P & D ENVIRONMENTAL
A Division of Paul H. King, Inc.
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April 22, 2002
Report 0014.R44

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

SUBJECT: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT
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. All three wells were monitored and wells MW1 and MW3 were sampled on March 30, 2002. The reporting period for this report is for January through March, 2002. 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 ppm, respectively; in borehole MW2 at depths of 10 and 15 feet below grade at concentrations of 230 and 95 ppm, respectively; and in borehole MW3 at depths of 5, 10 and 15 feet at concentrations of 140, 250 and 25 ppm, respectively. In addition, 120 ppm 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 ppm, 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 ppm and greater than 2,000 ppm, 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.

FIELD ACTIVITIES

On March 30, 2002, the three groundwater monitoring wells at the site (MW1, MW3 and MW4) were monitored and wells MW1 and MW3 were sampled by P&D personnel. A joint groundwater monitoring with Allisto Engineering, Inc. was not performed this quarter. Extraction well EW1 was not monitored or sampled at the subject site during the quarter.

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 and MW3 using an electric water level indicator. In MW4 the depth to water was measured to the nearest 0.01 foot using a steel tape with water-finding paste and product-finding paste. The presence of free product and sheen was evaluated using a transparent bailer in wells MW1 and MW3. No free product was observed in any of the monitoring wells prior to purging with the exception of MW4, where free product measuring 2.49 feet in thickness was encountered. In addition, sheen was observed in wells MW1 and MW3 prior to purging the wells. A petroleum-absorbent sock was present in monitoring well MW1.

A passive hydrocarbon collection device was present in well MW4. The collection device was observed to be full of what appeared to be diesel fuel, based on odor. The collection device was removed and emptied into a steel drum at the site. The height of the device was adjusted after monitoring of the well to match the measured water level, in order to better collect free product. The water level was measured in well MW4 after removal of the passive hydrocarbon collection device. The water level measurement for well MW4 may not be accurate because the water and free product interface may not have had time to equilibrate following removal of the device. Depth to water level measurements are presented in Table 1.

Prior to sampling, monitoring wells MW1 and MW3 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 which 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 monitoring period. The measured depth to water at the site in wells MW1, MW3 and MW4 on March 30, 2002 was 7.43, 6.97, and 9.86 feet, respectively. A separate phase layer measuring 2.49 feet in thickness was measured in well MW4. Using a specific gravity of 0.75, the corrected depth to water in well MW4 is 7.99 feet. Since the previous quarter, groundwater levels have decreased in wells MW1, MW3 and MW4 by 0.51, 0.53, and 2.07 feet, respectively. In well MW4, the separate phase layer thickness has increased from 1.75 feet in thickness on December 22, 2001 to 2.49 feet in thickness on March 30, 2002. The corrected groundwater level in well MW4 has decreased by 1.51 feet since the previous quarter.

Based on the measured depth to groundwater in the groundwater monitoring wells, the apparent groundwater flow direction at the site on March 30, 2002 was calculated to be to the southeast with a gradient of 0.021. The groundwater flow direction has shifted toward the east and the gradient has increased since the previous monitoring. The groundwater flow direction on March 30, 2002 is shown on Figure 2. As discussed above, the groundwater flow direction may not be accurate because the water level may not have equilibrated following removal of the passive hydrocarbon collection device.

LABORATORY RESULTS

The groundwater samples collected from monitoring wells MW1 and MW3 on March 30, 2001 were analyzed for TPH-G using EPA Method 5030 and Modified EPA Method 8015; benzene, toluene, ethylbenzene, total xylenes (BTEX), and MTBE using EPA Method 8020; and for TPH-D using EPA Method 3510 in conjunction with Modified EPA Method 8015.

The laboratory analytical results for the groundwater samples from wells MW1 and MW3 show TPH-G concentrations of 99 and 170 ppm, respectively; benzene concentrations of 4.1 and 40 ppm, respectively; and TPH-D concentrations of 12 and 8.5 ppm, respectively. MTBE was detected at a concentration of 26 ppm in well MW3 and was not detected in well MW1. Review of the laboratory analytical reports indicates that the TPH-D results for both of the wells consist of both diesel- and gasoline-range compounds.

