BP OIL

BP Oil Company
Environmental Resources Management
Building 13, Suite N
295 SW 41st Street
Renton, Washington 98055-4931
(206) 251-0667

January 24, 1995

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 May 9, 1995** for the above referenced facility.

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

Respectfully,

Scott T. Hooton
Environmental Resources Management
Group Leader

STH:mu msword\ERM11270

cc: Mr. Larry Cummins, RREEF Engineering Group, 1301 Dove Street, #460, Newport Beach, CA 92660

Mr. Eddy So, CRWQCB, San Francisco Bay Region, 2101 Webster St. Suite 500, Oakland CA 94612

Mr. Brady Nagle, Alisto Engineering Group, 1575 Treat Blvd Ste 201, Walnut Creek, CA 94598

Mr. Larry Silva, TOSCO Northwest, 601 Union Street, Suite 2500, Seattle, WA 98101

Mr. Jim Pate, RREEF Management Company, 230-A Alamo Plaza, Alamo, CA 94507

Mr. Gary Pischke, Hydro-Environmental Technologies, Inc., 2363 Mariner Square Drive, Suite 243, Alameda, CA 94501

Site File

GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-206-01-004

Prepared for:

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

Prepared by:

Alisto Engineering Group
1777 Oakland Boulevard, Suite 200
Walnut Creek, California

May 9, 1995

Brady Nagle
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. 10-206-01-004

May 9, 1995

INTRODUCTION

This report presents the results and findings of the February 5, 1995 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 in 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 groundwater monitoring field form and sampling identification numbers 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 in Figure 2. The results of groundwater analysis are shown in 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)	HVOC (ug/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	ND	—	—
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	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-6	02/05/95	6.88 (f)	6.39	0.49	1000	1000	7.6	19	9.1	96	—	5.0	ATI
MW-7	02/05/95	6.62 (f)	7.62	-1.00	280	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	—	5.1	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)	HVOC (ug/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	ND<50	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	4.9	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	ND<50	ND<500	ND<0.25	0.38	ND<0.25	ND<0.50	---	5.2	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	280	ND<500	ND<0.50	ND<0.50	0.63	ND<1.0	---	4.9	ATI
QC-2 (g)	04/05/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (g)	07/28/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (g)	10/26/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (g)	02/05/95	---	---	---	ND<50	---	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	ATI

