



BP OIL

BP Oil Company
16400 Southcenter Parkway, Suite 301
Tukwila, Washington 98188
(206) 575-4077

June 23, 1993

Mr. Brian Oliva
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, CA 94621

RE: BP OIL FACILITY #11266
1541 Park Street
Alameda, CA

Attached please find our GROUNDWATER MONITORING AND SAMPLING REPORT for the above referenced facility.

Please call me at (206) 394-5243 with questions regarding this submission.

Respectfully,

Scott T. Hooton
Environmental Resources Management

STH:jc ERM11266

cc: Mr. Eddy So, California Regional Water Quality Control Board, San Francisco Bay Region, 2101 Webster Street, Suite 500, Oakland, Ca 94612

Mr. Markus B. Niebanck, Hydro Environmental Technologies, Inc., 2363 Mariner Square Drive, Suite 243, Alameda, CA 94501

Mr. Brady Nagle, ALISTO, 1777 Oakland Blvd., Suite 200, Walnut Creek, CA 94596

Site file

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11266
1541 Park Street
Alameda, California

Project No. 10-050

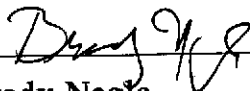
Prepared for:

BP Oil Company
Environmental Resource Management
16400 Southcenter Parkway, Suite 301
Tukwila, Washington

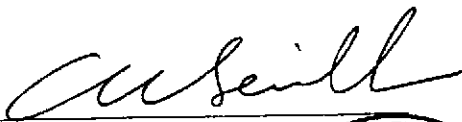
Prepared by:

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

June 7, 1993



Brady Nagle
Project Manager



Al Sevilla, P.E.
Principal



GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11266
1541 Park Street
Alameda, California

Project No. 10-050

June 7, 1993

INTRODUCTION

This report presents the results and findings of the March 24, 1993 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11266, 1541 Park Street, 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 the 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, and electrical conductivity. 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 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. 11266
 1541 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-050

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	LAB
MW-1	03/04/88	22.63	---	---	95000	2000	5900	1100	10000	---
MW-1	03/29/89	22.63	---	---	25000	930	2600	24	3100	---
MW-1	11/28/89	22.63	---	---	15000	280	880	340	1200	---
MW-1	02/13/91	22.63	---	---	25000	680	2700	1100	3200	---
MW-1	01/08/92	22.63	---	---	10000	260	1100	570	2000	---
MW-1	03/30/92	22.63	8.15	14.48	5800	290	570	500	1100	PACE
MW-1	07/02/92	22.63	9.38	13.25	2500	170	60	310	300	ANA
MW-1	07/22/92	22.63	9.62	13.01	---	---	---	---	---	---
MW-1	10/02/92	22.63	9.98	12.65	4000	86	190	270	350	ANA
QC-1 (c)	10/02/92	---	---	---	3600	89	180	270	340	ANA
MW-1	12/14/92	22.63	9.90	12.73	6800	75	540	200	670	ANA
QC-1 (c)	12/14/92	---	---	---	5900	68	480	190	600	ANA
MW-1	03/24/93	22.63	8.52	14.11	6400	150 (d)	310	370	710	PACE
MW-2	03/04/88	22.75	---	---	ND	ND	ND	ND	ND	---
MW-2	03/29/89	22.75	---	---	ND	1.1	0.78	ND	1.7	---
MW-2	11/28/89	22.75	---	---	170	ND	ND	ND	ND	---
MW-2	02/13/91	22.75	---	---	150	1.4	ND	ND	0.9	---
MW-2	01/08/92	22.75	---	---	ND	1.4	ND	ND	1.1	---
MW-2	03/30/92	22.75	9.03	13.72	91	0.7	ND	ND	ND	PACE
MW-2	07/02/92	22.75	9.96	12.79	150	3.1	0.6	0.6	1.1	ANA
MW-2	07/22/92	22.75	10.12	12.63	---	---	---	---	---	---
MW-2	10/02/92	22.75	10.42	12.33	56	ND<0.5	0.8	0.8	1.2	ANA
MW-2	12/14/92	22.75	10.77	11.98	210	1.5	ND<0.5	0.9	2.7	ANA
MW-2	03/24/93	22.75	9.33	13.42	94	0.8	ND<0.5	ND<0.5	0.9	PACE
QC-1 (c)	03/24/93	---	---	---	150	1.8	0.6	1.3	1.3	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11266
 1541 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-050