Since the previous sampling on December 22, 2001, TPH-G and Benzene concentrations have increased in wells MW1 and MW3. TPH-D, Tolulene, Ethylbenzene, Xylenes and MTBE concentrations have decreased with the exception of Ethylbenzene and Xylenes in well MW1, which have increased and MTBE which remained undetected in well MW1. The laboratory analytical results of 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

The three wells at the site were monitored and wells MW1 and MW3 were sampled once during the quarter. A layer of separate phase petroleum hydrocarbon measuring 2.49 feet in thickness was detected in well MW4. The collection device in well MW4 was emptied and adjusted to facilitate the collection of the separate phase hydrocarbons. It is P&D's understanding that the collection device is maintained by Xtra Oil Company personnel. P&D recommends that a log be maintained of product removed.

P&D recommends that use of absorbent socks in well MW1 be continued. The socks should be checked periodically and replaced as needed.

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 which are presently being monitored and sampled.

DISTRIBUTION

Copies of this report should be sent to Mr. Chuck Headlee at the Regional Water Quality Control Board, San Francisco Bay Region, and 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 the principal executive officer of the 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	3/30/02	177.37*	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

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1 (continued)	5/19/94		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	3/30/02	176.40	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	8/22/94		7.65	168.76
(continued)	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	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.)	Water Table Elev. (ft.)
MW4	3/30/02	176.35	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 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on March 30, 2002				
MW1 +,@	12	99	ND	4.1	1.2	2.5	6.4
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3 +,@	8.5	170	26	40	17	2.6	16
MW4	Not Sampled (Free Product Present in Well)						
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
NA = Not Analyzed.
@ = Review of the laboratory analytical reports indicates the presence of a lighter than water immiscible sheen on the sample.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline-range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on December 22, 2001				
MW1 +,@	22	60	ND	3.2	1.9	2	6.2
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3 +,@	9.2	140	27	37	20	2.6	15
MW4	Not Sampled (Free Product Present in Well)						
EW1	Not Sampled						
			Samples Collected on September 23, 2001				
MW1 ++,@	16	49	ND	4	1.4	2.2	6.2
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3 +,@	47	130	26	32	9.1	2.4	12
MW4	Not Sampled (Free Product Present in Well)						
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
@ = Review of the laboratory analytical reports indicates the presence of a lighter than water immiscible sheen on the sample.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline-range compounds.
++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on June 22, 2001				
MW1 @,+	85	35	ND	3.1	0.75	1.2	4.0
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3 @,+	33	110	25	31	7.2	1.9	11
MW4 @,+	440	140	15	35	19	2.0	10
EW1	Not Sampled						
			Samples Collected on April 22, 2001				
MW1 @	16	43	ND	3.6	1.2	1.6	5.8
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+,@	61	140	24	25	5.4	1.7	11
MW4	Not Sampled (Free Product Present in Well)						
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
@ = Review of the laboratory analytical reports indicates that both the TPH-D and the TPH-G results indicate the presence of a lighter than water immiscible sheen.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline-range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on December 14, 2000				
MW1 @,@@@	11	49	ND	5.8	1.6	2	6.9
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+,@	120	140	35	37	16	2.4	15
MW4	Not Sampled (Free Product Present in Well)						
EW1	Not Sampled						
			Samples Collected on September 18, 2000				
MW1@,+	15	86	ND	7.2	2	3.2	13
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3@,+	43	130	33	39	91	2.3	14
MW4	Not Sampled (Free Product Present in Well)						
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
@ = Review of the laboratory analytical reports indicates the presence of a lighter than water immiscible sheen on the sample.
@@@ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both oil-range and gasoline-range compounds.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline-range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on July 26, 2000				
MW1	Not Sampled						
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3@@	NA	NA	21	NA	NA	NA	NA
MW4	Not Sampled						
EW1	Not Sampled						
			Samples Collected on June 8, 2000				
MW1@,++	6.5	50	ND	5.7	1.5	1.8	7
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3@,+	74	130	23	41	16	1.9	13
MW4	Not Sampled (Free Product Present in Well)						
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
NA = Not Analyzed.
@ = Review of the laboratory analytical reports indicates the presence of a lighter than water immiscible sheen.
@@ = Review of the laboratory analytical reports indicate that the oxygenated volatile organic compounds (including DIPE, ETBE, TAME, methanol, ethanol, EDB, and 1,2-DCA) were not detected except for MTBE at 21 ppm and tert-butanol at 19 ppm.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline-range compounds.
++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on March 9, 2000				
MW1+	7.4	48	ND	5.3	3.1	1.6	8.1
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+,@	14	180	24	39	22	2.5	16
MW4+,@	2,100	130	6.9	35	13	2.1	11
EW1	Not Sampled						
			Samples Collected on December 9, 1999				
MW1+,@	12	65	ND	9.3	2.9	2.2	8.8
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+,@	17	120	16	35	6.7	2.4	12
MW4+,@	9,000	120	8.1	33	6	2.4	12
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
@ = Review of the laboratory analytical reports indicates that both the TPH-D and the TPH-G results indicate the presence of a lighter than water immiscible sheen.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline-range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on August 31, 1999				
MW1+	22	66	0.71	8.7	2.7	2.4	10
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+	22	120	4.7	35	3.7	2.4	14
MW4+	9.4	190	4.4	46	30	2.8	15
EW1	Not Sampled						
			Samples Collected on April 29, 1999				
MW1+	22	48	ND	8.4	2.8	2.0	8.1
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+	48	100	2.5	33	8.0	2.1	14
MW4+	9.4	210	3.2	42	35	2.8	15
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline-range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on January 29, 1999				
MW1+	9.1	47	ND	9.0	2.9	1.9	8.0
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+	240	84	1.3	31	2.8	1.8	12
MW4+	7.3	190	2.4	44	40	3.1	17
EW1	Not Sampled						
			Samples Collected on April 26, 1998				
MW1++	7.8	60	ND	9.3	5.7	2.1	9.1
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+	380	100	9.7	29	7.1	1.8	14
MW4+	13	190	ND	49	37	3.2	18
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.
++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on January 24, 1998				
MW1+	24	57	ND	6.9	5.5	2.0	8.7
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+	77	97	ND	28	7.1	1.8	11
MW4+	20	200	ND	50	40	3.1	17
EW1	Not Sampled						
			Samples Collected on November 6, 1997				
MW1++	17	63	ND	7.4	6.7	2.3	9.9
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+	120	140	ND	37	19	2.4	14
MW4+	110	160	ND	48	30	2.8	16
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.
++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on August 26, 1997				
MW1	Not Sampled						
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3	Not Sampled						
MW4+	5.5	210	1.7	48	42	3.4	19
EW1	Not Sampled						
			Samples Collected on July 24, 1997				
MW1++	28	66	1.8	8.6	8.1	2.2	10
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3++	91	120	1.4	33	17	2.2	12
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.
++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.
Results in parts per million (ppm), unless otherwise indicated

