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

April 24, 1995

Why was not MW-1 sampled on 1/30/95 - Vapor extraction header attached to MW-1
AW-4 must be made accessible for monitoring/sampling - if it continues to be inaccessible, then another MW is required -
More effort will be made to gain access to well in street
Does GW extraction from Row 1 affect AW-4?

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 April 3, 1995** for the above referenced facility. Confirming our previous phone conversation, please note that the remediation system is currently operating.

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, 1777 Oakland Blvd., Suite 200, Walnut Creek, CA 94596

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. 10-025-04-003

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

April 3, 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. 10-025-04-003

February 16, 1995

INTRODUCTION

This report presents the results and findings of the January 30, 1995 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, electrical conductivity, and dissolved oxygen. Groundwater samples were collected for laboratory analysis by lowering a bottom-fill, disposable bailer to just below the water level in the well. The samples were transferred from the bailer into laboratory-supplied containers. The 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 (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	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-1	01/30/95	34.46	--	--	--	--	--	--	--	--	--	--
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-2	01/30/95	35.50	8.38	--	27.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	1.7	ATI
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	16.62	--	19.71	1400	1.2	ND<0.5	2.0	3.5	--	PACE
MW-3	10/21/93	36.53	16.84	--	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
MW-3	01/30/95	36.53	12.62	--	23.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	2.5	ATI

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 (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	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-1	01/30/95	38.11	17.71	—	20.4	35000	[illegible]	650	3200	4100	1.7	ATI
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-2	01/30/95	36.83	16.65	—	20.18	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	2.4	ATI
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	2.6	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)	01/30/95	39.13	—	—	—	—	—	—	—	—	—	—

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 (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	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 (c)	04/01/92	39.08	23.56	—	15.52	210000	65000	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	36	64	280	2000	2.1	PACE
AW-4 (d)	01/30/95	39.08	—	—	—	—	—	—	—	—	—	—
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	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	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	12/21/94	38.51	—	—	—	340	ND<0.5	15	3.3	1.4	—	PACE
AW-5	01/30/95	38.51	18.88	—	19.63	210	0.6	11	8.8	2	1.5	ATI
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	0.6	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
AW-6	01/30/95	37.08	16.74	—	20.34	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	2.2	ATI
QC-1 (c)	01/30/95	37.08	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	—	ATI

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 (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	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	0.5	2.2	PACE
AW-7	01/30/95	37.60	17.51	—	20.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	2.7	ATI
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	8.5	—	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
AW-8	01/30/95	40.86	19.75	—	21.11	ND<50	ND<0.5	1	ND<0.5	1	0.8	ATI
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)	01/30/95	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 (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	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
QC-2 (g)	01/30/95	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	ATI

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
DO	Dissolved oxygen
ug/L	Micrograms per liter
ppm	Parts per million
---	Not measured/available/analyzed
ND	Not detected above reported detection limit
PACE	Pace, Inc.
SUP	Superior Analytical Laboratories, Inc.
APP	Applied Analytical Laboratory
ANA	Anametrix, Inc.
ATI	Analytical Technologies, 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) Monitoring well not accessible.

(e) Duplicate.

(f) Not accessed due to vapor extraction system.

(g) Travel blank.

E:\0010-025\025-4-1.WO2

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	[illegible]
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.

