BP OIL

BP Oil Company
Environmental Resources Management
Building 13, Suite N
295 SW 41st Street
Renton, Washington 98055-4931
(206) 251-0667
Fax No: (206) 251-0736

April 23,1996

Ms. Juliet Shin
Alameda County Health Care Services Agency
1131 Harbour Bay Parkway, Room 250
Alameda, CA 94502-6577

RE: BP OIL FACILITY #11270
3255 Mecartney Road
Alameda, CA

Dear Ms. Shin:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING REPORT DATED MARCH13,1996** for the above referenced facility. Please note that the we are not planning futher monitoring at this site.

If you should have any questions regarding this site, I may be reached at (206) 251-0689.

Respectfully,

Scott T. Hooton
Environmental Resources Management
Corrective Action Manager

STH:sb msword\ERM11270

cc: Mr. Jim Pate, RREEF Engineering Group

Mr. Eddy So, CRWQCB, San Francisco Bay Region

Mr. Brady Nagle, Alisto Engineering Group

Mr. Larry Silva, TOSCO Northwest

Mr. Gary Pischke, Hydro-Environmental Technologies, Inc.

Mr. Larry Cummins, RREEF Management Co.

Site File

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11270
3255 Mecartney Road
Alameda, California

Project No. 10-206-03-003

Prepared for:

BP Oil Company
Environmental Resources Management
295 S.W. 41st Street
Building 13, Suite N
Renton, Washington

Prepared by:

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

March 13, 1996

Dale Swain
Project Manager

Al Sevilla, P.E.
Principal

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11270
3255 Mecartney Road
Alameda, California

Project No. 10-206-03-003

March 13, 1996

INTRODUCTION

This report presents the results and findings of the January 8, 1996 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11270, 3255 Mecartney Road, 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 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 the 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 quarters 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 groundwater analysis are shown on Figure 3. The laboratory report and chain of custody record are presented in Appendix B.

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11270
3255 MECARTNEY ROAD, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-206

WELL ID	DATE OF SAMPLING/ MONITORING	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)	TDS (mg/l)	DO (ppm)	LAB
MW-1 (c)	10/29/92	12.50	7.28	5.22	---	---	---	---	---	---	---	---	---	---
MW-1 (c)	06/21/93	12.50	5.40	7.10	---	---	---	---	---	---	---	---	---	---
MW-1	04/05/94	12.50	5.64	6.86	1700	---	20	1.1	3.9	7.6	---	---	---	PACE
MW-1	07/28/94	12.50	6.22	6.28	---	---	---	---	---	---	---	---	---	PACE
MW-1	10/26/94	12.50	6.40	6.10	---	---	---	---	---	---	---	---	---	---
MW-1 (d)	02/05/95	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	10/29/92	12.08	6.84	5.24	2500	3900	140	ND<10	65	22	---	---	---	---
MW-2	06/21/93	12.08	5.49	6.59	720	770	12	1.5	11	12	---	---	---	---
MW-2	04/05/94	12.08	5.40	6.68	420	1300	ND<0.5	ND<0.5	ND<0.5	4.0	---	---	1.8	PACE
MW-2	07/28/94	12.08	5.97	6.11	---	---	---	---	---	---	---	---	---	PACE
MW-2	10/26/94	12.08	6.10	5.98	---	---	---	---	---	---	---	---	---	---
MW-2 (d)	02/05/95	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3 (c)	10/29/92	12.09	7.14	4.95	---	---	---	---	---	---	---	---	---	---
MW-3 (c)	06/21/93	12.09	5.84	6.25	---	---	---	---	---	---	---	---	---	---
MW-3	04/05/94	12.09	5.83	6.26	990	4300	3.2	ND<0.5	ND<0.5	1.3	---	---	---	PACE
MW-3	07/28/94	12.09	6.32	5.77	---	---	---	---	---	---	---	---	---	PACE
MW-3	10/26/94	12.09	6.42	5.67	---	---	---	---	---	---	---	---	---	---
MW-3 (d)	02/05/95	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	10/29/92	12.14	6.90	5.24	2600	---	250	2.5	74	6.6	---	---	---	---
MW-4	06/21/93	12.14	5.54	6.60	1400	1100	24	2.9	2.6	7.9	---	---	---	---
MW-4	04/05/94	12.14	5.46	6.68	930	940	33	0.8	ND<0.5	2.8	---	---	2.7	PACE
MW-4	07/28/94	12.14	6.02	6.12	2400	1400	19	1.8	0.5	8.0	---	---	6.7	PACE
QC-1 (e)	07/28/94	---	---	---	2300	---	19	1.7	0.5	7.4	---	---	---	PACE
MW-4	10/26/94	12.14	6.13	6.01	---	---	---	---	---	---	---	---	---	---
MW-4 (d)	02/05/95	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	06/21/93	13.37	7.44	5.93	ND<50	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---
MW-5	04/05/94	13.37	7.42	5.95	ND<50	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	2.5	PACE
QC-1 (e)	04/05/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-5	07/28/94	13.37	7.88	5.49	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.4	PACE
MW-5	10/26/94	13.37	7.92	5.45	ND<50	160	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	5.5	PACE
QC-1 (e)	10/26/94	---	---	---	ND<50	---	ND<0.5	0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-5	02/05/95	8.36 (f)	7.83	0.53 (g)	ND<50	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	---	ATI
QC-1 (e)	02/05/95	---	---	---	ND<50	---	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	---	ATI
MW-5	05/05/95	8.36	9.00	-0.64	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	3.1	ATI
MW-5	07/19/95	8.36	9.03	-0.67	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	14700	4.6	ATI
MW-5	10/12/95	8.36	9.15	-0.79	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	8490	4.3	ATI
MW-5	01/08/96	8.36	9.04	-0.68	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	10000	4.9	ATI
MW-6	02/05/95	6.88 (f)	6.39	0.49 (g)	1000	1000	7.6	19	9.1	96	---	---	5.0	ATI
MW-6	05/05/95	6.88	6.85	0.03	2300	---	49	9.0	130	46	---	---	3.3	ATI
QC-1 (e)	05/05/95	---	---	---	2400	---	49	9.2	140	48	---	---	---	ATI
MW-6	07/19/95	6.88	7.13	-0.25	1500	---	84	3.3	28	24	---	818	3.7	ATI
QC-1 (e)	07/19/95	---	---	---	1500	---	89	3.8	30	26	---	---	---	ATI
MW-6	10/12/95	6.88	7.35	-0.47	1800	---	36	13	38	86	2500	868	4.1	ATI
QC-1 (e)	10/12/95	---	---	---	1100	---	33	7.0	18	44	2200	---	---	ATI
MW-6	01/08/96	6.88	7.04	-0.16	1300	---	31	4.7	60	53	170	474	4.2	ATI
QC-1 (e)	01/08/96	---	---	---	1000	---	27	4.0	49	44	150	---	---	ATI
MW-7	02/05/95	6.62 (f)	7.62	-1.00 (g)	280	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	5.1	ATI
MW-7	05/05/95	6.62	7.64	-1.02	290	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	3.6	ATI
MW-7	07/19/95	6.62	7.70	-1.08	150	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	12100	4.6	ATI
MW-7	10/12/95	6.62	7.88	-1.26	110	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	390	14000	4.7	ATI
MW-7	01/08/96	6.62	7.66	-1.04	90	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	300	12060	4.9	ATI

