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

Analyze for PNA in wells MW-2

November 7, 1996

Ms. Eva Chu
Hazardous Materials Program
Department of Environmental Health
1131 Harbor Bay Pkwy. 2nd floor
Alameda, Ca. 94502-6577

Regarding: 1701 Park St.
STID 3836

Dear Ms. Chu,

Please find enclosed the quarterly report for the above location.
If you have any questions feel free to contact us.

Sincerely,

Keith Simas

GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-210-05-003

Prepared for:

Xtra Oil Company
2307 Pacific Avenue
Alameda, California

Prepared by:

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

October 29, 1996

Brady Nagle
Project Manager

Al Sevilla, P.E.
Principal

REGISTERED PROFESSIONAL ENGINEER
ALBERTO SANCHEZ SEVILLA
23282
Exp. Date 3/31/00
CIVIL
STATE OF CALIFORNIA

GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-210-05-003

October 29, 1996

INTRODUCTION

This report presents the results and findings of the September 23, 1996 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 September 23, 1996 groundwater monitoring and sampling event are summarized as follows:

- Approximately 0.01 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 0.01 foot per foot in a southeasterly direction across the site.
- Analysis of the groundwater samples detected up to 76000 micrograms per liter (ug/l) total petroleum hydrocarbons as gasoline and up to 14000 ug/l benzene in the samples collected from MW-1 and MW-2.

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 (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-1	11/04/94	19.49	8.64	---	10.85	60000	6400	13000	4900	1300	5500	—	—	MCC
QC-1 (c)	11/04/94	---	---	—	---	54000	---	12000	4500	1200	5200	---	---	MCC
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	---	---	MCC
QC-1 (c)	02/24/95	---	---	---	—	43000	---	8900	4600	970	3300	—	---	MCC
MW-1	05/25/95	19.49	6.54	—	12.95	53000	4700	11000	5700	1200	4000	---	4.3	MCC
QC-1 (c)	05/25/95	---	---	---	---	48000	---	11000	5300	1200	3800	---	---	MCC
MW-1	08/30/95	19.49	8.15	---	11.34	14000	3700	5000	1100	3900	103	---	2.8	MCC
QC-1 (c)	08/30/95	---	---	---	---	57000	---	17000	7000	1500	5200	---	---	MCC
MW-1	11/16/95	19.49	8.79	---	10.70	100000	5900	22000	17000	2100	8500	---	---	MCC
QC-1 (c)	11/16/95	---	---	---	---	95000	---	20000	15000	1800	7800	---	—	MCC
MW-1	03/20/96	19.49	6.45	---	13.04	46000	3300	10000	6200	1100	3200	—	—	MCC
QC-1 (c)	03/20/96	---	---	---	---	42000	—	9800	5800	970	3000	---	---	MCC
MW-1	06/13/96	19.49	7.14	---	12.35	44000	5400	9500	5500	1100	4000	19000	---	MCC
QC-1 (c)	06/13/96	---	---	---	---	48000	—	9300	5600	1000	3800	17000	---	MCC
MW-1	09/23/96	19.49	7.56	---	11.93	76000	14000	14000	11000	1600	7100	17000	6.1	MCC
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-2	11/16/95	20.29	9.07	0.01	11.23	---	---	---	---	---	---	—	—	—
MW-2	11/16/95	20.29	9.07	0.01	11.23	---	---	—	—	---	---	---	---	---
MW-2	03/20/96	20.29	6.79	0.01	13.51	---	---	---	---	---	---	---	—	—
MW-2	06/13/96	20.29	7.41	0.01	12.89	---	—	—	—	---	---	---	---	---
MW-2	09/23/96	20.29	7.83	0.01	12.47	30000	19000	4600	180	1500	4100	2600	5.5	MCC
QC-1 (c)	09/23/96	---	---	---	---	33000	---	4700	170	1600	3900	2400	---	MCC
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	---	---	MCC
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	—	—	MCC
MW-3	05/25/95	20.58	6.24	---	14.34	91	ND<50	28	12	2.1	6.5	—	—	MCC
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	MCC
MW-3	11/16/95	20.58	8.82	---	11.76	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	MCC
MW-3	11/16/95	20.58	8.82	---	11.76	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	MCC
MW-3	03/20/96	20.58	5.44	---	15.14	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	MCC
MW-3	06/13/96	20.58	6.17	---	14.41	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	MCC
MW-3	09/23/96	20.58	6.57	---	14.01	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	4.9	MCC

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 (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
QC-2 (d)	11/04/94	---	---	---	---	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	MCC
QC-2 (d)	02/24/95	---	---	---	---	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	MCC
QC-2 (d)	05/25/95	---	---	---	---	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	—	MCC
QC-2 (d)	08/30/95	---	---	---	---	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	MCC
QC-2 (d)	11/16/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	MCC
QC-2 (d)	11/16/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	—	MCC
QC-2 (d)	03/20/96	---	---	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	MCC
QC-2 (d)	06/13/96	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	—	MCC

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
---	Not analyzed/applicable/measurable
ND	Not detected above reported detection limit
MCC	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) Travel blank.

F:\0\10-210\210-5-3.WQ2

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

N

0 1000' 2000'

FIGURE 1

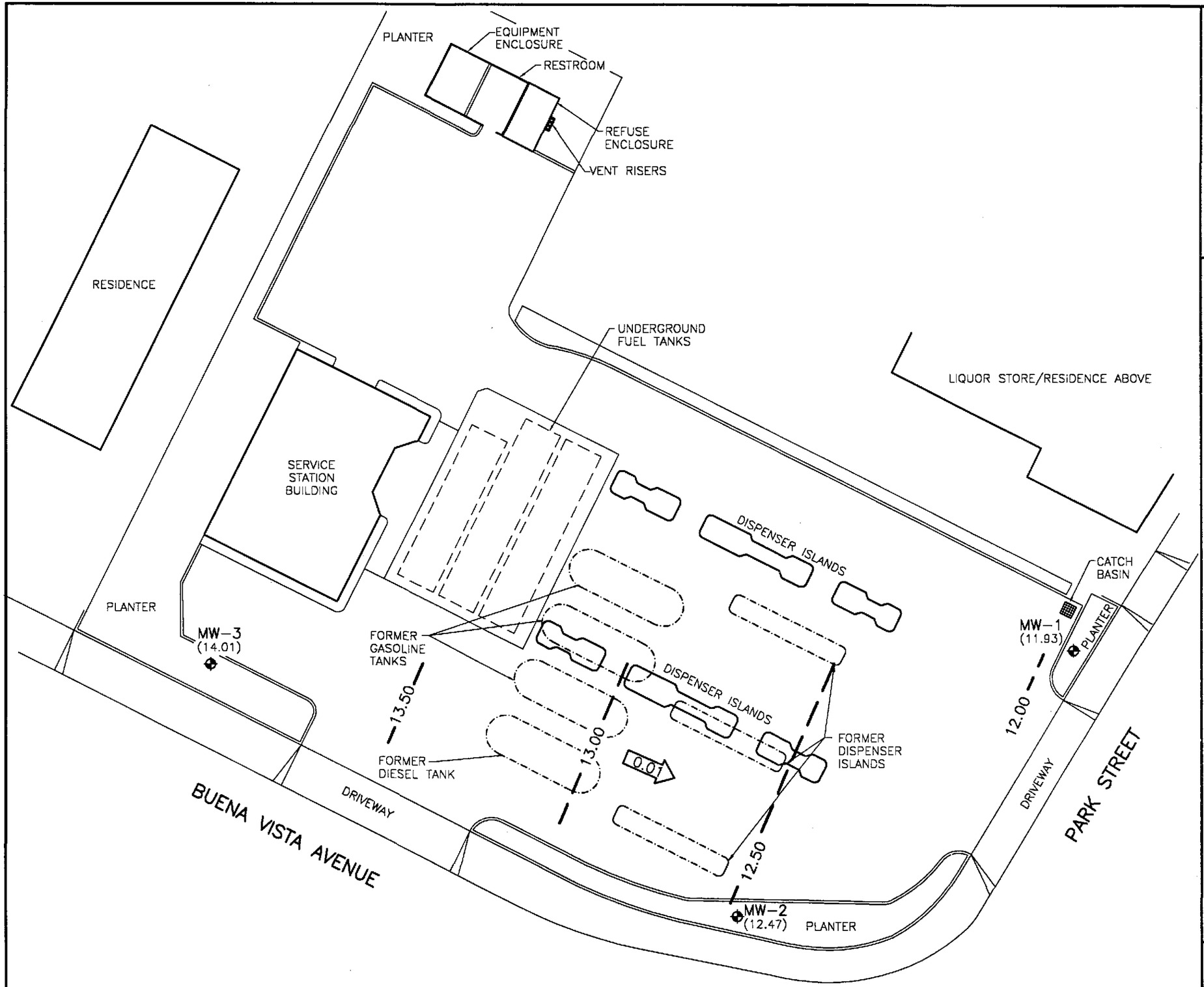
SITE VICINITY MAP

XTRA OIL COMPANY SERVICE STATION
1701 PARK STREET
ALAMEDA, CALIFORNIA

PROJECT NO. 10-210

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10210B--DWG 6-3-94 RMW 1=1



N

0 20 40

SCALE IN FEET

LEGEND

- ◆ GROUNDWATER MONITORING WELL
- (12.47) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 12.50 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL–0.50 FOOT)
- 0.01 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

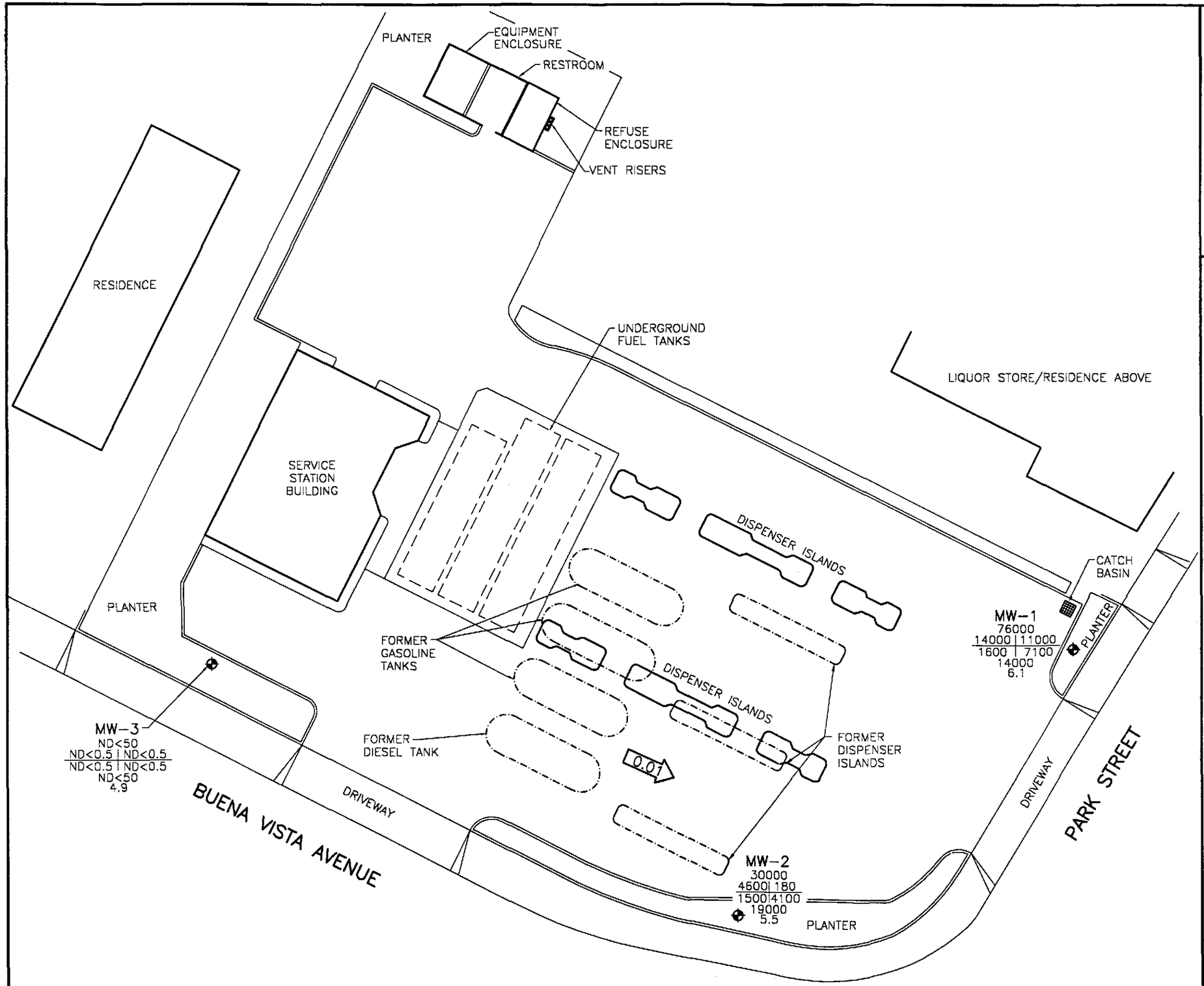
SEPTEMBER 23, 1996

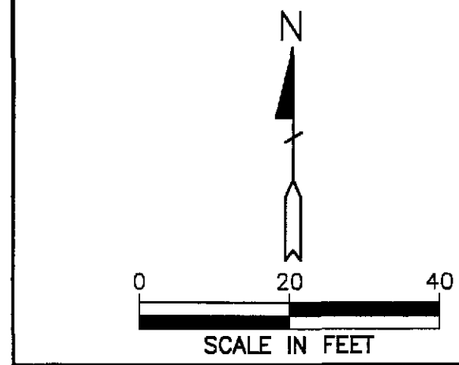
XTRA OIL COMPANY SERVICE STATION
1701 PARK STREET
ALAMEDA, CALIFORNIA

PROJECT NO. 10–210

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10210D-S.DWG 10-17-96 DDM 1=20





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
⟨0.01	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

SEPTEMBER 23, 1996

XTRA OIL COMPANY SERVICE STATION
1701 PARK STREET
ALAMEDA, CALIFORNIA

PROJECT NO. 10-210

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10210E-S.DWG 10-17-96 DDM 1=20

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

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. 10-210-05-003 Date: 9/23/96
Address 1701 Park Street Day: (M) T W TH F
Contract No. Pending City: Alameda
Station No. XTRA Sampler: CB

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME SAMPLED	COMMENTS:
MW-1	S-2	2"	20.00	7.56	Ø	1310	
MW-2	~~DUP-3~~	↓	N/M	7.83	.01	1314	~~Purged about~~ QC-1 (S-4) From this well
MW-3	S-1	↓	19.50	6.57	Ø	1302	

FIELD INSTRUMENT CALIBRATION DATA

pH METER Alum Creek 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED (Y) N TIME 1300 WEATHER Clear

D.O. METER 11 ZERO d.O. SOLUTION D BAROMETRIC PRESSURE 760 TEMP 64 °F

CONDUCTIVITY METER 11 10,000 _____ TURBIDITY METER _____ 5.0 NTU _____ OTHER X

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-3	6.57	2"	OK	Ø	Y (N)	2	1331	67.2	7.48	392 µS	4.2
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			4		66.1	7.29	362 µS	
19.50 - 6.57 = 12.93	X .16 = 2.07	X 3 =	6.21			6.5	1340	65.8	7.21	357 µS	4.9

Purge Method: (X) Surface Pump O Disp.Tube O Winch O Disp. Baller(s) ___ O Sys Port

Comments:

O EPA 601 ____
(X) TPH-G/BTEX HCl
(X) TPH Diesel HCl
O TOG 5520 ___

TIME/SAMPLE ID: 1346

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-1	7.56	2"	OK	Ø	Y (N)	2	1357	69.1	7.72	901 µS	5.3
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			4		68.2	7.58	837 µS	
20.00 - 7.56 = 12.44	X .16 = 1.99	X 3 =	5.97			6	1402	67.4	7.49	829 µS	6.1

Purge Method: (X) Surface Pump O Disp.Tube O Winch O Disp. Baller(s) ___ O Sys Port

Comments:

O EPA 601 ____
(X) TPH-G/BTEX HCl
(X) TPH Diesel HCl
O TOG 5520 ___

TIME/SAMPLE ID: 1410

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. 10-210-05-003 Date: 9/23/96
Address 1701 Park Street Day: (M) T W TH F
Contract No. Pending City: Alameda
Station No. XTRA Sampler:

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-2	7.83	2"	OK	~~65~~	Y (N)	5	1420	66.7	7.79	893 NS	4.9
						10		65.8	7.42	842 NS	
						15	1431	65.3	7.33	834 NS	5.5

Total Depth - Water Level= x Well Vol. Factor= x# vol. to Purge PurgeVol.
N/M - 7.83 DTP = 7.82

Purge Method: (S)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

Comments: QC-1(5-4) From this well

- O EPA 601 ____
- O TPH-G/BTEX HCL
- O TPH Diesel HCL
- O TOG 5520 ___

TIME/SAMPLE ID
1440

MW-2 Pumped out Extra Volume & Sampled

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

10/04/96

Dear Brady:

Enclosed are:

1). the results of **4** samples from your **# 10-210-5-3; Xtra Oil** 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, Lab Director

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

Alisto Engineering Group 1575 Treat Blvd., Suite 201 Walnut Creek, CA 94598	Client Project ID: # 10-210-5-3; Xtra Oil	Date Sampled: 09/23/96
		Date Received: 09/25/96
	Client Contact: Brady Nagle	Date Extracted: 09/25/96
	Client P.O:	Date Analyzed: 09/25/96

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)

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
69496	S-1	W	ND	ND	ND	ND	ND	ND	106
69497	S-2	W	76,000,a,h	17,000	14,000	11,000	1600	7100	102
69498	S-3	W	30,000,a,h	2600	4600	180	1500	4100	100
69499	S-4	W	33,000,a,h	2400	4700	170	1600	3900	101
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

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

cluttered chromatogram; sample peak coelutes 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 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.

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

Alisto Engineering Group 1575 Treat Blvd., Suite 201 Walnut Creek, CA 94598	Client Project ID: # 10-210-5-3; Xtra Oil	Date Sampled: 09/23/96
		Date Received: 09/25/96
	Client Contact: Brady Nagle	Date Extracted: 09/27/96
	Client P.O:	Date Analyzed: 09/29/96

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
69496	S-1	W	ND	104
69497	S-2	W	14,000,d,f,h	104
69498	S-3	W	19,000,d,f,h	104
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

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

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.

+ 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.

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

QC REPORT FOR HYDROCARBON ANALYSES

Date: 09/24/96-09/25/96 Matrix: Water

Analyte	Concentration (ug/L) Sample (#69240)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	89.1	98.5	100.0	89.1	98.5	10.0
Benzene	0.0	10.1	10.2	10.0	101.0	102.0	1.0
Toluene	0.0	10.2	10.1	10.0	102.0	101.0	1.0
Ethyl Benzene	0.0	10.2	10.4	10.0	102.0	104.0	1.9
Xylenes	0.0	31.6	31.4	30.0	105.3	104.7	0.6
TPH (diesel)	0	159	155	150	106	103	2.4
TRPH (oil & grease)	0	22300	21600	23700	94	91	3.2

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

RPD = (MS - MSD) / (MS + MSD) x 2 x 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: 09/29/96 Matrix: Water

Analyte	Concentration (ug/L) Sample (#69449)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	97.1	96.0	100.0	97.1	96.0	1.2
Benzene	0.0	8.9	8.5	10.0	89.0	85.0	4.6
Toluene	0.0	9.1	8.6	10.0	91.0	86.0	5.6
Ethyl Benzene	0.0	9.2	9.0	10.0	92.0	90.0	2.2
Xylenes	0.0	28.4	27.3	30.0	94.7	91.0	3.9
TPH (diesel)	0	146	147	150	97	98	1.0
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

[redacted]

McCampbell

7287AAEG80

CHAIN OF CUSTODY

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CONSULTANT'S NAME: Allisto Engineering	ADDRESS: 1575 Treat Blvd #201	CITY: W.C.	STATE: Ca	ZIP CODE: 94598	
BP SITE NUMBER: XTRA	BP CORNER ADDRESS/CITY: Alameda, Ca			CONSULTANT PROJECT NUMBER: 10-210-5-3	
CONSULTANT PROJECT MANAGER: Brady Nagle	PHONE NUMBER: (510) 295-1650	FAX NUMBER: 295-1823		CONSULTANT CONTRACT NUMBER: XTRA	
BP CONTACT: ~~Scott Hooton~~ Keith Simas	BP ADDRESS: ~~Benton~~	PHONE NUMBER: –		FAX NO.: –	
LAB CONTACT: SPL McCampbell	LABORATORY ADDRESS: ~~Texas~~	PHONE NUMBER: –		FAX NO.: –	
SAMPLED BY (Please Print Name): Larry Buenvenida	SAMPLED BY (Signature): [signature]	SHIPMENT DATE: —		SHIPMENT METHOD: ~~Fed~~ Fed Ex	AIRBILL NUMBER: —

TAT: ☐ 24 Hours ☐ 48 Hours ☐ 1 Week ☒ Standard 2 Weeks

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	TYPE (VOL.)	PRESERVATIVE / LAB SAMPLE #	TPH-G/BTEX	MTBE	TPH-D								COMMENTS
S-1	9/23/96	W	4	NL		X	X	X						S-1		3 VOAs & 1 ltr
+ S-2	↓	↓	4	↓		↓	↓	↓						S-2		↓
+ S-3	↓	↓	4	↓		↓	↓	↓						S-3		↓
+ S-4	↓	↓	3	↓		↓	↓									

69496

69497

69498

69499

ICE/T° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

	VOAS	O&G	METALS	OTHER
PRESERVATIVE	✓			

APPROPRIATE CONTAINERS ✓

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	9/24/96		Patricia Yelton	9/25/96	0800
Patricia Yelton	9/25	1642	Neidi Ricca	9/25/96	1642

ADDITIONAL COMMENTS: Bill To ~~Sara~~ ARA Oil

CLV-16722
PKG/50

Distribution: White - Original (with Data) Yellow - BP Pink - Lab Blue - Consultant Field Staff