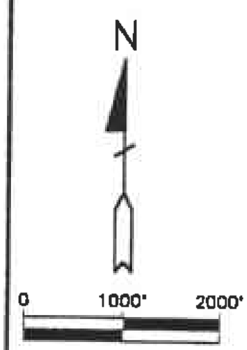


FIGURE 1

SITE VICINITY MAP

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

PROJECT NO. 10-025

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

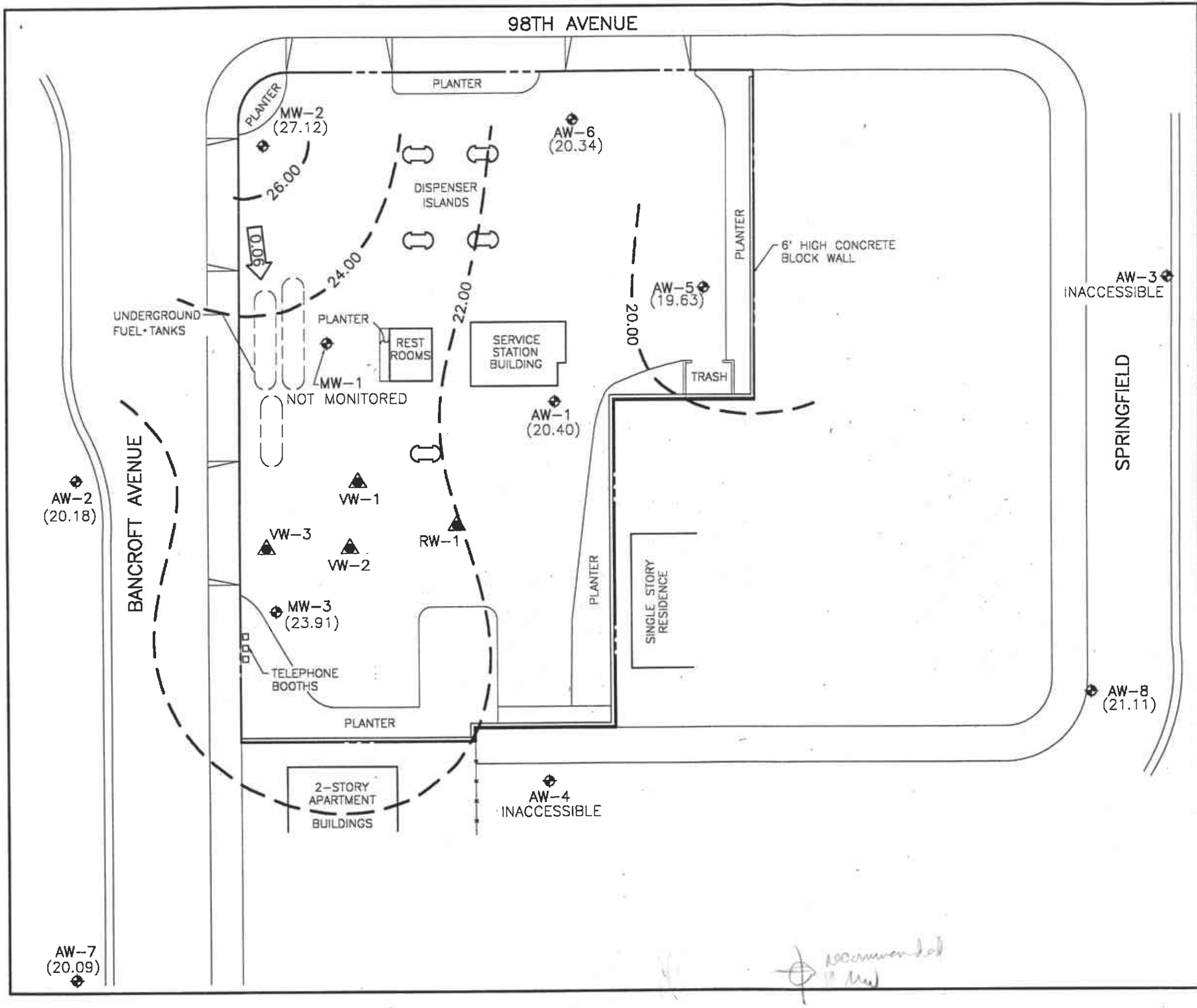


FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

