



BP OIL

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

October 31, 1994

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Mr. ~~Barney Chan~~
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland CA 94621

**RE: BP OIL FACILITY #11132
3201 - 35th Street
Oakland, CA**

Dear Mr. Chan:

Attached please find our GROUNDWATER MONITORING AND SAMPLING REPORT DATED SEPTEMBER 7, 1994 for the above referenced facility.

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

Respectfully,

Scott T. Hooton
Environmental Resources Management
Group Leader

STH:mu msword\VERM11132

cc: Mr. Eddy So, California Regional Water Quality Control Board, San Francisco Bay Region, 2101 Webster St. Suite 500, Oakland CA 94612

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

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

Site File

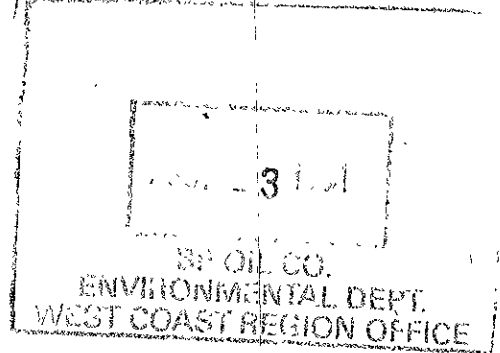
GROUNDWATER MONITORING AND SAMPLING REPORT

**BP Oil Company Service Station No. 11132
3201 35th Street
Oakland, California**

Project No. 10-024-05-001

Prepared for:

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



Prepared by:

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

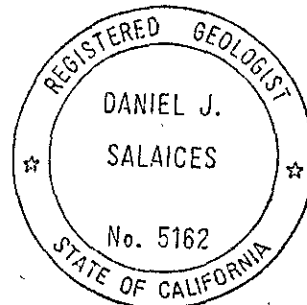
September 7, 1994

Handwritten signature of Brady Nagle in cursive script.

**Brady Nagle
Project Manager**

Handwritten signature of Dan Salaires in cursive script.

**Dan Salaires
Registered Geologist**



GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11132
3201 35th Street
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Project No. 10-024-05-001

September 7, 1994

INTRODUCTION

This report presents the results and findings of the August 1, 1994 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11132, 3201 35th Street, 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 relative 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.

SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples for this and previous quarters are summarized in Table 1. The potentiometric groundwater elevations as interpreted from the results of this monitoring event are shown in Figure 2. The results of groundwater analysis are shown in Figure 3. The laboratory report and chain of custody record are presented in Appendix B.

FREE PRODUCT MONITORING AND RECOVERY

Product recovery canisters have been installed in Monitoring Wells MW-2, MW-8, MW-9, and MW-10 to recover liquid-phase product. Product thicknesses measured during this and previous monitoring events are presented in Table 1. The volume of free product recovered from the wells is presented in Table 2.



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-1	07/09/90	169.75	--	0.22	--	--	--	--	--	--	--	--
MW-1	12/21/90	169.75	--	0.58	--	--	--	--	--	--	--	--
MW-1	03/07/91	169.75	20.59	--	--	--	--	--	--	--	--	--
MW-1	06/27/91	169.75	--	0.18	--	--	--	--	--	--	--	--
MW-1	09/27/91	169.75	--	0.27	--	--	--	--	--	--	--	--
MW-1	12/18/91	169.75	--	0.28	--	--	--	--	--	--	--	--
MW-1	04/01/91	169.75	16.51	0.15	153.35	--	--	--	--	--	--	--
MW-1	07/03/92	169.75	22.30	0.27	147.65	--	--	--	--	--	--	--
MW-1	10/05/92	169.75	23.98	0.24	145.95	--	--	--	--	--	--	--
MW-1	01/13/93	169.75	17.03	0.24	152.90	--	--	--	--	--	--	--
MW-1	04/23/93	169.75	18.10	0.42	151.97	--	--	--	--	--	--	--
MW-1	07/12/93	169.75	22.02	0.49	148.10	--	--	--	--	--	--	--
MW-1	10/21/93	169.75	25.12	1.09	145.45	--	--	--	--	--	--	--
MW-1	01/21/94	169.75	23.02	0.76	147.30	--	--	--	--	--	--	--
MW-1	04/20/94	169.75	24.54	1.80	146.56	--	--	--	--	--	--	--
MW-1	08/01/94	169.75	24.11	0.35	145.90	--	--	--	--	--	--	--
MW-2	07/09/90	168.14	--	0.10	--	--	--	--	--	--	--	--
MW-2	12/21/90	168.14	--	0.48	--	--	--	--	--	--	--	--
MW-2	03/07/91	168.14	19.18	--	--	--	--	--	--	--	--	--
MW-2	06/27/91	168.14	--	0.19	--	--	--	--	--	--	--	--
MW-2	09/27/91	168.14	--	0.15	--	--	--	--	--	--	--	--
MW-2	12/18/91	168.14	--	0.36	--	--	--	--	--	--	--	--
MW-2	04/01/91	168.14	15.21	0.10	153.01	--	--	--	--	--	--	--
MW-2	07/03/92	168.14	20.93	0.03	147.23	--	--	--	--	--	--	--
MW-2	10/05/92	168.14	22.74	0.21	145.56	--	--	--	--	--	--	--
MW-2	01/13/93	168.14	15.55	0.02	152.61	--	--	--	--	--	--	--
MW-2	04/23/93	168.14	16.54	0.21	151.76	--	--	--	--	--	--	--
MW-2	07/12/93	168.14	20.46	0.06	147.73	--	--	--	--	--	--	--
MW-2	10/21/93	168.14	24.91	0.31	143.46	--	--	--	--	--	--	--
MW-2	01/21/94	168.14	21.20	--	146.94	--	--	--	--	--	--	--
MW-2	04/20/94	168.14	22.44	--	145.70	1800	140	370	54	290	1.7	PACE
MW-2	08/01/94	168.14	22.24	0.04	145.93	--	--	--	--	--	--	--

