



**BP OIL**

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

September 5, 1995

Alameda County Health Care Services Agency  
Attention Ms. Juliet Shin - Senior Hazardous Materials Specialist  
1131 Harbor Bay Parkway, Ste. 250  
Alameda, CA 94502-6577

RE: BP Oil Site No. 11270  
3255 McCartney Road  
Alameda, CA

Dear Ms. Shin:

Enclosed find a report entitled Groundwater Monitoring and Sampling Report, dated June 27, 1995. Please note that we will sample wells MW-5, MW-6, MW-7, XW-1, XW-2, and XW-3 during the scheduled August 1995 sampling event. Additional analyses will also be performed for total dissolved solids.

In response to your letter of June 12, 1995, thank you for confirming that groundwater containing TDS concentrations greater than 3,000 mg/l is not considered to have a present or future beneficial use, as these term are defined under Resolution No. 88-63 of the State Water Resources Control Board. I understand that you have some concerns regarding the capacity for remnant concentrations of petroleum hydrocarbons to adversely effect aquatic life, or to effect humans via exposure pathways other than ingestion of groundwater. Please forward any applicable local guidance documentation regarding assessments of this nature that you may have at your disposal. Absent local guidance, I am assuming that guidance from other agencies (eg. EPA, DTSC) could be used for this determination. If this assumption is not correct, I would appreciate your efforts to correct me.

If you have additional questions, please contact me at your earliest convenience. I can be reached at (206) 251-0689.

Sincerely,

Scott T. Hooton  
Environmental Resources Management

attachment

RECEIVED  
ENVIRONMENTAL  
SEP 11 AM 8:50

GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-206-02-001

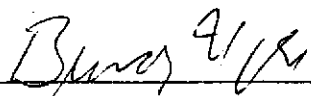
Prepared for:


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

June 27, 1995

  
\_\_\_\_\_  
Brady Nagle  
Project Manager

  
\_\_\_\_\_  
Al Sevilla, P.E.  
Principal



cc: site file

Mr. Al Sevilla, Alisto Engineering Group, 1575 Treat Blvd, Ste 201, Walnut Creek, CA 94598

Mr. Ed So, CRWQCB San Francisco Bay Region, 2101 Webster Street, Ste 500, Oakland, CA 94612

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

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

Mr. Larry Silva, Tosco Northwest Co, 601 Union Street, Ste 2500, Seattle, WA 98101

# GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-206-02-001

June 27, 1995

## INTRODUCTION

This report presents the results and findings of the May 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 (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 (f)	9.00	-0.64 (g)	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	3.1	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 (f)	6.85	0.03 (g)	2300	---	49	9.0	130	46	---	3.3	ATI
QC-1 (e)	05/05/95	---	---	---	2400	---	49	9.2	140	48	---	---	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 (f)	7.64	-1.02 (g)	290	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	3.6	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

