P & D Environmental

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

> June 23, 2000 Report 0014.R35

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. The wells were monitored and sampled on June 8, 2000. The reporting period is for April through June, 2000. 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 EWI, 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 EWI 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 June 8, 2000, 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. Well MW4 was not sampled because of the presence of separate phase hydrocarbons in the well. A joint groundwater monitoring with Allisto Engineering, Inc. was 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 using an electric water level indicator. The presence of free product and sheen was evaluated using a transparent bailer. No free product or sheen was observed in monitoring wells MW1 and MW3 prior to purging. However, sheen was observed on water from wells MW1 and MW3 after purging the wells. A petroleum-absorbent sock was present in monitoring well MW1. Although no separate phase hydrocarbons were detected on the water surface in well MW4, a passive hydrocarbon collection device was observed in well MW4. The collection device was observed to be full of a coffee-colored liquid with a strong petroleum hydrocarbon odor (much like diesel). Field measurements indicate the collection device held approximately one-quarter of one gallon of fluid. Depth to water level measurements are presented in Table 1.

Prior to sampling, the monitoring wells 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 the wells once during the monitoring period. The measured depth to water at the site in wells MW1, MW3 and MW4 on June 8, 2000 was 7.97, 7.50, and 7.34 feet, respectively. Groundwater levels have decreased in wells MW1, MW3, and MW4 by 1.29, 1.42, and 1.07 feet, respectively, since the previous monitoring on March 9, 1999.

Based on the measured depth to groundwater in the groundwat** monitoring wells, the apparent groundwater flow direction at the site on June 8, 2000 was calculated to be to the south-southeast with a gradient of 0.005. The groundwater flow direction has shifted toward the south and the gradient has decreased since the previous monitoring.

LABORATORY RESULTS

The groundwater samples collected from monitoring wells MW1 and MW3 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 50 and 130 ppm, respectively; benzene concentrations of 5.7 and 41 ppm, respectively; and TPH-D concentrations of 6.5 and 74 ppm, respectively. MTBE was detected at a concentration of 23 ppm in well MW3, and was not detected in well MW1. Review of the laboratory analytical reports indicates that the TPH-D results for MW1 consist of gasoline-range compounds, and that the TPH-D results for MW3 consist of both diesel-range and gasoline-range compounds.

Since the previous sampling on March 9, 2000, TPH-G concentrations have increased in well MW1 and decreased in well MW3; TPH-D concentrations decreased in well MW1 and increased in well MW3; MTBE concentrations have remained not-detected in well MW1, and have decreased in MW3; and benzene concentrations have increased in wells MW1 and MW3. 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 sampled once during the quarter. A separate phase petroleum hydrocarbon collection device was present in well MW4, and was observed to be full at the time that the well was monitored. Based on the presence of the petroleum hydrocarbons in the collection device, the well was not sampled. It is P&D's understanding that 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 continue to 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 judgement 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 judgement 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

Greg Brown

Project Scientist

Paul H. King

California Registered Geologist

Registration No.: 5901 Expires: 12/31/01

Attachments:

Tables 1 & 2

Site Location Map (Figure 1)

Site Plan (Figure 2)

Field Parameter Forms

Laboratory Analytical Results Chain of Custody Documentation

PHK/gmb 0014.R35

TABLE 1 WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1	6/08/00	177.37*	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	169.16 170.47
	5/02/95		6.96	169.71
	2/23/95		7.72 7.14	170.29
	11/18/94 8/22/94		7.1 1 8.67	168.76
	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
MW2		•	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

NOTES:

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

TABLE 1 WELL MONITORING DATA (Continued)

Well	Date	Top of Casing	Depth to	Water Table
No.	Monitored	Elev. (ft.)	Water (ft.)	Elev. (ft.)
MW2	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	466 44	6.39	169.65
	11/13/92	198.61***	8.70	189.91 166.14
	5/29/92	175.45	9.31 8.97	166.48
	1/14/92 12/23/91		10.39	165.06
	12/23/91		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
	0,23,32		3.00	103.03
MW3	6/08/00	176.40*	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	186 43.4	7.67	168.93
	7/24/97	176.41**	7.90	168.51 169.29
	4/25/97		7.12	170.06
	1/20/97 7/26/96		6.35 7.84	169.57
	7/09/96		7.61	168.80
	4/23/96		6.81	169.60
	2/07/96		5.05	170.36
	1/29/96		5.77	170.64
	10/26/95		7.72	168.69
	7/28/95		7.80	168.61
	5/02/95		6.50	169.91
	2/23/95		7.24	169.17
	11/18/94		6.05	170.36
	8/22/94		7.65	168.76
	5/19/94		7.15	169.26
	2/24/94		6.68	169.73
	11/24/93		7.55	168.86
	8/30/93		7.64	168.77
	5/18/93		7.12	169.29
	2/23/93		8.01	168.40
	11/13/92	190.97***	7.86	191.12

