P & D ENVIRONMENTAL
A Division of Paul H. King, Inc.
4020 Panama Court
Oakland, CA 94611
(510) 658-6916

October 10, 2003
Report 0014.R49

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

SUBJECT: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT
(JULY THROUGH SEPTEMBER 2003)
Xtra Oil Company
3495 Castro Valley Blvd.
Castro Valley, CA

Gentlemen:

P&D Environmental, a division of Paul H. King, Inc. (P&D) is pleased to present this report documenting the results of the most recent quarterly monitoring and sampling of the wells at the subject site. This work was performed in accordance with P&D's proposal 020599.P1 dated February 5, 1999. Wells MW1, MW3, MW4, and EW1 were monitored, and wells MW1, MW3, and EW1 were sampled on September 18, 2003. The reporting period for this report is for July through September 2003. A Site Location Map (Figure 1) and Site Plan (Figure 2) 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.

FIELD ACTIVITIES

On September 18, 2003, groundwater monitoring wells MW1, MW3, and MW4, and extraction well EW1 were monitored and wells MW1, MW3, and EW1 were sampled by P&D personnel. Well MW4 was not sampled because of the presence of free product. A joint groundwater monitoring with Allisto Engineering, Inc. was not performed this time period.

The wells were monitored for depth to water and the presence of free product or sheen. Depth to water was measured to the nearest 0.01 foot in wells MW1, MW3, and EW1 using an electric water level indicator. In well MW4, the depth to water was measured to the nearest 1/32-inch with a steel tape and water-finding paste. The depth to free product in well MW4 was measured using a steel tape with product-finding paste. The presence of free product and sheen was evaluated using a transparent bailer in wells MW1, MW3, and EW1. No free product was observed in any of the wells prior to purging with the exception of well MW4 where 1.80 feet of free product were encountered. In addition, sheen was observed in wells MW3 and EW1.

The passive hydrocarbon collection device in well MW4 was accidentally disconnected and sank in the well during the previous monitoring and sampling event on June 19, 2003 and was not present in well

MW4 at the time of the monitoring and sampling event on September 18, 2003. Depth to water level and free product layer thickness measurements are presented in Table 1.

Prior to sampling, wells MW1, MW3, and EW1 were purged of a minimum of three casing volumes of water, or until the wells had been purged dry. During purging operations, the field parameters of electrical conductivity, temperature, and pH were monitored. Once the field parameters were observed to stabilize, and 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 for wells MW1, MW3, MW4 and EW1 on September 18, 2003 was 8.15, 7.91, 9.13, and 7.29 feet, respectively. The separate phase hydrocarbon layer in MW4 was 1.80 feet in thickness. Using a specific gravity of 0.75, the corrected depth to water in well MW4 is 7.78 feet. Since the previous quarter, the measured depth to water has decreased in wells MW1 and MW3 by 0.02 and 0.31 feet, respectively. In well MW4, the separate phase layer thickness has increased from 0.31 feet in thickness on June 19, 2003 to 1.80 feet in thickness on September 18, 2003. The corrected groundwater elevation in well MW4 has increased by 0.55 feet since the previous quarter.

Based on the groundwater surface elevations in monitoring wells MW1 and MW3 and the corrected groundwater surface elevation in well MW4, the groundwater flow direction at the site on September 18, 2003 was calculated to be to the southeast with a gradient of 0.0073. Since the previous monitoring event the groundwater flow direction at the site has shifted from the east toward the south and the gradient has decreased from 0.36. The groundwater flow direction on September 18, 2003 is shown on Figure 2.

LABORATORY RESULTS

The groundwater samples collected from wells MW1, MW3, and EW1 on September 18, 2003 were analyzed for TPH-D and TPH-G using Modified EPA Method 8015; benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020; and for fuel oxygenates (MTBE, ETBE, TAME, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC) using EPA Method 8260.

