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 Mr. Scott Seery
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502-6577

RE: Former BP Oil Site No. 11105
3159 Castro Valley Boulevard (at Redwood)
Castro Valley, CA

Dear Mr. Seery:

Enclosed find a 23 February 1998 Groundwater Monitoring and Sampling Report prepared on behalf of BP by Alisto Engineering Group.

The report shows that aromatic petroleum hydrocarbons were detected in samples obtained in three of the seven wells sampled this quarter. The highest benzene concentration (440 ug/l) was detected in a sample obtained from well ESE-1, located southwest of the underground storage tank area.

You will also note that MTBE was detected in groundwater samples collected from wells ESE-1(1,300 ug/l), ESE-2 (10,000 ug/l), and MW-7 (2,300 ug/l). Those concentrations represent increases above the concentrations associated with the previous sampling event of 27 October 1997.

Please contact me at (425) 251-0689 if you have any questions or concerns regarding this submittal.

Sincerely,

Scott Hooton

attachment

cc: site file
A. Fagorala - RWQCB-SFBR
Mr. Azim Shakoori, Castro Valley Chevron, 3519 Castro Valley Boulevard, Castro Valley, CA 94546 (w/attachment)

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11105
3519 Castro Valley Boulevard
Castro Valley, California

Project No. 10-138-10-002

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

February 23, 1998

Brady Nagle
Project Manager

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DANIEL J.
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STATE OF CALIFORNIA

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11105
3519 Castro Valley Boulevard
Castro Valley, California

Project No. 10-138-10-002

February 23, 1998

INTRODUCTION

This report presents the results and findings of the January 22, 1998 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11105, 3519 Castro Valley Boulevard, Castro Valley, 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 in reference to mean sea level. The survey data and groundwater elevation measurements collected to date are presented in Table 1.

Before sample collection, each well was purged of 3 casing volumes while recording field readings of pH, temperature, electrical conductivity, and dissolved oxygen. Groundwater samples were collected for laboratory analysis by lowering a bottom-fill, disposable bailer to just below the water level in the well. The samples were transferred from the bailer into laboratory-supplied containers. The water sampling field survey forms are presented in Appendix A.

Groundwater monitoring was performed concurrently at the neighboring Xtra Oil Company service station, 3495 Castro Valley Boulevard. The results are presented in Table 2.

SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples collected during 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 laboratory analysis are shown on Figure 3. The laboratory report and chain of custody record are presented in Appendix B.

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11105
3519 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