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on April 25, 1997				
MW1+	170	77	ND	7.4	7.9	2.1	9.8
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3+	760	240	1.6	24	18	4.1	24
EW1	Not Sampled						
			Samples Collected on January 21, 1997				
MW1++	57	80	0.25	7.8	8.3	1.9	8.9
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3++	34	150	1.30	40	14	2.6	12
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.
++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on July 26, 1996				
MW1++	11	76	ND	11	13	2.4	10
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3++	24	130	0.89	40	22	2.4	12
EW1	Not Sampled						
			Samples Collected on April 23, 1996				
MW1++	5.7	73	ND	8.6	12	2.2	9.8
MW2	Not Sampled (Destroyed on February 7, 1996)						
MW3++	280	170	0.72	34	22	2.2	14
EW1	Not Sampled						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on January 29, 1996				
MW1++	6.6	81	0.25	7.6	13	1.9	8.9
MW2++	4.6	38	0.0071	1.9	5.7	1.1	5.9
MW3++	45	150	0.54	32	21	1.9	12
EW1	Not Sampled						
			Samples Collected on October 26, 1995				
MW1++	62	89	ND	7.8	12	2.4	11
MW2	900	74	ND	2.9	5.9	2.0	10
MW3	33	130	0.69	37	21	0.21	11
EW1	Not Sampled.						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on July 28, 1995				
MW1++	2.0	35	NA	3.8	8.7	1.1	6.5
MW2++	2.0	15	NA	1.4	2.3	0.62	3.2
MW3+	1.9	86	NA	28	16	1.3	7.6
EW1	Not Sampled.						
			Samples Collected on May 2, 1995				
MW1++	6.5	86	NA	8.9	14	2.3	11
MW2+	6.6	55	NA	3.3	10	1.8	10
MW3+	9.7	170	NA	43	30	2.5	14
EW1	Not Sampled.						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.
++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on February 24, 1995				
MW1	9.1	90	NA	7.5	12	1.5	11
MW2	22	67	NA	4.9	11	1.8	11
MW3	9.2	130	NA	31	19	1.8	10
EW1	Not Sampled.						
			Samples Collected on November 18, 1994				
MW1	10	96	NA	9.3	14	2.5	11
MW2	5.0	86	NA	11	17	1.8	12
MW3	23	140	NA	38	22	2.0	11
EW1	Not Sampled.						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
NA = Not Analyzed.
+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.
++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on August 22, 1994				
MW1	8.3	100	NA	9.0	11	2.1	9.4
MW2	4.1	91	NA	10	13	1.5	9.0
MW3	5.3	170	NA	35	20	1.8	10
EW1	Not Sampled.						
			Samples Collected on May 19, 1994				
MW1	30	100	NA	12	14	3.5	17
MW2	5.8	62	NA	9.2	13	1.3	8.4
MW3	30	150	NA	38	25	2.4	14
EW1	Not Sampled.						
			Samples Collected on February 28, 1994				
MW1	110	90	NA	11	9.6	2.1	9.9
MW2	13	91	NA	13	16	1.5	9.0
MW3	210	110	NA	36	21	1.9	11
EW1	Not Sampled.						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
NA = Not Analyzed.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on November 24, 1993				
MW1	8.2	66	NA	8.3	8.9	2.0	11
MW2	79	12	NA	13	17	2.5	17
MW3	24	160	NA	48	26	2.2	12
EW1	Not Sampled.						
			Samples Collected on August 30, 1993				
MW1	9.4	77	NA	6.4	11	2.2	12
MW2	110	110	NA	11	14	1.8	11
MW3	32	130	NA	36	21	1.9	8.2
EW1	Not Sampled.						
			Samples Collected on May 18, 1993				
MW1	30	92	NA	4.0	11	2.5	15
MW2	44	67	NA	9.2	12	1.4	9.3
MW3	7.2	130	NA	36	21	2.1	12
EW1	Not Sampled.						