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	LAB
MW-3	03/04/88	23.45	---	---	ND	ND	ND	ND	ND	---
MW-3	03/29/89	23.45	---	---	ND	ND	ND	ND	ND	---
MW-3	11/28/89	23.45	---	---	ND	ND	ND	ND	ND	---
MW-3	02/13/91	23.45	---	---	ND	ND	ND	ND	ND	---
MW-3	01/08/92	23.45	---	---	ND	ND	ND	ND	ND	---
MW-3	03/30/92	23.45	9.71	13.74	ND	ND	ND	ND	ND	PACE
MW-3	07/02/92	23.45	10.52	12.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-3	07/22/92	23.45	10.62	12.83	---	---	---	---	---	---
MW-3	10/02/92	23.45	10.86	12.59	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-3	12/14/92	23.45	10.53	12.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-3	03/24/93	23.45	9.06	14.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND>0.5	PACE
MW-4	03/04/88	23.63	---	---	ND	ND	ND	ND	ND	---
MW-4	03/29/89	23.63	---	---	ND	ND	ND	ND	ND	---
MW-4	11/28/89	23.63	---	---	430	6.2	0.6	12	3.3	---
MW-4	02/13/91	23.63	---	---	ND	ND	ND	ND	ND	---
MW-4	01/08/92	23.63	---	---	ND	ND	ND	ND	ND	---
MW-4	03/30/92	23.63	8.73	14.90	ND	ND	ND	ND	ND	PACE
MW-4	07/02/92	23.63	10.04	13.59	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-4	07/22/92	23.63	10.26	13.37	---	---	---	---	---	---
MW-4	10/02/92	23.63	10.63	13.00	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-4	12/14/92	23.63	10.02	13.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-4	03/24/93	23.63	9.08	14.55	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11266
 1541 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-050

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	LAB
MW-5	03/04/88	22.87	---	---	ND	ND	ND	ND	ND	---
MW-5	03/29/89	22.87	---	---	ND	ND	ND	ND	ND	---
MW-5	11/28/89	22.87	---	---	ND	ND	ND	ND	ND	---
MW-5	02/13/91	22.87	---	---	ND	ND	ND	ND	ND	---
MW-5	01/08/92	22.87	---	---	ND	ND	ND	ND	ND	---
MW-5	03/30/92	22.87	7.85	15.02	ND	ND	ND	ND	ND	PACE
MW-5	07/02/92	22.87	9.27	13.60	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-5	07/22/92	22.87	9.55	13.32	---	---	---	---	---	---
MW-5	10/02/92	22.87	9.97	12.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-5	12/14/92	22.87	9.14	13.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-5	03/24/93	22.87	8.17	14.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
MW-6	03/04/88	22.85	---	---	ND	ND	ND	ND	ND	---
MW-6	03/29/89	22.85	---	---	ND	ND	ND	ND	ND	---
MW-6	11/28/89	22.85	---	---	ND	ND	ND	ND	ND	---
MW-6	02/13/91	22.85	---	---	ND	ND	ND	ND	ND	---
MW-6	01/08/92	22.85	---	---	ND	ND	ND	ND	ND	---
MW-6	03/30/92	22.85	8.86	13.99	ND	ND	ND	ND	ND	PACE
MW-6	07/02/92	22.85	9.94	12.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-6	07/22/92	22.85	10.10	12.75	---	---	---	---	---	---
MW-6	10/02/92	22.85	10.48	12.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-6	12/14/92	22.85	10.76	12.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-6	03/24/93	22.85	9.19	13.66	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11266
 1541 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-050