ALISTO PROJECT NO. 10-138

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (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
ESE-1 (c)	10/05/92	177.69	11.22	166.47	2100	370	150	17	110	---	---	---
ESE-1D (d)	10/05/92	---	---	---	2300	370	160	16	110	---	---	---
ESE-1	04/01/93	177.69	8.79	168.90	5900	1500	410	110	390	---	---	PACE
ESE-1	06/29/93	177.69	10.34	167.35	7600	2900	390	130	460	---	---	PACE
ESE-1	09/23/93	177.69	10.91	166.78	2000	490	40	20	56	600 (e)	---	PACE
QC-1 (d)	09/23/93	---	---	---	1500	420	39	19	56	550 (e)	---	PACE
ESE-1	12/10/93	177.69	9.93	167.76	1800	480	42	19	66	921 (e)	3.2	PACE
QC-1 (d)	12/10/93	---	---	---	1500	380	38	17	55	770 (e)	---	PACE
ESE-1	02/17/94	177.69	9.64	168.05	1900	380	48	24	80	590 (e)	---	PACE
QC-1 (d)	02/17/94	---	---	---	2200	430	42	19	65	680 (e)	---	PACE
ESE-1	08/08/94	177.69	11.72	165.97	2100	450	46	16	50	760 (e)	5.1	PACE
ESE-1	10/12/94	177.69	10.48	167.21	760	240	16	51	39	230 (e)	3.5	PACE
ESE-1	01/19/95	177.69	7.77	169.92	840	600	120	22	58	---	8.0	ATI
ESE-1	05/02/95	177.69	8.69	169.00	2000	640	67	24	98	---	8.5	ATI
ESE-1	07/28/95	177.69	10.12	167.57	190	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	7.9	ATI
ESE-1	11/17/95	177.69	10.57	167.12	200	3.4	ND<1.0	1.0	ND<2.0	600	7.7	ATI
ESE-1	02/07/96	177.69	7.41	170.28	750	370	23	21	64	680	2.5	SPL
ESE-1	04/23/96	177.69	9.12	168.57	310	100	ND<1	ND<1	ND<1	1500	6.3	SPL
ESE-1	07/09/96	177.69	10.12	167.57	730	230	74	13	63	750	2.9	SPL
ESE-1	10/10/96	177.69	10.80	166.89	420	26	1.6	7.3	12.0	430	7.4	SPL
ESE-1	01/20/97	177.69	8.52	169.17	660	290	4.2	13	36	450	5.9	SPL
ESE-1	04/25/97	177.69	9.77	167.92	410	ND<0.5	ND<1.0	ND<1.0	ND<1.0	580	5.3	SPL
ESE-1	07/18/97	177.69	10.55	167.14	420	ND<0.5	ND<1.0	ND<1.0	ND<1.0	370	5.0	SPL
ESE-1	10/27/97	177.69	10.36	167.33	300	56	ND<1.0	6.5	ND<1.0	220	4.8	SPL
ESE-1	01/22/98	177.69	7.52	170.17	4200	440	9.0	15	17.7	1300	4.2	SPL
ESE-2	10/05/92	178.23	11.68	166.55	300	5.4	16	3.9	45	---	---	---
ESE-2	04/01/93	178.23	9.17	169.06	240	27	ND<0.5	17	2.6	123 (e)	---	PACE
ESE-2	06/29/93	178.23	10.88	167.35	1700	260	24	110	23	---	---	PACE
QC-1 (d)	06/29/93	---	---	---	1300	240	17	110	25	---	---	PACE
ESE-2	09/23/93	178.23	11.56	166.67	240	3.1	0.5	0.6	2.5	900 (e)	---	PACE
ESE-2	12/10/93	178.23	10.48	167.75	250	2.4	2.4	1.5	11	940 (e)	2.6	PACE
ESE-2	02/17/94	178.23	10.06	168.17	900	ND<0.5	ND<0.5	ND<0.5	ND<0.5	930 (e)	---	PACE
ESE-2	08/08/94	178.23	11.11	167.12	750	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1400 (e)	5.1	PACE
ESE-2	10/12/94	178.23	11.31	166.92	1700	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3000 (e)	3.6	PACE
ESE-2	01/19/95	178.23	8.25	169.98	300	2	0.9	0.7	1	---	8.1	ATI
ESE-2	05/02/95	178.23	9.21	169.02	1200	4.0	ND<2.5	ND<2.5	ND<5.0	---	8.4	ATI
ESE-2	07/28/95	178.23	10.64	167.59	2000	ND<2.5	ND<2.5	ND<2.5	ND<5.0	---	7.7	ATI
ESE-2	11/17/95	178.23	11.13	167.10	3600	ND<25	ND<25	ND<25	ND<50	12000	7.4	ATI
QC-1 (d)	11/17/95	---	---	---	3400	ND<25	ND<25	ND<25	ND<50	12000	---	ATI
ESE-2	02/07/96	178.23	7.94	170.29	450	ND<0.5	ND<1	ND<1	ND<1	2300	1.8	SPL
ESE-2	04/23/96	178.23	9.73	168.50	260	0.9	ND<1	ND<1	ND<1	8600	7.2	SPL
ESE-2	07/09/96	178.23	10.70	167.53	780	ND<2.5	ND<5	ND<5	ND<5	13393	3.0	SPL
ESE-2	10/10/96	178.23	11.39	166.84	2900	ND<0.5	ND<1.0	ND<1.0	ND<1.0	12000	7.0	SPL
ESE-2	01/20/97	178.23	9.04	169.19	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	13000	6.2	SPL
ESE-2	04/25/97	178.23	10.31	167.92	2700	ND<0.5	ND<1.0	ND<1.0	ND<1.0	15000	5.9	SPL
ESE-2	07/18/97	178.23	11.02	167.21	11000	ND<5	ND<10	ND<10	ND<10	11000	5.0	SPL
ESE-2	10/27/97	178.23	10.93	167.30	6100	ND<2.5	ND<5.0	ND<5.0	ND<5.0	7100	4.8	SPL
QC-1 (d)	10/27/97	---	---	---	6600	ND<2.5	ND<5.0	ND<5.0	ND<5.0	7400	---	SPL
ESE-2	01/22/98	178.23	7.93	170.30	13000	ND<0.5	ND<1.0	ND<1.0	ND<1.0	10000	4.6	SPL
QC-1 (d)	01/22/98	---	---	---	13000	ND<0.5	ND<1.0	ND<1.0	ND<1.0	10000	---	SPL

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BP OIL COMPANY SERVICE STATION NO. 11105
3519 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

