ALISTO ENGINEERING GROUP

Alameda County
MAY 22 2003
Environmental Health

May 20, 2003

RO 191

Mr. Amir K. Gholami
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502-6577

10-210-19-001

Subject: Groundwater Monitoring and Sampling Report
Xtra Oil Company Service Station (dba Shell)
1701 Park Street
Alameda, California

Dear Mr. Gholami:

On Behalf of Xtra Oil Company, Alisto Engineering Group is pleased to submit this groundwater monitoring and sampling report for the Xtra Oil Company service station (dba Shell), 1701 Park Street, Alameda, California.

Please call if you have questions or comments.

Sincerely,

ALISTO ENGINEERING GROUP

Chris Reinheimer
Project Manager

Enclosure

cc: Mr. Keith Simas, Xtra Oil Company (with enclosure)
Ms. Ade Fagorala, California Regional Water Quality Control Board, San Francisco Bay Region (with enclosure)

GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-210-19-001

Prepared for:

Xtra Oil Company
2307 Pacific Avenue
Alameda, California

Prepared by:

Alisto Engineering Group
2737 North Main Street, Suite 100
Walnut Creek, California

May 20, 2003

Chris Reinheimer
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. 10-210-19-001

May 20, 2003

INTRODUCTION

This report presents the results and findings of the February 7, 2003 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 the Alameda County Health Care Services Agency (ACHCSA) 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 three casing volumes while recording field readings of pH, temperature and electrical conductivity. 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. Groundwater monitoring was performed concurrently with former Exxon Service Station 7-0104, 1725 Park Street, Alameda, California, the results of which are presented in Table 2.

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 February 7, 2003 groundwater monitoring and sampling event are as follows:

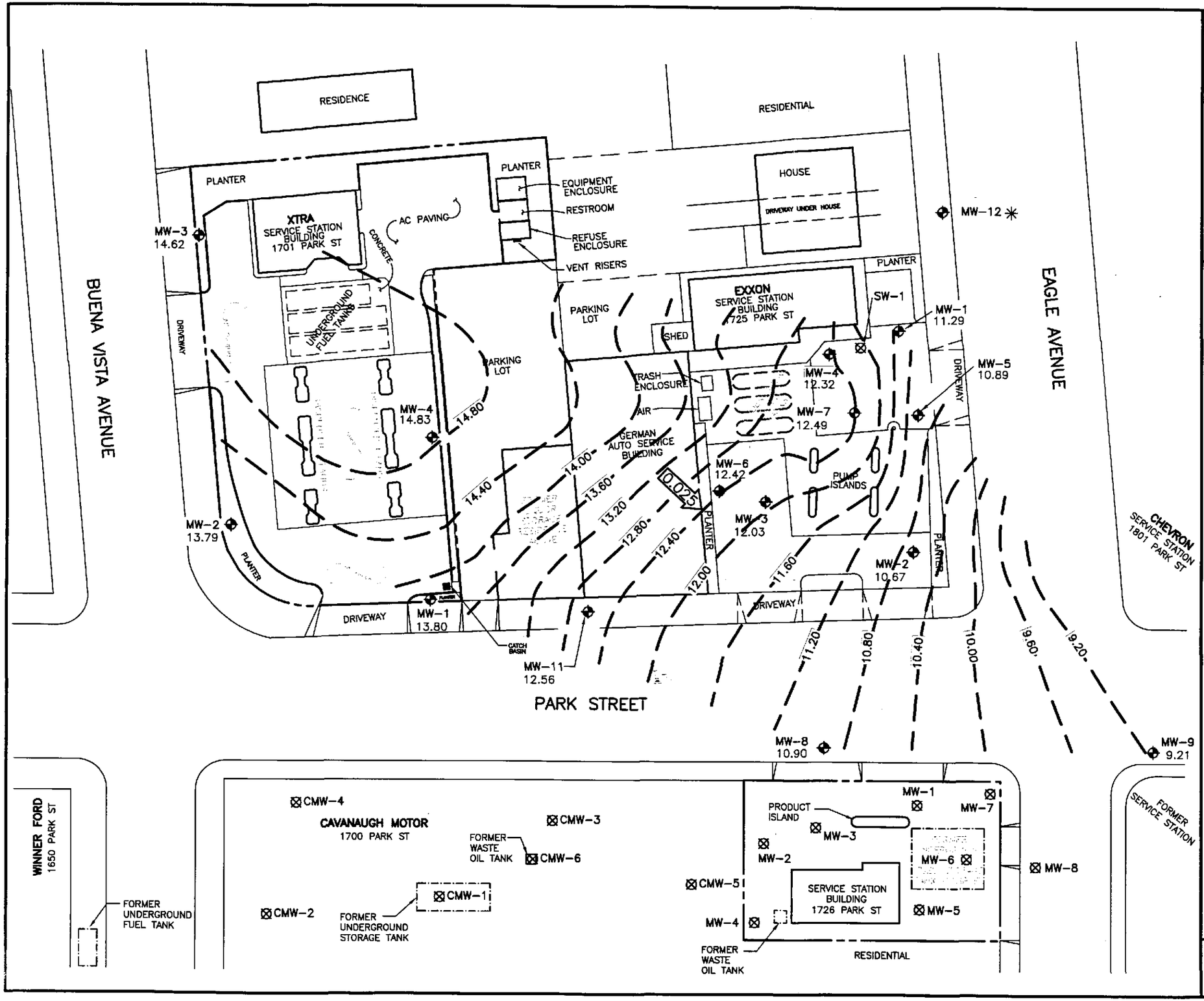
- Groundwater gradient as interpreted from the monitoring data was 0.025 foot per foot in an easterly direction across the Xtra Oil and former Exxon sites.

- Analysis of the samples detected dissolved-phase petroleum hydrocarbons in Monitoring Wells MW-1, MW-2, and MW-4 at concentrations of up to 43,000 micrograms per liter (ug/l) total petroleum hydrocarbons as gasoline in Well MW-1 and up to 4400 ug/l benzene in Well MW-2.

- Total petroleum hydrocarbons as diesel was analyzed for, and detected in the groundwater from Well MW-1 at a concentration of 3700 ug/l.