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
NA = Not Analyzed.
ND = Not Detected.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on February 23, 1993				
MW1	14	100	NA	4.5	11	2.1	12
MW2	7.0	76	NA	12	17	1.6	9.6
MW3	8.1	110	NA	31	18	1.9	11
EW1	9.6	66	NA	14	8.5	1.4	9.8
			Samples Collected on November 13, 1992				
MW1	4.4	120	NA	5.8	10	2.1	13
MW2	8.2	79	NA	10	13	1.4	8.6
MW3	4.7	140	NA	38	24	2.0	12
EW1	13	62	NA	11	9.2	1.1	9.6
			Samples Collected On May 27, 1992				
MW1	11	120	NA	8.8	16	2.3	15
MW2	130	89	NA	18	19	1.7	14
MW3	27	370	NA	91	57	3.0	21

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
NA = Not Analyzed.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected On January 14, 1992				
MW1	19	39	NA	7.3	8.7	1.3	8.9
MW2	1600	59	NA	17	14	1.8	15
MW3	270	130	NA	76	30	3.4	21
			Samples Collected On December 23, 1991				
MW1	34	78	NA	9.3	7.3	0.54	13
MW2	700	2100	NA	36	130	79	560
MW3	540	740	NA	30	61	31	180
			Samples Collected On November 25, 1991				
MW1	36	170	NA	5.5	5.6	1.6	8.4
MW2	130	230	NA	11	9.7	1.4	9.7
MW3	74	150	NA	65	31	3.4	18

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
NA = Not Analyzed.
ND = Not Detected.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
				Samples Collected On October 10, 1991			
MW1	19	28	NA	4.1	4.7	1.0	4.8
MW2	360	85	NA	21	25	2.1	14
MW3	39	140	NA	57	31	2.2	14
				Samples Collected On September 17, 1991			
MW1	19	39	NA	4.9	4.1	1.2	5.9
MW2	56	74	NA	10	11	1.4	8.1
MW3	140	180	NA	47	25	2.6	15
				Samples Collected On August 19, 1991			
MW1	47	48	NA	13	8.4	0.99	29
MW2	19	69	NA	26	22	2.1	18
MW3	150	170	NA	82	31	4.4	22

