



BP OIL

ENVIRONMENTAL
PROTECTION

95 MAR -2 PM 1:43

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

February 28, 1995

Mr. Ed So
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland CA 94612

**RE: BP OIL FACILITY #11126
1700 Powell Street
Emeryville, California**

Dear Mr. So:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING REPORT
DATED JANUARY 31, 1995** for the above referenced facility.

Please note that I have solicited proposals for a groundwater pumping test and for a soil vapor extraction test. A contractor will be selected in the next four to six weeks.

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\ERM11126

cc: Ms. Susan Hugo, Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Room 250, Oakland, CA 94502-6577

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

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

Site File

GROUNDWATER MONITORING AND SAMPLING REPORT

**BP Oil Company Service Station No. 11126
1700 Powell Street
Emeryville, California**

Project No. 10-061-03-004

Prepared for:

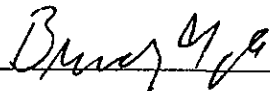
**BP Oil Company
Environmental Resources Management
295 S.W. 41st Street
Building 13, Suite N
Renton, Washington**

ENVIRONMENTAL
PROTECTION
95 MAR -2 PM 1:43


Prepared by:

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

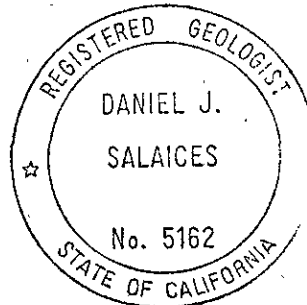
January 31, 1995



**Brady Nagle
Project Manager**



**Dan Salaices
Registered Geologist**



GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11126
1700 Powell Street
Emeryville, California

Project No. 10-061-03-004

January 31, 1995

INTRODUCTION

This report presents the results and findings of the October 18, 1994 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11126, 1700 Powell Street, Emeryville, 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, 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.

FREE PRODUCT MONITORING AND RECOVERY

Product recovery canisters have been installed in Monitoring Well MW-9 to recover liquid-phase product. Product thicknesses for this and previous monitoring events are presented in Table 1. The volume of product recovered is presented in Table 2.



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. 11126
 1700 POWELL STREET, EMERYVILLE, CALIFORNIA

ALISTO PROJECT NO. 10-061

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	TPH-D (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TOG (ppb)	HVOC (ppb)	DO (ppm)	LAB
MW-1	11/04/92	7.76	4.96	--	2.80	5300	--	1100	480	ND<0.5	1500	--	--	--	PACE
MW-1	10/12/93	7.76	5.26	--	2.50	3600	--	970	71	100	550	--	--	--	PACE
MW-1	02/15/94	7.76	4.98	--	2.78	17000	--	4200	510	360	1600	--	--	3.9	PACE
MW-1	05/11/94	7.76	4.55	--	3.21	5500	--	2900	37	56	64	--	--	8.0	PACE
MW-1	08/01/94	7.76	5.51	--	2.25	15000	--	3600	740	510	2800	--	--	2.9	PACE
QC-1 (c)	08/01/94	--	--	--	--	16000	--	3600	750	510	2800	--	--	--	PACE
MW-1	10/18/94	7.76	5.11	--	2.65	16000	--	1800	61	160	890	--	--	2.9	PACE
QC-1 (c)	10/18/94	--	--	--	--	16000	--	1900	64	170	950	--	--	--	PACE
MW-2	11/04/92	8.56	5.88	--	2.68	12000	--	3900	1300	ND<0.5	2300	--	--	--	PACE
QC-1 (c)	11/04/92	8.56	5.88	--	2.68	12000	--	3200	980	ND<0.5	1900	--	--	--	PACE
MW-2	10/12/93	8.56	6.29	--	2.27	4500	--	3400	180	230	940	--	--	--	PACE
MW-2	02/15/94	8.56	5.56	--	3.00	2000	--	430	270	28	390	--	--	4.0	PACE
QC-1 (c)	02/15/94	8.56	5.56	--	3.00	1800	--	290	160	14	250	--	--	--	PACE
MW-2	05/11/94	8.56	5.17	--	3.39	14000	--	3900	1200	440	1900	--	--	8.9	PACE
QC-1 (c)	05/11/94	8.56	--	--	--	15000	--	5600	1500	470	2000	--	--	--	PACE
MW-2	08/01/94	8.56	5.43	--	3.13	8200	--	3000	420	230	680	--	--	2.6	PACE
MW-2	10/18/94	8.56	5.71	--	2.85	9000	--	2000	140	150	420	--	--	7.2	PACE
MW-3	11/04/92	8.25	6.38	--	1.87	200	690	1.6	ND<0.5	ND<0.5	1.1	ND<5000	ND (d)	--	PACE
MW-3	10/12/93	8.25	5.84	--	2.41	270	2100	5.0	0.7	ND<0.5	2.6	ND<5000	ND (d)	--	PACE
QC-1 (c)	10/12/93	8.25	5.84	--	2.41	150	--	5.6	0.6	ND<0.5	1.6	--	--	--	PACE
MW-3	02/15/94	8.25	6.60	--	1.65	140	2.3	5.7	ND<0.5	ND<0.5	ND<0.5	90	ND (d)	3.9	PACE
MW-3	05/11/94	8.25	5.86	--	2.39	190	2500	2.7	1.9	ND<0.5	1.9	ND<5000	ND (d)	9.2	PACE
MW-3	08/01/94	8.25	6.13	--	2.12	120	1300	1.3	ND<0.5	0.5	1.1	ND<5000	ND (d)	2.9	PACE
MW-3	10/18/94	8.25	6.39	--	1.86	100	2200	2.3	ND<0.5	ND<0.5	ND<0.5	ND<5000	ND (d)	3.6	PACE
MW-4	11/04/92	8.12	6.66	--	1.46	340	--	4.5	ND<0.5	4.3	ND<0.5	--	--	--	PACE
MW-4	10/12/93	8.12	6.87	--	1.25	160	--	5.8	1.4	0.8	2.7	--	--	--	PACE
MW-4	02/15/94	8.12	6.61	--	1.51	110	--	4.4	0.7	ND<0.5	2.5	--	--	4.3	PACE
MW-4	05/11/94	8.12	5.89	--	2.23	120	--	0.5	0.8	ND<0.5	ND<0.5	--	--	9.3	PACE
MW-4	08/01/94	8.12	6.87	--	1.25	140	--	0.7	2.0	5.2	15	--	--	3.3	PACE
MW-4	10/18/94	8.12	6.62	--	1.50	140	--	3.5	ND<0.5	0.5	ND<0.5	--	--	3.0	PACE
MW-5	10/12/93	7.69	6.01	--	1.68	--	--	--	--	--	--	--	--	--	--
MW-5	10/13/93	--	--	--	--	2300	--	160	10	ND<0.5	26	--	--	--	PACE
MW-5	02/15/94	7.69	5.74	--	1.95	5100	--	710	16	33	35	--	--	4.0	PACE
MW-5	05/11/94	7.69	5.28	--	2.41	11000	--	1100	39	110	57	--	--	8.0	PACE
MW-5	08/01/94	7.69	5.84	--	1.85	9000	--	730	35	61	41	--	--	2.6	PACE
MW-5	10/18/94	7.69	6.01	--	1.68	7800	--	330	30	27	27	--	--	5.6	PACE
MW-6	10/12/93	8.52	6.59	--	1.93	63	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
MW-6	02/15/94	8.52	6.31	--	2.21	68	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	3.1	PACE
MW-6	05/11/94	8.52	6.15	--	2.37	68	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	8.7	PACE
MW-6	08/01/94	8.52	6.46	--	2.06	91	--	ND<0.5	ND<0.5	ND<0.5	0.6	--	--	2.4	PACE
MW-6	10/18/94	8.52	6.72	--	1.80	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	6.0	PACE
MW-7	10/12/93	7.61	6.14	--	1.47	ND<50	--	ND<0.5	ND<0.5	ND<0.5	0.7	--	--	--	PACE
MW-7	02/15/94	7.61	5.88	--	1.73	78	--	ND<0.5	ND<0.5	ND<0.5	0.6	--	--	4.0	PACE
MW-7	05/11/94	7.61	5.76	--	1.85	70	--	ND<0.5	ND<0.5	ND<0.5	0.9	--	--	9.1	PACE
MW-7	08/01/94	7.61	5.97	--	1.64	77	--	ND<0.5	ND<0.5	ND<0.5	0.5	--	--	2.5	PACE
MW-7	10/18/94	7.61	6.24	--	1.37	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	6.3	PACE
MW-8	10/12/93	8.60	5.86	--	2.74	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
MW-8	02/15/94	8.60	5.50	--	3.10	380	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	3.3	PACE
MW-8	05/11/94	8.60	5.09	--	3.51	330	--	ND<0.5	1.2	ND<0.5	1.9	--	--	8.5	PACE
MW-8	08/01/94	8.60	5.20	--	3.40	260	--	ND<0.5	1.2	2.9	5.8	--	--	2.3	PACE
MW-8	10/18/94	8.60	5.70	--	2.90	82	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	6.4	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11126
 1700 POWELL STREET, EMERYVILLE, CALIFORNIA

ALISTO PROJECT NO. 10-061

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	TPH-D (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TOG (ppb)	HVOC (ppb)	DO (ppm)	LAB
MW-9 (e)	10/12/93	8.08	5.66	0.08	2.48	--	--	--	--	--	--	--	--	--	--
MW-9 (e)	02/15/94	8.08	5.32	0.05	2.80	--	--	--	--	--	--	--	--	--	--
MW-9 (e)	05/11/94	8.08	5.57	--	2.51	--	--	--	--	--	--	--	--	--	--
MW-9 (e)	08/01/94	8.08	6.25	--	1.83	--	--	--	--	--	--	--	--	--	--
MW-9 (e)	10/18/94	8.08	5.59	0.13	2.59	--	--	--	--	--	--	--	--	--	--
QC-2 (f)	11/05/92	--	--	--	--	ND-50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
QC-2 (f)	10/12/93	--	--	--	--	ND-50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
QC-2 (f)	02/15/94	--	--	--	--	ND-50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
QC-2 (f)	05/11/94	--	--	--	--	ND-50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
QC-2 (f)	08/01/94	--	--	--	--	ND-50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
QC-2 (f)	10/18/94	--	--	--	--	ND-50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 TPH-D Total petroleum hydrocarbons as diesel
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 TOG Total oil and grease
 HVOC Halogenated volatile organic compounds
 DO Dissolved oxygen
 ppb Parts per billion
 ppm Parts per million
 ND Not detected above reported detection limit
 -- Not analyzed/applicable/measurable
 PACE Pace, Inc.

NOTES:

- (a) Top of casing elevations surveyed relative to an established benchmark with an elevation of 8.11 feet above mean sea level.
 (b) Groundwater elevations in feet above mean sea level.
 (c) Blind duplicate.
 (d) Detection limits vary; see laboratory report.
 (e) Not sampled due to presence of free product.
 (f) Travel blank.

E:\10-061061-3-4W WQ1



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

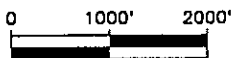
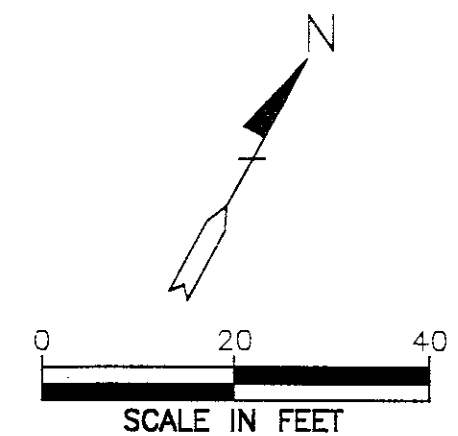
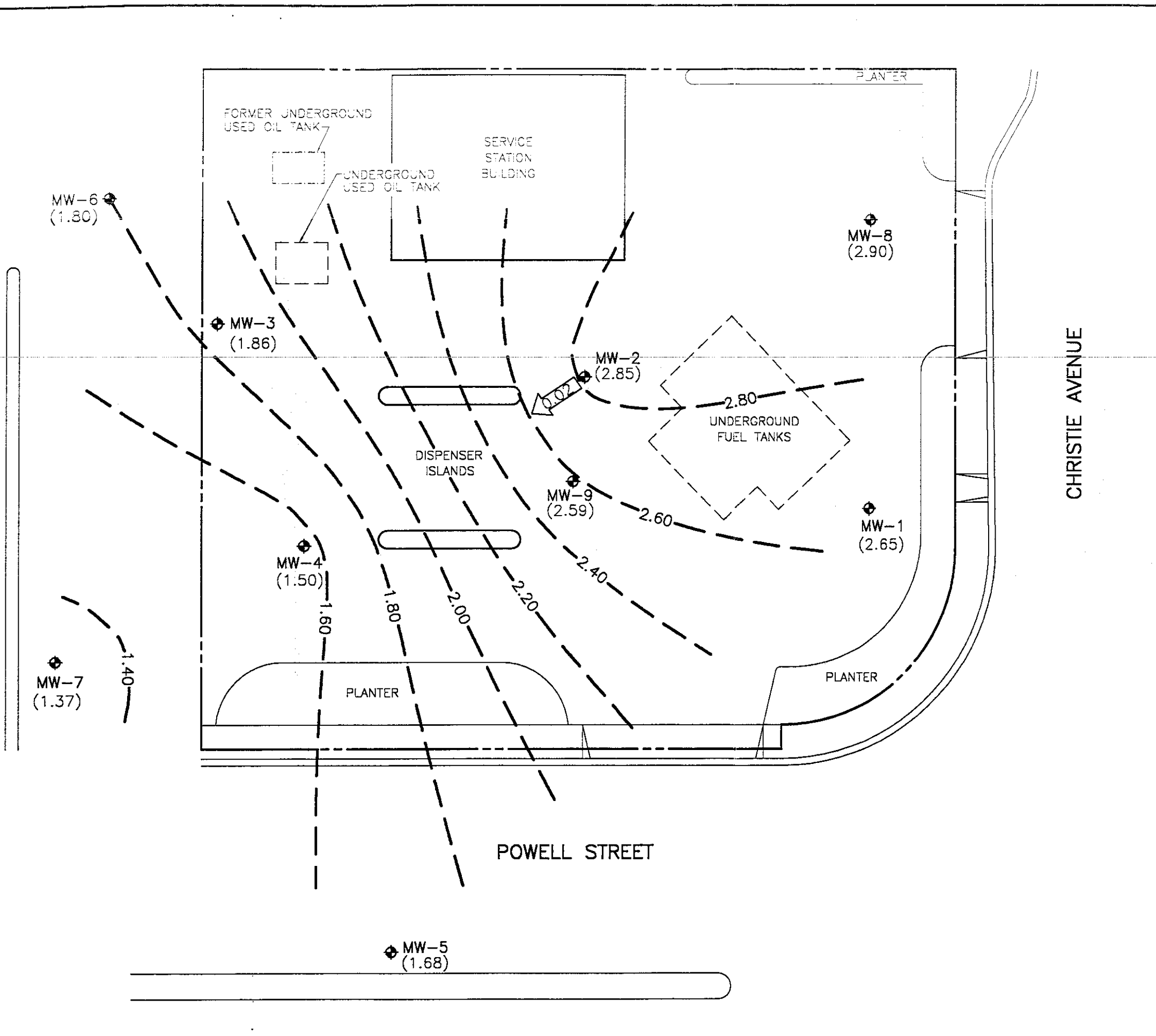


FIGURE 1
SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA
PROJECT NO. 10-061



ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA

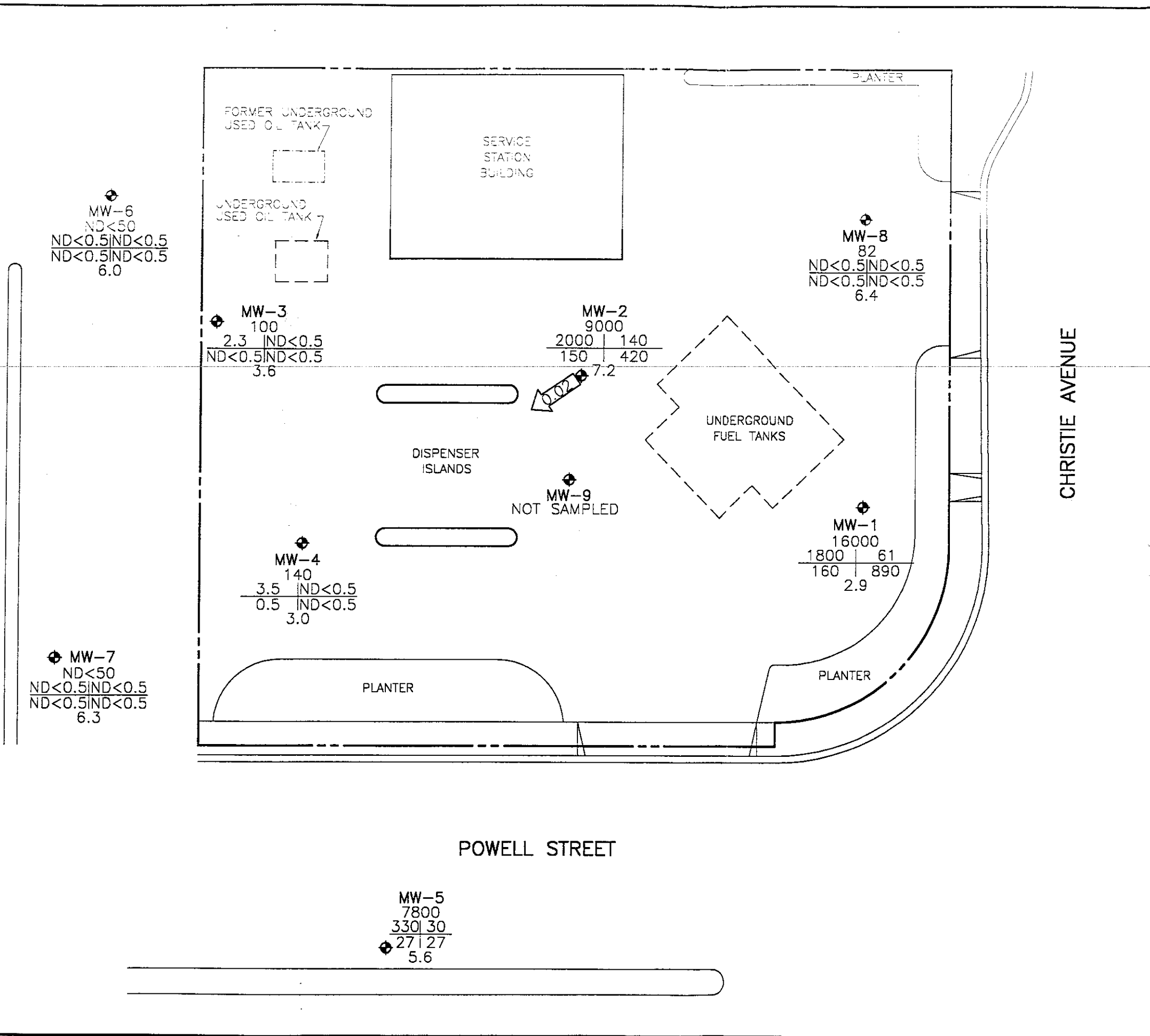


- LEGEND**
- ◆ GROUNDWATER MONITORING WELL
 - (2.85) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 - 2.80 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL-0.20 FOOT)
 - ← 0.02 → CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP
OCTOBER 18, 1994
 BP OIL SERVICE STATION NO. 11126
 1700 POWELL STREET
 EMERYVILLE, CALIFORNIA
 PROJECT NO. 10-061



10610-1-061 2-1-95 RW



LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- TPH-G CONCENTRATION OF CONSTITUENTS IN PARTS PER BILLION, EXCEPT DISSOLVED OXYGEN, WHICH IS IN PARTS PER MILLION
- B | T
- E | X
- DO
- 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

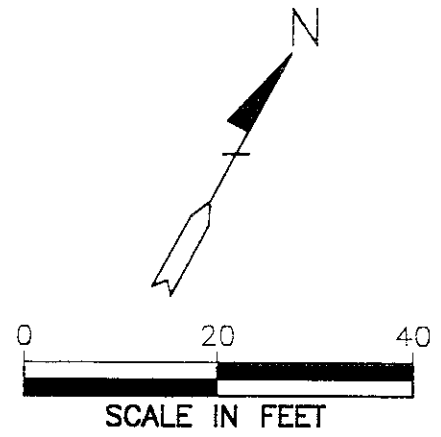


FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
OCTOBER 18, 1994
 BP OIL SERVICE STATION NO. 11126
 1700 POWELL STREET
 EMERYVILLE, CALIFORNIA
 PROJECT NO. 10-061

APPENDIX A
WATER SAMPLING FIELD SURVEY FORMS

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING
GROUP

Groundwater Sampling

Date: 10/18/94 Project No. 10-061-03-004

1777 OAKLAND BLVD, STE 200

Barometric pres. 761

Day: M T W Th F Facility No. 1126

WALNUT CREEK CA 94596 (510) 295-1650 FAX 295-1823

Temp. 75.0°F Address Powell St, Emeryville, CA

SAMPLER: DC

Well ID	SAMPLE #	WATER	time	Well ID	SAMPLE #	WATER/	time	Well ID	SAMPLE	WATER / time
MW7	S-1	6.24	1200	MW-2	S-6	5.71	1212			
MW-6	S-2	6.72	1202	MW-5	S-7	6.01	1220			
MW3	S-3	6.39	1205	MW-1	S-8	5.11	1225			
MW4	S-4	6.62	1207	MW-9	not	5.59	1232			
MW-8	S-5	5.70	1210							

FIELD INSTRUMENT CALIBRATION DATA

PH METER 4.00 7.00 10.00 TIME 1235 TEMPERATURE COMPENSATED N 1245

TURBIDI METER 5.0 NTU STANDARD OTHER 1 cm DO meter 0.50 in 1.6 2

CONDUCTIVITY METER 10,000 OTHER

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW7	6.24	2"	OK	Φ	Y (N)	1.5	1322	69.5	7.23	3.34	6.2	<input type="checkbox"/> EPA 601
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.						3	1324	71.9	7.23	3.48		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
$13.72 - 6.24 = 7.48 \times .16 = 1.20 \times 3 = 3.59$						3.75	1327	72.7	7.23	3.50	6.3	<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:												Time/Sample 1331 / 5-1
MW6	6.72	2"	OK	Φ	Y (N)	1	1340	72.1	7.28	4.99	6.3	<input type="checkbox"/> EPA 601
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.						2	1343	71.9	7.28	3.95		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
$13.25 - 6.72 = 6.53 \times .16 = 1.05 \times 3 = 3.13$						3.25	1346	71.4	7.27	3.92	6.0	<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/Sample 1350 / 5-2
MW3	6.39	2"	OK	Φ	Y (N)	1	1404	72.0	7.02	4.60	3.7	<input checked="" type="checkbox"/> EPA 601 HCL
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.						2	1407	72.4	7.03	4.58		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
$12.08 - 6.39 = 5.69 \times .16 = 0.91 \times 3 = 2.73$						2.75	1411	72.7	7.03	4.57	3.6	<input checked="" type="checkbox"/> TPH Diesel
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input checked="" type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TOG 5520
Comments:												Time/Sample 1415 / 5-3

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: 10/18/94 Project No. 10-061-03-004
Day: Tue Station No. 11126
Weather: Sunny Address Powell St, Emeryville CA
SAMPLER: DC

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW4	6.62	2"	OK	Φ	Φ	1	1430	70.2	7.23	3.99	3.0	<input type="checkbox"/> EPA 601
Total Depth - Water Level = $11.06 - 6.62 = 4.44 \times .16 = 0.71 \times 3 = 2.13$						2	dry	-	-	-	-	<input checked="" type="checkbox"/> TPH-G/BTEX HCL
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input checked="" type="checkbox"/> Disp. Bailor(s) <input type="checkbox"/> OSys Port						2.25						<input type="checkbox"/> TPH Diesel
Comments: <u>dry @ ± 1.5 galls; wait for well to recover</u>												<input type="checkbox"/> TOG 5520
											Time Sampled	<u>1440 / 5-4</u>
MW7	5.70	2"	OK	Φ	Φ	1.5	1500	72.2	7.29	2.04	6.5	<input type="checkbox"/> EPA 601
Total Depth - Water Level = $13.65 - 5.70 = 7.95 \times .16 = 1.27 \times 3 = 3.82$						3	1503	72.5	7.29	2.00		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailor(s) <input type="checkbox"/> OSys Port						4	1505	72.6	7.29	2.00	6.4	<input type="checkbox"/> TPH Diesel
Comments:												<input type="checkbox"/> TOG 5520
											Time Sampled	<u>1507 / 5-5</u>
MW2	5.71	2"	refined	Φ	Φ	1	1520	72.3	7.97	2.06	7.3	<input type="checkbox"/> EPA 601
Total Depth - Water Level = $11.83 - 5.71 = 6.12 \times .16 = 0.98 \times 3 = 2.94$						2	1523	71.2	7.81	2.01		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailor(s) <input type="checkbox"/> OSys Port						3	1526	70.4	7.79	2.01	7.2	<input type="checkbox"/> TPH Diesel
Comments:												<input type="checkbox"/> TOG 5520
											Time Sampled	<u>1530 / 5-6</u>
MW5	6.01	2"	OK	Φ	Φ	1	1255	72.9	6.79	3.10	5.7	<input type="checkbox"/> EPA 601
Total Depth - Water Level = $13.70 - 6.01 = 7.69 \times .16 = 1.23 \times 3 = 3.69$						2	1257	73.1	6.87	2.73		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailor(s) <input type="checkbox"/> OSys Port						3.75	1300	73.3	6.94	2.72	5.6	<input type="checkbox"/> TPH Diesel
Comments:												<input type="checkbox"/> TOG 5520
											Time Sampled	<u>1305 / 5-7</u>
MW1	5.11	2"	OK	Φ	Φ	1	1540	70.4	6.87	1.61	2.6	<input type="checkbox"/> EPA 601
Total Depth - Water Level = $11.62 - 5.11 = 6.51 \times .16 = 1.04 \times 3 = 3.13$						2	1544	72.5	6.68	1.61		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailor(s) <input type="checkbox"/> OSys Port						3.25	1547	71.6	6.67	1.60	2.9	<input type="checkbox"/> TPH Diesel
Comments: <u>GC-1 from this well (5-9)</u>												<input type="checkbox"/> TOG 5520
											Time Sampled	<u>1552 / 5-8</u>

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: 10/18/94

Project No. 18-061-03-004

Day: Tu

Station No. 11126

Weather: Sunny

Address Powell St, Emeryville CA

SAMPLER: DC

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 <input type="checkbox"/> TPH-G/BTEX <input type="checkbox"/> TPH Diesel <input type="checkbox"/> TOG 6520 Time Sampled		
MW9	5.59	4"	OK	5.46	0.13									
Total Depth - Water Level =						x Well Vol. Factor =						x#vol. to Purge =		PurgeVol.
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														
Comments: <u>Product is Black</u>														

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 <input type="checkbox"/> TPH-G/BTEX <input type="checkbox"/> TPH Diesel <input type="checkbox"/> TOG 6520 Time Sampled		
Total Depth - Water Level =						x Well Vol. Factor =						x#vol. to Purge =		PurgeVol.
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														
Comments:														

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 <input type="checkbox"/> TPH-G/BTEX <input type="checkbox"/> TPH Diesel <input type="checkbox"/> TOG 6520 Time Sampled		
Total Depth - Water Level =						x Well Vol. Factor =						x#vol. to Purge =		PurgeVol.
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														
Comments:														

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD



REPORT OF LABORATORY ANALYSIS

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

October 31, 1994
 PACE Project Number: 441020509

Attn: Mr. Bill Howell

Client Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427320
 Date Collected: 10/18/94
 Date Received: 10/20/94

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>S-1</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	-	10/21/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):				
Benzene	ug/L	0.5	ND	10/21/94
Toluene	ug/L	0.5	ND	10/21/94
Ethylbenzene	ug/L	0.5	ND	10/21/94
Xylenes, Total	ug/L	0.5	ND	10/21/94



REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
Page 2

October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427339
Date Collected: 10/18/94
Date Received: 10/20/94
Client Sample ID: S-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):			-	10/21/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	10/21/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	10/21/94
Benzene	ug/L	0.5	ND	10/21/94
Toluene	ug/L	0.5	ND	10/21/94
Ethylbenzene	ug/L	0.5	ND	10/21/94
Xylenes, Total	ug/L	0.5	ND	10/21/94

Mr. Bill Howell
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October 31, 1994
 PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427347
 Date Collected: 10/18/94
 Date Received: 10/20/94
 Client Sample ID: S-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):			-	10/21/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	100	10/21/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	10/21/94
Benzene	ug/L	0.5	2.3	10/21/94
Toluene	ug/L	0.5	ND	10/21/94
Ethylbenzene	ug/L	0.5	ND	10/21/94
Xylenes, Total	ug/L	0.5	ND	10/21/94

HALOGENATED VOLATILE ORGANICS BY 8010

VOLATILE HALOCARBONS BY EPA 8010			-	10/25/94
Dichlorodifluoromethane	ug/L	2.0	ND	10/25/94
Chloromethane	ug/L	2.0	ND	10/25/94
Vinyl Chloride	ug/L	2.0	ND	10/25/94
Bromomethane	ug/L	2.0	ND	10/25/94
Chloroethane	ug/L	2.0	ND	10/25/94
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	10/25/94
FREON 113	ug/L	1.0	ND	10/25/94
1,1-Dichloroethene	ug/L	0.5	ND	10/25/94
Methylene Chloride	ug/L	2.0	ND	10/25/94
trans-1,2-Dichloroethene	ug/L	0.5	ND	10/25/94
1,1-Dichloroethane	ug/L	0.5	ND	10/25/94
cis-1,2-Dichloroethene	ug/L	0.5	ND	10/25/94
Chloroform	ug/L	0.5	ND	10/25/94
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	10/25/94
Carbon Tetrachloride	ug/L	0.5	ND	10/25/94
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	10/25/94
Trichloroethene (TCE)	ug/L	0.5	ND	10/25/94
1,2-Dichloropropane	ug/L	0.5	ND	10/25/94
Bromodichloromethane	ug/L	0.5	ND	10/25/94
Dibromomethane	ug/L	0.5	ND	10/25/94
2-Chloroethylvinyl ether	ug/L	0.5	ND	10/25/94
cis-1,3-Dichloropropene	ug/L	0.5	ND	10/25/94

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
 Page 4

October 31, 1994
 PACE Project Number: 441020509

Client-Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427347
 Date Collected: 10/18/94
 Date Received: 10/20/94
 Client Sample ID: S-3

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

HALOGENATED VOLATILE ORGANICS BY 8010

trans-1,3-Dichloropropene	ug/L	0.5	ND	10/25/94
1,1,2-Trichloroethane	ug/L	0.5	ND	10/25/94
Tetrachloroethene	ug/L	0.5	ND	10/25/94
Dibromochloromethane	ug/L	0.5	ND	10/25/94
Chlorobenzene	ug/L	0.5	ND	10/25/94
1,1,1,2-Tetrachloroethane	ug/L	0.5	ND	10/25/94
Bromoform	ug/L	0.5	ND	10/25/94
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	10/25/94
1,2,3-Trichloropropane	ug/L	0.5	ND	10/25/94
Bromobenzene	ug/L	0.5	ND	10/25/94
1,3-Dichlorobenzene	ug/L	0.5	ND	10/25/94
1,4-Dichlorobenzene	ug/L	0.5	ND	10/25/94
Benzyl Chloride	ug/L	0.5	ND	10/25/94
1,2-Dichlorobenzene	ug/L	0.5	ND	10/25/94
Bromochloromethane (Surrogate Recovery)	%		103	10/25/94
1,4-Dichlorobutane (Surrogate Recovery)	%		94	10/25/94

OIL AND GREASE, SILICA GEL (LUFT)

Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	ND	10/28/94
Date Extracted			10/27/94	

EXTRACTABLE FUELS EPA 3510/8015

Extractable Fuels, as Diesel	mg/L	0.05	2.2	10/26/94
Date Extracted			10/24/94	



REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427355
Date Collected: 10/18/94
Date Received: 10/20/94
Client Sample ID: S-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):			
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	140
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	3.5
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	0.5
Xylenes, Total	ug/L	0.5	ND

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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October 31, 1994
 PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427363
 Date Collected: 10/18/94
 Date Received: 10/20/94
 Client Sample ID: S-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):			
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	82
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



REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427371
Date Collected: 10/18/94
Date Received: 10/20/94
Client Sample ID: S-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	1300	9000	10/25/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):				
Benzene	ug/L	12	2000	10/25/94
Toluene	ug/L	0.5	140	10/25/94
Ethylbenzene	ug/L	0.5	150	10/25/94
Xylenes, Total	ug/L	0.5	420	10/25/94

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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October 31, 1994
 PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427380
 Date Collected: 10/18/94
 Date Received: 10/20/94
 Client Sample ID: S-7

<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	250	7800	10/25/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):				
Benzene	ug/L	0.5	330	10/25/94
Toluene	ug/L	0.5	30	10/25/94
Ethylbenzene	ug/L	0.5	27	10/25/94
Xylenes, Total	ug/L	0.5	27	10/25/94



REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427398
Date Collected: 10/18/94
Date Received: 10/20/94
Client Sample ID: S-8

<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):			-	10/25/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	1000	16000	10/25/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	10/25/94
Benzene	ug/L	0.5	1800	10/25/94
Toluene	ug/L	0.5	61	10/25/94
Ethylbenzene	ug/L	0.5	160	10/25/94
Xylenes, Total	ug/L	0.5	890	10/25/94



REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427401
Date Collected: 10/18/94
Date Received: 10/20/94
Client Sample ID: S-9

<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	1000	16000	10/25/94
--	------	------	-------	----------

PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	10/25/94
--	--	--	---	----------

Benzene	ug/L	0.5	1900	10/25/94
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Toluene	ug/L	0.5	64	10/25/94
---------	------	-----	----	----------

Ethylbenzene	ug/L	0.5	170	10/25/94
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Xylenes, Total	ug/L	0.5	950	10/25/94
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REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PACE Sample Number: 70 0427410
Date Collected: 10/18/94
Date Received: 10/20/94
Client Sample ID: S-10

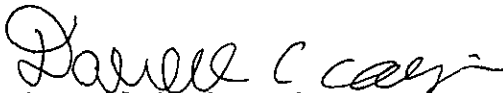
<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	10/24/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	10/24/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	10/24/94
Benzene	ug/L	0.5	ND	10/24/94
Toluene	ug/L	0.5	ND	10/24/94
Ethylbenzene	ug/L	0.5	ND	10/24/94
Xylenes, Total	ug/L	0.5	ND	10/24/94

These data have been reviewed and are approved for release.


Darrell C. Cain
Regional Director



REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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FOOTNOTES
for pages 1 through 11

October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

MDL Method Detection Limit
ND Not detected at or above the MDL.



REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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QUALITY CONTROL DATA

October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

EXTRACTABLE FUELS EPA 3510/8015
Batch: 70 35523
Samples: 70 0427347

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
Extractable Fuels, as Diesel	mg/L	0.05	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>
Extractable Fuels, as Diesel	mg/L	0.05	1.00	91%	96%	5%

Mr. Bill Howell
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QUALITY CONTROL DATA

October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

HALOGENATED VOLATILE ORGANICS 8010/8020
Batch: 70 35544
Samples: 70 0427347

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
VOLATILE HALOCARBONS BY EPA 8010			
Dichlorodifluoromethane	ug/L	2.0	ND
Chloromethane	ug/L	2.0	ND
Vinyl Chloride	ug/L	2.0	ND
Bromomethane	ug/L	2.0	ND
Chloroethane	ug/L	2.0	ND
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND
FREON 113	ug/L	1.0	ND
1,1-Dichloroethene	ug/L	0.5	ND
Methylene Chloride	ug/L	2.0	ND
trans-1,2-Dichloroethene	ug/L	0.5	ND
1,1-Dichloroethane	ug/L	0.5	ND
cis-1,2-Dichloroethene	ug/L	0.5	ND
Chloroform	ug/L	0.5	ND
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND
Carbon Tetrachloride	ug/L	0.5	ND
1,2-Dichloroethane (EDC)	ug/L	0.5	ND
Trichloroethene (TCE)	ug/L	0.5	ND
1,2-Dichloropropane	ug/L	0.5	ND
Bromodichloromethane	ug/L	0.5	ND
Dibromomethane	ug/L	0.5	ND
2-Chloroethylvinyl ether	ug/L	0.5	ND
cis-1,3-Dichloropropene	ug/L	0.5	ND
trans-1,3-Dichloropropene	ug/L	0.5	ND
1,1,2-Trichloroethane	ug/L	0.5	ND
Tetrachloroethene	ug/L	0.5	ND
Dibromochloromethane	ug/L	0.5	ND
Chlorobenzene	ug/L	0.5	ND
1,1,1,2-Tetrachloroethane	ug/L	0.5	ND
Bromoform	ug/L	0.5	ND
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND
1,2,3-Trichloropropane	ug/L	0.5	ND

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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QUALITY CONTROL DATA

October 31, 1994
 PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

HALOGENATED VOLATILE ORGANICS 8010/8020

Batch: 70 35544
 Samples: 70 0427347

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Bromobenzene	ug/L	0.5	ND
1,3-Dichlorobenzene	ug/L	0.5	ND
1,4-Dichlorobenzene	ug/L	0.5	ND
Benzyl Chloride	ug/L	0.5	ND
1,2-Dichlorobenzene	ug/L	0.5	ND
Bromochloromethane (Surrogate Recovery)	%		104
1,4-Dichlorobutane (Surrogate Recovery)	%		96
VOLATILE AROMATICS BY EPA 8020			
Benzene	ug/L	0.3	ND
Toluene	ug/L	0.3	ND
Chlorobenzene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND
1,3-Dichlorobenzene	ug/L	0.5	ND
1,4-Dichlorobenzene	ug/L	0.5	ND
1,2-Dichlorobenzene	ug/L	0.5	ND
a,a,a-Trifluorotoluene (Surro. Recovery)	%		115

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700408385	Spike	Spike		RPD
					Recv	Dupl Recv	
1,1-Dichloroethane	ug/L	0.5	ND	20	92%	99%	7%
Trichloroethene (TCE)	ug/L	0.5	ND	20	110%	110%	0%
1,1,2-Trichloroethane	ug/L	0.5	ND	20	100%	107%	7%
Tetrachloroethene	ug/L	0.5	ND	20	109%	107%	2%
Benzene	ug/L	0.3		20	104%	110%	6%
Toluene	ug/L	0.3		20	105%	111%	6%
Xylenes, Total	ug/L	0.5		60	107%	113%	5%



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QUALITY CONTROL DATA

October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

HALOGENATED VOLATILE ORGANICS 8010/8020
Batch: 70 35544
Samples: 70 0427347

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>
1,1-Dichloroethane	ug/L	0.5	20	105%	102%	3%
Trichloroethene (TCE)	ug/L	0.5	20	101%	101%	0%
1,1,2-Trichloroethane	ug/L	0.5	20	94%	98%	4%
Tetrachloroethene	ug/L	0.5	20	96%	107%	11%
Benzene	ug/L	0.3	20	102%	101%	1%
Toluene	ug/L	0.3	20	104%	101%	3%
Xylenes, Total	ug/L	0.5	60	106%	102%	4%



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QUALITY CONTROL DATA

October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

OIL AND GREASE, SILICA GEL (LUFT)

Batch: 70 35656
Samples: 70 0427347

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	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>
Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	20.0	90%	83%	8%



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QUALITY CONTROL DATA

October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PURGEABLE FUELS AND AROMATICS
Batch: 70 35415
Samples: 70 0427320, 70 0427339

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

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>700424836</u>	<u>Spike</u>	<u>Spike Recv</u>	<u>Spike Dupl Recv</u>	<u>RPD</u>
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	1000	87%	85%	2%

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	97%	92%	5%



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QUALITY CONTROL DATA

October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PURGEABLE FUELS AND AROMATICS

Batch: 70 35420
Samples: 70 0427363

METHOD BLANK:

Parameter	Units	MDL	Method Blank
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

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700427363		Spike Recv	Spike Dupl Recv	RPD
			S-5	Spike			
Benzene	ug/L	0.5	ND	100	95%	99%	4%
Toluene	ug/L	0.5	ND	100	93%	97%	4%
Ethylbenzene	ug/L	0.5	ND	100	92%	96%	4%
Xylenes, Total	ug/L	0.5	ND	300	93%	97%	4%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference	Spike Recv	Dupl Recv	RPD
			Value			
Benzene	ug/L	0.5	100	95%	104%	9%
Toluene	ug/L	0.5	100	96%	103%	7%
Ethylbenzene	ug/L	0.5	100	97%	101%	4%
Xylenes, Total	ug/L	0.5	300	98%	102%	4%



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QUALITY CONTROL DATA

October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PURGEABLE FUELS AND AROMATICS

Batch: 70 35462
Samples: 70 0427347, 70 0427355, 70 0427410

METHOD BLANK:

Parameter	Units	MDL	Method Blank
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

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700427363		Spike		RPD
			S-5	Spike	Spike Recv	Dupl Recv	
Benzene	ug/L	0.5	ND	100	95%	99%	4%
Toluene	ug/L	0.5	ND	100	93%	97%	4%
Ethylbenzene	ug/L	0.5	ND	100	92%	96%	4%
Xylenes, Total	ug/L	0.5	ND	300	93%	97%	4%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference	Dupl		RPD
			Value	Recv	Recv	
Benzene	ug/L	0.5	100	95%	104%	9%
Toluene	ug/L	0.5	100	96%	103%	7%
Ethylbenzene	ug/L	0.5	100	97%	101%	4%
Xylenes, Total	ug/L	0.5	300	98%	102%	4%



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QUALITY CONTROL DATA

October 31, 1994
PACE Project Number: 441020509

Client Reference: BP Site #11126/10-061-03-004

PURGEABLE FUELS AND AROMATICS

Batch: 70 35540

Samples: 70 0427371, 70 0427380, 70 0427398, 70 0427401

METHOD BLANK:

Parameter	Units	MDL	Method Blank
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

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700427363		Spike		RPD
			S-5	Spike	Recv	Dup1 Recv	
Benzene	ug/L	0.5	ND	100	95%	99%	4%
Toluene	ug/L	0.5	ND	100	93%	97%	4%
Ethylbenzene	ug/L	0.5	ND	100	92%	96%	4%
Xylenes, Total	ug/L	0.5	ND	300	93%	97%	4%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference	Spike		RPD
			Value	Recv	Dup1 Recv	
Benzene	ug/L	0.5	100	95%	104%	9%
Toluene	ug/L	0.5	100	96%	103%	7%
Ethylbenzene	ug/L	0.5	100	97%	101%	4%
Xylenes, Total	ug/L	0.5	300	98%	102%	4%



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FOOTNOTES
for pages 13 through 21

October 31, 1994
PACE Project Number: 441020509

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



CHAIN OF CUSTODY

No. 052471

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441020-509

CONSULTANT'S NAME <i>Alisto Engineering</i>		ADDRESS <i>1777 Oakland Blvd, Ste 200</i>		CITY <i>Walnut Creek</i>	STATE <i>CA</i>	ZIP CODE <i>94596</i>
BP SITE NUMBER <i>11126</i>	BP CORNER ADDRESS/CITY <i>Powell St, Emeryville CA</i>			CONSULTANT PROJECT NUMBER <i>10-061-03-004</i>		
CONSULTANT PROJECT MANAGER <i>Bill Howell</i>		PHONE NUMBER <i>(510) 295 1050</i>	FAX NUMBER <i>(510) 295 1923</i>		CONSULTANT CONTRACT NUMBER <i>6223901</i>	
BP CONTACT <i>Scott Houston</i>	BP ADDRESS <i>Renton, WA</i>		PHONE NUMBER <i>(415) 873 6100</i>	FAX NO. <i>(415) 873 2473</i>		
LAB CONTACT <i>Pro, Inc.</i>	LABORATORY ADDRESS <i>Novato CA</i>		PHONE NUMBER <i>(415) 873 6100</i>	FAX NO. <i>(415) 873 2473</i>		
SAMPLED BY (Please Print Name) <i>DAVID CUSACK</i>		SAMPLED BY (Signature) <i>David Cusack</i>		SHIPMENT DATE		SHIPMENT METHOD <i>Courier</i>

TAT: 24 Hours 48 Hours 1 Week Standard 2 Weeks

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	HCC	HCC	-	-	COMMENTS
	COLLECTION TIME		NO.	TYPE (VOL.)	LAB SAMPLE #	TPH	601	TPH	106	
S-1 1331	10/18/04	H ₂ O	3	V8A		X				42732.0
S-2 1350			↓	↓						42733.9
S-3 1415			6 WA 3L	6 WA 3L			X	X	X	42734.7
S-4 1440			3	V8A						42735.5
S-5 1507										42736.3
S-6 1530										42737.1
S-7 1305										42738.0
S-8 1552										42739.8
S-9 -										42740.1
S-10 -			2							42741.0

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>David Cusack Alisto</i>	<i>10/20/04</i>	<i>11:30</i>	<i>Brenda DAD</i>	<i>10/20/04</i>	<i>11:30</i>	<i>TEMP RECD AT: 6.0°</i>
<i>Brenda DAD</i>	<i>10/20/04</i>	<i>2:30</i>	<i>Bill [Signature]</i>	<i>10/20/04</i>	<i>1430</i>	
						<i>15/2 H/2</i>