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-3	07/09/90	167.17	--	--	--	140	5.3	4.6	2.0	3.8	--	--
MW-3	12/21/90	167.17	--	--	--	0.19	100	6.0	0.9	27	--	--
MW-3	03/07/91	167.17	17.40	--	149.77	0.4	69	22	6.1	57	--	--
MW-3	06/27/91	167.17	--	--	--	380	28	26	13	46	--	--
MW-3	09/27/91	167.17	--	--	--	0.07	7.9	ND	0.4	1.1	--	--
MW-3	12/18/91	167.17	--	--	--	0.26	34	24	0.8	28	--	--
MW-3	04/01/91	167.17	13.69	--	153.48	ND	ND	ND	ND	ND	--	--
MW-3	07/03/92	167.17	19.59	--	147.58	71	9.4	0.9	5.0	13	--	ANA
MW-3	10/05/92	167.17	21.22	--	145.95	67	5.1	1.1	6.1	8.1	--	ANA
QC-1 (c)	10/05/92	--	--	--	--	ND<50	2.2	ND<0.5	1.5	2.8	--	ANA
MW-3	01/13/93	167.17	13.63	--	153.54	830	50	34	42	89	--	PACE
MW-3	04/23/93	167.17	15.02	--	152.15	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
QC-1 (c)	04/23/93	--	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-3	07/12/93	167.17	19.16	--	148.01	250	12	4.2	12	16	--	PACE
MW-3	10/21/93	167.17	21.81	--	145.36	52	4.4	1.4	4.7	3.3	--	PACE
QC-1 (c)	10/21/93	--	--	--	--	65	7.4	1.0	6.9	4.2	--	PACE
MW-3	01/21/94	167.17	19.94	--	147.23	57	3.0	3.4	3.6	9.0	--	PACE
MW-3	04/20/94	167.17	20.24	--	146.93	600	26	23	33	88	1.8	PACE
MW-3	08/01/94	167.17	20.74	--	146.43	99	6.2	1.1	4.5	5.2	1.4	PACE
QC-1 (c)	08/01/94	--	--	--	--	120	7.7	1.6	5.9	6.7	--	PACE
MW-4	07/09/90	170.36	--	--	--	ND	ND	ND	ND	ND	--	--
MW-4	12/21/90	170.36	--	--	--	ND	ND	ND	ND	0.8	--	--
MW-4	03/07/91	170.36	20.72	--	149.64	ND	2.2	3.8	1.5	2.8	--	--
MW-4	06/27/91	170.36	--	--	--	ND	6.3	1.8	0.4	1.0	--	--
MW-4	09/27/91	170.36	--	--	--	ND	ND	ND	ND	ND	--	--
MW-4	12/18/91	170.36	--	--	--	ND	ND	ND	ND	ND	--	--
MW-4	04/01/91	170.36	17.49	--	152.87	ND	ND	ND	ND	ND	--	--
MW-4	07/03/92	170.36	22.16	--	148.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-4	10/05/92	170.36	23.38	--	146.98	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-4	01/13/93	170.36	17.58	--	152.78	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-4	04/23/93	170.36	15.72	--	154.64	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-4	07/12/93	170.36	21.74	--	148.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-4	10/21/93	170.36	23.84	--	146.52	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-4	01/21/94	170.36	22.42	--	147.94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-4	04/20/94	170.36	22.66	--	147.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.2	PACE
MW-4	08/01/94	170.36	23.01	--	147.35	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.9	PACE

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ALISTO PROJECT NO. 10-024

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-5	07/09/90	165.14	--	--	--	280	200	210	46	290	--	--
MW-5	12/21/90	165.14	--	--	--	0.69	300	34	8.4	39	--	--
MW-5	03/07/91	165.14	16.60	--	148.54	ND	17	0.9	0.7	1.6	--	--
MW-5	06/27/91	165.14	--	--	--	330	120	10	12	8	--	--
MW-5	09/27/91	165.14	--	--	--	0.73	230	16	20	22	--	--
MW-5	12/18/91	165.14	--	--	--	ND	ND	ND	ND	ND	--	--
MW-5	04/01/91	165.14	11.99	--	153.15	800	250	54	11	60	--	--
MW-5	07/03/92	165.14	18.65	--	146.49	150	36	ND<0.5	ND<0.5	1.1	--	ANA
MW-5	10/05/92	165.14	20.32	--	144.82	270	79	4	1.7	2.9	--	ANA
MW-5	01/13/93	165.14	13.03	--	152.11	180	59	6.0	1.8	7.6	--	PACE
MW-5	04/23/93	165.14	13.51	--	151.63	8700	440	96	35	136	--	PACE
MW-5	07/12/93	165.14	18.06	--	147.08	250	57	2.9	2.1	6.0	--	PACE
MW-5	10/21/93	165.14	20.41	--	144.73	210	82	1.5	ND<0.5	1.4	--	PACE
MW-5	01/21/94	165.14	18.86	--	146.28	110	36	1.2	ND<0.5	0.7	--	PACE
MW-5	04/20/94	165.14	17.30	--	147.84	690	230	4.5	1.6	11	1.3	PACE
MW-5	08/01/94	165.14	17.53	--	147.61	170	44	1.6	0.9	2.7	0.9	PACE
MW-6	07/09/90	165.40	--	--	--	ND	ND	ND	ND	ND	--	--
MW-6	12/21/90	165.40	--	--	--	0.17	2.6	7.0	4.9	26	--	--
MW-6 (d)	03/07/91	165.40	--	--	--	--	--	--	--	--	--	--
MW-6 (d)	06/27/91	165.40	--	--	--	--	--	--	--	--	--	--
MW-6 (d)	09/27/91	165.40	--	--	--	--	--	--	--	--	--	--
MW-6	12/18/91	165.40	--	--	--	ND	1.3	22	ND	2.7	--	--
MW-6	04/01/91	165.40	11.79	--	153.61	ND	ND	ND	ND	ND	--	--
MW-6	07/03/92	165.40	17.77	--	147.63	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-6	10/05/92	165.40	19.46	--	145.94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-6	01/13/93	165.40	11.34	--	154.06	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-6	04/23/93	165.40	12.92	--	152.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-6	07/12/93	165.40	17.36	--	148.04	ND<50	ND<0.5	ND<0.5	ND<0.5	0.7	--	PACE
MW-6	10/21/93	165.40	19.98	--	145.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-6	01/21/94	165.40	18.10	--	147.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-6	04/20/94	165.40	18.68	--	146.72	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.0	PACE
MW-6	08/01/94	165.40	18.90	--	146.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.5	PACE