- Methyl tert-butyl ether (MTBE) was detected in the samples from Wells MW-2 and MW-4 at concentrations of 1900 and 420 ug/l, respectively.

- Dissolved-phase petroleum hydrocarbons, including MTBE, were not detected in the sample collected from Well MW-3.



N

0 40 80

SCALE IN FEET

LEGEND

- ◆ GROUNDWATER MONITORING WELL
- ⊠ DESTROYED WELL
- PROPERTY LINE
- 13.80 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 13.60 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL–0.40 FOOT)
- 0.025 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT
- * NOT MONITORED

NOTE:
Potentiometric groundwater elevation contours were generated with Quicksurf using the Kriging method with a piece–wise variogram on a triangulated grid surface.

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

FEBRUARY 7, 2003

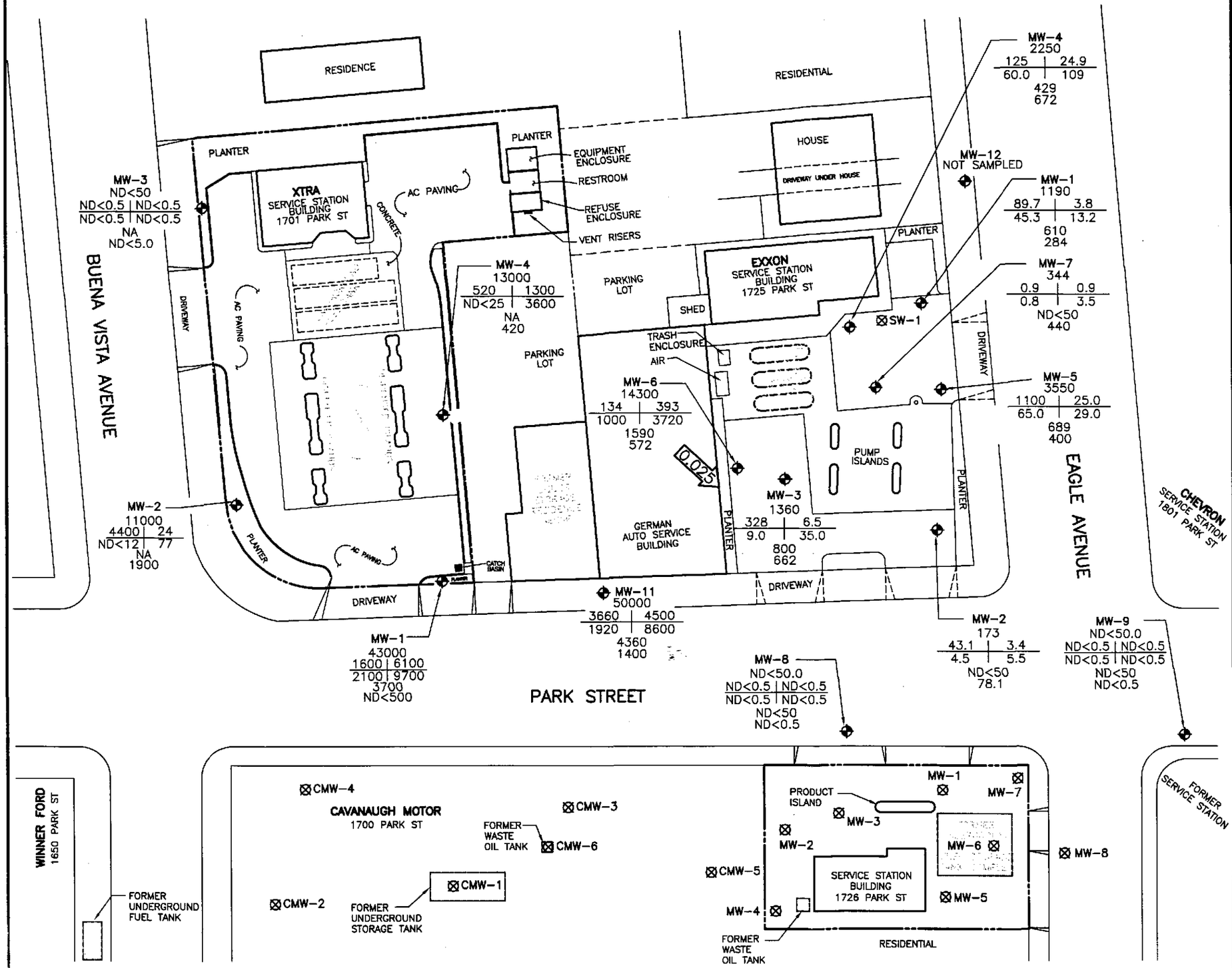
XTRA OIL COMPANY SERVICE STATION

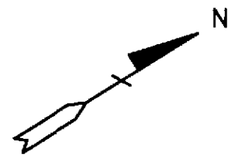
1701 PARK STREET
ALAMEDA, CALIFORNIA

PROJECT NO. 10–210

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

102100-197.DWG 04-23-03 DME 1=40





LEGEND

◆	GROUNDWATER MONITORING WELL
⊠	DESTROYED WELL
———	PROPERTY LINE
TPH-G / B / T / E / X / TPH-D / MTBE	CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
TPH-D	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
MTBE	METHYL TERT BUTYL ETHER
ND	NOT DETECTED ABOVE REPORTED DETECTION LIMIT
NA	NOT APPLICABLE
0.025	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

FEBRUARY 7, 2003

XTRA OIL COMPANY SERVICE STATION

1701 PARK STREET
ALAMEDA, CALIFORNIA

PROJECT NO. 10-210

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10210E-1IF.DWG 04-23-03 CME 1=40