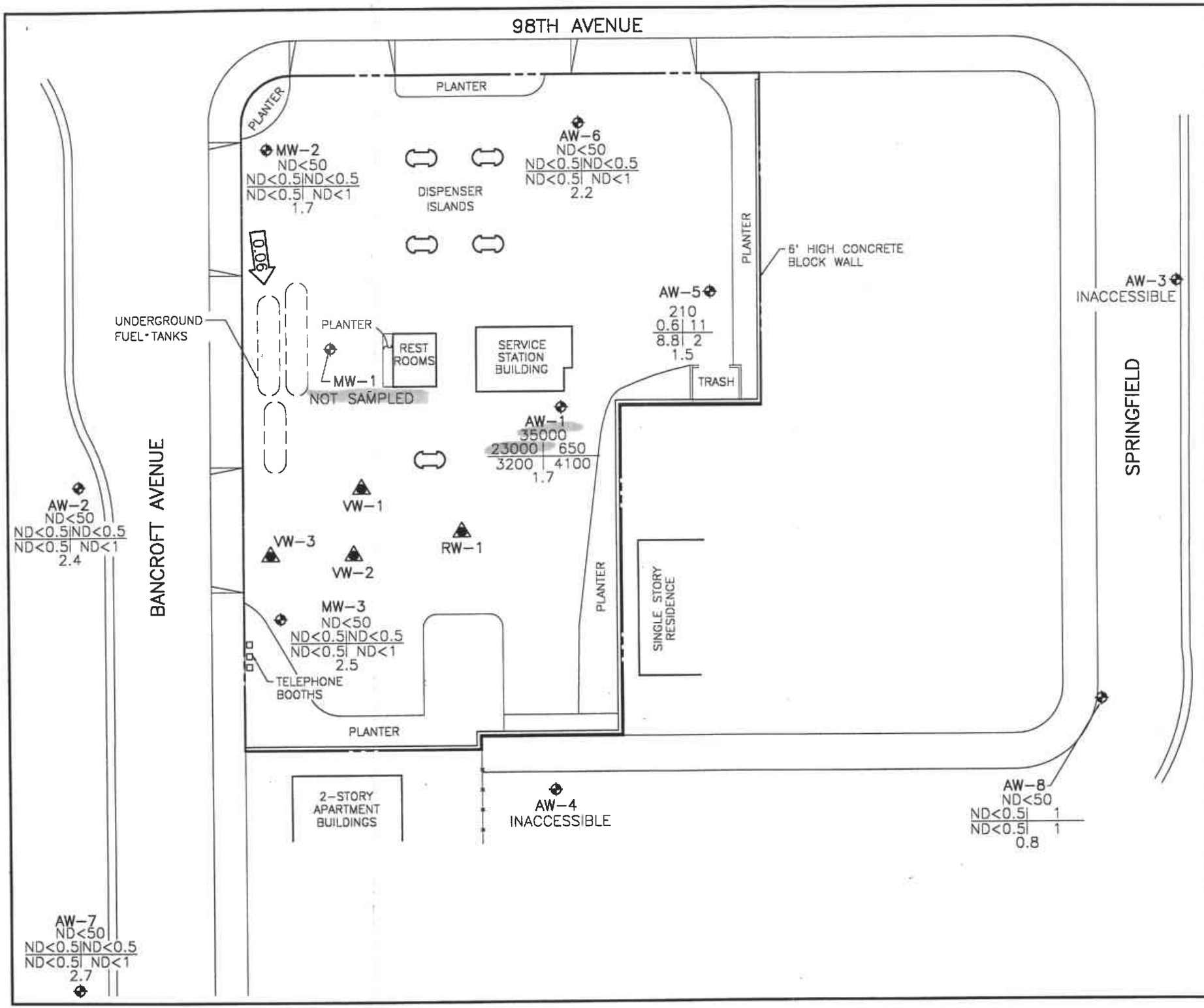
JANUARY 30, 1995

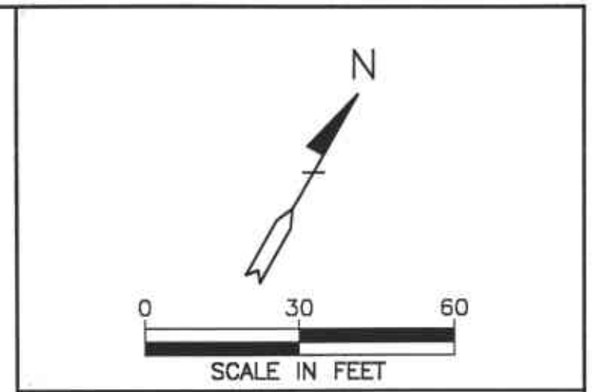
BP OIL SERVICE STATION NO. 11133
2220 98TH AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 10-025

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10025D-4.DWG 3-10-95 RKW 1=30





