P & D ENVIRONMENTAL

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

> January 22, 2002 Report 0014.R43

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.Pl dated February 5, 1999. All three wells were monitored and wells MW1 and MW3 were sampled on December 22, 2001. The reporting period for this report is for October through December, 2001. 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.

January 22, 2002 Report 0014.R43

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 December 22, 2001, 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 using an electric water level indicator. 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 exception of MW4, where the product measuring 1.75 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. 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

1 1 1 A

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 December 22, 2001 was 6.92, 6.44, and 7.79 feet, respectively. A separate phase layer measuring 1.75 feet in thickness was measured in well MW4. Using a specific gravity of 0.75, the corrected depth to water in well MW4 is 6.48 feet. Since the previous quarter, groundwater levels have increased in wells MW1, MW3 and MW4 by 1.61, 1.71, and 1.18 feet, respectively. In well MW4, the separate phase layer thickness has increased from 1.17 feet on September 23, 2001 to 1.75 feet on December 22; 2001. The corrected groundwater level in well MW4 has increased by 1.61 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 December 22, 2001 was calculated to be to the southeast with a gradient of 0.0068. The groundwater flow direction has shifted toward the south and the gradient has increased since the previous monitoring.

LABORATORY RESULTS

The groundwater samples collected from monitoring wells MW1 and MW3 on December 22, 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 49 and 130 ppm, respectively; benzene concentrations of 4 and 32 ppm, respectively; and TPH-D concentrations of 16 and 47 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 September 23, 2001, TPH-G, BTEX and TPH-D concentrations have increased in wells MW1 and MW3 with the exception of TPH-D in well MW1, which has decreased. MTBE concentrations increased in well MW3, and 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 1.75 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.

 ${\tt P\&D}$ 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 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

2 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

PHK 0014.R43

TABLE 1 WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
No. MW1	Monitored 12/22/01 9/23/01 6/22/01 4/22/01 12/14/00 9/18/00 6/08/00 3/09/00 12/09/99 8/31/99 4/29/99 1/29/99 1/29/99 1/29/99 1/29/99 1/29/99 1/24/97 7/24/97 7/24/97 7/26/96 7/09/96 1/20/97 7/26/96 7/09/96 1/29/96 1/29/96 10/26/95 7/28/95 5/02/95 2/23/95 11/18/94 8/22/94 5/19/94 2/28/94 5/19/94 2/28/94 11/24/93 8/30/93 5/18/93 2/23/93 11/13/92 5/29/92 1/14/92			Elev. (ft.) 170.45 168.84 169.07 169.60 168.88 168.81 169.40 170.69 169.22 169.01 169.69 170.38 169.87 170.76 168.58 168.72 169.45 170.31 169.45 170.31 169.96 171.34 171.26 168.98 169.99 171.34 171.26 168.98 169.99 168.70 169.71 170.29 168.76 169.38 169.99 168.65 169.39 168.65 169.31 170.09 190.87 167.14
	12/23/91 11/25/91 10/10/91 9/17/91 8/19/91		9.65 9.41 9.70 9.50 9.31	166.08 166.32 166.03 166.23 166.42

