

XTRA OIL COMPANY
2307 PACIFIC AVE.
ALAMEDA, CA 94501
(510) 865-9503

*Have cancelled file search
Several times over 2-3 weeks
PERP?*

January 22, 1996

ALAMEDA COUNTY
DEPT. OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
1131 HARBOR BAY PKWY. ROOM 250
ALAMEDA, CA. 94502

ATTENTION: EVA CHU
REGARDING: 1701 PARK ST.
ALAMEDA

DEAR MS. CHU,

PLEASE FIND ENCLOSED, THE GROUNDWATER MONITORING AND SAMPLING REPORT
FOR THE ABOVE LOCATION. IF YOU HAVE ANY QUESTIONS FEEL FREE TO
CONTACT ME.

SINCERELY,


KEITH SIMAS

ENCLOSURES

RECEIVED
ENVIRONMENTAL
HEALTH DIVISION
JAN 23 1996

GROUNDWATER MONITORING AND SAMPLING REPORT

Xtra Oil Company Service Station (dba Shell)
1701 Park Street
Alameda, California

Project No. 10-210-04-003

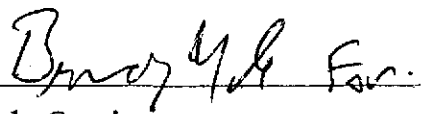
Prepared for:

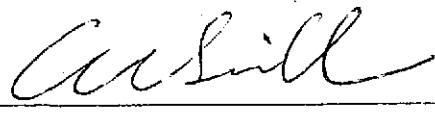
Xtra Oil Company
2307 Pacific Avenue
Alameda, California

Prepared by:

Alisto Engineering Group
1575 Treat Boulevard, Suite 201
Walnut Creek, California

December 11, 1995


Dale Swain
Project Manager


Al Sevilla, P.E.
Principal



GROUNDWATER MONITORING AND SAMPLING REPORT

Xtra Oil Company Service Station (dba Shell)
1701 Park Street
Alameda, California

Project No. 10-210-04-003

December 11, 1995

INTRODUCTION

This report presents the results and findings of the August 30, 1995 groundwater monitoring and sampling conducted by Alisto Engineering Group at the Xtra Oil Company service station (dba Shell), 1701 Park Street, Alameda, California. A site vicinity map is shown on Figure 1.

FIELD PROCEDURES

Field activities were performed in accordance with the procedures and guidelines of Alameda County Health Care Services Agency and the California Regional Water Quality Control Board, San Francisco Bay Region.

Before purging and sampling, the groundwater level in each well was measured from a permanent mark on top of the casing to the nearest 0.01 foot using an electronic sounder. The depth to groundwater and top of casing elevation data were used to calculate the groundwater elevation in each well in reference to mean sea level. The survey data and groundwater elevation measurements collected to date are presented in Table 1.

Before sample collection, each well was purged of 3 casing volumes while recording field readings of pH, temperature, electrical conductivity, and dissolved oxygen. Groundwater samples were collected for laboratory analysis by lowering a bottom-fill, disposable bailer to just below the water level in each well. The samples were transferred from the bailer into laboratory-supplied containers. The water sampling field survey forms are presented in Appendix A.

SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples for this and previous events are summarized in Table 1. The potentiometric groundwater elevations as interpreted from the results of this monitoring event are shown on Figure 2. The results of laboratory analysis are shown on Figure 3. The laboratory report and chain of custody record are presented in Appendix B.



FINDINGS

The findings of the August 30, 1995 groundwater monitoring and sampling event are summarized as follows:

- Approximately 0.12 foot of free product was observed in Monitoring Well MW-2. Free product or sheen was not observed in MW-1 or MW-3.
- Groundwater elevation data indicate a gradient of approximately 0.006 foot per foot in a southeasterly direction across the site.
- Analysis of the groundwater samples detected 57000 micrograms per liter (ug/l) total petroleum hydrocarbons as gasoline (TPH-G), 3700 ug/l total petroleum hydrocarbons as diesel (TPH-D), and 17000 ug/l benzene in the sample collected from MW-1.
- Dissolved oxygen was measured at 2.8 and 4.6 parts per million in the groundwater samples collected from MW-1 and MW-3.



