



BP OIL

BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(425) 251-0667
Fax No: (425) 251-0736

April 10, 1998

Alameda County Health Care Services Agency
Attention Ms. Susan Hugo
1131 Harbor Bay Parkway, Ste. 250
Alameda, CA 94502-6577

RE: BP Oil Site No. 11132
3201 35th Street (at I-580)
Oakland, CA

Dear Ms. Hugo:

Enclosed please find a report titled Groundwater Monitoring and Sampling Report, dated 13 March 1998.

The report shows that aromatic petroleum constituents were detected in groundwater samples collected from six of the eight wells sampled this quarter. The highest benzene concentration (2,200 ug/l) was reported in a sample obtained from well MW-1, located east of the underground storage tanks.

Plans for the coming quarter include product removal and groundwater monitoring.

Please give me a call if you have any questions, comments or concerns regarding this matter. I can be reached at (425) 251-0689.

Sincerely,

Scott Hooton
Environmental Remediation Management

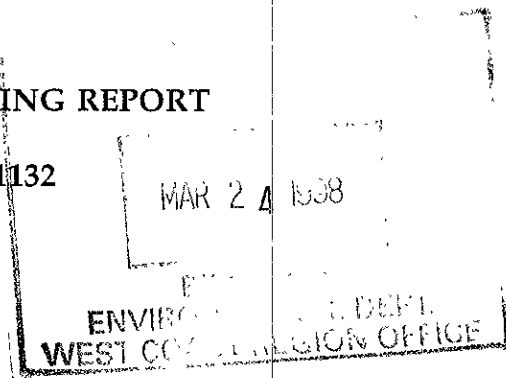
attachment

cc: B. Nagle - Alisto
Ade Fagorala- CRWQCB-SFBR
T. Berry - Tosco

GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-024-10-003



Prepared for:

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

Prepared by:

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

March 13, 1998

Handwritten signature of Brady Nagle in cursive script.

**Brady Nagle
Project Manager**

Handwritten signature of Al Sevilla in cursive script.

**Al Sevilla, P.E.
Principal**



GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-024-10-003

March 13, 1998

INTRODUCTION

This report presents the results and findings of the February 3 and 4, 1998 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)	MTBE (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-1	10/27/95	169.75	25.41	0.69	144.86	—	—	—	—	—	—	—	—
MW-1	01/25/96	169.75	18.20	1.40	152.60	—	—	—	—	—	—	—	—
MW-1	04/19/96	169.75	19.06	1.22	151.61	—	—	—	—	—	—	—	—
MW-1	07/23/96	169.75	22.98	0.89	147.44	—	—	—	—	—	—	—	—
MW-1	11/11/96	169.75	23.99	0.98	146.50	—	—	—	—	—	—	—	—
MW-1	01/21/97	169.75	16.80	0.90	153.63	—	—	—	—	—	—	—	—
MW-1	04/29/97	169.75	21.90	0.85	148.49	—	—	—	—	—	—	—	—
MW-1	04/30/97	169.75	—	—	—	100000	3600	8000	4000	21300	7700	5.2	SPL
QC-1 (c)	04/30/97	—	—	—	—	92000	3500	8100	4400	23800	6900	—	SPL
MW-1	08/21/97	169.75	23.40	0.87	147.00	140000	3000	8500	3900	22100	5700	5.3	SPL
QC-1 (c)	08/21/97	—	—	—	—	120000	3200	8100	3800	19600	5200	—	SPL
MW-1	11/05/97	169.75	23.70	0.54	146.46	68000	6200	4400	3300	14300	8000	4.7	SPL
QC-1 (c)	11/05/97	—	—	—	—	88000	7300	4800	3600	16900	8200	—	SPL
MW-1	02/03/98	169.75	13.63	0.32	156.36	—	—	—	—	—	—	—	—
MW-1	02/04/98	—	—	—	—	190000	2200	10000	5600	32000	ND<10000	5.3	SPL
QC-1 (c)	02/04/98	—	—	—	—	160000	2300	8400	5000	29400	ND<10000	—	SPL

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)	MTBE (ug/l)	DO (ppm)	LAB
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	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	---	---	---	---	---	---	---	---
MW-2	10/27/95	168.14	23.61	0.30	144.76	---	---	---	---	---	---	---	---
MW-2	01/25/96	168.14	15.95	0.15	152.30	---	---	---	---	---	---	---	---
MW-2	04/19/96	168.14	17.33	0.07	150.86	---	---	---	---	---	---	---	---
MW-2	07/23/96	168.14	21.25	0.05	146.93	---	---	---	---	---	---	---	---
MW-2	11/11/96	168.14	22.27	0.01	145.88	---	---	---	---	---	---	---	---
MW-2	01/21/97	168.14	15.19	0.01	152.96	---	---	---	---	---	---	---	---
MW-2	04/29/97	168.14	20.22	0.01	147.93	---	---	---	---	---	---	---	---
MW-2	04/30/97	168.14	---	---	---	130000	4600	15000	6000	37000	ND<5000	5.0	SPL
MW-2	08/21/97	168.14	21.74	0.01	146.41	110000	6000	16000	4700	28000	ND<500	4.6	SPL
MW-2	11/05/97	168.14	21.61	0.01	146.54	120000	7800	18000	4900	28100	ND<2500	4.6	SPL
MW-2	02/03/98	168.14	11.51	---	156.63	75000	590	1500	1800	12800	ND<2500	4.5	SPL

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 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)	MTBE (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	ND<5.0 (d)	6.6	ATI
MW-3	10/27/95	167.17	22.43	---	144.74	---	---	---	---	---	---	---	---
MW-3	10/30/95	167.17	---	---	---	51	2.4	ND<0.50	ND<0.50	ND<1.0	ND<5.0	6.9	ATI
MW-3	01/25/96	167.17	14.03	---	153.14	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	5.1	---	CEI
MW-3	04/19/96	167.17	15.26	---	151.91	460	55	4	33	63	ND<10	9.4	SPL
MW-3	07/23/96	167.17	19.19	---	147.98	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	9.2	SPL
MW-3	11/11/96	167.17	20.24	---	146.93	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	8.4	SPL
MW-3	01/21/97	167.17	13.09	---	154.08	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.4	SPL
MW-3	04/29/97	167.17	18.14	---	149.03	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.3	SPL
MW-3	08/21/97	167.17	19.64	---	147.53	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.9	SPL
MW-3	11/05/97	167.17	19.95	---	147.22	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.5	SPL
MW-3	02/03/98	167.17	10.57	---	156.60	ND<50	ND<0.50	ND<1.0	ND<1.0	ND<1.0	ND<10	4.7	SPL

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)	MTBE (ug/l)	DO (ppm)	LAB
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	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	170.36	21.55	---	148.81	---	---	---	---	---	---	---	---
MW-4	08/22/95	170.36	23.47	---	146.89	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0 (d)	6.4	ATI
MW-4	10/27/95	170.36	24.50	---	145.86	---	---	---	---	---	---	---	---
MW-4	01/25/96	170.36	18.74	---	151.62	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	58	---	CEI
MW-4	04/19/96	170.36	18.63	---	151.73	---	---	---	---	---	---	---	---
MW-4	07/23/96	170.36	22.56	---	147.80	---	---	---	---	---	---	---	---
MW-4	11/11/96	170.36	23.63	---	146.73	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	34	8.2	SPL
MW-4	01/21/97	170.36	16.59	---	153.77	---	---	---	---	---	---	---	---
MW-4	04/29/97	170.36	21.43	---	148.93	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.7	SPL
MW-4	08/21/97	170.36	22.91	---	147.45	---	---	---	---	---	---	---	---
MW-4	11/05/97	170.36	22.34	---	148.02	60	ND<0.5	ND<1.0	ND<1.0	ND<1.0	76	4.9	SPL
MW-4	02/03/98	170.36	12.26	---	158.10	---	---	---	---	---	---	---	---

