BP OIL

ALCO
HAZMAT

94 SEP 28 AM 9:12

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

September 26, 1994

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 AUGUST 10, AND SEPTEMBER 7, 1994** for the above referenced facility.

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

Respectfully,

Scott T. Hooton
Environmental Resources Management
Group Leader

STH:mu msword\ERM11126

cc: Ms. Susan Hugo, Alameda County Health Care Services Agency
80 Swan Way, Room 200, Oakland, CA 94621

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. 10-061-03-003

Prepared for:

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

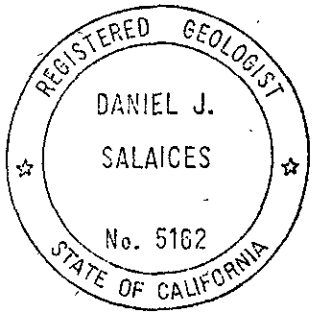
Prepared by:

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

September 7, 1994

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. 10-061-03-003

September 7, 1994

INTRODUCTION

This report presents the results and findings of the August 1, 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	[illegible]	—	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	8.56	—	—	—	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	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	[illegible]	—	[illegible]	420	230	680	—	—	2.6	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	[illegible]	[illegible]	[illegible]	ND<0.5	0 5	1.1	ND<5000	ND (d)	2.9	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	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	—	—	3.3	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	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	—	—	2.6	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-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-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	[illegible]	[illegible]	[illegible]	—	—	2.3	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- (e)	10/12/93	8.08	5.66	0.08	2.48	---	---	---	---	---	---	---	---	---	---
MW- (e)	02/15/94	8.08	5.32	0.05	2.80	---	---	---	---	---	---	---	---	---	---
MW- (e)	05/11/94	8.08	5.57	---	2.51	---	---	---	---	---	---	---	---	---	---
MW- (e)	08/01/94	8.08	6.25	---	1.83	---	---	---	---	---	---	---	---	---	---
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

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:\0\10-061\061-3-2W.WQ1

TABLE 2
PRODUCT REMOVAL STATUS

BP OIL COMPANY SERVICE STATION NO.11126
1700 POWELL, EMERYVILLE, CALIFORNIA

ALISTO PROJECT NO. 10-061

WELL ID	DATE	PRODUCT REMOVED (Gallons)	PRODUCT REMOVED CUMULATIVE (Gallons)
MW-9	12/02/93	0.15	0.15
	12/09/93	0.15	0.30
	12/30/93	0.05? → 0.15	0.45
	01/12/94	0.02	0.47
	02/02/94	2/15/94 0.35 Sheen	0.7? ---
	05/27/94	Sheen	---
	06/25/94	Sheen	---

E:\0\10-061\PRODUCT.WQ2

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

N

0 1000' 2000'