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
NA = Not Analyzed.
ND = Not Detected.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
				Samples Collected On July 20, 1991			
MW1	49	100	NA	11	14	2.3	17
MW2	100	51	NA	9.9	7.7	1.2	7.5
MW3	270	450	NA	46	29	3.5	21
				Samples Collected On June 20, 1991			
MW1	42	76	NA	4.7	7.1	1.5	9.8
MW2	69	87	NA	8.1	8.4	1.1	8.9
MW3	210	920	NA	39	49	13	69
				Samples Collected On May 17, 1991			
MW1	26	72	NA	7.7	9.9	ND	11
MW2	33	62	NA	5.9	6.3	1.2	9.0
MW3	70	170	NA	32	22	2.2	18

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
NA = Not Analyzed.
ND = Not Detected.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
				Samples Collected On April 15, 1991			
MW1	NA	56	NA	6.5	8.5	0.41	9.9
MW2	NA	82	NA	5.3	7.4	1.0	9.4
MW3	NA	110	NA	31	15	0.88	7.4
				Samples Collected On March 21, 1991			
MW1	NA	36	NA	4.5	5.7	0.087	7.3
MW2	NA	62	NA	9.3	11	0.35	9.7
MW3	NA	87	NA	30	14	0.69	5.4
				Samples Collected On February 15, 1991			
MW1	NA	120	NA	7.4	6.6	ND	13
MW2	NA	200	NA	12	12	1.7	14
MW3	NA	230	NA	44	40	ND	31

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
NA = Not Analyzed.
+++ Indicates Organic Lead was not detected.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected On January 14, 1991				
MW1	NA	33	NA	3.9	2.9	0.21	5.3
MW2	NA	78	NA	11	8.7	0.58	8.0
MW3	NA	160	NA	48	25	1.0	16
			Samples Collected On September 27, 1990				
MW1	NA	28	NA	3.7	3.5	0.01	6.5
MW2	NA	59	NA	8.4	12	0.88	9.0
MW3	NA	25	NA	7.2	6.4	0.42	3.4
			Samples Collected On August 23, 1990				
MW1	NA	40	NA	5.1	4.9	0.35	6.0
MW2	NA	96	NA	8.1	8.4	1.5	8.6
MW3	NA	220	NA	67	46	27	18