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11270
3255 MECARTNEY ROAD, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-206

WELL ID	DATE OF SAMPLING/ MONITORING	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)	TDS (mg/l)	DO (ppm)	LAB
XW-1	06/21/93	---	---	---		---	---	---	---	---	---	---	---	---	---
XW-1	04/05/94	---	5.36	---		ND<50	70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	3.0	PACE
XW-1	07/28/94	---	5.92	---		---	---	---	---	---	---	---	---	---	PACE
XW-1	10/26/94	---	6.05	---		---	---	---	---	---	---	---	---	---	---
XW-1	02/05/95	7.49 (f)	5.82	1.67	(g)	ND<50	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	4.9	ATI
XW-1	05/05/95	7.49	5.57	1.92		---	---	---	---	---	---	---	---	---	---
XW-1	07/19/95	7.49	6.12	1.37		ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	1680	4.3	ATI
XW-1	10/12/95	7.49	6.82	0.67		ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	1150	3.8	ATI
XW-1	01/08/96	7.49	6.11	1.38		ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	1300	4.7	ATI
XW-2	06/21/93	12.50	5.89	6.61		---	---	---	---	---	---	---	---	---	---
XW-2	04/05/94	12.50	5.77	6.73		ND<50	160	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	3.0	PACE
XW-2	07/28/94	12.50	6.25	6.25		---	---	---	---	---	---	---	---	---	PACE
XW-2	10/26/94	12.50	6.39	6.11		---	---	---	---	---	---	---	---	---	---
XW-2	02/05/95	7.48 (f)	5.62	1.86	(g)	ND<50	ND<500	ND<0.25	0.38	ND<0.25	ND<0.50	---	---	5.2	ATI
XW-2	05/05/95	7.48	5.66	1.82		---	---	---	---	---	---	---	---	---	---
XW-2	07/19/95	7.48	6.80	0.68		ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	4750	3.9	ATI
XW-2	10/12/95	7.48	7.21	0.27		ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	3630	4.3	ATI
XW-2	01/08/96	7.48	6.79	0.69		ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	3440	4.2	ATI
XW-3	06/21/93	11.85	5.85	6.00		---	---	---	---	---	---	---	---	---	---
XW-3	04/05/94	11.85	5.85	6.00		ND<50	150	ND<0.5	0.7	ND<0.5	ND<0.5	---	---	3.1	PACE
XW-3	07/28/94	11.85	6.28	5.57		---	---	---	---	---	---	---	---	---	PACE
XW-3	10/26/94	11.85	6.40	5.45		---	---	---	---	---	---	---	---	---	---
XW-3	02/05/95	6.84 (f)	7.23	-0.39	(g)	280	ND<500	ND<0.50	ND<0.50	0.63	ND<1.0	---	---	4.9	ATI
XW-3	05/05/95	6.84	7.43	-0.59		---	---	---	---	---	---	---	---	---	---
XW-3	07/19/95	6.84	7.60	-0.76		400	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	10400	4.3	ATI
XW-3	10/12/95	6.84	7.74	-0.90		130	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	480	8430	4.7	ATI
XW-3	01/08/96	6.84	7.58	-0.74		320	---	ND<2.5	ND<2.5	ND<2.5	ND<5.0	1100	10000	4.4	ATI
QC-2 (h)	04/05/94	---	---	---		ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (h)	07/28/94	---	---	---		ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (h)	10/26/94	---	---	---		ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (h)	02/05/95	---	---	---		ND<50	---	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	---	ATI
QC-2 (h)	05/05/95	---	---	---		ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
QC-2 (h)	07/19/95	---	---	---		ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
QC-2 (h)	10/12/95	---	---	---		ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	ATI
QC-2 (h)	01/08/96	---	---	---		ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	ATI

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
TDS	Total dissolved solids
DO	Dissolved oxygen
ug/l	Micrograms per liter
mg/l	Milligrams per liter
ppm	Parts per million
---	Not analyzed/measured/applicable
ND	Not detected above reported detection limit
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.