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 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-7	07/09/90	167.61	—	—	—	ND	ND	ND	ND	ND	—	—
MW-7	12/21/90	167.61	—	—	—	ND	ND	ND	ND	ND	—	—
MW-7	03/07/91	167.61	19.04	—	148.57	ND	ND	0.4	0.3	2.4	—	—
MW-7	06/27/91	167.61	—	—	—	70	17	4	0.8	2.2	—	—
MW-7	09/27/91	167.61	—	—	—	ND	0.4	ND	ND	0.4	—	—
MW-7	12/18/91	167.61	—	—	—	ND	0.7	2.9	0.8	3.3	—	—
MW-7	04/01/91	167.61	15.18	—	152.43	ND	ND	ND	ND	ND	—	—
MW-7	07/03/92	167.61	20.28	—	147.33	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
MW-7	10/05/92	167.61	21.56	—	146.05	ND<50	ND<0.5	ND<0.5	ND<0.5	1.5	—	ANA
MW-7	01/13/93	167.61	15.41	—	152.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-7	04/23/93	167.61	15.84	—	151.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-7	07/12/93	167.61	19.84	—	147.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-7	10/21/93	167.61	21.61	—	146.00	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-7	01/21/94	167.61	20.49	—	147.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
QC-1 (c)	01/21/94	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-7	04/20/94	167.61	20.54	—	147.07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.5	PACE
MW-7	08/01/94	167.61	20.99	—	146.62	ND<50	0.7	ND<0.5	ND<0.5	ND<0.5	1.9	PACE
MW-8	03/07/91	165.74	16.72	—	149.02	2.7	780	450	64	310	—	—
MW-8	06/27/91	165.74	—	—	—	12000	3400	1100	240	750	—	—
MW-8	09/27/91	165.74	—	—	—	41	5700	5200	1100	4300	—	—
MW-8	12/18/91	165.74	—	—	—	3.2	990	150	120	250	—	—
MW-8	04/01/91	165.74	12.54	—	153.20	15000	3600	2600	410	1900	—	—
MW-8	07/03/92	165.74	18.78	—	146.96	72000	19000	32000	3000	15000	—	ANA
MW-8	10/05/92	165.74	20.48	0.01	145.27	—	—	—	—	—	—	—
MW-8	01/13/93	165.74	12.87	0.01	152.88	—	—	—	—	—	—	—
MW-8	04/23/93	165.74	13.90	SHEEN	151.84	—	—	—	—	—	—	—
MW-8	07/12/93	165.74	18.30	SHEEN	147.44	—	—	—	—	—	—	—
MW-8	10/21/93	165.74	21.91	0.95	144.54	—	—	—	—	—	—	—
MW-8	01/21/94	165.74	19.12	0.03	146.64	—	—	—	—	—	—	—
MW-8	04/20/94	165.74	19.28	0.03	146.46	26000	1700	4100	960	4000	1.1	PACE
MW-8	08/01/94	165.74	—	—	—	—	—	—	—	—	—	—

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-9	03/07/91	166.20	16.79	--	149.41	7.1	220	4	2.4	2400	--	--
MW-9	06/27/91	166.20	--	--	--	3600	520	400	85	310	--	--
MW-9	09/27/91	166.20	--	--	--	3.2	720	150	50	180	--	--
MW-9	12/18/91	166.20	--	--	--	ND	2.5	1.1	0.3	5.8	--	--
MW-9	04/01/91	166.20	12.89	--	153.31	12000	2000	2600	360	1600	--	--
MW-9	07/03/92	166.20	18.89	--	147.31	5700	17000	840	230	800	--	ANA
MW-9	10/05/92	166.20	20.52	--	145.68	1400	440	17	14	100	--	ANA
MW-9	01/13/93	166.20	12.92	--	153.28	11000	1200	1700	340	1400	--	PACE
QC-1 (c)	01/13/93	--	--	--	0.00	11000	1200	1600	330	1300	--	PACE
MW-9	04/23/93	166.20	14.08	--	152.12	24000	2800	4500	730	3400	--	PACE
MW-9	07/12/93	166.20	18.44	--	147.76	13000	1400	1100	360	1400	--	PACE
QC-1 (c)	07/12/93	--	--	--	--	10000	1200	900	310	1200	--	PACE
MW-9	10/21/93	166.20	21.81	0.89	145.06	--	--	--	--	--	--	--
MW-9	01/21/94	166.20	19.28	--	146.92	--	--	--	--	--	--	--
MW-9	04/20/94	166.20	19.72	--	146.48	43000	2800	6800	1300	7900	1.7	PACE
QC-1 (c)	04/20/94	--	--	--	--	45000	2700	6800	1200	8200	--	PACE
MW-9	08/01/94	166.20	20.18	0.05	146.06	--	--	--	--	--	--	--
MW-10	03/07/91	167.01	18.09	--	148.92	1.6	120	190	32	230	--	--
MW-10	06/27/91	167.01	--	--	--	12000	7300	500	150	300	--	--
MW-10	09/27/91	167.01	--	--	--	57	12000	7200	1400	4600	--	--
MW-10	12/18/91	167.01	--	--	--	5.3	2500	120	36	79	--	--
MW-10	04/01/91	167.01	13.92	--	153.09	ND	ND	ND	ND	ND	--	--
MW-10	07/03/92	167.01	19.92	--	147.09	8600	5100	1300	180	690	--	ANA
MW-10	10/05/92	167.01	21.92	0.19	145.23	--	--	--	--	--	--	--
MW-10	01/13/93	167.01	14.43	0.03	152.60	--	--	--	--	--	--	--
MW-10	04/23/93	167.01	15.26	0.06	151.80	--	--	--	--	--	--	--
MW-10	07/12/93	167.01	19.78	0.45	147.57	--	--	--	--	--	--	--
MW-10	10/21/93	167.01	22.90	0.69	144.63	--	--	--	--	--	--	--
MW-10	01/21/94	167.01	20.25	0.06	146.81	--	--	--	--	--	--	--
MW-10	04/20/94	167.01	20.74	--	146.27	100000	12000	24000	2400	14000	1.0	PACE
MW-10	08/01/94	167.01	22.00	0.28	145.22	--	--	--	--	--	--	--

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
RW-1	07/09/90	168.01	--	1.21	--	--	--	--	--	--	--	--
RW-1	12/21/90	168.01	--	0.01	--	--	--	--	--	--	--	--
RW-1	03/07/91	168.01	17.62	SHEEN	150.39	--	--	--	--	--	--	--
RW-1	06/27/91	168.01	--	0.04	--	--	--	--	--	--	--	--
RW-1	09/27/91	168.01	--	0.02	--	--	--	--	--	--	--	--
RW-1	12/18/91	168.01	--	0.02	--	--	--	--	--	--	--	--
RW-1	04/01/91	168.01	14.40	0.11	153.69	--	--	--	--	--	--	--
RW-1	07/03/92	168.01	20.66	SHEEN	147.35	--	--	--	--	--	--	--
RW-1	10/05/92	168.01	23.34	0.08	144.73	--	--	--	--	--	--	--
RW-1	01/13/93	168.01	16.59	0.05	151.46	--	--	--	--	--	--	--
RW-1	04/23/93	168.01	16.17	0.18	151.98	--	--	--	--	--	--	--
RW-1	07/12/93	168.01	20.18	0.06	147.88	--	--	--	--	--	--	--
RW-1	10/21/93	168.01	25.70	0.56	142.73	--	--	--	--	--	--	--
RW-1	01/21/94	168.01	21.24	0.40	147.07	--	--	--	--	--	--	--
RW-1	04/20/94	168.01	32.20	--	135.81	--	--	--	--	--	--	--
RW-1	08/01/94	168.01	21.70	--	146.31	29000	580	950	300	7800	1.1	PACE
QC-2 (e)	10/05/92	--	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
QC-2 (e)	01/13/93	--	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
QC-2 (e)	04/23/93	--	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
QC-2 (e)	07/12/93	--	--	--	--	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)	01/21/94	--	--	--	--	ND<50	ND<0.5	2.1	ND<0.5	2.1	--	PACE
QC-2 (e)	04/20/94	--	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 DO Dissolved oxygen
 ppb Parts per billion
 ppm Parts per million
 -- Not analyzed/available/applicable/measurable
 ND Not detected above reported detection limit
 ANA Anametrix, Inc.
 PACE Pace Inc.