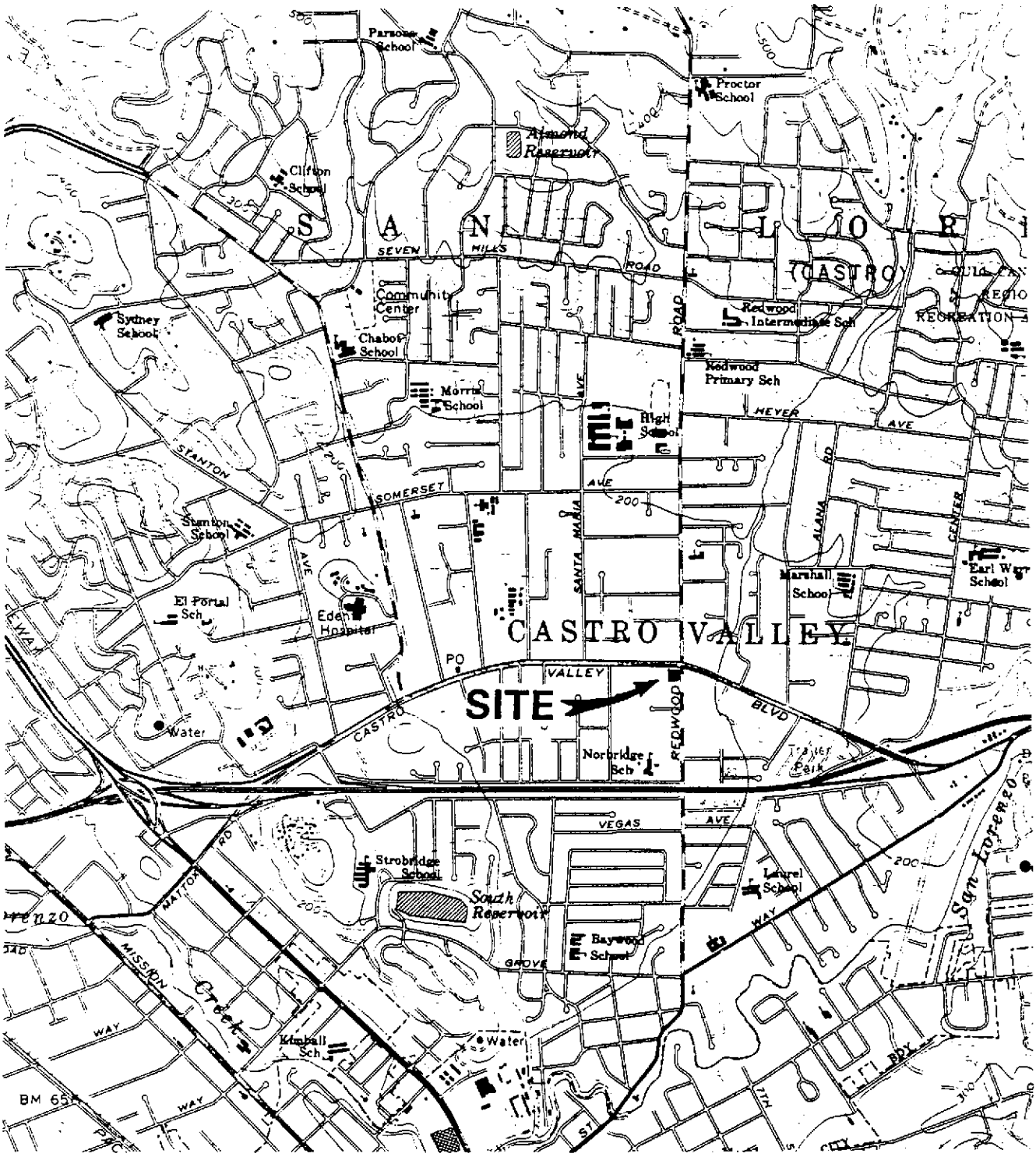
NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
NA = Not Analyzed.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected On July 20, 1990				
MW1	44	NA	NA	5.1	4.2	ND	9.1
MW2	86	NA	NA	9.1	14	0.94	13
MW3	88	NA	NA	25.1	21.1	0.61	14.1
			Samples Collected On March 19, 1990				
MW1	NA	40	NA	3.7	1.1	ND	3.3
MW2	NA	50	NA	7.7	8.7	0.075	5.6
MW3	NA	210	NA	38	28	1.8	12
			Samples Collected On February 20, 1990				
MW1+++	NA	7.6	NA	1.6	ND	ND	1.3
MW2+++	NA	38	NA	7.3	3.1	0.075	6.8
MW3+++	NA	46	NA	20	15	1.8	9.7

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
ND = Not Detected.
NA = Not Analyzed.
+++ Indicates Organic Lead was not detected.
Results in parts per million (ppm), unless otherwise indicated.