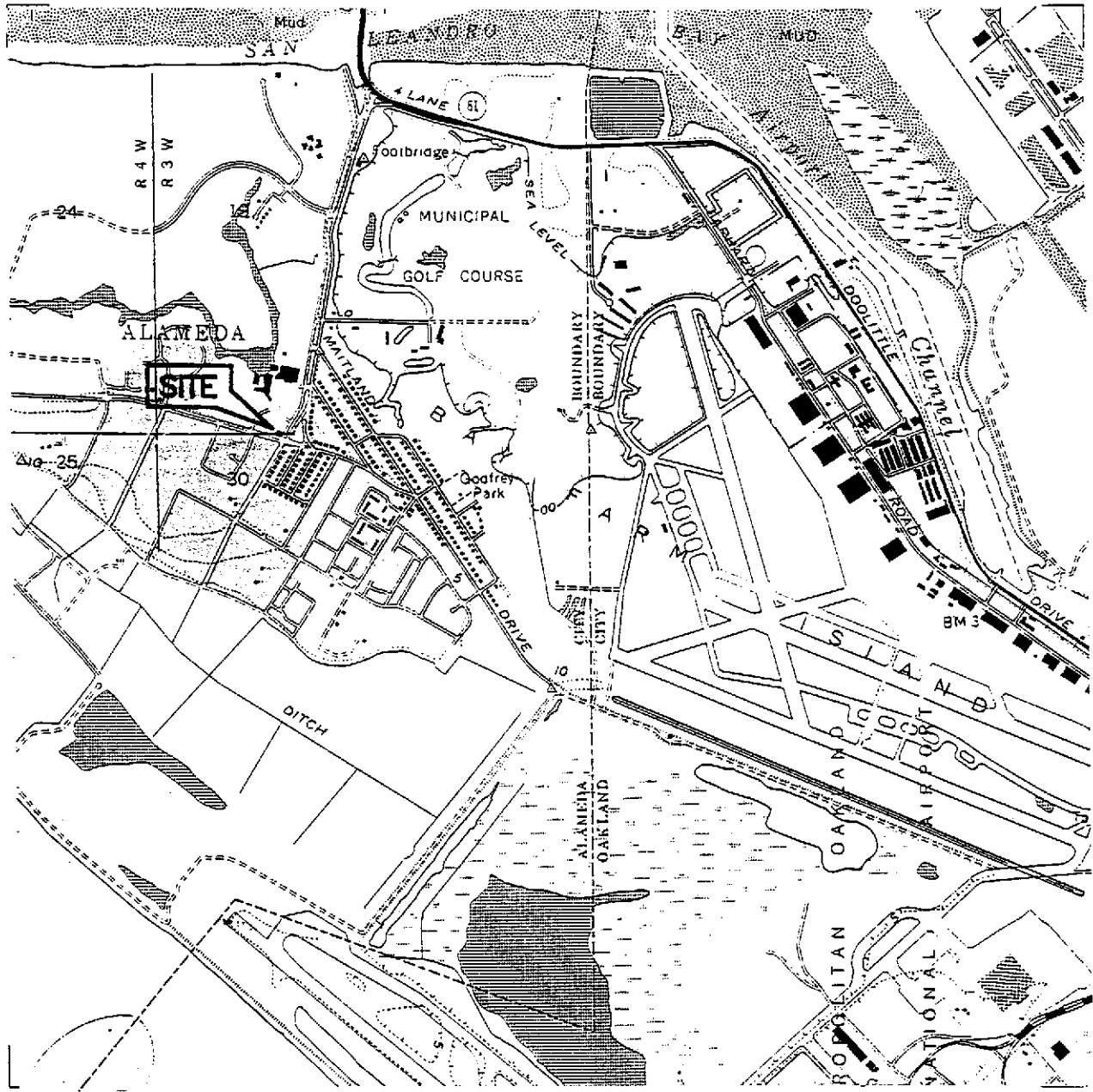
WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
XW-1	06/21/93	---	---	---	---	---	---	---	---	---	---	---	---
XW-1	04/05/94	---	5.36	---	ND<50	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 (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 (f)	5.57	1.92 (g)	---	---	---	---	---	---	---	---	---
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 (f)	5.66	1.82 (g)	---	---	---	---	---	---	---	---	---
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 (f)	7.43	-0.59 (g)	---	---	---	---	---	---	---	---	---
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

ABBREVIATIONS:

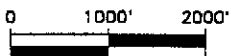
TPH-G Total petroleum hydrocarbons as gasoline  
 TPH-D Total petroleum hydrocarbons as diesel  
 B Benzene  
 T Toluene  
 E Ethylbenzene  
 X Total xylenes  
 HVOC Halogenated volatile organic compounds  
 DO Dissolved oxygen  
 ug/l Micrograms per liter  
 ppm Parts per million  
 --- Not analyzed/measured/applicable  
 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 an arbitrary benchmark: top of hydrant = 10.00 feet above datum.  
 (g) Groundwater elevation relative to an arbitrary datum.  
 (h) Travel blank.