NOTES:

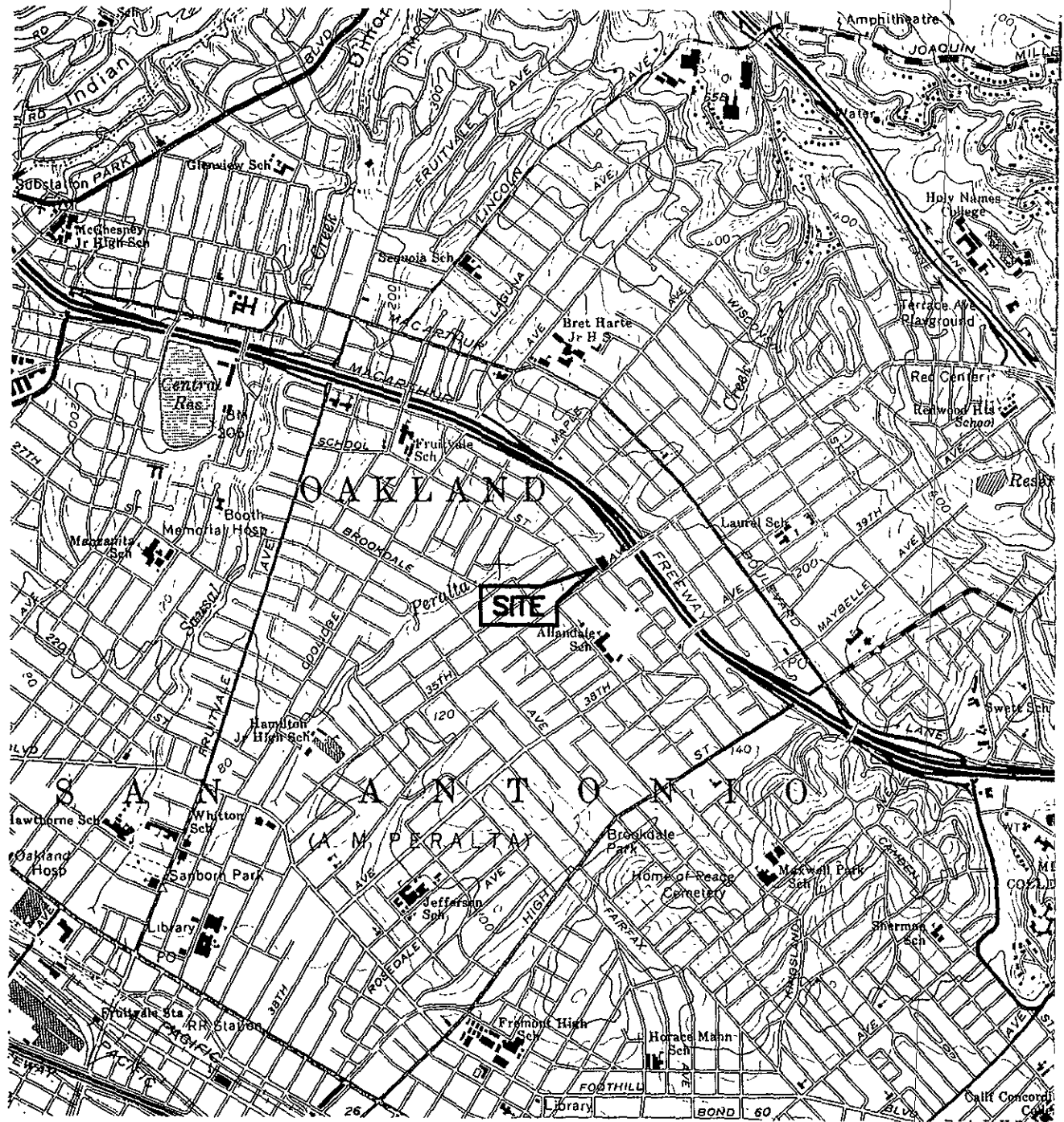
- (a) Casing elevations surveyed to the nearest 0.01 foot relative to mean sea level.
 (b) Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.
 (c) Blind duplicate.
 (d) Not sampled due to an abandoned vehicle parked over well.
 (e) Travel blank.

TABLE 2 - PRODUCT REMOVAL STATUS

BP OIL COMPANY SERVICE STATION NO. 11132
3201 35TH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

WELL ID	DATE	PRODUCT REMOVED (Gallons)	PRODUCT REMOVED CUMULATIVE (Gallons)	
MW-2	09/29/93	0.10	0.10	
	10/05/93	0.10	0.20	
	10/14/93	0.10	0.30	
	10/20/93	0.25	0.55	
	11/02/93	0.10	0.65	
	12/07/93	0.05	0.70	
	12/17/93	<0.01	0.70	
	12/23/93	0.3	1.00	
	01/12/94	0.05	1.05	
	02/02/94	0.01	1.06	
	02/11/94	0.01	1.07	
	03/18/94	<0.01	1.07	
	MW-8	11/02/93	0.25	0.25
		11/10/93	0.10	0.35
11/16/93		0.10	0.45	
11/23/93		0.10	0.55	
11/30/93		0.10	0.65	
12/17/93		<0.01	0.65	
12/23/93		<0.01	0.65	
01/12/94		0.01	0.66	
02/02/94		0.05	0.71	
02/11/94		0.08	0.79	
02/18/94		<0.01	0.79	
03/18/94		0.01	0.80	
04/27/94		<0.01	0.80	
05/27/94		<0.01	0.80	
MW-9	11/02/93	0.10	0.10	
	11/10/93	0.10	0.20	
	11/16/93	0.10	0.30	
	12/23/93	<0.01	0.30	
	01/12/94	0.01	0.31	
	01/20/93	0.05	0.36	
	02/02/94	0.05	0.41	
	02/11/94	0.01	0.42	
	02/18/94	<0.01	0.42	
	03/18/94	0.10	0.52	
MW-10	09/07/93	0.10	0.10	
	09/14/93	0.10	0.20	
	09/29/93	0.10	0.30	
	10/05/93	1.60	1.90	
	10/14/93	2.10	4.00	
	10/20/93	1.00	5.00	
	10/27/93	1.00	6.00	
	11/02/93	0.30	6.30	
	11/10/93	0.20	6.50	
	11/16/93	0.10	6.60	
	11/23/93	0.10	6.70	
	11/30/93	0.30	7.00	
	12/07/93	0.20	7.20	
	12/17/93	0.30	7.50	
	12/23/93	<0.01	7.50	
	01/04/94	0.01	7.51	
	01/12/94	0.01	7.52	
	01/20/94	0.20	7.72	
	02/02/94	0.01	7.73	
	02/11/94	0.01	7.74	
02/18/94	0.20	7.94		
05/27/94	<0.01	7.94		