NOTES:

(a) Casing elevations surveyed to nearest 0.01 foot above mean sea level.

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

(c) Not sampled due to inadequate recharge.

(d) Wells destroyed by HETI on January 18 and 19, 1995.

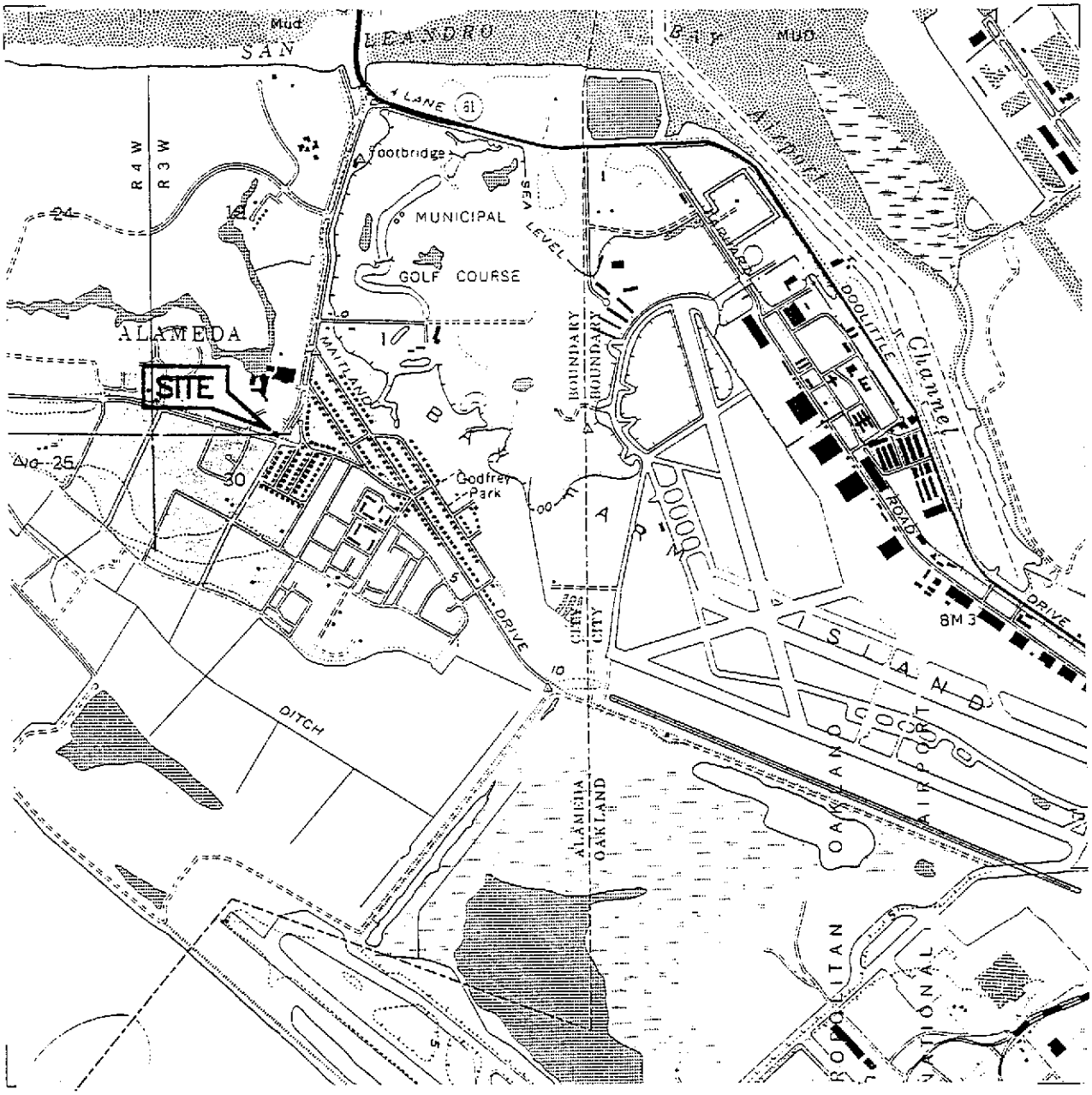
(e) Blind duplicate.

(f) Top of casing elevation surveyed in reference to an arbitrary benchmark; top of hydrant = 10.00 feet above datum.

(g) Groundwater elevation relative to an arbitrary datum.

(h) Travel blank.

F:\0\10-206\206-3-3.WQ1



SOURCE:
USGS MAP, SAN LEANDRO QUADRANGLE,
7.5 MINUTE SERIES. 1959.
PHOTOREVISED 1980.

