



BP OIL

3878

BP Oil Company
Environmental Resources Management
Building 13, Suite N
295 SW 41st Street
Renton, Washington 98055-4931
(206) 251-0667
Fax No: (206) 251-0736

February 22, 1996

Ms. Susan Hugo
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway Room 250
Oakland CA 94621

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

Dear Ms. Hugo:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING REPORT DATED November 7, 1995**, for the above referenced facility.

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

Respectfully,

Scott T. Hooton
Environmental Resources Management
Group Leader

STH:sb msword\ERM11132

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

NOV 20 1995

GROUNDWATER MONITORING AND SAMPLING REPORT

BP OIL CO.
ENVIRONMENTAL DEPT.
WEST COAST REGION OFFICE

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

Project No. 10-024-08-001

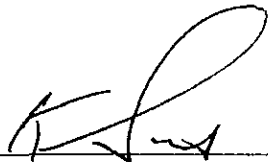
Prepared for:

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

Prepared by:

Alisto Engineering Group
1575 Treat Boulevard, Suite 201
Walnut Creek, California

November 7, 1995



Ken Simas
Project Manager



Al Sevilla, P.E.
Principal



GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-024-08-001

November 7, 1995

INTRODUCTION

This report presents the results and findings of the August 22, 1995 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 on 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, electrical conductivity, and dissolved oxygen. Groundwater samples were collected for laboratory analysis by lowering a bottom-fill, disposable bailer to just below the water level in the well. The samples were transferred from the bailer into laboratory-supplied containers. The water sampling field survey forms are presented in Appendix A.

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 on Figure 2. The results of groundwater analysis are shown on 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-1, 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 STREET, 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 (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	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-1	12/23/94	169.75	18.19	0.29	151.78	--	--	--	--	--	--	--
MW-1	01/26/95	169.75	16.25	1.10	154.33	--	--	--	--	--	--	--
MW-1	06/08/95	169.75	22.92	1.20	147.73	--	--	--	--	--	--	--
MW-1	08/22/95	169.75	24.45	0.85	145.94	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--
MW-2	12/23/94	168.14	16.25	0.03	151.91	--	--	--	--	--	--	--
MW-2	01/26/95	168.14	14.55	0.39	153.88	--	--	--	--	--	--	--
MW-2	06/08/95	168.14	21.18	0.43	147.28	--	--	--	--	--	--	--
MW-2	08/22/95	168.14	22.76	0.36	145.65	--	--	--	--	--	--	--

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH STREET, 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 (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	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-3	12/23/94	167.17	14.70	—	152.47	ND<50	ND<0.5	0.78	ND<0.5	ND<0.5	1.7	PACE
QC-1 (c)	12/23/94	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
MW-3	01/26/95	167.17	12.89	—	154.28	190	16	0.5	35	24	6.6	ATI
MW-3	06/08/95	167.17	19.95	—	147.22	330	21	4.0	34	32	7.0	ATI
MW-3	08/22/95	167.17	21.41	—	145.76	150	14	ND<0.50	ND<0.50	1.6	6.6	ATI
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
MW-4	12/23/94 (d)	170.36	17.03	—	153.33	—	—	—	—	—	—	—
MW-4	01/26/95	170.36	17.42	—	152.94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	7.5	ATI
MW-4	06/08/95 (d)	170.36	21.55	—	148.81	—	—	—	—	—	—	—
MW-4	08/22/95	170.36	23.47	—	146.69	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	6.4	ATI

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH STREET, 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 (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	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-5	12/23/94	165.14	11.63	--	153.51	630	180	1.9	0.66	1.9	1.4	PACE
MW-5	01/26/95	165.14	11.25	--	153.89	160	68	ND<0.5	ND<0.5	22	5.9	ATI
MW-5	06/08/95	165.14	16.80	--	148.34	2000	630	58	61	180	6.5	ATI
QC-1 (c)	06/08/95	--	--	--	--	1700	560	51	55	170	--	ATI
MW-5	08/22/95	165.14	19.02	--	146.12	3700	1100	18	27	59	7.3	ATI
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 (e)	03/07/91	165.40	--	--	--	--	--	--	--	--	--	--
MW-6 (e)	06/27/91	165.40	--	--	--	--	--	--	--	--	--	--
MW-6 (e)	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	16.10	--	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
MW-6 (d)	12/23/94	165.40	12.94	--	152.46	--	--	--	--	--	--	--
MW-6	01/26/95	165.40	10.46	--	154.94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	7.3	ATI
MW-6 (d)	06/08/95	165.40	16.84	--	148.56	--	--	--	--	--	--	--
MW-6	08/22/95	165.40	19.48	--	145.92	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	6.7	ATI

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH STREET, 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 (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	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-7 (d)	12/23/94	167.61	15.00	--	152.61	--	--	--	--	--	--	--
MW-7	01/26/95	167.61	14.69	--	152.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	7.0	ATI
MW-7 (d)	06/08/95	167.61	19.87	--	147.74	--	--	--	--	--	--	--
MW-7	08/22/95	167.61	21.49	--	146.12	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	6.4	ATI
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	146.48	26000	1700	4100	960	4000	1.1	PACE
MW-8	08/01/94	165.74	--	--	--	--	--	--	--	--	--	--
MW-8	12/23/94	165.74	13.81	0.03	151.95	--	--	--	--	--	--	--
MW-8 (d)	01/26/95	165.74	--	--	--	--	--	--	--	--	--	--
MW-8	06/08/95	165.74	17.82	0.29	148.14	--	--	--	--	--	--	--
MW-8	08/22/95	165.74	19.41	0.20	146.48	--	--	--	--	--	--	--