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

100618---.DWG 12-30-93 RKW 1=1

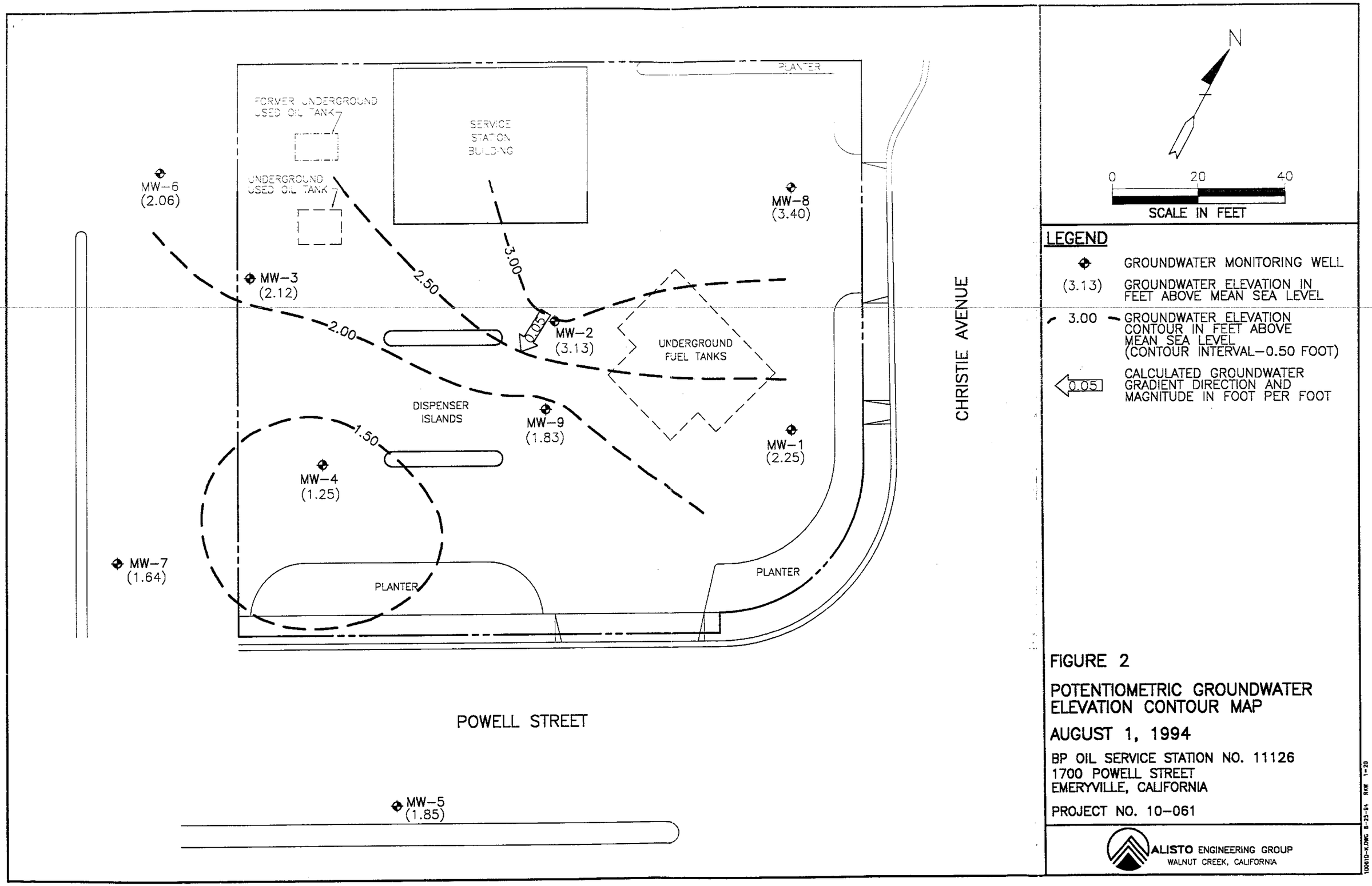


FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

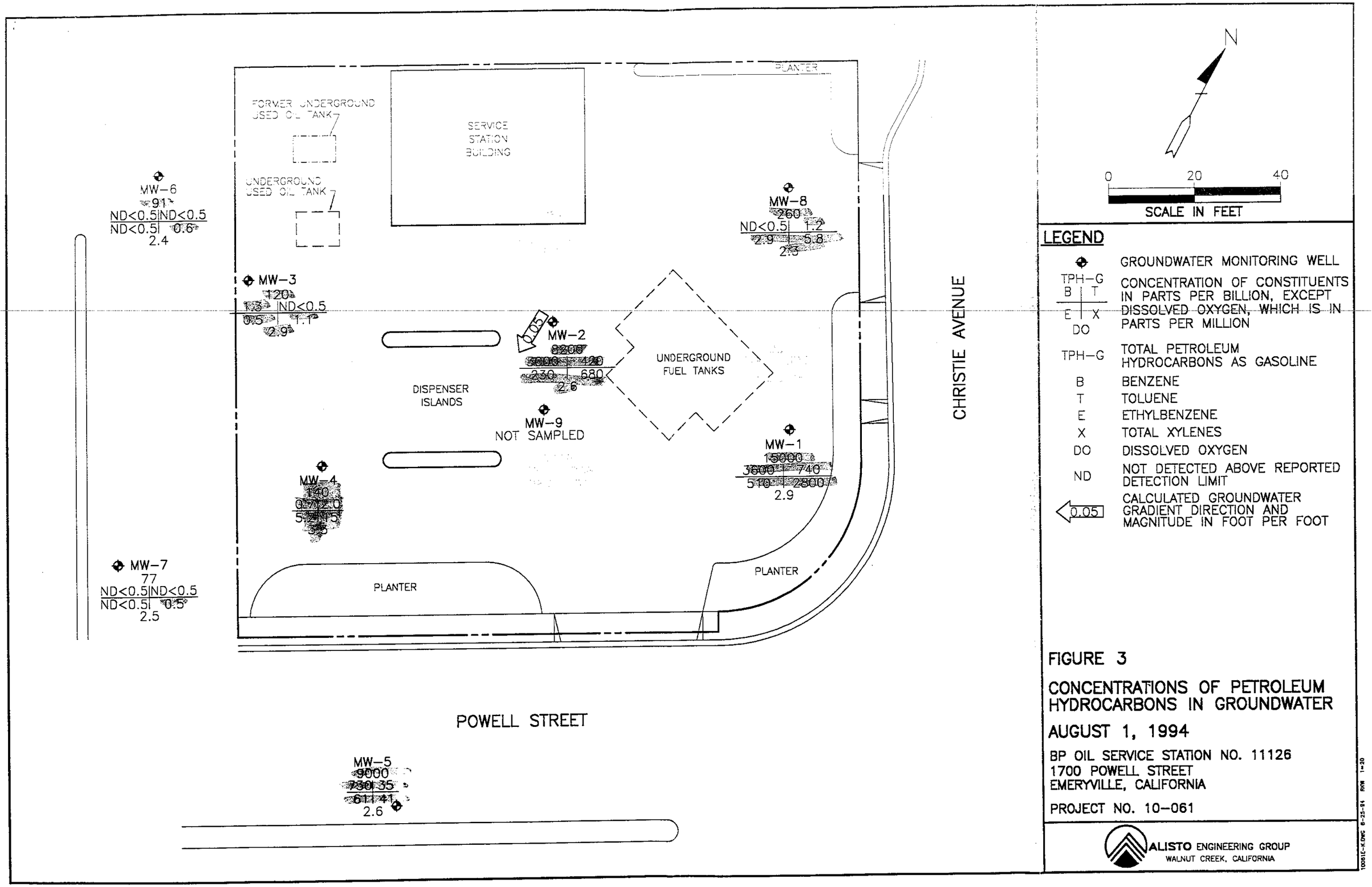
AUGUST 1, 1994

BP OIL SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-061

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10061D-K.DWG 8-25-94 RKW 1=20



N

0 20 40

SCALE IN FEET

LEGEND

◆	GROUNDWATER MONITORING WELL
TPH-G / B / T / E / X / DO	CONCENTRATION OF CONSTITUENTS IN PARTS PER BILLION, EXCEPT DISSOLVED OXYGEN, WHICH IS IN PARTS PER MILLION
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
DO	DISSOLVED OXYGEN
ND	NOT DETECTED ABOVE REPORTED DETECTION LIMIT
0.05	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

AUGUST 1, 1994

BP OIL SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-061

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10061C-K.DWG 8-23-94 RKW 1=20

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

ALISTO

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

Field Report / Sampling Data Sheet

☒ Groundwater Sampling

Date: 8/1/94 Project No. 10-061-03-003
Day: Mon Station No. 1126
Weather: Overcast Address Emeryville CA
SAMPLER: DC

	Well ID	SAMPLE #	WATER	DEPTH	Well ID	SAMPLE	# time	WATER	DEPTH	Well ID	SAMPLE	WATER DEPTH
1105	mw-5	5-1	5.84		mw-8	5-6	1119	5.20				
1107	mw-7	5-2	5.97		mw-2	5-7	1123	5.43				
1110	mw-6	5-3	6.46		mw-1	5-8	1134	~~5.25~~ 5.51				
1113	mw-3	5-4	6.13		*mw-9	—	1135	6.25				
1116	mw-4	5-5	6.87									

mw5 — Well ID | Depth to Water 5.84 | Diam 2" | Cap/Lock OK | Product Depth Ø | Thickness Ø
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
13.70 − 5.84 = 7.86 x .16 = 1.26 x 3 = 3.78
Purge Method: OSurface Pump ODisp.Tube OWinch ☒Disp. Bailer(s)___ OSys Port
Comments:

Gal.	Time	Temp °F	pH	E.C.	D.O.
1.5	1216	74.0	6.52	1.11	2.7
3	1219	74.6	6.79	1.00	
4	1222	74.4	6.81	1.00	2.6

O EPA 601___ ☒ TPH-G/BTEX HCL O TPH Diesel___ O TOG 5520___
Time Sampled: 1225

mw-7 — Well ID | Depth to Water 5.97 | Diam 2" | Cap/Lock OK | Product Depth Ø | Thickness Ø
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
13.72 − 5.97 = 7.75 x .16 = 1.24 x 3 = 3.72
Purge Method: OSurface Pump ODisp.Tube OWinch ☒Disp. Bailer(s)___ OSys Port
Comments:

Gal.	Time	Temp °F	pH	E.C.	D.O.
1.5	1235	75.3	7.08	2.76	3.0
3	1237	75.6	7.11	3.02	
4	1242	75.4	7.13	3.60	2.5

O EPA 601___ ☒ TPH-G/BTEX HCL O TPH Diesel___ O TOG 5520___
Time Sampled: 1247

mw-6 — Well ID | Depth to Water 6.46 | Diam 2" | Cap/Lock OK | Product Depth Ø | Thickness Ø
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
13.25 − 6.46 = 6.79 x .16 = 1.09 x 3 = 3.26
Purge Method: OSurface Pump ODisp.Tube OWinch ☒Disp. Bailer(s)___ OSys Port
Comments:

Gal.	Time	Temp °F	pH	E.C.	D.O.
1.5	1257	73.9	7.34	3.45	1.9
3	1300	73.6	7.26	3.72	
3.5	1304	73.5	7.25	3.33	2.4

☒ EPA 601 HCL ☒ TPH-G/BTEX HCL O TPH Diesel___ O TOG 5520___
Time Sampled: 1306

mw-3 — Well ID | Depth to Water 6.13 | Diam 2" | Cap/Lock replaced | Product Depth Ø | Thickness Ø
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
12.09 − 6.13 = 5.95 x .16 = 0.95 x 3 = 2.86
Purge Method: OSurface Pump ODisp.Tube OWinch ☒Disp. Bailer(s)___ OSys Port
Comments:

Gal.	Time	Temp °F	pH	E.C.	D.O.
1	1330	73.6	7.35	4.64	2.5
2	1333	75.6	7.27	4.41	
3	1336	74.7	7.30	4.44	2.9

☒ EPA 601 HCL ☒ TPH-G/BTEX HCL ☒ TPH Diesel — ☒ TOG 5520 —
Time Sampled: 1339

6/20/94
DO - 9.2
Temp - 68
Press - 760
Time - 1207

*mw9 not sampled due to sheen

Hydrol
time 1214
temp 69.8

✓ 10 pH
✓ 7
✓ 4

ALISTO

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

Field Report / Sampling Data Sheet

O Groundwater Sampling

Date: 7/1/94 Project No. 10-061-03-003
Day: Mon Station No. 11126
Weather: Overcast Address Emeryville CA
SAMPLER: DC

Well ID	SAMPLE #	WATER	DEPTH	Well ID	SAMPLE #	WATER	DEPTH	Well ID	SAMPLE	WATER DEPTH

Well ID: MW4 | Depth to Water: 6.87 | Diam: 2" | Cap/Lock: OK | Product Depth: Ø | Thickness: Ø

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
11.06 − 6.87 = 4.19 x .16 = 0.67 x 3 = 2.01

Purge Method: OSurface Pump ODisp.Tube OWinch ~~X~~ Disp. Bailer(s)___ OSys Port

Comments: Dry @ 1.5 let recover 8090

Gal.	Time	Temp °F	pH	E.C.	D.O.
1	1405	73.4	7.57	3.87	3.3
1.5	1408	73.3	7.51	3.92	3.3
2.25	—	—	—	—	

O EPA 601___
~~O~~ TPH-G/BTEX HCL
O TPH Diesel___
O TOG 5520___
Time Sampled: 1412

Well ID: MW8 | Depth to Water: 5.20 | Diam: 2" | Cap/Lock: OK | Product Depth: Ø | Thickness: Ø

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
13.65 − 5.20 = 8.45 x .16 = 1.35 x 3 = 4.06

Purge Method: OSurface Pump ODisp.Tube OWinch ~~X~~ Disp. Bailer(s)___ OSys Port

Comments:

Gal.	Time	Temp °F	pH	E.C.	D.O.
1.5	1424	73.7	7.10	1.45	2.8
3	1427	72.8	7.04	1.55	
4.25	1430	72.1	7.14	1.58	2.3

O EPA 601___
~~O~~ TPH-G/BTEX HCL
O TPH Diesel___
O TOG 5520___
Time Sampled: 1435

Well ID: MW-2 | Depth to Water: 5.43 | Diam: 2" | Cap/Lock: ~~Lock~~ Reuse | Product Depth: Ø | Thickness: Ø

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
11.83 − 5.43 = 6.4 x .16 = 1.02 x 3 = 3.07

Purge Method: OSurface Pump ODisp.Tube OWinch ~~X~~ Disp. Bailer(s)___ OSys Port

Comments: casing needs to be brought up to grade

Gal.	Time	Temp °F	pH	E.C.	D.O.
1	1446	73.2	7.18	1.51	2.6
2	1450	72.7	7.13	1.53	
3.25	1455	72.1	7.19	1.54	2.6

O EPA 601___
~~O~~ TPH-G/BTEX HCL
O TPH Diesel___
O TOG 5520___
Time Sampled: 1500

Well ID: MW-1 | Depth to Water: 5.51 | Diam: 2" | Cap/Lock: | Product Depth: Ø | Thickness: Ø

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
11.62 − 5.51 = 6.11 x .16 = 0.98 x 3 = 2.93

Purge Method: OSurface Pump ODisp.Tube OWinch ~~X~~ Disp. Bailer(s)___ OSys Port

Comments: QC-1 will be from this well (5-9)

Gal.	Time	Temp °F	pH	E.C.	D.O.
1	1508	73.6	7.17	1.54	2.3
2	1510	73.6	7.06	1.58	
3	1514	72.8	7.04	1.62	2.9

O EPA 601___
~~O~~ TPH-G/BTEX HCL
O TPH Diesel___
O TOG 5520___
Time Sampled: 1520

6/20/94

ALISTO

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

Field Report / Sampling Data Sheet

Ø Groundwater Sampling

Date: 8/1/94 Project No. 10-061-03-003
Day: Mon Station No. 11126
Weather: Overcast Address Emeryville CA
SAMPLER: DC

Well ID	SAMPLE #	WATER DEPTH	Well ID	SAMPLE #	WATER DEPTH	Well ID	SAMPLE	WATER DEPTH

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness
MW-5	6.25	4"	OK	Sheen	—

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.

PPRS was empty ; looks like serviced recently

Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

Comments:

Gal.	Time	Temp *F	pH	E.C.	D.O.

O EPA 601___ O TPH-G/BTEX___ O TPH Diesel___ O TOG 5520___

Time Sampled: ___

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.

Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

Comments:

Gal.	Time	Temp *F	pH	E.C.	D.O.

O EPA 601___ O TPH-G/BTEX___ O TPH Diesel___ O TOG 5520___

Time Sampled: ___

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.

Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

Comments:

Gal.	Time	Temp *F	pH	E.C.	D.O.

O EPA 601___ O TPH-G/BTEX___ O TPH Diesel___ O TOG 5520___

Time Sampled: ___

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.

Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

Comments:

Gal.	Time	Temp *F	pH	E.C.	D.O.

O EPA 601___ O TPH-G/BTEX___ O TPH Diesel___ O TOG 5520___

Time Sampled: ___

6/20/94

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

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REPORT OF LABORATORY ANALYSIS

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

August 12, 1994
PACE Project Number: 440803536

Attn: Mr. Bill Howell

Client Reference: BP Site #11126/10-061-03-003

PACE Sample Number:			70 0364914	
Date Collected:			08/01/94	
Date Received:			08/03/94	
			S-1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/08/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	500	9000	08/08/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/08/94
Benzene	ug/L	5.0	730	08/08/94
Toluene	ug/L	5.0	35	08/08/94
Ethylbenzene	ug/L	5.0	61	08/08/94
Xylenes, Total	ug/L	5.0	41	08/08/94

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REPORT OF LABORATORY ANALYSIS

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PACE Sample Number:			70 0364922	
Date Collected:			08/01/94	
Date Received:			08/03/94	
Client Sample ID:			S-2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/08/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	77	08/08/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/08/94
Benzene	ug/L	0.5	ND	08/08/94
Toluene	ug/L	0.5	ND	08/08/94
Ethylbenzene	ug/L	0.5	ND	08/08/94
Xylenes, Total	ug/L	0.5	0.5	08/08/94

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REPORT OF LABORATORY ANALYSIS

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PACE Sample Number:			70 0364930	
Date Collected:			08/01/94	
Date Received:			08/03/94	
Client Sample ID:			S-3	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/08/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	91	08/08/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/08/94
Benzene	ug/L	0.5	ND	08/08/94
Toluene	ug/L	0.5	ND	08/08/94
Ethylbenzene	ug/L	0.5	ND	08/08/94
Xylenes, Total	ug/L	0.5	0.6	08/08/94

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REPORT OF LABORATORY ANALYSIS

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

Parameter	Units	MDL	70 0364949	DATE ANALYZED
PACE Sample Number:				
Date Collected:			08/01/94	
Date Received:			08/03/94	
Client Sample ID:			S-4	
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/08/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	120	08/08/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/08/94
Benzene	ug/L	0.5	1.3	08/08/94
Toluene	ug/L	0.5	ND	08/08/94
Ethylbenzene	ug/L	0.5	0.5	08/08/94
Xylenes, Total	ug/L	0.5	1.1	08/08/94
HALOGENATED VOLATILE ORGANICS BY 8010				
VOLATILE HALOCARBONS BY EPA 8010			-	08/08/94
Dichlorodifluoromethane	ug/L	2.0	ND	08/08/94
Chloromethane	ug/L	2.0	ND	08/08/94
Vinyl Chloride	ug/L	2.0	ND	08/08/94
Bromomethane	ug/L	2.0	ND	08/08/94
Chloroethane	ug/L	2.0	ND	08/08/94
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	08/08/94
1,1-Dichloroethene	ug/L	0.5	ND	08/08/94
Methylene Chloride	ug/L	2.0	ND	08/08/94
trans-1,2-Dichloroethene	ug/L	0.5	ND	08/08/94
1,1-Dichloroethane	ug/L	0.5	ND	08/08/94
cis-1,2-Dichloroethene	ug/L	0.5	ND	08/08/94
Chloroform	ug/L	0.5	ND	08/08/94
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	08/08/94
Carbon Tetrachloride	ug/L	0.5	ND	08/08/94
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	08/08/94
Trichloroethene (TCE)	ug/L	0.5	ND	08/08/94
1,2-Dichloropropane	ug/L	0.5	ND	08/08/94
Bromodichloromethane	ug/L	0.5	ND	08/08/94
Dibromomethane	ug/L	0.5	ND	08/08/94
2-Chloroethylvinyl ether	ug/L	0.5	ND	08/08/94
cis-1,3-Dichloropropene	ug/L	0.5	ND	08/08/94
trans-1,3-Dichloropropene	ug/L	0.5	ND	08/08/94

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REPORT OF LABORATORY ANALYSIS

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

Parameter	Units	MDL		DATE ANALYZED
PACE Sample Number:			70 0364949	
Date Collected:			08/01/94	
Date Received:			08/03/94	
Client Sample ID:			S-4	
ORGANIC ANALYSIS				
HALOGENATED VOLATILE ORGANICS BY 8010				
1,1,2-Trichloroethane	ug/L	0.5	ND	08/08/94
Tetrachloroethene	ug/L	0.5	ND	08/08/94
Dibromochloromethane	ug/L	0.5	ND	08/08/94
Chlorobenzene	ug/L	0.5	ND	08/08/94
1,1,1,2-Tetrachloroethane	ug/L	0.5	ND	08/08/94
Bromoform	ug/L	0.5	ND	08/08/94
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	08/08/94
1,2,3-Trichloropropane	ug/L	0.5	ND	08/08/94
Bromobenzene	ug/L	0.5	ND	08/08/94
1,3-Dichlorobenzene	ug/L	0.5	ND	08/08/94
1,4-Dichlorobenzene	ug/L	0.5	ND	08/08/94
Benzyl Chloride	ug/L	0.5	ND	08/08/94
1,2-Dichlorobenzene	ug/L	0.5	ND	08/08/94
Bromochloromethane (Surrogate Recovery)	%		98	08/08/94
1,4-Dichlorobutane (Surrogate Recovery)	%		96	08/08/94
EXTRACTABLE FUELS EPA 3510/8015				
Extractable Fuels, as Diesel	mg/L	0.05	1.3	08/09/94
Date Extracted			08/05/94	
OIL AND GREASE, SILICA GEL (LUFT)				
Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	ND	08/10/94
Date Extracted			08/10/94	

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REPORT OF LABORATORY ANALYSIS

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PACE Sample Number:			70 0364957	
Date Collected:			08/01/94	
Date Received:			08/03/94	
Client Sample ID:			S-5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/08/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	140	08/08/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/08/94
Benzene	ug/L	0.5	0.7	08/08/94
Toluene	ug/L	0.5	2.0	08/08/94
Ethylbenzene	ug/L	0.5	5.2	08/08/94
Xylenes, Total	ug/L	0.5	15	08/08/94

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REPORT OF LABORATORY ANALYSIS

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PACE Sample Number:			70 0364965	
Date Collected:			08/01/94	
Date Received:			08/03/94	
Client Sample ID:			S-6	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/08/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	260	08/08/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/08/94
Benzene	ug/L	0.5	ND	08/08/94
Toluene	ug/L	0.5	1.2	08/08/94
Ethylbenzene	ug/L	0.5	2.9	08/08/94
Xylenes, Total	ug/L	0.5	5.8	08/08/94

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REPORT OF LABORATORY ANALYSIS

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PACE Sample Number:			70 0364973	
Date Collected:			08/01/94	
Date Received:			08/03/94	
Client Sample ID:			S-7	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/08/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	500	8200	08/08/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/08/94
Benzene	ug/L	5.0	3000	08/08/94
Toluene	ug/L	5.0	420	08/08/94
Ethylbenzene	ug/L	5.0	230	08/08/94
Xylenes, Total	ug/L	5.0	680	08/08/94

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REPORT OF LABORATORY ANALYSIS

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PACE Sample Number:			70 0364981	
Date Collected:			08/01/94	
Date Received:			08/03/94	
Client Sample ID:			S-8	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/08/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	500	15000	08/08/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/08/94
Benzene	ug/L	5.0	3600	08/08/94
Toluene	ug/L	5.0	740	08/08/94
Ethylbenzene	ug/L	5.0	510	08/08/94
Xylenes, Total	ug/L	5.0	2800	08/08/94

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REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PACE Sample Number:			70 0364990	
Date Collected:			08/01/94	
Date Received:			08/03/94	
Client Sample ID:			S-9	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/10/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	1200	16000	08/10/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/10/94
Benzene	ug/L	12	3600	08/10/94
Toluene	ug/L	12	750	08/10/94
Ethylbenzene	ug/L	12	510	08/10/94
Xylenes, Total	ug/L	12	2800	08/10/94

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REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PACE Sample Number:			70 0365007	
Date Collected:			08/01/94	
Date Received:			08/03/94	
Client Sample ID:			S-10	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/09/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	08/09/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/09/94
Benzene	ug/L	0.5	ND	08/09/94
Toluene	ug/L	0.5	ND	08/09/94
Ethylbenzene	ug/L	0.5	ND	08/09/94
Xylenes, Total	ug/L	0.5	ND	08/09/94

These data have been reviewed and are approved for release.

for Darrell C. Cain
Regional Director

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Mr. Bill Howell
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FOOTNOTES
for pages 1 through 11

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

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

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

EXTRACTABLE FUELS EPA 3510/8015
Batch: 70 32676
Samples: 70 0364949

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Extractable Fuels, as Diesel	mg/L	0.05	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Extractable Fuels, as Diesel	mg/L	0.05	1.00	82%	85%	4%

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Client Reference: BP Site #11126/10-061-03-003

HALOGENATED VOLATILE ORGANICS BY 8010
Batch: 70 32726
Samples: 70 0364949

METHOD BLANK:

Parameter	Units	MDL	Method Blank
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
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
Bromobenzene	ug/L	0.5	ND

Mr. Bill Howell
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QUALITY CONTROL DATA

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

HALOGENATED VOLATILE ORGANICS BY 8010
Batch: 70 32726
Samples: 70 0364949

METHOD BLANK:

Parameter	Units	MDL	Method Blank
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)	%		103
1,4-Dichlorobutane (Surrogate Recovery)	%		98

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700366380	Spike	Spike Recv	Spike Dupl Recv	RPD
1,1-Dichloroethane	ug/L	0.5	ND	20	110%	122%	10%
Trichloroethene (TCE)	ug/L	0.5	ND	20	118%	116%	2%
1,1,2-Trichloroethane	ug/L	0.5	ND	20	112%	116%	4%
Tetrachloroethene	ug/L	0.5	ND	20	126%	119%	6%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
1,1-Dichloroethane	ug/L	0.5	20	115%	128%	11%
Trichloroethene (TCE)	ug/L	0.5	20	108%	105%	3%
1,1,2-Trichloroethane	ug/L	0.5	20	111%	107%	4%
Tetrachloroethene	ug/L	0.5	20	107%	102%	5%

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QUALITY CONTROL DATA

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

OIL AND GREASE, SILICA GEL (LUFT)
Batch: 70 32791
Samples: 70 0364949

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	20	85%	85%	0%

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Client Reference: BP Site #11126/10-061-03-003

PURGEABLE FUELS AND AROMATICS
Batch: 70 32695
Samples: 70 0364914, 70 0364922, 70 0364930, 70 0364949, 70 0364957
70 0364965, 70 0364973

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	700363896	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND	1000	94%	90%	4%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	1000	103%	108%	5%

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PURGEABLE FUELS AND AROMATICS
Batch: 70 32715
Samples: 70 0364981

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	700364736	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND	1000	82%	83%	1%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	1000	89%	87%	2%

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FAX: 415-883 2673

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QUALITY CONTROL DATA

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PURGEABLE FUELS AND AROMATICS
Batch: 70 32752
Samples: 70 0365007

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	700365031	Spike	Spike Recv	Spike Dupl Recv	RPD
Benzene	ug/L	0.5	ND	100	94%	106%	12%
Toluene	ug/L	0.5	ND	100	94%	104%	10%
Ethylbenzene	ug/L	0.5	ND	100	93%	101%	8%
Xylenes, Total	ug/L	0.5	ND	300	92%	99%	7%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Benzene	ug/L	0.5	100	92%	97%	5%
Toluene	ug/L	0.5	100	92%	97%	5%
Ethylbenzene	ug/L	0.5	100	94%	97%	3%
Xylenes, Total	ug/L	0.5	300	95%	99%	4%

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FAX: 415-883-2673

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QUALITY CONTROL DATA

August 12, 1994
PACE Project Number: 440803536

Client Reference: BP Site #11126/10-061-03-003

PURGEABLE FUELS AND AROMATICS
Batch: 70 32820
Samples: 70 0364990

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	700367239	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND	1000	87%	83%	5%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	1000	94%	91%	3%

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Client Reference: BP Site #11126/10-061-03-003

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

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FAX: 415-883-2673

440803.536

CHAIN OF CUSTODY

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CONSULTANT'S NAME	ADDRESS	CITY	STATE	ZIP CODE
Alisto Engineering	1777 Oakland Blvd	Walnut Ck	CA	94596

BP SITE NUMBER	BP CORNER ADDRESS/CITY	CONSULTANT PROJECT NUMBER
11126	Powell St Emeryville CA	10-061-03-003

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
Bill Howell	(510) 295 1650	(510) 295 1823	G 223901

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

LAB CONTACT	LABORATORY ADDRESS	PHONE NUMBER	FAX NO.
PACE, Inc	Novato CA	(415) 883 6100	(415) 883 2673

SAMPLED BY (Please Print Name)	SAMPLED BY (Signature)	SHIPMENT DATE	SHIPMENT METHOD
David Cusack	[signature]		Courier

AIRBILL NUMBER:

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

ANALYSIS REQUIRED

SAMPLE DESCRIPTION time	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	TYPE (VOL.)	PRESERVATIVE / LAB SAMPLE #	HCL TPH Gas BTEX	HCL 601	— TPH Diesel	— TOG							COMMENTS
S-1 1225	8/1/94	H_2O	3	VOA	36491.4	X										
S-2 1247	↓	↓	3	↓	36492.2	↓										
S-3 1306			3		36493.0											
S-4 1339			10	4L 6 VOA	36494.9	X	X	X	X							ph~7
S-5 1412			3	VOA	36495.7											
S-6 1435			↓	↓	36496.5											
S-7 1500					36497.3											
S-8 1520					36498.1											
S-9 —			3		36499.0											
S-10 —	↓	↓	2	↓	36500.7	↓										

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] Alisto	8/3/4	1515	[signature] Pace	8/3/4	1515
[signature] Pace	8/3	1700	[signature] / PACE	8/3/94	1700

ADDITIONAL COMMENTS: 15/3 H/2

CLV-16722

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