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 MEASUR 2/07/96 1/29/96 10/26/95 7/28/95 5/02/95 2/23/95 11/18/94 8/22/94 5/19/94 2/28/94 11/24/93 8/30/93 5/18/93 2/23/93 11/13/92 5/29/92 1/14/92 12/23/91 11/25/91 10/10/91 9/17/91	ED (DESTROYED ON 176.04** 198.61*** 175.45	FEBRUARY 7, 1996) 5.70 5.16 8.21 7.99 6.79 7.51 6.92 8.59 7.70 6.99 8.47 8.64 7.73 6.39 8.70 9.31 8.97 10.39 9.81 10.39 10.23	170.34 170.88 167.83 168.05 169.25 168.53 169.12 167.45 168.34 169.05 167.57 167.40 168.31 169.65 167.40 168.31
	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.)
	Monitored 12/22/01 9/23/01 6/22/01 4/22/01 12/14/00 9/18/00 9/26/00 6/08/00 3/09/00 12/09/99 8/31/99 4/29/99 1/29/99 1/29/99 1/24/98 11/06/97 7/24/97 4/25/97 1/20/97 7/26/96 7/09/96 4/23/96 1/29/96	Elev. (ft.) 176.40* 176.41**	Water (ft.) 6.44 8.17 8.06 7.50 8.13 7.83 7.77 7.50 6.08 7.90 7.95 7.09 6.42 6.85 5.90 7.80 7.67 7.90 7.12 6.35 7.84 7.61 6.81 5.77 7.72 7.80 6.50 7.72 7.80 6.55 7.64 7.12 8.01 7.86	Elev. (ft.) 169.96 168.23 168.34 168.90 168.57 168.63 168.90 170.32 168.45 169.31 169.98 169.55 170.50 168.80 168.93 168.51 169.29 170.06 169.57 168.80 169.57 168.80 169.57 168.80 169.17 170.36 169.17 170.36 169.26 169.73 168.86 169.73 168.86 169.29 168.40 191.12
	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

^{* =} 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	12/22/01 9/23/01 6/22/01 4/22/01 12/14/00 9/18/00 6/08/00 3/09/00 12/09/99 8/31/99 4/29/99 1/29/99 1/29/99 1/29/98 1/24/98 1/06/97 8/26/97 8/26/97	176.35*	7.79 (1.75)# 8.97 (1.17)# 7.79 9.07 (2.20)# 8.87 (0.72)# 8.50 (0.45)# 7.34 6.61 (0.46)# 8.80 8.28 7.14 6.68 6.87 6.61 9.16 8.92 7.66 (prior to d	169.87 168.26 168.56 168.93 168.02 168.19 169.01 170.08 167.55 168.07 169.21 169.48 169.48 169.74 167.19 167.19
	0/20/91		1.00 (bilot co o	GACTONIIGHT (

^{* =} 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 December 22, 2002										
MW1 +,@	22	60	ND	3.2	1.9	2	6.2			
MW2	Not	Sampled (Des	troyed o	n February	7, 1996)					
MW3 +,@	9.:	2 140	27	37	20	2.6	15			
MW4	Not	Sampled (Fre	e Produc	t Present	in Well)					
EWl	Not	Sampled								
				ples Collec ptember 23,						
MWl ++,@	16	49	ND	4	1.4	2.2	6.2			
MW2	Not	Sampled (Des	troyed o	n February	7, 1996)					
MW3 +,@	47	130	26	32	9.1	2.4	12			
MW4	Not	Sampled (Fre	e Produc	t Present :	in Well)					
EW1	Not	Sampled								

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.
- ++ = 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			
NO.	Samples Collected on June 22, 2001									
MW1 @,+	85	35	ND	3.1	0.75	1.2	4.0			
MW2	Not	Sampled (Des	troyed or	ı 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 (Des	troyed or	1 February	7, 1996)					
MW3+,@	61	140	24	25	5.4	1.7	11			
MW4	Not	Sampled (Fre	e Product	Present i	n Well)					
EW1	Not	Sampled								
				les Collect cember 14,						
MWl @,@@@	9 11	49	ND	5.8	1.6	2	6.9			
MW2	Not	Sampled (Des	troyed on	n February	7, 1996)					
MW3+,@	120	140	35	37	16	2.4	15			
MW4	Not	Sampled (Fre	e Product	Present i	n Well)					
EW1	Not	Sampled								