^{* =} 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 Water		Water Table Elev. (ft.)
MW3	5/29/92 1/14/92 12/23/91 11/25/91 10/10/91 9/17/91 8/19/91	175.00	8.45 8.24 9.37 9.19 9.43 9.20 8.95		166.55 166.55 165.63 165.81 165.57 165.80 166.05
MW4	6/08/00 3/09/00 12/09/99 8/31/99 4/29/99 1/29/99 4/26/98 1/24/98 11/06/97 8/26/97	176.35*	8.80 8.28 7.14 6.68 6.87 6.61 9.16 8.92	(0.46)# (prior to	169.01 170.08 167.55 168.07 169.21 169.67 169.48 169.74 167.19 167.43 development)

NOTES:

^{* =} Surveyed on August 20, 1997

^{** =} Surveyed on March 24, 1993 *** = Surveyed on December 5, 1992

^{# =} 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 June 8, 2000											
MW1@,++	6.5	50	ND	5.7	1.5	1.8	7				
MW2	Not Samp	led (Dest	royed o	n February	7, 1996)						
MW3@,+	74	130	23	41	16	1.9	13				
MW4	Not Samp	led (Free	Produc	t Present i	n Well)						
EW1	Not Samp	led									

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.
- ++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.

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 Samp	led (Des	troyed o	n 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 Samp	leđ									
				ples Collec August 31, 1							
MW1+	22	66	0.71	8.7	2.7	2.4	10				
MW2	Not Samp	led (Des	troyed o	n 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 Samp	led									

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 April 29, 1999											
MW1+	22	48	ND	8.4	2.8	2.0	8.1				
MW2	Not Sampl	led (Dest	royed 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										
Samples Collected on January 29, 1999											
MW1+	9.1	47	ND	9.0	2.9	1.9	8.0				
MW2	Not Samp	led (Dest	royed or	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 Samp	led									
Samples Collected on April 26, 1998											
MW1++	7.8	60	ND	9.3	5.7	2.1	9.1				
MW2	Not Samp	led (Desi	troyed or	r 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 Samp	led									

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
				ples Collec anuary 24,			
MW1+	24	57	ND	6.9	5.5	2.0	8.7
MW2	Not Samp	led (Desi	troyed o	n February	7, 1996)		
MW3 +	77	97	MD	28	7.1	1.8	11
MW4+	20	200	ND	50	40	3.1	17
EW1	Not Samp	led					
				ples Collec ovember 6,			
MW1++	17	63	ND	7.4	6.7	2.3	9.9
MW2	Not Samp	led (Des	troyed o	n February	7, 1996)		
MW3+	120	140	ND	37	19	2.4	14
MW4+	110	160	ND	48	30	2.8	16
EW1	Not Samp	led					
				ples Collec August 26, 3			
MW1	Not Samp	oled					
MW2	Not Samp	oled (Des	troyed c	on February	7, 1996)		
мw3	Not Samp	oled					
MW4 +	5.5	210	1.7	48	42	3.4	19
EW1	Not Samp	led					

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 July 24, 1997											
MW1++	28	66	1.8	8.6	8.1	2.2	10				
MW2	Not Samp	led (Desi	troyed o	n February	7, 1996)						
MW 3++	91	120	1.4	33	17	2.2	12				
EW1	Not Samp	led									
Samples Collected on April 25, 1997											
MW1+	170	77	ND	7.4	7.9	2.1	9.8				
MW2	MW2 Not Sampled (Destroyed on February 7, 1996)										
MW3+	760	240	1.6	24	18	4.1	24				
EW1	Not Samp	led									
				ples Collections							
MW1++	57	80	0.25	7.8	8.3	1.9	8.9				
MW2	Not Samp	led (Des	troyed c	n February	7, 1996)						
MW3++	34	150	1.30	40	14	2.6	12				
EW1	Not Samp	led									
			Sam on	ples Collec July 26, 1	:teđ 996						
MW1++	11	76	ND	11	13	2.4	10				
MW2	Not Samp	led (Des	troyed o	n February	7, 1996)						
MW3++	24	130	0.89	40	22	2.4	12				
EW1	Not Samp	led									