N

0 1000' 2000'

FIGURE 1

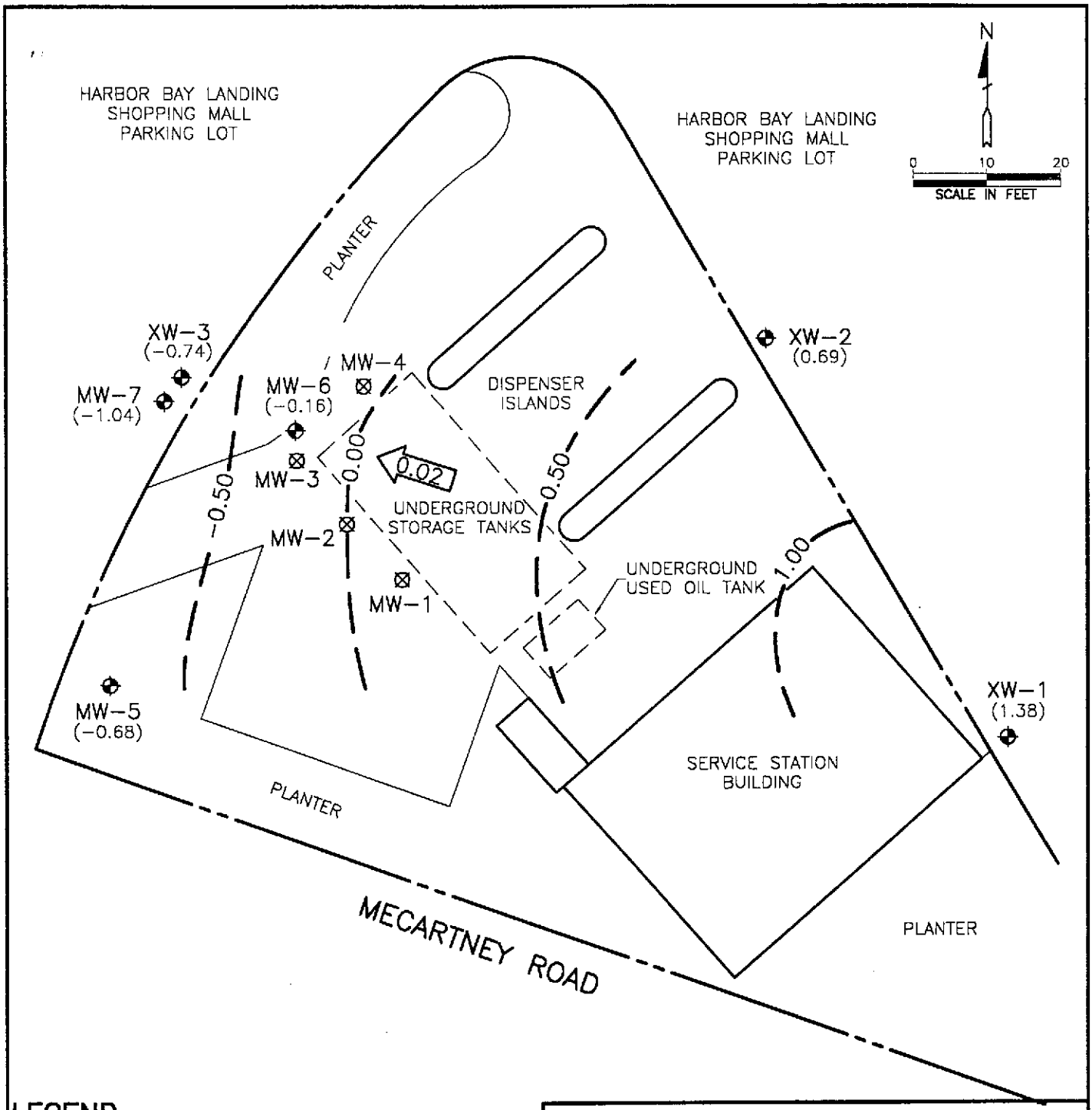
VICINITY MAP

BP OIL SERVICE STATION NO. 11270
3255 MECARTNEY ROAD
ALAMEDA, CALIFORNIA

PROJECT NO. 10-206

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

102068---.DWG 5-2-95 RKW 1-1



LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ⊠ DESTROYED WELL
- (-0.68) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- -0.50 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL-0.5 FOOT)
- 0.02 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

