BP OIL

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

ENVIRONMENTAL PROTECTION
95 MAY -3 PM 1:17

May 1, 1995

> 120 days to rec QMR

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

RE: BP OIL FACILITY #11133
2220 98th Avenue
Oakland CA

Dear Mr. Hiett:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING REPORT DATED March 13, 1995** for the above referenced facility.

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

Respectfully,

Scott T. Hooton
Environmental Resources Management
Group Leader

STH:mu msword\ERM11133

cc: Ms. Eva Chu, Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor, Alameda California 94542-6577

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

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

Site File

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11133
2220 98th Avenue
Oakland, California

Project No. 10-025-04-002

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

March 13, 1995

Brady Nagle
Project Manager

Dan Salaices
Registered Geologist

REGISTERED GEOLOGIST
DANIEL J.
SALAICES
No. 5162
STATE OF CALIFORNIA

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11133
2220 98th Avenue
Oakland, California

Project No. 10-025-04-002

March 13, 1995

INTRODUCTION

This report presents the results and findings of the December 21, 1994 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11133, 2220 98th Avenue, Oakland, 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 Wells MW-1 and RW-1 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

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. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-1	04/05/91	34.46	—	—	—	—	—	—	—	—	—	—
MW-1	04/01/92	34.46	11.25	0.01	23.22	—	—	—	—	—	—	—
MW-1	07/06/92	34.46	13.61	0.02	20.87	—	—	—	—	—	—	—
MW-1	10/07/92	34.46	15.15	0.09	19.38	—	—	—	—	—	—	—
MW-1	01/14/93	34.46	10.73	0.01	23.74	—	—	—	—	—	—	—
MW-1	04/22/93	34.46	11.64	0.16	22.94	—	—	—	—	—	—	—
MW-1	07/15/93	34.46	13.50	1.11	21.79	—	—	—	—	—	—	—
MW-1	10/21/93	34.46	15.21	1.00	20.00	—	—	—	—	—	—	—
MW-1	01/27/94	34.46	17.48	0.81	17.59	—	—	—	—	—	—	—
MW-1	04/21/94	34.46	10.94	—	23.52	110000	1400	9100	3400	30000	1.6	PACE
MW-1	09/09/94	34.46	13.80	—	20.66	—	—	—	—	—	—	—
MW-1	12/21/94	34.46	12.60	0.02	21.88	—	—	—	—	—	—	—
MW-2	04/05/91	35.50	16.62	—	18.88	ND<50	0.6	0.9	ND<0.3	ND<0.3	—	SUP
MW-2	04/01/92	35.50	11.25	—	24.25	—	—	—	—	—	—	—
MW-2	04/02/92	35.50	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	APP
MW-2	07/06/92	35.50	12.72	—	22.78	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
MW-2	10/07/92	35.50	15.08	—	20.42	ND<50	ND<0.5	1.8	ND<0.5	2.3	—	ANA
MW-2	01/14/93	35.50	9.69	—	25.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-2	04/22/93	35.50	10.46	—	25.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-2	07/15/93	35.50	12.02	—	23.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-2	10/21/93	35.50	13.12	—	22.38	ND<50	0.7	0.9	ND<0.5	0.9	—	PACE
MW-2	01/27/94	35.50	12.01	—	23.49	ND<50	0.6	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-2	04/21/94	35.50	10.60	—	24.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.1	PACE
MW-2	09/09/94	35.50	12.42	—	23.08	ND<50	ND<0.5	ND<0.5	ND<0.5	0.6	2.2	PACE
MW-2	12/21/94	35.50	10.85	—	24.65	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.2	PACE
MW-3	04/05/91	36.53	17.84	—	18.69	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	—	SUP
MW-3	04/01/92	36.53	15.64	—	20.89	—	—	—	—	—	—	—
MW-3	04/02/92	36.53	—	—	—	ND<50	1.4	ND<0.5	ND<0.5	ND<0.5	—	APP
MW-3	07/06/92	36.53	19.03	—	17.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
MW-3	10/07/92	36.53	21.83	—	14.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