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 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)	MTBE (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	ND<130 (d)	7.3	ATI
MW-5	10/27/95	165.14	20.94	---	144.20	---	---	---	---	---	---	---	---
MW-5	10/30/95	165.14	---	---	---	6500	2200	55	180	270	ND<250	7.5	ATI
MW-5	01/25/96	165.14	13.30	---	151.84	590	37	0.70	ND<0.50	ND<1.0	ND<5.0	---	CEI
QC-1 (c)	01/25/96	---	---	---	---	540	37	0.66	ND<0.50	ND<1.0	ND<5.0	---	CEI
MW-5	04/19/96	165.14	13.63	---	151.51	1500	470	38	49	210	ND<50	8.1	SPL
MW-5	07/23/96	165.14	17.61	---	147.53	140	4.6	ND<0.5	ND<0.5	ND<0.5	ND<10	8.0	SPL
MW-5	11/11/96	165.14	18.70	---	146.44	140	40	ND<1.0	ND<1.0	ND<1.0	ND<10	7.9	SPL
MW-5	01/21/97	165.14	11.63	---	153.51	730	300	ND<5.0	7.8	26	ND<50	5.0	SPL
MW-5	04/29/97	165.14	16.74	---	148.40	340	530	ND<5.0	ND<5.0	ND<5.0	ND<50	4.8	SPL
MW-5	08/21/97	165.14	18.26	---	146.88	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.9	SPL
MW-5	11/05/97	165.14	18.84	---	146.30	120	13	ND<1.0	ND<1.0	ND<1.0	ND<10	4.4	SPL
MW-5	02/03/98	165.14	9.49	---	155.65	ND<50	ND<0.50	ND<1.0	ND<1.0	ND<1.0	ND<10	4.3	SPL

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)	MTBE (ug/l)	DO (ppm)	LAB
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	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
MW-6	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	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	ND<5.0 (d)	6.7	ATI
MW-6	10/27/95	165.40	20.39	—	145.01	—	—	—	—	—	—	—	—
MW-6	01/25/96	165.40	12.24	—	153.16	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	9.9	—	CEI
MW-6	04/19/96	165.40	13.90	—	151.50	—	—	—	—	—	—	—	—
MW-6	07/23/96	165.40	17.83	—	147.57	—	—	—	—	—	—	—	—
MW-6	11/11/96	165.40	18.90	—	146.50	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	7.7	SPL
MW-6	01/21/97	165.40	11.97	—	153.43	—	—	—	—	—	—	—	—
MW-6	04/29/97	165.40	17.04	—	148.36	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.5	SPL
MW-6	08/21/97	165.40	18.58	—	146.82	—	—	—	—	—	—	—	—
MW-6	11/05/97	165.40	19.17	—	146.23	70	ND<0.5	ND<1.0	ND<1.0	ND<1.0	85	4.3	SPL
MW-6	02/03/98	165.40	9.87	—	155.53	—	—	—	—	—	—	—	—

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)	MTBE (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	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	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	ND<5.0 (d)	6.4	ATI
MW-7	10/27/95	167.61	22.53	---	145.08	---	---	---	---	---	---	---	---
MW-7	01/25/96	167.61	17.21	---	150.40	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	CEI
MW-7	04/19/96	167.61	17.09	---	150.52	---	---	---	---	---	---	---	---
MW-7	07/23/96	167.61	21.02	---	146.59	---	---	---	---	---	---	---	---
MW-7	11/11/96	167.61	22.03	---	145.58	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	7.8	SPL
MW-7	01/21/97	167.61	15.06	---	152.55	---	---	---	---	---	---	---	---
MW-7	04/29/97	167.61	20.11	---	147.50	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.4	SPL
MW-7	08/21/97	167.61	21.59	---	146.02	---	---	---	---	---	---	---	---
MW-7	11/05/97	167.61	20.05	---	147.56	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.4	SPL
MW-7	02/03/98	167.61	9.97	---	157.64	---	---	---	---	---	---	---	---

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)	MTBE (ug/l)	DO (ppm)	LAB
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	PAGE
MW-8	08/01/94	165.74	---	---	---	---	---	---	---	---	---	---	---
MW-8	12/23/94	165.74	13.81	0.03	151.95	---	---	---	---	---	---	---	---
MW-8	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	---	---	---	---	---	---	---	---
MW-8	10/27/95	165.74	20.47	0.14	145.38	---	---	---	---	---	---	---	---
MW-8	01/25/96	165.74	13.35	0.22	152.56	---	---	---	---	---	---	---	---
MW-8	04/19/96	165.74	14.40	0.20	151.49	---	---	---	---	---	---	---	---
MW-8	07/23/96	165.74	18.35	0.14	147.50	---	---	---	---	---	---	---	---
MW-8	11/11/96	165.74	19.41	0.02	146.35	---	---	---	---	---	---	---	---
MW-8	01/21/97	165.74	12.29	0.01	153.46	---	---	---	---	---	---	---	---
MW-8 (e)	04/29/97	165.74	---	---	---	---	---	---	---	---	---	---	---
MW-8	08/21/97	165.74	19.61	---	146.13	240000	1100	9300	4100	31100	ND<1000	5.2	SPL
MW-8	11/05/97	165.74	19.45	0.10	146.37	57000	790	2700	2300	15200	ND<1000	5.0	SPL
MW-8	02/03/98	165.74	9.33	0.03	156.43	---	---	---	---	---	---	---	---
MW-8	02/04/98	---	---	---	---	94000	570	1500	2100	15200	ND<2500	5.5	SPL

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 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)	MTBE (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	--	--	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	740 (d)	--	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-9	10/27/95	166.20	20.88	0.01	145.33	--	--	--	--	--	--	--	--
MW-9	01/25/96	166.20	13.84	0.07	152.41	--	--	--	--	--	--	--	--
MW-9 (e)	04/19/96	166.20	--	--	--	--	--	--	--	--	--	--	--
MW-9	07/23/96	166.20	18.84	0.03	147.38	--	--	--	--	--	--	--	--
MW-9	11/11/96	166.20	19.91	0.01	146.30	--	--	--	--	--	--	--	--
MW-9	01/21/97	166.20	12.93	0.01	153.28	--	--	--	--	--	--	--	--
MW-9	04/29/97	166.20	18.03	SHEEN	148.17	--	--	--	--	--	--	--	--
MW-9	04/30/97	166.20	--	--	--	78000	1900	3600	3100	20600	ND<5000	5.5	SPL
MW-9	08/21/97	166.20	19.56	0.01	146.65	110000	2100	3400	2300	18800	ND<500	5.1	SPL
MW-9	11/05/97	166.20	20.59	0.01	145.62	59000	1400	1700	2200	17000	ND<500	4.5	SPL
MW-9	02/03/98	166.20	10.56	--	155.64	55000	490	1200	1400	10200	ND<1000	4.9	SPL

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)	MTBE (ug/l)	DO (ppm)	LAB
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	1600	(d) 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	---	---	---	---	---	---	---	---
MW-10	10/27/95	167.01	21.69	0.63	145.79	---	---	---	---	---	---	---	---
MW-10	01/25/96	167.01	15.05	0.81	152.57	---	---	---	---	---	---	---	---
MW-10	04/19/96	167.01	16.26	0.58	151.19	---	---	---	---	---	---	---	---
MW-10	07/23/96	167.01	20.18	0.62	147.30	---	---	---	---	---	---	---	---
MW-10	11/11/96	167.01	21.20	0.20	145.96	---	---	---	---	---	---	---	---
MW-10	01/21/97	167.01	13.66	0.14	153.46	---	---	---	---	---	---	---	---
MW-10	04/29/97	167.01	18.71	0.21	148.30	---	---	---	---	---	---	---	---
MW-10	04/30/97	167.01	---	---	---	170000	9700	38000	4700	30500	ND<5000	5.6	SPL
MW-10	08/21/97	167.01	20.19	0.14	146.93	170000	9500	35000	4300	27100	ND<5000	5.3	SPL
MW-10	11/05/97	167.01	20.52	0.02	146.51	80000	3800	12000	2700	15700	ND<500	4.4	SPL
MW-10	02/03/98	167.01	10.62	0.01	156.40	---	---	---	---	---	---	---	---
MW-10	02/04/98	---	---	---	---	72000	500	1300	1700	12000	ND<1000	5.1	SPL