LEGEND

◆	GROUNDWATER MONITORING WELL
▲	VAPOR EXTRACTION WELL
TPH-G / B / T / E / X / DO	CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER, 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
0.06	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

JANUARY 30, 1995

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

O Groundwater Sampling

Date: 1-30-95 Project No. 10-025-04-003
Day: (M) T W Th F Station No. BP11133
Barometric pres. 30.50' Temp. 55 Address 2220 98TH
SAMPLER: [signature] OAKLAND

Well ID	SAMPLE #	WATER / time	Well ID	SAMPLE #	WATER / time	Well ID	SAMPLE	WATER / time
AW-1	S-8	17.71' / 1025	AW-5	S-4	18.88' / 1037	MW-1	NOT	NM /
AW-2	S-2	16.65' / 1041	AW-6	S-5, S-6	16.74' / 1055	MW-2	S-7	8.38' / 1020
AW-3	NOT	Cap on well	AW-7	S-1	17.51' / 1050	MW-3 12.62'mw	S-9	24.10' / 12.62'
AW-4	NOT	CAP on well	AW-8	S-3	19.75' / 1051	RW-1	NOT	NM /

S-10 TRIP BLANK

FIELD INSTRUMENT CALIBRATION

Ph METER ICM 4.00 4.00 7.00 7.00 10.00 10.00 TIME 1100 TEMPERATURE COMPENSATED (Y) N
D.O. METER ICM BAROMETRIC PRESSURE 30.5 AIR TEMPERATURE 55° Rainy Zero D.O. yes
CONDUCTIVITY METER ICM 10,000 OTHER Factory

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
AW-7	17.51'	2"	ok/ok	None	Y (N)	2	1125	63.6	7.91	320	2.1
						5	1131	64.1	7.95	340	2.6
						7	1139	64.4	8.09	341	2.7

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
32.30' - 17.51' = 14.79 x .16 x 3 = 7.09 gal
Purge Method: (OSurface Pump) ODisp.Tube OWinch ODisp. Bailer(s) ___ OSys Port
Comments:

O EPA 601 ___ X TPH-G/BTEXw hcl O TPH Diesel ___ O TOG 5520 ___
Time/Sample 1139 / S-1

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
AW-2	16.65	2"	ok/ok	None	Y (N)	3	1201	64.0	8.11	411	4.1
						6	1207	64.2	8.03	359	2.3
						9	1211	64.2	8.07	372	2.4

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
35.20' - 16.65 = 18.55 x .16 x 3 = 8.9 gal
Purge Method: (OSurface Pump) ODisp.Tube OWinch ODisp. Bailer(s) ___ OSys Port
Comments:

O EPA 601 ___ X TPH-G/BTEX w hcl O TPH Diesel ___ O TOG 5520 ___
Time/Sample 1211 / S-2

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
AW-8	19.75'	2"	ok/ok	None	Y (N)	3	1300	65.3	6.99	734	1.6
						6	1310	65.7	7.07	730	0.9
						9	1320	65.6	7.04	727	0.8

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
39.20' - 19.75' = 15.45 x .16 x 3 = 9.3 gal
Purge Method: ~~OSurface Pump~~ ~~ODisp. Tube~~ ~~OWinch~~ ~~ODisp. Bailer(s)~~ ___ OSys Port
Comments: Structure

O EPA 601 ___ X TPH-G/BTEX w hcl O TPH Diesel ___ O TOG 5520 ___
Time/Sample 1320 / S-3

ALISTO

Field Report / Sampling Data Sheet

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

☒ Groundwater Sampling

Date: 1-30-95 | Project No. 10-025-04-003
Day: (M) T W Th F | Station No. BP11133
Rainy day | Address 2220 98TH OAKLAND
SAMPLER: [signature]