The laboratory analytical results for the groundwater samples from wells MW1, MW3, and EW1 show TPH-D concentrations of 15, 140, and 8.2 mg/L, respectively, TPH-G concentrations of 32, 130, and 7.5 mg/L, respectively; and benzene concentrations of 2.2, 34, and 0.33 mg/L, respectively. Review of the laboratory analytical reports shows that the TPH-D results for all of the samples consist of both

diesel- and gasoline-range compounds. The laboratory analytical results for fuel oxygenates and lead scavengers using EPA Method 8260 show that MTBE was detected at concentrations of 0.052, 23, and 220 mg/L, respectively. No other fuel oxygenates or lead scavengers were detected except for TBA in wells MW3 and EW1 at concentrations of 10 and 51 mg/L, respectively.

Since the previous sampling on June 19, 2003, TPH-D, TPH-G, MTBE, and benzene concentrations have increased in well MW3. In well MW1, TPH-D and TPH-G concentrations have decreased and MTBE and benzene concentrations have increased. 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

Wells MW1, MW3, MW4 and EW1 were monitored and wells MW1, MW3 and EW1 were sampled once during the quarter. A 1.80-foot thick separate phase petroleum hydrocarbon layer was measured in well MW4. Based on odor and viscosity, the petroleum hydrocarbon layer in well MW4 was qualitatively identified as diesel fuel. The passive hydrocarbon collection device in well MW4 was accidentally disconnected and sank in the well during the previous monitoring and sampling event on June 19, 2003 and was not present in well MW4 at the time of the monitoring and sampling event on September 18, 2003. The separate phase layer thickness in well MW4 has increased from 0.31 feet in thickness on June 19, 2003 to 1.80 feet in thickness on September 18, 2003. The increase in separate phase layer thickness may be related to the absence of the hydrocarbon collection device.

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 the collection device be repaired for use, and a log be maintained of product removed. P&D recommends that use of petroleum hydrocarbon absorbent socks in well MW1 be continued. The sock in MW1 needs to be replaced, and socks should be checked periodically and replaced as needed.

The laboratory analytical results for the groundwater samples from wells MW1, MW3, and EW1 show that TPH-D concentrations ranged from 8.2 to 140 mg/L, TPH-G concentrations ranged from 7.5 to 130 mg/L, and benzene concentrations ranged from 0.33 to 34 mg/L. Review of the results for the fuel oxygenate and lead scavenger analysis shows that only MTBE and TBA were detected with MTBE detected in all of the wells at concentrations ranging from 0.052 to 220 mg/L and TBA detected in wells MW3 and EW1 at concentrations of 10 and 51 mg/L, respectively.

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. Scott Seery 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.

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

Paul H. King
President
California Registered Geologist
Registration No. 5901
Expires: 12/31/03

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

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TABLE 1
WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1	9/18/03	177.37*	8.15	169.22
	6/19/03		8.13	169.24
	3/18/03		7.77	169.60

NOTES:
* = Surveyed on August 20, 1997

TABLE 1
WELL MONITORING DATA
(Continued)

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1 (Continued)	12/21/02	177.37*	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
	1/29/99		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		8.51	168.86
	7/24/97	177.43**	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

NOTES:
* = Surveyed on August 20, 1997
** = Surveyed on March 24, 1993
*** = Surveyed on December 5, 1992

TABLE 1
WELL MONITORING DATA
(Continued)

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1 (Continued)	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
(Continued)

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
(Continued)

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW3	9/18/03	176.40*	7.91	168.49
	6/19/03		7.60	168.80
	3/18/03		7.35	169.05

NOTES:
* = Surveyed on August 20, 1997

TABLE 1
WELL MONITORING DATA
(Continued)

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW3 (Continued)	12/21/02	176.40*	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
	8/31/99		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

NOTES:
* = Surveyed on August 20, 1997
** = Surveyed on March 24, 1993
*** = Surveyed on December 5, 1992

TABLE 1
WELL MONITORING DATA
(Continued)

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW3 (Continued)	8/22/94		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	176.41**	8.01	168.40
	11/13/92	190.97***	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
(Continued)

