BP OIL

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

March 30, 1994

Ms. Eva Chu
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, CA 94621

RE: BP Oil Site 11133
2220 98th Ave.
Oakland, CA

Dear Ms. Chu,

Attached please find our **GROUNDWATER MONITORING AND SAMPLING REPORT DATED MARCH 23, 1994** for the above referenced site.

Please call me at (206) 251-0689 with any questions regarding this submission.

Respectfully,

Scott Hooton
Group Leader

Enclosure

SH:clj

cc: Mr. R. Hiett, CA Regional Water Quality Control Board, 2101 Webster St., Suite 500, Oakland, CA, 94612

Mr. R. Merriken, Mobil Oil, 3225 Gallows Rd, Fairfax, VA, 22037

GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-025-02-003

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

March 23, 1994

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. 10-025-02-003

March 23, 1994

INTRODUCTION

This report presents the results and findings of the January 27, 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)	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-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-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		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

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)	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	3900	1400	26	130	220	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-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	2.0	0.5	ND<0.5	ND<0.5	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)	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 (d)	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-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	0.9	ND<0.5	1.0	0.9	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

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)	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-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

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	---	---	---	---	---	---

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)	LAB
QC-2 (e)	10/07/92	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
QC-2 (e)	01/14/93	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
QC-2 (e)	04/22/93	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
QC-2 (e)	07/15/93	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
QC-2 (e)	10/21/93	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
QC-2 (e)	01/27/94	---	---	---	---	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
ppb	Parts per billion
—	Not analyzed/available/applicable
ND	Not detected above reported detection limit
SUP	Superior Analytical Laboratories, Inc.
APP	Applied Analytical Laboratory
ANA	Anametrix, Inc.
PACE	Pace, 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) Duplicate.

(e) Travel blank.

TABLE 2 - PRODUCT REMOVAL STATUS
BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

WELL ID	DATE	PRODUCT REMOVED (Gallons)	PRODUCT REMOVED CUMULATIVE (Gallons)
RW-1	10/06/93	1.0	1.0
	10/14/93	1.0	2.0
	10/20/93	18.0	20.0
	10/26/93	3.0	23.0
	11/02/93	5.0	28.0
	11/10/93	6.0	34.0
	11/16/93	2.5	36.5
	11/23/93	5.0	41.5
	11/30/93	2.0	43.5
	12/07/93	4.0	47.5
	12/17/93	1.5	49.0
	01/04/94	4.0	53.0
	01/12/94	3.5	56.5
	01/20/94	3.0	59.5
	01/27/94	1.0	60.5
	02/11/94	4.0	64.5
	02/18/94	3.5	68.0
	02/25/94	4.0	72.0
	03/04/94	3.5	75.5
	03/18/94	5.5	[illegible]
MW-1	10/20/93	0.1	0.1
	11/10/93	0.1	0.2
	01/04/94	0.1	0.3
	01/12/94	0.1	0.4
	01/27/94	0.1	0.5

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

N

0 1000' 2000'