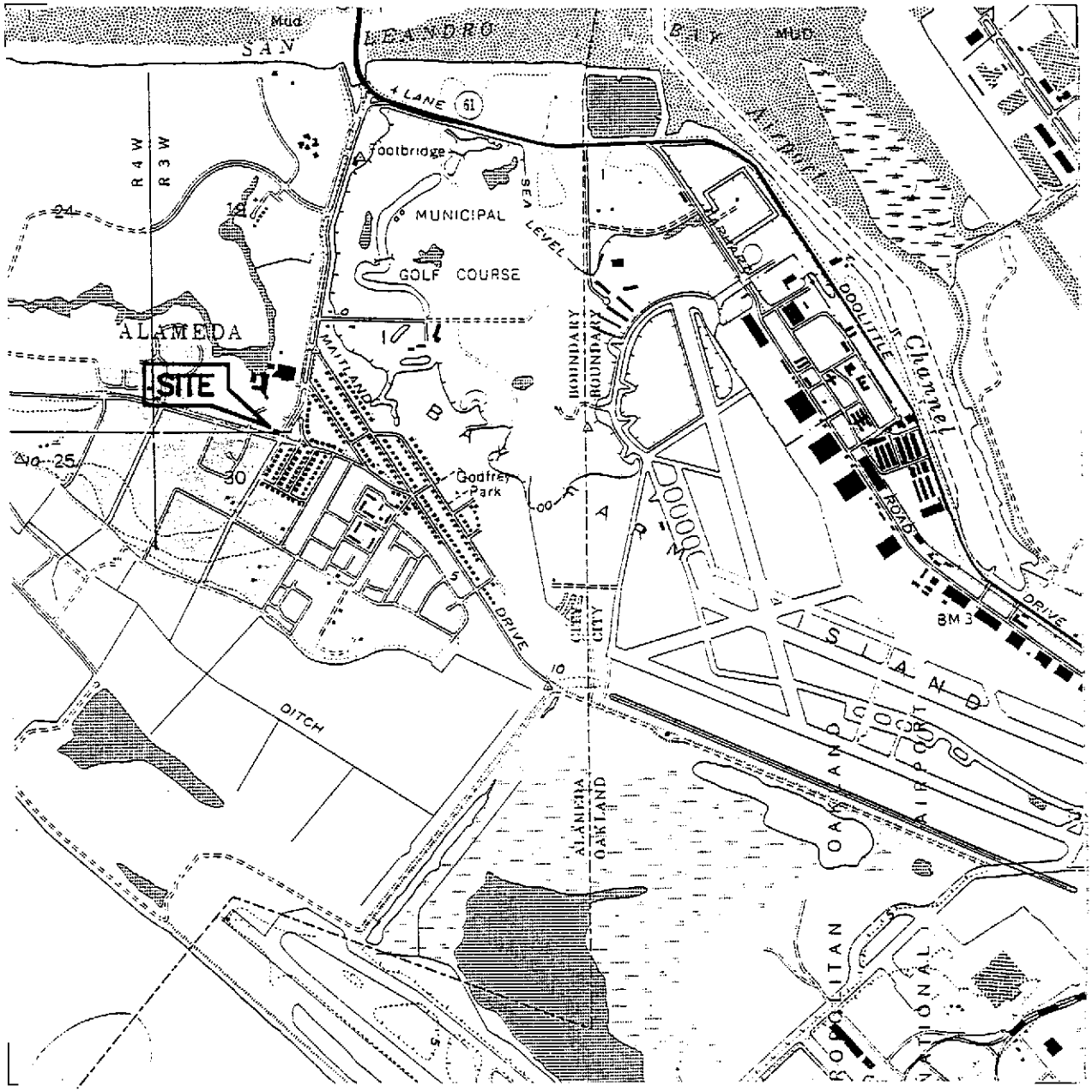
ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
HVOC	Halogenated volatile organic compounds
DO	Dissolved oxygen
ug/L	Micrograms 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 were destroyed by HETI on January 18 and 19, 1995.
(e)	Blind duplicate.
(f)	Top of casing elevations surveyed in reference to temporary benchmark: top of hydrant = 10.00 feet above datum.
(g)	Travel blank.

E:\0\10-206\206-1-4.WQ1



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

N

0 1000' 2000'