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Corrected Water Table Elev. (ft.)
MW4	9/18/03	176.35*	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
(Continued)

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)
EW1	9/18/03	Not Surveyed	7.29

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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*
9/18/03	15,a,b	32	0.052	2.2	0.62	1.8	3.8	ND<0.017, TBA ND<0.17
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	--

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 = Lighter than water immiscible sheen present on the sample.
b = TPH-D results consist of both diesel-range and gasoline-range compounds.
c = TPH-D results consist of both gasoline-range compounds.
d = 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, 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*
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	--
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	--

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 = TPH-D results consist of both diesel-range and gasoline-range compounds.
c = TPH-D results consist of both gasoline-range compounds.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, 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*
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	--

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.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, 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*
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.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, 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	--

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 = TPH-D results consist of both diesel-range and gasoline-range compounds.
c = TPH-D results consist of both gasoline-range compounds.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, 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 MW2 (Continued)

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other Fuel Additives by 8260*
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.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, 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*
9/18/03	140,a,b	130	23	34	11	2.5	14	ND<0.5, except TBA = 10
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	--

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 = Lighter than water immiscible sheen present on the sample.
b = TPH-D results consist of both diesel-range and gasoline-range compounds.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).
***Review of the laboratory analytical reports indicate that oxygenated volatile organic compounds (including DIPE, ETBE, TAME, methanol, ethanol, EDB, and 1,2-DCA) were not detected except for 21 mg/L MTBE and 19 mg/L tert-butanol.
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*
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	--
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	--

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 = TPH-D results consist of both diesel-range and gasoline-range compounds.
c = TPH-D results consist of both gasoline-range compounds.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, 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*
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	--

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.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, 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*
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.
a = Lighter than water immiscible sheen present on the sample.
b = TPH-D results consist of both diesel-range and gasoline-range compounds.
c = TPH-D results consist of both gasoline-range compounds.
d = 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, 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.

October 10, 2003
Report 0014.R49

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*
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	--

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 = Lighter than water immiscible sheen present on the sample.
b = TPH-D results consist of both diesel-range and gasoline-range compounds.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, 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 MW4 (Continued)

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other Fuel Additives by 8260*
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.
b = TPH-D results consist of both diesel-range and gasoline-range compounds.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).
Results in milligrams per liter (mg/L), unless otherwise indicated.