FIGURE 1

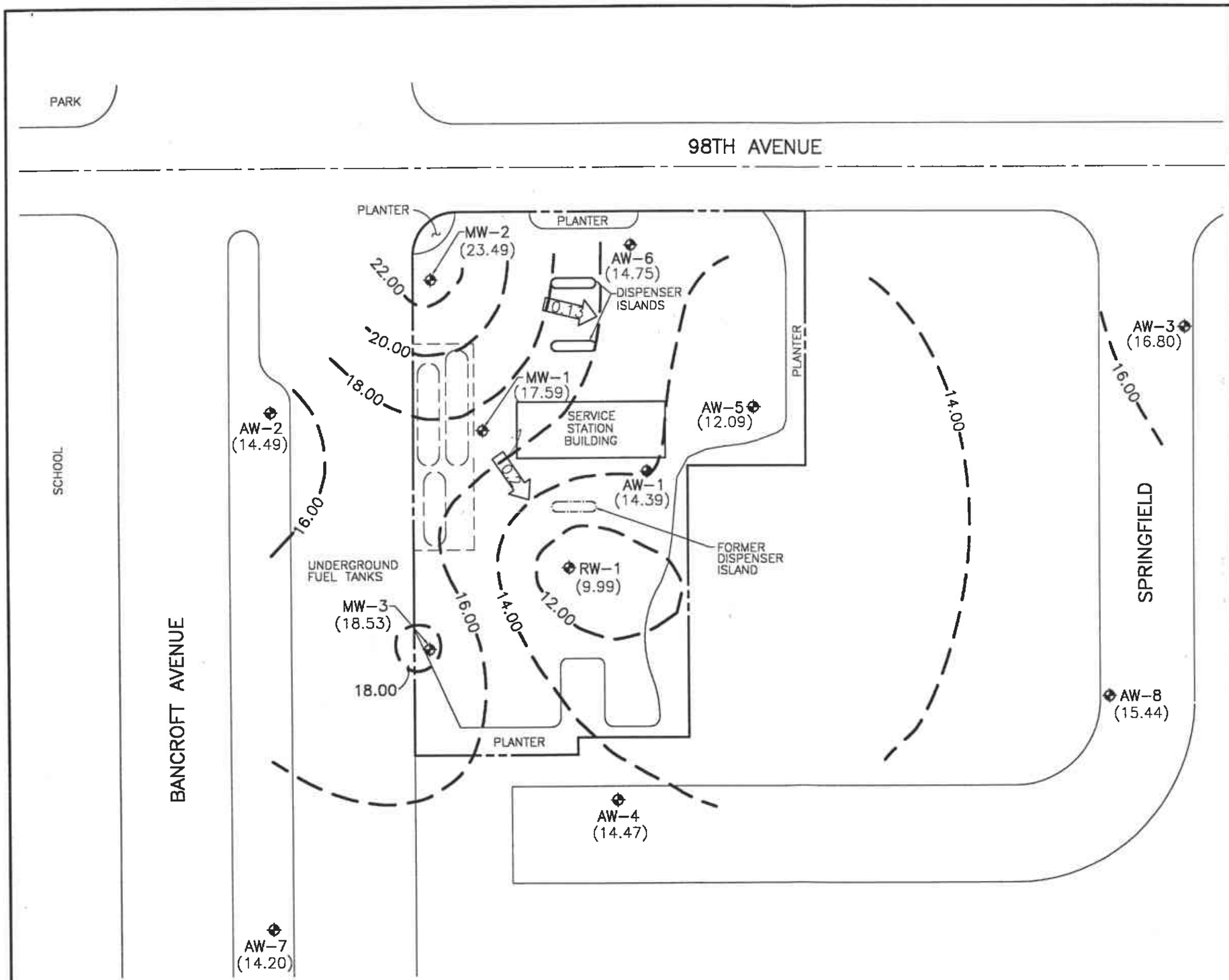
SITE VICINITY MAP

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

PROJECT NO. 10-025

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10025B--.DWG 3-23-94 RVW 1=1



LEGEND

- ◆ GROUNDWATER MONITORING WELL
- (16.80) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 16.00 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL–2.00 FEET)
- 0.13 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