TABLE 1 - SUMMARY 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)	OTHER SVOCs (ug/l)	NAPTHALENE (ug/l)	BENZO-PYRENE (ug/l)	DO (ppm)	LAB
MW-1	11/04/94	19.60	8.6	---	10.96	60000	6400	13000	4900	1300	5500	---	---	---	---	---	MCC
QC-1 (c)	11/04/94	---	---	---	---	54000	---	12000	4500	1200	5200	---	---	---	---	---	MCC
MW-1	01/11/95	19.60	6.10	---	13.50	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	02/24/95	19.60	6.57	---	13.03	56000	4400	13000	7000	1400	5100	---	---	---	---	---	MCC
QC-1 (c)	02/24/95	---	---	---	---	43000	---	8900	4600	970	3300	---	---	---	---	---	MCC
MW-1	05/25/95	19.60	6.54	---	13.06	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	19.60	8.15	---	11.45	14000	3700	5000	1100	3900	103	---	---	---	---	2.6	MCC
QC-1 (c)	08/30/95	---	---	---	---	57000	---	17000	7000	1500	5200	---	---	---	---	---	MCC
MW-1	11/16/95	19.60	8.79	---	10.81	100000	5900	22000	17000	2100	8500	---	---	---	---	---	MCC
QC-1 (c)	11/16/95	---	---	---	---	95000	---	20000	15000	1800	7800	---	---	---	---	---	MCC
MW-1	03/20/96	19.60	6.45	---	13.15	46000	3300	10000	6200	1100	3200	---	---	---	---	---	MCC
QC-1 (c)	03/20/96	---	---	---	---	42000	---	9800	5800	970	3000	---	---	---	---	---	MCC
MW-1	06/13/96	19.60	7.14	---	12.46	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	19.60	7.56	---	12.04	76000	14000	14000	11000	1600	7100	17000	---	---	---	6.1	MCC
MW-1	12/19/96	19.60	7.08	---	12.52	46000	---	12000	5500	1200	4100	---	---	---	---	---	MCC
MW-1	05/09/97	19.60	7.39	---	12.21	60000	7500	14000	12000	1700	7600	14000	ND	280	ND<2	2.7	MCC/CHR
MW-1	09/11/97	19.60	7.50	---	12.10	100000	7700	19000	19000	2400	11000	ND<2100	---	---	---	7.2	MCC
MW-1	12/15/97	19.60	7.61	---	11.99	45000	3500	11000	5300	1500	5200	13000	---	---	---	6.8	MCC
QC-1 (c)	12/15/97	---	---	---	---	45000	---	11000	5400	1400	5100	14000	---	---	---	---	MCC
MW-1	03/11/98	19.60	5.35	---	14.25	40000	3600	5900	3900	1300	4900	8700	---	---	---	6	MCC
QC-1 (c)	03/11/98	---	---	---	---	43000	---	7200	5000	1400	5300	14000	---	---	---	---	MCC
MW-1	06/23/98	19.60	6.63	---	12.97	44000	3700	5900	6200	1800	6200	870	---	---	---	6.2	MCC
QC-1 (c)	06/23/98	---	---	---	---	47000	---	6000	6400	1800	6300	1000	---	---	---	---	MCC
MW-1	12/01/98	19.60	6.48	---	13.12	57000	---	7400	12000	2100	8200	7200	---	---	---	2.4	MCC
QC-1 (c)	12/01/98	---	---	---	---	57000	---	6800	11000	1900	7500	8300	---	---	---	---	MCC
MW-1	03/30/99	19.60	5.74	---	13.86	67000	6500	5700	9400	2500	9400	3200	---	---	---	2.1	MCC
QC-1 (c)	03/30/99	---	---	---	---	64000	6400	5500	9000	2400	9100	3100	---	---	---	---	MCC
MW-1	08/16/99	19.60	7.02	---	12.58	63000	---	3800	9100	2800	11000	ND<1700	---	---	---	1.3	MCC
QC-1 (c)	08/16/99	---	---	---	---	64000	---	3700	8800	2800	11000	ND<1400	---	---	---	---	MCC
MW-1	12/31/99	19.60	7.45	---	12.15	62000	5100	2900	9400	2700	11000	ND<100	---	---	---	8.3	MCC
QC-1 (c)	12/31/99	---	---	---	---	67000	4900	2900	9700	2800	12000	ND<100	---	---	---	---	MCC
MW-1	03/31/00	19.60	5.85	---	13.75	48000	490	3200	5500	2000	6700	520	---	---	---	7.9	MCC
QC-1 (c)	03/31/00	---	---	---	---	54000	3300	3500	6000	2300	7300	730	---	---	---	---	MCC
MW-1	07/14/00	19.60	7.00	---	12.60	78000	5700	5600	14000	2300	9500	ND<200	---	---	---	3.2	MCC
QC-1 (c)	07/14/00	---	---	---	---	72000	---	4900	14000	2100	9200	ND<200	---	---	---	---	MCC
MW-1	10/04/00	19.60	7.60	---	12.00	65000	2900	3800	11000	2400	8200	ND<100	---	---	---	1.4	MCC
QC-1 (c)	10/04/00	---	---	---	---	68000	---	3900	13000	2400	9300	ND<100	---	---	---	---	MCC
MW-1	12/21/00	19.60	6.91	---	12.69	74000	2500	3800	17000	3400	15000	ND<200	---	---	---	1.3	MCC
QC-1 (c)	12/21/00	---	---	---	---	69000	---	2700	12000	2400	11000	ND<550	---	---	---	---	MCC
MW-1	04/13/01	19.60	6.06	---	13.54	55000	2400	2900	7800	2400	9400	ND<900	---	---	---	0.8	MCC
QC-1 (c)	04/13/01	---	---	---	---	51000	---	2300	6100	2000	7900	ND<350	---	---	---	---	MCC
MW-1	06/27/01	19.60	6.54	---	13.06	80000	3600	2800	13000	2300	10000	ND<250	---	---	---	1.1	MCC
QC-1 (c)	06/27/01	---	---	---	---	76000	---	3100	13000	2300	10000	ND<250	---	---	---	---	MCC
MW-1	09/20/01	19.60	7.08	---	12.52	74000	6600	1600	7700	2500	10000	ND<200	---	---	---	0.8	MCC
QC-1 (c)	09/20/01	---	---	---	---	67000	---	1600	7800	2600	10000	ND<200	---	---	---	---	MCC
MW-1	12/21/01	19.60	5.71		13.89	58000	5500	2100	11000	2400	10000	ND<720	---	---	---	1.4	MCC
QC-1 (c)	12/21/01					56000	---	2100	11000	2300	10000	ND<620	---	---	---	---	MCC
MW-1	02/04/02	19.60	5.01	---	14.59	6500	1800	74	100	230	1500	140	---	---	---	4.1	MCC
QC-1 (c)	02/04/02	---	---	---	---	8000	---	90	130	270	1800	ND<500	---	---	---	---	MCC
MW-1	05/07/02	19.60	6.10	---	13.50	41000	7900	1300	5200	1700	6300	ND<1000	---	---	---	4.3	MCC
QC-1 (c)	05/07/02	---	---	---	---	40000	---	1300	5200	1700	6400	ND<500	---	---	---	---	MCC
MW-1	08/22/02	19.60	6.91	---	12.69	42000	4800	1100	6300	1900	7900	ND<500	---	---	---	4.9	MCC
QC-1 (c)	08/22/02	---	---	---	---	40000	---	1000	6100	1800	7500	ND<500	---	---	---	---	MCC
MW-1	11/08/02	19.60	6.46	---	13.14	38000	6800	770	4600	1600	6600	ND<1000	---	---	---	---	MCC
QC-1 (c)	11/08/02	---	---	---	---	49000	---	880	4600	1800	6700	ND<1700	---	---	---	---	MCC
MW-1	**02/07/03**	**19.60**	**5.80**	**---**	**13.80**	**43000**	**3700**	**1600**	**6100**	**2100**	**9700**	**ND<500**	**---**	**---**	**---**	**1.1**	**MCC**

TABLE 1 - SUMMARY 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)	MTBE (ug/l)	OTHER SVOCs (ug/l)	NAPTHALENE (ug/l)	BENZO-PYRENE (ug/l)	DO (ppm)	LAB
MW-2	11/04/94	20.31	9.12	0.16	11.31	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	01/11/95	20.31	6.75	---	13.56	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/24/95	20.31	7.11	0.18	13.34	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	05/25/95	20.31	7.01	0.01	13.31	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	08/30/95	20.31	6.58	0.12	11.82	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	11/16/95	20.31	9.07	0.01	11.25	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	03/20/96	20.31	6.79	0.01	13.53	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	06/13/96	20.31	7.41	0.01	12.91	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	09/23/96	20.31	7.83	0.01	12.49	30000	19000	4600	180	1500	4100	2600	---	---	---	5.5	MCC
QC-1 (c)	09/23/96	---	---	---	---	33000	---	4700	170	1600	3900	2400	---	---	---	---	MCC
MW-2	12/19/96	20.31	7.37	0.01	12.95	29000	---	1800	240	1400	5400	---	(d)	420	ND<10	---	MCC
QC-1 (c)	12/19/96	---	---	---	---	29000	---	580	210	1300	5100	---	---	---	---	---	MCC
MW-2	05/09/97	20.31	6.11	0.21	14.36	34000	6700000	4600	260	1500	4300	1600	---	---	---	3.7	MCC
MW-2	09/11/97	20.31	7.70	0.03	12.63	44000	1200000	3900	250	2400	7400	ND<610	---	---	---	6.5	MCC
QC-1 (c)	09/11/97	---	---	---	---	47000	1100000	4000	420	2700	8300	920	---	---	---	---	MCC
MW-2	12/15/97	20.31	7.87	0.03	12.46	32000	68000	4600	130	2200	5400	ND<470	---	---	---	6	MCC
MW-2	03/11/98	20.31	5.61	0.18	14.84	44000	3800	5200	220	2000	5000	1100	---	---	---	6.2	MCC
MW-2	06/23/98	20.31	6.74	0.02	13.59	75000	570000	5900	390	3100	8300	8400	---	---	---	6.3	MCC
MW-2	12/01/98	20.31	7.30	---	13.01	36000	---	3800	73	1500	3900	2000	---	---	---	1.9	MCC
MW-2	03/30/99	20.31	6.51	0.13	13.90	23000	23000	5000	100	610	870	21000	---	---	---	1.7	MCC
MW-2	08/16/99	20.31	8.04	0.21	12.43	30000	---	5200	67	1100	1800	6000	---	---	---	2.6	MCC
MW-2	12/31/99	20.31	8.20	0.01	12.12	43000	340000	7800	97	1400	2500	4300	---	---	---	9.0	MCC
MW-2	03/31/00	20.31	6.29	0.01	14.03	26000	200000	4000	58	1100	1500	13000	---	---	---	8.1	MCC
MW-2	07/14/00	20.31	8.02	---	12.29	35000	170000	5000	76	1100	2500	4900	---	---	---	3.9	MCC
MW-2	10/04/00	20.31	8.62	---	11.69	22000	67000	4700	97	1300	1000	1900	---	---	---	1.8	MCC
MW-2	12/21/00	20.31	7.70	---	12.61	23000	16000	7500	65	770	490	8600	---	220	ND<10	0.6	MCC
MW-2	04/13/01	20.31	7.05	---	13.26	25000	21000	6400	79	790	670	8300	---	---	---	1.1	MCC
MW-2	06/27/01	20.31	7.50	---	12.81	34000	10000	5400	100	520	370	6800	---	---	---	0.7	MCC
MW-2	09/20/01	20.31	8.10	---	12.21	28000	64000	4600	78	670	500	2000	---	---	---	0.4	MCC
MW-2	12/21/01	20.31	6.66	---	13.65	30000	18000	3000	52	1700	970	ND<100	---	---	---	0.9	MCC
MW-2	02/04/02	20.31	6.75	---	13.56	17000	35000	3600	ND<50	960	500	1200	---	---	---	1.3	MCC
MW-2	05/07/02	20.31	7.20	---	13.11	16000	59000	3500	43	520	220	3100	---	---	---	1.0	MCC
MW-2	08/22/02	20.31	7.96	---	12.35	15000	60000	2700	30	460	220	700	---	---	---	4.2	MCC
MW-2	11/08/02	20.31	7.69	---	12.62	15000	100000	2100	60	1100	150	ND<250	---	---	---	---	MCC
MW-2	**02/07/03**	**20.31**	**6.52**	**---**	**13.79**	**11000**	**---**	**4400**	**24**	**ND<12**	**77**	**1900**	**---**	**---**	**---**	**0.7**	**MCC**
MW-3	11/04/94	20.57	8.92	---	11.65	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
MW-3	01/11/95	20.57	5.67	---	14.90	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/24/95	20.57	6.11	---	14.46	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
MW-3	05/25/95	20.57	6.24	---	14.33	91	ND<50	28.0	12.0	2.1	6.5	---	---	---	---	---	MCC
MW-3	08/30/95	20.57	8.27	---	12.30	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	4.8	MCC
MW-3	11/16/95	20.57	8.82	---	11.75	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
MW-3	03/20/96	20.57	5.44	---	15.13	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
MW-3	06/13/96	20.57	6.17	---	14.40	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	20.57	6.57	---	14.00	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	4.9	MCC
MW-3	12/19/96	20.57	6.59	---	13.98	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
MW-3	05/09/97	20.57	7.00	---	13.57	ND<50	59	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	3.3	MCC
MW-3	09/11/97	20.57	6.92	---	13.65	ND<50	82	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	7	MCC
MW-3	12/15/97	20.57	7.03	---	13.54	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	6.5	MCC
MW-3	03/11/98	20.57	4.71	---	15.86	ND<50	ND<50	ND<0.5	1.8	0.6	3.1	ND<5.0	---	---	---	6.1	MCC
MW-3	06/23/98	20.57	6.33	---	14.24	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	5.7	MCC
MW-3	12/01/98	20.57	6.74	---	13.83	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	4	MCC
MW-3	03/30/99	20.57	5.68	---	14.89	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	4.6	MCC
MW-3	08/16/99	20.57	7.67	---	12.90	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	2.7	MCC
MW-3	12/31/99	20.57	8.07	---	12.50	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	9.0	MCC
MW-3	03/31/00	20.57	5.59	---	14.98	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	2.8	MCC
MW-3	07/14/00	20.57	7.64	---	12.93	68	ND<50	0.89	1.7	2.1	9.5	ND<5.0	---	---	---	2.1	MCC
MW-3	10/04/00	20.57	8.34	---	12.23	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	2.0	MCC
MW-3	12/21/00	20.57	7.00	---	13.57	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	1.4	MCC
MW-3	04/13/01	20.57	6.38	---	14.19	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	1.3	MCC