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
				les Collect pril 23, 19			
MW1++	5.7	73	ND	8.6	12	2.2	9.8
MW2	Not Samp	led (Des	troyed on	February	7, 1996)		
MW3++	280	170	0.72	34	22	2.2	14
EW1	Not Samp	led					
				les Collect nuary 29, 1			
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 Samp	led					
			Samp on Oc	les Collect tober 26, 1	ced 1995		
MW1++	62	89	ND	7.8	12	2.4	11
MW2	900	74	ND	2.9	5.9	2.0	10
MM3	33	130	0.69	37	21	0.21	11
EW1	Not Samp	led.					
				les Collect July 28, 19			
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	В6	NA	28	16	1.3	7.6
EW1	Not Samp	led.					

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 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 Samp	oled.									
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 Samp	oled.									
				ples Collec vember 18,							
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 Samp	oled.	Sam	ples Collec August 22, 1	ted						
MW1	8.3	100	NA	9.0	11	2.1	9.4				
MW2	4.1	91	NA NA	10	13	1.5	9.0				
MW3	5.3	170	NA NA	35	20	1.8	10				
			AA	33	20	1.0					
EW1	Not Sam	brea.									

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.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes				
Samples Collected on May 19, 1994											
MW1	30	100	NA	12	14	3.5	17				
MN2	5.8	62	NA	9.2	13	1.3	8.4				
MW3	30	150	NA	38	25	2.4	14				
EW1	Not Sampl	.ed.									
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	W1 Not Sampled.										
				les Collect vember 24, 1							
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 Sampl	led.		les Collect gust 30, 19							
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 Samp:	led.									

NOTES:

TPH-G = Total Petroleum Hydrocarbons as Gasoline. TPH-D = Total Petroleum Hydrocarbons as Diesel.

NA = Not Analyzed.

TABLE 2 SUMMARY OF LABORATORY ANALYTICAL RESULTS (Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes				
Samples Collected on May 18, 1993											
MW1	30	92	NA	4.0	11	2.5	15				
MN2	44	67	NA	9.2	12	1.4	9.3				
MW3	7.2	130	NA	36	21	2.1	12				
EW1 Not Sampled.											
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				
WM3	8.1	110	NA	31	18	1.9	11				
EW1	9.6	66	NA	14	8.5	1.4	9.8				
				les Collect vember 13, 1							
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				
BW1	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				

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

NA = Not Analyzed.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes
				ples Collectanuary 14,			
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
				ples Collec cember 23,			
MW1	34	78	NA	9.3	7.3	0.54	13
MW2	700	2100	NA	36	130	79	560
ММ З	540	740	NA	30	61	31	180
				ples Collec ovember 25,			
MWl	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
				ples Collec ctober 10,			
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
				ples Collec ptember 17,			
MW1	19	39	NA	4.9	4.1	1.2	5.9
MW2	56	74	NA	10	11	1.4	8.1
ммз	140	180	NA	47	25	2.6	15

NOTES:

TPH-G = Total Petroleum Hydrocarbons as Gasoline. TPH-D = Total Petroleum Hydrocarbons as Diesel.

NA = Not Analyzed.

TABLE 2 SUMMARY OF LABORATORY ANALYTICAL RESULTS (Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes
				ples Collect August 19, 1			
MWl	47	48	NA	13	8.4	0.99	29
MW2	19	69	NA	26	22	2.1	18
WM3	150	170	NA	82	31	4.4	22
			Sam On	ples Collect July 20, 19	ted 91		
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
				ples Collec June 20, 19			
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
				ples Collec May 17, 19			
MW1	26	72	NA	7.7	9.9	ND	11
MW2	33	62	NA	5.9	6.3	1.2	9.0
WW3	70	170	NA	32	22	2.2	18
				ples Collec April 15, 1			
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

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

NA = Not Analyzed.

ND = Not Detected.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes
				ples Collec March 21, 1			
MW1	NA	36	NA	4.5	5.7	0.087	7.3
MW2	NA	62	NA	9.3	11	0.35	9.7
WM3	NA	87	NA	30	14	0.69	5.4
				ples Collec bruary 15,			
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
				ples Collec anuary 14,			
MW1	NA	33	NA	3.9	2.9	0.21	5.3
MW2	AN	78	NA	11	8.7	0.58	8.0
MW3	NA	160	NA	48	25	1.0	16
				ples Collec ptember 27,			
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
•				ples Collec August 23, 3			
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.