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

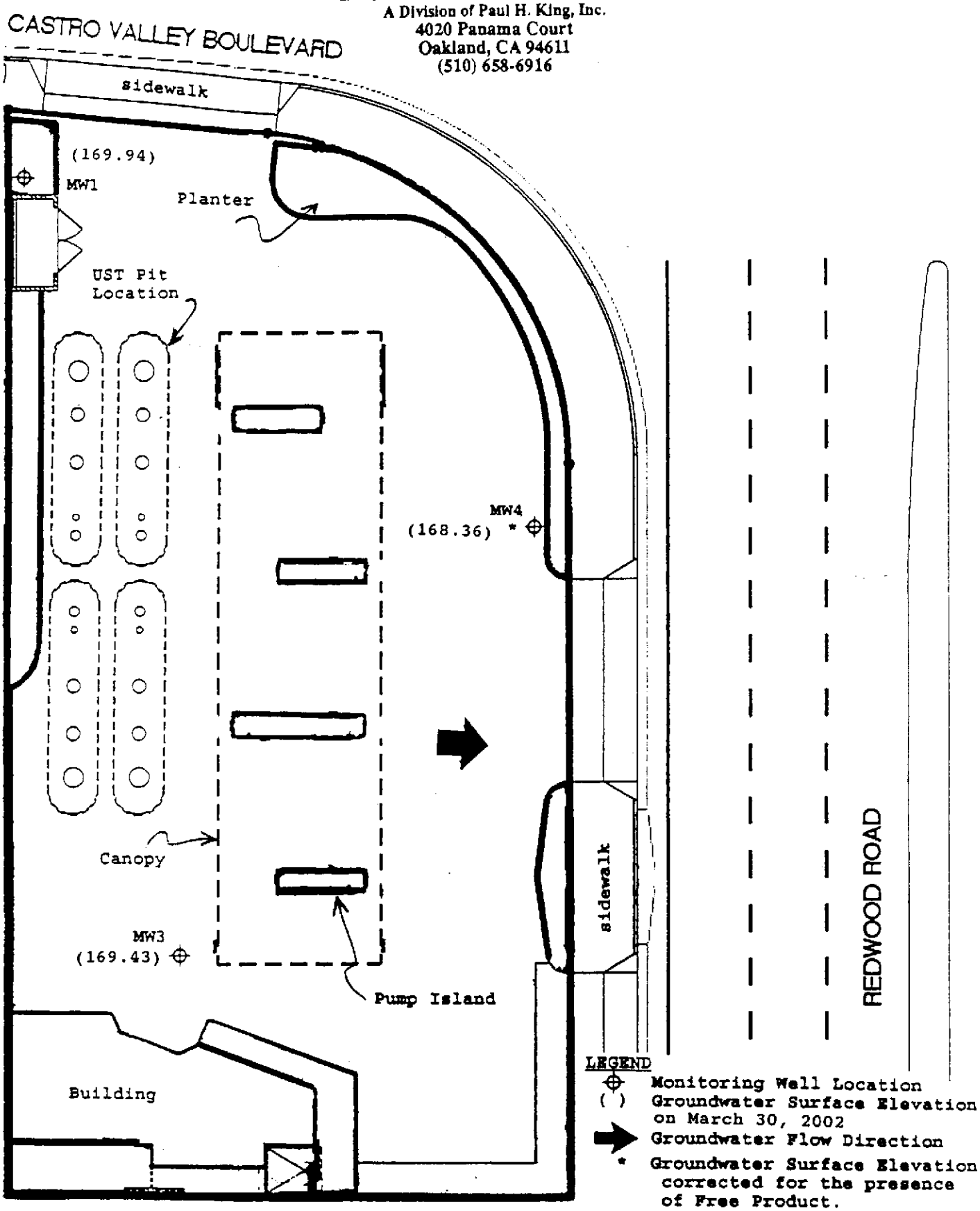


Scale in Feet
0 1000 2000 3000

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

Figure 1
SITE LOCATION MAP
XTRA OIL Company
3195 Castro Valley Blvd.
Alameda, 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
3459 Castro Valley Blvd.
Castro Valley, CA

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil Castro Valley | Well No. MW1

Job No. 0014 | Date 3/30/02

TOC to Water (ft.) 7.43 | Sheen Yes

Well Depth (ft.) 20 | Free Product Thickness Ø

Well Diameter 4" | Sample Collection Method

Gal./Casing Vol. 8.1 | Teflon Bailer

$\Sigma = 24.3$

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (mS/cm)
2:20	1	8.57	71.1	9.92 X 100
2:22	4	8.90	68.3	9.16
2:24	8	8.42	67.5	9.23
2:27	12	7.90	68.1	9.53
	very low rate of discharge			
2:30	well dewatered			
2:38	16	7.18	68.3	9.34
2:42	20	7.16	69.1	9.48
2:52	25	7.32	71.2	9.65
3:00 ~~2:55~~	Collect sample			

NOTES: Petroleum Hydrocarbon Sock in well. Depth to water was measured before the sock was removed from the well.

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil - Castro Valley
Well No. MW3
Job No. 0014
Date 3/30/02
TOC to Water (ft.) 6.97
Sheen Yes
Well Depth (ft.) 18
Free Product Thickness Ø
Well Diameter 4"
Sample Collection Method
Gal./Casing Vol. 7.1
Teflon Bailer
ε = 21.3

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY mS/cm
3:38	1	7.29	75.3	12.72 x100
3:40	3	7.27	74.0	13.88
3:43	6	7.28	70.0	13.25
3:46	9	7.33	68.8	12.88
3:49	12	7.38	68.8	13.17
3:50	14 well dewatered			
4:20	Collect Sample			

NOTES:

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name Xtra Oil - Castro Valley | Well No. MW4

Job No. 0014 | Date 3/30/02

TOC to Water (ft.) | Sheen N/A

Well Depth (ft.) | Free Product Thickness 2.49

Well Diameter | Sample Collection Method None

Gal./Casing Vol.