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



### FIGURE 1

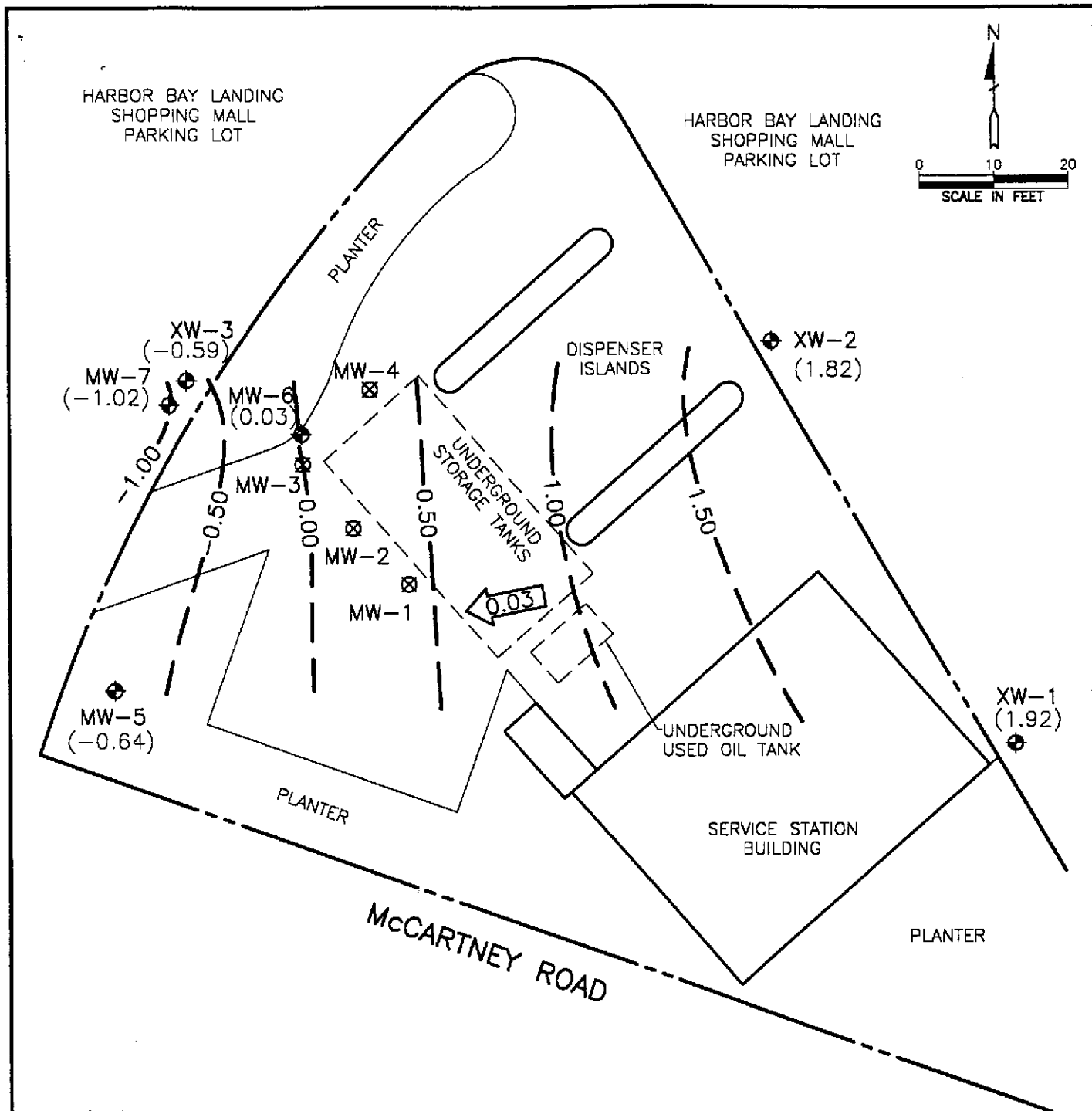
#### VICINITY MAP

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

PROJECT NO. 10-206



**ALISTO ENGINEERING GROUP**  
 WALNUT CREEK, CALIFORNIA



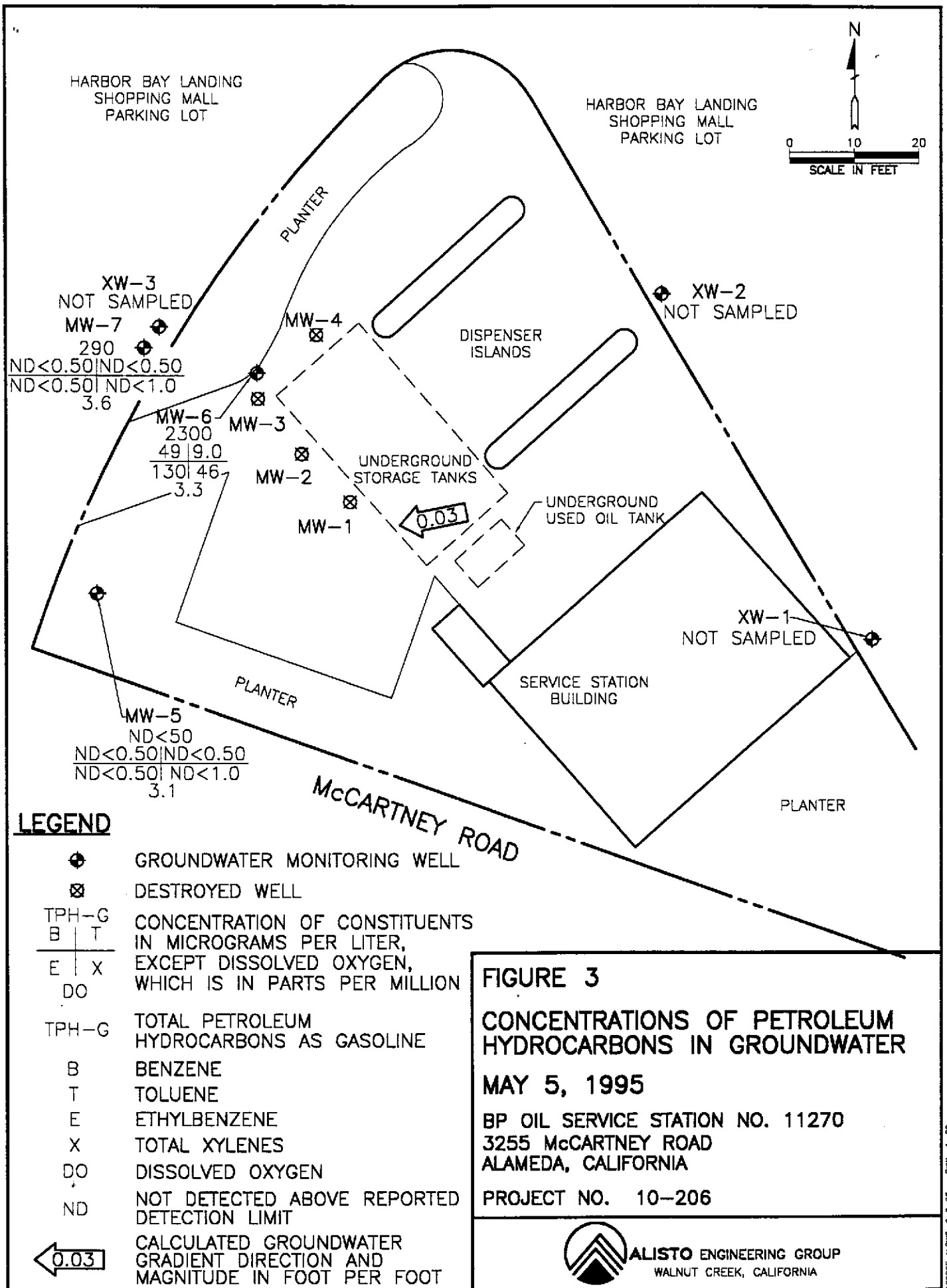
**LEGEND**

- ◆ GROUNDWATER MONITORING WELL
- ⊗ DESTROYED WELL
- (0.03) GROUNDWATER ELEVATION IN FEET ABOVE AN ARBITRARY DATUM
- 1.00 - GROUNDWATER ELEVATION CONTOUR IN FEET RELATIVE TO AN ARBITRARY DATUM (CONTOUR INTERVAL -0.50 FOOT)
- ← 0.03 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