FIGURE 1

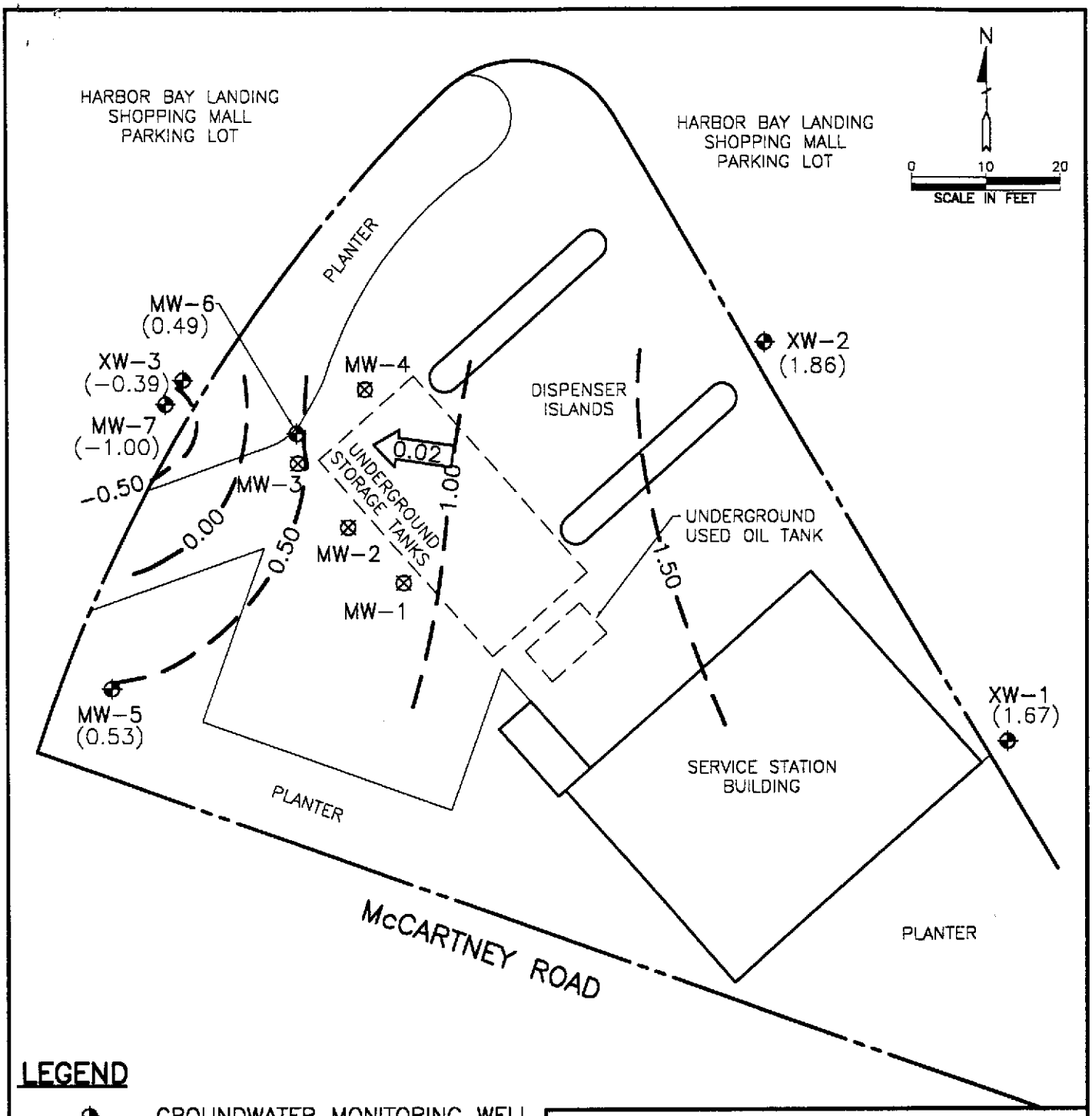
VICINITY MAP

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

PROJECT NO. 10-206

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10206B--DWG 5-2-95 RKW 1-1



LEGEND

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

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

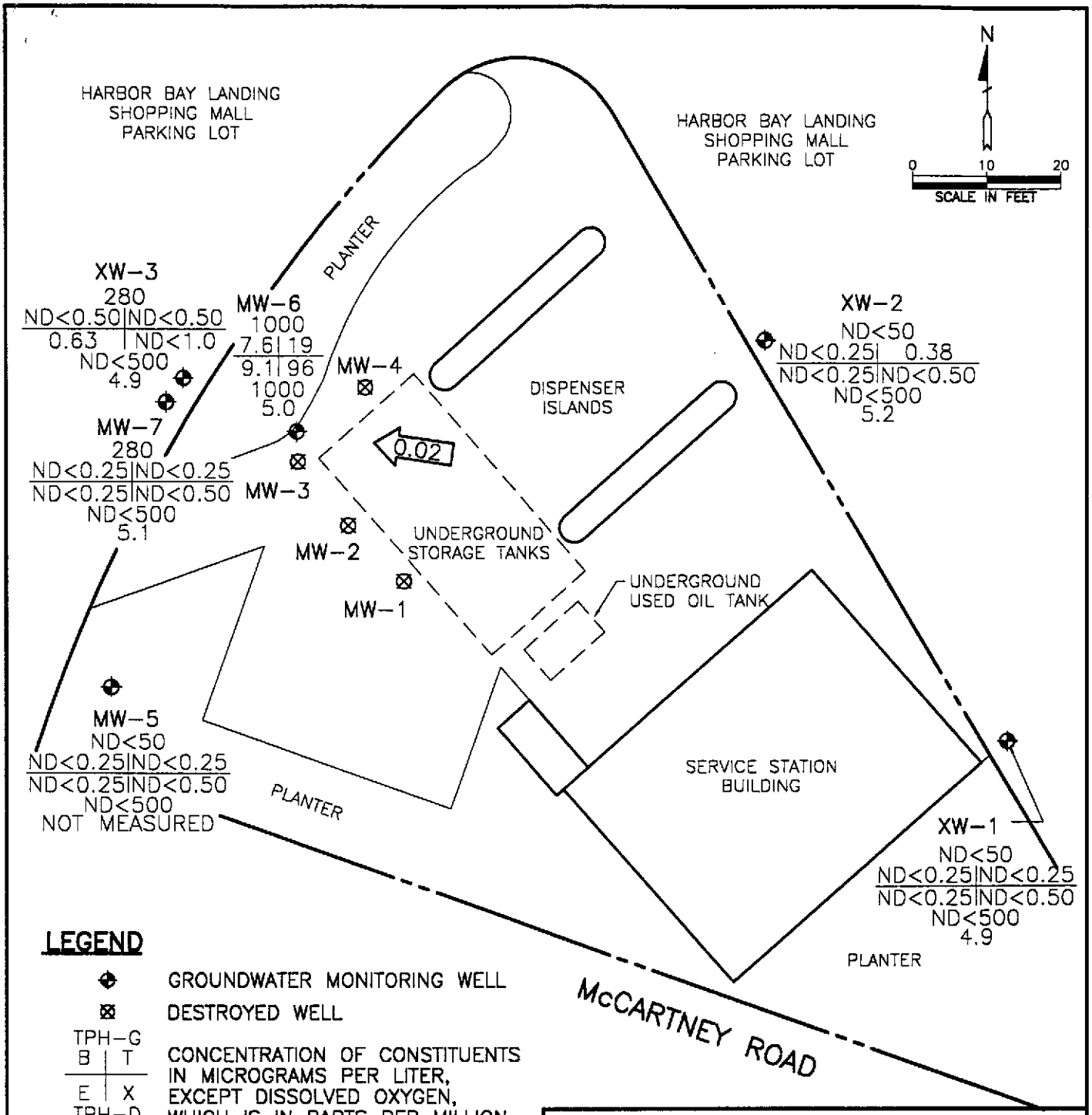
FEBRUARY 5, 1995

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

PROJECT NO. 10–206

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10206D-M DWG 5-2-95 RKW 1-20



LEGEND

⊕	GROUNDWATER MONITORING WELL
⊠	DESTROYED 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
⟵ 0.02	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

FEBRUARY 5, 1995

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

PROJECT NO. 10-206

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10208E-M.DWG 5-2-95 RKW 1-20

APPENDIX A

GROUNDWATER MONITORING FIELD FORM

ALISTO ENGINEERING GROUP
GROUNDWATER MONITORING

Client: BP OIL COMPANY
Alisto Project No: 10-286-01-004
Service Station No: 11270

Date: 2/5/95
Field Personnel: HOA TR WH
Site Address: 3255 McCARTNEY RD., ALAMEDA, CA

FIELD ACTIVITY:

X Groundwater Monitoring
X Groundwater Sampling
___ Well Development

QUALITY CONTROL SAMPLES:

X QC-1 Sample Duplicate (Well ID) MW-5
X QC-2 Trip Blank S-8
___ QC-3 Rinsate Blank

Well ID	Well Diam	Order Measured/ Sampled	Total Depth	Depth to Water	Depth to Product	Product Thick-ness	Comments
MW-5	4"	6		7.83			S-6, S-7
MW-6	4"	1		6.39			S-1
MW-7	2"	2		7.62			S-2
XW-1	↓	5		5.82			S-5
XW-2	↓	4		5.62			S-4
XW-3	↓	3		7.23			S-3

Notes:

MW-1 through MW-4 were previously destroyed.