MW-3	01/14/93	36.53	15.96	—	20.57	350	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-3	04/22/93	36.53	16.20	—	20.33	2800	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-3	07/15/93	36.53	16.82	—	19.71	1400	1.2	ND<0.5	2.0	3.5	—	PACE
MW-3	10/21/93	36.53	18.84	—	17.69	370	2.1	2.3	2.3	6.0	—	PACE
MW-3	01/27/94	36.53	18.00	—	18.53	1300	6.3	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-3	04/21/94	36.53	16.62	—	19.91	2000	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.4	PACE
MW-3	09/09/94	36.53	18.38	—	18.15	1300	ND<0.5	ND<0.5	0.5	1.2	3.0	PACE
MW-3	12/21/94	36.53	15.28	—	21.25	420	16	0.7	3.5	5.9	1.9	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
AW-1	04/05/91	38.11	25.44	—	12.67	4100	1500	69	100	83	—	SUP
AW-1	04/01/92	38.11	23.22	—	14.89	—	—	—	—	—	—	—
AW-1	04/02/92	38.11	—	—	—	11000	1800	210	210	490	—	APP
AW-1	07/06/92	38.11	24.89	—	13.22	6500	4000	40	290	530	—	ANA
AW-1	10/07/92	38.11	26.55	—	11.56	4700	1500	41	47	300	—	ANA
QC-1 (c)	10/07/92	38.11	—	—	—	2900	1200	25	37	210	—	ANA
AW-1	01/14/93	38.11	23.73	—	14.38	2800	830	31	140	240	—	PACE
QC-1 (c)	01/14/93	38.11	—	—	—	4100	1700	28	130	230	—	PACE
AW-1	04/22/93	38.11	22.29	—	15.82	39000	14000	530	1800	6100	—	PACE
AW-1	07/15/93	38.11	22.50	—	15.61	6200	2200	28	210	540	—	PACE
AW-1	10/21/93	38.11	24.32	—	13.79	2400	820	13	55	120	—	PACE
AW-1	01/27/94	38.11	23.72	—	14.39	3500	1400	26	130	220	—	PACE
AW-1	04/21/94	38.11	22.48	—	15.63	40000	12000	1900	1600	5000	1.4	PACE
AW-1	09/09/94	38.11	23.04	—	15.07	3500	1600	5.0	200	250	2.1	PACE
QC-1 (c)	09/09/94	38.11	—	—	—	3900	1900	5.5	190	240	—	PACE
AW-1	12/21/94	38.11	21.70	—	16.41	7600	3100	36	370	320	1.6	PACE
				—								
AW-2	04/05/91	36.83	22.36	—	14.47	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	—	SUP
AW-2	04/01/92	36.83	20.81	—	16.02	—	—	—	—	—	—	—
AW-2	04/02/92	36.83	—	—	—	130	25	2.3	0.7	2.1	—	APP
AW-2	07/06/92	36.83	23.57	—	13.26	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
AW-2	10/07/92	36.83	25.24	—	11.59	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
AW-2	01/14/93	36.83	20.82	—	16.01	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-2	04/22/93	36.83	19.37	—	17.46	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-2	07/15/93	36.83	21.29	—	15.54	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-2	10/21/93	36.83	23.14	—	13.69	ND<50	1.3	1.1	0.9	2.1	—	PACE
AW-2	01/27/94	36.83	22.34	—	14.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-2	04/21/94	36.83	21.15	—	15.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.0	PACE
AW-2	09/09/94	36.83	22.09	—	14.74	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4.1	PACE
AW-2	12/21/94	36.83	20.12	—	16.71	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.0	PACE
AW-3	04/05/91	39.13	23.90	—	15.23	5200	980	450	95	310		SUP
AW-3	04/01/92	39.13	22.50	—	16.63	4700	890	47	43	110	—	APP
AW-3	07/06/92	39.13	23.26	—	15.87	3900	3100	30	80	99	—	ANA
AW-3	10/07/92	39.13	24.75	—	14.38	5000	2600	ND<0.5	ND<0.5	59	—	ANA
AW-3	01/14/93	39.13	23.59	—	15.54	350	250	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-3	04/22/93	39.13	19.42	—	19.71	240	71	2.4	0.6	4.0	—	PACE
AW-3	07/15/93	39.13	20.09	—	19.04	650	71	2.8	1.5	1.1	—	PACE
AW-3	10/21/93	39.13	21.88	—	17.25	160	4.8	1.7	1.6	3.6	—	PACE
QC-1 (c)	10/21/93	39.13	—	—	—	170	6.1	2.0	1.7	4.4	—	PACE
AW-3	01/27/94	39.13	22.33	—	16.80	92	2.1	ND<0.5	ND<0.5	ND<0.5	—	PACE
QC-1 (c)	01/27/94	39.13	—	—	—	90	2.9	0.5	ND<0.5	ND<0.5	—	PACE
AW-3	04/21/94	39.13	20.96	—	18.17	150	3.6	0.8	0.9	2.5	1.3	PACE
AW-3	09/09/94	39.13	21.60	—	17.53	53	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.9	PACE
AW-3 (d)	12/21/94	39.13	—	—	—	—	—	—	—	—	—	PACE