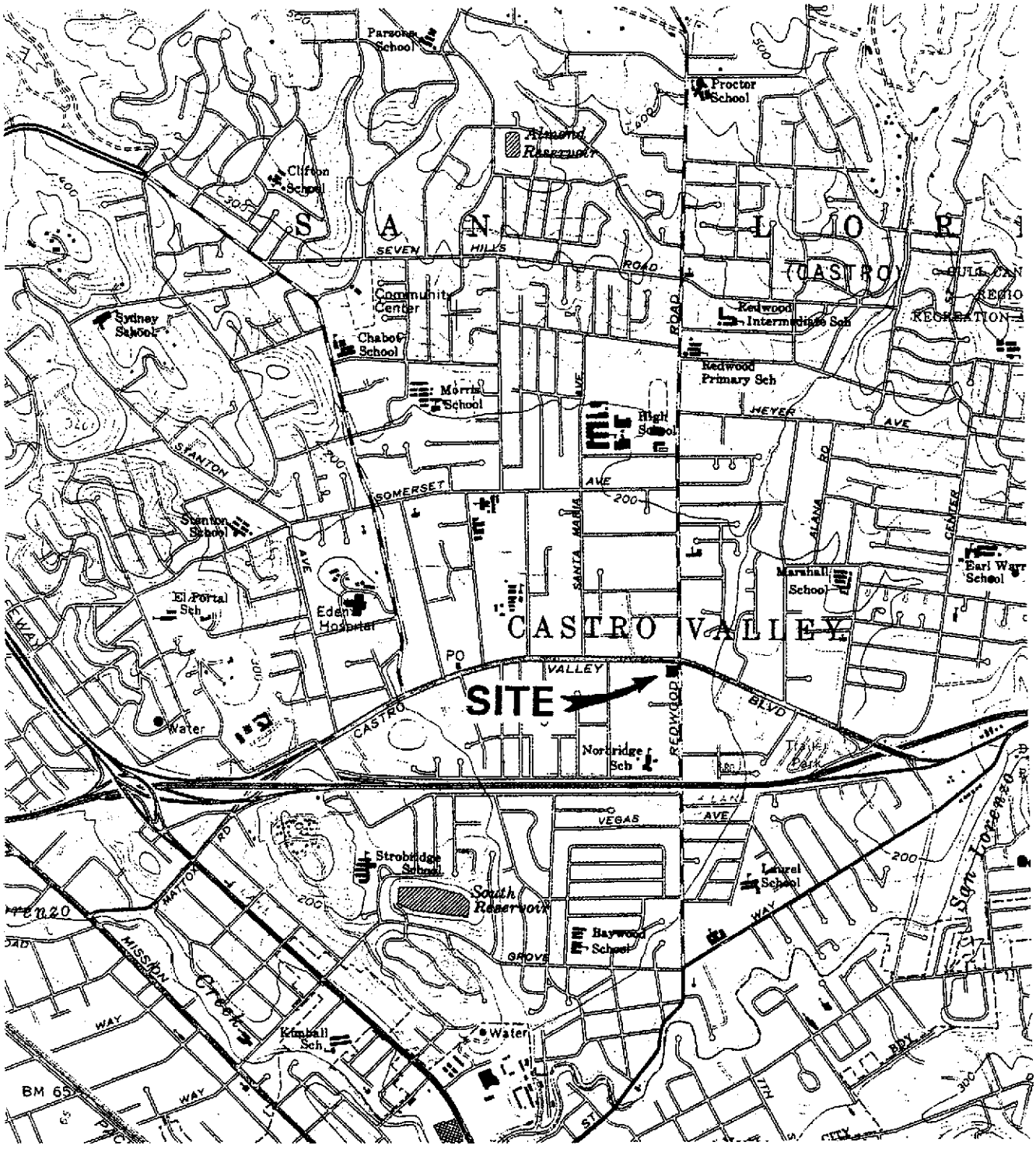
TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS

Well EW1

Date	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Other Fuel Additives by 8260*
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.
a = Lighter than water immiscible sheen present on the sample.
b = TPH-D results consist of both diesel-range and gasoline-range compounds.
* = This column summarizes results for analysis using EPA Method 8260 for non-MTBE fuel oxygenates (TAME, ETBE, and TBA) and lead scavengers (EDB, 1,2-DCA/EDC).
Results in milligrams per liter (mg/L), unless otherwise indicated.