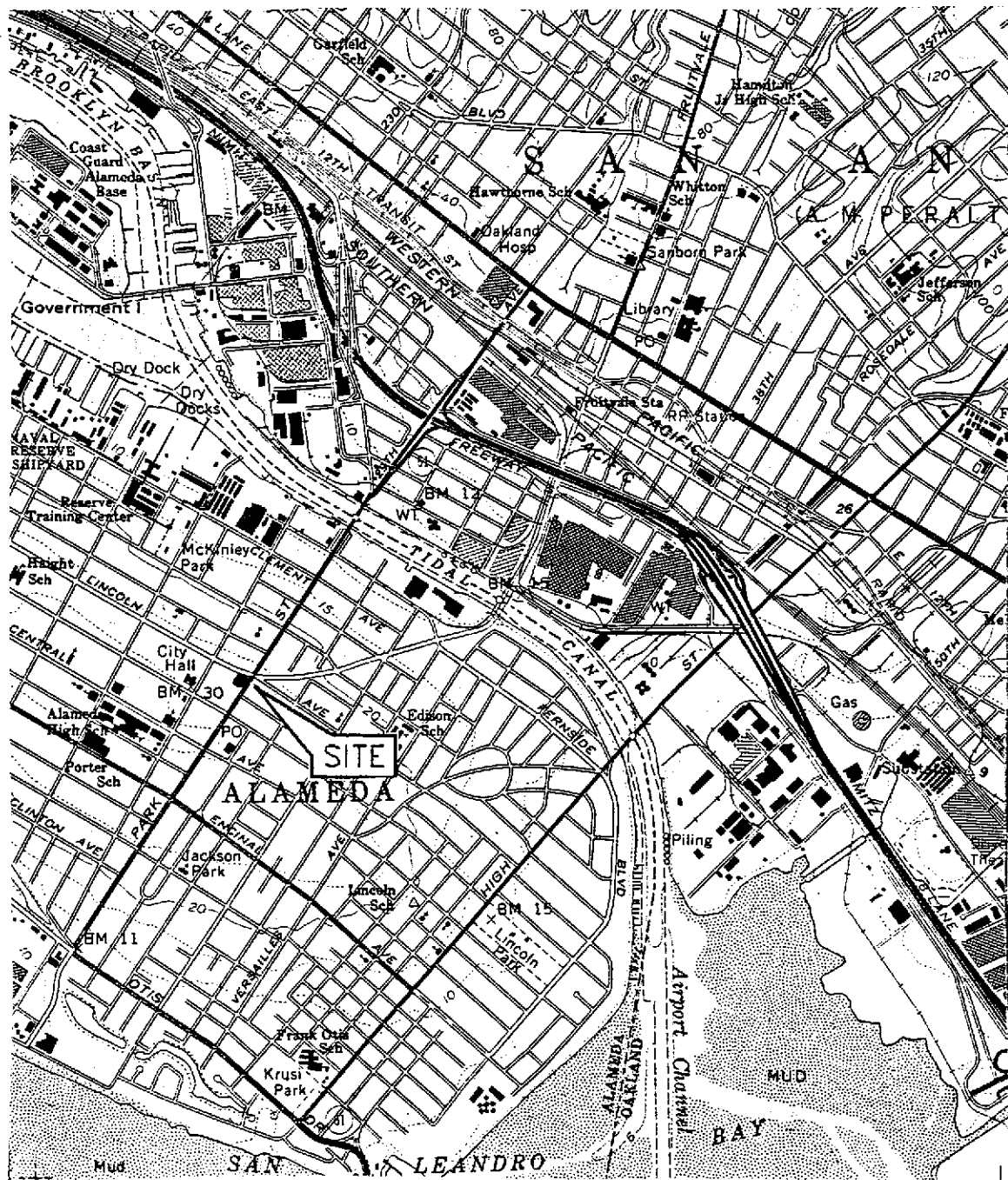
WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	LAB
RW-1	07/22/92	---	9.66	---	13000	1000	3400	380	2800	ANA
RW-1	10/02/92	---	10.28	---	---	---	---	---	---	---
RW-1	12/14/92	---	23.28	---	---	---	---	---	---	---
RW-1	03/24/93	---	8.93	---	660	21 (d)	25	8.3	100	PACE
QC-2 (e)	10/02/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
QC-2 (e)	12/14/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
QC-2 (e)	03/24/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 ppb Parts per billion
 --- Not analyzed/measured/available
 ND Not detected above reported detection limit
 PACE Pace, Inc.
 ANA Anametrix, 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) Blind duplicate.
 (d) A peak eluting earlier than benzene and suspected to be methyl tert butyl ether was present.
 (e) Travel blank.