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BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
AW-4	04/05/91	39.08	25.12	—	13.96	110000	40000	13000	2000	5500	—	SUP
AW-4	04/01/92	39.08	23.56	—	15.52	230000	57000	31000	2900	7600	—	APP
AW-4 (e)	04/01/92	39.08	23.56	—	15.52	210000	55000	23000	2900	7000	—	APP
AW-4	07/06/92	39.08	25.87	—	13.21	38000	16000	5400	2000	6100	—	ANA
AW-4	10/07/92	39.08	27.53	—	11.55	120000	41000	26000	4700	13000	—	ANA
AW-4	01/14/93	39.08	24.12	—	14.96	62000	18000	14000	2700	7700	—	PACE
AW-4	04/22/93	39.08	21.47	—	17.61	18000	1100	2100	320	3500	—	PACE
AW-4	07/15/93	39.08	23.30	—	15.78	21000	820	2300	590	3800	—	PACE
AW-4	10/21/93	39.08	25.08	—	14.00	11000	570	83	630	2300	—	PACE
AW-4	01/27/94	39.08	24.61	—	14.47	12000	420	460	600	2200	—	PACE
AW-4	04/21/94	39.08	22.96	—	16.12	12000	110	250	150	1900	1.5	PACE
QC-1 (c)	04/21/94	39.13	—	—	—	14000	71	160	29	1200	—	PACE
AW-4	09/09/94	39.08	23.85	—	15.23	9700	75	64	280	2000	2.1	PACE
AW-4 (d)	12/21/94	—	—	—	—	—	—	—	—	—	—	PACE
AW-5	04/05/91	38.51	25.48	—	13.03	420	31	7.5	20	68	—	SUP
AW-5	04/01/92	38.51	23.95	—	14.56	—	—	—	—	—	—	—
AW-5	04/02/92	38.51	—	—	—	4000	270	63	190	290	—	APP
AW-5	07/06/92	38.51	26.48	—	12.03	1400	160	ND<2.5	250	58	—	ANA
AW-5	10/07/92	38.51	28.18	—	10.33	360	12	0.6	8.7	5	—	ANA
AW-5	01/14/93	38.51	24.15	—	14.36	1700	270	7.5	130	62	—	PACE
AW-5	04/22/93	38.51	22.43	—	16.08	2700	780	30	220	180	—	PACE
QC-1 (c)	04/22/93	38.51	—	—	—	3500	780	29	240	210	—	PACE
AW-5	07/15/93	38.51	24.31	—	14.20	1300	69	16	67	120	—	PACE
QC-1 (c)	07/15/93	38.51	—	—	—	1300	68	8.3	64	99	—	PACE
AW-5	10/21/93	38.51	26.05	—	12.46	510	9.6	1.5	17	45	—	PACE
AW-5	10/21/93	38.51	26.05	—	12.46	510	9.6	1.5	17	45	—	PACE
AW-5	01/27/94	38.51	26.42	—	12.09	420	3.3	ND<0.5	1.0	0.9	—	PACE
AW-5	04/21/94	38.51	24.36	—	14.15	1000	110	25	56	27	1.3	PACE
AW-5	09/09/94	38.51	24.55	—	13.96	210	ND<0.5	ND<0.5	0.5	0.9	2.7	PACE
AW-5	12/21/94	38.51	22.30	—	16.21	410	ND<0.5	20	4.3	1.4	1.1	PACE
QC-1 (c)	12/21/94	38.51	—	—	—	340	ND<0.5	15	3.3	1.4	—	PACE
AW-6	04/05/91	37.08	22.48	—	14.60	1100	80	19	1.4	230	—	SUP
AW-6	04/01/92	37.08	22.50	—	14.58	—	—	—	—	—	—	—
AW-6	04/02/92	37.08	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	APP
AW-6	07/06/92	37.08	22.74	—	14.34	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
AW-6	10/07/92	37.08	24.64	—	12.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
AW-6	01/14/93	37.08	22.36	—	14.72	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-6	04/22/93	37.08	22.82	—	14.26	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-6	07/15/93	37.08	20.49	—	16.59	ND<50	ND<0.5	ND<0.5	ND<0.5	0.8	—	PACE
AW-6	10/21/93	37.08	22.84	—	14.24	ND<50	0.5	0.6	ND<0.5	0.7	—	PACE
AW-6	01/27/94	37.08	22.33	—	14.75	ND<50	ND<0.5	0.9	3.1	12	—	PACE
AW-6	04/21/94	37.08	20.66	—	16.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.7	PACE
AW-6	09/09/94	37.08	21.57	—	15.51	ND<50	0.9	ND<0.5	ND<0.5	0.5	2.9	PACE
AW-6	12/21/94	37.08	19.40	—	17.68	ND<50	1.8	0.8	0.8	3.2	1.1	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
AW-7	04/05/91	37.60	23.38	—	14.22	ND<50	0.4	0.7	ND<0.3	ND<0.3	—	SUP
AW-7	04/01/92	37.60	21.92	—	15.68	—	—	—	—	—	—	—
AW-7	04/02/92	37.60	—	—	—	ND<50	ND<0.5	3.2	1.0	5.4	—	APP
AW-7	07/06/92	37.60	24.50	—	13.10	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
AW-7	10/07/92	37.60	26.18	—	11.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
AW-7	01/14/93	37.60	22.03	—	15.57	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-7	04/22/93	37.60	21.18	—	16.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-7	07/15/93	37.60	22.09	—	15.51	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-7	10/21/93	37.60	24.05	—	13.55	51	5.0	4.2	3.5	8.2	—	PACE
AW-7	01/27/94	37.60	23.40	—	14.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-7	04/21/94	37.60	22.24	—	15.36	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.5	PACE
AW-7	09/09/94	37.60	22.94	—	14.66	ND<50	ND<0.5	ND<0.5	ND<0.5	0.5	4.3	PACE
AW-7	12/21/94	37.60	20.86	—	16.74	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.2	PACE
AW-8	04/05/91	40.86	26.68	—	14.18	80	1.9	2.2	0.5	1.3	—	SUP
AW-8	04/01/92	40.86	25.11	—	15.75	73	ND<0.5	0.7	ND<0.5	0.6	—	APP
AW-8	07/06/92	40.86	26.43	—	14.43	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
AW-8	10/07/92	40.86	28.59	—	12.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
AW-8	01/14/93	40.86	25.55	—	15.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-8	04/22/93	40.86	22.29	—	18.57	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-8	07/15/93	40.86	23.42	—	17.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
AW-8	10/21/93	40.86	25.15	—	15.71	ND<50	1.9	1.8	1.3	3.3	—	PACE
AW-8	01/27/94	40.86	25.42	—	15.44	ND<50	ND<0.5	0.5	0.6	6.5	—	PACE
AW-8	04/21/94	40.86	24.14	—	16.72	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.5	PACE
AW-8	09/09/94	40.86	24.55	—	16.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.4	PACE
AW-8	12/21/94	40.86	22.72	—	18.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.1	PACE
RW-1	04/05/91	37.73	—	—	—	—	—	—	—	—	—	—
RW-1	04/01/92	37.73	22.81	0.30	15.14	—	—	—	—	—	—	—
RW-1	07/06/92	37.73	26.92	0.41	11.12	—	—	—	—	—	—	—
RW-1	10/07/92	37.73	28.51	1.26	10.16	—	—	—	—	—	—	—
RW-1	01/14/93	37.73	23.75	0.25	14.17	—	—	—	—	—	—	—
RW-1	04/22/93	37.73	22.70	1.38	16.07	—	—	—	—	—	—	—
RW-1	07/15/93	37.73	26.10	0.81	12.24	—	—	—	—	—	—	—
RW-1	10/21/93	37.73	25.40	0.49	12.70	—	—	—	—	—	—	—
RW-1	10/21/93	37.73	25.40	0.49	12.70	—	—	—	—	—	—	—
RW-1	01/27/94	37.73	28.02	0.37	9.99	—	—	—	—	—	—	—
RW-1	04/21/94	37.73	23.10	0.91	15.31	—	—	—	—	—	—	—
RW-1	09/09/94	37.73	24.39	1.04	14.12	—	—	—	—	—	—	—
RW-1 (f)	12/21/94	37.73	—	—	—	—	—	—	—	—	—	—