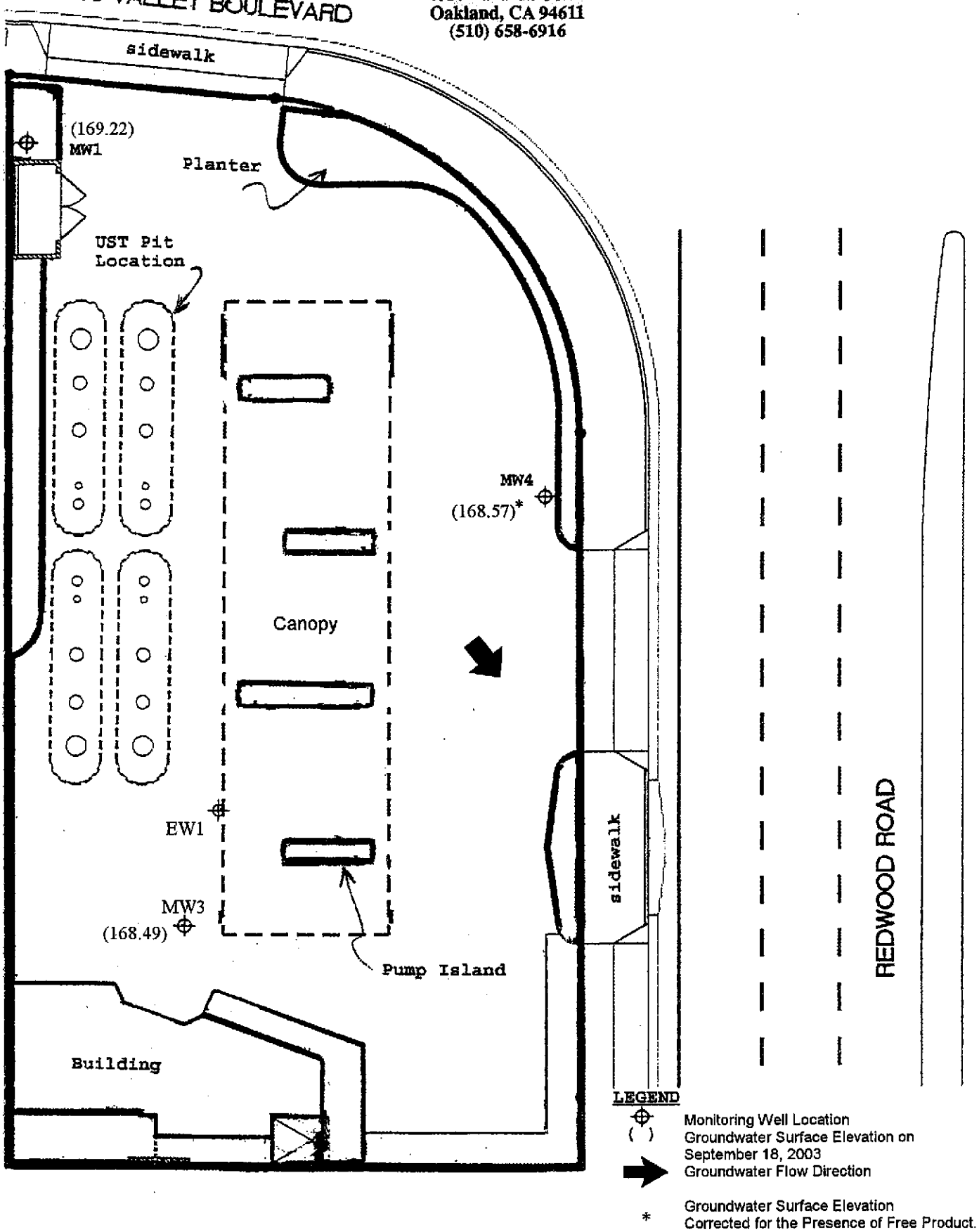
P & D ENVIRONMENTAL
A Division of Paul H. King, Inc.
4020 Panama Court
Oakland, CA 94611
(510) 658-6916



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

P & D ENVIRONMENTAL
A Division of Paul H. King, Inc.
4020 Panama Court
Oakland, CA 94611
(510) 658-6916



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

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

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil-Castrovalley
Well No. MW1
Job No. 0014
Date 9/18/03
TOC to Water (ft.) 8.15
Sheen NONE
Well Depth (ft.) 20
Free Product Thickness Ø
Well Diameter ~~Blank~~ 4 in.
Sample Collection Method
Gal./Casing Vol.
Teflon bailer

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (mS/cm)
3:55 pm	0.5	6.99	75.6	1.03
3:56	5	7.01	74.2	1.01
3:58	10	7.02	74.1	1.03
4:02	15	6.97	75.7	1.07
4:06	~~20~~ ~~25~~	well pumped dry.		
4:15	Sampling time.			

NOTES: Moderate PHC odor, but no sheen on purge water. No water in Chlorine box

PURGE10.92 PHC Sheen on samples

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil - Castro Valley
Job No. 0014
TOC to Water (ft.) 7.91
Well Depth (ft.) 18.7
Well Diameter 4in.
Gal./Casing Vol. 7gal
Σ = 21 gal

Well No. MW3
Date 9/18/03
Sheen
Free Product Thickness
Sample Collection Method Teflon bailer

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (mS/cm)
5:02pm	2	7.18	73.0	1.48
5:03	5	7.13	72.9	1.48
5:06	10	7.09	74.8	1.49
5:08	15	7.18	73.7	1.49
5:09	~~20~~	well pumped dry.		
6:20 ~~5:15~~		sampling time.		