FORM: FS2/121592

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

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

SECOND COPY

ATI I.D.: 502065

February 20, 1995

ALISTO ENGINEERING
1777 OAKLAND BOULEVARD, SUITE 200
WALNUT CREEK, CA 94596

Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA
Project # : 10-206-01-004/G463120

Attention: BILL HOWELL

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

Date Received	Quantity	Matrix
February 07, 1995	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

ALAN J. KLEINSCHMIDT
LABORATORY MANAGER

Analytical Technologies, Inc.

SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING
Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

Report Date: February 20, 1995
ATI I.D. : 502065

ATI #	Client Description	Matrix	Date Collected
1	S-1	WATER	05-FEB-95
2	S-2	WATER	05-FEB-95
3	S-3	WATER	05-FEB-95
4	S-4	WATER	05-FEB-95
5	S-5	WATER	05-FEB-95
6	S-6	WATER	05-FEB-95
7	S-7	WATER	05-FEB-95
8	S-8	WATER	05-FEB-95

---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 # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D.: 502065

Analysis	Technique/Description
8D EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)	GC/FLAME IONIZATION DETECTOR
8OD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)	GC/FLAME ION./PHOTO IONIZATION DETECTOR

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)
Client : ALISTO ENGINEERING
ATI I.D. : 502065
Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1	WATER	05-FEB-95	08-FEB-95	08-FEB-95	1.00
2	S-2	WATER	05-FEB-95	08-FEB-95	08-FEB-95	1.00
3	S-3	WATER	05-FEB-95	08-FEB-95	09-FEB-95	1.00

Parameter	Units	1	2	3
FUEL HYDROCARBONS	MG/L	1.0	<0.50	<0.50
HYDROCARBON RANGE		C11-C18	-	-
HYDROCARBONS QUANTITATED USING		DIESEL	-	-
SURROGATES				
BIS(2-ETHYLHEXYL)PHTHALATE	%	111	101	116

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)
Client : ALISTO ENGINEERING ATI I.D. : 502065
Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	S-4	WATER	05-FEB-95	08-FEB-95	09-FEB-95	1.00
5	S-5	WATER	05-FEB-95	08-FEB-95	09-FEB-95	1.00
6	S-6	WATER	05-FEB-95	08-FEB-95	09-FEB-95	1.00

Parameter	Units	4	5	6
FUEL HYDROCARBONS	MG/L	<0.50	<0.50	<0.50
HYDROCARBON RANGE		-	-	-
HYDROCARBONS QUANTITATED USING		-	-	-
SURROGATES				
BIS(2-ETHYLHEXYL)PHTHALATE	%	92	63	53*H

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
Blank I.D. : 34299
Client : ALISTO ENGINEERING
Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D. : 502065
Date Extracted: 08-FEB-95
Date Analyzed : 09-FEB-95
Dil. Factor : 1.00

Parameters	Units	Results
FUEL HYDROCARBONS	MG/L	<0.50
HYDROCARBON RANGE		-
HYDROCARBONS QUANTITATED USING		-
SURROGATES		
BIS(2-ETHYLHEXYL)PHTHALATE	%	119

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

est : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
MSMSD # : 72885
Client : ALISTO ENGINEERING

Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D. : 502065
Date Extracted: 08-FEB-95
Date Analyzed : 09-FEB-95
Sample Matrix : WATER
REF I.D. : 502064-01

arameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
FUEL HYDROCARBONS	MG/L	<0.50	10	10	100	9.4	94	6

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

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
Blank Spike #: 54309
Client : ALISTO ENGINEERING
Project # : 10-206-01-004/G463120
Project Name : BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D. : 502065
Date Extracted: 08-FEB-95
Date Analyzed : 08-FEB-95
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
FUEL HYDROCARBONS	MG/L	<0.50	10	10	100