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
QC-2 (g)	10/07/92	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ANA
QC-2 (g)	01/14/93	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (g)	04/22/93	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (g)	07/15/93	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (g)	10/21/93	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (g)	01/27/94	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (g)	04/21/94	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (g)	09/09/94	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (g)	12/21/94	---	---	---	---	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
DO	Dissolved oxygen
ppb	Parts per billion
ppm	Parts per million
---	Not measured/available/applicable/measurable
ND	Not detected above reported detection limit
PACE	Pace, Inc.
SUP	Superior Analytical Laboratories, Inc.
APP	Applied Analytical Laboratory
ANA	Anametrix, Inc.

NOTES:

(a)	Top of casing elevations surveyed to the nearest 0.01 foot above mean sea level.
(b)	Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.
(c)	Blind duplicate.
(d)	Inaccessible; car parked over well.
(e)	Duplicate.
(f)	Well not monitored or sampled due to vapor extraction system.
(g)	Travel blank.

E:\00\10-025\025-4-1.WQ2

TABLE 2 - PRODUCT REMOVAL STATUS

BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

WELL ID	DATE	PRODUCT REMOVED (Gallons)	PRODUCT REMOVED CUMULATIVE (Gallons)
RW-1	10/06/93	1.00	1.00
	10/14/94	1.00	2.00
	10/20/94	18.00	20.00
	10/26/94	3.00	23.00
	11/02/93	5.00	28.00
	11/10/94	6.00	34.00
	11/16/94	2.50	36.50
	11/23/94	5.00	41.50
	11/30/93	2.00	43.50
	12/07/93	4.00	47.50
	12/17/93	1.50	49.00
	01/04/94	5.00	54.00
	01/12/94	3.50	57.50
	01/20/94	2.50	60.00
	02/11/94	4.00	64.00
	02/18/93	3.50	67.50
	02/25/94	3.00	70.50
	03/04/94	3.50	74.00
	03/18/94	5.50	79.50
	03/30/94	4.00	83.50
	04/13/94	4.60	88.10
	04/21/94	4.20	92.30
	04/29/94	4.50	96.80
	05/06/94	5.50	102.30
	05/13/94	3.50	105.80
	05/20/94	3.50	109.30
	05/26/94	4.50	113.80
	06/02/94	3.50	117.30
	06/09/94	2.50	119.80
	06/16/94	3.50	123.30
	06/23/94	4.00	127.30
	06/29/94	2.50	129.80
	07/07/94	2.00	131.80
	07/12/94	3.00	134.80
	07/20/94	1.50	136.30
	07/29/94	3.50	139.80
	08/05/94	1.50	141.30
	08/12/94	2.00	143.30
	08/18/94	2.50	145.80
	09/09/94	3.50	149.30
	09/16/94	4.00	153.30
	09/23/94	2.00	155.30
MW-1	10/20/93	0.10	0.1
	11/10/93	0.10	0.2
	09/09/94	SHEEN	0.2
	10/26/94	SHEEN	0.2
	11/16/94	SHEEN	0.2
	12/21/94	0.25	0.45
	02/08/95	0	0.45

Note: Groundwater and soil vapor extraction equipment installed in RW-1 in October 1994.

SOURCE:
USGS MAP, OAKLAND EAST AND SAN LEANDRO QUADRANGLES, CALIFORNIA. 7.5 MINUTE SERIES. 1956. PHOTOREVISED 1980.

0 1000' 2000'

FIGURE 1

SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11133
2220 98TH AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 10-025