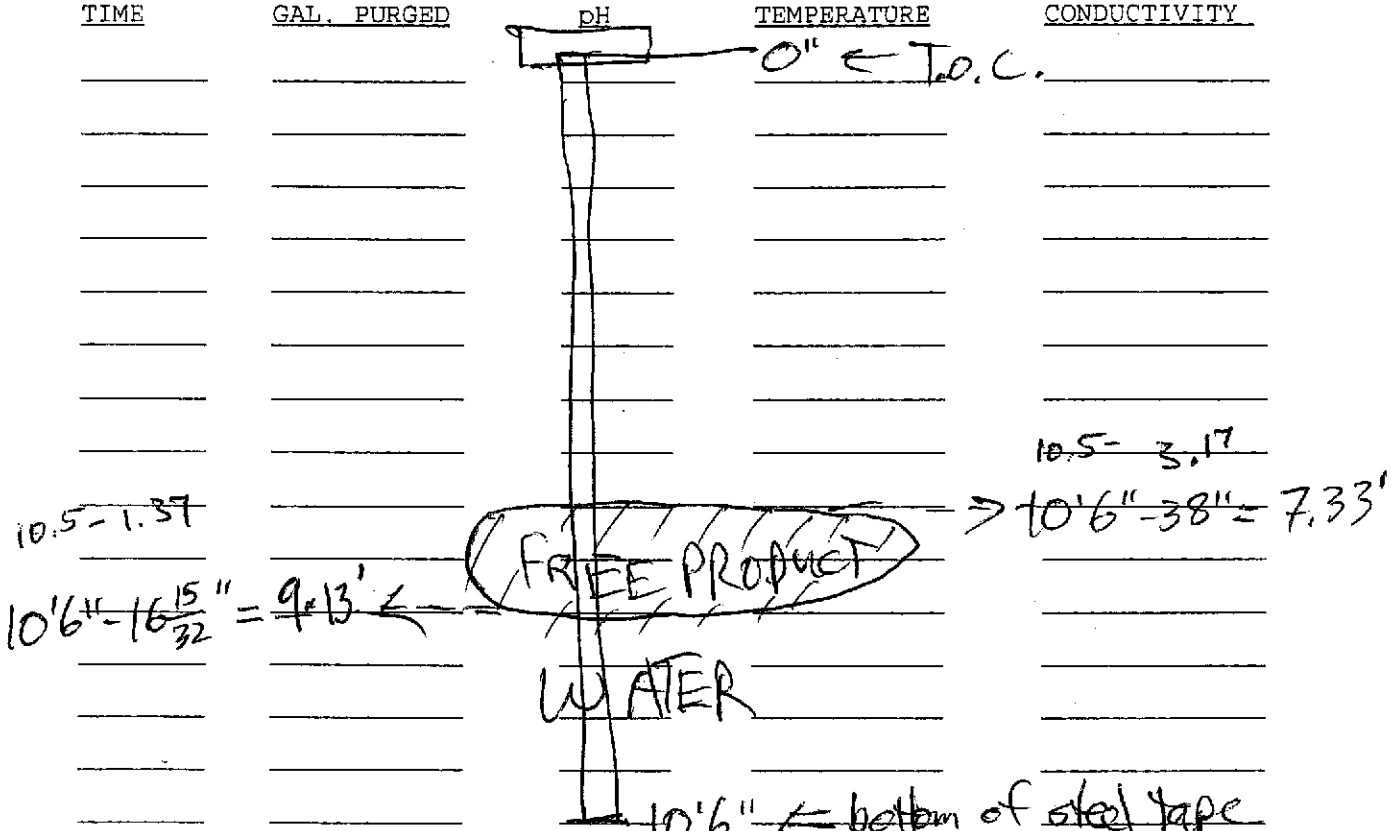
NOTES: Light brown greasy droplets on top of well water.
Moderate PHC odor, ~~but no sheen~~ on purge water.
Slight PHC sheen

