/05
	Client P.O.:	Date Extracted: 07/31/05-08/01/05
		Date Analyzed: 07/31/05-08/01/05

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0507510

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW1	W	30,000,a,h	---	2500	760	2100	4800	100	120
002A	MW3	W	100,000,a,h	---	30,000	1100	2300	12,000	100	117
003A	MW4	W	130,000,a,h,i	---	32,000	8900	2900	14,000	100	117
004A	EW1	W	1200,a	---	33	5.1	0.56	5.9	1	101
005A	OW1	W	10,000,a,h	---	1300	30	190	72	33	116

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	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.



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 Telephone : 925-798-1620 Fax : 925-798-1622  
 Website: www.mcccampbell.com E-mail: main@mcccampbell.com

P & D Environmental  55 Santa Clara, Ste.240  Oakland, CA 94610	Client Project ID: #0014; Xtra Oil, Castro Valley	Date Sampled: 07/28/05
	Client Contact: Wilhelm Welzenbach	Date Received: 07/29/05
	Client P.O.:	Date Extracted: 08/01/05-08/02/05
		Date Analyzed: 08/01/05-08/02/05

### Oxygenates and BTEX by GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0507510

Lab ID	0507510-001A	0507510-002A	0507510-003A	0507510-004A	Reporting Limit for DF = 1	
Client ID	MW1	MW3	MW4	EW1		
Matrix	W	W	W	W		
DF	100	1000	1000	500		

Compound	Concentration				ug/kg	ug/L
tert-Amyl methyl ether (TAME)	ND<50	ND<500	ND<500	ND<250	NA	0.5
Benzene	2400	32,000	39,000	ND<250	NA	0.5
t-Butyl alcohol (TBA)	ND<500	13,000	8400	22,000	NA	5.0
1,2-Dibromoethane (EDB)	ND<50	ND<500	ND<500	ND<250	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<50	ND<500	ND<500	ND<250	NA	0.5
Diisopropyl ether (DIPE)	ND<50	ND<500	ND<500	ND<250	NA	0.5
Ethylbenzene	2100	2600	7600	ND<250	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<50	ND<500	ND<500	ND<250	NA	0.5
Methyl-t-butyl ether (MTBE)	260	32,000	27,000	17,000	NA	0.5
Toluene	790	1100	11,000	ND<250	NA	0.5
Xylenes	4800	13,000	48,000	ND<250	NA	0.5

### Surrogate Recoveries (%)

%SS1:	96	100	99	93	
%SS2:	102	95	95	102	
%SS3:	99	99	93	107	
Comments	h	h	h,i		

\* 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; N/A means analyte not applicable to this analysis.

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

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



# McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
 Telephone : 925-798-1620 Fax : 925-798-1622  
 Website: www.mcccampbell.com E-mail: rmain@mcccampbell.com

P & D Environmental  55 Santa Clara, Ste.240  Oakland, CA 94610	Client Project ID: #0014; Xtra Oil, Castro Valley	Date Sampled: 07/28/05
	Client Contact: Wilhelm Welzenbach	Date Received: 07/29/05
	Client P.O.:	Date Extracted: 08/01/05-08/02/05
		Date Analyzed: 08/01/05-08/02/05

### Oxygenates and BTEX by GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0507510

Lab ID	0507510-005A	Reporting Limit for DF = 1	S	W
Client ID	OW1			
Matrix	W			
DF	100			

Compound	Concentration			ug/kg	ug/L
	tert-Amyl methyl ether (TAME)	ND<50			NA
Benzene	1400			NA	0.5
t-Butyl alcohol (TBA)	ND<500			NA	5.0
1,2-Dibromoethane (EDB)	ND<50			NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<50			NA	0.5
Diisopropyl ether (DIPE)	ND<50			NA	0.5
Ethylbenzene	200			NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<50			NA	0.5
Methyl-t-butyl ether (MTBE)	ND<50			NA	0.5
Toluene	ND<50			NA	0.5
Xylenes	ND<50			NA	0.5

### Surrogate Recoveries (%)


%SS1:	96			
%SS2:	102			
%SS3:	98			
Comments	h			

\* 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; N/A means analyte not applicable to this analysis.

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

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

 Angela Rydelius, Lab Manager





QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0507510

EPA Method: SW8021B/8015Cm		Extraction: SW5030B				BatchID: 17382			Spiked Sample ID: 0507523-007A	
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	LCS / LCSD
TPH(btex) <sup>£</sup>	ND	60	106	105	1.07	91.1	93	2.04	70 - 130	70 - 130
MTBE	ND	10	116	115	1.03	88.9	89.1	0.227	70 - 130	70 - 130
Benzene	ND	10	109	113	2.90	84	83.6	0.473	70 - 130	70 - 130
Toluene	ND	10	107	109	1.86	90.7	91	0.258	70 - 130	70 - 130
Ethylbenzene	ND	10	110	112	2.14	96.2	96.9	0.756	70 - 130	70 - 130
Xylenes	ND	30	96.7	100	3.39	100	100	0	70 - 130	70 - 130
%SS:	99	10	107	107	0	98	97	0.967	70 - 130	70 - 130

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

BATCH 17382 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507510-001A	7/28/05	7/31/05	7/31/05 6:48 AM	0507510-002A	7/28/05	7/31/05	7/31/05 7:54 AM
0507510-003A	7/28/05	7/31/05	7/31/05 8:27 AM	0507510-004A	7/28/05	7/31/05	7/31/05 9:01 AM
0507510-004A	7/28/05	8/01/05	8/01/05 10:32 PM	0507510-005A	7/28/05	8/01/05	8/01/05 11:39 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.