TABLE 1-SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 XTRA OIL COMPANY SERVICE STATION
 1701 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-210

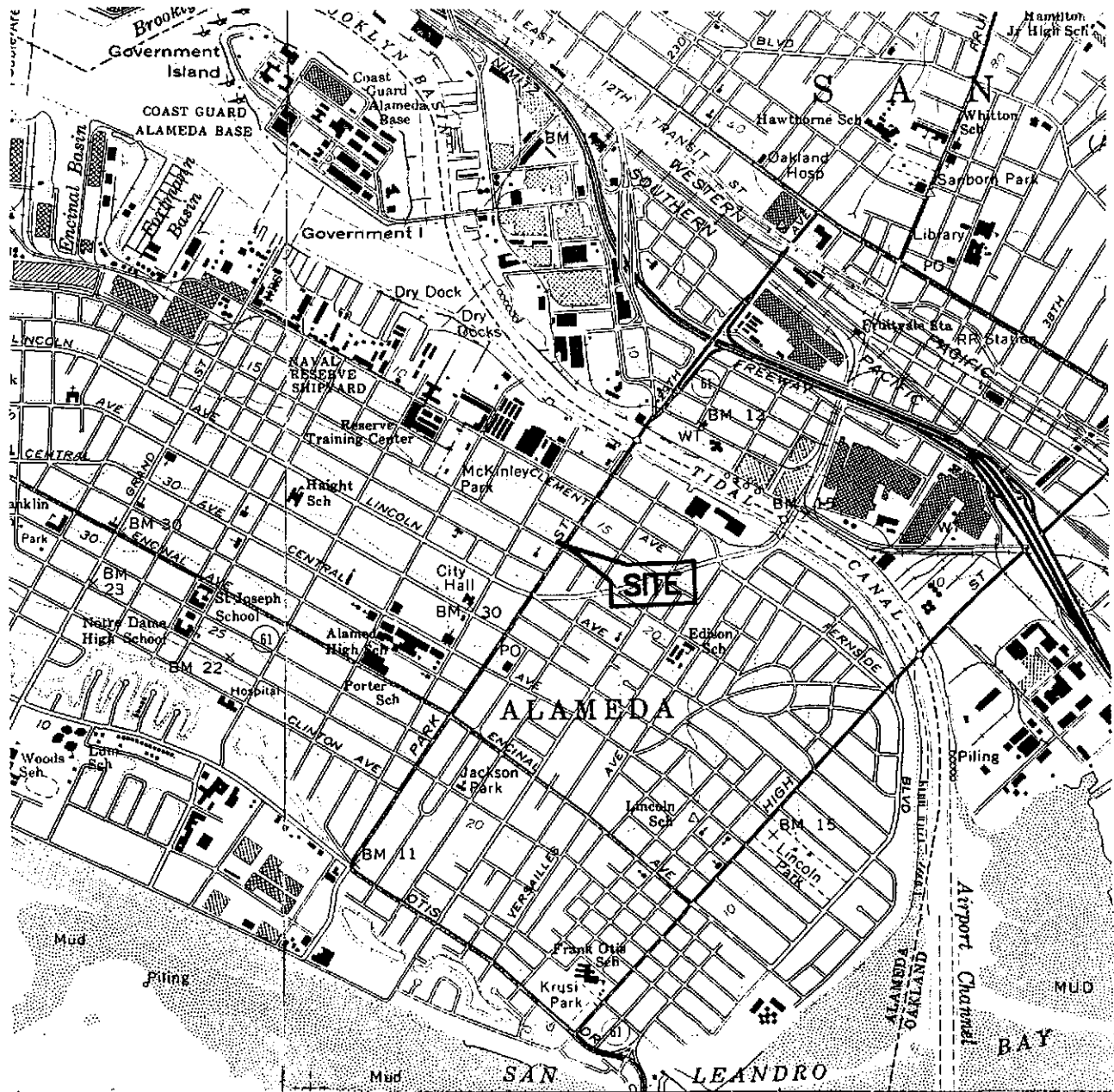
WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (Feet) (a)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet) (b)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	DO (ppm)	LAB
MW-1	11/04/94	19.49	8.64	---	10.85	60000	6400	13000	4900	1300	5500	---	MAI
QC-1 (c)	11/04/94	---	---	---	---	54000	---	12000	4500	1200	5200	---	MAI
MW-1	01/11/95	19.49	6.10	---	13.39	---	---	---	---	---	---	---	---
MW-1	02/24/95	19.49	6.57	---	12.92	56000	4400	13000	7000	1400	5100	---	MAI
QC-1 (c)	02/24/95	---	---	---	---	43000	---	8900	4600	970	3300	---	MAI
MW-1	05/25/95	19.49	6.54	---	12.95	53000	4700	11000	5700	1200	4000	4.3	MAI
QC-1 (c)	05/25/95	---	---	---	---	48000	---	11000	5300	1200	3800	---	MAI
MW-1	08/30/95	19.49	8.15	---	11.34	14000	3700	5000	1100	3900	103	2.8	MAI
QC-1 (c)	08/30/95	---	---	---	---	57000	---	17000	7000	1500	5200	---	MAI
MW-2	11/04/94	20.29	9.12	0.16	11.29	---	---	---	---	---	---	---	---
MW-2	01/11/95	20.29	6.75	---	13.54	---	---	---	---	---	---	---	---
MW-2	02/24/95	20.29	7.11	0.18	13.32	---	---	---	---	---	---	---	---
MW-2	05/25/95	20.29	7.01	0.01	13.29	---	---	---	---	---	---	---	---
MW-2	08/30/95	20.29	8.58	0.12	11.80	---	---	---	---	---	---	---	---
MW-3	11/04/94	20.58	8.92	---	11.66	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	MAI
MW-3	01/11/95	20.58	5.67	---	14.91	---	---	---	---	---	---	---	---
MW-3	02/24/95	20.58	6.11	---	14.47	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	MAI
MW-3	05/25/95	20.58	6.24	---	14.34	91	ND<50	28	12	2.1	6.5	---	MAI
MW-3	08/30/95	20.58	8.27	---	12.31	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4.6	MAI
QC-2 (d)	11/04/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	MAI
QC-2 (d)	02/24/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	MAI
QC-2 (d)	05/25/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	MAI
QC-2 (d)	08/30/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	MAI