ALISTO PROJECT NO. 10-138

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (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
ESE-3	10/05/92	178.20	10.58	167.62	430	57	31	3.6	34	---	---	---
ESE-3	04/01/93	178.20	8.14	170.06	2400	460	220	74	210	---	---	PACE
ESE-3	06/29/93	178.20	9.72	168.48	280	56	14	15	13	---	---	PACE
ESE-3	09/23/93	178.20	10.46	167.74	72	13	3.5	1.7	4.1	---	---	PACE
ESE-3	12/10/93	178.20	9.30	168.90	270	71	32	6.1	33	---	2.7	PACE
ESE-3	02/17/94	178.20	8.97	169.23	520	140	10	20	33	---	---	PACE
ESE-3	08/08/94	178.20	10.02	168.18	ND<50	8.8	1.6	1.6	2.3	---	6.2	PACE
ESE-3	10/12/94	178.20	10.32	167.88	470	190	6.4	15	18	---	3.5	PACE
ESE-3	01/19/95	178.20	7.40	170.80	330	260	27	21	20	---	6.7	ATI
ESE-3	05/02/95	178.20	8.26	169.94	530	180	30	23	44	---	8.6	ATI
ESE-3	07/28/95	178.20	9.54	168.66	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.8	ATI
ESE-3	11/17/95	178.20	10.04	168.16	ND<50	1.7	ND<0.50	ND<0.50	ND<1.0	ND<5.0	7.3	ATI
ESE-3	02/07/96	178.20	7.08	171.12	ND<50	8.6	ND<1	ND<1	ND<1	ND<10	3.9	SPL
ESE-3	04/23/96	178.20	8.79	169.41	ND<50	7.6	ND<1	ND<1	ND<1	65	6.9	SPL
ESE-3	07/09/96	178.20	10.09	168.11	ND<50	12	2.6	2.0	3.9	26	3.4	SPL
ESE-3	10/10/96	178.20	10.48	167.72	---	---	---	---	---	---	---	---
ESE-3	10/11/96	178.20	---	---	260	140	ND<1.0	ND<1.0	2.6	ND<10	7.2	SPL
ESE-3	01/20/97	178.20	8.65	169.55	ND<50	1.5	1.7	ND<1.0	ND<1.0	14	5.7	SPL
ESE-3	04/25/97	178.20	10.02	168.18	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	14	5.4	SPL
ESE-3	07/18/97	178.20	10.66	167.54	10000	1400	1400	300	1280	ND<250	5.2	SPL
ESE-3	10/27/97	178.20	9.83	168.37	ND<250	ND<2.5	ND<5.0	ND<5.0	36	ND<50	5.0	SPL
ESE-3	01/22/98	178.20	7.06	171.14	130	ND<0.5	ND<1.0	ND<1.0	ND<1.0	120	4.3	SPL
ESE-4	10/05/92	177.73	10.33	167.40	98	7.2	1.3	1.1	6.1	---	---	---
ESE-4	04/01/93	177.73	7.88	169.85	550	93	20	23	33	---	---	PACE
ESE-4	06/29/93	177.66 (f)	8.33	169.33	150	23	0.6	5.4	0.5	54 (e)	---	PACE
ESE-4	09/23/93	177.66	10.05	167.61	110	14	1.7	3.2	4.6	---	---	PACE
ESE-4	12/10/93	177.66	8.95	168.71	110	21	7.2	4.2	10	---	2.8	PACE
ESE-4	02/17/94	177.66	8.65	169.01	210	26	1.2	4.7	11	110 (e)	---	PACE
ESE-4	08/08/94	177.66	9.76	167.90	76	9.6	ND<0.5	2.0	ND<0.5	62 (e)	7.0	PACE
ESE-4	10/12/94	177.66	9.62	168.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	44 (e)	3.2	PACE
ESE-4	01/19/95	177.66	6.97	170.69	140	56	14	24	23	---	6.9	ATI
ESE-4	05/02/95	177.66	7.85	169.81	130	21	2.8	8.6	8.2	---	9.1	ATI
ESE-4	07/28/95	177.66	9.20	168.46	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.1	ATI
ESE-4	11/17/95	177.66	9.68	167.98	ND<50	ND<0.50	0.60	ND<0.50	ND<1.0	18	5.7	ATI
ESE-4	02/07/96	177.66	6.59	171.07	100	2.6	ND<1	1.6	4.1	42	2.0	SPL
ESE-4	04/23/96	177.66	8.30	169.36	160	37	15	16	31	43	5.4	SPL
ESE-4	07/09/96	177.66	9.21	168.45	60	17	1.5	6.8	11.6	27	3.9	SPL
ESE-4	10/10/96	177.66	9.97	167.69	---	---	---	---	---	---	---	---
ESE-4	10/11/96	177.66	---	---	ND<50	ND<0.50	ND<1.0	ND<1.0	ND<1.0	18	5.5	SPL
ESE-4	01/20/97	177.66	7.68	169.98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	130	4.9	SPL
ESE-4	04/25/97	177.66	9.15	168.51	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.3	SPL
ESE-4	07/18/97	177.66	9.71	167.95	ND<50	15	ND<10	ND<10	ND<10	ND<100	4.5	SPL
ESE-4	10/27/97	177.66	9.38	168.28	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.9	SPL
ESE-4	01/22/97	177.66	6.59	171.07	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.3	SPL