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

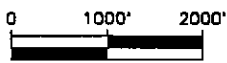


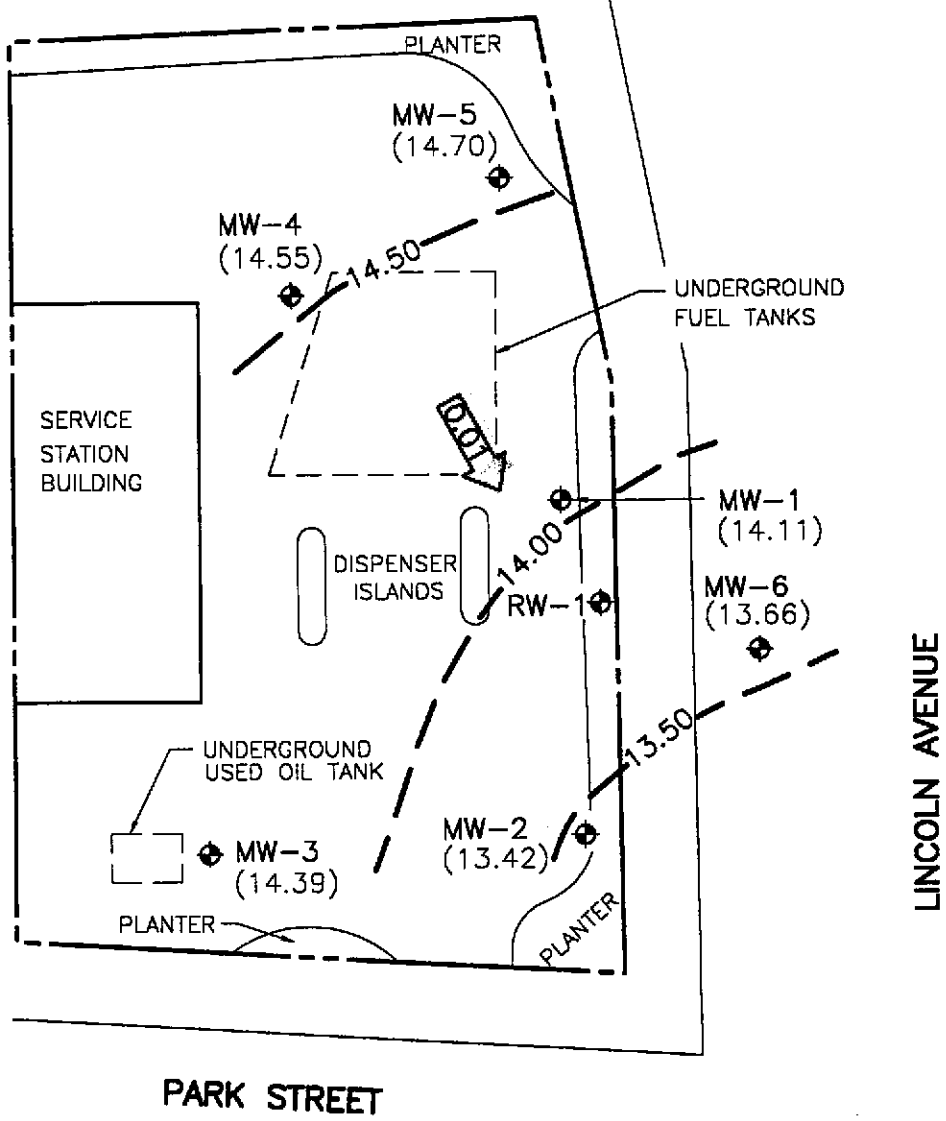
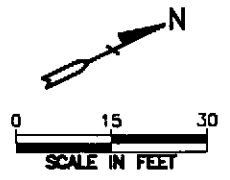
FIGURE 1

SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11266
1541 PARK STREET
ALAMEDA, CALIFORNIA
PROJECT NO. 10-050



ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA

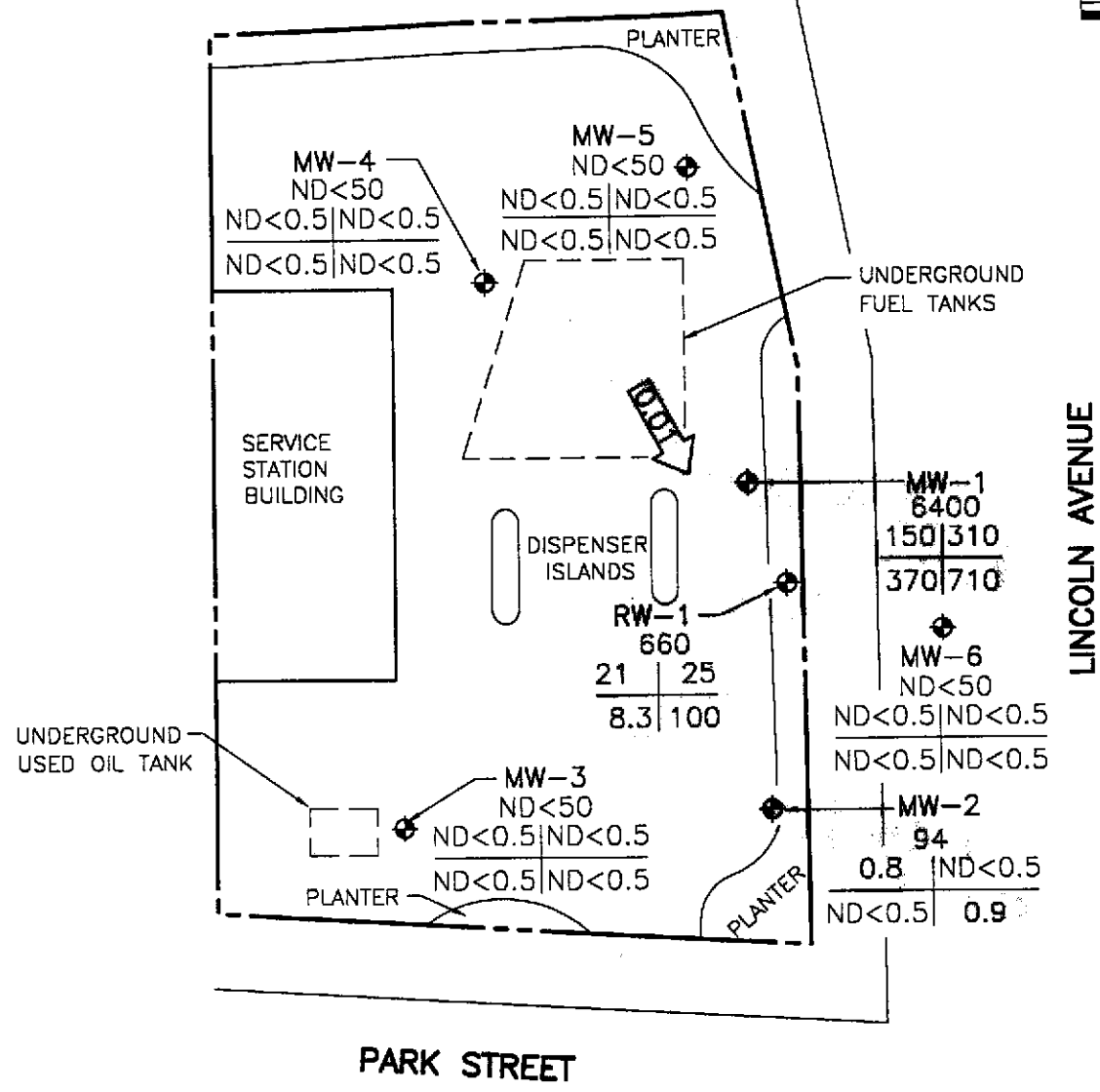
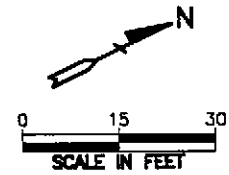