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 TPH-D Total petroleum hydrocarbons as diesel
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 DO Dissolved oxygen
 ug/l Micrograms per liter
 ppm Parts per million
 ND Not detected above reported detection limit
 D Duplicate
 TB Trip blank
 MAI McCampbell Analytical, Inc.

NOTES:

(a) Top of casing surveyed relative to mean sea level.
 (b) Groundwater elevations expressed in feet above mean sea level, and adjusted assuming a specific gravity of 0.75 for free product.
 (c) Blind duplicate.
 (d) Trip blank.



SOURCE:
 USGS MAP, OAKLAND WEST AND EAST QUADRANGLE,
 7.5 MINUTE SERIES, 1959.
 PHOTOREVISED 1980.

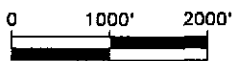
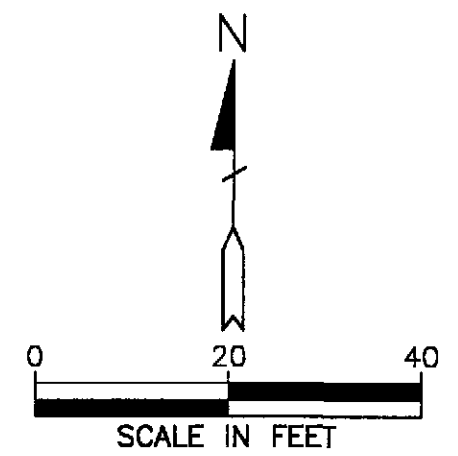
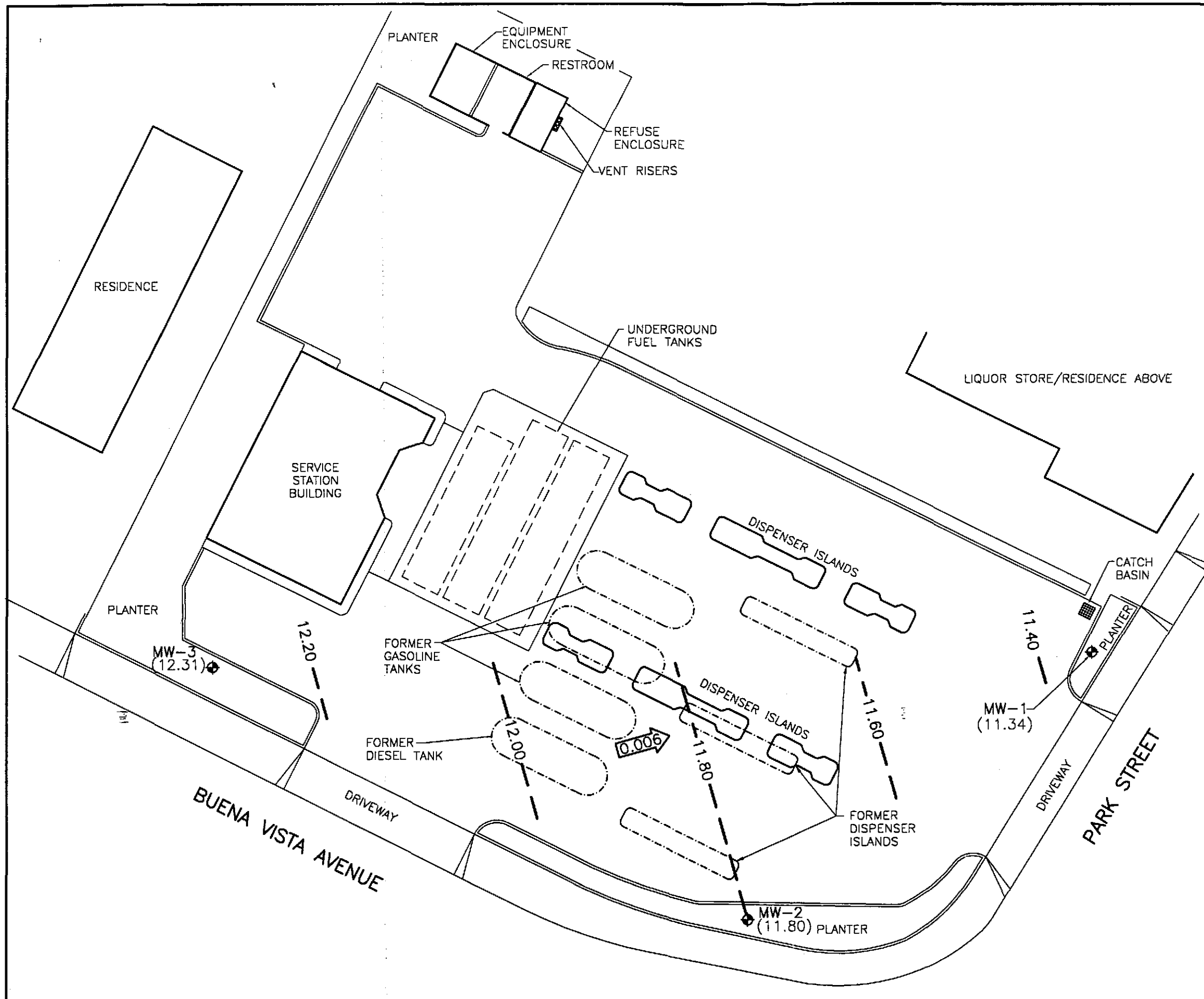