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.	Analyses
AW-4					Y N							O EPA 601; O TPH-G/BTEX w hcl; O TPH Diesel; O TOG 5520
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												Time /Sample NOT
Comments: CAR OVER WELL - SAME PROBLEM LAST VISIT.												
AW-3					Y N							O EPA 601; O TPH-G/BTEX w hcl; O TPH Diesel; O TOG 5520
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												Time/ Sample NOT
Comments: CAR OVER WELL - SAME PROBLEM LAST VISIT												
AW-5	18.88'	4"	N/A	None	Y (N)	10	1402	67.1	6.51	420	1.2	O EPA 601; ☒ TPH-G/BTEX w hcl; O TPH Diesel; O TOG 5520
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.: 42.9 - 18.88 = 24.02 x .65 x 3 = 46.8						20	1430	67.4	6.57	431	1.4	
						40	1445	67.4	6.58	433	1.5	
Purge Method: ☒Surface Pump ☒Disp.Tube OWinch ODisp. Bailer(s) OSys Port												Time /Sample 1445 / S-4
Comments:												
AW-6	16.74	4	N/A	None	Y (N)	5	1517	68.9	6.70	444	2.0	O EPA 601; ☒ TPH-G/BTEX w hcl; O TPH Diesel; O TOG 5520
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.: 34.2 - 16.74 = 17.46 x .65 x 3 = 34.0						10	1522	72.6	6.55	429	1.7	
						20	1533	76.4	6.57	436	2.2	
Purge Method: ☒Surface Pump ☒Disp.Tube OWinch ODisp. Bailer(s) OSys Port												Time /Sample 1541 1546 / S-5 + S-6
Comments: Duplicate from AW-6												
MW-2	8.38'	2"	N/A	None	Y (N)	3	1542	74.1	6.91	2260	1.6	O EPA 601; ☒ TPH-G/BTEX w hcl; O TPH Diesel; O TOG 5520
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.: 31.4' - 8.38 = 23.02 x .16 x 3 = 11.0 GAL						6	1550	75.2	6.97	2510	1.5	
						12	1600	75.6	6.98	2560	1.7	
Purge Method: ☒Surface Pump ☒Disp.Tube OWinch ODisp. Bailer(s) OSys Port												Time/ Sample 1600 / S-7
Comments:												

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: 1-30-95 Project No. 10-025-04-003
Day: (M) T W Th F Station No. BP11133
Address 2220 98TH
SAMPLER DJK OAKLAND

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence
AW-1	17.71'	2	dk/dk	None	Y (N)

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
38.60' - 17.71' = 20.89 x .16 x 3 = 10.02
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port
Comments:

Gal.	Time	Temp *F	pH	E.C.	D.O.
3	1620	69.8	6.52	664	2.6
6	1624	66.7	6.31	671	1.9
10	1630	66.9	6.33	659	1.7

O EPA 601 ____
X TPH-G/BTEX w hcl
O TPH Diesel ____
O TOG 5520 ___
Time/ Sample
1630 / S-8

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence
MW-3	12.62'	2"	dk/dk	None	Y (N)

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
34.10' - 12.62' = 21.48 x .16 x 3 = 10.3 gal.
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port
Comments:

Gal.	Time	Temp *F	pH	E.C.	D.O.
1	1646	65.7	6.79	291	2.1
5	1652	66.7	6.81	285	2.2
10	1701	66.9	6.72	282	2.5

O EPA 601 ____
X TPH-G/BTEX w hcl
O TPH Diesel ____
O TOG 5520 ___
Time/ Sample
1709 / S-9

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence
S-10	@ 17'11				Y N

Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.
TRIP BLANK
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 w hcl
O TPH Diesel ____
O TOG 5520 ___
Time/ Sample
nil / S-10

Purge water pumped into system water storage tank. No drums exist at site.

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

AnalyticalTechnologies,Inc. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

SIGNATURE PAGE

Reviewed by: Millicia L Pope
ATI Project Manager

Client:	BP OIL COMPANY RENTON, WASHINGTON
Project Name:	BP SITE NUMBER 11133
Project Number:	10-025-04-003
Project Location:	2220 98TH AVE, OAKLAND
Accession Number:	502221
Project Manager:	BRADY NAGLE (ALISTO, CA), SCOTT HOOTEN (BP OIL)
Sampled By:	DAN BIRCH

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

Analysis Report

Analysis: CA-LUFT BETX AND TPH C6-C10 RANGE

Accession:	502221
Client:	BP OIL COMPANY
Project Number:	10-025-04-003
Project Name:	BP SITE NUMBER 11133
Project Location:	2220 98TH AVE, OAKLAND
Department:	SEMI-VOLATILE FUELS