TABLE 1 - SUMMARY 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)	OTHER SVOCs (ug/l)	NAPTHALENE (ug/l)	BENZO-PYRENE (ug/l)	DO (ppm)	LAB
MW-3	08/27/01	20.57	7.37	---	13.20	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	1.9	MCC
MW-3	09/20/01	20.57	8.25	---	12.32	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	2.1	MCC
MW-3	12/21/01	20.57	5.72	---	14.85	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	2.9	MCC
MW-3	02/04/02	20.57	5.85	---	14.72	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	4.1	MCC
MW-3	05/07/02	20.57	6.49	---	14.08	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	4.0	MCC
MW-3	08/22/02	20.57	7.93	---	12.64	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	4.6	MCC
MW-3	11/08/02	20.57	7.67	---	12.90	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	---	---	---	---	MCC
MW-3	**02/07/03**	**20.57**	**5.95**	**---**	**14.62**	**ND<50**	**---**	**ND<0.5**	**ND<0.5**	**ND<0.5**	**ND<0.5**	**ND<5.0**	**---**	**---**	**---**	**2.8**	**MCC**
MW-4	05/09/97	19.69	7.17	---	12.52	31000	15000	540	1300	1000	4500	1900	ND	2.1	ND<2	3.1	MCC/CHR
MW-4	09/11/97	19.69	7.71	---	11.98	40000	6500	2000	3100	1700	7700	3400	---	---	---	6.4	MCC
MW-4	12/15/97	19.69	7.87	---	11.82	14000	2100	910	690	390	2700	1700	---	---	---	6	MCC
MW-4	03/11/98	19.69	3.51	---	16.18	2800	780	68	94	72	430	140	---	---	---	5.5	MCC
MW-4	06/23/98	19.69	5.21	---	14.48	15000	2800	240	630	720	2700	370	---	---	---	5.4	MCC
MW-4	12/01/98	19.69	6.45	---	13.24	21000	---	580	1000	530	3600	1700	---	---	---	4.4	MCC
MW-4	03/30/99	19.69	5.41	---	14.28	41000	3600	3100	3400	1700	6700	5700	---	---	---	4.6	MCC
MW-4	08/16/99	19.69	7.35	---	12.34	24000	---	4600	940	1200	2700	9700	---	---	---	3.4	MCC
MW-4	12/31/99	19.69	7.71	---	11.98	14000	2000	510	630	600	3100	3500	---	---	---	10.1	MCC
MW-4	03/31/00	19.69	5.22	---	14.47	14000	1400	470	480	580	2200	2000	---	---	---	6.8	MCC
MW-4	07/14/00	19.69	7.31	---	12.38	37000	4300	770	1500	1800	7200	1700	---	---	---	3.3	MCC
MW-4	10/04/00	19.69	7.11	---	12.58	47000	3200	870	2000	2600	9800	ND<1500	---	---	---	1.7	MCC
MW-4	12/21/00	19.69	6.86	---	12.83	13000	1800	370	410	460	2300	1500	---	88	ND<10	0.6	MCC
MW-4	04/13/01	19.69	6.02	---	13.67	20000	2800	710	640	620	2900	2300	---	---	---	1.0	MCC
MW-4	06/27/01	19.69	6.72	---	12.97	23000	2100	510	1100	1100	4300	1400	---	---	---	1.0	MCC
MW-4	09/20/01	19.69	7.30	---	12.39	36000	4400	460	1300	1700	6700	1000	---	---	---	2.0	MCC
MW-4	12/21/01	19.69	4.55	---	15.14	11000	5600	130	250	480	2400	ND<320	---	---	---	1.6	MCC
MW-4	02/04/02	19.69	5.82	---	13.87	50000	12000	3000	8100	1900	7600	ND<500	---	---	---	2.0	MCC
MW-4	05/07/02	19.69	6.08	---	13.61	17000	3200	270	820	870	3700	ND<500	---	---	---	2.6	MCC
MW-4	08/22/02	19.69	7.45	---	12.24	26000	3800	720	920	1500	6500	2100	---	---	---	4.5	MCC
MW-4	11/08/02	19.69	6.74	---	12.95	20000	3600	290	630	1200	5100	670	---	---	---	---	MCC
MW-4	**11/08/02**	**19.69**	**4.86**	**---**	**14.83**	**13000**	**---**	**520**	**1300**	**ND<25**	**3600**	**420**	**---**	**---**	**---**	**2.1**	**MCC**
QC-1 (c)	**11/08/02**	**---**	**---**	**---**	**---**	**13000**	**---**	**510**	**1200**	**83**	**3100**	**420**	**---**	**---**	**---**	**---**	**MCC**
QC-2 (e)	11/04/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
QC-2 (e)	02/24/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
QC-2 (e)	05/25/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
QC-2 (e)	08/30/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
QC-2 (e)	11/16/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
QC-2 (e)	03/20/96	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	MCC
QC-2 (e)	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 using EPA Methods 5030/8015
TPH-D	Total petroleum hydrocarbons as diesel using EPA Methods 3510/8015
B	Benzene using EPA Methods 5030/8020
T	Toluene using EPA Methods 5030/8020
E	Ethylbenzene using EPA Methods 5030/8020
X	Total xylenes using EPA Methods 5030/8020
MTBE	Methyl tert butyl ether using EPA Methods 5030/8020
SVOCs	Semivolatile organic compounds using EPA Method 8270
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.
CHR	Chromalab, 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) Other SVOCs detected at concentrations of 200 ug/l 2-methylnapthalene and 14 ug/l phenanthrene.

(e) Travel blank.

TABLE 2 - SUMMARY OF GROUNDWATER SAMPLING
FORMER EXXON SERVICE STATION 7-0104
1725 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-210

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (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)	LAB
MW-1	02/04/02	17.29	5.00	12.29	75	52.0	0.70	ND<0.50	0.50	ND<0.50	67.1	TAI
MW-1	05/06/02	17.29	5.48	11.81	793	129	8.6	ND<0.50	0.50	1.1	702	TAI
MW-1	08/22/02	17.29	7.14	10.15	1150	602	120	0.8	9.0	3.6	181	TAI
MW-1	11/08/02	17.29	6.19	11.10	947	504	95.6	4.0	3.7	2.7	182	TAI
MW-1	02/07/03	17.29	6.00	11.29	1190	610	89.7	3.8	45.3	13.2	284	TAI
MW-2	02/04/02	16.39	4.71	11.68	122.0	69.0	31.4	5.40	9.10	10.4	7.10	TAI
MW-2	05/06/02	16.39	5.08	11.31	1250	252	125	22.5	68.2	63.1	646	TAI
MW-2	08/22/02	16.39	6.88	9.51	1270	178	269	ND<0.5	4.3	10.6	652	TAI
MW-2	11/08/02	16.39	6.20	10.19	158	83	14.0	0.7	0.6	1.0	177	TAI
MW-2	02/07/03	16.39	5.72	10.67	173	ND<50	43.1	3.4	4.5	5.5	78.1	TAI
MW-3	02/04/02	17.02	4.59	12.43	8830	402	2300	166	150	158	1420	TAI
MW-3	05/06/02	17.02	4.84	12.18	7950	1300	1930	18.0	80.0	648	544	TAI
MW-3	08/22/02	17.02	6.42	10.60	2270	416	506	3.5	8.0	6.5	298	TAI
MW-3	11/08/02	17.02	5.66	11.36	1640	193	330	1.8	4.9	2.7	470	TAI
MW-3	02/07/03	17.02	4.99	12.03	1360	800	328	6.5	9.0	35.0	662	TAI
MW-4	02/04/02	17.29	4.35	12.94	1250	774	124	4.40	46.7	43.5	46.1	TAI
MW-4	05/06/02	17.29	4.95	12.34	2040	776	165	5.0	42.0	39.0	1410	TAI
MW-4	08/22/02	17.29	6.65	10.64	1570	445	73.3	ND<0.5	9.9	6.8	1070	TAI
MW-4	11/08/02	17.29	5.60	11.69	2340	680	169	4.3	34.9	23.3	1200	TAI
MW-4	02/07/03	17.29	4.97	12.32	2250	429	125	24.9	60.0	109	672	TAI
MW-5	02/04/02	16.64	4.69	11.95	4380	976	1440	38.0	84.0	50.0	620	TAI
MW-5	05/06/02	16.64	5.00	11.64	3810	1360	1110	20.0	26.0	26.0	764	TAI
MW-5	08/22/02	16.64	6.98	9.66	3190	695	823	9.0	11.0	31.0	545	TAI
MW-5	11/08/02	16.64	5.31	11.33	3360	645	1050	9.4	11.1	17.8	746	TAI
MW-5	02/07/03	16.64	5.75	10.89	3550	689	1100	25.0	65.0	29.0	400	TAI
MW-6	02/04/02	17.31	4.24	13.07	14800	168	425	120	1480	4030	545	TAI
MW-6	05/06/02	17.31	4.83	12.48	8580	1540	988	24.0	866	1080	380	TAI
MW-6	08/22/02	17.31	6.49	10.82	4050	10400	44.5	11.5	460	270	716	TAI
MW-6	11/08/02	17.31	5.49	11.82	5640	822	49.3	42.7	586	858	1150	TAI
MW-6	02/07/03	17.31	4.89	12.42	14300	1590	134	393	1000	3720	572	TAI

TABLE 2 - SUMMARY OF GROUNDWATER SAMPLING
FORMER EXXON SERVICE STATION 7-0104
1725 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-210

WELL ID	DATE OF MONITORING/ SAMPLING		CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (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)	MTBE (ug/l)	LAB
MW-7	02/04/02		17.06		3.81	13.25		928	88.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	610	TAI
MW-7	05/06/02		17.06		4.51	12.55		591	72	2.4	ND<0.5	2.5	4.1	565	TAI
MW-7	08/22/02		17.06		6.25	10.81		586	ND<50	2.5	ND<2.5	ND<2.5	3.0	482	TAI
MW-7	11/08/02		17.06		5.03	12.03		463	ND<50	1.7	ND<0.5	ND<0.5	0.6	319	TAI
MW-7	02/07/03		17.06		4.57	12.49		344	ND<50	0.9	0.9	0.8	3.5	440	TAI
MW-8	02/04/02	(c)	16.24		---	---		---	---	---	---	---	---	---	---
MW-8	05/06/02		16.24		5.31	10.93		ND<50.0	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	TAI
MW-8	08/22/02		16.24		6.07	10.17		ND<50.0	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	TAI
MW-8	11/08/02		16.24		5.91	10.33		ND<50.0	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	TAI
MW-8	02/07/03		16.24		5.34	10.90		ND<50.0	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	TAI
MW-9	02/04/02		15.56		4.77	10.79		ND<50.0	ND<50.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.50	TAI
MW-9	05/06/02		15.56		6.29	9.27		ND<50.0	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	TAI
MW-9	08/22/02		15.56		6.70	8.86		ND<50.0	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	TAI
MW-9	11/08/02		15.56		6.55	9.01		ND<50.0	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	TAI
MW-9	02/07/03		15.56		6.35	9.21		ND<50.0	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	TAI
MW-11	02/04/02		17.98		5.14	12.84		37800	2430	3340	3550	1450	6480	1910	TAI
MW-11	05/06/02		17.98		5.51	12.47		27200	3000	1420	1580	1110	4960	1350	TAI
MW-11	08/22/02		17.98		6.63	11.35		28100	5660	2020	1520	1120	5360	2240	TAI
MW-11	11/08/02		17.98		5.34	12.64		26000	3680	1170	2130	1020	5390	246	TAI
MW-11	02/07/03		17.98		5.42	12.56		50000	4360	3660	4500	1920	8600	1400	TAI
MW-12	02/04/02	(c)	16.15		---	---		---	---	---	---	---	---	---	---
MW-12	05/06/02	(c)	16.15		---	---		---	---	---	---	---	---	---	---
MW-12	08/22/02	(c)	16.15		---	---		---	---	---	---	---	---	---	---
MW-12	11/08/02		16.15		---	---		---	---	---	---	---	---	---	---
MW-12	02/07/03		16.15		---	---		---	---	---	---	---	---	---	---

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline using EPA Methods 8015m/5030
TPH-D	Total petroleum hydrocarbons as diesel using EPA Methods 8015B/3510
B	Benzene using EPA Methods 8121B
T	Toluene using EPA Methods 8121B
E	Ethylbenzene using EPA Methods 8121B
X	Total xylenes using EPA Methods 8121B
MTBE	Methyl tert butyl ether using EPA Methods 8121B
ug/l	Micrograms per liter
---	Not analyzed/applicable/measurable
ND	Not detected above reported detection limit
TAI	Test America Incorporated

NOTES:

(a) Top of casing surveyed relative to mean sea level.

(b) Groundwater elevations expressed in feet above mean sea level.

(c) Not monitored or sampled

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

ALISTO

Well Redevelopment Data Sheet

ENGINEERING GROUP
3732 MT DIABLO BLVD., SUITE 270
LAFAYETTE, CA 94549
PHONE (925) 962-6970 FAX (925) 962-6971

Site: Xtra Oil Company
Address: 1701 Park St Alameda California
Project No. ~~10-427~~ 10-210-19-1

Date: 1-7-03
Day: M T W TH (F)
Page 1 of 1

Well ID	DTW	Diameter	~~Lab / Field Filtered~~	Cap / Lock
MW3	5.95	2"	@1212	

TD-WL = __ X well vol.factor = ___ X # vol. to purge = Purge Vol.
20 - 5.95 = 14 x .16 x 3 = 7

Purge Method ___ Ded. Pump/ ___ Disp.Tube/ ___ Disp. Bailer(s) ___/___ Sys. Port

Comments: 12VDC Calibrate Horiba time

Gal.	Time	Temp F or C	pH	E.C. umhos/cm	D.O. mg/l	Eh Millivolts	Turbidity NTU
1	1250	16.7	6.19	.276	2.73		250
4	1253	17.9	6.01	.286	3.11		21
5		17.9	6.04	.249	2.66		16
7	1300	17.9	6.03	.290	2.77		12

TPHG/BTEX. MTBE

1300 / MW-3

Well ID	DTW	Diameter	~~Lab / Field Filtered~~	Cap / Lock
MW2	6.52	2	@1220	

TD-WL = __ X well vol.factor = ___ X # vol. to purge = Purge Vol.
~~Short~~

Purge Method ___ Ded. Pump/ ___ Disp.Tube/ ___ Disp. Bailer(s) ___/___ Sys. Port

Comments:

Gal.	Time	Temp F or C	pH	E.C. umhos/cm	D.O. mg/l	Eh Millivolts	Turbidity NTU
1	1310	19.0	6.28	1.02	0.95		12
5	1316	18.8	6.32	.992	1.11		10
7	1322	18.8	6.33	.990	0.69		6

Same

1322 / MW-2

Well ID	DTW	Diameter	~~Lab / Field Filtered~~	Cap / Lock
MW-1	5.80	2"	@1225	

TD-WL = __ X well vol.factor = ___ X # vol. to purge = Purge Vol.
~20 - 5.8 = 14.2 So 7

Purge Method ___ Ded. Pump/ ___ Disp.Tube/ ___ Disp. Bailer(s) ___/___ Sys. Port

Comments: 12VDC

Gal.	Time	Temp F or C	pH	E.C. umhos/cm	D.O. mg/l	Eh Millivolts	Turbidity NTU
1	1330	18.5	6.90	.403	1.24		16
5	1340	18.6	6.66	.428	1.17		5
7	1347	18.6	6.67	.429	1.11		4

Same plus Diesel (Amber)

1400 / MW-1

Well ID	DTW	Diameter	Lab / Field Filtered	Cap / Lock
MW4	4.86	2"	@1230	

TD-WL = __ X well vol.factor = ___ X # vol. to purge = Purge Vol.
DTW @ 1, 2, 3

Purge Method ___ Ded. Pump/ ___ Disp.Tube/ ___ Disp. Bailer(s) ___/___ Sys. Port

Comments:

Gal.	Time	Temp F or C	pH	E.C. umhos/cm	D.O. mg/l	Eh Millivolts	Turbidity NTU
1	1410	15.8	6.69	.393	1.37		20
2	1420	15.5	6.54	.404	2.44		42
3	1430	15.6	6.55	.410	2.12		39

1430 / MW-4

1435 / QC-1

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APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

McCampbell Analytical Inc.
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

Alisto Engineering Grp. 3732 Mt. Diablo Blvd. Ste. 270 Lafayette, CA 94549	Client Project ID: #10-210-19-1; Groundwater Sampling	Date Sampled: 02/07/03
		Date Received: 02/11/03
	Client Contact: Chris Reinheimer	Date Reported: 02/15/03
	Client P.O.:	Date Completed: 02/15/03

WorkOrder: 0302107

February 15, 2003

Dear Chris:

Enclosed are:

1). the results of **5** analyzed samples from your **#10-210-19-1; Groundwater Sampling project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. 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,

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
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http://www.mccampbell.com E-mail: main@mccampbell.com

Alisto Engineering Grp. 3732 Mt. Diablo Blvd. Ste. 270 Lafayette, CA 94549	Client Project ID: #10-210-19-1; Groundwater Sampling	Date Sampled: 02/07/03
		Date Received: 02/11/03
	Client Contact: Chris Reinheimer	Date Extracted: 02/12/03-02/13/03
	Client P.O.:	Date Analyzed: 02/12/03-02/13/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0302107

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	43,000,a	ND<500	1600	6100	2100	9700	50	109
002A	MW-2	W	11,000,a	1900	4400	24	ND<12	77	25	101
003A	MW-3	W	ND	ND	ND	ND	ND	ND	1	87.4
004A	MW-4	W	13,000,a	420	520	1300	ND<25	3600	50	97.7
005A	QC-1	W	13,000,a	420	510	1200	83	3100	50	100
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

*water and vapor samples are reported in µg/L, soil and sludge samples in mg/kg, wipe samples in µg/wipe, and TCLP extracts in µg/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 (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

Alisto Engineering Grp. 3732 Mt. Diablo Blvd. Ste. 270 Lafayette, CA 94549	Client Project ID: #10-210-19-1; Groundwater Sampling	Date Sampled: 02/07/03
		Date Received: 02/11/03
	Client Contact: Chris Reinheimer	Date Extracted: 02/11/03
	Client P.O.:	Date Analyzed: 02/13/03

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

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0302107

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0302107-001B	MW-1	W	3700,d	1	95.4
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50		µg/L
		S	NA		NA

* water and vapor samples are reported in µg/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in µg/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) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent / mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0302107

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 5854 Spiked Sample ID: 0302107-003A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	112	110	2.13	105	107	1.37	70	130
MTBE	ND	10	85.8	87.3	1.65	91.3	90.3	1.13	70	130
Benzene	ND	10	113	99.8	12.2	102	95.8	6.60	70	130
Toluene	ND	10	106	101	4.84	104	97.2	6.42	70	130
Ethylbenzene	ND	10	111	101	9.69	101	96.9	4.53	70	130
Xylenes	ND	30	110	103	6.25	107	100	6.45	70	130
%SS:	87.4	100	89.8	87.3	2.88	90.7	86.1	5.17	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0302107

EPA Method: SW8015C	Extraction: SW3510C	BatchID: 5848	Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	102	102	0.380	70	130
%SS:	N/A	100	N/A	N/A	N/A	85.7	85.2	0.523	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0302107

Client:
Alisto Engineering Grp.
3732 Mt. Diablo Blvd. Ste. 270
Lafayette, CA 94549

TEL: (925) 962-6970
FAX: (925) 962-6971
ProjectNo: #10-210-19-1; Groundwater Sampling
PO:

Date Received: **2/11/03**
Date Printed: **2/11/03**

					Requested Tests	
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**Hold**	**SW8015C**	**8021B/8015**
0302107-001	MW-1	Water	2/7/03 2:00:00 PM		B	A
0302107-002	MW-2	Water	2/7/03 1:22:00 PM			A
0302107-003	MW-3	Water	2/7/03 1:00:00 PM			A
0302107-004	MW-4	Water	2/7/03 2:30:00 PM			A
0302107-005	QC-1	Water	2/7/03 2:35:00 PM			A

Prepared by: Maria Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

0302107

ALISTO ENGINEERING GROUP
CHAIN OF CUSTODY

Project Information:

Project No: 10-210-19-1
Project Title: Groundwater Sampling
Location: 1701 Park St Alameda

Sampler's Name: Dan Birch
(print)
Sampler's Signature: [signature]

Report To:

Consultant: Alisto Engineering Group
Address: 2700 Mt. Diablo Blvd., Ste. 270
Lafayette, CA 94549
Contact: Chris Reinheimer
Phone: (925) 962-6970
Fax: (925) 962-6971

Bill To:

Client: Xtra Oil Company
Address:

Laboratory: McCampb
Address:
Contact: ed hamilt
Phone: (925)
Fax: 798-1620
Date Results Required:
Date Report Required:

TURN AROUND TIME

RUSH	24 Hour	48 Hour	5 Day	Standard (10-14 days)
☐	☐	☐	☐	☒

ANALYSIS

	Sample ID.	Date	Time	# Containers	Matrix	TPH G BTEX MTBE	TPH Diesel									
						HCl	—	—	—	—	—	—	—	—	—	
+	Mw-1	2/7/03	1400	5	W	X	X									
+	Mw-2	↓	1322	3	↓	X										
+	Mw-3	↓	1300	3	↓	X										
+	Mw-4	↓	1430	3	↓	X										
+	QC-1	↓	1435	3	↓	X										

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
[signature]	2/10/03	1000	[signature]	2/11/03	8:45a

SPECI

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ___
PRESERVATION ✓
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ___

VOAS	O&G	METALS	OTHER
✓			

Cooler Received sealed and Intact.