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3519 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

ALISTO PROJECT NO. 10-138

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (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
ESE-5	10/05/92	176.08	9.22	166.86	1300	200	3.8	1.2	18	---	---	---
ESE-5	04/01/93	176.08	7.02	169.06	13000	2200	26	730	1000	---	---	PACE
QC-1 (d)	04/01/93	---	---	---	13000	2500	25	740	1100	---	---	PACE
ESE-5	06/29/93	176.08	10.21	165.87	7600	1500	9.3	170	100	---	---	PACE
ESE-5	09/23/93	176.08	10.64	165.44	560	19	1.2	0.9	1.8	---	---	PACE
ESE-5	12/10/93	176.08	9.42	166.66	1700	300	3.0	76	110	---	2.5	PACE
ESE-5	02/07/94	176.08	9.35	166.73	3500	640	7.8	90	130	---	---	PACE
ESE-5	08/08/94	176.08	8.76	167.32	2600	210	4.6	9.4	4.4	33 (e)	5.8	PACE
QC-1 (d)	08/08/94	---	---	---	2500	230	4.6	13	4.8	32 (e)	---	PACE
ESE-5	10/12/94	176.08	8.95	167.13	5600	560	9.5	75	21	---	3.6	PACE
QC-1 (d)	10/12/94	---	---	---	6000	550	10	78	22	77 (e)	---	PACE
ESE-5	01/19/95	176.08	5.40	170.68	1900	620	ND<5	95	15	---	7.6	ATI
QC-1 (d)	01/19/95	---	---	---	1600	620	ND<5	93	17	---	---	ATI
ESE-5	05/02/95	176.08	6.48	169.60	5700	1100	ND<10	180	58	---	8.2	ATI
QC-1 (d)	05/02/95	---	---	---	5300	1100	ND<10	180	58	---	---	ATI
ESE-5	07/28/95	176.08	7.97	168.11	520	15	ND<0.50	1.7	1.3	---	8.2	ATI
QC-1 (d)	07/28/95	---	---	---	460	7.2	ND<0.50	1.9	1.5	---	---	ATI
ESE-5	11/17/95	176.08	8.39	167.69	850	39	1.8	7.6	2.7	24	6.3	ATI
ESE-5	02/07/96	176.08	4.71	171.37	4100	670	6.0	190	140	ND<50	1.5	SPL
ESE-5	04/23/96	176.08	7.35	168.73	3000	570	ND<5	79	100	84	6.5	SPL
ESE-5	07/09/96	176.08	9.40	166.68	620	150	1.7	9.3	6.4	25	3.7	SPL
ESE-5	10/10/96	176.08	9.04	167.04	1100	29	ND<5.0	ND<5.0	ND<5.0	ND<50	6.3	SPL
QC-1 (d)	10/10/96	---	---	---	1100	31	ND<5.0	ND<5.0	ND<5.0	ND<50	---	SPL
ESE-5	01/20/97	176.08	5.82	170.26	2100	980	ND<25	280	80	ND<250	5.4	SPL
QC-1 (d)	01/20/97	---	---	---	2700	910	8.8	280	84	180	---	SPL
ESE-5	04/25/97	176.08	7.24	168.84	---	---	---	---	---	---	---	---
ESE-5	04/28/97	176.08	---	---	ND<250	7.9	ND<5.0	ND<5.0	ND<5.0	ND<50	4.9	SPL
ESE-5	07/18/97	176.08	7.86	168.22	1200	ND<5	ND<10	ND<10	ND<10	ND<100	5.0	SPL
QC-1 (d)	07/18/97	---	---	---	630	31	ND<5.0	ND<5.0	ND<5.0	130	---	SPL
ESE-5	10/27/97	176.08	7.91	168.17	ND<250	5.4	ND<5.0	ND<5.0	ND<5.0	ND<50	5.2	SPL
ESE-5	01/22/98	176.08	4.64	171.44	170	7.7	ND<1.0	ND<1.0	ND<1.0	130	4.6	SPL
MW-6	07/28/95	179.24	10.00	169.24	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.1	ATI
MW-6	11/17/95	179.24	10.44	168.80	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	6.8	ATI
MW-6	02/07/96	179.24	7.68	171.56	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	2.4	SPL
MW-6	04/23/96	179.24	9.33	169.91	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	6.6	SPL
MW-6	07/09/96	179.24	10.10	169.14	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	2.7	SPL
MW-6	10/10/96	179.24	11.00	168.24	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.9	SPL
MW-6	01/20/97	179.24	8.70	170.54	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.5	SPL
MW-6	04/25/97	179.24	10.16	169.08	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.1	SPL
MW-6	07/18/97	179.24	10.66	168.58	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.8	SPL
MW-6	10/27/97	179.24	10.25	168.99	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.8	SPL
MW-6	01/22/98	179.24	7.76	171.48	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.0	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11105
3519 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