LEGEND

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

FIGURE 2
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP
MARCH 24, 1993
 BP OIL SERVICE STATION NO. 11266
 1541 PARK STREET
 ALAMEDA, CALIFORNIA
 PROJECT NO. 10-050





LEGEND

- ◆ GROUNDWATER MONITORING WELL
- TPH-G CONCENTRATION OF CONSTITUENTS IN PARTS PER BILLION (PPB)
- B | T
- E | X
- TPH-G TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X TOTAL XYLENES
- ND NOT DETECTED ABOVE REPORTED DETECTION LIMIT
- ←0.01 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
MARCH 24, 1993
 BP OIL SERVICE STATION NO. 11266
 1541 PARK STREET
 ALAMEDA, CALIFORNIA
 PROJECT NO. 10-050



1050E-E.DWG 5-8-93 RFI 1-30

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

Groundwater Sampling Groundwater Monitoring Well Development Drill Support Stockpile Sampling

116 Liberty st
Santa Cruz, Ca 95060
(408) 459-0718

Firm: ALISTO	Date: 3/24/93	Station #: BP11266	Day: M Tu (W) Th F
Project Number: 10-050	Field Technician: Dan Birch	Address: 1541 PARK ST., ALAMEDA	Weather: clear

DTW Order	Well ID	Diam.	Lock	Exp Cap	Total Depth (feet)	1st Depth to Water (feet)	2nd Depth to Water (feet)	Depth to Product (feet)	Product Thickness	Comments
7	RW-1	6	ok	ND	29.54	8.72 8.93	8.22 8.93			Depth to top of casing. Depth to port hole in PVC cap.
6	MW-1	2	ok	ok	21.88	8.52	8.52			
5	MW-2	2	ok	ND	23.01	9.33	9.53			
2	MW-3	2	ok	ok	19.59	9.06	9.06			
1	MW-4	2	ok	ok	19.92	9.08	9.08			
4	MW-5	2	ok	ok	24.24	8.17	8.17			
3	MW-6	2	ok	ok	16.95	9.19	9.19			

Notes:

Anive open wells allowing time for equilization before measuring depth to water. System appears not to be operating. Sampled wells and put purge water into poly overpack container in remediation system area.

Birch Technical Services

GROUNDWATER SAMPLING FORM

116 Liberty Street
 Santa Cruz, Ca 95060
 (408) 459-0718

Project Number: 10-050
 Station Number: BP1266
 Date: 3/24/93

Well Number: RW-1
 Sample Type: Groundwater Trip Blank Duplicate of _____
 Sampled by: DAN BIRCH

WELL PURGING

PURGE VOLUME Casing Diameter (inches) 0 2" 0 3" 0 4" 0 4.5" 0 6" 0 _____
 Volume Factors: 0.1632 0.3672 0.6528 0.826 1.469 _____

Total Depth of Well 29.54 Initial Water Level: 8.93 **PURGE METHOD:**
 Honda Pump
 Disposable Poly Tubing (35 ft)
 Speed Winch
 Disposable PVC Bailer(s) (____)
 Other _____
 Total Volume Purged: 91 Time Elapsed: 38
 Calculated Purge Volume:

$$\frac{29.54}{\text{Total Depth}} - \frac{8.93}{\text{Water Level}} = \frac{20.61}{\text{Well Vol. Fac.}} \times \frac{1.47}{\text{# of vol. to Purge}} = \frac{303}{\text{Calculated Purge Volume}} \times \frac{3}{\text{Calculated Purge Volume}} = \frac{90.8}{\text{Calculated Purge Volume}} \text{ (gallons)}$$

Subjective Analysis Prior to Purging

SHEEN Depth to Product Product Thickness
 O Yes No None (ft) None (ft)

PARAMETER EQUIPMENT CALIBRATION

pH Meter #: 9112 Time: 1100
 Solution pH 7.00 _____ at 70 °F
 Solution pH 4.00 _____ at 70 °F
 Solution pH 10.00 _____ at 70 °F
 Water Level Meter#: 10337