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 502221
Client: BP OIL COMPANY
Project Number: 10-025-04-003
Project Name: BP SITE NUMBER 11133
Project Location: 2220 98TH AVE, OAKLAND
Test: CA-LUFT BETX AND TPH C6-C10 RANGE
QC Level: N

Sample Number: 001 Client Sample Id: S-1
Analysis Method: 5030 / 8020 / 8015 / SW846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	0.5	
TOLUENE	UG/L	ND	0.5	
ETHYLBENZENE	UG/L	ND	0.5	
XYLENES (TOTAL)	UG/L	ND	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	ND	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	79	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	104	63-135	
ANALYST	INITIALS	KS		

Comments:

Sample Number: 002 Client Sample Id: S-2
Analysis Method: 5030 / 8020 / 8015 / SW846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	0.5	
TOLUENE	UG/L	ND	0.5	
ETHYLBENZENE	UG/L	ND	0.5	
XYLENES (TOTAL)	UG/L	ND	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	ND	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	86	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	100	63-135	
ANALYST	INITIALS	KS		

Comments:

Sample Number: 003 Client Sample Id: S-3
Analysis Method: 5030 / 8020 / 8015 / SW846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	0.5	
TOLUENE	UG/L	1	0.5	
ETHYLBENZENE	UG/L	ND	0.5	
XYLENES (TOTAL)	UG/L	1	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	ND	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	84	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	103	63-135	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 502221
Client: BP OIL COMPANY
Project Number: 10-025-04-003
Project Name: BP SITE NUMBER 11133
Project Location: 2220 98TH AVE, OAKLAND
Test: CA-LUFT BETX AND TPH C6-C10 RANGE
QC Level: N

Sample Number: 004 Client Sample Id: S-4
Analysis Method: 5030 / 8020 / 8015 / SW846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	0.6	0.5	
TOLUENE	UG/L	11	0.5	
ETHYLBENZENE	UG/L	8.8	0.5	
XYLENES (TOTAL)	UG/L	2	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	0.21	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	87	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	91	63-135	
ANALYST	INITIALS	KS		

Comments:

Sample Number: 005 Client Sample Id: S-5
Analysis Method: 5030 / 8020 / 8015 / SW846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	0.5	
TOLUENE	UG/L	ND	0.5	
ETHYLBENZENE	UG/L	ND	0.5	
XYLENES (TOTAL)	UG/L	ND	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	ND	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	85	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	103	63-135	
ANALYST	INITIALS	KS		

Comments:

Sample Number: 006 Client Sample Id: S-6
Analysis Method: 5030 / 8020 / 8015 / SW846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	0.5	
TOLUENE	UG/L	ND	0.5	
ETHYLBENZENE	UG/L	ND	0.5	
XYLENES (TOTAL)	UG/L	ND	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	ND	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	80	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	104	63-135	
ANALYST	INITIALS	KS		

Comments:

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 502221
Client: BP OIL COMPANY
Project Number: 10-025-04-003
Project Name: BP SITE NUMBER 11133
Project Location: 2220 98TH AVE, OAKLAND
Test: CA-LUFT BETX AND TPH C6-C10 RANGE
QC Level: N

Sample Number: 007 Client Sample Id: S-7
Analysis Method: 5030 / 8020 / 8015 / SW846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	0.5	
TOLUENE	UG/L	ND	0.5	
ETHYLBENZENE	UG/L	ND	0.5	
XYLENES (TOTAL)	UG/L	ND	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	ND	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	89	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	90	63-135	
ANALYST	INITIALS	KS		

Comments:

Sample Number: 008 Client Sample Id: S-8
Analysis Method: 5030 / 8020 / 8015 / SW846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	23000	50	
TOLUENE	UG/L	650	50	
ETHYLBENZENE	UG/L	3200	50	
XYLENES (TOTAL)	UG/L	4100	100	
TOTAL PETROLEUM HYDROCARBON	MG/L	35	5	
TRIFLUOROTOLUENE (PID)	%REC/SURR	72	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	71	63-135	
ANALYST	INITIALS	KS		