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH STREET, 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 (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	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	--	ANA
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-9	12/23/94	166.20	14.22	0.02	152.00	--	--	--	--	--	--	--
MW-9	01/26/95	166.20	11.85	0.13	154.45	--	--	--	--	--	--	--
MW-9	06/08/95	166.20	18.33	0.80	148.47	--	--	--	--	--	--	--
MW-9	08/22/95	166.20	19.95	0.01	146.26	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--
MW-10	12/23/94	167.01	16.08	0.25	151.12	--	--	--	--	--	--	--
MW-10	01/26/95	167.01	13.68	0.80	153.93	--	--	--	--	--	--	--
MW-10	06/08/95	167.01	19.08	0.75	148.49	--	--	--	--	--	--	--
MW-10	08/22/95	167.01	20.73	0.70	146.81	--	--	--	--	--	--	--

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH STREET, 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 (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	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
RW-1	12/23/94	168.01	16.02	—	151.99	1300	25	8.6	1.4	69	1.8	PACE
RW-1	01/26/95	168.01	13.78	—	154.23	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	—	ATI
QC-1 (c)	01/26/95	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	—	ATI
RW-1	06/08/95	168.01	20.05	—	147.96	1300	130	ND<1.0	ND<1.0	36	—	ATI
RW-1	08/22/95	168.01	21.74	—	146.27	3300	230	13	4.9	280	6.6	ATI
QC-1 (c)	08/22/95	—	—	—	—	2800	210	9.3	4.3	250	—	ATI
QC-2 (f)	10/05/92	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ANA
QC-2 (f)	01/13/93	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
QC-2 (f)	04/23/93	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
QC-2 (f)	07/12/93	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
QC-2 (f)	10/21/93	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
QC-2 (f)	01/21/94	—	—	—	—	ND<50	ND<0.5	2.1	ND<0.5	2.1	—	PACE
QC-2 (f)	04/20/94	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
QC-2 (f)	04/20/94	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	PACE
QC-2 (f)	12/23/94	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	ATI
QC-2 (f)	01/26/95	—	—	—	—	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	—	ATI
QC-2 (f)	06/08/95	—	—	—	—	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	ATI
QC-2 (f)	08/22/95	—	—	—	—	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	ATI

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
—	Not analyzed/available/applicable/measurable
ND	Not detected above reported detection limit
PACE	Pace, Inc.
ANA	Anametrix, Inc.
ATI	Analytical Technologies, 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) Monitoring well sampled semi-annually.
- (e) Inaccessible due to car parked over well.
- (f) Travel blank.