ALISTO PROJECT NO. 10-138

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (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	07/28/95	176.55	9.25	167.30	ND<50	0.54 (g)	0.54	ND<0.50	ND<1.0	---	7.1	ATI
MW-7	11/17/95	176.55	9.73	166.82	1100	ND<10	ND<10	ND<10	ND<20	4000	6.3	ATI
MW-7	02/07/96	176.55	6.48	170.07	610	ND<0.5	ND<1	ND<1	ND<1	2500	4.1	SPL
QC-1 (d)	02/07/96	---	---	---	280	ND<0.5	ND<1	ND<1	ND<1	2600	---	SPL
MW-7	04/23/96	176.55	8.37	168.18	110	ND<0.5	ND<1	ND<1	ND<1	3500	6.4	SPL
QC-1 (d)	04/23/96	---	---	---	230	ND<0.5	ND<1	ND<1	ND<1	3500	---	SPL
MW-7	07/09/96	176.55	9.24	167.31	230	ND<0.5	ND<1	ND<1	ND<1	4296	3.1	SPL
QC-1 (d)	07/09/96	---	---	---	220	ND<0.5	ND<1	ND<1	ND<1	4400	---	SPL
MW-7	10/10/96	176.55	10.05	166.50	---	---	---	---	---	---	---	---
MW-7	10/11/96	176.55	---	---	1600	ND<0.5	ND<1.0	ND<1.0	ND<1.0	3000	6.9	SPL
MW-7	01/20/97	176.55	7.51	169.04	ND<50	0.63	1.0	ND<1.0	ND<1.0	2600	5.7	SPL
MW-7	04/25/97	176.55	8.79	167.76	---	---	---	---	---	---	---	---
MW-7	04/28/97	176.55	---	---	1500	ND<0.5	ND<1.0	ND<1.0	ND<1.0	3600	5.1	SPL
QC-1 (d)	04/28/97	---	---	---	7700	3500	ND<25	74	37	ND<250	---	SPL
MW-7	07/18/97	176.55	9.50	167.05	1400	ND<0.5	ND<1.0	ND<1.0	ND<1.0	2600	5.2	SPL
MW-7	10/27/97	176.55	9.19	167.36	420	ND<0.5	ND<1.0	ND<1.0	ND<1.0	560	4.9	SPL
MW-7	01/22/98	176.55	6.45	170.10	3100	ND<0.5	ND<1.0	ND<1.0	1.4	2300	4.2	SPL
MW-8	07/28/95	176.34	7.80	168.54	1100	ND<2.5	ND<2.5	ND<2.5	ND<5.0	---	7.2	ATI
MW-8	11/17/95	176.34	8.29	168.05	8300	75	5.3	670	240	140	7.0	ATI
MW-8	02/07/96	176.34	4.99	171.35	2300	33	ND<10	190	216	ND<100	1.7	SPL
MW-8	04/23/96	176.34	6.09	170.25	2000	390	ND<20	150	26	ND<250	5.1	SPL
MW-8 (h)	07/09/96	---	---	---	---	---	---	---	---	---	---	---
QC-2 (i)	04/01/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (i)	06/29/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (i)	09/23/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (i)	12/10/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (i)	02/17/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (i)	08/08/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (i)	10/12/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (i)	01/19/95	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	ATI
QC-2 (i)	05/02/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2 (i)	07/28/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2 (i)	11/17/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2 (i)	02/07/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
QC-2 (i)	04/23/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
QC-2 (i)	07/09/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11105
3519 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

ALISTO PROJECT NO. 10-138

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (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

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
ND	Not detected above reported detection limit
—	Not applicable/available/measured/analyzed
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories

NOTES:

(a) Top of casing elevations surveyed relative to mean sea level.

(b) Groundwater elevations in feet relative to mean sea level.

(c) Additional analysis of the sample collected from ESE-1 on 10/5/92 detected 96 ug/l total petroleum hydrocarbons as diesel and 1.8 ug/l 1,2-dichloroethane.

(d) Blind duplicate.