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

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
Client : ALISTO ENGINEERING ATI I.D. : 502065
Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
	S-1	WATER	05-FEB-95	N/A	09-FEB-95	4.00
	S-2	WATER	05-FEB-95	N/A	09-FEB-95	2.00
	S-3	WATER	05-FEB-95	N/A	10-FEB-95	2.00

Parameter	Units	1	2	3
BENZENE	UG/L	7.6	<0.25	<0.50
TOLUENE	UG/L	19	<0.25	<0.50
ETHYLBENZENE	UG/L	9.1	<0.25	0.63
XYLENES (TOTAL)	UG/L	96	<0.50	<1.0
FUEL HYDROCARBONS	UG/L	1000@C	280@C	280@C
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
SURROGATES				
TRIFLUOROTOLUENE	%	96	97	93

@C SAMPLE CONTAINS MTBE PEAK

Analytical Technologies, Inc.

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Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	S-4	WATER	05-FEB-95	N/A	08-FEB-95	1.00
5	S-5	WATER	05-FEB-95	N/A	08-FEB-95	1.00
6	S-6	WATER	05-FEB-95	N/A	10-FEB-95	1.00

Parameter	Units	4	5	6
BENZENE	UG/L	<0.25	<0.25	<0.25
TOLUENE	UG/L	0.38	<0.25	<0.25
ETHYLBENZENE	UG/L	<0.25	<0.25	<0.25
XYLENES (TOTAL)	UG/L	<0.50	<0.50	<0.50
FUEL HYDROCARBONS	UG/L	<50	<50	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
SURROGATES				
TRIFLUOROTOLUENE	%	94	91	97

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

est : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
lient : ALISTO ENGINEERING ATI I.D. : 502065
roject # : 10-206-01-004/G463120
roject Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
7	S-7	WATER	05-FEB-95	N/A	08-FEB-95	1.00
8	S-8	WATER	05-FEB-95	N/A	10-FEB-95	1.00

arameter	Units	7	8
BENZENE	UG/L	<0.25	<0.25
TOLUENE	UG/L	<0.25	<0.25
ETHYLBENZENE	UG/L	<0.25	<0.25
XYLENES (TOTAL)	UG/L	<0.50	<0.50
FUEL HYDROCARBONS	UG/L	<50	<50
HYDROCARBON RANGE		C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE
SURROGATES			
TRIFLUOROTOLUENE	%	94	92

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 34283
Client : ALISTO ENGINEERING
Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D. : 502065
Date Extracted: N/A
Date Analyzed : 08-FEB-95
Dil. Factor : 1.00

Parameters	Units	Results
BENZENE	UG/L	<0.25
TOLUENE	UG/L	<0.25
ETHYLBENZENE	UG/L	<0.25
XYLENES (TOTAL)	UG/L	<0.50
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
SURROGATES		
TRIFLUOROTOLUENE	%	96

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 34327
Client : ALISTO ENGINEERING
Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D. : 502065
Date Extracted: N/A
Date Analyzed : 09-FEB-95
Dil. Factor : 1.00

Parameters	Units	Results
BENZENE	UG/L	<0.25
TOLUENE	UG/L	<0.25
ETHYLBENZENE	UG/L	<0.25
XYLENES (TOTAL)	UG/L	<0.50
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
SURROGATES		
TRIFLUOROTOLUENE	%	102

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 34328
Client : ALISTO ENGINEERING
Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D. : 502065
Date Extracted: N/A
Date Analyzed : 10-FEB-95
Dil. Factor : 1.00

Parameters	Units	Results
BENZENE	UG/L	<0.25
TOLUENE	UG/L	<0.25
ETHYLBENZENE	UG/L	<0.25
XYLENES (TOTAL)	UG/L	<0.50
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
SURROGATES		
TRIFLUOROTOLUENE	%	98

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
MSMSD # : 72836
Client : ALISTO ENGINEERING

Project # : 10-206-01-004/G463120
Project Name: BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D. : 502065
Date Extracted: N/A
Date Analyzed : 08-FEB-95
Sample Matrix : WATER
REF I.D. : 502064-03