E:\010-024024-8-1.WQ2

TABLE 2 - PRODUCT REMOVAL STATUS
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH STREET, OAKLAND, CALIFORNIA

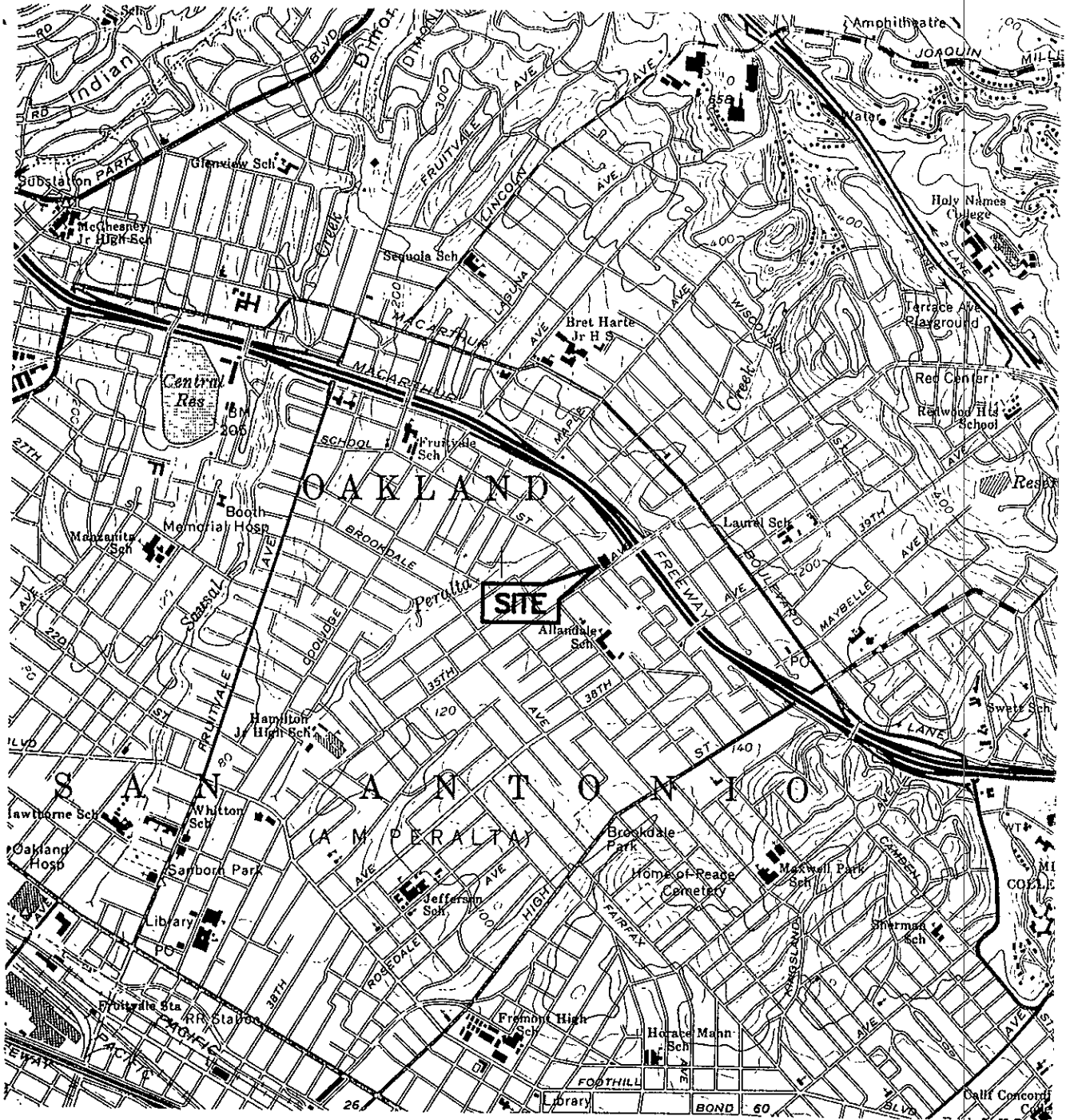
ALISTO PROJECT NO. 10-024

WELL ID	DATE	PRODUCT REMOVED (Gallons)	PRODUCT REMOVED CUMULATIVE (Gallons)
MW-1	01/26/95	3.00	3.00
	06/08/95	0.60	3.60
	06/28/95	0.10	3.70
	08/22/95	0.15	3.85
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	0.30	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
	10/26/94	0.76	1.83
	11/12/94	0.08	1.91
	12/12/94	0.03	1.94
	01/26/95	0.19	2.13
06/08/95	Sheen	2.13	
06/28/95	0.05	2.18	
08/22/95	0.10	2.28	
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
	10/26/94	0.10	0.90
	11/12/94	0.02	0.92
	12/12/94	0.01	0.93
06/08/95	Sheen	0.93	
08/22/95	0.05	0.98	

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-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
	10/26/94	0.15	0.67
	11/12/94	<0.01	0.67
	12/12/94	<0.01	0.67
	01/26/95	0.10	0.77
	06/28/95	<0.01	0.77
	08/22/95	<0.01	0.77
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
	10/26/94	0.60	8.54
	11/12/94	0.43	8.97
	12/12/94	0.26	9.23
	01/26/95	0.13	9.36
06/28/95	0.10	9.46	
08/22/95	0.15	9.61	



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

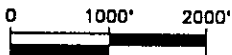
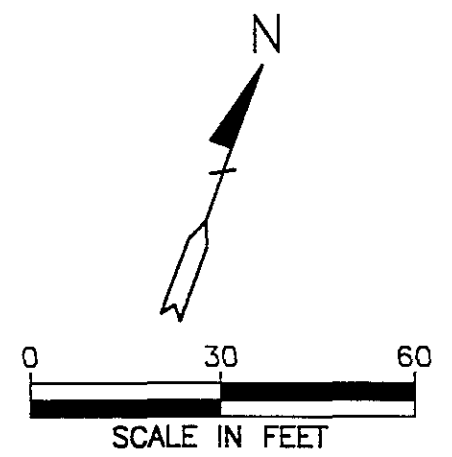
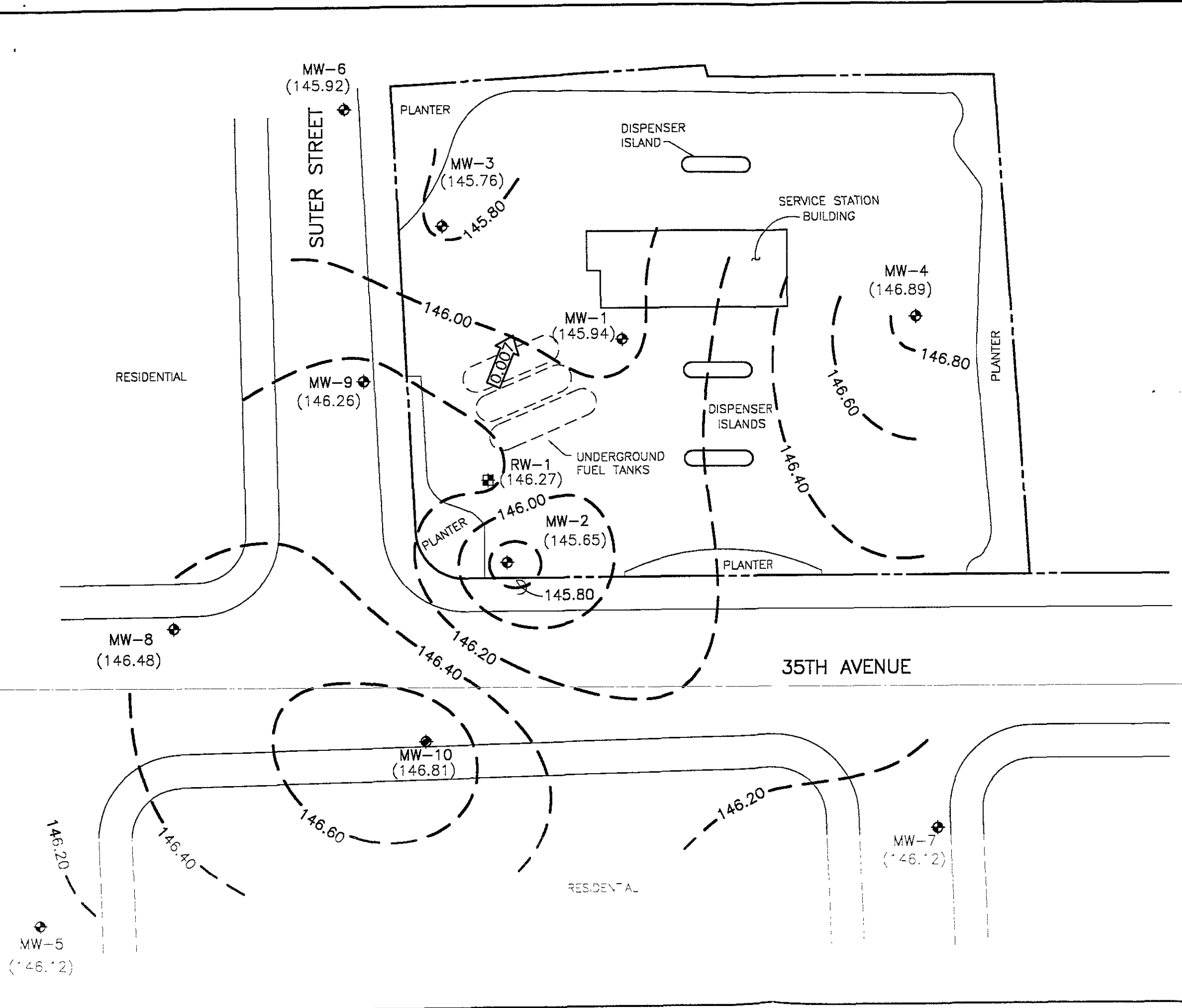