COMMENTS:

SAMPLING METHOD

PVC Disposable Bailer Time Sampled
 Teflon Bailer (24 hour clock)
 Other: _____ 1255

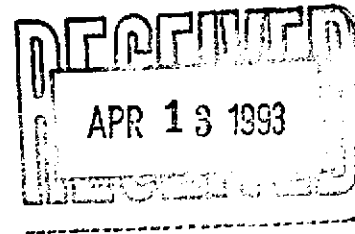
WELL SAMPLING PARAMETERS

Gallons Removed	Time	Temp °F	pH	Cond. (umhos/cm)	Analysis Required	No. of	Container Type	Preservatives
10	1220	64.8	7.93	1.20	EPA 601		VOA's	
30	1224	65.5	7.72	1.18	<input checked="" type="checkbox"/> TPH-G/BTEX	2	VOA's	HCl
40	1232	66.1	7.61	1.24	TPH- Diesel		Amber Liter	
45	1234	66.2	7.30	1.25	TOG 5520 BF		Amber Liter	H ₂ SO ₄
60	1240	68.1	7.29	1.21				
91	1255	68.0	7.30	1.20				

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

April 12, 1993



Mr. Brady Nagle
Alisto Engineering Group
1777 Oakland Blvd, Ste. 200
Walnut Creek, CA 94596

RE: PACE Project No. 430326.515
Client Reference: BP Station # 11266

Dear Mr. Nagle:

Enclosed is the report of laboratory analyses for samples received
March 26, 1993.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free
to contact us.

Sincerely,

A handwritten signature in cursive script that reads "Stephanie Matzo".

Stephanie Matzo
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Alisto Engineering Group
 1777 Oakland Blvd, Ste. 200
 Walnut Creek, CA 94596

April 12, 1993
 PACE Project Number: 430326515

Attn: Mr. Brady Nagle

Client Reference: BP Station # 11266

PACE Sample Number: 70 0035481
 Date Collected: 03/24/93
 Date Received: 03/26/93
 RW-1

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
<u>ORGANIC ANALYSIS</u>			
PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	04/07/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	660
PURGEABLE AROMATICS (BTXE BY EPA 8020M):		-	04/07/93
Benzene	ug/L	0.5	21 (MT)
Toluene	ug/L	0.5	25
Ethylbenzene	ug/L	0.5	8.3
Xylenes, Total	ug/L	0.5	100

Mr. Brady Nagle
 Page 2

April 12, 1993
 PACE Project Number: 430326515

Client Reference: BP Station # 11266

PACE Sample Number: 70 0035490
 Date Collected: 03/24/93
 Date Received: 03/26/93
 Client Sample ID: MW-1

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):			
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	6400
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	150 (MT)
Toluene	ug/L	0.5	310
Ethylbenzene	ug/L	0.5	370
Xylenes, Total	ug/L	0.5	710

Mr. Brady Nagle
 Page 3

April 12, 1993
 PACE Project Number: 430326515

Client Reference: BP Station # 11266

PACE Sample Number: 70 0035503
 Date Collected: 03/24/93
 Date Received: 03/26/93
 Client Sample ID: MW-2

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):			
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	0.8
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	0.9

REPORT OF LABORATORY ANALYSIS

Mr. Brady Nagle
 Page 4

April 12, 1993
 PACE Project Number: 430326515

Client Reference: BP Station # 11266

PACE Sample Number: 70 0035511
 Date Collected: 03/24/93
 Date Received: 03/26/93
 Client Sample ID: MW-3

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	04/06/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 04/06/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	ND 04/06/93
Toluene	ug/L	0.5	ND 04/06/93
Ethylbenzene	ug/L	0.5	ND 04/06/93
Xylenes, Total	ug/L	0.5	ND 04/06/93

REPORT OF LABORATORY ANALYSIS

Mr. Brady Nagle
 Page 5

April 12, 1993
 PACE Project Number: 430326515

Client Reference: BP Station # 11266

PACE Sample Number: 70 0035520
 Date Collected: 03/24/93
 Date Received: 03/26/93
 Client Sample ID: MW-4