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)	MTBE (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	1200	(d)	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	ND<25	(d)	6.6 ATI
QC-1 (c)	08/22/95	---	---	---	---	2800	210	9.3	4.3	250	ND<25	(d)	ATI
RW-1	10/27/95	168.01	32.00	---	136.01	---	---	---	---	---	---	---	---
RW-1	10/30/95	168.01	---	---	---	230	1.4	ND<1.0	ND<1.0	ND<2.0	650	6.9	ATI
QC-1 (c)	10/30/95	---	---	---	---	240	1.6	ND<1.0	ND<1.0	ND<2.0	630	---	ATI
RW-1	01/25/96	168.01	15.41	---	152.60	15000	3400	930	330	2500	5300	---	CEI
RW-1	04/19/96	168.01	16.83	---	151.18	35000	5500	3300	1700	9400	14000	7.6	SPL
QC-1 (c)	04/19/96	---	---	---	---	33000	5600	3200	1700	8800	15000	---	SPL
RW-1	07/23/96	168.01	20.76	---	147.25	46000	3600	2300	900	5100	36000	7.4	SPL
QC-1 (c)	07/23/96	---	---	---	---	47000	3700	2500	930	5300	35000	---	SPL
RW-1	11/11/96	168.01	21.73	---	146.28	34000	3000	1200	880	4600	22000	8.3	SPL
QC-1 (c)	11/11/96	---	---	---	---	31000	2900	1000	860	4600	22000	---	SPL
RW-1	01/21/97	168.01	14.20	---	153.81	260	40	16	2.7	34	1500	6.1	SPL
QC-1 (c)	01/21/97	---	---	---	---	270	42	17	2.7	36	1500	---	SPL
RW-1	04/29/97	168.01	19.15	---	148.86	32000	3100	590	1300	6000	46000	5.3	SPL
RW-1	08/21/97	168.01	20.67	---	147.34	7600	730	58	370	1780	9500	4.7	SPL
RW-1	11/05/97	168.01	21.01	---	147.00	39000	2300	86	1300	3840	56000	4.5	SPL
RW-1	02/03/98	168.01	10.68	---	157.33	3400	31	11	29	161	3200	5.1	SPL

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)	MTBE (ug/l)	DO (ppm)	LAB
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	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	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) 12/23/94	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(f) 01/26/95	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ATI
QC-2	(f) 06/08/95	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	ATI
QC-2	(f) 08/22/95	---	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2	(f) 10/30/95	---	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0 (d)	---	ATI
QC-2	(f) 01/25/96	---	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2	(f) 04/19/96	---	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	CEI SPL

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
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	Anametx, Inc.
ATI	Analytical Technologies, Inc.
CEI	Ceimic Corporation
SPL	Southern Petroleum Laboratories

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) A copy of the documentation for this data is included in Appendix C of Alisto report 10-024-10-001.
- (e) Well inaccessible.
- (f) Travel blank.

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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
	10/30/95	0.11	3.96
	01/25/96	1.00	4.96
	02/16/95	0.08	5.04
	04/19/96	0.75	5.79
	07/23/96	0	5.79
	11/11/96	0.98	6.77
	01/21/97	0.20	6.97
	04/29/97	0.25	7.22
	08/21/97	0.15	7.37
	11/05/97	0.25	7.62
02/03/98	0.25	7.62	
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
	10/30/95	0.05	2.33
	01/25/96	Sheen	2.33
	02/16/95	0.04	2.37
	04/19/96	0.01	2.38
	07/23/96	0.00	2.38
11/11/96	0.01	2.39	
01/21/97	<0.01	2.39	
04/29/97	<0.01	2.39	
11/05/97	<0.10	2.39	
02/03/98	<0.10	2.39	

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

ALISTO PROJECT NO. 10-024

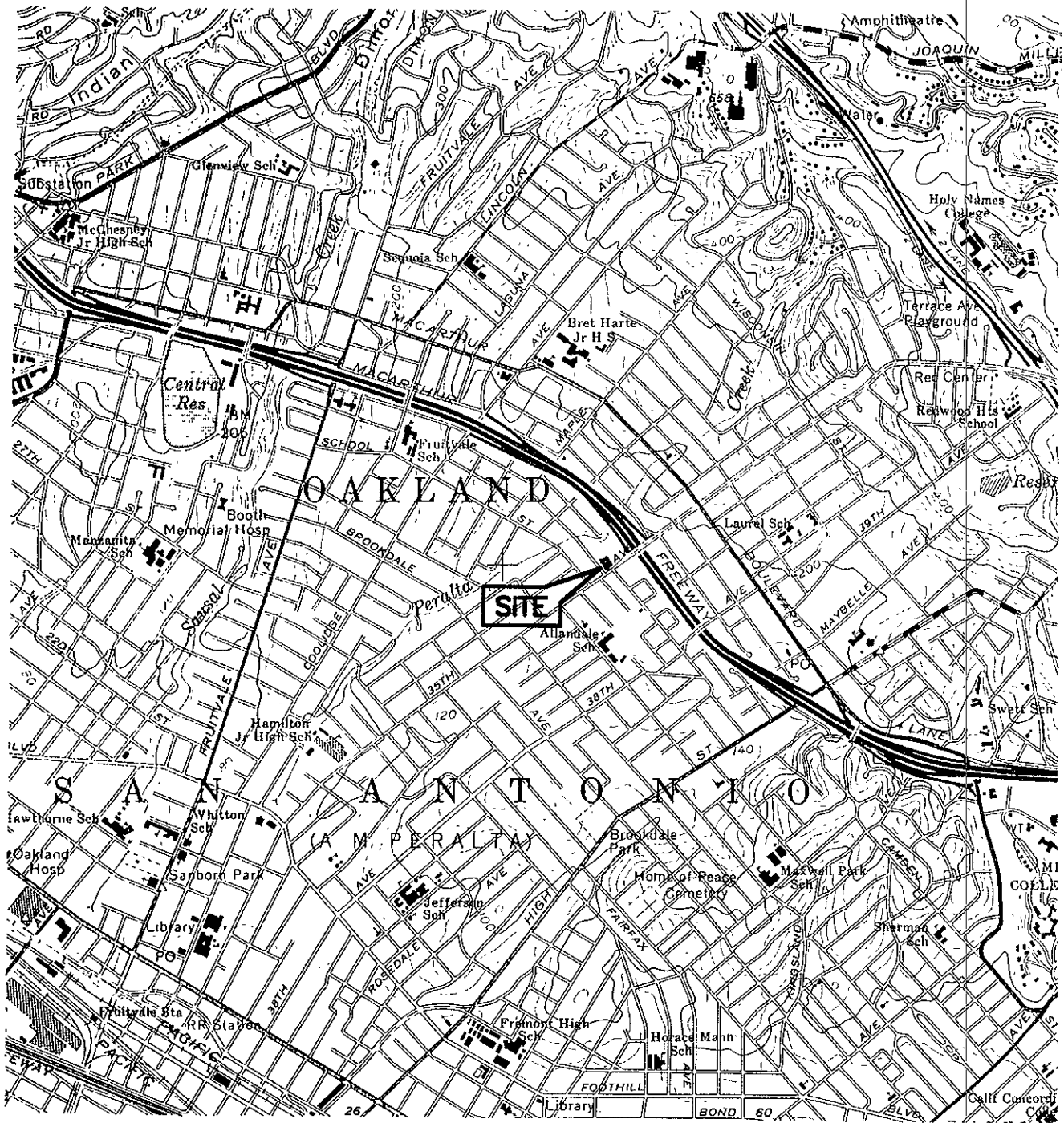
WELL ID	DATE	PRODUCT REMOVED (Gallons)	PRODUCT REMOVED CUMULATIVE (Gallons)
MW-8	11/02/93	0.25	0.25
	11/10/93	0.10	0.35
	11/16/93	0.10	0.45
	11/23/93	0.10	0.55
	11/30/93	0.10	0.65
	12/17/93	0.10	0.65
	12/23/93	0.10	0.65
	01/12/94	0.01	0.66
	02/02/94	0.05	0.71
	02/11/94	0.08	0.79
	02/18/94	0.10	0.79
	03/18/94	0.01	0.80
	04/27/94	0.10	0.90
	05/27/94	0.10	1.00
	10/26/94	0.10	1.10
	11/12/94	0.02	1.12
	12/12/94	0.01	1.13
	06/08/95	Sheen	1.13
	08/22/95	0.05	1.18
	10/30/95	0.02	1.20
	01/25/96	0.05	1.25
	02/16/95	0.10	1.25
	04/19/96	0.25	1.50
	07/23/96	0	1.50
	11/11/96	0.02	1.52
	01/21/97	0.10	1.52
	11/05/97	0.10	1.62
02/03/98	<0.10	1.62	
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	0.10	0.40
	01/12/94	0.01	0.41
	01/20/93	0.05	0.46
	02/02/94	0.05	0.51
	02/11/94	0.01	0.52
	02/18/94	0.10	0.52
	03/18/94	0.10	0.62
	10/26/94	0.15	0.77
	11/12/94	0.10	0.77
	12/12/94	0.10	0.77
	01/26/95	0.10	0.87
	06/28/95	0.10	0.87
	08/22/95	0.10	0.87
	10/30/95	0.10	0.87
	01/25/96	0.10	0.87
	02/16/95	0.10	0.87
	04/19/96	0.10	0.87
	07/23/96	0.00	0.87
	11/11/96	0.01	0.88
	01/21/97	0.10	0.88
	04/29/97	Sheen	0.88
	11/05/97	0.10	0.88
	02/03/98	<0.10	0.88