FIGURE 1
SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11132
3201 35TH STREET
OAKLAND, CALIFORNIA
PROJECT NO. 10-024

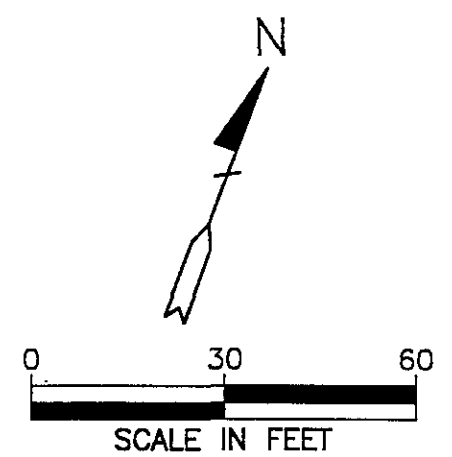
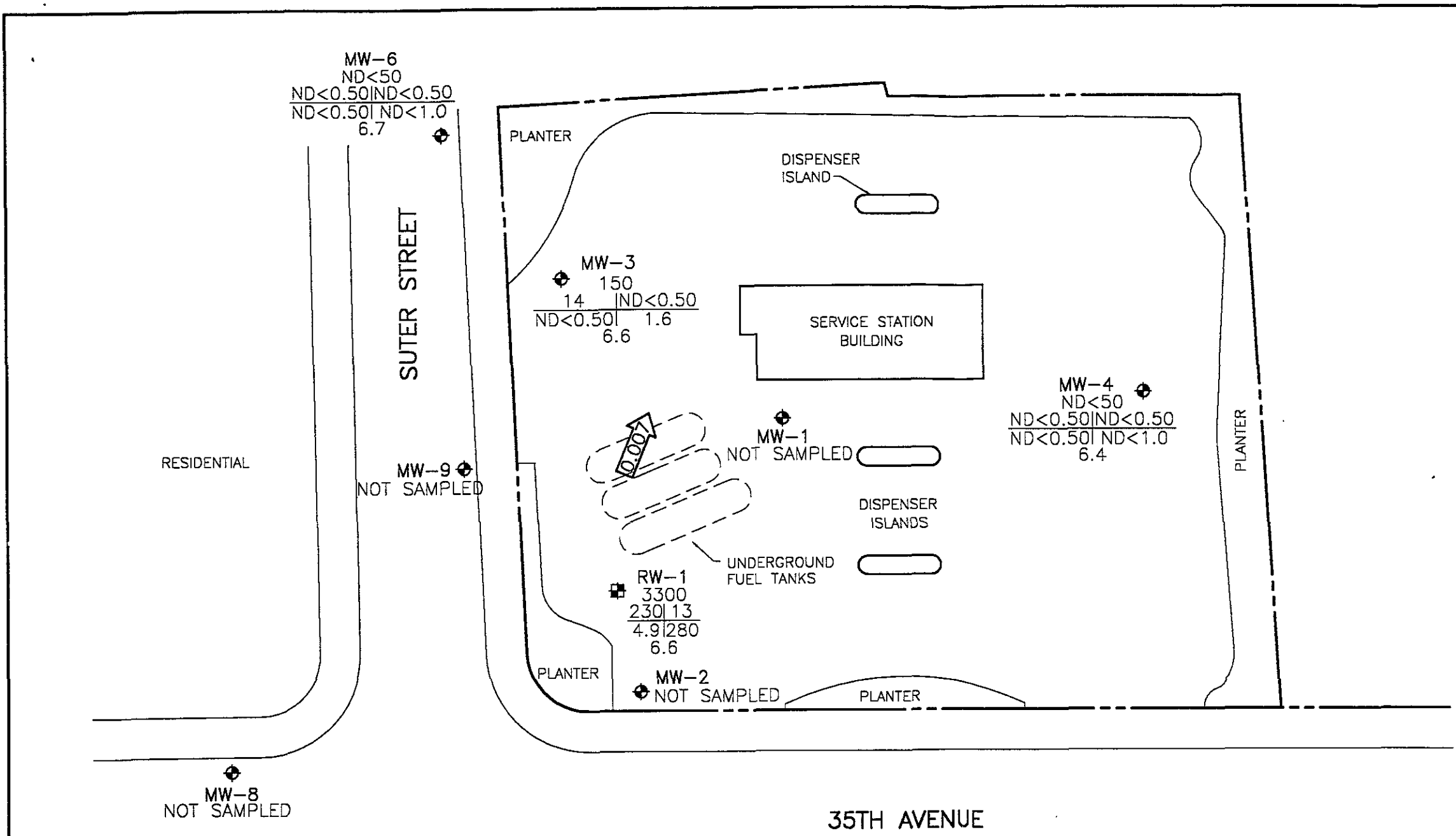


ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA



- LEGEND**
- ◆ GROUNDWATER MONITORING WELL
 - ⊠ GROUNDWATER RECOVERY WELL
 - (145.76) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 - 145.80 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL = 0.20 FOOT)
 - ← 0.007 → CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP
 AUGUST 22, 1995
 BP OIL SERVICE STATION NO. 11132
 3201 35TH STREET
 OAKLAND, CALIFORNIA
 PROJECT NO. 10-024