TABLE 2 SUMMARY OF LABORATORY ANALYTICAL RESULTS (Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes
				oles Collect July 20, 19			
WW1	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
				ples Collect March 19, 1			
WM.T	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
				ples Collectoruary 20,			
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

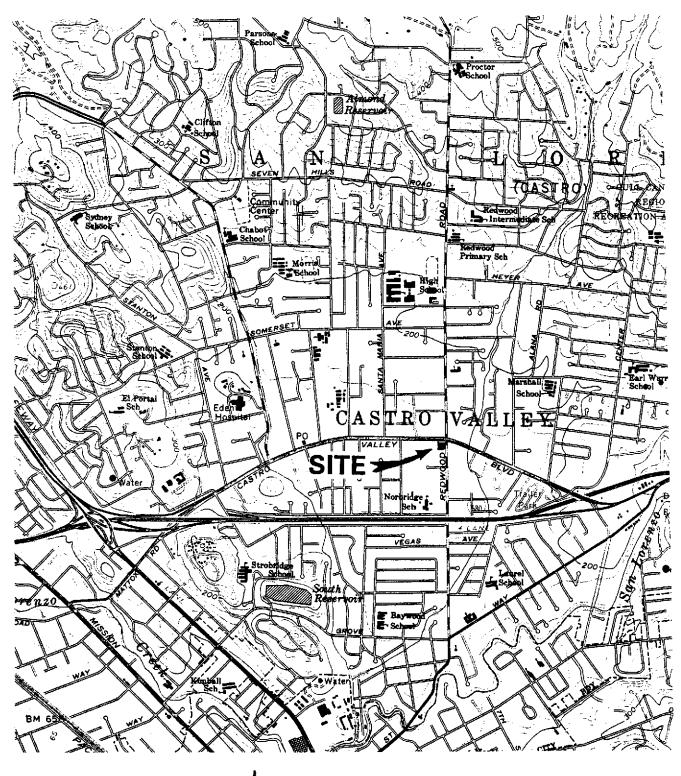
TPH-G = Total Petroleum Hydrocarbons as Gasoline. TPH-D = Total Petroleum Hydrocarbons as Diesel.

ND = Not Detected.

NA = Not Analyzed. +++ Indicates Organic Lead was not detected.

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

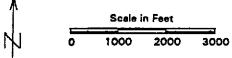


Figure 1 SITE LOCATION MAP XTRA OIL Company 3495 Castro Valley Blvd. Alameda, California

P & D ENVIRONMENTAL A Division of Paul H. King, Inc. CASTRO VALLEY BOULEVARD 4020 Panama Court Oakland, CA 94611 (510) 658-6916 sidewalk (169.40) MW1 Planter UST Pit Location 0 0 0 0 MW4 (169.01) 0 0 0 0 0 REDWOOD ROAD **Bidewalk** Canopy MW3 (168.90) Pump Island LEGEND Monitoring Well Location Building Groundwater Surface Elevation on June 8, 2000 Groundwater Flow Direction North 20 Figure 2 SITE PLAN XTRA OIL Company Base Map From 3459 Castro Valley Blvd. RHL Design Group, Inc. June, 1997 Scale in Feet Castro Valley, CA

P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET

Site Name XXX 0	IL CASTRO VALLE	4	Well No. $\frac{M}{M}$	W)	
Job No. 0014			Date 6/x/o		_
TOC to Water (ft	., 7.97	_	Sheen ON (WRGE VATER - UST	ZGALS.
Well Depth (ft.)	20.00	•	•	t Thickness	
Well Diameter	H"	_	Sample Coll	ection Method	
Gal./Casing Vol.	7.8, 5~24	r	TEFLAN 18	ILER T	
•		-		ELECTRICAL	
	PURGED	pH	TEMPERATURE	CONDUCTIVITY	
1:27 pm	ا	8.38	66.9	17.04	
	2.5	1.7 2	67.3	10.8	
	<u></u>	7.42	67.5	10.79	
	.5	7.11	68.2	10-84	,
1:33		7.10	69.1	10.65	
	<u> </u>	6.88	70.Z	11.06	
1:38 1	5	6.93	70.]		
1:41	1.5	6.96	73.7	11.41	
H4 7	$\overline{\mathcal{D}}$	7.07	74.7	11.97	
1:46 7.	1.5	C.88	73.4	11 45	
	in de water	160.			
	<u>, , , , , , , , , , , , , , , , , , , </u>				
					