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-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	0.00	7.50
	01/12/94	0.10	7.50
	01/20/94	0.20	7.70
	02/02/94	0.10	7.70
	02/11/94	0.10	7.70
	02/18/94	0.20	7.90
	05/27/94	<0.10	7.90
	10/26/94	0.60	8.50
	11/12/94	0.43	8.93
	12/12/94	0.26	9.19
	01/26/95	0.13	9.32
	06/28/95	0.10	9.42
	08/22/95	0.15	9.57
	10/30/95	0.10	9.67
	01/25/96	0.25	9.92
02/16/95	0.10	10.02	
04/19/96	0.50	10.52	
07/23/96	<0.10	10.52	
11/11/96	0.20	10.72	
01/21/97	<0.03	10.72	
04/29/97	0.04	10.76	
11/05/97	<0.10	10.76	
02/03/98	<0.10	10.76	

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

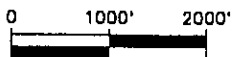


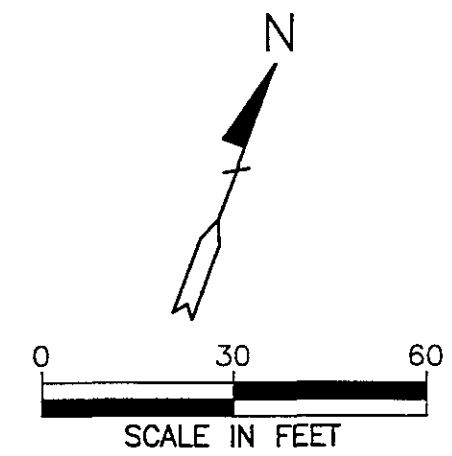
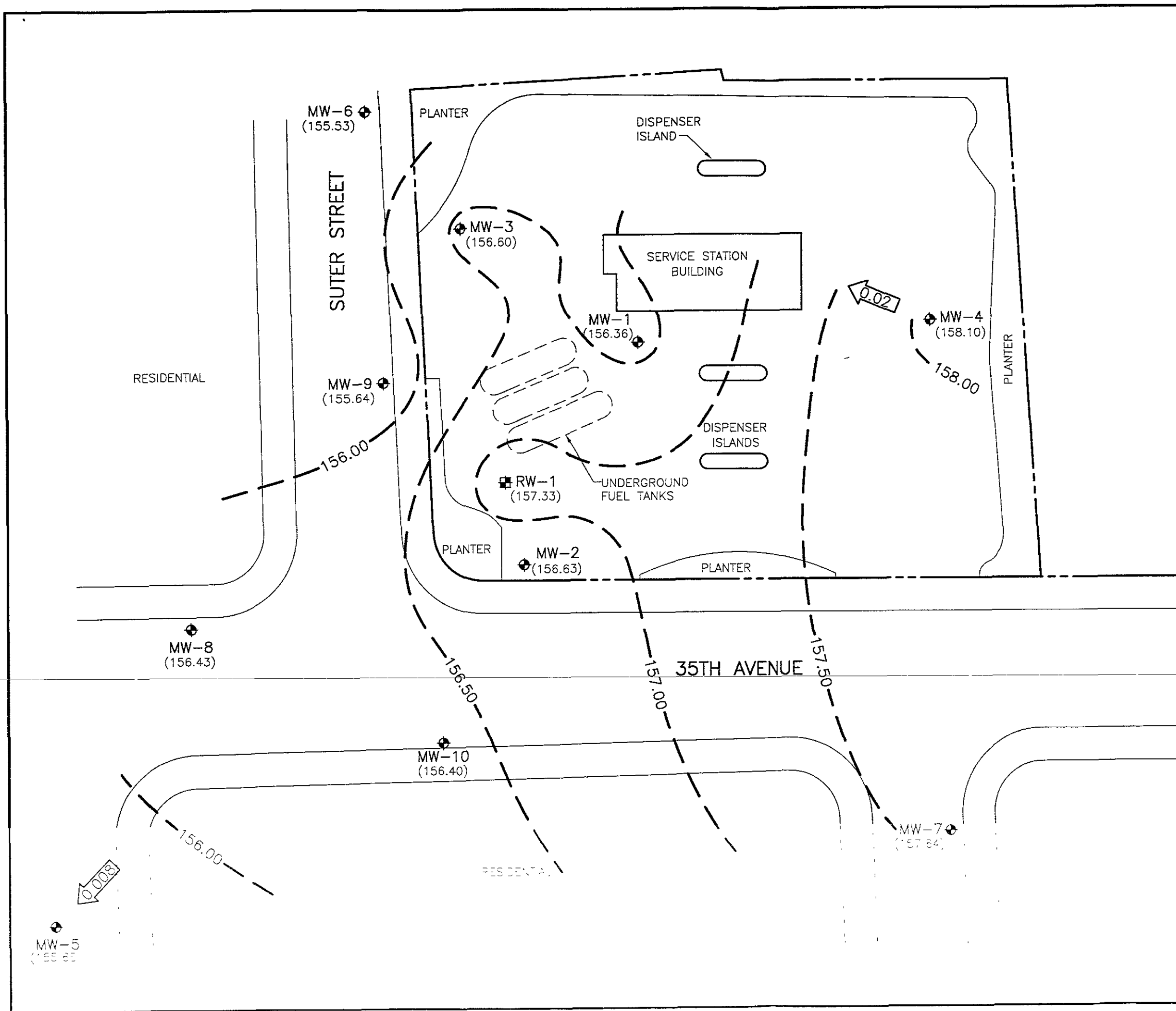
FIGURE 1