LEGEND

◆	GROUNDWATER MONITORING WELL
⊕	GROUNDWATER RECOVERY WELL
TPH-G B T E X DO	CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER, EXCEPT DISSOLVED OXYGEN, WHICH IS IN PARTS PER MILLION
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
DO	DISSOLVED OXYGEN
ND	NOT DETECTED ABOVE REPORTED DETECTION LIMIT
←0.007	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

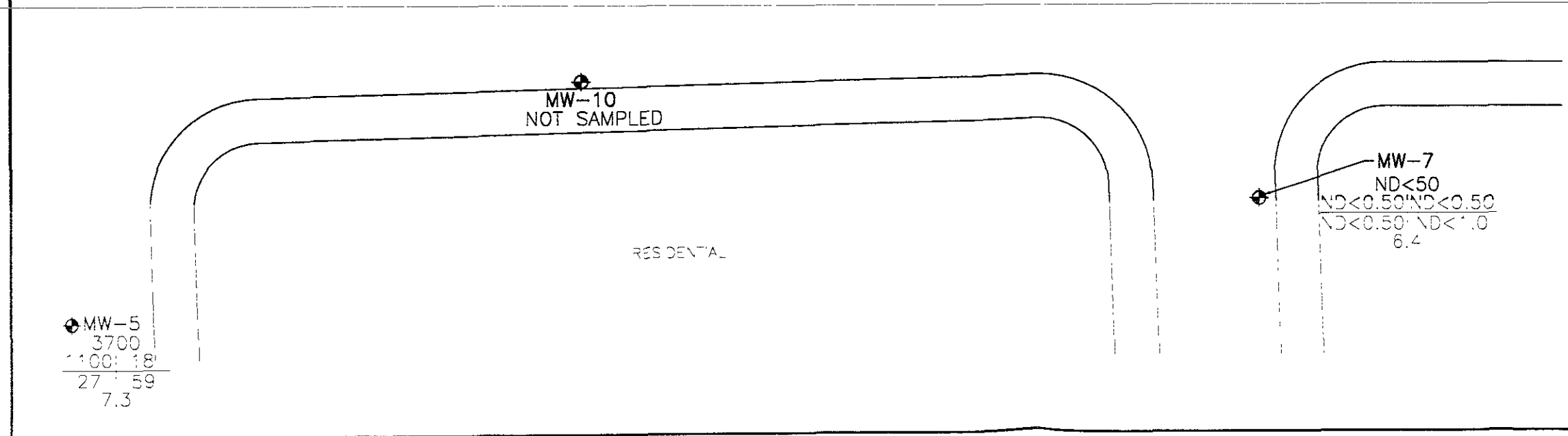


FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
AUGUST 22, 1995
BP OIL SERVICE STATION NO. 11132
3201 35TH STREET
OAKLAND, CALIFORNIA
PROJECT NO. 10-024

APPENDIX A
WATER SAMPLING FIELD SURVEY FORMS

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING
GROUP
1575 TREAT BOULEVARD, SUITE 201

Project No. 10-024-08-001 Date: 8/22/95
Address 3201 35TH Street Day: M W T H F
Contract No. Pending City: Oakland
Station No. BP 11132 Sampler: LUG

WELL ID	SAMPLE ID	DEPTH TO WATER	TOTAL DEPTH	PRODUCT THICKNESS	TIME	COMMENTS:
MW-1	N/S	24.45	NM	.85	1140	Product DTP=23.60' PT=.85'
MW-2	N/S	22.76	NM	.36	1151	Product DTP=22.40' PT=.36'
MW-3	S-4	21.41		Ø	1120	
MW-4	S-3	23.47			1116	
MW-5	S-5	19.02	30.89		1124	
MW-6	S-1	19.48			1110	
MW-7	S-2	21.41			1113	
MW-8	N/S	19.41	NM	.20	1200	Product DTP=19.21' PT=.20'
MW-9		19.95		.01	1205	DTP=19.94' PT=.01'
MW-10		20.73		.70	1210	DTP=20.03' PT=.70'
RW-1	S-6	21.74	38.41	Ø	1130	

FIELD INSTRUMENT CALIBRATION DATA

PH METER ICM 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED N TIME 12:20
D.O. METER ICM ZERO d.o. SOLUTION 0 BAROMETRIC PRESSURE 760 TEMP 70 WEATHER clear
CONDUCTIVITY METER ICM 10,000 10,000 TURBIDITY METER _____ 5.0 NTU OTHER _____

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Irridensence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-6	19.48	2"	*	Ø	Y (N)	3	1310	65.5	7.65	478 µs	7.1	<input type="radio"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.						5		64.1	7.42	479 µs		<input checked="" type="radio"/> TPH-G/BTEX <u>HU</u>
$34.56 - 19.48 = 15.08 \times .16 = 2.41 \times 3 = 7.23$						7.5	1318	63.4	7.36	481 µs	6.7	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input checked="" type="radio"/> Disp. Bailer(s) <input type="radio"/> OSys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1325
MW-7	23.50	2"	*	Ø	Y (N)	2	1400	65.0	7.63	587 µs	6.9	<input type="radio"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.						4		64.1	7.41	591 µs		<input checked="" type="radio"/> TPH-G/BTEX <u>HU</u>
$34.49 - 21.49 = 13.00 \times .16 = 2.08 \times 3 = 6.24$						6.5	1409	63.6	7.39	610 µs	6.4	<input type="radio"/> TPH Diesel
Purge Method: <input type="radio"/> Surface Pump <input type="radio"/> Disp. Tube <input type="radio"/> Winch <input checked="" type="radio"/> Disp. Bailer(s) <input type="radio"/> OSys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1412

* all wells need new locks PAGE 1 OF 2

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING

GROUP

1575 TREAT BOULEVARD, SUITE 201

WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Project No.

