Xtra Oil Company
2307 Pacific Avenue, Alameda, CA 94501
Tel. (510) 865-9503, Fax (510) 865-1889

May 10, 1994

Mr. Scott Seary
Hazardous Materials Program
Department of Environmental Health
80 Swan Way, Room 200
Oakland, Ca. 94621

Regarding: 3495 Castro Valley Blvd. Castro Valley

Dear Mr. Seary,

Please find enclosed the quarterly report for the above location. This report is for the first quarter of 1994. If you have any questions feel free to contact us.

Sincerely,

Keith Simas

P & D ENVIRONMENTAL

4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916

April 29, 1994
Report No. 0014.R9

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 (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 013194.P1 dated January 31, 1993. The reporting period is for December, 1993 through February, 1994. 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.

FIELD ACTIVITIES

On February 28, 1994 all of the monitoring wells at the site were monitored and sampled by P&D personnel. Extraction well EW1 was not monitored or sampled 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 or sheen was evaluated using a transparent bailer. No sheen was observed in wells MW1 or MW2. However, a sheen was observed in well MW3. 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 been 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 monitoring wells once during the quarter. The measured depth to water at the site on February 28, 1994 ranged from 6.68 to 7.44 feet. Groundwater levels have increased in wells MW1, MW2 and MW3 by 1.30, 1.48 and 0.87 feet, respectively, since the previous monitoring on November 24, 1993. The calculated groundwater flow direction on February 28, 1994 was to the east with a gradient of 0.0063. The groundwater gradient has decreased and the flow direction has shifted slightly from the east-northeasterly direction calculated during the previous monitoring of November 24, 1993.

Groundwater level data collected during the quarter are presented in Table 1. The groundwater flow direction at the site on February 28, 1994 is shown on Figure 2.

LABORATORY RESULTS

All of the groundwater samples collected from the monitoring wells were analyzed for TPH-G using EPA Method 5030 and Modified EPA Method 8015; benzene, toluene, ethylbenzene and total xylenes (BTEX) 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 MW1, MW2 and MW3 show TPH-G at concentrations of 90, 91 and 110 ppm, respectively; benzene

concentrations of 11, 13 and 36 ppm, respectively; and TPH-D at concentrations of 110, 13 and 210 ppm, respectively. Since the previous quarter, TPH-G concentrations have increased in wells MW1 and MW2, and decreased in well MW3. Benzene concentrations have increased in well MW1, remained unchanged in well MW2 and decreased in well MW3 since the previous quarter. TPH-D concentrations have increased in wells MW1 and MW3 and decreased in well MW2 since the previous quarter. The laboratory analytical results of the groundwater samples are summarized in Table 2. Copies of the laboratory analytical results and chain of custody documentation are attached with this report.

DISCUSSION AND RECOMMENDATIONS

The groundwater flow direction and gradient have remained relatively unchanged since the previous quarter. Based on the absence of free product in well MW2, it appears that the free product recovery efforts have been successful in reducing the free product to less than a sheen in this well. P&D recommends that use of an absorbent sock in well MW2 for the recovery of free product be discontinued for one quarter, and the well then evaluated for the presence of free product. P&D recommends that an absorbent sock be placed in well MW3 and the sock monitored periodically for the accumulation of free product.

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

DISTRIBUTION

Copies of this report should be sent to Mr. Richard Hiett 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. 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.

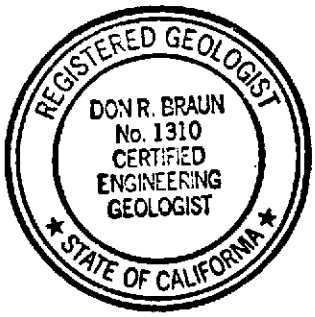
Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental

Paul H. King

Paul H. King
Hydrogeologist



Don R. Braun

Don R. Braun
Certified Engineering Geologist
Registration No. : 1310
Expires: 6/30/94

PHK
0014.R9

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

TABLE 1

WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1	2/28/94	177.43*	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	2/28/94	176.04*	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
MW3	2/24/94	176.41*	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 March 24, 1993
** = Surveyed on December 5, 1992

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS

Well No.	TPH-D	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on February 28, 1994			
MW1	110	90	11	9.6	2.1	9.9
MW2	13	91	13	16	1.5	9.0
MW3	210	110	36	21	1.9	11
EW1	Not Sampled.					
			Samples Collected on November 24, 1993			
MW1	8.2	66	8.3	8.9	2.0	11
MW2	79	12	13	17	2.5	17
MW3	24	160	48	26	2.2	12
EW1	Not Sampled.					
			Samples Collected on August 30, 1993			
MW1	9.4	77	6.4	11	2.2	12
MW2	110	110	11	14	1.8	11
MW3	32	130	36	21	1.9	8.2
EW1	Not Sampled.					
			Samples Collected on May 18, 1993			
MW1	30	92	4.0	11	2.5	15
MW2	44	67	9.2	12	1.4	9.3
MW3	7.2	130	36	21	2.1	12
EW1	Not Sampled.					

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected on February 23, 1993			
MW1	14	100	4.5	11	2.1	12
MW2	7.0	76	12	17	1.6	9.6
MW3	8.1	110	31	18	1.9	11
EW1	9.6	66	14	8.5	1.4	9.8
			Samples Collected on November 13, 1992			
MW1	4.4	120	5.8	10	2.1	13
MW2	8.2	79	10	13	1.4	8.6
MW3	4.7	140	38	24	2.0	12
EW1	13	62	11	9.2	1.1	9.6
			Samples Collected On May 27, 1992			
MW1	11	120	8.8	16	2.3	15
MW2	130	89	18	19	1.7	14
MW3	27	370	91	57	3.0	21
			Samples Collected On January 14, 1992			
MW1	19	39	7.3	8.7	1.3	8.9
MW2	1600	59	17	14	1.8	15
MW3	270	130	76	30	3.4	21
			Samples Collected On December 23, 1991			
MW1	34	78	9.3	7.3	0.54	13
MW2	700	2100	36	130	79	560
MW3	540	740	30	61	31	180

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected On November 25, 1991			
MW1	36	170	5.5	5.6	1.6	8.4
MW2	130	230	11	9.7	1.4	9.7
MW3	74	150	65	31	3.4	18
			Samples Collected On October 10, 1991			
MW1	19	28	4.1	4.7	1.0	4.8
MW2	360	85	21	25	2.1	14
MW3	39	140	57	31	2.2	14
			Samples Collected On September 17, 1991			
MW1	19	39	4.9	4.1	1.2	5.9
MW2	56	74	10	11	1.4	8.1
MW3	140	180	47	25	2.6	15
			Samples Collected On August 19, 1991			
MW1	47	48	13	8.4	0.99	29
MW2	19	69	26	22	2.1	18
MW3	150	170	82	31	4.4	22
			Samples Collected On July 20, 1991			
MW1	49	100	11	14	2.3	17
MW2	100	51	9.9	7.7	1.2	7.5
MW3	270	450	46	29	3.5	21

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected On June 20, 1991			
MW1	42	76	4.7	7.1	1.5	9.8
MW2	69	87	8.1	8.4	1.1	8.9
MW3	210	920	39	49	13	69
			Samples Collected On May 17, 1991			
MW1	26	72	7.7	9.9	ND	11
MW2	33	62	5.9	6.3	1.2	9.0
MW3	70	170	32	22	2.2	18
			Samples Collected On April 15, 1991			
MW1	NA	56	6.5	8.5	0.41	9.9
MW2	NA	82	5.3	7.4	1.0	9.4
MW3	NA	110	31	15	0.88	7.4
			Samples Collected On March 21, 1991			
MW1	NA	36	4.5	5.7	0.087	7.3
MW2	NA	62	9.3	11	0.35	9.7
MW3	NA	87	30	14	0.69	5.4
			Samples Collected On February 15, 1991			
MW1	NA	120	7.4	6.6	ND	13
MW2	NA	200	12	12	1.7	14
MW3	NA	230	44	40	ND	31

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	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected On January 14, 1991			
MW1	NA	33	3.9	2.9	0.21	5.3
MW2	NA	78	11	8.7	0.58	8.0
MW3	NA	160	48	25	1.0	16
			Samples Collected On September 27, 1990			
MW1	NA	28	3.7	3.5	0.01	6.5
MW2	NA	59	8.4	12	0.88	9.0
MW3	NA	25	7.2	6.4	0.42	3.4
			Samples Collected On August 23, 1990			
MW1	NA	40	5.1	4.9	0.35	6.0
MW2	NA	96	8.1	8.4	1.5	8.6
MW3	NA	220	67	46	27	18
			Samples Collected On July 20, 1990			
MW1	44	NA	5.1	4.2	ND	9.1
MW2	86	NA	9.1	14	0.94	13
MW3	88	NA	25.1	21.1	0.61	14.1
			Samples Collected On March 19, 1990			
MW1	NA	40	3.7	1.1	ND	3.3
MW2	NA	50	7.7	8.7	0.075	5.6
MW3	NA	210	38	28	1.8	12

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.

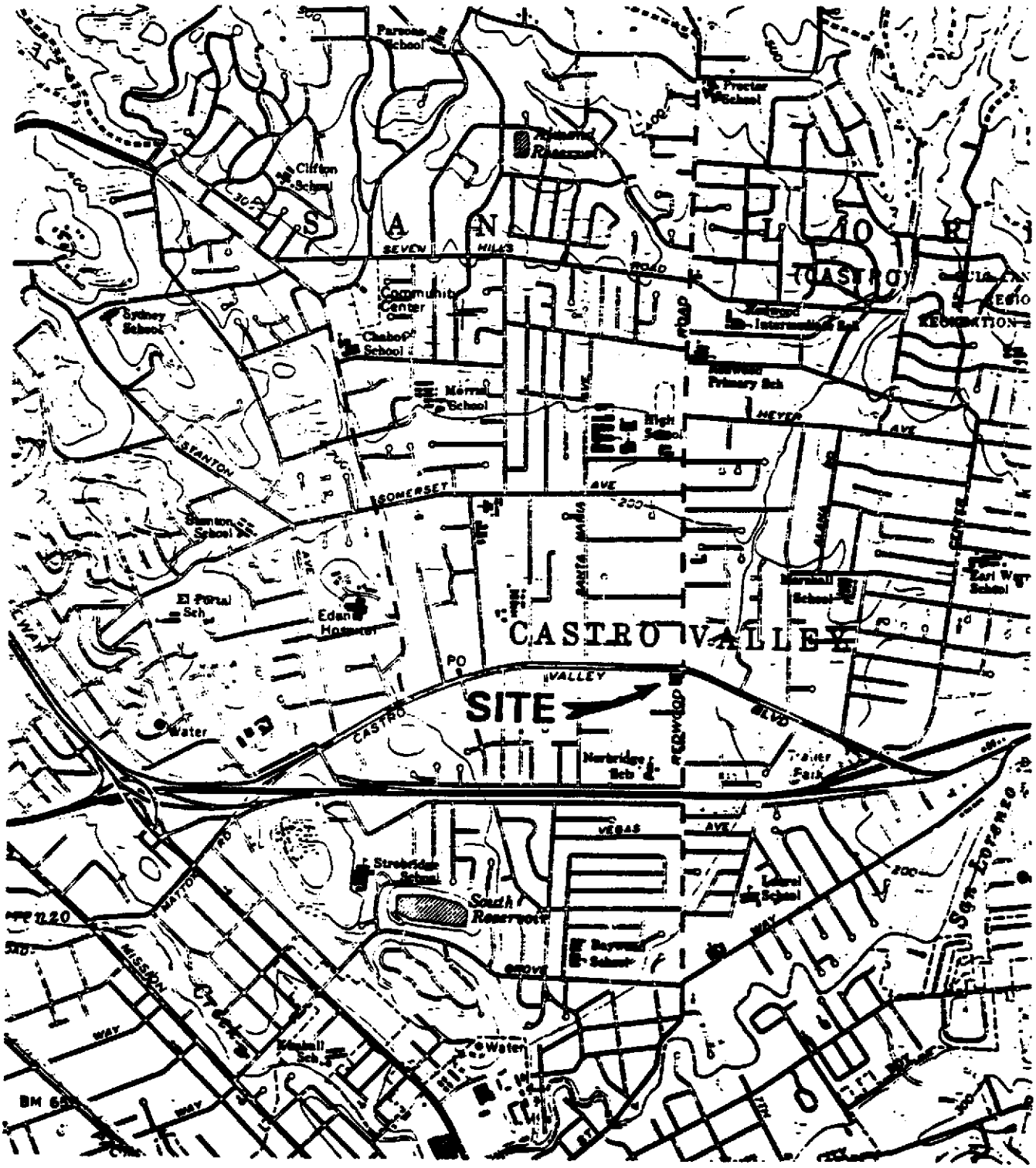
TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

Well No.	TPH-D	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Samples Collected On February 20, 1990			
MW1*	NA	7.6	1.6	ND	ND	1.3
MW2*	NA	38	7.3	3.1	0.075	6.8
MW3*	NA	46	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.
Results in parts per million (ppm), unless otherwise indicated.

P & D ENVIRONMENTAL

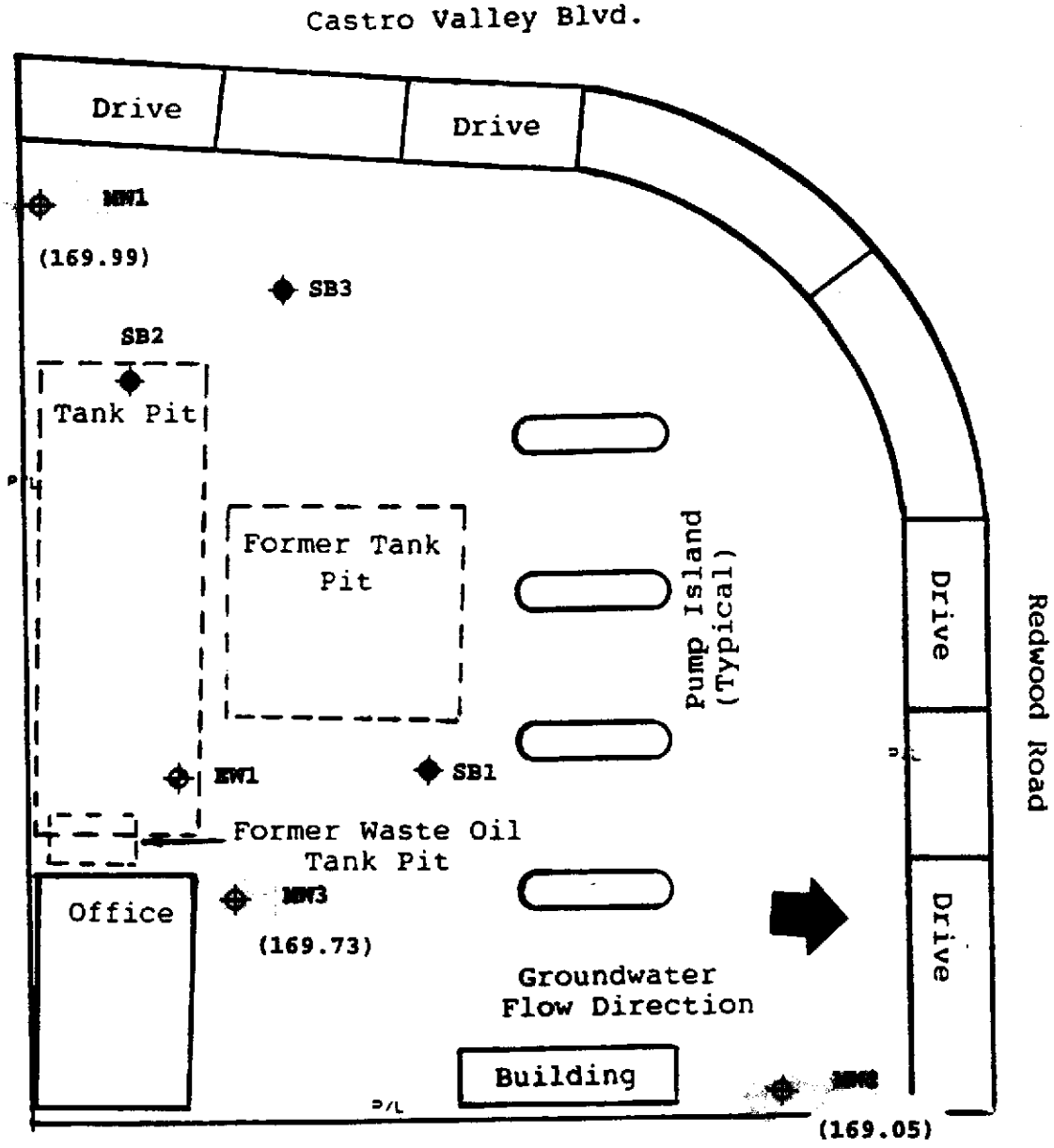
4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916



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
4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916



LEGEND

- Extraction Well Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Flow Direction
- ( ) Groundwater Surface Elevation on February 28, 1994
- P/L Property Line

N

0 10 20 30 60

Scale in Feet

Base Map From
K&B Environmental
Dated 9/14/92

Figure 2
SITE PLAN
XTRA OIL Company
3495 Castro Valley Blvd.
Castro Valley, CA

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name XTRA OIL - Castro Valley | Well No. MW1

Job No. 0014 | Date 2/28/94

TOC to Water (ft.) 7.44 Time 0934 AM | Sheen None

Well Depth (ft.) 20.2 | Free Product Thickness 0

Well Diameter 4" | Sample Collection Method

Gal./Casing Vol. 8.3 | Teflon Bailer

$\Sigma = 25.2$

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (µS/cm)
10:17	1.0	6.67	64.5	13.15 x 100
10:18	5.0	6.42	65.8	13.03
10:19	10.0	6.44	65.7	12.77
10:21	15.0	6.48	67.2	14.00
Shut down pump to empty buckets				
10:27	20.0	6.59	66.1	13.89
10:29	22.0	~~6.48~~ Well Dewatered		
10:55	25.0	6.68	67.6	13.12
10:58	30.0	6.67	67.8	13.28
11:05	Collect samples			

NOTES:

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name XTRA OIL - Castro Valley
Well No. MW2
Job No. 0014
Date 2/28/94
TOC to Water (ft.) 6.99 10:04
Sheen None
Well Depth (ft.) 18.2
Free Product Thickness Ø
Well Diameter 4"
Sample Collection Method
Gal./Casing Vol. 7.3
Teflon Bailer
Σ=22

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (mS/cm)
12:07	1.0	6.76	69.5	15.41 X100
12:09 ~~12:09~~	5.0	6.74	70.0	15.72
12:11	8.0	6.72	71.0	15.95
12:16	12.0	6.77	72.4	16.58
12:18	16.0	6.69	72.3	17.24
12:20	20.0	6.78	74.1	17.33
12:22	24.0	6.87	74.3	17.50
12:25	Collect Samples			

NOTES: No sock in 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 2/28/94

TOC to Water (ft.) 6.68 Time 09:59AM | Sheen Yes

Well Depth (ft.) 18.5 | Free Product Thickness ϕ

Well Diameter 4" | Sample Collection Method

Gal./Casing Vol. 7.7 | Teflon Bailer

ε = 23.0

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (µS/cm)
12:51	5.0	6.90	67.5	2.71 x 1000
12:54	10.0	6.57	67.9	2.61
12:57	14.0	Well Purged dry		
13:17	15.0	6.64	68.0	2.50
13:18	18.0	Well Purged dry		
13:25	Collect samples			

NOTES:

PURGE10.92

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

P & D Environmental 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0014;Xtra Oil-Castro Valley	Date Sampled: 02/28/94
		Date Received: 02/28/94
	Client Contact: Paul King	Date Extracted: 03/01-03/05/94
	Client P.O:	Date Analyzed: 03/01-03/05/94

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

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

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
34461	MW1	W	90,000,a,h	11,000	9600	2100	9900	97
34462	MW2	W	91,000,a	13,000	16,000	1500	9000	98
34463	MW3	W	110,000,a,h	36,000	21,000	1900	11,000	104
Detection Limit unless otherwise stated; ND means Not Detected		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak co-elutes 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 are significant; no recognizable pattern; 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.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

P & D Environmental 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0014;Xtra Oil-Castro Valley	Date Sampled: 02/28/94
		Date Received: 02/28/94
	Client Contact: Paul King	Date Extracted: 03/02/94
	Client P.O:	Date Analyzed: 03/03/94

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
34461	MW1	W	110,000,d,a,h	96
34462	MW2	W	13,000,d,a	96
34463	MW3	W	210,000,a,d,h	96
Detection Limit unless otherwise stated; ND means Not Detected		W	50 ug/L	
		S	10 mg/kg	

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; surrogate and sample peaks co-elute or surrogate peak is on elevated baseline

+ 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) modified diesel?; light(C_L) or heavy(C_H) diesel compounds are 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.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/02-03/03/94 Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.0	84.3	86.0	100	84.3	86.0	2.0
Benzene	0	9.6	9.7	10	96.0	97.0	1.0
Toluene	0	9.9	9.9	10	99.0	99.0	0.0
Ethyl Benzene	0	10.2	10.1	10	102.0	101.0	1.0
Xylenes	0	30.6	30.5	30	102.0	101.7	0.3
TPH (diesel)	0	149	156	150	99	104	4.7
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/04-03/05/94 Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.0	87.8	87.0	100	87.8	87.0	1.0
Benzene	0	10	10	10	100.0	100.0	0.0
Toluene	0	10	10	10	100.0	100.0	0.0
Ethyl Benzene	0	10	10	10	100.0	100.0	0.0
Xylenes	0	30.5	30.5	30	101.7	101.7	0.0
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	0	19900	22100	23700	84	93	10.5

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

P & D ENVIRONMENTAL
300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916

CHAIN OF CUSTODY RECORD

2124 AP047 PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
0014	~~ARCO~~ OIL - CASTRO VALLEY

SAMPLED BY: (PRINTED AND SIGNATURE)
Paul

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-g, BTEX	TPH-Diesel	PRESERVATIVE	REMARKS
MW1	2/28/94		Water		4	X	X	ICE	Normal Turn Around
MW2	"		"		"	X	X	"	" " "
MW3	"		"		"	X	X	"	" " "

34461
34462
34463

ICE/T ✓ PRESERVATIVE ✓ VOAS O&G METALS OTHER
GOOD CONDITION ✓ APPROPRIATE
HEAD SPACE ABSENT ✓ CONTAINERS ✓

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Paul H. King	2/28/94	1435	J R Hamilton
J R Hamilton	3/8/94	3:15pm	Leslie Rivera
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT)	3
TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	12
LABORATORY:	McCampbell Analytical
LABORATORY CONTACT:	Ed Hamilton
LABORATORY PHONE NUMBER:	(510) 798-1620
SAMPLE ANALYSIS REQUEST SHEET ATTACHED:	( )YES (x)NO

REMARKS: VOAs preserved with HCl in the field