SITE VICINITY MAP

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



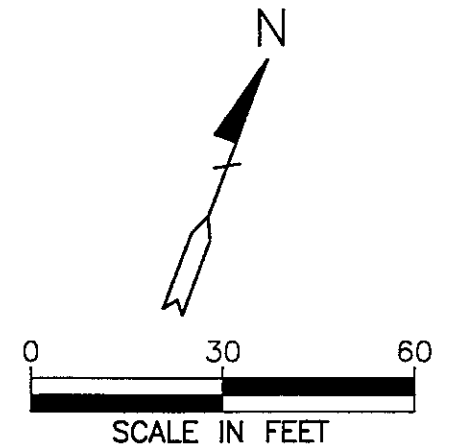
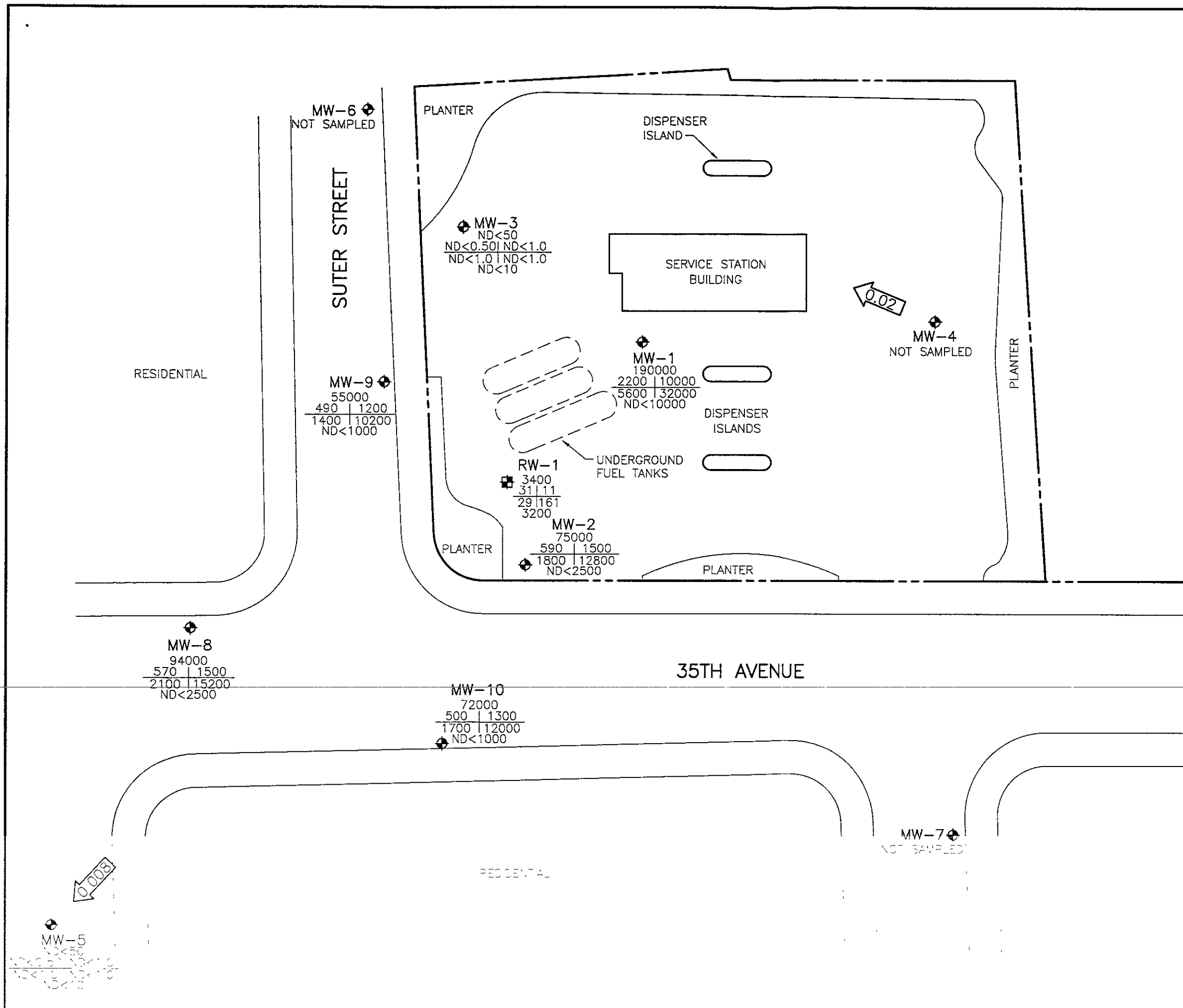
ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA



- LEGEND**
- ◆ GROUNDWATER MONITORING WELL
 - ⊕ GROUNDWATER RECOVERY WELL
 - (155.64) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 - 156.00 - 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
 FEBRUARY 3, 1998
 BP OIL SERVICE STATION NO. 11132
 3201 35TH STREET
 OAKLAND, CALIFORNIA
 PROJECT NO. 10-024

DATE PLOTTED: 2/26/98 BY: [unreadable]



LEGEND

- ◆ GROUNDWATER MONITORING WELL
- ⊕ GROUNDWATER RECOVERY WELL
- TPH-G
B | T
E | X
MTBE
CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER
- TPH-G
TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X TOTAL XYLENES
- MTBE METHYL TERT BUTYL ETHER
- 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
 FEBRUARY 3 AND 4, 1998
 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
WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Project No. 10-024-10-003
Address 3201 35th Street
Contract No. H177109
Station No. BP 11132

Date: 2/3/98 - 2/4/98
Day: M T W T H F
City: Oakland
Sampler: LCR

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME MONITORED	COMMENTS:
✓ MW-1	S-8	2"	40.0	13.63	.32	1450	QC-1 (S-9) From this well (Serviced PPRS)
MW-2	S-3	2"	40.0	11.51	∅	1430	S-3 Serviced PPRS
MW-3	S-1	2"	34.58	10.57	↓	1410	
MW-4	NIS	2"	38.74	12.26	↓	1401	SEMI-Do Not Sample
MW-5	S-2	2"	30.88	9.49	↓	1421	
MW-6	NIS	2"	34.56	9.87	↓	1406	SEMI-Do Not Sample
MW-7	NIS	2"	34.49	9.97	↓	1415	SEMI-Do Not Sample
✓ MW-8	S-8	2"	40.0	9.33	.03	1446	S-7
MW-9	S-4	2"	40.0	10.56	∅	1433	PPRS
4 MW-10	S-6	2"	40.0	10.62	.01	1442	PPRS
RW-1	S-5	6"	38.41	10.68	∅	1440	

FIELD INSTRUMENT CALIBRATION DATA

pH METER Tem 4.00 4 7.00 7 10.00 0 TEMPERATURE COMPENSATED N TIME 0830
 D.O. METER Tem ZERO d.O. SOLUTION _____ BAROMETRIC PRESSURE _____ TEMP _____ WEATHER Rain/Cloudy
 CONDUCTIVITY METER Tem 10,000 _____ TURBIDITY METER _____ 5.0 NTU _____ OTHER _____
 LEAK DETECTOR: _____ ALARM MODE _____ NON-ALARM MODE _____

Well ID	Depth to Water	Diam	Cap/Lock	Product	Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.		
MW-3	10.57	2"	OK	∅	Y	(N)	4	1511	61.2	7.29	807µs	4.5	<input type="radio"/> EPA 601 _____	
Total Depth - Water Level = x Well Vol. Factor = x#Vol. to Purge PurgeVol.							8		61.9	7.14	827µs		<input checked="" type="radio"/> TPH-G/BTEX _____	
34.58 - 10.57 = 24.01 x .16 = 3.84 x 3 = 11.52							12	1525	62.3	7.11	836µs	4.7	<input type="radio"/> TPH Diesel _____	
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> OSys Port													<input type="radio"/> TOG 5520 _____	
Comments:													TIME/SAMPLE ID	
													1525	
MW-5	9.49	2"	OK	∅	Y	(N)	4	1539	60.3	7.44	1.27ms	4.2	<input type="radio"/> EPA 601 _____	
Total Depth - Water Level = x Well Vol. Factor = x#Vol. to Purge PurgeVol.							8		61.2	7.26	1.46ms			<input checked="" type="radio"/> TPH-G/BTEX _____
30.88 - 9.49 = 21.39 x .16 = 3.42 x 3 = 10.26							11	1550	61.7	7.24	1.50ms	4.3	<input type="radio"/> TPH Diesel _____	
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> OSys Port													<input type="radio"/> TOG 5520 _____	
Comments:													TIME/SAMPLE ID	
													1552	

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.

10-024-10-003

Address

3201 35th Street

Contract No.

H177109

Station No.