**FIGURE 2**  
**POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP**  
**MAY 5, 1995**  
 BP OIL SERVICE STATION NO. 11270  
 3255 McCARTNEY ROAD  
 ALAMEDA, CALIFORNIA  
 PROJECT NO. 10-206







**APPENDIX A**  
**GROUNDWATER MONITORING FIELD FORM**

# ALISTO ENGINEERING GROUP GROUNDWATER MONITORING

Client: BP  
 Alisto Project No: 10-206-02/001  
 Service Station No: 11270

Date: 5/5/95  
 Field Personnel: LB  
 Site Address: Alameda, CA

**FIELD ACTIVITY:**

- Groundwater Monitoring
- Groundwater Sampling
- Well Development

**QUALITY CONTROL SAMPLES:**

- MW-6QC-1 <sup>S-4</sup> Sample Duplicate (Well ID)
- QC-2 <sup>S-5</sup> Trip Blank
- QC-3 Rinsate Blank

Well ID	Well Diam	Order Measured/ Sampled	Total Depth	Depth to Water	Depth to Product	Product Thickness	Comments
XW-1	2"	1	NM	5.57	∅	∅	
XW-2	2"	2	↓	5.66	↓	↓	
XW-3	2"	3	↓	7.43	↓	↓	
MW-7	2"	4	20.00	7.64	↓	↓	S-1 <small>APPROX T.O.</small>
MW-5	4"	5	14.51	9.00	↓	↓	S-2
MW-6	4"	6	20.00	6.85	↓	↓	S-3 <small>APPROX T.O.</small>

Notes:

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# ALISTO

## Field Report / Sampling Data Sheet

ENGINEERING  
GROUP

Groundwater Sampling

1777 OAKLAND BLVD, STE 200  
WALNUT-CREEK CA 94596 (510) 295-1650 FAX 295-1823

Date: 5/5/95 Project No. 10-206-02/001  
Day: Fri. Station No. 11270  
Weather: Cloudy Address Alameda, Ca  
SAMPLER: WB

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-7	7.64	2"	OK*	Ø	Ø	2	1430	64.9	7.89	11.0 MS	3.4	<input type="checkbox"/> EPA 601
Total Depth - Water Level =						4		64.3	7.77	10.5 MS		<input checked="" type="checkbox"/> TPH-G/BTEX Hcl
20.00 - 7.64 = 12.36 X .16 = 1.98 X 3 = 5.94						6	1442	64.0	7.68	10.1 MS	3.6	<input type="checkbox"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TOG 5520
Comments:												Time Sampled
												447 S-1

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-5	9.00	4"	OK*	Ø	Ø	3	1457	63.9	7.64	10.4 MS	2.8	<input type="checkbox"/> EPA 601
Total Depth - Water Level =						7		64.3	7.51	10.0 MS		<input checked="" type="checkbox"/> TPH-G/BTEX Hcl
14.51 - 9.00 = 5.51 X .65 = 3.58 X 3 = 10.74						11	1520	64.1	7.43	9.8 MS	3.1	<input type="checkbox"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TOG 5520
Comments:												Time Sampled
												1527 S-2

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-6	6.85	4"	OK*	Ø	Ø	9	1545	64.2	7.72	10.7 MS	3.3	<input type="checkbox"/> EPA 601
Total Depth - Water Level =						17		63.8	7.51	10.2 MS		<input checked="" type="checkbox"/> TPH-G/BTEX Hcl
20.00 - 6.85 = 13.15 X .65 = 8.55 X 3 = 25.65						26	1630	63.6	7.47	10.0 MS	3.3	<input type="checkbox"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TOG 5520
Comments: <u>QC-1 Dup taken from this well</u>												Time Sampled
												1635 S-3

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
												<input type="checkbox"/> EPA 601
Total Depth - Water Level =												<input type="checkbox"/> TPH-G/BTEX
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TPH Diesel
Comments:												<input type="checkbox"/> TOG 5520
												Time Sampled

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
												<input type="checkbox"/> EPA 601
Total Depth - Water Level =												<input type="checkbox"/> TPH-G/BTEX
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TPH Diesel
Comments:												<input type="checkbox"/> TOG 5520
												Time Sampled

\* Need 3 blocks Replaced Next quarter.

**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.: 505083

May 19, 1995

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

Project Name: BP SITE#11270/ALAMEDA, CA  
Project # : G463120/10-206-02/001


Attention: BILL HOWELL

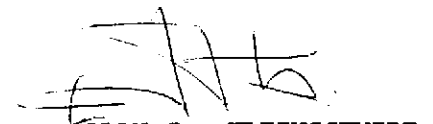
Analytical Technologies, Inc. has received the following sample(s):

<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
May 09, 1995	5	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

## SAMPLE CROSS REFERENCE

Page

Client : ALISTO ENGINEERING  
Project # : G463120/10-206-02/001  
Project Name: BP SITE#11270/ALAMEDA, CA

Report Date: May 19, 1995  
ATI I.D. : 505083

ATI #	Client Description	Matrix	Date Collected
1	S-1	WATER	05-MAY-95
2	S-2	WATER	05-MAY-95
3	S-3	WATER	05-MAY-95
4	S-4	WATER	05-MAY-95
5	S-5	WATER	05-MAY-95

## ---TOTALS---

Matrix# Samples

WATER

5

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 SCHEDULE

Client : ALISTO ENGINEERING  
Project # : G463120/10-206-02/001  
Project Name: BP SITE#11270/ALAMEDA, CA

ATI I.D.: 50508

Analysis	Technique/Description
MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTEX)	GC/FLAME ION./PHOTO IONIZATION DETECTOR





GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTEX)  
 Client : ALISTO ENGINEERING ATI I.D. : 505083  
 Project # : G463120/10-206-02/001  
 Project Name: BP SITE#11270/ALAMEDA, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1	WATER	05-MAY-95	N/A	19-MAY-95	1.00
2	S-2	WATER	05-MAY-95	N/A	19-MAY-95	1.00
3	S-3	WATER	05-MAY-95	N/A	19-MAY-95	5.00

Parameter	Units	1	2	3
BENZENE	UG/L	<0.50	<0.50	49
TOLUENE	UG/L	<0.50	<0.50	9.0
ETHYLBENZENE	UG/L	<0.50	<0.50	130
XYLENES (TOTAL)	UG/L	<1.0	<1.0	46
FUEL HYDROCARBONS	UG/L	290	<50	2300
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE

SURROGATES

TRIFLUOROTOLUENE	%	105	96	107
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GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)  
 Client : ALISTO ENGINEERING  
 Project # : G463120/10-206-02/001  
 Project Name: BP SITE#11270/ALAMEDA, CA

ATI I.D. : 505083

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	S-4	WATER	05-MAY-95	N/A	19-MAY-95	5.00
5	S-5	WATER	05-MAY-95	N/A	19-MAY-95	1.00

Parameter	Units	4	5			
BENZENE	UG/L	49	<0.50			
TOLUENE	UG/L	9.2	<0.50			
ETHYLBENZENE	UG/L	140	<0.50			
XYLENES (TOTAL)	UG/L	48	<1.0			
FUEL HYDROCARBONS	UG/L	2400	<50			
HYDROCARBON RANGE		C6-C12	C6-C12			
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE			
<u>SURROGATES</u>						
TRIFLUOROTOLUENE	%	101	86			



GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
Blank I.D. : 35443  
Client : ALISTO ENGINEERING  
Project # : G463120/10-206-02/001  
Project Name: BP SITE#11270/ALAMEDA, CA

ATI I.D. : 505083  
Date Extracted: N/A  
Date Analyzed : 18-MAY-95  
Dil. Factor : 1.00

Parameters	Units	Results
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
<u>SURROGATES</u>		
TRIFLUOROTOLUENE	%	98



GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 MSMSD # : 75762  
 Client : ALISTO ENGINEERING  
 Project # : G463120/10-206-02/001  
 Project Name: BP SITE#11270/ALAMEDA, CA

ATI I.D. : 505083  
 Date Extracted: N/A  
 Date Analyzed : 17-MAY-95  
 Sample Matrix : WATER  
 REF I.D. : 505085-01

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	4.8	96	4.7	94	2
TOLUENE	UG/L	<0.50	5.0	4.9	98	4.9	98	0

% 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**
**BLANK SPIKE**

**Test** : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
**Blank Spike #**: 56601  
**Client** : ALISTO ENGINEERING  
**Project #** : G463120/10-206-02/001  
**Project Name** : BP SITE#11270/ALAMEDA, CA

**ATI I.D.** : 505083  
**Date Extracted**: N/A  
**Date Analyzed** : 18-MAY-95  
**Sample Matrix** : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	4.7	5.0	94
TOLUENE	UG/L	<0.50	4.9	5.0	98

$\% \text{ Recovery} = (\text{Spike Sample Result} - \text{Sample Result}) * 100 / \text{Spike Concentration}$

$\text{RPD (Relative \% Difference)} = (\text{Spiked Sample} - \text{Blank Result}) * 100 / \text{Average Result}$



# CHAIN OF CUSTODY

No. 055475

Page 1 of 2

CONSULTANT'S NAME <i>Allistic Engineering</i>		ADDRESS <i>1777 Oakland Blvd #200 Walnut Creek Ca</i>		CITY <i>Walnut Creek</i>	STATE <i>Ca</i>	ZIP CODE <i>94596</i>
BP SITE NUMBER <i>11270</i>	BP CORNER ADDRESS/CITY <i>Alameda, Ca</i>		CONSULTANT PROJECT NUMBER <i>10-206-02/01</i>		CONSULTANT CONTRACT NUMBER <i>6463120</i>	
CONSULTANT PROJECT MANAGER <i>Bill Howell</i>		PHONE NUMBER <i>(510) 295-1650</i>	FAX NUMBER <i>295-1823</i>			
BP CONTACT <i>Scott Hooten</i>		BP ADDRESS <i>Lenton, WA</i>	PHONE NUMBER		FAX NO.	
LAB CONTACT <i>ATTN</i>		LABORATORY ADDRESS <i>San Diego, Ca</i>	PHONE NUMBER		FAX NO.	
SAMPLED BY (Please Print Name) <i>Larry Buenavente</i>		SAMPLED BY (Signature) <i>[Signature]</i>		SHIPMENT DATE		SHIPMENT METHOD <i>Fed Express</i>

TAT:  24 Hours  48 Hours  1 Week  Standard 2 Weeks

**ANALYSIS REQUIRED**

AIRBILL NUMBER

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	LAB SAMPLE #	TUBE	COMMENTS
	COLLECTION TIME		NO.	TYPE (VOL.)				
<i>01 S-1</i>	<i>5/8/95</i>	<i>W</i>	<i>2</i>	<i>100</i>			<i>X</i>	
<i>02 S-2</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>			<i>↓</i>	
<i>03 S-3</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>			<i>↓</i>	
<i>04 S-4</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>			<i>↓</i>	
<i>05 S-5</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>			<i>↓</i>	
<i>06 S-6</i>								

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>[Signature]</i>	<i>5/8/95</i>		<i>[Signature]</i>	<i>5/9/95</i>	<i>10:00</i>	<i>505083</i> <i>505083</i>