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 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		
				les Collect tember 18,		Delizene	Ay Telles		
MW1@,+	15	86	ND	7.2	2	3.2	13		
MW2	Not Samp	led (Dest	royed or	n February	7, 1996)				
MW3@,+	43	130	33	39	91	2.3	14		
MW4	Not Samp	led (Free	Product	t Present i	n Well)				
EWl	Not Samp	led							
Samples Collected on July 26, 2000									
MW1	Not Sampl	led							
MW2	Not Sampl	Led (Dest	royed or	n February '	7, 1996)				
·MW3@@	NA	NA	21	NA	NA	NA	NA		
MW4	Not Sampl	Led							
EW1	Not Samp]	leđ							
				les Collect June 8, 200					
MW1@,++	6.5	50	ND	5.7	1.5	1.8	7		
MW2	Not Sampl	Led (Dest	royed or	n February '	7, 1996)				
MW3@,+	74	130	23	41	16	1.9	13		
MW4	Not Sampl	led (Free	Product	Present in	n Well)				
EW1	Not Sampl	Led							
MOTEC									

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 tertbutanol at 19 ppm.
- 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.

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 Sampl	ed (Dest	royed 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 Sampl	.ed								
Samples Collected on December 9, 1999										
MW1+,@	12	65	ND	9.3	2.9	2.2	8.8			
MW2	Not Sampl	.ed (Dest	royed 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 Sampl	.ed								
•				les Collecte gust 31, 19						
MW1+	22	66	0.71	8.7	2.7	2.4	10			
MW2	Not Sampl	.ed (Dest	royed 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 Sampl	.ed								

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 Samp	led (Dest	royed or	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 Samp	led								
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	ı 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	leđ								
				les Collect pril 26, 19						
MW1++	7.8	60	ND	9.3	5.7	2.1	9.1			
MW2	Not Samp	leđ (Dest	royed or	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.

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 Samp	led (Dest	troyed o	n February	7, 1996)				
MW3+	. 77	97	ND	28	7.1	1.8	11		
MW4 +	20	200	ND	50	40	3.1	17		
EW1	Not Samp	led							
Samples Collected on November 6, 1997									
MW1++	17	63	ND	7.4	6.7	2.3	9.9		
MW2	Not Samp	led (Dest	croyed 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							
				oles Collect ugust 26, 1					
MW1	Not Samp	led							
MW2	Not Samp	led (Des	troyed o	n February	7, 1996)				
MW3	Not Samp	led							
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.

Pesults 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)					
MW3++	. 91	120	1.4	33	17	2.2	12			
EWl	Not Samp	led								
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 Samp	led								
				ples Collec anuary 21,						
MW1++	57	80 .	0.25	7.8	8.3	1.9	8.9			
MW2	Not Samp	led (Des	troyed o	n February	7, 1996)					
MW3++	34	150	1.30	40	14	2,6	12			
EW1	Not Samp	led								
			Sam on	ples Collec July 26, 19	ted 996					
MW1++	11	76	ND	11	13	2.4	10			
MW2	Not Samp	led (Des	troyed c	n February	7, 1996)					
MW3++	24	130	0.89	40	22	2.4	12			
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.

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 23, 1996										
MW1++	5.7	73	ND	8.6	12	2.2	9.8			
MW2	Not Samp	led (Des	troyed or	February	7, 1996)					
MW3++	280	170	0.72	34	22	2.2	14			
EW1	Not Samp	led								
				les Collect nuary 29, :						
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								
				les Collect tober 26, :						
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 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	86	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.

January 22, 2002 Report 0014.R43

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes
				les Collect 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 Sampl	ed.					
				les Collect ruary 24, 1			
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 Sampl	ed.					
				les Collect ember 18, 1			
MW1	10	96	NA	9.3	14	2.5	11
MW2	5.0	86	NA	11	17	1.8	12
ммз	23	140	NA	38	22	2.0	11
EW1	Not Sampl	ed.		les Collect gust 22, 19			
MWl	8.3	100	NA	9.0	11	2.1	9.4
MW2	4.1	91	NA	10	13	1.5	9.0
кимз	5.3	170	NA	35	20	1.8	10
EW1	Not Sampl	ed.					