BP 11132

Sampler:

Date:

2/3/98 - 2/4/98

Day:

MON TH F

City:

Oakland

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-2	11.51	2"	OK	Ø	Y (N)	5	1601	61.7	7.43	867µs	4.5	<input type="radio"/> EPA 601
Total Depth - Water Level=						10		62.3	7.24	888µs		<input checked="" type="radio"/> TPH-G/BTEX
40.00 - 11.51 = 28.49 x .16 = 4.56 x 3 = 13.68						14	1610	62.7	7.20	897µs	4.5	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump ODisp. Tube OWinch ODisp. Bailer(s) OSys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1614
MW-9	10.56	2"	OK	Ø	Y (N)	5	1627	61.4	7.41	717µs	4.7	<input type="radio"/> EPA 601
Total Depth - Water Level=						10		62.5	7.31	736µs		<input checked="" type="radio"/> TPH-G/BTEX
40.00 - 10.56 = 29.44 x .16 = 4.71 x 3 = 14.13						15	1640	62.9	7.26	741µs	4.9	<input type="radio"/> TPH Diesel
Purge Method: <input type="checkbox"/> Surface Pump ODisp. Tube OWinch ODisp. Bailer(s) OSys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1648
RW-1	10.68	6"	OK	Ø	Y (N)	45	1657	60.9	7.80	1.33ms	4.7	<input type="radio"/> EPA 601
Total Depth - Water Level=						90		61.4	7.62	1.49ms		<input checked="" type="radio"/> TPH-G/BTEX
38.41 - 10.68 = 27.73 x 1.47 = 40.76 x 3 = 122.28						123	1759	62.2	7.49	1.52ms	5.1	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump ODisp. Tube OWinch ODisp. Bailer(s) OSys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1802
MW-10	10.62	2"	OK	Ø	Y (N)	5	0720	60.1	7.71	810µs	4.9	<input type="radio"/> EPA 601
Total Depth - Water Level=						10		60.7	7.49	827µs		<input checked="" type="radio"/> TPH-G/BTEX
40.00 - 10.62 = 29.38 x .16 = 4.70 x 3 = 14.10						15	0731	61.4	7.43	833µs	5.1	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump ODisp. Tube OWinch ODisp. Bailer(s) OSys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												0744 2/4/98
MW-8	9.33	2"	OK	Ø	Y (N)	5	0801	61.1	7.37	737µs	5.4	<input type="radio"/> EPA 601
Total Depth - Water Level=						10		61.9	7.19	777µs		<input checked="" type="radio"/> TPH-G/BTEX
40.00 - 9.33 = 30.67 x .16 = 4.91 x 3 = 14.73						15	0815	62.7	7.12	791µs	5.5	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump ODisp. Tube OWinch ODisp. Bailer(s) OSys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												0817 2/4/98

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. 10-024-10-003

Address 3201 35th Street

Contract No. H177109

Station No. BP 11132

Date: 2/3/98 - 2/4/98

Day: ~~MON~~ TH F

City: Oakland

Sampler: L8

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-1	13.63	2"	OLL	Ø	Y ⊕	4	0831	60.7	7.14	1.10 _{ms}	5.1	<input type="radio"/> EPA 601 _____
Total Depth - Water Level=						8		61.8	7.03	1.21 _{ms}		<input checked="" type="radio"/> TPH-G/BTEX _____
40.00 - 13.63 = 26.37						13	0844	62.4	6.97	1.23 _{ms}	5.3	<input type="radio"/> TPH Diesel _____
x Well Vol. Factor=												<input type="radio"/> TOG 5520 _____
x#vol. to Purge												TIME/SAMPLE ID
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port												0852 2/4/98
Comments: 4												

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

February 17, 1998

Mr. Scott Hooton
BP OIL COMPANY
295 SW 41st St, Bldg 13, Ste N
Renton, WA 98055


The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on February 7, 1998. The sample(s) was assigned to Certificate of Analysis No.(s)9802343 and analyzed for all parameters as listed on the chain of custody.

Any data flag or quality control exception associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s).

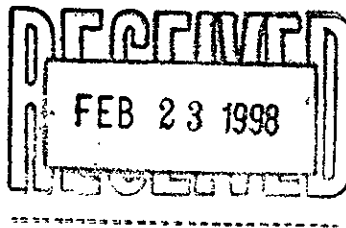
If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis No. during any inquiries.

Again, SPL is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Southern Petroleum Laboratories



Joel Grice
Project Manager






HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-02-343

Approved for Release by:



Joel Grice, Project Manager

Date: 2/17/98

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TEXAS 77054
 PHONE (713) 660-0901

Certificate of Analysis No. H9-9802343-01

BP Oil Company
 295 SW 41st St, Bldg 13, Ste N
 Renton, WA 98055
 ATTN: Scott Hooton

P.O.#
 H177109, COC#090236
 DATE: 02/17/98

PROJECT: #11132, N/A
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-1

PROJECT NO: 10-024-10-003
 MATRIX: WATER
 DATE SAMPLED: 02/03/98
 DATE RECEIVED: 02/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.50 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

100
 100

Method 8020A***

Analyzed by: SB/
 Date: 02/11/98

Gasoline Range Organics

ND 0.050 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

70
 97

California LUFT Manual for Gasoline

Analyzed by: SB/
 Date: 02/11/98 10:39:00

ND - Not detected.

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
 **Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
 ***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
 SPL California License # 1903



HOUSTON LABORATORY

8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9802343-02

BP Oil Company
295 SW 41st St, Bldg 13, Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.#
H177109, COC#090236
DATE: 02/17/98

PROJECT: #11132, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-024-10-003
MATRIX: WATER
DATE SAMPLED: 02/03/98
DATE RECEIVED: 02/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.50 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene

100

4-Bromofluorobenzene

103

Method 8020A***

Analyzed by: SB/

Date: 02/12/98

Gasoline Range Organics

ND 0.050 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

70

4-Bromofluorobenzene

97

California LUFT Manual for Gasoline

Analyzed by: SB/

Date: 02/12/98 03:41:00

ND - Not detected.

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TEXAS 77054
 PHONE (713) 660-0901

Certificate of Analysis No. H9-9802343-03

BP Oil Company
 295 SW 41st St, Bldg 13, Ste N
 Renton, WA 98055
 ATTN: Scott Hooton

P.O.#
 H177109, COC#090236
 DATE: 02/17/98

PROJECT: #11132, N/A
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-3

PROJECT NO: 10-024-10-003
 MATRIX: WATER
 DATE SAMPLED: 02/03/98
 DATE RECEIVED: 02/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	2500 P	µg/L
Benzene	590	125 P	µg/L
Toluene	1500	250 P	µg/L
Ethylbenzene	1800	250 P	µg/L
Total Xylene	12800	250 P	µg/L
Surrogate		% Recovery	
1,4-Difluorobenzene		99	
4-Bromofluorobenzene		100	
Method 8020A***			
Analyzed by: SB/			
Date: 02/12/98			
Gasoline Range Organics	75	12.5 P	mg/L
Surrogate		% Recovery	
1,4-Difluorobenzene		71	
4-Bromofluorobenzene		93	
California LUFT Manual for Gasoline			
Analyzed by: SB/			
Date: 02/12/98 06:25:00			

ND - Not detected.

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
 **Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
 ***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
 SPL California License # 1903



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TEXAS 77054
 PHONE (713) 660-0901

Certificate of Analysis No. H9-9802343-04

BP Oil Company
 295 SW 41st St, Bldg 13, Ste N
 Renton, WA 98055
 ATTN: Scott Hooton

P.O.#
 H177109, COC#090236
 DATE: 02/17/98

PROJECT: #11132, N/A
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-4

PROJECT NO: 10-024-10-003
 MATRIX: WATER
 DATE SAMPLED: 02/03/98
 DATE RECEIVED: 02/07/98

PARAMETER	ANALYTICAL DATA		DETECTION LIMIT	UNITS
	RESULTS			
MTBE	ND		1000 P	µg/L
Benzene	490		50 P	µg/L
Toluene	1200		100 P	µg/L
Ethylbenzene	1400		100 P	µg/L
Total Xylene	10200		100 P	µg/L
Surrogate	% Recovery			
1,4-Difluorobenzene	103			
4-Bromofluorobenzene	100			
Method 8020A***				
Analyzed by: SB/				
Date: 02/12/98				
Gasoline Range Organics	55		5.0 P	mg/L
Surrogate	% Recovery			
1,4-Difluorobenzene	70			
4-Bromofluorobenzene	93			
California LUFT Manual for Gasoline				
Analyzed by: SB/				
Date: 02/12/98 12:02:00				

ND - Not detected.