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10025—DWG 3-22-94 RKW 1-1

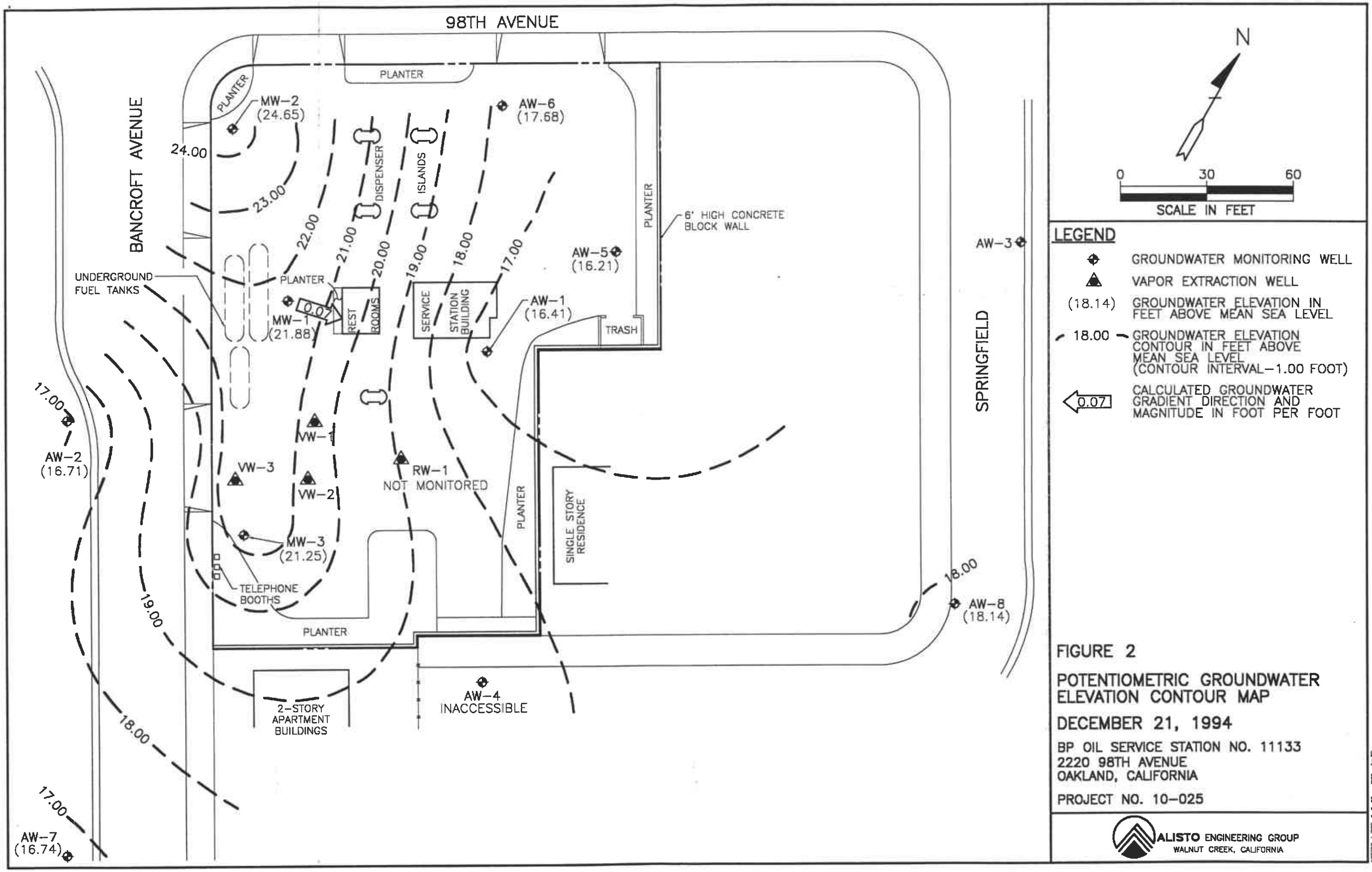


FIGURE 2

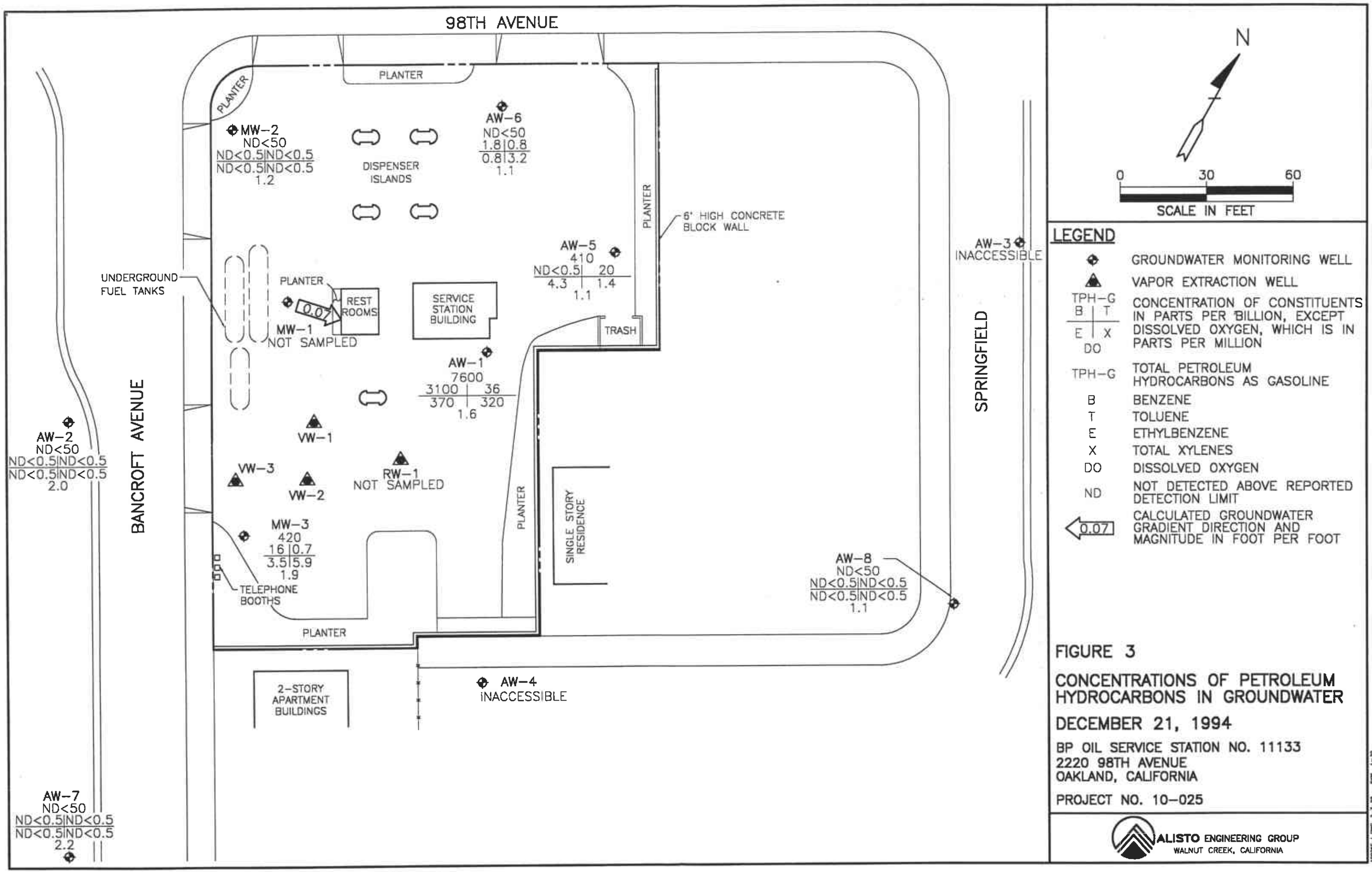
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

DECEMBER 21, 1994

BP OIL SERVICE STATION NO. 11133
2220 98TH AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 10-025

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA



LEGEND

◆	GROUNDWATER MONITORING WELL
▲	VAPOR EXTRACTION 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
⇦ 0.07	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

DECEMBER 21, 1994

BP OIL SERVICE STATION NO. 11133
2220 98TH AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 10-025

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

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

6 Groundwater Sampling

Barometric pres. 29.80

Date: 12-21-94 | Project No. 10-25-04-002

Day: M T (W) Th F | Station No. BP11132

Temp. 57° | Address 2220 98TH AVE.