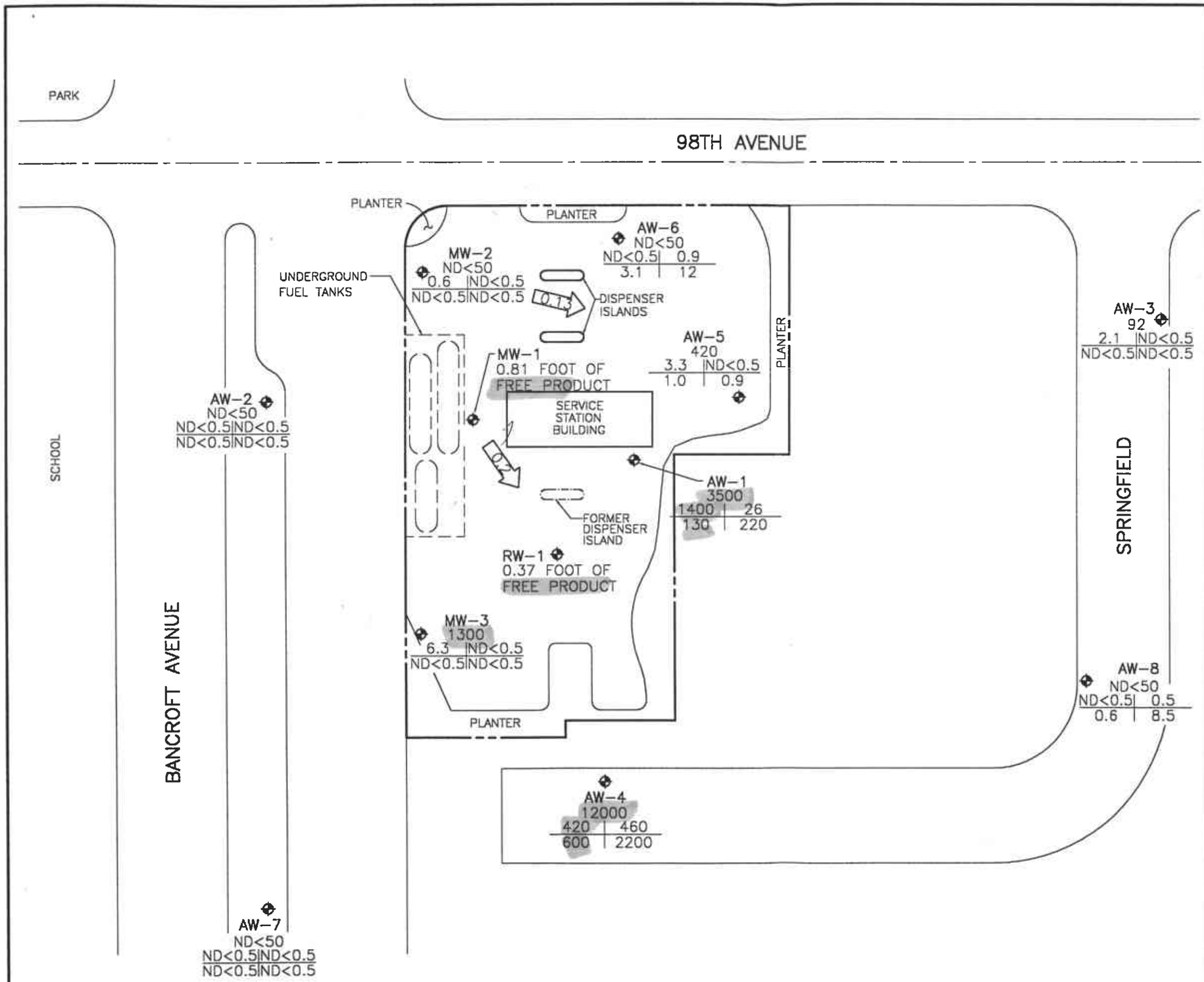
JANUARY 27, 1994

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

PROJECT NO. 10–025

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10025D-DWG 3-22-94 RVW 1=30



LEGEND

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

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

JANUARY 27, 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

Birch Technical Services

Field Report / Data Sheet

X Groundwater Sampling O Groundwater Monitoring O Well Development O Drill Support O Stockpile Sampling

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

Firm: ALISTO
Project Number: 10-025-02-003
Date: 1/27/94
Field Technician: DJBIRCH
Station #: BP1133
Address: 2220 98th AVENUE OAKLAND
Day: M Tu W (Th) F
Weather: Clear, cool

DTWorder	Well ID	Well Diam	Cap Lock	Total Depth (feet)	1st Depth to Water (feet)	2nd Depth to Water (feet)	Depth to Product (feet)	Product Thickness	Comments
9	AW-1	2	ok	38.6	23.72	23.72			
1	AW-2	2	|	35.2	22.34	22.34			
6	AW-3	2	|	35.75	22.33	22.33			QC-1 was taken from AW-3
10	AW-4	2	|	33.9	24.61	24.61			
7	AW-5	4	|	42.9	26.42	26.42			
4	AW-6	4	|	34.2	22.33	22.33			
2	AW-7	2	|	32.3	23.40	23.40			
3	AW-8	2	|	39.2	25.42	25.42			
11	MW-1	2	|	NM	17.48	17.48	16.67	0.81	PRODUCT
5	MW-2	2	|	31.4	12.01	12.01			
8	MW-3	2	|	34.1	18.0	18.0			
12	RW-1	6	↓	NM	28.02	28.02	27.65	0.37	Product

Notes: Two full drums were at the site upon arrival, two Full drums were left at the site after sampling (collection

CALIBRATION pH 7.00 7.0 pH 4.00 4.0 pH 10.00 ____ at 75 °F

Birch Technical Services

GROUNDWATER SAMPLING FORM

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

Well Number: AW-1

Project Number: 10-025-02-003

Sample Type: ⊗Groundwater OTrip Blank ODuplicate of _____

Station Number: BP1133

Sampled by: DJBIRCH

Date: 1/27/94

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) ⊗2" O3" O4" O4.5" O6" O____

Volume Factors: 0.1632 0.3672 0.6528 0.826 1.469 _____

Total Depth of Well 38.6

Initial Water Level: 23.72

Total Volume Purged: 7 gal

Time Elapsed: 10 min

PURGE METHOD:
⊗Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

Calculated Purge Volume:

38.6 (Total Depth) - 23.72 (Water Level) = 14.88 x .16 (Well Vol. Fac.) = 7.38 x 3 (#of vol. to Purge) = 7.1 (gallons) Calculated Purge Volume

AVER. PURGE 7 gallons

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN OYes ⊗No

Depth to Product None (ft)

Product Thickness None (ft)

SAMPLING METHOD

⊗PVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock) 1645

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)
3	1635	6.67	60.5	0.31
5	1640	6.34	62.3	0.36
7	1645	6.26	62.2	0.40

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services

GROUNDWATER SAMPLING FORM

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

Well Number: AW-2

Project Number: 11133

Sample Type: ⊗Groundwater OTrip Blank ODuplicate of _____

Station Number: 10-025-02.003

Date: 1/27/94

Sampled by: DJ Birch

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) / Volume Factors:

⊗2"	O3"	O4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well 35.2

Initial Water Level: 22.34

Total Volume Purged: 6.17

Time Elapsed: 10 min

Calculated Purge Volume:

PURGE METHOD:
⊗Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

35.2 (Total Depth) - 22.34 (Water Level) = 12.86 x .16 (Well Vol. Fac.) = 2.05 x 3 (#of vol. to Purge) = 6.17 (gallons) (Calculated Purge Volume)

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN: OYes ⊗No

Depth to Product: None (ft)

Product Thickness: None (ft)

SAMPLING METHOD

⊗PVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock): 1240

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)
2	1234	7.02	66.1	0.33
4	1236	7.03	66.1	0.33
6.1	1238	7.10	66.2	0.34

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services — GROUNDWATER SAMPLING FORM

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

Well Number: AW-3

Project Number: 10.025.02.003
Sample Type: ☒Groundwater OTrip Blank ODuplicate of _____
Station Number: 11133
Date: 1/27/94
Sampled by: DS BIRCH

WELL PURGING

PURGE VOLUME

Casing Diameter (inches)	☒2"	O3"	O4"	O4.5"	O6"	O____
Volume Factors:	0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well 35.75 Initial Water Level: 22.33

Total Volume Purged: 6.5 Time Elapsed: _____

Calculated Purge Volume:

PURGE METHOD:
O Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

35.75 (Total Depth) - 22.33 (Water Level) = 13.42 x .16 (Well Vol. Fac.) = 2.14 x 3 (#of vol. to Purge) = 6.44 (gallons) (Calculated Purge Volume)

COMMENTS:

QC-1 Was taken from AW-3

Subjective Analysis Prior to Purging

SHEEN: OYes ☒No
Depth to Product: NONE (ft)
Product Thickness: NONE (ft)

SAMPLING METHOD

☒PVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock): 1500

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)
2	1452	7.02	64.9	1.72
4	1455	7.01	65.1	1.72
6.5	1500	7.02	65.1	1.72

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
Y	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services

GROUNDWATER SAMPLING FORM

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

Well Number: AW-4

Project Number: 10.025.02.003

Sample Type: ⊗Groundwater OTrip Blank ODuplicate of _____

Station Number: 11138

Date: 1/27/94

Sampled by: DS Birch

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) / Volume Factors:

⊗2"	O3"	O4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well 33.9 **Initial Water Level:** 24.61

Total Volume Purged: 4.45 gal **Time Elapsed:** 6 MIN

Calculated Purge Volume:

PURGE METHOD:
O Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

33.9 (Total Depth) - 24.61 (Water Level) = 9.29 x .16 (Well Vol. Fac.) = 1.4 x 3 (#of vol. to Purge) = 4.45 (gallons) Calculated Purge Volume

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN: OYes ⊗No

Depth to Product: NONE (ft)

Product Thickness: NONE (ft)

SAMPLING METHOD

⊗PVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock): 1700

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)
2	1655	6.46	59.1	0.41
3	1657	6.43	60.0	0.42
4.5	1700	6.41	60.2	0.45

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services

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

GROUNDWATER SAMPLING FORM

Well Number: AW-5

Project Number: 10-025-02.003
Station Number: 11133
Date: 1/27/94

Sample Type: XGroundwater OTrip Blank ODuplicate of _____
Sampled by: DS BIRCH

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) / Volume Factors:

O 2"	O3"	X4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well 47.9 Initial Water Level: 26.42

Total Volume Purged: 25 gal Time Elapsed: 15 min

Calculated Purge Volume:

PURGE METHOD:
X Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

47.9 (Total Depth) - 26.42 (Water Level) = 16.48 x .65 (Well Vol. Fac.) = 10.7 x 3 (#of vol. to Purge) = 30 (gallons) (Calculated Purge Volume)

COMMENTS:

Parameters were stabilized after 25 gal. were removed & the Sample was taken

Subjective Analysis Prior to Purging

SHEEN: OYes XNo
Depth to Product: NONE (ft)
Product Thickness: NONE (ft)

SAMPLING METHOD

X PVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock): 1545

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)
10	1525	6.69	65.1	0.36
15	1530	6.50	68.2	0.38
17	1533	6.52	68.5	0.41
20	1540	6.53	68.5	0.36
25	1545	6.52	68.4	0.36

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services

GROUNDWATER SAMPLING FORM

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

Project Number: 10-025-02-003
Station Number: 11133
Date: 1/27/94

Well Number: AW-6
Sample Type: ⊗Groundwater OTrip Blank ODuplicate of _____
Sampled by: DS Birch

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) / Volume Factors:

O 2"	O3"	⊗4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well 34.2
Initial Water Level: 22.33
Total Volume Purged: 23 gal.
Time Elapsed: 15 MIN.