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
 **Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
 ***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
 SPL California License # 1903



Certificate of Analysis No. H9-9802343-05

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

BP Oil Company
295 SW 41st St, Bldg 13, Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.#
H177109, COC#090236
DATE: 02/17/98

PROJECT: #11132, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-5

PROJECT NO: 10-024-10-003
MATRIX: WATER
DATE SAMPLED: 02/03/98
DATE RECEIVED: 02/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	3200	100 P	µg/L
Benzene	31	0.50 P	µg/L
Toluene	11	1.0 P	µg/L
Ethylbenzene	29	1.0 P	µg/L
Total Xylene	161	1.0 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene 107
4-Bromofluorobenzene 100

Method 8020A***

Analyzed by: SB/
Date: 02/12/98

Gasoline Range Organics 3.4 0.050 P mg/L

Surrogate

% Recovery

1,4-Difluorobenzene 70
4-Bromofluorobenzene 97

California LUFT Manual for Gasoline

Analyzed by: SB/
Date: 02/11/98 11:34:00

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TEXAS 77054
 PHONE (713) 660-0901

Certificate of Analysis No. H9-9802343-06

BP Oil Company
 295 SW 41st St, Bldg 13, Ste N
 Renton, WA 98055
 ATTN: Scott Hooton

P.O.#
 H177109, COC#090236
 DATE: 02/17/98

PROJECT: #11132, N/A
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-6

PROJECT NO: 10-024-10-003
 MATRIX: WATER
 DATE SAMPLED: 02/04/98
 DATE RECEIVED: 02/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	1000 P	µg/L
Benzene	500	50 P	µg/L
Toluene	1300	100 P	µg/L
Ethylbenzene	1700	100 P	µg/L
Total Xylene	12000	100 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene

100

4-Bromofluorobenzene

103

Method 8020A***

Analyzed by: SB/

Date: 02/12/98

Gasoline Range Organics

72

5.0 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

73

4-Bromofluorobenzene

97

California LUFT Manual for Gasoline

Analyzed by: SB/

Date: 02/12/98 12:29:00

ND - Not detected.

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
 **Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
 ***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
 SPL California License # 1903



Certificate of Analysis No. H9-9802343-07

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

BP Oil Company
295 SW 41st St, Bldg 13, Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.#
H177109, COC#090236
DATE: 02/17/98

PROJECT: #11132, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-7

PROJECT NO: 10-024-10-003
MATRIX: WATER
DATE SAMPLED: 02/04/98
DATE RECEIVED: 02/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	2500 P	µg/L
Benzene	570	125 P	µg/L
Toluene	1500	250 P	µg/L
Ethylbenzene	2100	250 P	µg/L
Total Xylene	15200	250 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene

101

4-Bromofluorobenzene

103

Method 8020A***

Analyzed by: SB/

Date: 02/12/98

Gasoline Range Organics

94

12.5 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

72

4-Bromofluorobenzene

95

California LUFT Manual for Gasoline

Analyzed by: SB/

Date: 02/12/98 12:56:00

ND - Not detected.

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TEXAS 77054
 PHONE (713) 660-0901

Certificate of Analysis No. H9-9802343-08

BP Oil Company
 295 SW 41st St, Bldg 13, Ste N
 Renton, WA 98055
 ATTN: Scott Hooton

P.O.#
 H177109, COC#090236
 DATE: 02/17/98

PROJECT: #11132, N/A
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-8

PROJECT NO: 10-024-10-003
 MATRIX: WATER
 DATE SAMPLED: 02/04/98
 DATE RECEIVED: 02/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10000 P	µg/L
Benzene	2200	500 P	µg/L
Toluene	10000	1000 P	µg/L
Ethylbenzene	5600	1000 P	µg/L
Total Xylene	32000	1000 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene

100

4-Bromofluorobenzene

103

Method 8020A***

Analyzed by: SB/

Date: 02/12/98

Gasoline Range Organics

190

50 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

70

4-Bromofluorobenzene

93

California LUFT Manual for Gasoline

Analyzed by: SB/

Date: 02/12/98 02:46:00

ND - Not detected.

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
 **Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
 ***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
 SPL California License # 1903



Certificate of Analysis No. H9-9802343-09

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

BP Oil Company
295 SW 41st St, Bldg 13, Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.#
H177109, COC#090236
DATE: 02/17/98

PROJECT: #11132, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-9

PROJECT NO: 10-024-10-003
MATRIX: WATER
DATE SAMPLED: 02/04/98
DATE RECEIVED: 02/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10000 P	µg/L
Benzene	2300	500 P	µg/L
Toluene	8400	1000 P	µg/L
Ethylbenzene	5000	1000 P	µg/L
Total Xylene	29400	1000 P	µg/L
Surrogate			
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	103		
Method 8020A*** Analyzed by: SB/ Date: 02/12/98			
Gasoline Range Organics	160	50 P	mg/L
Surrogate			
1,4-Difluorobenzene	70		
4-Bromofluorobenzene	93		
California LUFT Manual for Gasoline Analyzed by: SB/ Date: 02/12/98 03:13:00			

ND - Not detected.

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

QUALITY CONTROL

DOCUMENTATION



Batch Id: HP_0980211132600

Units: µg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	41	82.0	72 - 128
Benzene	ND	50	44	88.0	61 - 119
Toluene	ND	50	46	92.0	65 - 125
EthylBenzene	ND	50	46	92.0	70 - 118
O Xylene	ND	50	45	90.0	72 - 117
M & P Xylene	ND	100	92	92.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	860	20	900	NC	930	NC	NC	20	39 - 150
BENZENE	140	20	170	NC	170	NC	NC	21	32 - 164
TOLUENE	52	20	80	140	80	140	0	20	38 - 159
ETHYL_BENZENE	140	20	160	NC	170	NC	NC	19	52 - 142
O-XYLENE	83	20	100	NC	110	NC	NC	18	53 - 143
M AND P XYLENE	230	40	260	NC	290	NC	NC	17	53 - 144

* = Values outside QC Range due to Matrix Interference (except RPD)

< = Data outside Method Specification limits.

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS % Recovery = (<1> / <3>) x 100

Relative Percent Difference = | (<4> - <5>) | / [(<4> + <5>) / 2] x 100

(**) = Source: SPL-Houston Historical Data (1st Q '97)

(***) = Source: SPL-Houston Historical Data (1ST Q '97)

Analyst: SB/

Sequence Date: 02/11/98

SPL ID of sample spiked: 9802330-06A

Sample File ID: O_B2114.TX0

Method Blank File ID:

Blank Spike File ID: O_B2108.TX0

Matrix Spike File ID: O_B2103.TX0

Matrix Spike Duplicate File ID: O_B2104.TX0

SAMPLES IN BATCH(SPL ID):

9802330-06A 9802343-05A 9802343-04A 9802343-06A
 9802343-07A 9802343-08A 9802343-09A 9802343-02A
 9802334-01A 9802328-04A 9802328-03A 9802330-05A
 9802330-07A 9802343-03A 9802323-01A 9802343-01A
 9802442-03A 9802442-01A 9802442-02A



SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Batch Id: HP_0980212074700

Units: µg/L

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	41	82.0	72 - 128
Benzene	ND	50	42	84.0	61 - 119
Toluene	ND	50	44	88.0	65 - 125
EthylBenzene	ND	50	42	84.0	70 - 118
O Xylene	ND	50	43	86.0	72 - 117
M & P Xylene	ND	100	87	87.0	72 - 116

MATRIX SPIKES

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	8.2	20	30	109	30	109	0	20	39 - 150
BENZENE	ND	20	25	125	25	125	0	21	32 - 164
TOLUENE	ND	20	27	135	25	125	7.69	20	38 - 159
ETHYLBENZENE	ND	20	25	125	25	125	0	19	52 - 142
O XYLENE	2.2	20	27	124	27	124	0	18	53 - 143
M & P XYLENE	3.6	40	55	128	53	124	3.17	17	53 - 144

* = Values outside QC Range due to Matrix Interference (except RPD)

« = Data outside Method Specification limits.

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = $[(<1> - <2>) / <3>] \times 100$

LCS % Recovery = $(<1> / <3>) \times 100$

Relative Percent Difference = $| (<4> - <5>) / [(<4> + <5>) \times 0.5] \times 100$

(**) = Source: SPL-Houston Historical Data (1st Q '97)

(***) = Source: SPL-Houston Historical Data (1st Q '97)

Analyst: SB/

Sequence Date: 02/12/98

SPL ID of sample spiked: 9802436-01A

Sample File ID: O_B2151.TX0

Method Blank File ID:

Blank Spike File ID: O_B2135.TX0

Matrix Spike File ID: O_B2145.TX0

Matrix Spike Duplicate File ID: O_B2146.TX0

SAMPLES IN BATCH(SPL ID):

9802331-06A 9802343-05A 9802436-01A 9802448-04A
9802331-05A 9802193-05A 9802331-06A 9802331-05A



SPL BATCH QUALITY CONTROL REPORT **

Method Modified 8015B*** for Gasoline

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

Batch Id: HP_0980211135300

Units: mg/L

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Gasoline Range Organics	ND	1.0	1.1	110	64 - 131

M A T R I X S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits (***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
GASOLINE RANGE ORGANICS	ND	0.90	1.0	111	0.99	110	0.905	36	36 - 160

Analyst: SB/

Sequence Date: 02/11/98

SPL ID of sample spiked: 9802343-01A

Sample File ID: OOB2113.TX0

Method Blank File ID:

Blank Spike File ID: OOB2109.TX0

Matrix Spike File ID: OOB2105.TX0

Matrix Spike Duplicate File ID: OOB2106.TX0

* = Values outside QC Range due to Matrix Interference (except RPD)

< = Data outside Method Specification limits.

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = $[(<1> - <2>) / <3>] \times 100$

LCS % Recovery = $(<1> / <3>) \times 100$

Relative Percent Difference = $\{ (<4> - <5>) / [(<4> + <5>) \times 0.5] \} \times 100$

(**) = Source: SPL-Houston Historical data (1st Q '97)

(***) = Source: SPL-Houston Historical data (1st Q '97)

SAMPLES IN BATCH(SPL ID):

9802343-04A 9802343-06A 9802343-07A 9802343-08A
 9802343-09A 9802343-02A 9802334-01A 9802343-03A
 9802442-03A 9802442-01A 9802442-02A 9802343-01A
 9802343-05A

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 2-7-98	Time: 1000
---	--

SPL Sample ID:

98 02 343

		<u>Yes</u>	<u>No</u>
1	Chain-of-Custody (COC) form is present.	✓	
2	COC is properly completed.	✓	
3	If no, Non-Conformance Worksheet has been completed.		
4	Custody seals are present on the shipping container.	✓	
5	If yes, custody seals are intact.	✓	
6	All samples are tagged or labeled.	✓	
7	If no, Non-Conformance Worksheet has been completed.		
8	Sample containers arrived intact	✓	
9	Temperature of samples upon arrival:	2°	C
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #)	3848472261
		Other:	
11	Method of sample disposal:	SPL Disposal	
		HOLD	
		Return to Client	

Name: <div style="font-size: 1.5em; margin-left: 20px; margin-top: 10px;">John Curtis</div>	Date: <div style="text-align: right; margin-top: 10px; font-size: 1.2em;">2-7-98</div>
--	---



9802343

CHAIN OF CUSTODY

No. 090236

Page 1 of 1

CONSULTANT'S NAME <i>Alisto Eng. neering</i>		CONSULTANT'S ADDRESS <i>1575 Trent Blvd #201, W.C., CA 94598</i>	
BP SITE NUMBER <i>1132</i>	BP SITE / FACILITY ADDRESS <i>Oakland, CA</i>		CONSULTANT PROJECT NUMBER <i>10-024-10-003</i>
CONSULTANT PROJECT MANGER <i>Brady Nagle</i>		PHONE NUMBER <i>(510) 295-1650</i>	FAX NUMBER <i>295-1823</i>
BP CONTACT <i>Scott Houston</i>		BP ADDRESS <i>Renton, WA</i>	PHONE NUMBER <i>-</i>
LAB CONTACT <i>SPL</i>		LABORATORY ADDRESS <i>TEXAS</i>	PHONE NUMBER <i>-</i>
BP CONTACT REQUESTING RUSH TAT (Print BP Contact Name)		RUSH REQUESTED OF (Print Consultant Contact Name)	DATE/TIME <i>2/6/98</i>
			SHIPMENT DATE <i>2/6/98</i>
			SHIPMENT METHOD <i>FedEx</i>

TAT: 24 Hours 48 Hours 72 Hours Standard 7 or 14 Days

ANALYSIS REQUIRED

AIRBILL NUMBER *3848472261*

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	LAB SAMPLE #	TPT-H-61	TPT-H-62	TPT-H-63	TPT-H-64	TPT-H-65	TPT-H-66	TPT-H-67	TPT-H-68	TPT-H-69	TPT-H-70	COMMENTS	
				NO.	TYPE (VOL.)														
<i>S-1</i>	<i>2/3/98</i>		<i>W</i>	<i>3</i>	<i>HCL</i>			<i>X</i>	<i>X</i>										
<i>S-2</i>																			
<i>S-3</i>																			
<i>S-4</i>																			
<i>S-5</i>																			
<i>S-6</i>	<i>2/4/98</i>																		
<i>S-7</i>																			
<i>S-8</i>																			
<i>S-9</i>																			

SAMPLED BY (Please Print Name) _____ SAMPLED BY (Signature) _____ ADDITIONAL COMMENTS _____

RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY / AFFILIATION (Print Name / Signature)	DATE	TIME
<i>[Signature]</i>	<i>2/6/98</i>		<i>P.L. Felton</i>	<i>2/6/98</i>	<i>1200</i>
<i>P.L. Felton</i>	<i>2/6/98</i>	<i>1400</i>	<i>[Signature]</i>	<i>2/7/98</i>	<i>1000</i>

**BP EXPLORATION & OIL, INC.
ENVIRONMENTAL REMEDIATION MANAGEMENT
DATA REVIEW CHECKLIST**

BP Site Number: 11132
ERM Contact: H177109
Sampling Date: 2/3/98
Matrix Description: Water
Date Final Report Received: 2/23/98
Laboratory & Location: SPL, Houston, Texas

	Yes	No	N/A
1. Is BP contract release number consistent with analytical report?	<u> X </u>	<u> </u>	<u> </u>
2. Was report submitted within the specified timeframe?	<u> X </u>	<u> </u>	<u> </u>
3. Does report agree with the COC?	<u> X </u>	<u> </u>	<u> </u>
4. Are units consistent with the given matrix?	<u> X </u>	<u> </u>	<u> </u>
5. Were any target analytes/compounds detected in blanks (i.e., trip or equipment)?	<u> </u>	<u> </u>	<u> X </u>
6. Are duplicate water samples within 30%?	<u> X </u>	<u> </u>	<u> </u>
7. Are holding times met?	<u> X </u>	<u> </u>	<u> </u>
8. Are surrogates within limits using laboratory criteria?	<u> X </u>	<u> </u>	<u> </u>
9. Are MS/MSD acceptable using laboratory criteria?	See Below	<u> </u>	<u> </u>
10. Are LCS results acceptable using laboratory criteria?	<u> X </u>	<u> </u>	<u> </u>

MS/MSD recovery and relative % difference for MTBE, benzene, ethylbenzene, and xylenes in one of two matrix spikes were not calculated due to sample exceeding spike by a factor of 4 or more. MS/MSD limits are advisory only; as stated in SW-846, Section 8.7 to 8.8, if the MS/MSD results fall outside the advisable ranges, a laboratory control samples (LCS) must be analyzed and fall within those ranges. LCS results are within quality control limits.

Data Validation Completed by: Brady Nagle

(signature): Brady Nagle

Date: 3/12/98