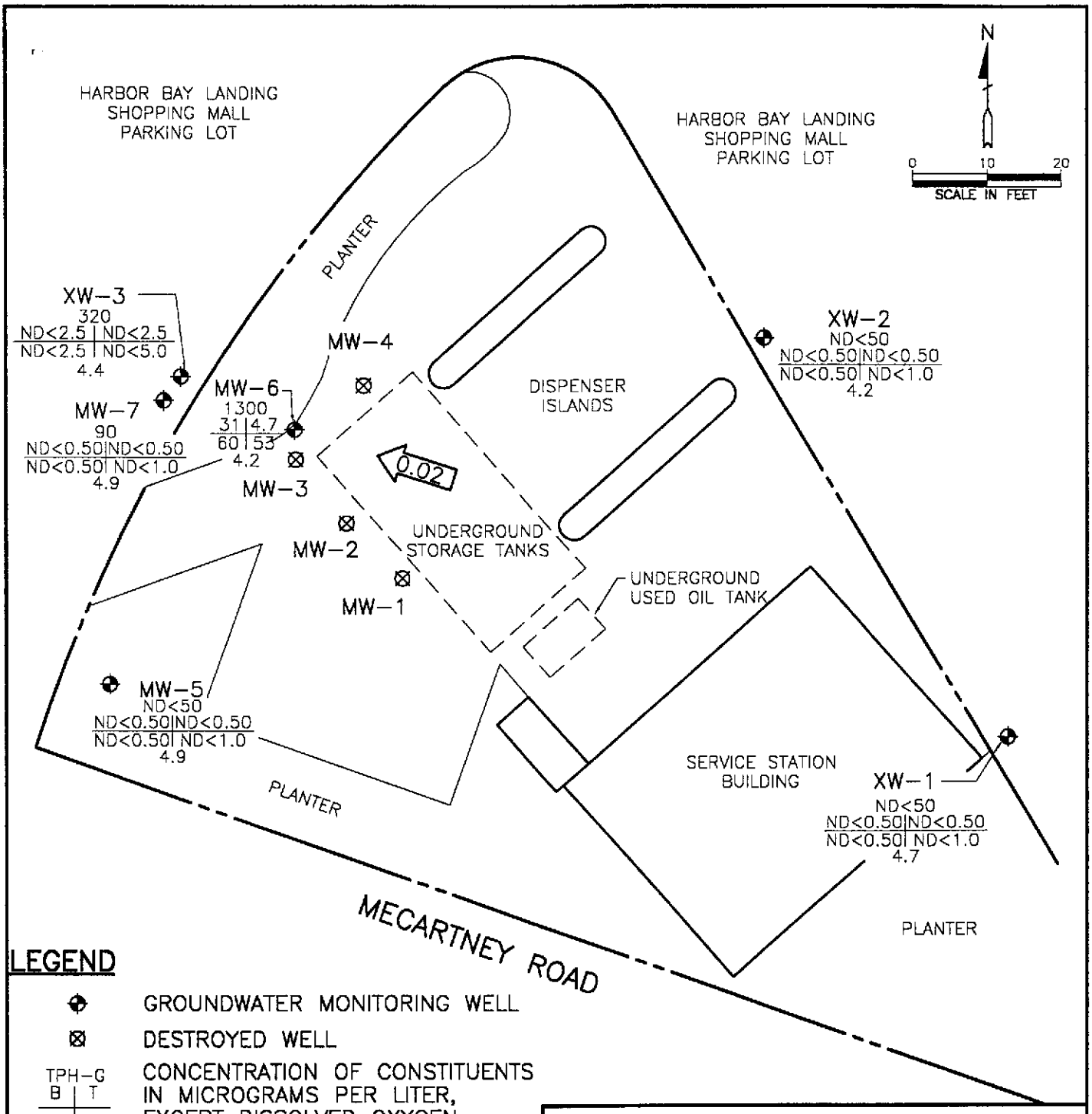
JANUARY 8, 1996

BP OIL SERVICE STATION NO. 11270
3255 MECARTNEY ROAD
ALAMEDA, CALIFORNIA

PROJECT NO. 10-206

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10206D-Q.DWG 03-05-96 CLC 1"=20



LEGEND

⊕	GROUNDWATER MONITORING WELL
⊠	DESTROYED WELL
TPH-G / B | T / E | X / 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
DO	DISSOLVED OXYGEN
ND	NOT DETECTED ABOVE REPORTED DETECTION LIMIT
⟵ 0.02	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

JANUARY 8, 1996

BP OIL SERVICE STATION NO. 11270
3255 MECARTNEY ROAD
ALAMEDA, CALIFORNIA

PROJECT NO. 10-206

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10206E-0.DWG 03-05-96 CLC 1-20

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

ALISTO

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

Field Report / Sampling Data Sheet

Project No. 10-206-03-003 Date: 1/8/96
Address 3255 McCartney Rd. Day: (M) T W TH F
Contract No. G620649 City: Alameda
Station No. BP 11270 Sampler: LB

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME SAMPLED	COMMENTS:
MW-5	S-3	4"	14.51	9.04	Ø	1233	
MW-6	S-5	4"	20.00	7.04		1425	QC-1 (S-7) from this well
MW-7	S-4	2"	20.00	7.66		1347	
XW-1	S-1		15.35	6.11		1131	
XW-2	S-2		13.62	6.79		1200	
XW-3	S-6	↓	13.53	7.58	↓	1451	

FIELD INSTRUMENT CALIBRATION DATA

pH METER Ion 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED (Y) N TIME _____ WEATHER clear

D.O. METER Ion ZERO d.O. SOLUTION 0 BAROMETRIC PRESSURE 760 TEMP 64

CONDUCTIVITY METER Ion 10,000 other TURBIDITY METER _____ 5.0 NTU _____ OTHER _____

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
XW-1	6.11	2"	OK	Ø	Y (N)	1	1110	64.7	8.19	1.26ms	4.4
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2.5		63.2	8.02	1.32ms	
15.35 - 6.11 = 9.24	x .16 = 1.48	x3=	4.44			4.5	1129	62.7	7.98	1.36ms	4.7

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

Comments:

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

TIME/SAMPLE ID
1131

S-7 = QC-1
S-8 = QC-2

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. 10-206-03-003 Date: 11/8/96
Address 3255 McCartney Rd. Day: (M) T W TH F
Contract No. G620649 City: Alameda
Station No. BP 11270 Sampler:

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.	
XW-2	6.79	2"	OIC	Ø	Y (N)	1	1142	65.2	7.37	3.42ms	4.7	O EPA 601 ____
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2		63.7	7.21	3.71ms		X TPH-G/BTEX HCl
13.62 - 6.79 = 6.83 X .16 = 1.09 X 3 =	3.27					3.5	1154	63.1	7.16	3.75ms	4.2	O TPH Diesel ____
Purge Method: XSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port												O TOG 5520 ___
Comments:												TIME/SAMPLE ID 1200