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			<u></u>		
					
					
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		-			
			(PXC)		
NOTES: GMR -	Parsician	HUPROCIED	J'ABSPREGUT		
410	1611 octobri	27, 100	V HOSPICIENT	BOCK W	
			2 MYS, THEN		
PURGE10.92	Knege 11	20 15 cm	DY INITIALLY, CL	earing past SGAZ	 .
	MODERATO	F PHZ DOR	c on Hzb		-
	. • -	• •	PURE		

P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET

Site Name χ	GRA OL CASTRO	Vaccey	Well No,	<u>N'S</u>	
Job No. 001	4	/	Date 6/8/20	3	
TOC to Water	(ft.) 7.50		Sheen 📐	SAMPLES	
Well Depth (ft.) 18.65	_		t Thickness	
Well Diamete	11 b			ection Method	
	vol. 9.3, E= 70	<u>.</u> 5		LER	
2:43 	2.5 	R.69 7.34 6.68 6.16 VE-WATE	73.0 73.8 71.2 71.2 70.7	ELECTRICAL CONDUCTIVITY 17,49 16.16 15.60 15.60	Low - RARGE Finctives,
					
				<u> </u>	
			 		
		<u></u>			
NOTES: (M	3 - PHRGE	water is	VAME, CLOUDY	+ FOAMY	_
			-	1	

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-	Date Sampled: 06/08/00			
4020 Panama Court	Castro Valley	Date Received: 06/09/00			
Oakland, CA 94611	Client Contact: Paul King	Date Extracted: 06/09/00			
	Client P.O:	Date Analyzed: 06/09/00			

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWOCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	d 8020 or 602; C TPH(g) ⁺	МТВЕ	Benzene	Toluene	Ethylben- zene	Xylenes	% Recovery Surrogate
39988	MW1	W	50,000,a,h	ND<200	5700	1500	1800	7000	105
39989	MW3	w	130,000,a,h	23,000	41,000	16,000	1900	13,000	109
				:					
<u> </u>									
	z Limit unless e stated; ND	w	50 ug/L	5.0	0.5	0.5	0.5	0.5	
means not	detected above orting limit	s	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

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

^{&#}x27;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 (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.



^{*} cluttered chromatogram; sample peak coelutes with surrogate peak

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P&D Environmental	Client Project ID: #0014; Xtra Oil-	Date Sampled: 06/08/00		
4020 Panama Court	Castro Valley	Date Received: 06/09/00		
Oakland, CA 94611	Client Contact: Paul King	Date Extracted: 06/09/00		
	Client P.O:	Date Analyzed: 06/09/00		

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

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) ⁺	% Recovery Surrogate
39988	MW1	w	6500,d,h	120
39989	MW3	w	74,000,a,d,h	93
· ·				
	· · ·			
Reporting List	mit unless otherwise	w	50 ug/L	
stated; ND means not detected above the reporting limit		S	1.0 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

^{&#}x27;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) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.



^{*}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.

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QC REPORT

Date:

06/09/00-06/10/00

Matrix:

Water

Extraction:

N/A

		Concent	ration:	ug/L	%Re	covery	
Compound	Sample	MS	MSD	Amount Spiked	мѕ	MSD	RPD

SampleID: 38090

Instrument: GC-3

Surrogate1	0.000	97.0	104.0	100.00	97	104	7.0
Xylenes	0.000	275.0	292.0	300.00	92	97	6.0
Ethyl Benzene	0.000	92.0	99.0	100.00	92	99	7.3
Toluene	0.000	94.0	103.0	100.00	94	103	9.1
Benzene	0.000	97.0	107.0	100.00	97	107	9.8
MTBE	0.000	100.0	104.0	100.00	100	104	3.9
GAS	0.000	923.3	928.6	1000.00	92	93	0.6

SampleID: 6900

Instrument: GC-6 B

Surrogate1	0.000	107.0	107.0	100.00	107	107	0.0
TPH (diesel)	0.000	339.0	341.0	300.00	113	114	0.6

(MS-Sample)
AmountSpiked 100

 $RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2.100$

RPD means Relative Percent Deviation

P & D Environmental

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

20586 zpd 40

CHAIN OF CUSTODY RECORD

PAGE OF
REMARKS REMARKS
& /
CE MORMAL THRU AROUNT
1, 4 k 1)
39988
39989
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<u> </u>
The post atomy
LABORATORY: ANALYTICAL NO
LABORATORY PHONE NUMBER
(925)718-1620
SIS REQUEST SHEET)YES NO