PURGE METHOD:
⊗Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

Calculated Purge Volume:

34.2 (Total Depth) - 22.33 (Water Level) = 11.87 x .65 (Well Vol. Fac.) = 7.7 x 3 (#of vol. to Purge) = 23.1 (gallons) (Calculated Purge Volume)

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN OYes ONo
Depth to Product NONE (ft)
Product Thickness NONE (ft)

SAMPLING METHOD

⊗PVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock) 1410

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)
5	1350	7.34	64.3	0.37
10	1353	7.32	65.7	0.36
15	1357	7.28	66.8	0.31
20	1402	7.27	66.9	0.36
23	1405	7.26	66.8	0.36

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services — GROUNDWATER SAMPLING FORM

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

Well Number: AW-7

Project Number: 10-025-02-003 Sample Type: ⊗Groundwater OTrip Blank ODuplicate of _____

Station Number: 11133

Date: 1/27/94 Sampled by: DS Birch

WELL PURGING

PURGE VOLUME Casing Diameter (inches) / Volume Factors:

⊗2"	O3"	O4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well 32.3 Initial Water Level: 23.40

Total Volume Purged: 4.25 Time Elapsed: 5 min

Calculated Purge Volume:

PURGE METHOD:
⊗Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

32.3 (Total Depth) − 23.40 (Water Level) = 8.9 × .16 (Well Vol. Fac.) = 1.42 × 3 (#of vol. to Purge) = 4.27 (gallons) (Calculated Purge Volume)

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN OYes ⊗No

Depth to Product NONE (ft)

Product Thickness NONE (ft)

SAMPLING METHOD

⊗PVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock) 1250

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)
2	1245	7.55	65.0	0.36
3	1247	7.55	65.7	0.37
4	1249	7.56	65.6	0.36

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services

GROUNDWATER SAMPLING FORM

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

Project Number: 10.025-02.005
Station Number: 11133
Date: 1/27/94

Well Number: AW-8
Sample Type: ⊗Groundwater OTrip Blank ODuplicate of _____
Sampled by: DJ Bischl

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) / Volume Factors:

⊗2"	O3"	O4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well 39.2 **Initial Water Level:** 25.42

Total Volume Purged: 7941 **Time Elapsed:** 10 min

Calculated Purge Volume:

PURGE METHOD:
⊗Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

39.2 (Total Depth) - 25.42 (Water Level) = 13.78 x .16 (Well Vol. Fac.) = 2.20 x 3 (#of vol. to Purge) = 6.6 (gallons) Calculated Purge Volume

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN OYes ONo
Depth to Product None (ft)
Product Thickness _____ (ft)

SAMPLING METHOD

⊗PVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock) 1330

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)
2	1325	8.51	65.3	0.65
4	1328	8.46	65.5	0.67
7	1330	8.24	65.7	0.71

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services

GROUNDWATER SAMPLING FORM

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

Project Number: 10-025
Station Number: BP11133
Date: 1/27/94

Well Number: MW-1
Sample Type: OGroundwater OTrip Blank ODuplicate of _____
Sampled by: RJB

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) / Volume Factors:

O 2"	O3"	O4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well _____ Initial Water Level: 17.48

Total Volume Purged: _____ Time Elapsed: _____

Calculated Purge Volume:

PURGE METHOD:
O Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

_____ - 17.48 = _____ x _____ = _____ x _____ = _____(gallons)
Total Depth | Water Level | Well Vol. Fac. | #of vol. to Purge | Calculated Purge Volume

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN ~~OYes ONo~~ Depth to Product 16.67 (ft) Product Thickness 0.81 (ft)

SAMPLING METHOD

OPVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock) NOT

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)

Analysis Required	No. of	Container Type	Preservatives
EPA 601		VOA's	
TPH-G/BTEX		VOA's	HCl
TPH- Diesel		Amber Liter	
TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services

GROUNDWATER SAMPLING FORM

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

Well Number: MW2

Project Number: 10-025-07-003

Sample Type: XGroundwater OTrip Blank ODuplicate of _____

Station Number: 11137

Date: 1/27/94

Sampled by: DJ Black

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) / Volume Factors:

X2"	O3"	O4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well 31.4

Initial Water Level: 12.01

Total Volume Purged: 9.3 gal

Time Elapsed: 10 min

Calculated Purge Volume:

PURGE METHOD:
X Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

31.4 (Total Depth) - 12.01 (Water Level) = 19.39 x .16 (Well Vol. Fac.) = 3.10 x 3 (#of vol. to Purge) = 9.3 (gallons) (Calculated Purge Volume)