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil - Castro Valley
Well No. MW4
Job No. 0014
Date 9/18/03
TOC to Water (ft.)
Sheen *
Well Depth (ft.)
Free Product Thickness 1.80'
Well Diameter 2 in.
Sample Collection Method
Gal./Casing Vol.
NA

TIME	GAL. PURGED	pH	TEMPERATURE	ELECTRICAL CONDUCTIVITY



NOTES: Thickness of product = 9.13' - 7.33' = 1.80'
Water in Christie box above T.O.C. Free product recovery device chain lying disattached, as at end of prev. M+S.

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil - Castro Valley
Well No. ~~OW1~~ EW1
Job No. 0014
Date 9/17/03
TOC to Water (ft.) 7.29
Sheen
Well Depth (ft.) 13.2
Free Product Thickness
Well Diameter 8in.
Sample Collection Method
Gal./Casing Vol. 15.5gal
Teflon bailer
Σ = 46.5gal

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (mS/cm)
	5			
	10			
5:38	15	7.07	76.9	0.73
5:40	20	7.06	76.5	0.70
5:42	25	7.01	76.2	0.68
5:55	30	7.04	71.0	0.66
5:57	35	7.06	75.9	0.66
5:59	~~40~~ 42	7.07	75.8	0.66
6:01	47	7.04	75.8	0.67
6:10	Sampling time			

NOTES: White foam on top of well water. PHC odor & sheen on purge water

PURGE10.92

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

P & D Environmental	Client Project ID: #0014; Xtra Oil; Castro Valley	Date Sampled: 09/18/03
4020 Panama Court		Date Received: 09/19/03
Oakland, CA 94611-4931	Client Contact: Paul King	Date Extracted: 09/24/03-09/25/03
	Client P.O.:	Date Analyzed: 09/24/03-09/25/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0309377

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW1	W	32,000,a,h	---	2200	620	1800	3800	200	99.5
002A	MW3	W	130,000,a,h	---	34,000	11,000	2500	14,000	100	105
003A	EW1	W	7500,a,h	---	330	ND<50	ND<50	ND<50	100	93.5
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	1	µg/L
	S	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 McCampbell 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 ~2 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.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

P & D Environmental 4020 Panama Court Oakland, CA 94611-4931	Client Project ID: #0014; Xtra Oil; Castro Valley	Date Sampled: 09/18/03
		Date Received: 09/19/03
	Client Contact: Paul King	Date Extracted: 09/19/03
	Client P.O.:	Date Analyzed: 09/21/03

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

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0309377

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0309377-001C	MW1	W	15,000,d,b,h	10	116
0309377-002C	MW3	W	140,000,a,d,h	10	109
0309377-003C	EW1	W	8200,a,d,h	10	—#

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 McCampbell 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 ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

P & D Environmental 4020 Panama Court Oakland, CA 94611-4931	Client Project ID: #0014; Xtra Oil; Castro Valley	Date Sampled: 09/18/03
		Date Received: 09/19/03
	Client Contact: Paul King	Date Extracted: 09/24/03
	Client P.O.:	Date Analyzed: 09/24/03

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0309377

Lab ID	0309377-001B	0309377-002B	0309377-003B		Reporting Limit for DF =1	
Client ID	MW1	MW3	EW1			
Matrix	W	W	W			
DF	33	1000	5000		S	W
Compound	**Concentration**				ug/kg	µg/L
Diisopropyl ether (DIPE)	ND<17	ND<500	ND<2500		NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<17	ND<500	ND<2500		NA	0.5
Methyl-t-butyl ether (MTBE)	52	23,000	220,000		NA	0.5
tert-Amyl methyl ether (TAME)	ND<17	ND<500	ND<2500		NA	0.5
t-Butyl alcohol (TBA)	ND<170	10,000	51,000		NA	5.0
1,2-Dibromoethane (EDB)	ND<17	ND<500	ND<2500		NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<17	ND<500	ND<2500		NA	0.5
Surrogate Recoveries (%)						
%SS:	110	98.3	98.1			
Comments	h	h	h			