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	04/06/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 04/06/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	ND 04/06/93
Toluene	ug/L	0.5	ND 04/06/93
Ethylbenzene	ug/L	0.5	ND 04/06/93
Xylenes, Total	ug/L	0.5	ND 04/06/93

Mr. Brady Nagle
 Page 6

April 12, 1993
 PACE Project Number: 430326515

Client Reference: BP Station # 11266

PACE Sample Number: 70 0035538
 Date Collected: 03/24/93
 Date Received: 03/26/93
 Client Sample ID: MW-5

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/06/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	04/06/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/06/93
Benzene	ug/L	0.5	ND	04/06/93
Toluene	ug/L	0.5	ND	04/06/93
Ethylbenzene	ug/L	0.5	ND	04/06/93
Xylenes, Total	ug/L	0.5	ND	04/06/93

REPORT OF LABORATORY ANALYSIS

Mr. Brady Nagle
 Page 7

April 12, 1993
 PACE Project Number: 430326515

Client Reference: BP Station # 11266

PACE Sample Number: 70 0035546
 Date Collected: 03/24/93
 Date Received: 03/26/93
 Client Sample ID: MW-6

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):			
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

Mr. Brady Nagle
 Page 8

April 12, 1993
 PACE Project Number: 430326515

Client Reference: BP Station # 11266

PACE Sample Number: 70 0035554
 Date Collected: 03/24/93
 Date Received: 03/26/93
 Client Sample ID: QC-1

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/06/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	150	04/06/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/06/93
Benzene	ug/L	0.5	1.8	04/06/93
Toluene	ug/L	0.5	0.6	04/06/93
Ethylbenzene	ug/L	0.5	1.3	04/06/93
Xylenes, Total	ug/L	0.5	1.3	04/06/93

Mr. Brady Nagle
 Page 9

April 12, 1993
 PACE Project Number: 430326515

Client Reference: BP Station # 11266

PACE Sample Number: 70 0035562
 Date Collected: 03/24/93
 Date Received: 03/26/93
 Client Sample ID: QC-2

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	04/06/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 04/06/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):		-	04/06/93
Benzene	ug/L	0.5	ND 04/06/93
Toluene	ug/L	0.5	ND 04/06/93
Ethylbenzene	ug/L	0.5	ND 04/06/93
Xylenes, Total	ug/L	0.5	ND 04/06/93

These data have been reviewed and are approved for release.



Darrell C. Cain
 Regional Director

Mr. Brady Nagle
Page 10

FOOTNOTES
for pages 1 through 9

April 12, 1993
PACE Project Number: 430326515

Client Reference: BP Station # 11266

MDL Method Detection Limit
ND Not detected at or above the MDL.
(MT) A peak eluting earlier than Benzene and suspected to be methyl tert
butyl ether was present in your samples RW-1 and MW-1 at approximately
315 ppb and 1400 ppb respectively.

REPORT OF LABORATORY ANALYSIS

Mr. Brady Nagle
 Page 11

QUALITY CONTROL DATA

April 12, 1993
 PACE Project Number: 430326515

Client Reference: BP Station # 11266

PURGEABLE FUELS AND AROMATICS

Batch: 70 20020

Samples: 70 0035481, 70 0035490, 70 0035503, 70 0035511, 70 0035520
 70 0035538, 70 0035546, 70 0035554, 70 0035562

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M)			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Reference Value</u>	<u>Recv</u>	<u>Dupl Recv</u>	<u>RPD</u>
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	94%	91%	3%
Benzene	ug/L	0.5	40.0	94%	91%	3%
Toluene	ug/L	0.5	40.0	94%	88%	6%
Ethylbenzene	ug/L	0.5	40.0	94%	91%	3%
Xylenes, Total	ug/L	0.5	120	93%	89%	4%

Mr. Brady Nagle
Page 12

FOOTNOTES
for page 11

April 12, 1993
PACE Project Number: 430326515

Client Reference: BP Station # 11266

MDL Method Detection Limit
ND Not detected at or above the MDL.
RPD Relative Percent Difference