10-024-08-001

Date:

8/22/95

Address

3201 35TH Street

Day:

MTWTF

Contract No.

Pending

City:

Oakland

Station No.

BP 11132

Sampler:

CB

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Irridensence	Gal.	Time	Temp *F	pH	E.C.	D.O.			
MW-4	23.47	2"	X	Ø	Y (N)	3	1426	66.2	7.95	575µs	6.1	<input type="radio"/> EPA 601		
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge	PurgeVol.					<input checked="" type="radio"/> TPH-G/BTEX HLL	
38.74 - 23.47 = 15.27						X.16 = 2.44	X3 = 7.32	7.5	1439	65.1	7.74	587µs	6.4	<input type="radio"/> TPH Diesel
Purge Method: OSurface Pump						ODisp.Tube	OWinch	XDisp. Bailer(s)	O Sys Port				<input type="radio"/> TOG 5520	
Comments:												TIME/SAMPLE ID		
												1444		
MW-3	21.41	2"	X	Ø	Y (N)	2	1501	63.1	7.11	703µs	6.6	<input type="radio"/> EPA 601		
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge	PurgeVol.					<input checked="" type="radio"/> TPH-G/BTEX HLL	
34.58 - 21.41 = 13.17						X.16 = 2.11	X3 = 6.33	6.5	1510	62.9	7.04	7.12µs	6.6	<input type="radio"/> TPH Diesel
Purge Method: OSurface Pump						ODisp.Tube	OWinch	XDisp. Bailer(s)	O Sys Port				<input type="radio"/> TOG 5520	
Comments:												TIME/SAMPLE ID		
												1513		
MW-5	19.02	2"	X	Ø	Y (N)	2	1524	64.4	7.03	7.03µs	7.1	<input type="radio"/> EPA 601		
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge	PurgeVol.					<input checked="" type="radio"/> TPH-G/BTEX HLL	
30.88 - 19.02 = 11.86						X.16 = 1.90	X3 = 5.70	6	1540	62.6	7.03	1142µs	6.97	<input type="radio"/> TPH Diesel
Purge Method: OSurface Pump						ODisp.Tube	OWinch	XDisp. Bailer(s)	O Sys Port				<input type="radio"/> TOG 5520	
Comments:												TIME/SAMPLE ID		
												1547		
MW-6	21.74	4"	X	Ø	Y (N)	11	1610	72.0	7.36	7.36µs	6.4	<input type="radio"/> EPA 601		
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge	PurgeVol.					<input checked="" type="radio"/> TPH-G/BTEX HLL	
38.41 - 21.74 = 16.67						X.15 = 10.84	X3 = 32.52	22	1622	71.1	7.22	8.14µs	6.6	<input type="radio"/> TPH Diesel
Purge Method: OSurface Pump						ODisp.Tube	OWinch	XDisp. Bailer(s)	O Sys Port				<input type="radio"/> TOG 5520	
Comments: GC-1 Dug taken from this well												TIME/SAMPLE ID		
												1632		
MW-7			X		Y N							<input type="radio"/> EPA 601		
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge	PurgeVol.					<input checked="" type="radio"/> TPH-G/BTEX	
Purge Method: OSurface Pump						ODisp.Tube	OWinch	ODisp. Bailer(s)	O Sys Port				<input type="radio"/> TPH Diesel	
Comments:												TIME/SAMPLE ID		

* all wells Need New locks
next quarter

APPENDIX B
LABORATORY REPORT AND CHAIN OF CUSTODY RECORD



RECEIVED
SEP 11 1995
LABORATORY

ATI I.D.: 508239

September 06, 1995

ALISTO ENGINEERING
1575 TREAT BOULEVARD, SUITE 201
WALNUT CREEK, CA 94598

Project Name: BP SITE#11132/OAKLAND, CA
Project # : G602109/10-024-08-001

Attention: **BILL HOWELL**

Analytical Technologies, Inc. has received the following sample(s):

<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
August 25, 1995	8	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. If any flags appear next to the analytical data in this report, please see the attached list of flag definitions.

The results of these analyses and the quality control data are enclosed. Please note that the Sample Condition Upon Receipt Checklist is included at the end of this report.

GARY STEWART
VOLATILES SUPERVISOR

ALAN J. KLEINSCHMIDT
LABORATORY MANAGER



Client : ALISTO ENGINEERING
Project # : G602109/10-024-08-001
Project Name: BP SITE#11132/OAKLAND, CA

Report Date: September 06, 199
ATI I.D. : 508239

Table with 4 columns: ATI #, Client Description, Matrix, Date Collected. Contains 8 rows of sample data.

---TOTALS---

Summary table with 2 columns: Matrix, # Samples. Shows WATER with 8 samples.