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.	
MW-5	9.04	4"	OIC	Ø	Y (N)	3	1210	63.4	7.47	8.20ms	4.7	O EPA 601 ____
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			7		62.6	7.19	8.79ms		X TPH-G/BTEX HCl
14.57 - 9.04 = 5.47 X .65 = 3.56 X 3 =	10.68					11	1227	62.2	7.14	8.87ms	4.9	O TPH Diesel ____
Purge Method: XSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port												O TOG 5520 ___
Comments:												TIME/SAMPLE ID 1233

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.	
MW-7	7.66	2"	OIC	Ø	Y (N)	2	1330	62.9	7.52	8.47ms	4.9	X EPA 601 ____
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			4		62.2	7.39	8.63ms		X TPH-G/BTEX HCl
20.00 - 7.66 = 12.34 X .16 = 1.97 X 3 =	5.91					6	1340	61.9	7.29	8.70ms	4.9	O TPH Diesel ____
Purge Method: XSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port												O TOG 5520 ___
Comments:												TIME/SAMPLE ID 1347

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.	
MW-6	7.04	4"	OIC	Ø	Y (N)	9	1352	63.4	8.22	610 µS	4.1	X EPA 601 ____
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			17		62.7	7.82	617 µS		X TPH-G/BTEX HCl
20.00 - 7.04 = 12.96 X .65 = 8.42 X 3 =	25.26					25.5	1415	62.4	7.77	625 µS	4.2	O TPH Diesel ____
Purge Method: XSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port												O TOG 5520 ___
Comments: DC-1(5-7) from this well												TIME/SAMPLE ID 1425

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.	
XW-3	7.58	2"	OIC	Ø	Y (N)	1	1437	64.3	7.11	9.70ms 9704µS	4.7	X EPA 601 ____
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2		63.6	7.02	9.76ms		X TPH-G/BTEX HCl
13.53 - 7.58 = 5.95 X .16 =	.95 X 3 = 2.85					3	1449	63.0	6.92	9.84ms	4.4	O TPH Diesel ____
Purge Method: XSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port												O TOG 5520 ___
Comments:												TIME/SAMPLE ID 1451

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 601080

January 22, 1996

ALISTO ENGINEERING
1575 TREAT BOULEVARD, SUITE 201
WALNUT CREEK, CA 94598

Project Name: BP SITE #11270/ALAMEDA,CA
Project # : G620649/10-206-03

Attention: BRADY NAGLE

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
January 11, 1996	8	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. If any flags appear next to the analytical data in this report, please see the attached list of flag definitions.

The results of these analyses and the quality control data are enclosed. Please note that the Sample Condition Upon Receipt Checklist is included at the end of this report.

GARY STEWART
VOLATILES SUPERVISOR

for ALAN J. KLEINSCHMIDT
LABORATORY MANAGER

Analytical Technologies, Inc.

SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING
Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA,CA

Report Date: January 22, 1996
ATI I.D. : 601080

ATI #	Client Description	Matrix	Date Collected
1	S-1	WATER	08-JAN-96
2	S-2	WATER	08-JAN-96
3	S-3	WATER	08-JAN-96
4	S-4	WATER	08-JAN-96
5	S-5	WATER	08-JAN-96
6	S-6	WATER	08-JAN-96
7	S-7	WATER	08-JAN-96
8	S-8	WATER	08-JAN-96

---TOTALS---

Matrix	# Samples
WATER	8

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

ANALYTICAL SCHEDULE

Client : ALISTO ENGINEERING
Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA,CA

ATI I.D.: 601080

Analysis	Technique/Description
EPA 160.1 (TOTAL DISSOLVED SOLIDS)	GRAVIMETRIC
MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)	GC/FLAME ION./PHOTO IONIZATION DETECTOR

Client : ALISTO ENGINEERING
Project # : G620649/10-206-03 ATI I.D.: 601080
Project Name: BP SITE #11270/ALAMEDA,CA

Sample #	Client ID	Matrix	Date Sampled	Date Received
1	S-1	WATER	08-JAN-96	11-JAN-96
2	S-2	WATER	08-JAN-96	11-JAN-96
3	S-3	WATER	08-JAN-96	11-JAN-96
4	S-4	WATER	08-JAN-96	11-JAN-96
5	S-5	WATER	08-JAN-96	11-JAN-96

Parameter	Units	1	2	3	4	5
TOTAL DISSOLVED SOLIDS	MG/L	1300	3440	10000	12060	474

GENERAL CHEMISTRY RESULTS

Client : ALISTO ENGINEERING
Project # : G620649/10-206-03 ATI I.D.: 601080
Project Name: BP SITE #11270/ALAMEDA,CA

Sample #	Client ID	Matrix	Date Sampled	Date Received
6	S-6	WATER	08-JAN-96	11-JAN-96

Parameter	Units	6
TOTAL DISSOLVED SOLIDS	MG/L	10000

Client : ALISTO ENGINEERING
Project # : G620649/10-206-03 ATI I.D. : 601080
Project Name: BP SITE #11270/ALAMEDA,CA

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
TOTAL DISSOLVED SOLIDS	601064-02	MG/L	722	714	1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Sample Result - Duplicate Result)*100/Average Result