Comments:

Sample Number: 009 Client Sample Id: S-9
Analysis Method: 5030 / 8020 / 8015 / SW846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	0.5	
TOLUENE	UG/L	ND	0.5	
ETHYLBENZENE	UG/L	ND	0.5	
XYLENES (TOTAL)	UG/L	ND	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	ND	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	91	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	89	63-135	
ANALYST	INITIALS	KS		

Comments:

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 502221
Client: BP OIL COMPANY
Project Number: 10-025-04-003
Project Name: BP SITE NUMBER 11133
Project Location: 2220 98TH AVE, OAKLAND
Test: CA-LUFT BETX AND TPH C6-C10 RANGE
QC Level: N

Sample Number: 010 Client Sample Id: S-10
Analysis Method: 5030 / 8020 / 8015 / SW846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	0.5	
TOLUENE	UG/L	ND	0.5	
ETHYLBENZENE	UG/L	ND	0.5	
XYLENES (TOTAL)	UG/L	ND	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	ND	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	80	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	108	63-135	
ANALYST	INITIALS	KS		

Comments:

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 502221
Client: BP OIL COMPANY
Project Number: 10-025-04-003
Project Name: BP SITE NUMBER 11133
Project Location: 2220 98TH AVE, OAKLAND
Test: CA-LUFT BETX AND TPH C6-C10 RANGE
QC Level: N

Client Id:	Lab Id:	Matrix:	Date/Time Sampled:	Date Received:
S-1	001	GROUNDWATER	30-JAN-95 1139	03-FEB-95
S-2	002	GROUNDWATER	30-JAN-95 1211	03-FEB-95
S-3	003	GROUNDWATER	30-JAN-95 1320	03-FEB-95
S-4	004	GROUNDWATER	30-JAN-95 1445	03-FEB-95
S-5	005	GROUNDWATER	30-JAN-95 1541	03-FEB-95
S-6	006	GROUNDWATER	30-JAN-95 1546	03-FEB-95
S-7	007	GROUNDWATER	30-JAN-95 1600	03-FEB-95
S-8	008	GROUNDWATER	30-JAN-95 1630	03-FEB-95
S-9	009	GROUNDWATER	30-JAN-95 1701	03-FEB-95
S-10	010	GROUNDWATER	30-JAN-95 1711	03-FEB-95

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 502221
Client: BP OIL COMPANY
Project Number: 10-025-04-003
Project Name: BP SITE NUMBER 11133
Project Location: 2220 98TH AVE, OAKLAND
Test: CA-LUFT BETX AND TPH C6-C10 RANGE
QC Level: N

Lab Id:	Batch Id:	Blank Id:	Dryweight %	Extraction Date:	Analysis Date:
001	GRW008	B	N/A	N/A	09-FEB-95
002	GRW009	B	N/A	N/A	09-FEB-95
003	GRW010	A	N/A	N/A	10-FEB-95
004	GRW008	B	N/A	N/A	09-FEB-95
005	GRW010	A	N/A	N/A	10-FEB-95
006	GRW008	B	N/A	N/A	10-FEB-95
007	GRW010	A	N/A	N/A	10-FEB-95
008	GRW010	A	N/A	N/A	10-FEB-95
009	GRW010	A	N/A	N/A	10-FEB-95
010	GRW008	B	N/A	N/A	10-FEB-95

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"Method Report Summary"

Accession Number: 502221
Client: BP OIL COMPANY
Project Number: 10-025-04-003
Project Name: BP SITE NUMBER 11133
Project Location: 2220 98TH AVE, OAKLAND
Test: CA-LUFT BETX AND TPH C6-C10 RANGE

Client Sample Id:	Parameter:	Unit:	Result:
S-3	TOLUENE	UG/L	1
	XYLENES (TOTAL)	UG/L	1
S-4	BENZENE	UG/L	0.6
	TOLUENE	UG/L	11
	ETHYLBENZENE	UG/L	8.8
	XYLENES (TOTAL)	UG/L	2
	TOTAL PETROLEUM HYDROCARBON	MG/L	0.21
S-8	BENZENE	UG/L	23000
	TOLUENE	UG/L	650
	ETHYLBENZENE	UG/L	3200
	XYLENES (TOTAL)	UG/L	4100
	TOTAL PETROLEUM HYDROCARBON	MG/L	35

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG = MICROGRAMS
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/M3 = MILLIGRAM PER CUBIC METER.
PPMV = PART PER MILLION BY VOLUME.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

ND = NOT DETECTED ABOVE REPORTING LIMIT.