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

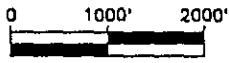
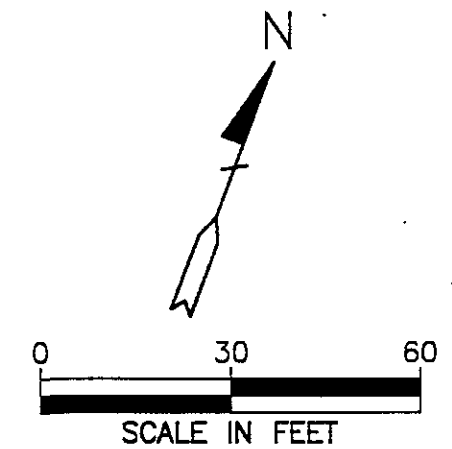
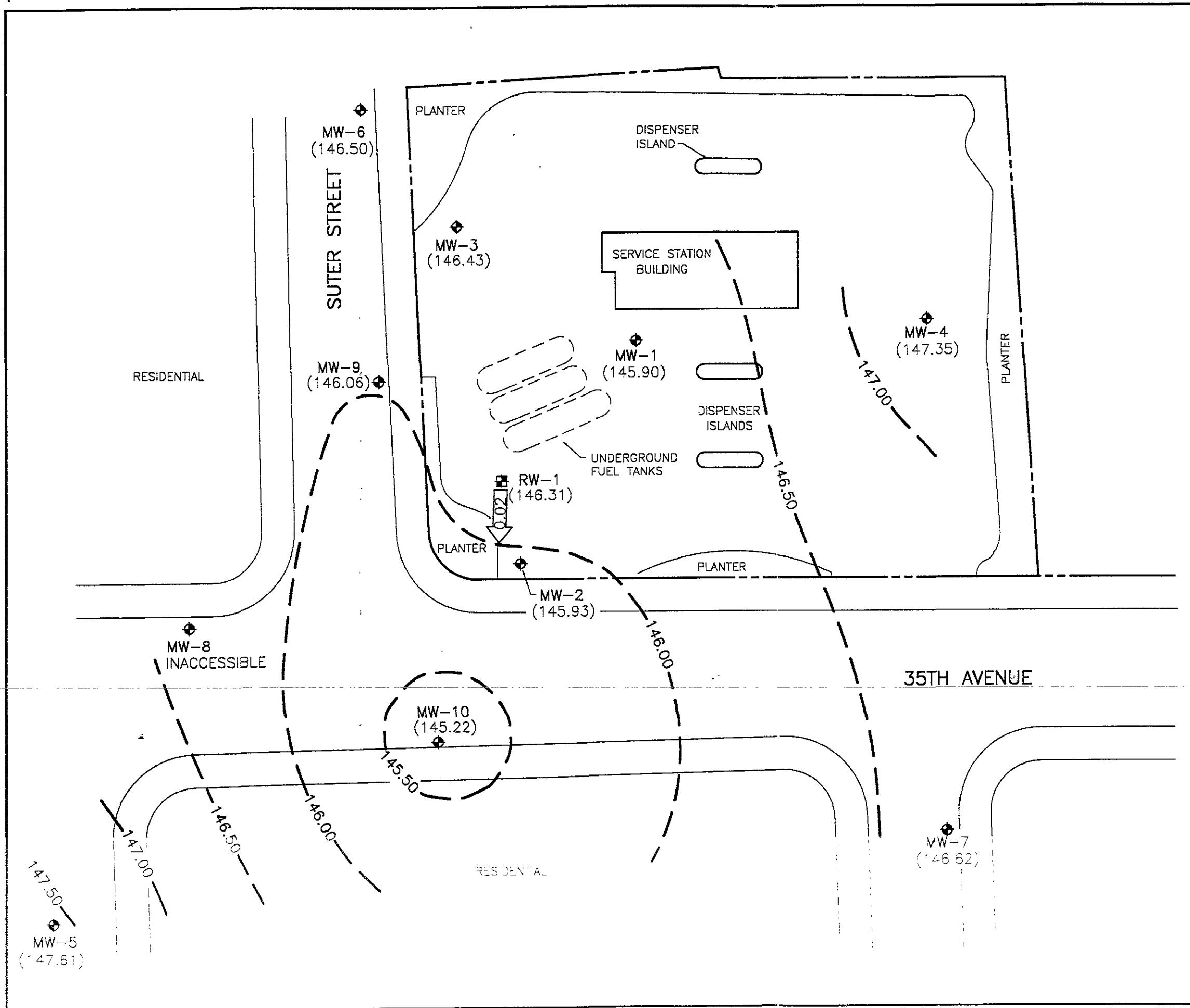