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0309377

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 8625 Spiked Sample ID: 0309381-002A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex) £	ND	60	102	107	4.20	96.5	97.6	1.12	70	130
MTBE	7.357	10	98.6	99.1	0.336	98.4	102	3.89	70	130
Benzene	2.073	10	99.5	100	0.773	101	103	2.43	70	130
Toluene	ND	10	97.1	98.9	1.85	101	104	3.01	70	130
Ethylbenzene	ND	10	103	107	3.98	104	107	2.86	70	130
Xylenes	ND	30	90.7	95.3	5.02	107	110	3.08	70	130
%SS:	102	100	103	102	1.05	101	101	0	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

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 and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with 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 = 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.

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0309377

EPA Method: SW8015C Extraction: SW3510C BatchID: 8620 Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	89.6	89.5	0.184	70	130
%SS:	N/A	100	N/A	N/A	N/A	102	102	0	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

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 and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with 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.

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8260B

Matrix: W WorkOrder: 0309377

EPA Method: SW8260B	Extraction: SW5030B			BatchID: 8622		Spiked Sample ID: 0309369-014A				
	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
tert-Amyl methyl ether (TAME)	ND	10	89.9	93	3.39	96	104	7.93	70	130
t-Butyl alcohol (TBA)	ND	50	82.2	87.1	5.83	85.1	105	21.3	70	130
1,2-Dibromoethane (EDB)	ND	10	114	117	2.47	117	125	6.83	70	130
1,2-Dichloroethane (1,2-DCA)	ND	10	108	114	5.64	116	117	1.26	70	130
Diisopropyl ether (DIPE)	ND	10	104	111	6.15	115	111	2.94	70	130
Ethyl tert-butyl ether (ETBE)	ND	10	91	96.8	6.21	98.8	102	3.49	70	130
Methyl-t-butyl ether (MTBE)	ND	10	92.2	96.8	4.84	99.1	110	10.6	70	130
%SS1:	111	100	93.1	97.4	4.54	112	113	0.441	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

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 and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with 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.

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0309377

Client:
P & D Environmental
4020 Panama Court
Oakland, CA 94611-4931

TEL: (510) 658-6916
FAX: (510) 658-9074
ProjectNo: #0014; Xtra Oil; Castro Valley
PO:

Date Received: 9/19/03
Date Printed: 9/19/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests						
					SW8015C	W8021B/8015C	SW8260B				
0309377-001	MW1	Water	9/18/03	☐	C	A	B				
0309377-002	MW3	Water	9/18/03	☐	C	A	B				
0309377-003	EW1	Water	9/18/03	☐	C	A	B				

Prepared by: Melissa Valles

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.

P. & D ENVIRONMENTAL
A Division of Paul H. King, Inc.
4020 Panama Court
Oakland, CA 94611
(510) 658-6916

0309377

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER: 0014

PROJECT NAME: Xtra Oil – Castro Valley

SAMPLED BY: (PRINTED AND SIGNATURE) Wilhelm Welzenbach

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Gas + BTEX	MTBE by EPA 8260	TPH-D	Oxygenates + lead scavengers by 8260		PRESERVATIVE	REMARKS
+ MW1	9/18/03		water		7	X	X	X			ICE	Normal Turnaround
(+) MW3	↓		X		7	X	X	X			X	
+ EW1	↓		X		2	X	X	X			X	

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

	VOAS	O&G	METALS	OTHER
PRESERVATION	✓			

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Wilhelm Welzenbach	9/19/03	1210	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 3
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 21

LABORATORY: McCampbell Analytical

LABORATORY CONTACT: Angela Rydelius

LABORATORY PHONE NUMBER: (925) 798-1620

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

REMARKS: VOAs preserved w HCl.

JG MW1