(e) A copy of the documentation for this data is included in Appendix C of Alisto report 10-138-09-004.

(f) Top of casing lowered by 0.07 foot after the monitoring event on 4/01/93.

(g) Sample result may be falsely elevated due to matrix interference.

(h) Well destroyed.

(i) Travel blank.

F:\010-088\10-088GW.WQ2

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
XTRA OIL COMPANY SERVICE STATION
3495 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

ALISTO PROJECT NO. 10-138

WELL ID		DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)		DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)
MW-1		08/19/91	175.73		9.31	166.42	48	47	13	8.4	0.99	29
MW-1		09/17/91	175.73		9.50	166.23	39	19	4.9	4.1	1.2	5.9
MW-1		10/10/91	175.73		9.70	166.03	28	19	4.1	4.7	1.0	4.8
MW-1		11/25/91	175.73		9.41	166.32	170	36	5.6	5.6	1.6	8.4
MW-1		12/23/91	175.73		9.65	166.08	78	34	9.3	7.3	0.54	13
MW-1		01/14/92	175.73		8.57	167.16	39	19	7.3	8.7	1.3	8.9
MW-1		05/29/92	175.73		8.59	167.14	120	11	8.8	16	2.3	15
MW-1		11/13/92	175.73		9.13	190.87	120	4.4	5.8	10	2.1	13
MW-1		02/23/93	200.00	(c)	7.34	ERR	100	14	4.5	11	2.1	12
MW-1		05/18/93	177.43	(d)	8.12	169.31	92	30	4.0	11	2.5	15
MW-1		08/30/93	177.43		8.78	168.65	77	9.4	6.4	11	2.2	12
MW-1		11/24/93	177.43		8.74	168.69	66	8.2	8.3	8.9	2.0	11
MW-1		02/28/94	177.43		7.44	169.99	90	110	11	9.6	2.1	9.9
MW-1		05/19/94	177.43		8.05	169.38	---	---	---	---	---	---
MW-1		08/22/94	177.43		8.67	168.76	---	---	---	---	---	---
MW-1		11/18/94	177.43		7.14	170.29	---	---	---	---	---	---
MW-1		02/23/95	177.43		7.72	169.71	---	---	---	---	---	---
MW-1		05/02/95	177.43		6.96	170.47	---	---	---	---	---	---
MW-1		07/28/95	177.43		8.27	169.16	---	---	---	---	---	---
MW-1		10/26/95	177.43		8.45	168.98	---	---	---	---	---	---
MW-1		01/29/96	177.43		6.17	171.26	---	---	---	---	---	---
MW-1		02/07/96	177.43		6.09	171.34	---	---	---	---	---	---
MW-1		04/23/96	177.43		7.47	169.96	---	---	---	---	---	---
MW-1		07/09/96	177.43		8.16	169.27	---	---	---	---	---	---
MW-1		01/20/97	177.43		7.12	170.31	---	---	---	---	---	---
MW-1		04/25/97	177.43		7.98	169.45	---	---	---	---	---	---
MW-1		07/24/97	177.43		8.71	168.72	---	---	---	---	---	---
MW-1		08/26/97	177.37	(e)	8.51	168.86	---	---	---	---	---	---
MW-1		11/06/97	177.37		6.79	168.58	---	---	---	---	---	---
MW-1		01/24/98	177.37		6.61	170.76	---	---	---	---	---	---
MW-2		08/19/91	175.45		9.60	165.85	69	19	26	22	2.1	18
MW-2		09/17/91	175.45		10.23	165.22	74	56	10	11	1.4	8.1
MW-2		10/10/91	175.45		10.39	165.06	85	360	21	25	2.1	14
MW-2		11/25/91	175.45		9.81	165.64	230	130	11	9.7	1.4	9.7
MW-2		12/23/91	175.45		10.39	165.06	2100	700	36	130	79	560
MW-2		01/14/92	175.45		8.97	166.48	59	1600	17	14	1.8	15
MW-2		05/27/95	175.45		9.31	166.14	89	130	18	19	1.7	14
MW-2		11/13/92	198.61	(c)	8.70	189.91	79	8.2	10	13	1.4	8.6
MW-2		02/23/93	198.61		6.39	192.22	76	7.0	12	17	1.6	9.6
MW-2		05/18/93	176.04	(d)	7.73	168.31	67	44	9.2	12	1.4	9.3
MW-2		08/30/93	176.04		8.64	167.40	110	110	11	14	1.8	11
MW-2		11/24/93	176.04		8.47	167.57	12	79	13	17	2.5	17
MW-2		02/28/94	176.04		6.99	169.05	91	13	13	16	1.5	9.0
MW-2		05/19/94	176.04		7.70	168.34	---	---	---	---	---	---
MW-2		08/22/94	176.04		8.59	167.45	---	---	---	---	---	---
MW-2		11/18/94	176.04		6.92	169.12	---	---	---	---	---	---
MW-2		02/23/95	176.04		7.51	168.53	---	---	---	---	---	---
MW-2		05/02/95	176.04		6.79	169.25	---	---	---	---	---	---
MW-2		07/28/95	176.04		7.99	168.05	---	---	---	---	---	---
MW-2		10/26/95	176.04		8.21	167.83	---	---	---	---	---	---
MW-2		01/29/96	176.04		5.16	170.88	---	---	---	---	---	---
MW-2		02/07/96	176.04		5.70	170.34	---	---	---	---	---	---
MW-2	(f)	04/23/96	176.04		---	---	---	---	---	---	---	---