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.25	5.0	4.5	90	4.5	90	0
TOLUENE	UG/L	<0.25	5.0	4.3	86	4.3	86	0

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

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank Spike #: 54272
Client : ALISTO ENGINEERING
Project # : 10-206-01-004/G463120
Project Name : BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D. : 502065
Date Extracted: N/A
Date Analyzed : 08-FEB-95
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.25	4.6	5.0	92
TOLUENE	UG/L	<0.25	4.7	5.0	94

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

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

"est : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
.ank Spike #: 54376
.ient : ALISTO ENGINEERING
roject # : 10-206-01-004/G463120
Project Name : BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D. : 502065
Date Extracted: N/A
Date Analyzed : 09-FEB-95
Sample Matrix : WATER

rameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
NZENE	UG/L	<0.25	4.5	5.0	90
LUENE	UG/L	<0.25	4.4	5.0	88

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

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank Spike #: 54378
Client : ALISTO ENGINEERING
Project # : 10-206-01-004/G463120
Project Name : BP SITE#11270/3255 McCARTNEY RD. ALAMEDA, CA

ATI I.D. : 502065
Date Extracted: N/A
Date Analyzed : 10-FEB-95
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.25	5.1	5.0	102
TOLUENE	UG/L	<0.25	5.1	5.0	102

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

ANALYTICAL TECHNOLOGIES, INC.
SAN DIEGO
FLAGS

ORGANICS

FLAG	MESSAGE DESCRIPTION
A	A TIC IS A SUSPECTED ALDOL-CONDENSATION PRODUCT
B	ANALYTE FOUND IN THE ASSOCIATED REAGENT BLANK
C	PESTICIDE, WHERE THE IDENTIFICATION WAS CONFIRMED BY GC/MS
CO	THESE COMPOUNDS CO-ELUTE AND ARE QUANTITATED AS ONE PEAK
D	COMPOUND IDENTIFIED IN AN ANALYSIS AT SECONDARY DILUTION
E	ANALYTE AMOUNT EXCEEDS THE CALIBRATION RANGE
J	ESTIMATED VALUE
H	QUANTIFIED AS DIESEL BUT CHROMATOGRAPHIC PATTERN DOES NOT MATCH THAT OF DIESEL
K	QUANTIFIED AS KEROSENE BUT CHROMATOGRAPHIC PATTERN DOES NOT MATCH THAT OF KEROSENE
L	QUANTIFIED AS GASOLINE BUT CHROMATOGRAPHIC PATTERN DOES NOT MATCH THAT OF GASOLINE
N	PRESUMPTIVE EVIDENCE OF A COMPOUND
P	PESTICIDE/AROCLOR TARGET ANALYTE, WHERE THERE IS GREATER THAN 25% DIFFERENCE FOR DETECTED CONCENTRATION BETWEEN 2 GC COLUMNS
TR	COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL
U	COMPOUND WAS ANALYZED FOR BUT NOT DETECTED
X	SEE CASE NARRATIVE
Y	SEE CASE NARRATIVE
Z	SEE CASE NARRATIVE
*	OUTSIDE OF QUALITY CONTROL LIMITS
*D	COMPOUND ANALYZED FROM A SECONDARY ANALYSIS
*F	RESULT OUTSIDE OF ATI'S QUALITY CONTROL LIMITS
*G	RESULT OUTSIDE QUALITY CONTROL LIMITS. INSUFFICIENT SAMPLE FOR RE-EXTRACTION/ANALYSIS
*H	RESULT OUTSIDE OF LIMITS DUE TO SAMPLE MATRIX INTERFERENCE
*I	BECAUSE OF NECESSARY SAMPLE DILUTION, VALUE WAS OUTSIDE QC LIMITS
*K	DUE TO THE NECESSARY DILUTION OF THE SAMPLE, RESULT WAS NOT ATTAINABLE
*L	ANALYTE IS A SUSPECTED LAB CONTAMINANT
*P	A STANDARD WAS USED TO QUANTITATE THIS VALUE
*R	DATA IS NOT USABLE
*T	SURROGATE RECOVERY IS OUTSIDE QC CONTROL LIMITS. NO CORRECTIVE ACTION INDICATED BY METHOD
*V	SAMPLE RESULT IS >4X SPIKED CONCENTRATION, THEREFORE SPIKE IS NOT DETECTABLE
*Y	RESULT NOT ATTAINABLE DUE TO SAMPLE MATRIX INTERFERENCE
@A	RESULTS OUT OF LIMITS DUE TO SAMPLE NON-HOMOGENEITY
@C	*VARIABLE MESSAGE*
@D	RESULT COULD NOT BE CONFIRMED DUE TO MATRIX INTERFERENCE ON THE CONFIRMATION COLUMN
@E	RESULT MAY BE FALSELY ELEVATED DUE TO SAMPLE MATRIX INTERFERENCE
@F	RESULT OUTSIDE OF CONTRACT SPECIFIED QUALITY CONTROL LIMITS
@G	RESULT OUTSIDE OF CONTRACT SPECIFIED ADVISORY LIMITS
@H	DETECTION LIMIT ELEVATED DUE TO MATRIX INTERFERENCE
@M	RESULT NOT CONFIRMED BY U.V. DUE TO SAMPLE MATRIX INTERFERENCE
@N	RESULT NOT CONFIRMED BY FLUORESCENCE DUE TO SAMPLE MATRIX INTERFERENCE
@P	RESULT QUANTITATED USING FLUORESCENCE ONLY DUE TO THE LOW CONCENTRATION
@Q	DETECTION LIMIT ELEVATED DUE TO LIMITED SAMPLE FOR ANALYSIS
@T	RESULT DUE TO TCLP EXTRACTION MATRIX INTERFERENCE. NO QC LIMITS HAVE BEEN ESTABLISHED
@U	SAMPLE CHROMATOGRAM DOES NOT RESEMBLE COMMON FUEL HYDROCARBON FINGERPRINTS
@Z	SAMPLE CHROMATOGRAM DOES NOT RESEMBLE A FUEL HYDROCARBON