FIGURE 1
SITE VICINITY MAP
 BP OIL SERVICE STATION NO. 11132
 3201 35TH STREET
 OAKLAND, CALIFORNIA
 PROJECT NO. 10-024

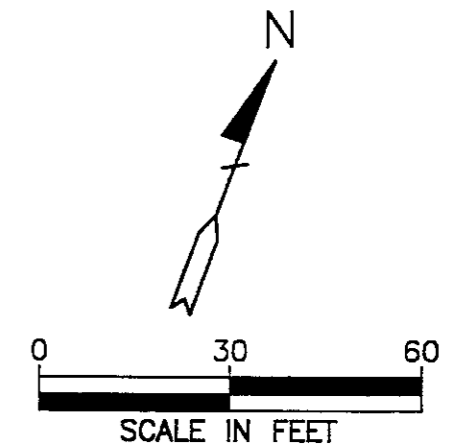
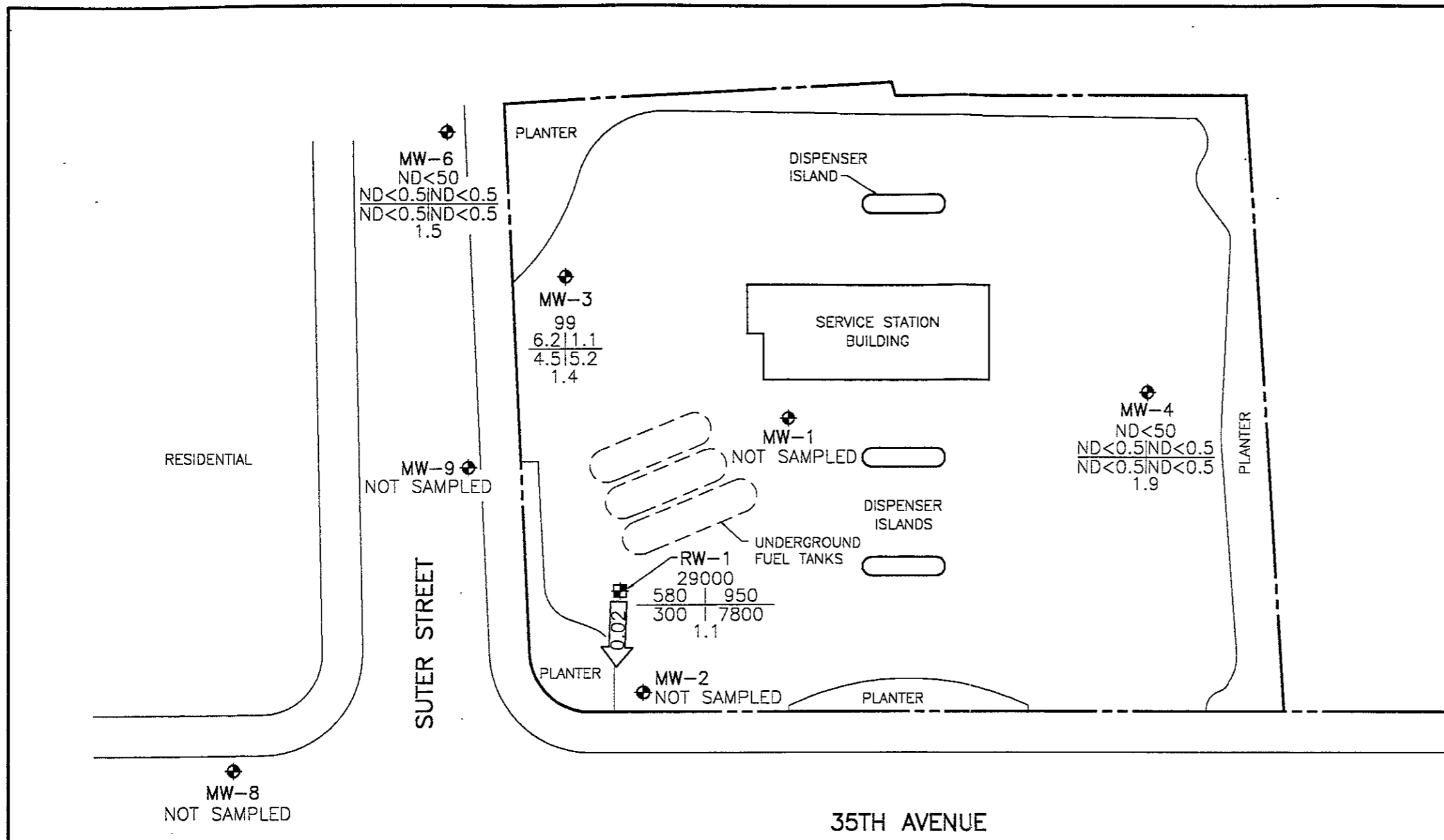




- LEGEND**
- ⊕ GROUNDWATER MONITORING WELL
 - ⊞ GROUNDWATER RECOVERY WELL
 - (147.35) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 - 147.00 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL=0.50 FOOT)
 - ← 0.02 → CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP
 AUGUST 1, 1994
 BP OIL SERVICE STATION NO. 11132
 3201 35TH STREET
 OAKLAND, CALIFORNIA
 PROJECT NO. 10-024

100240 K DWG. B 26.04 RW 1-30



LEGEND

- ◆ GROUNDWATER MONITORING WELL
- ⊕ GROUNDWATER RECOVERY WELL
- TPH-G CONCENTRATION OF CONSTITUENTS IN PARTS PER BILLION, EXCEPT DISSOLVED OXYGEN, WHICH IS IN PARTS PER MILLION
- B | T
- E | X
- DO
- TPH-G TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X TOTAL XYLENES
- DO DISSOLVED OXYGEN
- ND NOT DETECTED ABOVE REPORTED DETECTION LIMIT
- ←0.02 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
 AUGUST 1, 1994
 3P OIL SERVICE STATION NO. 11132
 3201 35TH STREET
 JAKLAND, CALIFORNIA
 PROJECT NO. 10-024



GENERAL & CIVIL 9 23 84 RW 1 x 50

APPENDIX A
WATER SAMPLING FIELD SURVEY FORMS

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING
GROUP

Groundwater Sampling

Date: 8-1-94 Project No. 10-024-04-001

Day: M T W Th F Station No. BP11132

1777 OAKLAND BLVD, STE 200 Barometric pres. 30.05

Temp. 20°C Address 3201 35TH STREET

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

SAMPLER: AJBul OAKLAND

Well ID	SAMPLE #	WATER	time	Well ID	SAMPLE #	WATER/	time	Well ID	SAMPLE	WATER / time
MW-1	Not Sampled	24.11'		MW-6	S-2	18.90'	1045	RW-1	S-7	21.70'
MW-2	Not Sampled	22.24'		MW-7	S-4	20.99'				
MW-3	S-5, S-6	20.74'		MW-8	Car over well / not accessed					
MW-4	S-1	23.01'	1037	MW-9	Not Sampled	20.18'				
MW-5	S-3	17.53'	1049	MW-10	Not Sampled	22.00'				

FIELD INSTRUMENT CALIBRATION DATA

Ph METER HYDAX 4.00 4.00 7.00 7.00 10.00 TIME 11:45 TEMPERATURE COMPENSATED N
 D.O. METER ICM BAROMETRIC PRESSURE 30.05 AIR TEMPERATURE 20°C
 CONDUCTIVITY METER HYDAX 10,000 OTHER DI

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
<u>MW-4</u>	<u>23.01</u>	<u>2"</u>	<u>OK</u>	<u>None</u>	<u>Y (N)</u>	<u>2</u>	<u>1207</u>	<u>75.8</u>	<u>7.04</u>	<u>1200</u>		<input type="radio"/> EPA 601
Total Depth - Water Level =						<u>5</u>	<u>1208</u>	<u>75.5</u>	<u>7.03</u>	<u>1192</u>		<input checked="" type="radio"/> TPH-G/BTEX <u>HL</u>
<u>38.74' - 23.01' = 15.73 x .16 = 2.5 x 3 = 7.6</u>						<u>8</u>	<u>1209</u>	<u>75.1</u>	<u>7.09</u>	<u>1025</u>	<u>1.9</u>	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="radio"/> Surface Pump <input checked="" type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port												<input type="radio"/> TOG 5520
Comments:												Time/Sample <u>1209 / 5-1</u>

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
<u>MW-6</u>	<u>18.90'</u>	<u>2"</u>	<u>OK</u>	<u>None</u>	<u>Y (N)</u>	<u>4</u>	<u>1227</u>	<u>71.4</u>	<u>6.63</u>	<u>663</u>		<input type="radio"/> EPA 601
Total Depth - Water Level =						<u>6</u>	<u>1230</u>	<u>70.6</u>	<u>7.04</u>			<input checked="" type="radio"/> TPH-G/BTEX <u>HL</u>
<u>-18.90' =</u>						<u>8</u>	<u>1233</u>	<u>70.7</u>	<u>7.05</u>	<u>670</u>	<u>1.5</u>	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="radio"/> Surface Pump <input checked="" type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port												<input type="radio"/> TOG 5520
Comments:												Time/Sample <u>1233 / 5-2</u>

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
<u>MW-5</u>	<u>17.53</u>	<u>2"</u>	<u>OK</u>	<u>None</u>	<u>Y (N)</u>	<u>5</u>	<u>1257</u>	<u>71.7</u>	<u>7.17</u>	<u>575</u>	<u>1.1</u>	<input type="radio"/> EPA 601
Total Depth - Water Level =						<u>9</u>	<u>1300</u>	<u>70.3</u>	<u>7.11</u>	<u>591</u>	<u>0.9</u>	<input checked="" type="radio"/> TPH-G/BTEX <u>HL</u>
<u>-17.53' =</u>												<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="radio"/> Surface Pump <input checked="" type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port												<input type="radio"/> TOG 5520
Comments:												Time/Sample <u>1300 / 5-3</u>

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING

Groundwater Sampling

Date: 8-1-94

Project No.