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
XTRA OIL COMPANY SERVICE STATION
3495 CASTRO VALLEY BOULEVARD, CASTRO VALLEY, CALIFORNIA

ALISTO PROJECT NO. 10-138

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)		DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)
MW-3	08/19/91	175.00		8.95	166.05	170	150	82	31	4.4	22
MW-3	09/17/91	175.00		9.20	165.80	160	140	47	25	2.6	15
MW-3	10/10/91	175.00		9.43	165.57	140	39	57	31	2.2	14
MW-3	11/25/91	175.00		9.19	165.81	150	74	65	31	3.4	18
MW-3	12/23/91	175.00		9.37	165.63	740	540	30	61	31	180
MW-3	01/14/92	175.00		8.24	166.76	130	270	76	30	3.4	21
MW-3	05/29/92	175.00		8.45	166.55	370	27	91	57	3.0	21
MW-3	11/13/92	175.00		7.86	167.14	140	4.7	38	24	2.0	12
MW-3	02/23/93	190.97	(c)	8.01	182.96	110	8.1	31	18	1.9	11
MW-3	05/18/93	176.41	(d)	7.12	169.29	130	7.2	36	21	2.1	12
MW-3	08/30/93	176.41		7.64	168.77	130	32	36	21	1.9	8.2
MW-3	11/24/93	176.41		7.55	168.86	160	24	48	26	2.2	12
MW-3	02/28/94	176.41		6.68	169.73	110	210	36	21	1.9	11
MW-3	05/19/94	176.41		7.15	169.26	---	---	---	---	---	---
MW-3	08/22/94	176.41		7.65	168.76	---	---	---	---	---	---
MW-3	11/18/94	176.41		6.05	170.36	---	---	---	---	---	---
MW-3	02/23/95	176.41		7.24	169.17	---	---	---	---	---	---
MW-3	05/02/95	176.41		6.50	169.91	---	---	---	---	---	---
MW-3	07/28/95	176.41		7.80	168.61	---	---	---	---	---	---
MW-3	10/26/95	176.41		7.72	168.69	---	---	---	---	---	---
MW-3	01/29/96	176.41		5.77	170.64	---	---	---	---	---	---
MW-3	02/07/96	176.41		5.05	171.36	---	---	---	---	---	---
MW-3	04/23/96	176.41		6.81	169.60	---	---	---	---	---	---
MW-3	07/09/96	176.41		7.61	168.80	---	---	---	---	---	---
MW-3	01/20/97	176.41		6.35	170.06	---	---	---	---	---	---
MW-3	04/25/97	176.41		7.12	169.29	---	---	---	---	---	---
MW-3	07/24/97	176.41		7.90	168.51	---	---	---	---	---	---
MW-3	08/26/97	176.60	(e)	7.67	168.93	---	---	---	---	---	---
MW-3	11/06/97	176.60		7.80	168.80	---	---	---	---	---	---
MW-3	01/24/98	176.60		5.90	170.70	---	---	---	---	---	---
MW-4	08/20/97	176.35		7.66	168.69	---	---	---	---	---	---
MW-4	08/26/97	176.35		8.92	167.43	---	---	---	---	---	---
MW-4	11/06/97	176.35		9.16	167.19	---	---	---	---	---	---
MW-4	01/24/98	176.35		6.61	169.74	---	---	---	---	---	---

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
ug/l	Micrograms per liter
---	Not available

NOTES:

(a) Top of casing elevations relative to mean sea level.

(b) Groundwater elevations in feet above mean sea level.

(c) Well resurveyed on December 5, 1992.

(d) Well resurveyed on March 24, 1993.

(e) Well resurveyed on August 20, 1997.

(f) Well destroyed February 7, 1996.