SAMPLER: DJB | OAKLAND

Well ID	SAMPLE #	WATER time	Well ID	SAMPLE #	WATER/ time	Well ID	SAMPLE	WATER / time
AW-1	S-8	21.70' / 1000	AW-6	S-6	19.40' / 1020	RW-1	NOT	NM
AW-2	S-3	20.12' / 1010	AW-7	S-2	20.96' / 1023	AW-8	S-1	22.72' / 1047
AW-3	NOT	NM	MW-1	NOT	12.60' / 1040			
AW-4	NOT	NM	MW-2	S-7	10.85' / 1031			
AW-5	S-4+5	22.30' / 1019	MW-3	S-9	15.28' / 1027			

FIELD INSTRUMENT CALIBRATION DATA

Ph METER ICM 4.00 4.00 7.00 7.00 10.00 10.00 TIME 0912 TEMPERATURE COMPENSATED (Y) N

D.O. METER ICM BAROMETRIC PRESSURE 29.8 AIR TEMPERATURE 57°

CONDUCTIVITY METER ICM 10,000 ~~10~~ OTHER Factory Calibrated

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
AW-8	22.72	2"	SR/SR	None	Y (N)	2	1050	57.7	7.10	1240	1.9	O EPA 601
Total Depth - Water Level =	x Well Vol. Factor =	x#vol. to Purge =	PurgeVol.			5	1055	61.3	7.20	1080	1.2	X TPH-G/BTEX
39.2-22.72 = 16.4 x .16 x 3 = 7.9 gal						8	1100	61.2	7.21	1090	1.1	O TPH Diesel
Purge Method: X Surface Pump ~~X~~ Disp.Tube OWinch ODisp. Bailer(s) OSys Port												O TOG 5520
Comments:												Time/Sample 1100/S-1

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
AW-3					Y N							O EPA 601
Total Depth - Water Level =	x Well Vol. Factor =	x#vol. to Purge =	PurgeVol.									O TPH-G/BTEX
CAR Parked over well												O TPH Diesel
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port												O TOG 5520
Comments:												Time/ Sample NOT

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
AW-4					Y N							O EPA 601
Total Depth - Water Level =	x Well Vol. Factor =	x#vol. to Purge =	PurgeVol.									O TPH-G/BTEX
Abandoned car parked on well												O TPH Diesel
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port												O TOG 5520
Comments:												Time /Sample NOT

ALISTO

Field Report / Sampling Data Sheet

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

O Groundwater Sampling

Date: 12-21-94 Project No. 10-25-04-002
Day: M T W Th F Station No. BP11132
Address 2220 98TH AVE. OAKLAND
SAMPLER: DXB

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence
AW-7	20.86'	2"	dk/dk	None	Y (N)

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
32-3 -20.86 = 11.4 x .16 x 3 = 5.49
Purge Method: ~~OSurface Pump~~ ~~ODisp.Tube~~ OWinch ODisp. Bailer(s)___ OSys Port
Comments:

Gal.	Time	Temp *F	pH	E.C.	D.O.
3	1145	63.7	7.02	446	1.9
6	1155	65.0	6.96	458	2.2

O EPA 601___ ~~O~~ TPH-G/BTEX___ O TPH Diesel___ O TOG 5520 __
Time/ Sample 1155/S-2

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence
AW-2	20.12	2"	dk/dk	None	Y (N)

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
35.2 - 20.12 = 15.08 x .16 x 3 = 7.2
Purge Method: ~~OSurface Pump~~ ~~ODisp.Tube~~ OWinch ODisp. Bailer(s)___ OSys Port
Comments:

Gal.	Time	Temp *F	pH	E.C.	D.O.
3	1210	64.8	6.58	346	1.9
5	1215	65.4	6.57	367	2.0
8	1217	65.2	6.59	369	2.0

O EPA 601___ ~~O~~ TPH-G/BTEX___ O TPH Diesel___ O TOG 5520 __
Time /Sample 1217/S-3

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence
AW-5	22.30	4	new/new	None	Y (N)

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
42.9 - 22.30 = 20.60 x .65 x 3 = 40.1 gal
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments: TRAFFIC Box Destroyed. Used 8" B.K

Gal.	Time	Temp *F	pH	E.C.	D.O.
6	1217	65.7	6.50	536	1.2
20	1225	66.2	6.50	528	1.1
41	1241	65.3	6.46	535	1.1

O EPA 601___ ~~O~~ TPH-G/BTEX___ O TPH Diesel___ O TOG 5520 __
Time/ Sample 1241/S-4,5

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence
AW-6	19.40	4"	dk/dk	None	Y (N)

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
34-2 - 19.4 = 14.8 x .65 x 3 = 28.8
Purge Method: ~~OSurface Pump~~ ~~ODisp.Tube~~ OWinch ODisp. Bailer(s)___ OSys Port
Comments: PURGED DRY

Gal.	Time	Temp *F	pH	E.C.	D.O.
4	1253	64.4	6.45	438	1.1
25	1307	65.4	6.45	441	1.2
30	1320	65.1	6.44	440	1.1

O EPA 601___ ~~O~~ TPH-G/BTEX___ O TPH Diesel___ O TOG 5520 __
Time/ Sample 1325/S-6

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence
MW-2	10.85	2"	dk/dk	None	Y (N)

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
34.1 - 10.85 = 23.25 x .16 x 3 = 11.6
Purge Method: ~~OSurface Pump~~ ~~ODisp.Tube~~ OWinch ODisp. Bailer(s)___ OSys Port
Comments:

Gal.	Time	Temp *F	pH	E.C.	D.O.
3	1327	66.7	6.87	242	1.4
9	1331	68.5	6.82	222	1.2
12	1334				

O EPA 601___ ~~O~~ TPH-G/BTEX___ O TPH Diesel___ O TOG 5520 __
Time/ Sample 1334/S-7

ALISTO

Field Report / Sampling Data Sheet

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

O Groundwater Sampling

Date: 12-21-94 Project No. 10-25-04-002
Day: M T (W) Th F Station No. BP11132
Address 2220 98TH AVE.
SAMPLER: OAKLAND