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
Client : ALISTO ENGINEERING ATI I.D. : 601080
Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1	WATER	08-JAN-96	N/A	13-JAN-96	1.00
2	S-2	WATER	08-JAN-96	N/A	13-JAN-96	1.00
3	S-3	WATER	08-JAN-96	N/A	13-JAN-96	1.00

Parameter	Units	1	2	3
METHYL T-BUTYL ETHER	UG/L	<5.0	<5.0	<5.0@C
BENZENE	UG/L	<0.50	<0.50	<0.50
TOLUENE	UG/L	<0.50	<0.50	<0.50
ETHYLBENZENE	UG/L	<0.50	<0.50	<0.50
XYLENES (TOTAL)	UG/L	<1.0	<1.0	<1.0
FUEL HYDROCARBONS	UG/L	<50	<50	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
SURROGATES				
TRIFLUOROTOLUENE	%	94	95	95

@C EARLY ELUTING UNKNOWN PEAK PRESENT

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
Client : ALISTO ENGINEERING ATI I.D. : 601080
Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA,CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	S-4	WATER	08-JAN-96	N/A	13-JAN-96	1.00
5	S-5	WATER	08-JAN-96	N/A	13-JAN-96	2.00
6	S-6	WATER	08-JAN-96	N/A	18-JAN-96	5.00

Parameter	Units	4	5	6
METHYL T-BUTYL ETHER	UG/L	300	170	1100
BENZENE	UG/L	<0.50	31	<2.5
TOLUENE	UG/L	<0.50	4.7	<2.5
ETHYLBENZENE	UG/L	<0.50	60	<2.5
XYLENES (TOTAL)	UG/L	<1.0	53	<5.0
FUEL HYDROCARBONS	UG/L	90	1300	320
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
SURROGATES				
TRIFLUOROTOLUENE	%	91	99	91

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
Client : ALISTO ENGINEERING ATI I.D. : 601080
Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA,CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
7	S-7	WATER	08-JAN-96	N/A	15-JAN-96	2.00
8	S-8	WATER	08-JAN-96	N/A	14-JAN-96	1.00

Parameter	Units	7	8
METHYL T-BUTYL ETHER	UG/L	150	<5.0
BENZENE	UG/L	27	<0.50
TOLUENE	UG/L	4.0	<0.50
ETHYLBENZENE	UG/L	49	<0.50
XYLENES (TOTAL)	UG/L	44	<1.0
FUEL HYDROCARBONS	UG/L	1000	<50
HYDROCARBON RANGE		C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE
SURROGATES			
TRIFLUOROTOLUENE	%	100	95

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 37845
Client : ALISTO ENGINEERING
Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA,CA

ATI I.D. : 601080
Date Extracted: N/A
Date Analyzed : 15-JAN-96
Dil. Factor : 1.00

Parameters	Units	Results
METHYL T-BUTYL ETHER	UG/L	<5.0
BENZENE	UG/L	<0.50
TOLUENE	UG/L	<0.50
ETHYLBENZENE	UG/L	<0.50
XYLENES (TOTAL)	UG/L	<1.0
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
SURROGATES		
TRIFLUOROTOLUENE	%	93

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 37870
Client : ALISTO ENGINEERING
Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA,CA

ATI I.D. : 601080
Date Extracted: N/A
Date Analyzed : 13-JAN-96
Dil. Factor : 1.00

Parameters	Units	Results
METHYL T-BUTYL ETHER	UG/L	<5.0
BENZENE	UG/L	<0.50
TOLUENE	UG/L	<0.50
ETHYLBENZENE	UG/L	<0.50
XYLENES (TOTAL)	UG/L	<1.0
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
SURROGATES		
TRIFLUOROTOLUENE	%	95

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 37877
Client : ALISTO ENGINEERING
Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA,CA

ATI I.D. : 601080
Date Extracted: N/A
Date Analyzed : 18-JAN-96
Dil. Factor : 1.00

Parameters	Units	Results
METHYL T-BUTYL ETHER	UG/L	<5.0
BENZENE	UG/L	<0.50
TOLUENE	UG/L	<0.50
ETHYLBENZENE	UG/L	<0.50
XYLENES (TOTAL)	UG/L	<1.0
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
SURROGATES		
TRIFLUOROTOLUENE	%	96

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
MSMSD # : 81137
Client : ALISTO ENGINEERING

Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA,CA

ATI I.D. : 601080
Date Extracted: N/A
Date Analyzed : 08-JAN-96
Sample Matrix : WATER
REF I.D. : 512315-01

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	4.8	96	5.2	104	8
TOLUENE	UG/L	<0.50	5.0	4.8	96	5.2	104	8

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
MSMSD # : 81181
Client : ALISTO ENGINEERING

Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA,CA

ATI I.D. : 601080
Date Extracted: N/A
Date Analyzed : 10-JAN-96
Sample Matrix : WATER
REF I.D. : 601037-03

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	4.9	98	4.7	94	4
TOLUENE	UG/L	<0.50	5.0	4.8	96	4.7	94	2

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
MSMSD # : 81233
Client : ALISTO ENGINEERING

Project # : G620649/10-206-03
Project Name: BP SITE #11270/ALAMEDA,CA

ATI I.D. : 601080
Date Extracted: N/A
Date Analyzed : 12-JAN-96
Sample Matrix : WATER
REF I.D. : 601039-02

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	4.8	96	5.2	104	8
TOLUENE	UG/L	<0.50	5.0	4.8	96	5.2	104	8