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

ATI/GC/FID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

ATI/GC/FIX
ATI GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

ATI/GC/FPD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

ATI/GC/PID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

ATI/GC/TCD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

LJT = LISA THOMASON
DGH = DARREL HALSELL
TLH = TARA HELTON
KW = KAREN WADSWORTH
MV = MONIQUE VERHEYDEN
SW = STEVE WILHITE
JMP = JACKIE PRICE
SJF = STEVE FILOROMO
PL = PAUL LESCHENSKY
RW = ROBERT WOLFE
BV = BEN VAUGHN
KS = KENDALL SMITH

Analytical Technologies, Inc.

PROJECT SAMPLE INSPECTION FORM

Accession #: SD 2221 Date received: 2/3/95

1.	Was there a Chain of Custody?	(YES)	NO		7.	Are samples correctly preserved for analysis required?	(YES)	NO
2.	Was Chain of Custody properly relinquished?	(YES)	NO		8.	Is there sufficient volume for analysis requested?	(YES)	NO
3.	Were samples received cold? (At 4° or on ice)	(YES)	NO	N/A	9.	Were samples received within holding time?	(YES)	NO
4.	Were all containers properly labeled and identified?	(YES)	NO		10.	Was there headspace greater than ¼" in diameter in volatile bottles?	YES	(NO) N/A
5.	Were samples received in proper containers for analysis requested?	(YES)	NO		11.	If sent, were matrix spike bottles returned?	YES	NO (N/A)
6.	Were all sample containers received intact?	(YES)	NO					

Tracking Number: See Attached Shipped By: FEDEX

Cooler Number: #1

Out of Control Events and Inspection Comments:

3. Cooler Temp 2 °C.

Inspected By: SF Date: 2/4/95 Logged By: SF Date: 2/4/95

SH2221

CHAIN OF CUSTODY

No. 055603 Page 1 of 2

CONSULTANT'S NAME: ALISTO ENGINEERING	ADDRESS: 1777 OAKLAND BLVD	CITY: WALNUT CREEK	STATE:	ZIP CODE: 94596
BP SITE NUMBER: BP11133	BP CORNER ADDRESS/CITY: 2220 98th Ave OAKLAND			CONSULTANT PROJECT NUMBER: 10-025-04-003
CONSULTANT PROJECT MANAGER: BRADY NAGLE	PHONE NUMBER: 510 295 1650	FAX NUMBER: 510 295 1823		CONSULTANT CONTRACT NUMBER: G387173
BP CONTACT: SCOTT HOOTEN	BP ADDRESS:	PHONE NUMBER:		FAX NO.:
LAB CONTACT: M. POPE	LABORATORY ADDRESS: Pensacola FL	PHONE NUMBER: 909 477 1823		FAX NO.:
SAMPLED BY (Please Print Name): DJBirch	SAMPLED BY (Signature): DAN BIRCH	SHIPMENT DATE: 2-1-95	SHIPMENT METHOD: FED EX	AIRBILL NUMBER:

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

ANALYSIS REQUIRED: HC; TPHG w/ BTEX

SAMPLE DESCRIPTION	COLLECTION DATE / TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPHG w/ BTEX	COMMENTS
S-1 1139	1/30/95	GW	2	VOA	1	X	
S-2 1211					2	X	
S-3 1320					3	X	
S-4 1445					4	X	
S-5 1541					5	X	
S-6 1546					6	X	
S-7 1600					7	X	
S-8 1630					8	X	
S-9 1701					9	X	
S-10 1711		W			10	X	TRIP BLNK

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
DJBirch Alisto	2/1/95	0900	Shyam R Jox	2/2/95	0914

ADDITIONAL COMMENTS:

CLV-16722

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