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
AW-1	21.70	2	ok/ok	None	Y (N)	5	1330	64.6	6.51	790	1.2	O EPA 601 ___
Total Depth - Water Level =	x Well Vol. Factor =	x#vol. to Purge =	PurgeVol.			9	1347	64.1	6.47	800		X TPH-G/BTEX Hel
38.6 - 21.70 = 16.9 x .16 x 3 = 8.11						10	1350	64.9	6.45	810	1.6	O TPH Diesel ___
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) ___ OSys Port												O TOG 5520 ___
Comments:												Time /Sample 1350/5-8

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-3	15.28'	2"	ok/ok		Y (N)	1	1407	64.6	6.51	251	1.7	O EPA 601 ___
Total Depth - Water Level =	x Well Vol. Factor =	x#vol. to Purge =	PurgeVol.			3	1414	64.9	6.53	241		X TPH-G/BTEX Hel
21.83 - 15.28 = 6.52 x .16 x 3 = 3.1						5	1420	65.5	6.86	238	1.9	O TPH Diesel ___
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) ___ OSys Port												O TOG 5520 ___
Comments: MW-3												Time/ Sample 1420/5-9

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-1	12.60	2"	ok/ok	12.58	(Y) N							O EPA 601 ___
Total Depth - Water Level =	x Well Vol. Factor =	x#vol. to Purge =	PurgeVol.									O TPH-G/BTEX ___
PPRS emptied 1/4g. product 5g. water bailed.												O TPH Diesel ___
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) ___ OSys Port												O TOG 5520 ___
Comments:												Time /Sample NOT

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
RW-1	NM				Y N							O EPA 601 ___
Total Depth - Water Level =	x Well Vol. Factor =	x#vol. to Purge =	PurgeVol.									O TPH-G/BTEX ___
RW-1 hooked up to vapor system operating.												O TPH Diesel ___
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) ___ OSys Port												O TOG 5520 ___
Comments: well not accessed or sampled.												Time /Sample NOT

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
					Y N							O EPA 601 ___
Total Depth - Water Level =	x Well Vol. Factor =	x#vol. to Purge =	PurgeVol.									O TPH-G/BTEX ___
												O TPH Diesel ___
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) ___ OSys Port												O TOG 5520 ___
Comments:												Time/ Sample

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

pace INCORPORATED
ENVIRONMENTAL LABORATORIES

REPORT OF LABORATORY ANALYSIS

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

December 28, 1994
PACE Project Number: 441221505

Attn: Mr. Brady Nagle

Client Reference: BP# 11132, 2220 98th Ave., Oakland.

PACE Sample Number:			70 0455375	
Date Collected:			12/21/94	
Date Received:			12/21/94	
			S-1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	12/22/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	12/22/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	12/22/94
Benzene	ug/L	0.5	ND	12/22/94
Toluene	ug/L	0.5	ND	12/22/94
Ethylbenzene	ug/L	0.5	ND	12/22/94
Xylenes, Total	ug/L	0.5	ND	12/22/94

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

pace INCORPORATED
ENVIRONMENTAL LABORATORIES

REPORT OF LABORATORY ANALYSIS

December 28, 1994
PACE Project Number: 441221505

Client Reference: BP# 11132, 2220 98th Ave., Oakland.

PACE Sample Number:			70 0455383	
Date Collected:			12/21/94	
Date Received:			12/21/94	
Client Sample ID:			S-2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	12/22/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	12/22/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	12/22/94
Benzene	ug/L	0.5	ND	12/22/94
Toluene	ug/L	0.5	ND	12/22/94
Ethylbenzene	ug/L	0.5	ND	12/22/94
Xylenes, Total	ug/L	0.5	ND	12/22/94

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REPORT OF LABORATORY ANALYSIS

December 28, 1994
PACE Project Number: 441221505

Client Reference: BP# 11132, 2220 98th Ave., Oakland.

PACE Sample Number:			70 0455391	
Date Collected:			12/21/94	
Date Received:			12/21/94	
Client Sample ID:			S-3	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	12/22/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	12/22/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	12/22/94
Benzene	ug/L	0.5	ND	12/22/94
Toluene	ug/L	0.5	ND	12/22/94
Ethylbenzene	ug/L	0.5	ND	12/22/94
Xylenes, Total	ug/L	0.5	ND	12/22/94

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REPORT OF LABORATORY ANALYSIS

Mr. Brady Nagle
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December 28, 1994
PACE Project Number: 441221505

Client Reference: BP# 11132, 2220 98th Ave., Oakland.

PACE Sample Number:			70 0455405	
Date Collected:			12/21/94	
Date Received:			12/21/94	
Client Sample ID:			S-4	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	12/22/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	410	12/22/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	12/22/94
Benzene	ug/L	0.5	ND	12/22/94
Toluene	ug/L	0.5	20	12/22/94
Ethylbenzene	ug/L	0.5	4.3	12/22/94
Xylenes, Total	ug/L	0.5	1.4	12/22/94

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PACE INCORPORATED
ENVIRONMENTAL LABORATORIES

REPORT OF LABORATORY ANALYSIS

December 28, 1994
PACE Project Number: 441221505

Client Reference: BP# 11132, 2220 98th Ave., Oakland.

PACE Sample Number:			70 0455413	
Date Collected:			12/21/94	
Date Received:			12/21/94	
Client Sample ID:			S-5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	12/22/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	340	12/22/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	12/22/94
Benzene	ug/L	0.5	ND	12/22/94
Toluene	ug/L	0.5	15	12/22/94
Ethylbenzene	ug/L	0.5	3.3	12/22/94
Xylenes, Total	ug/L	0.5	1.4	12/22/94

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REPORT OF LABORATORY ANALYSIS

December 28, 1994
PACE Project Number: 441221505

Client Reference: BP# 11132, 2220 98th Ave., Oakland.