FIGURE 1
SITE VICINITY MAP

XTRA OIL COMPANY SERVICE STATION
1701 PARK STREET
ALAMEDA, CALIFORNIA
PROJECT NO. 10-210

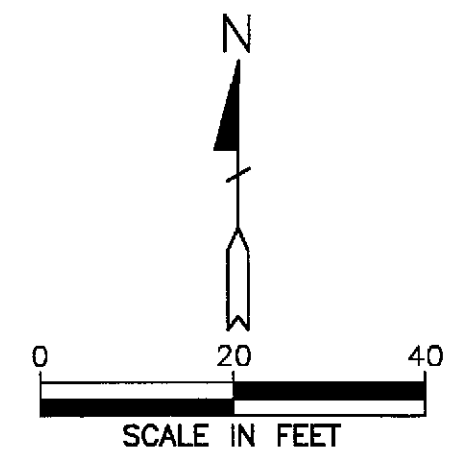
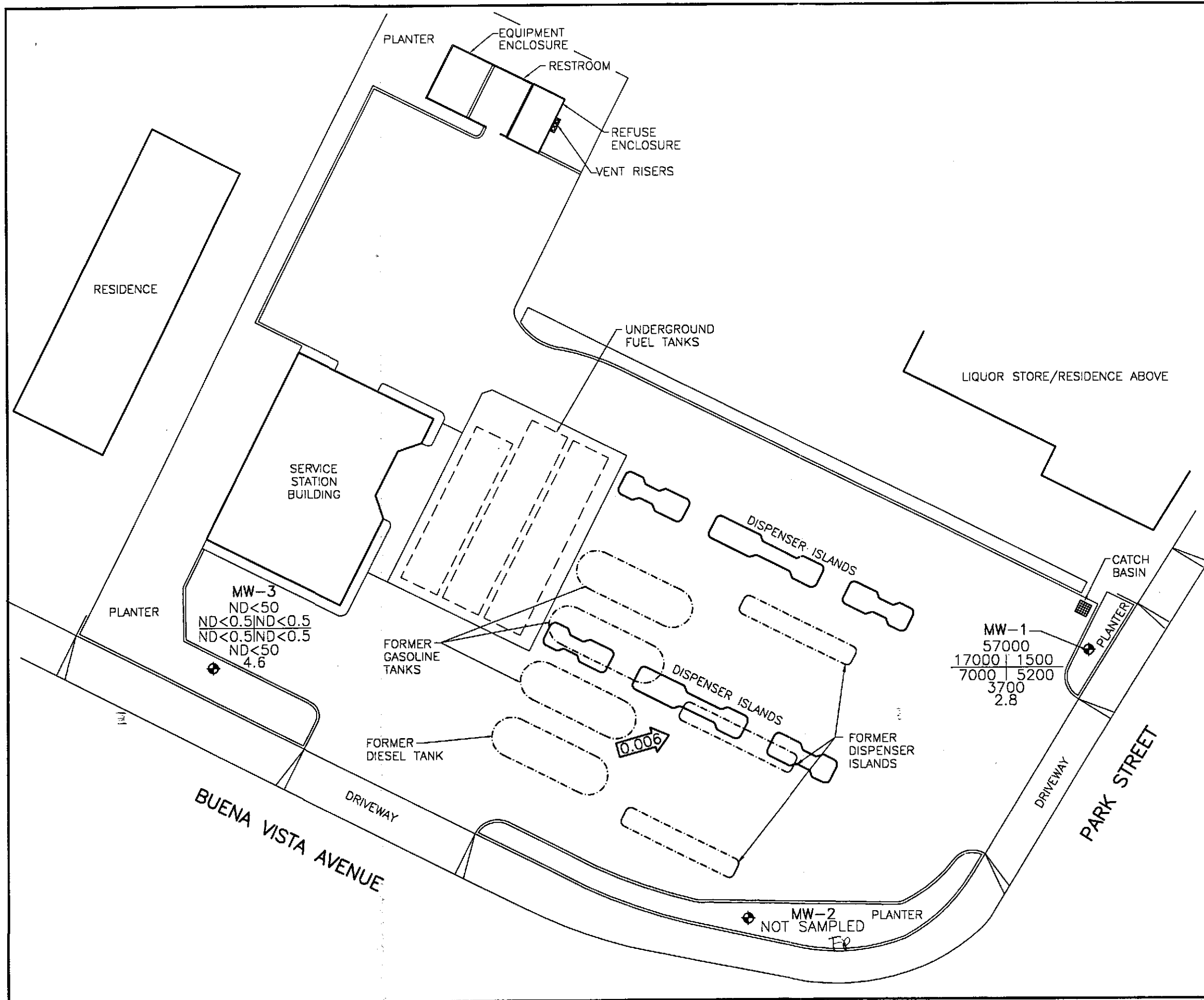


ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA



- LEGEND**
- ◆ GROUNDWATER MONITORING WELL
 - (11.34) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 - 11.40 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL=0.20 FOOT)
 - ← 0.006 → CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP
AUGUST 30, 1995
 XTRA OIL COMPANY SERVICE STATION
 1701 PARK STREET
 ALAMEDA, CALIFORNIA
 PROJECT NO. 10-210



LEGEND

◆	GROUNDWATER MONITORING WELL
TPH-G B T E X TPH-D DO	CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER, EXCEPT DISSOLVED OXYGEN, WHICH IS IN PARTS PER MILLION
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
TPH-D	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
DO	DISSOLVED OXYGEN
ND	NOT DETECTED ABOVE REPORTED DETECTION LIMIT
←0.006	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
AUGUST 30, 1995
 XTRA OIL COMPANY SERVICE STATION
 1701 PARK STREET
 ALAMEDA, CALIFORNIA
 PROJECT NO. 10-210

APPENDIX A
WATER SAMPLING FIELD SURVEY FORM

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING
GROUP

1575 TREAT BOULEVARD, SUITE 201
WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Project No. 10-210-04-003 Date: 8/30/95
Address 1701 High Street Day: MTWTF
Contract No. XTRA City: Alameda
Station No. _____ Sampler: LR

WELL ID	SAMPLE ID	DEPTH TO WATER	TOTAL DEPTH	PRODUCT THICKNESS	TIME	COMMENTS:
MW-1	S-1	8.15	20.00	Ø	1340	
MW-2		8.58	NM	.12	1346	OTP = 8.46'
MW-3	S-2	8.27	19.50	Ø	1343	

FIELD INSTRUMENT CALIBRATION DATA

PH METER ICM 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED (Y) N TIME 0900 WEATHER clear
D.O. METER ICM ZERO d.O. SOLUTION 0 BAROMETRIC PRESSURE 760 TEMP 67
CONDUCTIVITY METER ICM 10,000 10,000 TURBIDITY METER _____ 5.0 NTU _____ OTHER _____

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Irridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-3	8.27	2"	OK	Ø	Y (N)	2	1407	65.8	8.41	802µS	4.5	<input type="radio"/> EPA 601 _____
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.						4	1409	66.2	8.38	639µS		<input checked="" type="radio"/> TPH-G/BTEX <u>HCL</u>
$19.50 - 8.27 = 11.23 \times .16 = 1.80 \times 3 = 5.40$						5.5	1410	66.0	8.31	636µS	4.6	<input checked="" type="radio"/> TPH Diesel <u>HCL</u>
Purge Method: OSurface Pump ODIsP.Tube OWinch ODIsP. Baller(s) OSys Port												<input type="radio"/> TOG 5520 _____
Comments:												TIME/SAMPLE ID
												<u>1412</u>

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Irridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-1	8.15	2"	OK	Ø	Y (N)	2	1422	67.7	8.25	699µS	2.3	<input type="radio"/> EPA 601 _____
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.						4	1426	68.9	7.96	668µS		<input type="radio"/> TPH-G/BTEX _____
$20.00 - 8.15 = 11.85 \times .16 = 1.90 \times 3 = 5.70$						6	1430	68.0	7.81	682µS	2.8	<input type="radio"/> TPH Diesel _____
Purge Method: OSurface Pump ODIsP.Tube OWinch ODIsP. Baller(s) OSys Port												<input type="radio"/> TOG 5520 _____
Comments: <u>QC-1 Drip taken from this well</u>												TIME/SAMPLE ID
												<u>1435</u>

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Irridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-2	8.58	2"	OK	8.46	(Y) N							<input type="radio"/> EPA 601 _____
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.												<input type="radio"/> TPH-G/BTEX _____
<u>Not Sampled</u>												<input type="radio"/> TPH Diesel _____
Purge Method: OSurface Pump ODIsP.Tube OWinch ODIsP. Baller(s) OSys Port												<input type="radio"/> TOG 5520 _____
Comments: <u>Purged 2 gal TF, .02 gal FP</u>												TIME/SAMPLE ID

PAGE _____ OF _____

QC-1 (S-3) from MW-1

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

McCAMPBELL ANALYTICAL INC.

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

09/08/95

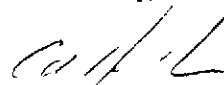
Dear Brady:

Enclosed are:

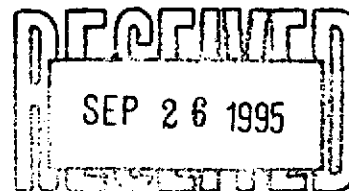
- 1). the results of 4 samples from your # 10-210-04/003; XTRA project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,



Edward Hamilton



McCAMPBELL ANALYTICAL INC.

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

QC REPORT FOR HYDROCARBON ANALYSES

Date: 09/07/95

Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.0	86.0	90.4	100	86	90	4.9
Benzene	0	9.4	10.3	10	94.0	103.0	9.1
Toluene	0	9.3	10.3	10	93.0	103.0	10.2
Ethyl Benzene	0	9.3	9.8	10	93.0	98.0	5.2
Xylenes	0	30.2	32	30	100.7	106.7	5.8
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL INC.

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

QC REPORT FOR HYDROCARBON ANALYSES

Date: 09/01/95-09/02/95

Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		
	Sample	MS	MSD		MS	MSD	RPD
TPH (gas)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethyl Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TPH (diesel)	0	153	154	150	102	103	0.3
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