TIME	GAL. PURGED	pH	TEMPERATURE	ELECTRICAL CONDUCTIVITY

10.00'
2.63' diesel
@ = 2.49' diesel
0.14 water
0

Measured with steel tape and ~~product~~ and water-finding paste following removal of product collection ~~device.~~ ~~Product~~ ~~water~~ collection device was full and was emptied into a 55-gallon, product-only drum. Water level may not be accurate because water and product may not have equilibrated following removal of product collection device.

NOTES:

PURGE10.92

McCampbell Analytical Inc.
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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: 03/30/02
4020 Panama Court		Date Received: 04/01/02
Oakland, CA 94611-4931	Client Contact: Paul King	Date Extracted: 04/04/02
	Client P.O.:	Date Analyzed: 04/04/02

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0204021

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW1	W	99000,a,h	ND<1000	4100	1200	2500	6400	200	105
002A	MW3	W	170000,a,h	26000	40000	17000	2600	16000	100	112

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5	0.5	0.5	0.5	0.5	ug/L
	S	1	0.05	0.005	0.005	0.005	0.005	mg/Kg

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

DF = dilution factor.

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); 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) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Direct

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P & D Environmental	Client Project ID: #0014; Xtra Oil-Castro Valley	Date Sampled: 03/30/02
4020 Panama Court		Date Received: 04/01/02
Oakland, CA 94611-4931	Client Contact: Paul King	Date Extracted: 04/01/02
	Client P.O.:	Date Analyzed: 04/03/02-04/08/02

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

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0204021

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
001B	MW1	W	12000,d,b,h	1	106
002B	MW3	W	8500,d,b,h	1	120

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

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in ug/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.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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QC REPORT

EPA 8015m + 8020

Date: 04/04/02 **Extraction:** EPA 5030 **Matrix:** Water

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 40402					Instrument	GC-12	
Surrogate1	ND	97.0	93.0	100.00	97	93	4.2
Xylenes	ND	32.5	32.6	30.00	108	109	0.3
Ethylbenzene	ND	10.6	10.5	10.00	106	105	0.9
Toluene	ND	10.4	10.3	10.00	104	103	1.0
Benzene	ND	10.5	10.3	10.00	105	103	1.9
MTBE	ND	10.2	10.2	10.00	102	102	0.0
TPH (gas)	ND	93.2	93.7	100.00	93	94	0.6

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$\text{RPD} = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

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QC REPORT

EPA 8015m + 8020

Date: 04/03/02 **Extraction:** EPA 5030 **Matrix:** Water

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 40202					Instrument	GC-6 B	
Surrogate1	ND	104.0	106.0	100.00	104	106	1.9
TPH (diesel)	ND	7950.0	8000.0	7500.00	106	107	0.6

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{Amount Spiked} \cdot 100$$

$$\text{RPD} = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

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

0204021 2PD101

CHAIN OF CUSTODY RECORD

by 8020

PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
0014	Xtra Oil - Castro Valley

SAMPLED BY: (PRINTED AND SIGNATURE) Paul H. King Paul H. King

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Diesel	TPH-Gas/BTEX/MTBE				PRESERVATIVE	REMARKS
+	MW1	3/30/02		water		7	X	X				ICE	Normal Turn Around
+	MW3	3/30/02		water		7	X	X				"	" " "

HCL ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ___

VOAS | O&G | METALS | OTHER
PRESERVATION APPROPRIATE ___
CONTAINERS ✓

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Paul H. King	3/30/02	10:20 A.M.	Sabrina Woodall #244
Sabrina Woodall	3/30/02	3:00 P.M.	T. Miller 4-1-02 3:50

TOTAL NO. OF SAMPLES (THIS SHIPMENT)	2	LABORATORY:
TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	14	McCampbell Analytical
LABORATORY CONTACT:		LABORATORY PHONE NUMBER:
Angela Rydelins		(925) 798-1620
SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO		

REMARKS: VOAs preserved with HCl

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(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0204021

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

TEL:
FAX:
ProjectNo: #0014; Xtra Oil-C
PO:

01-Apr-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests SW8015C	8021B/8015
0204021-001	MW1	Water	3/30/02		B	A
0204021-002	MW3	Water	3/30/02		B	A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTICE: Solid samples are discarded after 60 days and Non-Solid samples are discarded after 30 days unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other