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Client : ALISTO ENGINEERING
Project # : G602109/10-024-08-001
Project Name: BP SITE#11132/OAKLAND, CA

ATI I.D.: 508239

Analysis	Technique/Description
MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTEX)	GC/FLAME ION./PHOTO IONIZATION DETECTOR



Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTEX)
 Client : ALISTO ENGINEERING ATI I.D. : 508239
 Project # : G602109/10-024-08-001
 Project Name: BP SITE#11132/OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1	WATER	22-AUG-95	N/A	30-AUG-95	1.00
2	S-2	WATER	22-AUG-95	N/A	30-AUG-95	1.00
3	S-3	WATER	22-AUG-95	N/A	30-AUG-95	1.00

Parameter	Units	1	2	3
METHYL T-BUTYL ETHER	UG/L	<5.0	<5.0	<5.0
BENZENE	UG/L	<0.50	<0.50	<0.50
TOLUENE	UG/L	<0.50	<0.50	<0.50
ETHYLBENZENE	UG/L	<0.50	<0.50	<0.50
XYLENES (TOTAL)	UG/L	<1.0	<1.0	<1.0
FUEL HYDROCARBONS	UG/L	<50	<50	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE

SURROGATES

TRIFLUOROTOLUENE	%	94	95	97
------------------	---	----	----	----



Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
 Client : ALISTO ENGINEERING
 Project # : G602109/10-024-08-001
 Project Name: BP SITE#11132/OAKLAND, CA

ATI I.D. : 508239

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	S-4	WATER	22-AUG-95	N/A	30-AUG-95	1.00
5	S-5	WATER	22-AUG-95	N/A	31-AUG-95	25.00
6	S-6	WATER	22-AUG-95	N/A	31-AUG-95	5.00

Parameter	Units	4	5	6
METHYL T-BUTYL ETHER	UG/L	<5.0	<130	<25
BENZENE	UG/L	14	1100	230
TOLUENE	UG/L	<0.50	18	13
ETHYLBENZENE	UG/L	<0.50	27	4.9
XYLENES (TOTAL)	UG/L	1.6	59	280
FUEL HYDROCARBONS	UG/L	150	3700	3300
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
SURROGATES				
TRIFLUOROTOLUENE	%	102	101	119



Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTEX)
 Client : ALISTO ENGINEERING
 Project # : G602109/10-024-08-001
 Project Name: BP SITE#11132/OAKLAND, CA

ATI I.D. : 508239

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
7	S-7	WATER	22-AUG-95	N/A	31-AUG-95	5.00
8	S-8	WATER	22-AUG-95	N/A	30-AUG-95	1.00

Parameter	Units	7	8
METHYL T-BUTYL ETHER	UG/L	<25	<5.0
BENZENE	UG/L	210	<0.50
TOLUENE	UG/L	9.3	<0.50
ETHYLBENZENE	UG/L	4.3	<0.50
XYLENES (TOTAL)	UG/L	250	<1.0
FUEL HYDROCARBONS	UG/L	2800	<50
HYDROCARBON RANGE		C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE
SURROGATES			
TRIFLUOROTOLUENE	%	111	94



REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
 Blank I.D. : 36556
 Client : ALISTO ENGINEERING
 Project # : G602109/10-024-08-001
 Project Name: BP SITE#11132/OAKLAND, CA

ATI I.D. : 508239
 Date Extracted: N/A
 Date Analyzed : 30-AUG-95
 Dil. Factor : 1.00

Parameters	Units	Results
METHYL T-BUTYL ETHER	UG/L	<5.0
BENZENE	UG/L	<0.50
TOLUENE	UG/L	<0.50
ETHYLBENZENE	UG/L	<0.50
XYLENES (TOTAL)	UG/L	<1.0
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
<u>SURROGATES</u>		
TRIFLUOROTOLUENE	%	94



MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
 MSMSD # : 78196
 Client : ALISTO ENGINEERING

ATI I.D. : 508239
 Date Extracted: N/A
 Date Analyzed : 30-AUG-95
 Sample Matrix : WATER
 REF I.D. : 508232-02

Project # : G602109/10-024-08-001
 Project Name: BP SITE#11132/OAKLAND, CA

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	4.8	96	4.8	96	0
TOLUENE	UG/L	<0.50	5.0	4.8	96	4.8	96	0

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result



BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank Spike #: 58553
Client : ALISTO ENGINEERING
Project # : G602109/10-024-08-001
Project Name : BP SITE#11132/OAKLAND, CA

ATI I.D. : 508239
Date Extracted: N/A
Date Analyzed : 30-AUG-95
Sample Matrix : WATER

Page

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	5.0	5.0	100
TOLUENE	UG/L	<0.50	5.2	5.0	104

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

ATI-SanDiego
SAMPLE CONDITION UPON RECEIPT CHECKLIST
(FOR RE-ACCESSIONS, COMPLETE #7 THRU #9)

1	Does this project require special handling according to NFESC Levels C, D, AFCEE or CLP protocols? If yes, complete a) and b) a) pH sample aliquoted: yes / no / na b) Either 1) Record Bottle Lot #'s: Or 2) Attach Sample Kit Request Form(s)	YES	<input type="radio"/> NO
2	Number of Coolers Received If more than one cooler received attach Multiple Cooler Documentation Form (MCD) Indicate "see MCD" on Item 11 below		<u>1</u> <u>#2062</u>
3	Are custody seals required for this project ?	YES	<input type="radio"/> N/A
	a) are Custody Seals present on Cooler(s) ?	YES	<input type="radio"/> NO
	If yes, are seals intact ?	YES	NO
	b) are Custody Seals present on the sample ?	YES	<input type="radio"/> NO
	If yes, are seals intact ?	YES	NO
4	Is there a Chain-Of-Custody (COC) per cooler ? if not, if a problem is found indicate which samples/test were in the affected cooler on the MCD.	<input type="radio"/> YES	NO
5	Is the COC complete per cooler ? Relinquished: <input type="radio"/> yes / <input type="radio"/> no Requested analysis: <input type="radio"/> yes / <input type="radio"/> no	<input type="radio"/> YES	NO
6	Is the COC in agreement with the samples received? # Samples: <input type="radio"/> yes / <input type="radio"/> no Sample ID's: <input type="radio"/> yes / <input type="radio"/> no Date sampled: <input type="radio"/> yes / <input type="radio"/> no Matrix: <input type="radio"/> yes / <input type="radio"/> no # containers: <input type="radio"/> yes / <input type="radio"/> no	<input type="radio"/> YES	NO
7	Are the samples preserved correctly?	<input type="radio"/> YES	NO
8	Is there enough sample for all the requested analyses?	<input type="radio"/> YES	NO
9	Are all samples within holding times for the requested analyses?	<input type="radio"/> YES	NO
10	Record cooler temperature. Contact PM if temperature is not 4°C ± 2°C.		<u>2.0 °C</u>
	Is ice present in cooler?	<input type="radio"/> YES	NO
11	Were all sample containers received intact (ie. not broken, leaking, etc.)?	<input type="radio"/> YES	NO
12	Are samples requiring no headspace, headspace free? N/A	<input type="radio"/> YES	NO
13	Are VOA 1st stickers required?	YES	<input type="radio"/> NO
14	Are there special comments on the Chain of Custody which require client contact?	YES	<input type="radio"/> N/A
15	If yes, was ATI Project Manager notified?	YES	<input type="radio"/> NO