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or 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.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0507510

EPA Method: SW8260B		Extraction: SW5030B				BatchID: 17383			Spiked Sample ID: 0507524-004B	
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	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	10	108	113	4.68	103	105	2.58	70 - 130	70 - 130
Benzene	ND	10	112	114	2.53	112	110	2.23	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	50	89.6	96.2	7.12	84.6	89.6	5.84	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	10	115	119	3.31	113	114	0.765	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	105	110	4.33	103	104	1.34	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	110	114	3.77	107	106	1.26	70 - 130	70 - 130
Toluene	ND	10	106	103	2.80	104	104	0	70 - 130	70 - 130
%SS1:	106	10	102	107	4.78	106	103	2.94	70 - 130	70 - 130
%SS2:	103	10	101	100	0.850	102	101	0.965	70 - 130	70 - 130
%SS3:	110	10	99	97	2.49	102	99	2.75	70 - 130	70 - 130

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

BATCH 17383 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507510-001A	7/28/05	8/02/05	8/02/05 9:55 PM	0507510-002A	7/28/05	8/01/05	8/01/05 5:44 PM
0507510-003A	7/28/05	8/01/05	8/01/05 6:26 PM	0507510-004A	7/28/05	8/02/05	8/02/05 10:37 PM
0507510-005A	7/28/05	8/02/05	8/02/05 11:19 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.



### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0507510

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 17367			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	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	99.2	97.5	1.69	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	99	98	1.26	N/A	70 - 130

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

#### BATCH 17367 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507510-001A	7/28/05	7/29/05	7/30/05 12:34 AM	0507510-002A	7/28/05	7/29/05	8/03/05 4:20 PM
0507510-003A	7/28/05	7/29/05	7/30/05 1:45 AM	0507510-004A	7/28/05	7/29/05	8/03/05 3:11 PM
0507510-005A	7/28/05	7/29/05	8/02/05 8:06 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.

**P & D ENVIRONMENTAL**

A Division of Paul H. King, Inc.  
 55 Santa Clara Ave, Suite 240  
 Oakland, CA 94610  
 (510) 658-6916

0507510  
**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

PROJECT NUMBER: <b>0014</b>				PROJECT NAME: <b>Xtra Oil, Castro Valley</b>				NUMBER OF CONTAINERS	ANALYSIS(ES):				PRESERVATIVE	REMARKS
SAMPLED BY: (PRINTED AND SIGNATURE) <b>Wilhelm Welzenbach</b>									TPH	Diesel	Gasoline	BTEX		
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION										
MW1	7/28/05		water					7	X	X			ICE	Normal Turnaround
MW3	↓		↓					7	X	X			↓	↓
MW4	↓		↓					7	X	X			↓	↓
EW1	↓		↓						X	X			↓	↓
OW1	↓		↓						X	X			↓	↓
OW2	↓		↓										↓	Hold
								ICE/P		APPROPRIATE				
								GOOD CONDITION		CONTAINERS				
								HEAD SPACE ABSENT		PRESERVED IN LAB				
								DECHLORINATED IN LAB						
								VOAS	ORG	METALS	OTHER			
								PRESERVATION						
RELINQUISHED BY: (SIGNATURE) <b>Wilhelm Welzenbach</b>				DATE <b>7/28/05</b>	TIME <b>3:03</b>	RECEIVED BY: (SIGNATURE) <b>[Signature]</b>		TOTAL NO. OF SAMPLES (THIS SHIPMENT) <b>6</b>		LABORATORY: <b>McCampbell Analytical</b>				
RELINQUISHED BY: (SIGNATURE)				DATE	TIME	RECEIVED BY: (SIGNATURE)		TOTAL NO. OF CONTAINERS (THIS SHIPMENT) <b>31</b>		LABORATORY CONTACT: <b>Angela Ruelius</b>				
RELINQUISHED BY: (SIGNATURE)				DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)		LABORATORY PHONE NUMBER: <b>(925) 798-1620</b>						
								SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES <input checked="" type="checkbox"/> NO						
REMARKS:								<b>VOA's preserved w/ HCl,</b>						

Sampled by  
 July 22, 2005

+  
+  
+  
+  
+  
+

# McC Campbell Analytical, Inc.

110 Second Avenue South, #D7  
Pacheco, CA 94553-5560  
(925) 798-1620

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 0507510

ClientID: PDEO

EDF: NO

**Report to:**

Wilhelm Welzenbach  
P & D Environmental  
55 Santa Clara, Ste.240  
Oakland, CA 94610

TEL: (510) 658-6916  
FAX: 510-834-0152  
ProjectNo: #0014; Xtra Oil, Castro Valley  
PO:

**Bill to:**

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

Requested TAT:

5 days

Date Received: 07/29/2005

Date Printed: 07/29/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)																
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
0507510-001	MW1	Water	7/28/05	<input type="checkbox"/>	A	A															
0507510-002	MW3	Water	7/28/05	<input type="checkbox"/>	A	A															
0507510-003	MW4	Water	7/28/05	<input type="checkbox"/>	A	A															
0507510-004	EW1	Water	7/28/05	<input type="checkbox"/>	A	A															
0507510-005	OW1	Water	7/28/05	<input type="checkbox"/>	A	A															

**Test Legend:**

1	G-MBTX_W	2	MBTEXOXY-8260B_W	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Maria Venegas

**Comments:**

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