10-024-04-001

GROUP

Day: M T W Th F

Station No.

BP11132

1777 OAKLAND BLVD, STE 200

Address

3201 35TH STREET

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

SAMPLER:

OAKLAND

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-7	20.99	2	OK		Y <input checked="" type="radio"/> N	3	1321	70.1	6.91	791		<input type="radio"/> EPA 601
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.						5	1325	68.5	7.01	635		<input checked="" type="radio"/> TPH-G/BTEX <u>Hel</u>
$34.49 - 20.99 = 13.5 \times .16 = 2.16 \times 3 = 6.48$						7	1330	68.6	7.02	625	1.9	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port												<input type="radio"/> TOG 5520
Comments:												Time / Sample <u>1350 / 5-4</u>

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-9	20.18	2	OK	20.13	Y <input checked="" type="radio"/> N							<input type="radio"/> EPA 601
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.												<input type="radio"/> TPH-G/BTEX
0.05' PRODUCT - WELL NOT SAMPLED												<input type="radio"/> TPH Diesel
Purge Method: <input type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port												<input type="radio"/> TOG 5520
Comments: <u>Black Product. (bailed)</u>												Time / Sample <u>NOT SAMPLED</u>

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-8	NM	2"			Y <input type="radio"/> N							<input type="radio"/> EPA 601
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.												<input type="radio"/> TPH-G/BTEX
CAR OVER WELL PREVENTS SAMPLING.												<input type="radio"/> TPH Diesel
Purge Method: <input type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port												<input type="radio"/> TOG 5520
Comments:												Time / Sample <u>NOT SAMPLED</u>

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-10	22.00'	2"	OK	21.72'	Y <input checked="" type="radio"/> N							<input type="radio"/> EPA 601
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.												<input type="radio"/> TPH-G/BTEX
0.28' BLACK PRODUCT PREVENTS SAMPLING.												<input type="radio"/> TPH Diesel
Purge Method: <input type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port												<input type="radio"/> TOG 5520
Comments: <u>PPRS EMPTIED 5 GAL. Bailed.</u>												Time / Sample <u>Not Sampled</u>

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-3	20.74'	2"	OK		Y <input checked="" type="radio"/> N	1	1437	68.7	6.92	611		<input checked="" type="radio"/> EPA 601
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol.						5	1442	68.5	6.91	579		<input checked="" type="radio"/> TPH-G/BTEX <u>Hel</u>
$34.58 - 20.74 = 13.84 \times .16 = 2.2 \times 3 = 6.6$						7	1445	68.3	6.91	597	1.4	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port												<input type="radio"/> TOG 5520
Comments: <u>Duplicate collected from MW-3</u>												Time / Sample <u>1445 / 5-5, 6</u>

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING

Groundwater Sampling

Date: 8-1-94 Project No. 10-024-04-001

GROUP

Day: M T W Th F Station No. BP11132

1777 OAKLAND BLVD, STE 200

Address 3201 35TH STREET

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

SAMPLER: DJBud

OAKLAND

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-2	22-24'	2"	OK	22-20'	<input checked="" type="radio"/> N							<input type="radio"/> EPA 601 <input type="radio"/> TPH-G/BTEX <input type="radio"/> TPH Diesel <input type="radio"/> TOG 5520 Time/ Sample Not Sampled.
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol. Comments: <u>0.02' PRODUCT PREVENTS SAMPLING.</u> Purge Method: <input type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port Comments: <u>5 gallons bailed, PPRS emptied/returned.</u>												
MW-1	24-11'	2"	OK	23-76'	<input checked="" type="radio"/> N							<input type="radio"/> EPA 601 <input type="radio"/> TPH-G/BTEX <input type="radio"/> TPH Diesel <input type="radio"/> TOG 5520 Time/ Sample NOT SAMPLED
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol. Comments: <u>0.35' PRODUCT PREVENTS SAMPLING.</u> Purge Method: <input type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port Comments: <u>5 gallons bailed, PPRS emptied, returned.</u>												
RW-1	21-70	6"	NO	NONE	<input checked="" type="radio"/> Y <input checked="" type="radio"/> N		1540	69.5	6.82	717	1.1	<input type="radio"/> EPA 601 <input checked="" type="radio"/> TPH-G/BTEX <u>HE</u> <input type="radio"/> TPH Diesel <input type="radio"/> TOG 5520 Time/ Sample 1540/S-7
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge = PurgeVol. Comments: <u>Sample collected with barker.</u> Purge Method: <input type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input type="radio"/> Disp. Bailer(s) <input type="radio"/> Sys Port Comments: <u>System well.</u>												

S-8 trip blank 1600.

APPENDIX B
LABORATORY REPORT AND CHAIN OF CUSTODY RECORD



REPORT OF LABORATORY ANALYSIS

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

August 15, 1994
 PACE Project Number: 440805535

Attn: Mr. Bill Howell

Client Reference: BP Site #11132/10-024-04-001

PACE Sample Number: 70 0366950
 Date Collected: 08/01/94
 Date Received: 08/05/94
 Client Sample ID: S-1

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

<u>PURGEABLE FUELS AND AROMATICS</u>			
TOTAL FUEL HYDROCARBONS, (LIGHT):			
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	08/10/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	08/10/94
Toluene	ug/L	0.5	08/10/94
Ethylbenzene	ug/L	0.5	08/10/94
Xylenes, Total	ug/L	0.5	08/10/94

Mr. Bill Howell
 Page 2

August 15, 1994
 PACE Project Number: 440805535

Client Reference: BP Site #11132/10-024-04-001

PACE Sample Number: 70 0366968
 Date Collected: 08/01/94
 Date Received: 08/05/94
 Client Sample ID: S-2

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

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	08/10/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 08/10/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	ND 08/10/94
Toluene	ug/L	0.5	ND 08/10/94
Ethylbenzene	ug/L	0.5	ND 08/10/94
Xylenes, Total	ug/L	0.5	ND 08/10/94

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
 Page 3

August 15, 1994
 PACE Project Number: 440805535

Client Reference: BP Site #11132/10-024-04-001

PACE Sample Number: 70 0366976
 Date Collected: 08/01/94
 Date Received: 08/05/94
 Client Sample ID: S-3

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

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/10/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	170	08/10/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/10/94
Benzene	ug/L	0.5	44	08/10/94
Toluene	ug/L	0.5	1.6	08/10/94
Ethylbenzene	ug/L	0.5	0.9	08/10/94
Xylenes, Total	ug/L	0.5	2.7	08/10/94

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
 Page 4

August 15, 1994
 PACE Project Number: 440805535

Client Reference: BP Site #11132/10-024-04-001

PACE Sample Number: 70 0366984
 Date Collected: 08/01/94
 Date Received: 08/05/94
 Client Sample ID: S-4

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

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	0.7
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

Mr. Bill Howell
 Page 5

August 15, 1994
 PACE Project Number: 440805535

Client Reference: BP Site #11132/10-024-04-001

PACE Sample Number: 70 0366992
 Date Collected: 08/01/94
 Date Received: 08/05/94
 Client Sample ID: S-5

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

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	08/10/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	99
PURGEABLE AROMATICS (BTXE BY EPA 8020M):		-	08/10/94
Benzene	ug/L	0.5	6.2
Toluene	ug/L	0.5	1.1
Ethylbenzene	ug/L	0.5	4.5
Xylenes, Total	ug/L	0.5	5.2

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
 Page 6

August 15, 1994
 PACE Project Number: 440805535

Client Reference: BP Site #11132/10-024-04-001

PACE Sample Number: 70 0367000
 Date Collected: 08/01/94
 Date Received: 08/05/94
 Client Sample ID: S-6

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

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	08/10/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	120
PURGEABLE AROMATICS (BTXE BY EPA 8020M):		-	08/10/94
Benzene	ug/L	0.5	7.7
Toluene	ug/L	0.5	1.6
Ethylbenzene	ug/L	0.5	5.9
Xylenes, Total	ug/L	0.5	6.7

Mr. Bill Howell
 Page 7

August 15, 1994
 PACE Project Number: 440805535

Client Reference: BP Site #11132/10-024-04-001

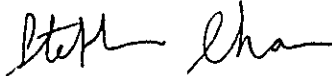
PACE Sample Number: 70 0367018
 Date Collected: 08/01/94
 Date Received: 08/05/94
 Client Sample ID: S-7

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

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):			08/10/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	250	29000
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			08/10/94
Benzene	ug/L	2.5	580
Toluene	ug/L	2.5	950
Ethylbenzene	ug/L	2.5	300
Xylenes, Total	ug/L	2.5	7800

These data have been reviewed and are approved for release.



for Darrell C. Cain
 Regional Director



REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
Page 8

FOOTNOTES
for pages 1 through 8

August 15, 1994
PACE Project Number: 440805535

Client Reference: BP Site #11132/10-024-04-001

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

Mr. Bill Howell
 Page 9

QUALITY CONTROL DATA

August 15, 1994
 PACE Project Number: 440805535

Client Reference: BP Site #11132/10-024-04-001

PURGEABLE FUELS AND AROMATICS

Batch: 70 32803
 Samples: 70 0366950, 70 0366968, 70 0366976

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M)			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>700367387</u>	<u>Spike</u>	<u>Spike Recv</u>	<u>Dupl Recv</u>	<u>RPD</u>
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	240	1000	75%	75%	0%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Reference Value</u>	<u>Recv</u>	<u>Dupl Recv</u>	<u>RPD</u>
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	98%	100%	2%

Mr. Bill Howell
Page 10

QUALITY CONTROL DATA

August 15, 1994
PACE Project Number: 440805535

Client Reference: BP Site #11132/10-024-04-001

PURGEABLE FUELS AND AROMATICS

Batch: 70 32804
Samples: 70 0366984, 70 0366992, 70 0367000, 70 0367018

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
TOTAL FUEL HYDROCARBONS, (LIGHT):			
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M)			
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>700367140</u>	<u>Spike</u>	<u>Spike Recv</u>	<u>Spike Dupl Recv</u>	<u>RPD</u>
Benzene	ug/L	0.5	2.6	100	107%	106%	1%
Toluene	ug/L	0.5	0.5	100	100%	100%	0%
Ethylbenzene	ug/L	0.5	ND	100	94%	91%	3%
Xylenes, Total	ug/L	0.5	0.9	300	96%	93%	3%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Reference Value</u>	<u>Recv</u>	<u>Dupl Recv</u>	<u>RPD</u>
Benzene	ug/L	0.5	100	100%	100%	0%
Toluene	ug/L	0.5	100	97%	97%	0%
Ethylbenzene	ug/L	0.5	100	95%	96%	1%
Xylenes, Total	ug/L	0.5	300	98%	99%	1%



REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
Page 11

FOOTNOTES
for pages 10 through 11

August 15, 1994
PACE Project Number: 440805535

Client Reference: BP Site #11132/10-024-04-001

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



440808.535

CHAIN OF CUSTODY

No.063450

Page 1 of 1

CONSULTANT'S NAME: **AUSTO ENGINEERING** ADDRESS: **1777 DAKLAND BLVD, STE 200 WALNUT CREEK CA 94596** CITY: **WALNUT CREEK** STATE: **CA** ZIP CODE: **94596**

BP SITE NUMBER: **BP11132** BP CORNER ADDRESS/CITY: **3201 35TH STREET DAKLAND** CONSULTANT PROJECT NUMBER: **10-024-04-001**

CONSULTANT PROJECT MANAGER: **BRIAN NAGLE** PHONE NUMBER: **510 295 1650** FAX NUMBER: CONSULTANT CONTRACT NUMBER:

BP CONTACT: **Scott Hooten** BP ADDRESS: PHONE NUMBER: FAX NO.:

LAB CONTACT: **Jim Oles** LABORATORY ADDRESS: PHONE NUMBER: FAX NO.:

SAMPLED BY (Please Print Name): **Dan Birch** SAMPLED BY (Signature): *[Signature]* SHIPMENT DATE: SHIPMENT METHOD: **Parcel Courier**

TAT: 24 Hours 48 Hours 1 Week Standard 2 Weeks

ANALYSIS REQUIRED: **TPH, BTEX**

AIRBILL NUMBER:

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	LAB SAMPLE #	HCL	TPH	B	T	X	X	X	X	X	X	X	COMMENTS
				NO.	TYPE (VOL.)														
S-1	1209	8/1/94	W	3			36695.0	X											marked BP#11137 in stb
S-2	1233						36696.8	X											
S-3	1300						36697.6	X											
S-4	1330						36698.4	X											
S-5	1445						36699.2	X											
S-6	1450						36700.0	X											
S-7	1540						36701.8	X											
S-9	1600			1			36703.4	X											
← Notify client this sample was lost in storage in the lab. therefore no results were available. <i>[Signature]</i> 8/15/94 04:30pm																			

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>[Signature]</i>	8/5/94	1000	<i>[Signature]</i>	8/5/94	1245	15/2
<i>[Signature]</i>	8/5	1710	<i>[Signature]</i>	8/5	1710	