ATL #502065

CHAIN OF CUSTODY

No. 055648 Page 1 of 1

CONSULTANT'S NAME	ADDRESS	CITY	STATE	ZIP CODE
Alisto Engineering Group	1777 Oakland Blvd, Ste 200	Walnut Creek	CA	94596

BP SITE NUMBER	BP CORNER ADDRESS/CITY	CONSULTANT PROJECT NUMBER
BP 11270	3255 McCartney Rd, Alameda, CA	10-2016-01-004.

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
Bill Howell	(510) 295-1650	(510) 295-1823	6463120

BP CONTACT	BP ADDRESS	PHONE NUMBER	FAX NO.
Scott Hooton	Renton, WA		

LAB CONTACT	LABORATORY ADDRESS	PHONE NUMBER	FAX NO.

SAMPLED BY (Please Print Name)	SAMPLED BY (Signature)	SHIPMENT DATE	SHIPMENT METHOD
Hoa Trinh			

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

ANALYSIS REQUIRED

AIRBILL NUMBER

	SAMPLE DESCRIPTION	COLLECTION DATE / TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	HCl TPH G BTEX	— TPH D	COMMENTS
01	S-1	2/5 1330	H2O	3			✓	✓	
02	S-2	2/5 1340		3			✓	✓	
03	S-3	2/5 1345		3			✓	✓	
04	S-4	2/5 1335		3			✓	✓	
05	S-5	2/5 1400		3			✓	✓	
06	S-6	2/5 1405		3			✓	✓	
087	S-7	2/5	↓	2			✓		
098	S-8 Trip Blank ~~2/5~~ 2/7 95			2			✓		
						Witness P. Yelton 2-6-95			1350

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
/ Alisto	2/6/95	950	(ATL)	2-7-95	11:46

ADDITIONAL COMMENTS

Cooler #391 = 2.0°C

CLV-16722

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