Describe "no" items: *6) Date taken from COC in 8/25/95 #6) Date
Sampled taken from COC.

Was client contacted? yes / no
 If yes, Date: _____ Name of Person contacted:
 Describe actions taken or client instructions: _____

*Or other representative documents, letters, and/or shipping memos



CHAIN OF CUSTODY

No. 075862

Page _____ of _____

CONSULTANT'S NAME Alisto Engineering		ADDRESS 1575 Trent Blvd #201		CITY Walnut Creek	STATE Ca	ZIP CODE 94596
BP SITE NUMBER 11132	BP CORNER ADDRESS/CITY Orville, Ca			CONSULTANT PROJECT NUMBER 10-024-081001		
CONSULTANT PROJECT MANAGER Bill Howell		PHONE NUMBER (510) 295-1650	FAX NUMBER 215-1823		CONSULTANT CONTRACT NUMBER Parting 06.02.109	
BP CONTACT Scott Horton	BP ADDRESS Kenton, Wa		PHONE NUMBER (206) 251-0689	FAX NO		
LAB CONTACT ATT	LABORATORY ADDRESS San Diego, Ca		PHONE NUMBER (619) 458-9141	FAX NO (619) 450-9181		
SAMPLED BY (Please Print Name) Larry Buenavista		SAMPLED BY (Signature) <i>[Signature]</i>		SHIPMENT DATE		SHIPMENT METHOD Fed Express

TAT: 24 Hours 48 Hours 1 Week Standard 2 Weeks

ANALYSIS REQUIRED

AIRBILL NUMBER
668 023 5763

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	T.P.H.-G P.P.P.E												COMMENTS
	COLLECTION TIME		NO.	TYPE (VOL.)	LAB SAMPLE #													
S-1	8/22/95	W	2	100	01	X												1325
S-2	↓	↓	↓	↓	02	↓												1412
S-3	↓	↓	↓	↓	03	↓												1444
S-4	↓	↓	↓	↓	04	↓												1513
S-5	↓	↓	↓	↓	05	↓												1547
S-6	↓	↓	↓	↓	06	↓												1635
S-7	↓	↓	↓	↓	07	↓												1637
S-8	↓	↓	↓	↓	08	↓												1321

RELINQUISHED BY / AFFILIATION <i>[Signature]</i>	DATE 8/23/95	TIME	ACCEPTED BY / AFFILIATION <i>[Signature]</i>	DATE 8-25-95	TIME 9:00 AM	ADDITIONAL COMMENTS Temp. 2.0° LAB I.D. 508239
---	------------------------	------	---	------------------------	------------------------	--

ALISTO

FIELD SERVICES PASSIVE PRODUCT RECOVERY LOG

ENGINEERING

GROUP

1575 TREAT BOULEVARD, SUITE 201

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

Project No. 10-024-08/601

Date: 8/22/95

Address Oakland, Ca

Day: Tues

Contract No.

City:

Station No. 11132 Technician: LB

Equipment Used

Water Level Indicator
 Disposable Bailers
 Locking Caps 2" 4"

Mileage
 Time
 Gloves

Well ID	Diameter	DTW	Depth to Product	Product Thickness	Product Removed
MW-1	2"	24.45	23.60	.85	.15 gal

Comments:

Purged 3 gal T.F.

Well ID	Diameter	DTW	Depth to Product	Product Thickness	Product Removed
MW-2	2"	22.76	22.40	.36	.10 gal

Comments:

Purged 2 gal T.F.

Well ID	Diameter	DTW	Depth to Product	Product Thickness	Product Removed
MW-8	2"	19.41	19.20	.20	.05 gal

Comments:

Purged 2 gal T.F.

Well ID	Diameter	DTW	Depth to Product	Product Thickness	Product Removed
MW-9	2"	19.95	19.94	.01	< 10g

Comments:

Purged 2 gal T.F.

Repairs Needed:

* All wells had dedicated PPRS & were serviced on 8/22/95

ALISTO

FIELD SERVICES PASSIVE PRODUCT RECOVERY LOG

ENGINEERING
GROUP

1575 TREAT BOULEVARD, SUITE 201
WALNUT CREEK CA 94596 (510) 295-1650 FAX 295-1823

Project No. 10-024-08/001 Date: 8/22/95
Address Oakland, CA Day: Thurs
Contract No. _____ City: _____
Station No. _____ Technician: _____

Equipment Used

_____ Water Level Indicator _____ Mileage
_____ Disposable Bailers _____ Time
_____ Locking Caps 2" 4" _____ Gloves

Well ID	Diameter	DTW	Depth to Product	Product Thickness	Product Removed
MW-10	7"	20.73	20.03	.70	.15

Comments:

Pugged 2 gal TF

Well ID	Diameter	DTW	Depth to Product	Product Thickness	Product Removed

Comments:

Well ID	Diameter	DTW	Depth to Product	Product Thickness	Product Removed

Comments:

Well ID	Diameter	DTW	Depth to Product	Product Thickness	Product Removed

Comments:

Repairs Needed: