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

December 31, 1992

Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Attention: Scott Seery

Regarding: 3495 Castro Valley Blvd.
Castro Valley

Dear Mr. Seery,

Please find enclosed Quarterly Report for monitoring and sampling performed at the above location for the final quarter of 1992.

Very truly yours,

Keith Simas

Enclosures

reviewed 1/4/93 SD3

P & D ENVIRONMENTAL

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

December 8, 1992
Report No. 0014.R2

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 our proposal dated September 18, 1992. The reporting period is for June through November, 1992. 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 10,000 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 15, 1990 by Wedge Western Geo-Engineers. 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 boreholes MW1 and MW3 at depths ranging from 5 to 15 feet below grade and at concentrations ranging from 40 to 1,400 ppm at MW1 and concentrations ranging from 25 to 250 ppm at MW3. In MW2, TPH-G was encountered at depths ranging from 10 to 15 feet below grade and at concentrations ranging from 95 to 230 ppm. In borehole MW3, TPH-D was encountered at concentrations ranging up to 1,200 ppm. Groundwater was encountered in the boreholes at a depth of 15 feet below grade.

On February 15, 1990 Wedge Western Geo-Engineers drilled three exploratory boreholes at the site designated as SB1, SB2 and SB3. Soil samples were collected from the exploratory boreholes at depths of 10 and 12 feet. TPH-G was detected in SB1 at a depth of 10 feet and at a concentration of 1,700 ppm. In SB2 and SB3, TPH-G was detected at depths of 10 and 12 feet. TPH-G concentrations in both boreholes were 800 ppm at a depth of 10 feet and 2,000 ppm at a depth of 12 feet. A groundwater monitoring and sampling program was initiated at the site on February 20, 1990.

During fuel tank removal activities in August, 1992 soil surrounding the tank pit was removed and disposed of offsite. An extraction well, designated as EW1, was constructed in one corner of the new tank pit at the time of installation for the new tanks. The location of E1 is shown on Figure 2.

FIELD ACTIVITIES

On November 13, 1992 all of the monitoring wells at the site were monitored and sampled by P&D personnel. 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 sheen was evaluated using a transparent bailer. No sheen was observed in wells MW1 and MW3. However, a spotty sheen was observed in wells MW2 and EW1. Depth to water level measurements and monitoring data are presented in Table 1.

Prior to sampling, the monitoring wells were purged of a minimum of three casing volumes of water. 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, water samples were collected using a clean Teflon bailer. At the request of XTRA OIL, a water sample was also collected from extraction well EW1, which was installed in the tank pit during the August 1992 fuel tank replacement activities. Well EW1 was not purged prior to sample collection.

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 November 13, 1992 ranged from 7.86 to 8.70 feet. Groundwater levels have decreased in wells MW2 and MW3 by 0.61 and 0.59 feet, respectively, and increased in well MW1 by 0.54 feet since the previous monitoring on May 29, 1992. The groundwater flow direction on November 13, 1992 was to the east-northeast with a gradient of 0.016. The groundwater flow direction has shifted towards the north and the gradient has increased since the previous monitoring on May 29, 1992.

Groundwater monitoring data collected during the quarter are presented in Table 1. The groundwater flow direction at the site on November 13, 1992 is shown on Figure 2.

LABORATORY RESULTS

All of the groundwater samples collected from the monitoring wells and the extraction well 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 showed TPH-G at concentrations of 120, 79 and 140 ppm, respectively, and TPH-D at concentrations of 4.4, 8.2 and 4.7 ppm, respectively. Since the previous quarter, TPH-G concentrations have remained unchanged in well MW1 and have decreased in wells MW2 and MW3. TPH-D concentrations have decreased in all of the wells since the previous quarter. TPH-G and TPH-D concentrations in EW1 were 62 and 13 ppm, respectively. The laboratory analytical results are

summarized in Table 2. Copies of the laboratory analytical results and chain of custody documentation are attached with this report.

DISCUSSION AND RECOMMENDATIONS

During the quarter, the underground fuel tanks were replaced in August. Because of modifications to the monitoring wellhead elevations during the fuel tank replacement activities, the wellhead elevations were resurveyed. It is P&D's understanding that the monitoring wells were surveyed vertically to the nearest 0.01 feet on December 5, 1992 by Andreas Deak of Alameda, a State-licensed surveyor. 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.

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 Health Care Services. 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.

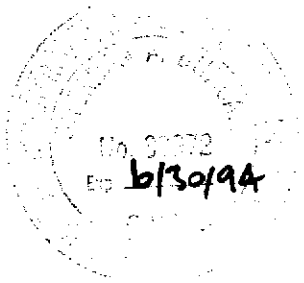
Should you have any questions, please do not hesitate to contact Paul King at (510) 658-6916.

Sincerely,

P&D Environmental

Paul H. King

Paul H. King
Hydrogeologist



Sherban A. Duncan
Registered Civil Engineer
Registration No.: 32972
Expiration Date: 6/30/94

PHK
0014.R2

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	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	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	11/13/92	198.98	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

- were the previous elevations purely arbitrary? from 200 to 175' ??

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS

Well No.	TPH-D	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			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.

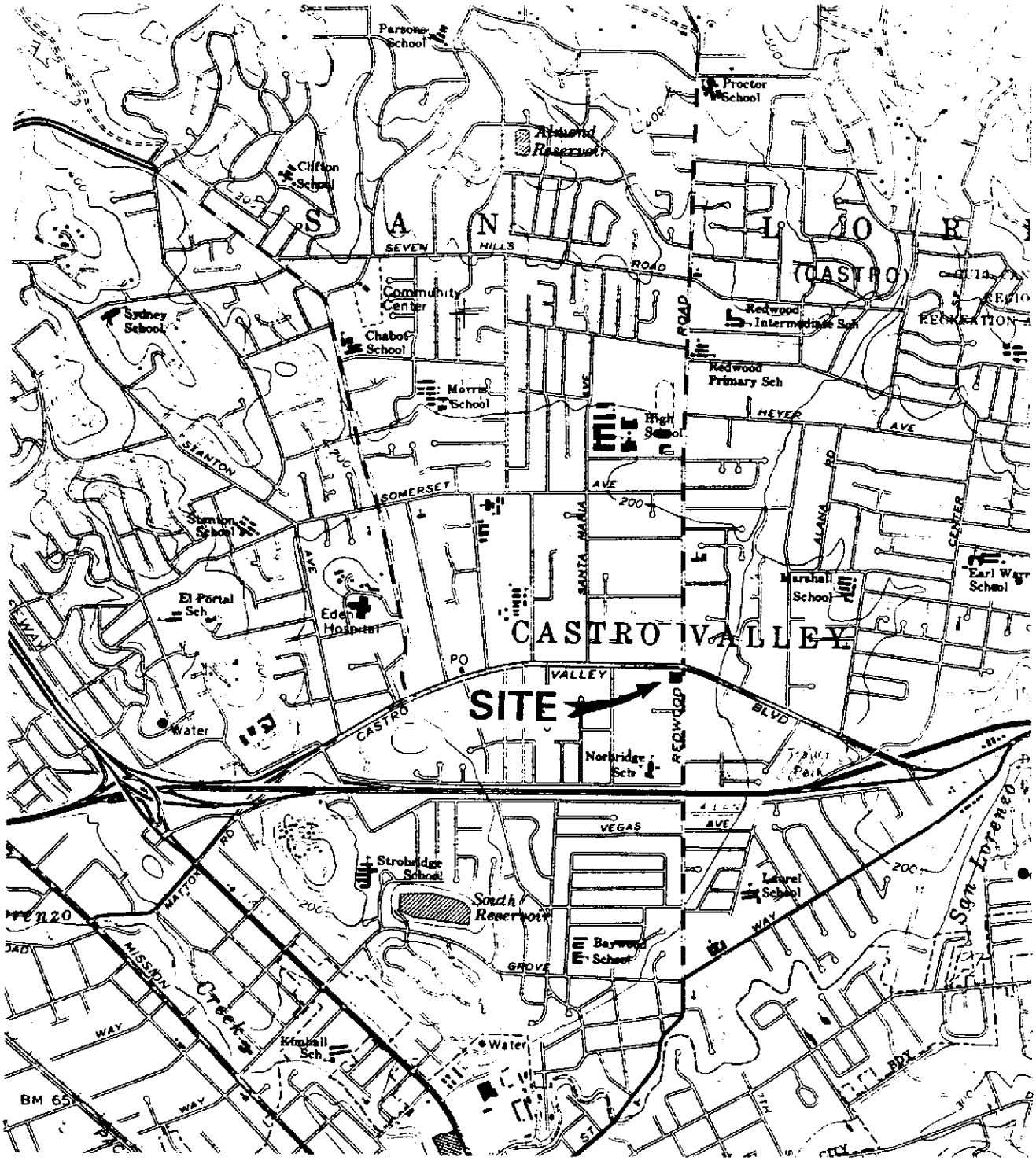
TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Continued)

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

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

P & D ENVIRONMENTAL

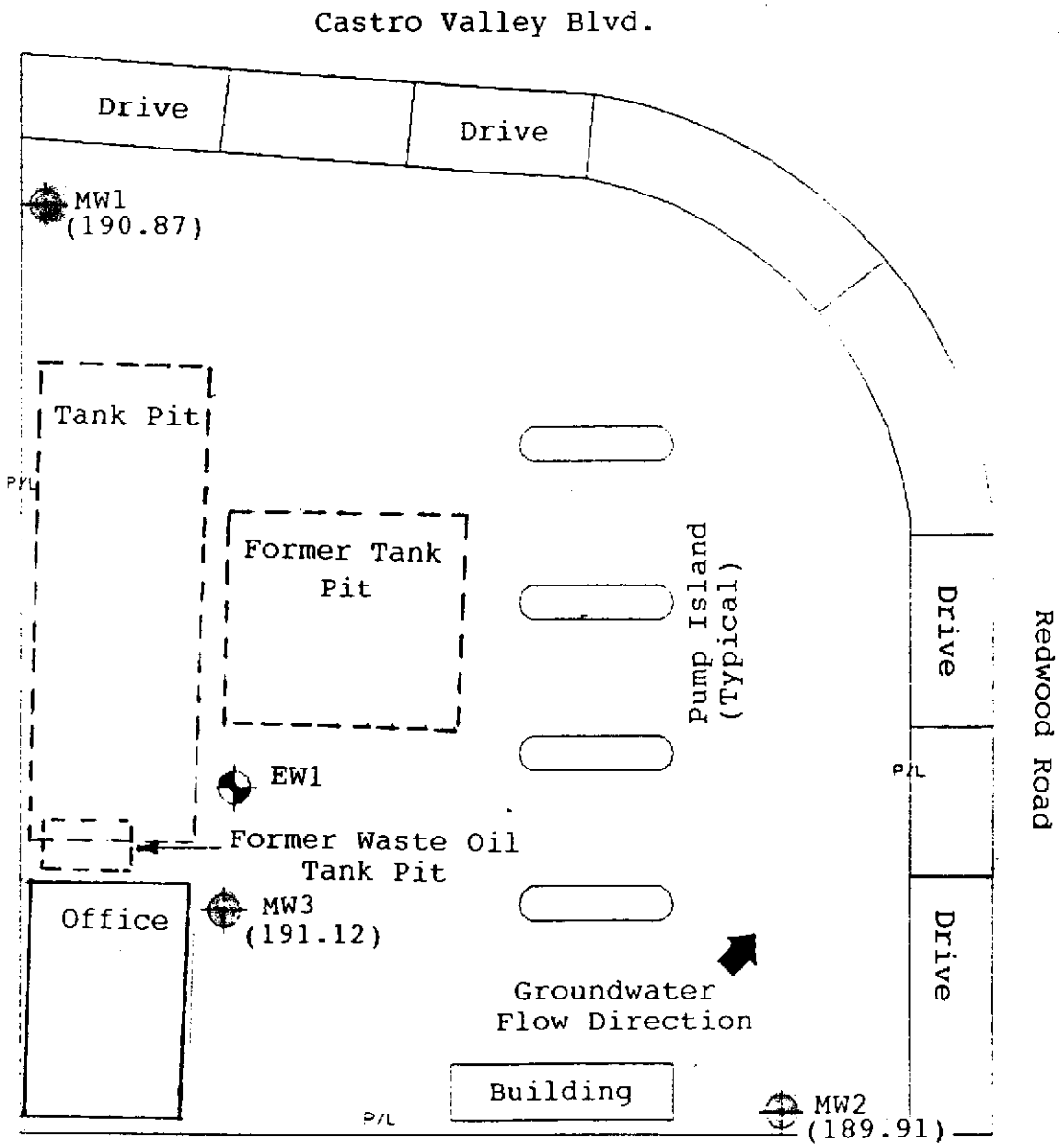
300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916



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



LEGEND

- Extraction Well Location
- Monitoring Well Location
- Groundwater Flow Direction
- ( ) Groundwater Surface Elevation on November 13, 1992

P/L Proprety Line

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

N

0 10 20 30 60

Scale in Feet

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.
Date ~~11/12/92~~ 11/13/92 9:40 AM
TOC to Water (ft.) 9.13 9:40AM
Sheen None
Well Depth (ft.) 20.3
Free Product Thickness ∅
Well Diameter 4"
Sample Collection Method
Gal./Casing Vol. 7.3
Teflon Bailer

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (µS/cm)	
11:09A	1.0	7.08	68.4	9.70 x100	
11:11	3.0	7.05	71.5	15.54 x100	
11:13	6.0	7.03	73.8	7.05 x100	
11:18	9.0	6.97	72.8	17.55 x100	
11:22	12.0	6.74	70.9	5.97 x1000	* empty 5 gal in their records. Field parameters
11:35	15.0	6.70	73.2	4.73 x1000	
11:40	18.0	6.82	76.2	3.13 x1000	
11:45	22.0	6.58	76.0	3.82 x1000	
		collect samples			

NOTES: Slight TPH (D?) odor in well. No water in Christy box

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name XTRA OIL - Castro Valley
Well No. MW-2
Job No. 00141
Date 11/13/92
TOC to Water (ft.) 8.70
Sheen Spotty
Well Depth (ft.) 18.3
Free Product Thickness ∅
Well Diameter 4"
Sample Collection Method
Gal./Casing Vol. 6.2
Teflon Bailer

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (mS/cm)
2:25	1.0	7.12	69.0	1.54 x 1000
2:29	4.0	6.72	71.7	3.16 x 1000
2:33	7.0	6.67	71.9	2.53 x 1000
2:38	10.0	6.74	73.1	2.38 x 1000
2:41	13.0	6.69	72.9	2.09 x 1000
2:48	16.0	6.68	70.8	1.96 x 1000
2:52	19.0	6.74	71.7	1.85 x 1000
		collect	samples	

NOTES: Strong TPH odor

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name XTRA OIL- Castro Valley | Well No. MW3

Job No. 0014 | Date 11/13/92

TOC to Water (ft.) 7.86 9:45AM | Sheen None

Well Depth (ft.) 18.4 | Free Product Thickness ∅

Well Diameter 4" | Sample Collection Method

Gal./Casing Vol. 6.8 | Teflon Bailer

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (µS/cm)
1:04 PM	1	6.61	70.8	11.25 X1000
1:06	5	~~6.98~~ 6.81	70.2	6.98 x1000
1:09	8	7.68	70.1	6.62 X 1000
1:17	12	7.59	69.9	6.08 X 1000
1:24	14	7.18	72.9	5.32 X 1000
	well dewatered @ 14 gallons			
1:32	16	6.73	71.7	5.15 X 1000
	well dewatered @ 16 gallons			
1:43	20	6.63	69.3	5.82 X 1000
	well dewatered @ 20 gallons.			
	collect samples			

NOTES: Christy
Water in box. water not up to locking plug.
Slight TPH odor in well

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name XTRA OIL - Castro Valley | Well No. EW1

Job No. 0014 | Date 11/13/92

TOC to Water (ft.) 8.66 | Sheen ~~None~~ Yes - spotty

Well Depth (ft.) 13.2 | Free Product Thickness 0

Well Diameter 8" | Sample Collection Method

Gal./Casing Vol. 11.7 | Teflon Bailer

TIME	GAL. PURGED	pH	TEMPERATURE	ELECTRICAL CONDUCTIVITY
	No Purge			
	Sampled	3:30 PM		

NOTES: Moderate TPH - odor

PURGE10.92

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

Xtra Oil Company 2307 Pacific Avenue Alameda, CA 94501	Client Project ID: Castro Valley	Date Sampled: 11/13/92
		Date Received: 11/13/92
	Client Contact: Keith Simas	Date Extracted: 11/14/92
	Client P.O:	Date Analyzed: 11/14/92

Medium Boiling Point (C10-C23) TPH* 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)+
20735	MW1	W	4400,d,b
20736	MW2	W	8200,d,b
20737	MW3	W	4700,d,b
20738	EW1	W	13,000,d,a
Detection Limit unless otherwise stated; ND means Not Detected		W	50 ug/L
		S	10 mg/kg

*water samples are reported in ug/L and soils in mg/kg

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) predominately unmodified or weakly modified diesel; b) diesel range compounds predominate; no recognizable pattern; c) diesel range compounds together with gasoline range compounds; d) gasoline range compounds predominate; e) medium boiling point pattern that does not match diesel(); f) one to a few isolated peaks present; g) oil range compounds predominate.

Edward Hamilton, Lab Director

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

Xtra Oil Company	Client Project ID: Castro Valley	Date Sampled: 11/13/92
2307 Pacific Avenue		Date Received: 11/13/92
Alameda, CA 94501	Client Contact: Keith Simas	Date Extracted:
	Client P.O:	Date Analyzed: 11/16-11/20/92

Low Boiling Point (C6-C12) TPH* as Gasoline and 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	Ethyl Benzene	Xylenes	% Rec. Surrogate
20735	MW1	W	120,000,a	5800	10,000	2100	13,000	99
20736	MW2	W	79,000,a	10,000	13,000	1400	8600	99
20737	MW3	W	140,000,a	38,000	24,000	2000	12,000	101
20738	EW1	W	62,000,a	11,000	9200	1100	9600	103
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 and soils in mg/kg

#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) predominately unmodified or weakly modified gasoline; b) heavier gasoline range compounds predominate (aged gasoline?); c) lighter gasoline range compounds predominate (the most mobile gasoline compounds); d) heavy and light gasoline range compounds predominate (aged gasoline together with introduced light compounds?); e) gasoline range compounds predominate; no recognizable pattern; f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds predominate.

Edward Hamilton, Lab Director

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

CHAIN OF CUSTODY RECORD

Auxon

PROJECT NUMBER: 0014

PROJECT NAME: XTRA OIL - Castro Valley

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Gas BTEX	TPH-Diesel	PRESERVATIVE	REMARKS
MW1	11/13/92		Water		3	X	X	ICE	No. 20735
MW2	"		"		3	X	X	"	No. 20736
MW3	"		"		3	X	X	"	No. 20737
EW1	"		"		3	X	X	"	No. 20738

HEAD SPACE ABSENT ✓ APPROPRIATE CONTAINERS ✓

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT)	4	LABORATORY:
Paul H. King	11/13/92	3:40P		TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	12	McCampbell Lab
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT:		LABORATORY PHONE NUMBER:
	11/13/92	4:46P		Ed Hamilton		(510) 798-1620
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: (X)YES ( )NO		

REMARKS: Samples not preserved in field w. HCl.