PACE Sample Number:			70 0455421	
Date Collected:			12/21/94	
Date Received:			12/21/94	
Client Sample ID:			S-6	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	12/22/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	12/22/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	12/22/94
Benzene	ug/L	0.5	1.8	12/22/94
Toluene	ug/L	0.5	0.8	12/22/94
Ethylbenzene	ug/L	0.5	0.8	12/22/94
Xylenes, Total	ug/L	0.5	3.2	12/22/94

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REPORT OF LABORATORY ANALYSIS

December 28, 1994
PACE Project Number: 441221505

Client Reference: BP# 11132, 2220 98th Ave., Oakland.

PACE Sample Number:			70 0455430	
Date Collected:			12/21/94	
Date Received:			12/21/94	
Client Sample ID:			S-7	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	12/23/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	12/23/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	12/23/94
Benzene	ug/L	0.5	ND	12/23/94
Toluene	ug/L	0.5	ND	12/23/94
Ethylbenzene	ug/L	0.5	ND	12/23/94
Xylenes, Total	ug/L	0.5	ND	12/23/94

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REPORT OF LABORATORY ANALYSIS

December 28, 1994
PACE Project Number: 441221505

Client Reference: BP# 11132, 2220 98th Ave., Oakland.

PACE Sample Number:			70 0455448	
Date Collected:			12/21/94	
Date Received:			12/21/94	
Client Sample ID:			S-8	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	12/23/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	1200	7600	12/23/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	12/23/94
Benzene	ug/L	12	3100	12/23/94
Toluene	ug/L	0.5	36	12/23/94
Ethylbenzene	ug/L	0.5	370	12/23/94
Xylenes, Total	ug/L	0.5	320	12/23/94

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REPORT OF LABORATORY ANALYSIS

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December 28, 1994
PACE Project Number: 441221505

Client Reference: BP# 11132, 2220 98th Ave., Oakland

PACE Sample Number:			70 0455456	
Date Collected:			12/21/94	
Date Received:			12/21/94	
Client Sample ID:			S-9	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	12/23/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	420	12/23/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	12/23/94
Benzene	ug/L	0.5	16	12/23/94
Toluene	ug/L	0.5	0.7	12/23/94
Ethylbenzene	ug/L	0.5	3.5	12/23/94
Xylenes, Total	ug/L	0.5	5.9	12/23/94

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PACE INCORPORATED
ENVIRONMENTAL LABORATORIES

REPORT OF LABORATORY ANALYSIS

Mr. Brady Nagle
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December 28, 1994
PACE Project Number: 441221505

Client Reference: BP# 11132, 2220 98th Ave., Oakland.

PACE Sample Number:			70 0455464	
Date Collected:			12/21/94	
Date Received:			12/21/94	
Client Sample ID:			S-10	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	12/22/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	12/22/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	12/22/94
Benzene	ug/L	0.5	ND	12/22/94
Toluene	ug/L	0.5	ND	12/22/94
Ethylbenzene	ug/L	0.5	ND	12/22/94
Xylenes, Total	ug/L	0.5	ND	12/22/94

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

11 Digital Drive
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TEL: 415-883-6100
FAX: 415-883-2673

REPORT OF LABORATORY ANALYSIS

FOOTNOTES
for pages 1 through 10

Client Reference: BP# 11132, 2220 98th Ave., Oakland

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

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Client Reference: BP# 11132, 2220 98th Ave., Oakland

PURGEABLE FUELS AND AROMATICS
Batch: 70 37304
Samples: 70 0455375, 70 0455383, 70 0455391, 70 0455405, 70 0455413
70 0455421, 70 0455430, 70 0455448, 70 0455456, 70 0455464

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	700455324	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND				
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	250		1000	87%		
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50		1000		100%	14%

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	95%	93%	2%

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REPORT OF LABORATORY ANALYSIS

FOOTNOTES
for page 12

Client Reference: BP# 11132, 2220 98th Ave., Oakland.

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

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BP

Rec Chilled 441221.505

CHAIN OF CUSTODY

No.062959 Page 1 of 1

CONSULTANT'S NAME: ALISTO	ADDRESS: 1777 OAKLAND BLVD., 200	CITY: Walnut Creek	STATE:	ZIP CODE: 94596	
BP SITE NUMBER: BP 11132	BP CORNER ADDRESS/CITY: 2220 98th Ave Oakland			CONSULTANT PROJECT NUMBER:	
CONSULTANT PROJECT MANAGER: BRADY NAGLE	PHONE NUMBER:	FAX NUMBER:		CONSULTANT CONTRACT NUMBER:	
BP CONTACT: Scott Hooton	BP ADDRESS:	PHONE NUMBER:		FAX NO.	
LAB CONTACT: Jim Oyes	LABORATORY ADDRESS:	PHONE NUMBER:		FAX NO.	
SAMPLED BY (Please Print Name): Dan Birch	SAMPLED BY (Signature): [signature]	SHIPMENT DATE:		SHIPMENT METHOD: Pace Courier	AIRBILL NUMBER:

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

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	TYPE (VOL.)	PRESERVATIVE / LAB SAMPLE #	HP TPH G BTEX	COMMENTS
S-1	12-21-94 1100	W	3	Voa	45537.5	X	
S-2	1155	↓	↓		45538.3	X	
S-3	1217	↓	↓		45539.1	X	
S-4	1241	↓	↓		45540.5	X	
S-5	1246	↓	↓		45541.3	X	
S-6	1325	↓	↓		45542.1	X	
S-7	1334	↓	↓		45543.0	X	
S-8	1350	↓	↓		45544.8	X	
S-9	1420	↓	↓		45545.6	X	
S-10	1430	↓	1		45546.4	X	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] Alisto	12/21/94	1438	Paul [signature] Alisto	12-21	1438
[signature] Alisto	12/21/94	1623	[signature] Pace	12/21/94	1623
[signature] Pace	12/21	1830	[signature] Pace	12/21/94	1830

ADDITIONAL COMMENTS: 15/2

CLV-16722

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