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
				les Collect May 19, 199			
MWl	30	100	NA	12	14	3.5	17
MW2	5.8	62	NA	9.2	13	1.3	8.4
KWM	30	150	NA	38	25	2.4	14
EW1	Not Sampl	ied.					
			Samp on Feb	les Collect oruary 28, 1	ed 1994		
MWl	110	90	NA	11	9.6	2.1	9.9
MW2	13	91	NA	13	16	1.5	9.0
EWM	210	110	NA	36	21	1.9	11
EW1	Not Samp	led.					
				les Collect vember 24, 1			
MWl	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 igust 30, 19			
MW1	9.4	77	NA	6.4	11	2.2	12
MW2	110	110	NA	11	14	1.8	1.1
MW3	32	130	NA	36	21	1.9	8.2
EW1	Not Sampl	led.					

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
				les Collecte 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 Sampl	ed.					
				les Collecte ruary 23, 1			
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
				les Collecte ember 13, 1			
MWl	4.4	120	NA	5.8	10	2.1	13
MW2	8.2	79	NA	10	13	1.4	8.6
MM3	4.7	140	NA	38	24	2.0	12
EW1	13	62	NA	11	9.2	1.1	9.6
				les Collecte 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.

January 22, 2002 Report 0014.R43

TABLE 2 SUMMARY OF LABORATORY ANALYTICAL RESULTS (Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes
				oles Collect anuary 14, 1			
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
				oles Collect cember 23,			
MW1	34	78	NA	9.3	7.3	0.54	13
MW2	700	2100	NA	36	130	79	560
MW3	540	740	AN	30	61	31	180
				oles Collect vember 25,			
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
				oles Collect ctober 10, 1			
MW1	19	28	NA	4.1	4.7	1.0	4.8
MW2	360	85	NA	21	25	2.1	14
MW3	39	140	NА	57	31	2.2	14
				oles Collect otember 17,			
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

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 ugust 19, 1			
MW1	47	48	NA	13	8.4	0.99	29
MW2	19	69	NA	26	22	2.1	18
мw3	, 150	170	NA	82	31	4.4	22
				oles Collect July 20, 19			
MWl	49	100	NA	11	14	2.3	17
MW2	100	51	NA	9.9	7.7	1.2	7.5
ким	270	450	NA	46	29	3.5	21
				ples Collect 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
мwз	210	920	NA	39	49	13	69
				ples Collect 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
мwз	70	170	NA	32	22	2.2	18
				ples Collect April 15, 1			
MW1	AN	56	NA	6.5	8.5	0.41	9.9
MW2	NA	82	NA	5.3	7.4	1.0	9.4
мwз	NA	110	NA	31	15	0.88	7.4

 $\frac{\text{NOTES:}}{\text{TPH-G}} = \text{Total Petroleum Hydrocarbons as Gasoline.}$ $\frac{\text{TPH-D}}{\text{Total Petroleum Hydrocarbons as Diesel.}}$

NA = Not Analyzed.

ND = Not Detected.

January 22, 2002 Report 0014.R43

TABLE 2 SUMMARY OF LABORATORY ANALYTICAL RESULTS (Continued)

Well No.	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes
				oles Collect March 21, 19			
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
				oles Collect bruary 15,			
MW1	NA	120	NA	7.4	6.6	ND	13
MW2	NA	200	NA	12	12	1.7	14
EWM	NA	230	NA	44	40	ND	31
				oles Collect anuary 14, 1			
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
				oles Collect otember 27,			
MWl	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
				oles Collect ugust 23, 1			
MWl	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

 $\frac{\text{NOTES:}}{\text{TPH-G}} = \text{Total Petroleum Hydrocarbons as Gasoline.}$ $\frac{\text{TPH-D}}{\text{TPH-D}} = \frac{\text{Total Petroleum Hydrocarbons as Diesel.}}{\text{TPH-D}}$

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
				les Collecte uly 20, 199			
MWl	44	NA	NA	5.1	4.2	ND	9.1
MW2	86	NA	NA	9.1	14	0.94	13
ммз	. 88	NA	NA	251	21.1	0.61	14.1
				les Collecte arch 19, 199			
MWl	NA	40	NA	3.7	1.1	ND	3.3
MW2	NA	50	NA	7.7	8.7	0.075	5.6
мwз	NA	210	NA	38	28	1.8	12
				les Collecte ruary 20, 1			
MW1+++	AN	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

 $\frac{\text{NOTES:}}{\text{TPH-G}} = \text{Total Petroleum Hydrocarbons as Gasoline.}$ $\frac{\text{TPH-D}}{\text{TPH-D}} = \frac{\text{Total Petroleum Hydrocarbons as Diesel.}}{\text{TPH-D}}$

ND = Not Detected.

NA = Not Analyzed.

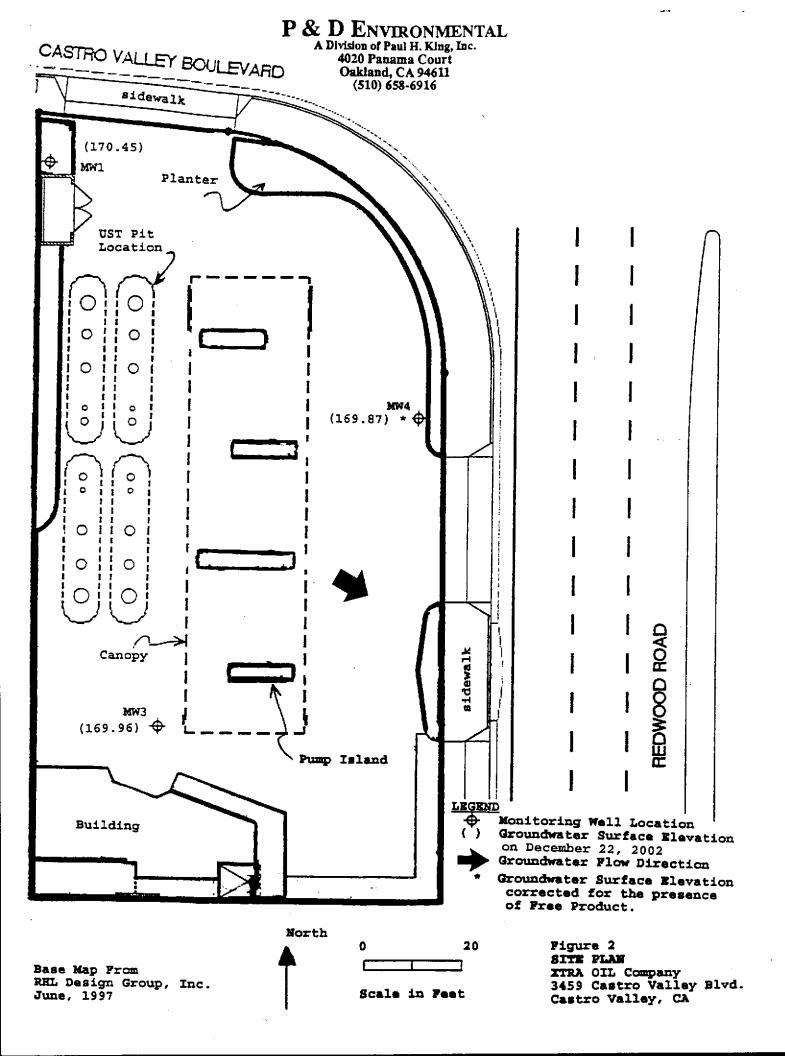
+++ Indicates Organic Lead was not detected.
Results in parts per million (ppm), unless otherwise indicated.