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN: OYes XNo

Depth to Product: None (ft)

Product Thickness: None (ft)

SAMPLING METHOD

XPVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock): 1430

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)
3	1425	7.16	64.7	0.30
6	1428	7.20	67.2	0.30
9	1430	7.11	68.2	0.30

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

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

February 09, 1994
PACE Project Number: 440201506

Attn: Mr. Bill Howell

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238420	
Date Collected:			01/27/94	
Date Received:			02/01/94	
			AW-1 1645	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/08/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	500	3500	02/08/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/08/94
Benzene	ug/L	5.0	1400	02/08/94
Toluene	ug/L	5.0	26	02/08/94
Ethylbenzene	ug/L	5.0	130	02/08/94
Xylenes, Total	ug/L	5.0	220	02/08/94

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

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
Page 2

February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238439	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			AW-2 1240	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/04/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/04/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/04/94
Benzene	ug/L	0.5	ND	02/04/94
Toluene	ug/L	0.5	ND	02/04/94
Ethylbenzene	ug/L	0.5	ND	02/04/94
Xylenes, Total	ug/L	0.5	ND	02/04/94

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Birch Technical Services

GROUNDWATER SAMPLING FORM

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

Well Number: MW3

Project Number: 10.02502-003

Sample Type: ⊗Groundwater OTrip Blank ODuplicate of _____

Station Number: 11173

Date: 1/27/94

Sampled by: DJ BIRCH

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) / Volume Factors:

⊗2"	O3"	O4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well 34.1 Initial Water Level: 18.0

Total Volume Purged: 7.7 gal Time Elapsed: 7 mins

PURGE METHOD:
⊗Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

Calculated Purge Volume:

34.1 (Total Depth) - 18.0 (Water Level) = 16.1 x .16 (Well Vol. Fac.) = 2.57 x 3 (#of vol. to Purge) = 7.7 (gallons) Calculated Purge Volume

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN	Depth to Product	Product Thickness
OYes ⊗No	NONE (ft)	NONE (ft)

SAMPLING METHOD

⊗PVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock): 1607

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)
3	1600	6.14	64.4	0.26
5	1603	6.80	66.2	0.25
7.7	1607	6.79	66.5	0.25

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services

GROUNDWATER SAMPLING FORM

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

Well Number: QC-1

Project Number: 10.025.02.003 Sample Type: OGroundwater OTrip Blank XDuplicate of AW-3

Station Number: 11133

Date: 1/27/94 Sampled by: DJ Birch

WELL PURGING

PURGE VOLUME Casing Diameter (inches) / Volume Factors:

O 2"	O3"	O4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	____

Total Depth of Well _____ Initial Water Level:_____

Total Volume Purged:_____ Time Elapsed:_____

Calculated Purge Volume:

PURGE METHOD:
O Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

_____ - _____ = _____ x _____ = _____ x _____ = _____(gallons)
Total Depth | Water Level | Well Vol. Fac. | #of vol. to Purge | Calculated Purge Volume

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN OYes ONo Depth to Product _____(ft) Product Thickness _____ (ft)

SAMPLING METHOD

OPVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock) _____

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	3	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services

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

GROUNDWATER SAMPLING FORM

Well Number: QC-2

Project Number: 10.825.02.03

Sample Type: OGroundwater OTrip Blank ODuplicate of _____

Station Number: 11133

Date: 1/27/94

Sampled by: DJ BIRCH

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) / Volume Factors:

O 2"	O3"	O4"	O4.5"	O6"	O____
0.1632	0.3672	0.6528	0.826	1.469	_____

Total Depth of Well _____ **Initial Water Level:** _____

Total Volume Purged: _____ **Time Elapsed:** _____

Calculated Purge Volume:

PURGE METHOD:
O Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

_____ - _____ = _____ x _____ = _____ x _____ = _____(gallons)
Total Depth | Water Level | Well Vol. Fac. | #of vol. to Purge | Calculated Purge Volume

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN OYes ONo

Depth to Product _____(ft)

Product Thickness _____ (ft)

SAMPLING METHOD

OPVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock) _____

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
X	TPH-G/BTEX	1	VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

Birch Technical Services

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

GROUNDWATER SAMPLING FORM

Well Number: RW-1

Project Number: 10-025
Station Number: BP11133
Date: 1/27/94

Sample Type: OGroundwater OTrip Blank ODuplicate of _____

Sampled by: DTB

WELL PURGING

PURGE VOLUME

Casing Diameter (inches) O 2" O3" O4" O4.5" O6" O____
Volume Factors: 0.1632 0.3672 0.6528 0.826 1.469 _____

Total Depth of Well _____ Initial Water Level: 28.02

Total Volume Purged: _____ Time Elapsed: _____

Calculated Purge Volume:

PURGE METHOD:
O Honda Pump
ODisposable PolyTubing(____ft)
OSpeed Winch
ODisposable PVC Bailer(s)(____)
OOther_____

_____ - _____ = _____ x _____ = _____ x _____ = _____(gallons)
Total Depth | Water Level | Well Vol. Fac. | #of vol. to Purge | Calculated Purge Volume

COMMENTS:

Subjective Analysis Prior to Purging

SHEEN OYes ONo
Depth to Product 27.65 (ft)
Product Thickness 0.37 (ft)

SAMPLING METHOD

OPVC Disposable Bailer
OTeflon Bailer
OOther:_____

Time Sampled (24 hour clock) NOT

WELL SAMPLING PARAMETERS

Gallons Removed	Time	pH	Temp °F	Cond. (umhos/cm)

	Analysis Required	No. of	Container Type	Preservatives
	EPA 601		VOA's	
	TPH-G/BTEX		VOA's	HCl
	TPH- Diesel		Amber Liter	
	TOG 5520 BF		Amber Liter	H_2SO_4

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

REPORT OF LABORATORY ANALYSIS

February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238447	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			AW-3 1500	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/03/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	92	02/03/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/03/94
Benzene	ug/L	0.5	2.1	02/03/94
Toluene	ug/L	0.5	ND	02/03/94
Ethylbenzene	ug/L	0.5	ND	02/03/94
Xylenes, Total	ug/L	0.5	ND	02/03/94

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REPORT OF LABORATORY ANALYSIS

February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238455	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			AW-4 1700	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/03/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	500	12000	02/03/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/03/94
Benzene	ug/L	5.0	420	02/03/94
Toluene	ug/L	5.0	460	02/03/94
Ethylbenzene	ug/L	5.0	600	02/03/94
Xylenes, Total	ug/L	5.0	2200	02/03/94

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REPORT OF LABORATORY ANALYSIS

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February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238480	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			AW-5 1545	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/03/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	420	02/03/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/03/94
Benzene	ug/L	0.5	3.3	02/03/94
Toluene	ug/L	0.5	ND	02/03/94
Ethylbenzene	ug/L	0.5	1.0	02/03/94
Xylenes, Total	ug/L	0.5	0.9	02/03/94

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REPORT OF LABORATORY ANALYSIS

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February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238498	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			AW-6 1410	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/03/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/03/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/03/94
Benzene	ug/L	0.5	ND	02/03/94
Toluene	ug/L	0.5	0.9	02/03/94
Ethylbenzene	ug/L	0.5	3.1	02/03/94
Xylenes, Total	ug/L	0.5	12	02/03/94

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REPORT OF LABORATORY ANALYSIS

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February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238501	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			AW-7 1250	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/03/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/03/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/03/94
Benzene	ug/L	0.5	ND	02/03/94
Toluene	ug/L	0.5	ND	02/03/94
Ethylbenzene	ug/L	0.5	ND	02/03/94
Xylenes, Total	ug/L	0.5	ND	02/03/94

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REPORT OF LABORATORY ANALYSIS

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February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238510	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			AW-8 1330	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/03/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/03/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/03/94
Benzene	ug/L	0.5	ND	02/03/94
Toluene	ug/L	0.5	0.5	02/03/94
Ethylbenzene	ug/L	0.5	0.6	02/03/94
Xylenes, Total	ug/L	0.5	8.5	02/03/94

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REPORT OF LABORATORY ANALYSIS

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February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238668	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			MW-2 1430	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/03/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/03/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/03/94
Benzene	ug/L	0.5	0.6	02/03/94
Toluene	ug/L	0.5	ND	02/03/94
Ethylbenzene	ug/L	0.5	ND	02/03/94
Xylenes, Total	ug/L	0.5	ND	02/03/94

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REPORT OF LABORATORY ANALYSIS

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February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238676	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			MW-3 1607	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/04/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1300	02/04/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/04/94
Benzene	ug/L	0.5	6.3	02/04/94
Toluene	ug/L	0.5	ND	02/04/94
Ethylbenzene	ug/L	0.5	ND	02/04/94
Xylenes, Total	ug/L	0.5	ND	02/04/94

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February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238684	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			QC-1 1515	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/04/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	90	02/04/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/04/94
Benzene	ug/L	0.5	2.9	02/04/94
Toluene	ug/L	0.5	0.5	02/04/94
Ethylbenzene	ug/L	0.5	ND	02/04/94
Xylenes, Total	ug/L	0.5	ND	02/04/94

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REPORT OF LABORATORY ANALYSIS