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank Spike #: 60995
Client : ALISTO ENGINEERING
Project # : G620649/10-206-03
Project Name : BP SITE #11270/ALAMEDA, CA

ATI I.D. : 601080
Date Extracted: N/A
Date Analyzed : 15-JAN-96
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	4.8	5.0	96
TOLUENE	UG/L	<0.50	5.0	5.0	100

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank Spike #: 61043
Client : ALISTO ENGINEERING
Project # : G620649/10-206-03
Project Name : BP SITE #11270/ALAMEDA,CA

ATI I.D. : 601080
Date Extracted: N/A
Date Analyzed : 13-JAN-96
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	5.1	5.0	102
TOLUENE	UG/L	<0.50	5.2	5.0	104

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank Spike #: 61052
Client : ALISTO ENGINEERING
Project # : G620649/10-206-03
Project Name : BP SITE #11270/ALAMEDA,CA

ATI I.D. : 601080
Date Extracted: N/A
Date Analyzed : 18-JAN-96
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	5.1	5.0	102
TOLUENE	UG/L	<0.50	5.1	5.0	102

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

ACCESSION #: 601080 INITIALS: LQ

ATI-SanDiego
SAMPLE CONDITION UPON RECEIPT CHECKLIST
(FOR RE-ACCESSIONS, COMPLETE #7 THRU #9)

1	Does this project require special handling according to NELAC Levels C, D, AFCEE or CLP protocols? If yes, complete a) and b) a) pH sample aliquoted: yes /no /na b) Either 1) Record Bottle Lot #'s: Or 2) Attach Sample Kit Request Form(s)	YES	(NO)
2	Number of Coolers Received If more than one cooler received attach Multiple Cooler Documentation Form (MCD) Indicate "see MCD" on Item 11 below	1	
3	Are custody seals required for this project ?	YES	(N/A)
	a) are Custody Seals present on Cooler(s) ?	YES	(NO)
	If yes, are seals intact ?	YES	NO (NA)
	b) are Custody Seals present on the sample ?	YES	(NO)
	If yes, are seals intact ?	YES	NO (NA)
4	Is there a Chain-Of-Custody (COC)' per cooler ? if not, if a problem is found indicate which samples/test were in the affected cooler on the MCD.	(YES)	NO
5	Is the COC' complete per cooler ? Relinquished: (yes)/no Requested analysis: (yes)/no	(YES)	NO
6	Is the COC' in agreement with the samples received? # Samples: yes/no Sample ID's: yes/no Date sampled: yes/no Matrix: yes/no # containers: yes/no	(YES)	NO
7	Are the samples preserved correctly?	(YES)	NO
8	Is there enough sample for all the requested analyses?	(YES)	NO
9	Are all samples within holding times for the requested analyses?	(YES)	NO
10	Record cooler temperature. Contact PM if temperature is not 4°C ± 2°C.	2.0 °C	
	Is ice present in cooler?	(YES)	NO
11	Were all sample containers received intact (ie. not broken, leaking, etc.)?	(YES)	NO
12	Are samples requiring no headspace, headspace free? N/A	(YES)	NO
13	Are VOA 1st stickers required?	YES	(NO)
14	Are there special comments on the Chain of Custody which require client contact?	YES	(N/A)
15	If yes, was ATI Project Manager notified?	YES	(NO)

Describe "no" items: _____

Was client contacted? yes / no

If yes, Date: _____ Name of Person contacted:

Describe actions taken or client instructions: _____

COC other representative documents, letters, and/or shipping memos

A.T.I. LAB I.D 601080

BP CHAIN OF CUSTODY

No. 071176 Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering	ADDRESS: 1575 Treat Blvd #201	CITY: W.C	STATE: Ca	ZIP CODE: 94598	
BP SITE NUMBER: 11270	BP CORNER ADDRESS/CITY: Alameda, Ca		CONSULTANT PROJECT NUMBER: 10-206-03		
CONSULTANT PROJECT MANAGER: Brady Nagle	PHONE NUMBER: (510) 295-1650	FAX NUMBER: 295-1823	CONSULTANT CONTRACT NUMBER: 6620649		
BP CONTACT: Scott Hooton	BP ADDRESS: Renton, WA	PHONE NUMBER:	FAX NO.:		
LAB CONTACT: ATI	LABORATORY ADDRESS: San Diego, Ca	PHONE NUMBER:	FAX NO.:		
SAMPLED BY (Please Print Name): Larry Gurevenich	SAMPLED BY (Signature): [signature]	SHIPMENT DATE:	SHIPMENT METHOD: Fed Express		

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

AIRBILL NUMBER: 6680234956

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE / LAB SAMPLE #	TPH-G	BTEX	[illegible]	TDS	COMMENTS
S-1	1/8/95	W	3	HCL	01	X	X	X		
S-2	↓	↓	↓	↓	02	↓	↓	↓		
S-3	↓	↓	↓	↓	03	↓	↓	↓		
S-4	↓	↓	↓	↓	04	↓	↓	↓		
S-5	↓	↓	↓	↓	05	↓	↓	↓		
S-6	↓	↓	↓	↓	06	↓	↓	↓		
S-7	↓	↓	2	↓	07	X				
S-8	↓	↓	2	↓	08	X				

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	1/10/95	0900	[signature] Alisto	1/10/96	1330
			[signature]	1/11/96	19:30

ADDITIONAL COMMENTS

CLV-16722
PKG/50

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