P & D Environmental

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



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 GROUNDWATER MONITORING/WELL PURGING DATA SHEET

Site Name _	Xtra oil -	Castro Vall	ツ Well No	MWI
Job No	Mrs. 0	<u>0</u>)4)	Date	12/22/01
TOC to Wate	r (ft.) 6.92		Sheen	Yes
Well Depth	(ft.) Zo.O		Free Produc	ct Thickness 🕏
Well Diamet	er4"		Sample Coll	lection Method
Gal./Casing	vol. 8,5	<u> </u>	· Jef	ton Bailer
TTME	<u>ار</u> عالی استان کے تاریخ		(or)	ELECTRICAL (
TIME	GAL. PURGED	<u>рн</u>	TEMPERATURE /	CONDUCTIVITY
2112	0.1	10.34	37.1	9.657100
2:14	<u> </u>	9.99	65.9	<u> </u>
2:16	8	9.68	<u>68.3</u>	9.82
2:21	12	9.04	70.4	8.68
#2:28	16	<u>ধ∙5%</u>	68.8	9.12
2:19	20 17	<u>w.e.1</u> 1	dewatered.	_
2:49	<u> </u>	8.29	68.1	9.16
2:51	22	well	dewatered	
3:00	Collect	sansle		
		0		
		· ,		
				
				-
· · · · · · · · · · · · · · · · · · ·				
-				
		·		
				-
			· ·	
NOTES:	stroleum	Husbrora	whon soch in	well
	heen on pu	زعو سم	ubon soch in ter	<u>**-</u>
		3		

P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET

Site Name Xtra Oil - C	astro Valley	Well No	mw3	
Job No. 0014	_		10/22/51	
TOC to Water (ft.) 6.44	<u>!</u>	Sheen	Yes	
Well Depth (ft.) \8,-	_	Free Product	Thickness d	
Well Diameter 4"	_	Sample Colle	ction Method	
Gal./Casing Vol	<u>.</u> .	T-ef	fon Bailer	
₹=24 TIME GAL. PURGED	DH TEMPI		ELECTRICAL CONDUCTIVITY	(m)
3:24 0,1		3.Z	10.75 X 10	r ()
3:26 3		8.8	12,49	U
3:28 6		8.7	11.93	
3:31 9		9.1	12.48	
3:33 11	weil dem			
3:55 12		6.4	11.53	
3:59 15	_	39.7	12.81	
4:00 16	Well deno			
4:05 Collect's	umple			
		· .		
			-	
		 _		
NOTES:				

P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET

Site Name			V	Well No	MWY
			I	Date	12/22/01
TOC to Wat	er (ft.)	_			
Well Depth	(ft.)	<u> </u>	F	Free Produc	t Thickness
Well Diame	ter	_	S	Sample Coll	ection Method
Gal./Casin	g Vol	<u></u>			
TIME	GAL, PURGED	На	TEMPERA		ELECTRICAL CONDUCTIVITY
·			8,34		
	-	+_		<u> </u>	
		+ 3	Steel	1-tape	
		+-	$\frac{w}{\omega}$	1 <u>45</u> 2	ing paste
			<u>~~~</u>	EF- 4176	ing parte
	Diese	1-2.30	· · · · · · · · · · · · · · · · · · ·		
		1	·		
	Hz	0.5	5	<u> </u>	
		士。			
	-				
					
			•	,	
					
					·

			····		
NOTES:	PHC collection	ton devi	= 2,3	FF belo	w top of liquid. diesel. Emplied
collect	tion device a	nd adj	uled.	it to	be in diesel
PURGE10.92	internal.	a		<u>-</u>	

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: 12/22/01
4020 Panama Court	Castro Valley	Date Received: 12/22/01
Oakland, CA 94611	Client Contact: Paul King	Date Extracted: 12/28/01
	Client P.O:	Date Analyzed: 12/28/01

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

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030) Ethyl-Lab ID Client ID % Recovery Matrix TPH(g)⁺ MTBE Benzene Toluene **Xylenes** benzene Surrogate 87399 MW1 W 60,000,a,h ND<200 3200 1900 2000 6200 111 87400 MW3 W 140,000,a,h 27,000 37,000 20,000 2600 15,000 102 Reporting Limit unless W 50 ug/L 5.0 0.5 0.5 0.5 0.5 otherwise stated; ND means not detected above