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February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PACE Sample Number:			70 0238692	
Date Collected:			01/27/94	
Date Received:			02/01/94	
Client Sample ID:			QC-2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	02/03/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	02/03/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	02/03/94
Benzene	ug/L	0.5	ND	02/03/94
Toluene	ug/L	0.5	ND	02/03/94
Ethylbenzene	ug/L	0.5	ND	02/03/94
Xylenes, Total	ug/L	0.5	ND	02/03/94

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

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FOOTNOTES
for pages 1 through 12

February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

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

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QUALITY CONTROL DATA

February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PURGEABLE FUELS AND AROMATICS
Batch: 70 28127
Samples: 70 0238447, 70 0238455, 70 0238480, 70 0238498, 70 0238501
70 0238510, 70 0238668, 70 0238676, 70 0238684, 70 0238692

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	700238668 MW-2 1430	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND	1000	86%	87%	1%
Benzene	ug/L	0.5	0.6	40	98%	93%	5%
Toluene	ug/L	0.5	ND	40	94%	86%	8%
Ethylbenzene	ug/L	0.5	ND	40	96%	84%	13%
Xylenes, Total	ug/L	0.5	ND	120	98%	84%	15%

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	100%	98%	2%
Benzene	ug/L	0.5	40	102%	103%	0%
Toluene	ug/L	0.5	40	100%	100%	0%
Ethylbenzene	ug/L	0.5	40	101%	101%	0%
Xylenes, Total	ug/L	0.5	120	101%	102%	0%

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QUALITY CONTROL DATA

February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PURGEABLE FUELS AND AROMATICS
Batch: 70 28141
Samples: 70 0238439

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	700238439 AW-2 1240	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	ND	1000	97%	94%	3%
Benzene	ug/L	0.5	ND	100	96%	97%	1%
Toluene	ug/L	0.5	ND	100	96%	97%	1%
Ethylbenzene	ug/L	0.5	ND	100	100%	100%	0%
Xylenes, Total	ug/L	0.5	ND	300	98%	98%	0%

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	78%	77%	1%
Benzene	ug/L	0.5	100	93%	100%	7%
Toluene	ug/L	0.5	100	98%	96%	2%
Ethylbenzene	ug/L	0.5	100	95%	99%	4%
Xylenes, Total	ug/L	0.5	300	94%	98%	4%

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QUALITY CONTROL DATA

February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

PURGEABLE FUELS AND AROMATICS
Batch: 70 28156
Samples: 70 0238420

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

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	99%	100%	1%
Benzene	ug/L	0.5	40	103%	101%	1%
Toluene	ug/L	0.5	40	100%	99%	1%
Ethylbenzene	ug/L	0.5	40	102%	96%	6%
Xylenes, Total	ug/L	0.5	120	103%	98%	4%

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

Mr. Bill Howell
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FOOTNOTES
for pages 14 through 16

February 09, 1994
PACE Project Number: 440201506

Client Reference: BP Station # 11133/10-025-02-003

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

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4462.01.506

CHAIN OF CUSTODY

No. 051381

Page 1 of 1

CONSULTANT'S NAME	ADDRESS	CITY	STATE	ZIP CODE
Alisto Engineering	1777 Oakland Blvd Suite 200	Walnut Creek	Ca	

BP SITE NUMBER	BP CORNER ADDRESS/CITY	CONSULTANT PROJECT NUMBER
11133	2220 98th Ave Oakland	10-025.02.003

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
B. N Howell	510 295 1650	295 1823	

BP CONTACT	BP ADDRESS	PHONE NUMBER	FAX NO.
Scott Hooton			

LAB CONTACT	LABORATORY ADDRESS	PHONE NUMBER	FAX NO.
Jim Oyes	11 Digital Drive Novato	415 883 6100	

SAMPLED BY (Please Print Name)	SAMPLED BY (Signature)	SHIPMENT DATE	SHIPMENT METHOD
Dan Birch		1-28-94	Pace Courier

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

HCl ANALYSIS REQUIRED

AIRBILL NUMBER

SAMPLE DESCRIPTION	COLLECTION DATE / TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPH GAS B-TEX		COMMENTS
AW-1 1645	1-27-94	Water	3	VOA	HCl	X	23842.0	
AW-2 1240						X	23843.9	
AW-3 1500						X	23844.7	
AW-4 1700						X	23845.5	
AW-5 1545						X	23848.0	
AW-6 1410						X	23849.8	
AW-7 1250						X	23850.1	
AW-8 1330						X	23851.0	
MW-2 1430						X	23866.8	
MW-3 1607						X	23867.6	
QC-1 1515						X	23868.4	
QC-2						X	23869.2	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	1/28/94	1600	Ed Hamilton / Pace	2/1/94	1600
Ed Hamilton / Pace	2/1/94	1710	Jeff McCulloch Pace	2/1/94	1710

ADDITIONAL COMMENTS

5/4

#973646

CLV-16722

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