0.005

0.005

0.005

0.005

0.05

S

1.0 mg/kg

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.



the reporting limit

^{*} 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

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

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: 12/22/01	
4020 Panama Court	Castro Valley	Date Received: 12/22/01	
Oakland, CA 94611	Client Contact: Paul King	Date Extracted: 12/22/01	
	Client P.O:	Date Analyzed: 12/22-12/27/01	
Dia	sel Danga (C10 C22) Fortuna 4-1-1		

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

PA methods modified 8015, and 3550 Lab ID Client ID		Matrix	TPH(d) ⁺	% Recover Surrogate		
87399	MWI	W	22,000,d,b,h	101		
87400	MW3	W	9200,d,b,h	100		
-				4		
	-					
Reporting Limit unless otherwise ated; ND means not detected above the reporting limit		w	50 ug/L			
		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

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.



[&]quot;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.

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

QC REPORT

EPA 8015m + 8020

Date: 12/28/01

Extraction: TTLC

Matrix: Water

	Concentration: ug/L				%Recovery		
Compound	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
SampleID: 1227001					Instrumer	ıt: GC	-12
Surrogate1	ND .	98.0	100.0	100.00	98	100	2.0
Xylenes	ND	32.4	33.4	30.00	108	111	3.0
Ethylbenzene	ND	10.5	11.2	10.00	105	112	6.5
Toluene	ND	10.5	11.1	10.00	105	111	5.6
Benzene	ND	9.8	10.5	10.00	98	105	6.9
МТВЕ	ND	9.0	9.7	10.00	90	97	7.5
TPH (gas)	ND	94.9	95.6	100.00	95	96	8.0

% Re covery =
$$\frac{(MS-Sample)}{AmountSpiked} \cdot 100$$

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

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

QC REPORT

EPA 8015m + 8020

Date: 12/27/01	Extraction	n: TTLC			Matrix:	Water	
	Concentration: ug/L				%Recovery		
Compound	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
<u>SampleID:</u> 1227001				•	instrume	<u>nt:</u> GC-	5 B
Surrogate1	ND	103.0	102.0	100.00	103	102	1.0
TPH (diesel)	ND	7850.0	7725.0	7500.00	105	103	1.6

% Re covery $\approx \frac{(MS-Sample)}{AmountSpiked} \cdot 100$

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

RPD means Relative Percent Deviation

P & D Environmental

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

CHAIN OF CUSTODY RECORD

PAGE ___ OF _ 39411ZR96 PROJECT NAME: PROJECT NUMBER: ANALYSIS(ES); Xtra 011 - Castro Valley 0014 NUMBER OF SAMPLED BY: (PRINTED AND SIGNATURE) REMARKS Paul H. Kina SAMPLE LOCATION DATE TIME TYPE SAMPLE NUMBER Normal Turn Around 12/22/01 TCE Water MWI MW3 87399 + 87400 VOAS102013EEELSIÕTHER PRESERMATION Arrautiale CONTAINERS RECEIVED BY: (SIGNATURE) RELINQUISHED BY: (SIGNATURE) TIME LABORATORY: DATE (THE SHIPMENT) 12/22/d) 624PM TOTAL NO. OF CONTAINERS
(THE SHIPMENT) 1 LI Mc Campbell Analytical Eury H. Kina RELINQUISHED BY: (SIGNATURE) LABORATORY CONTACT: LABORATORY PHONE NUMBER: DATE TIME RECEIVED BY: (SIGNATURE) Angela Rydelius (925) 798-1620 12/22 6: Expandonuel Mendora RECEIVED FOR LABORATORY BY: SAMPLE ANALYSIS REQUEST SHEET RELINQUISHED BY: (SIGNATURE) ATTACHED: ()YES (X)NO (SIGNATURE) REMARKS: VOAs preserved with HCl.