F:\01\10-138\XTRA-OIL.WQ2

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

N

0 1000' 2000'

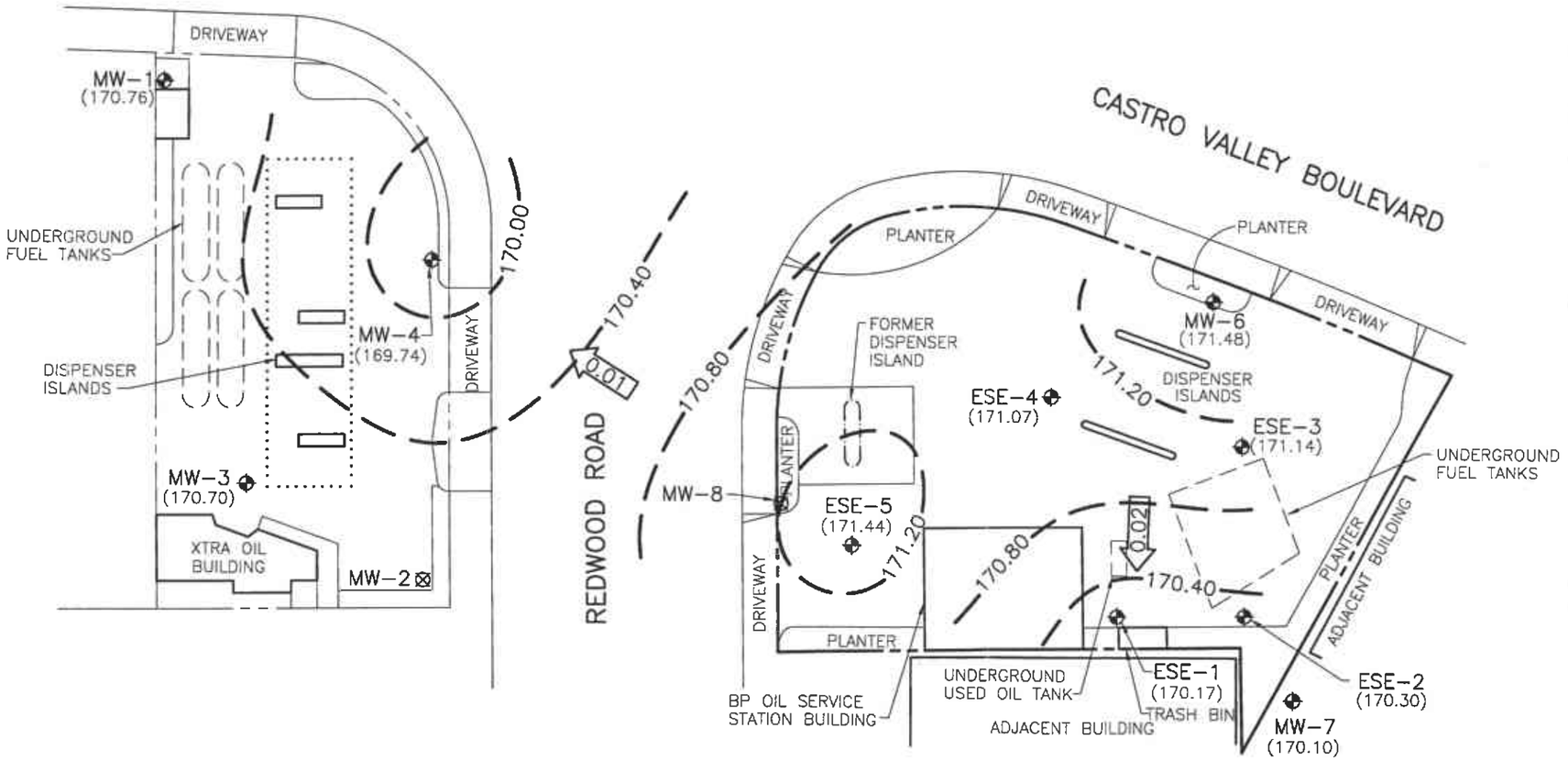
FIGURE 1

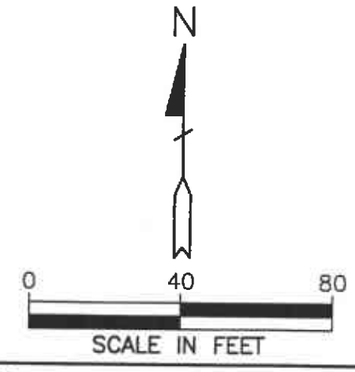
SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11105
3519 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

PROJECT NO. 10-138

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA





LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ⊠ DESTROYED WELL
- (170.17) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 170.40 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL–0.40 FOOT)
- 0.02 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

NOTE:
XTRA OIL COMPANY WELLS WERE MONITORED ON JANUARY 24, 1998.

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

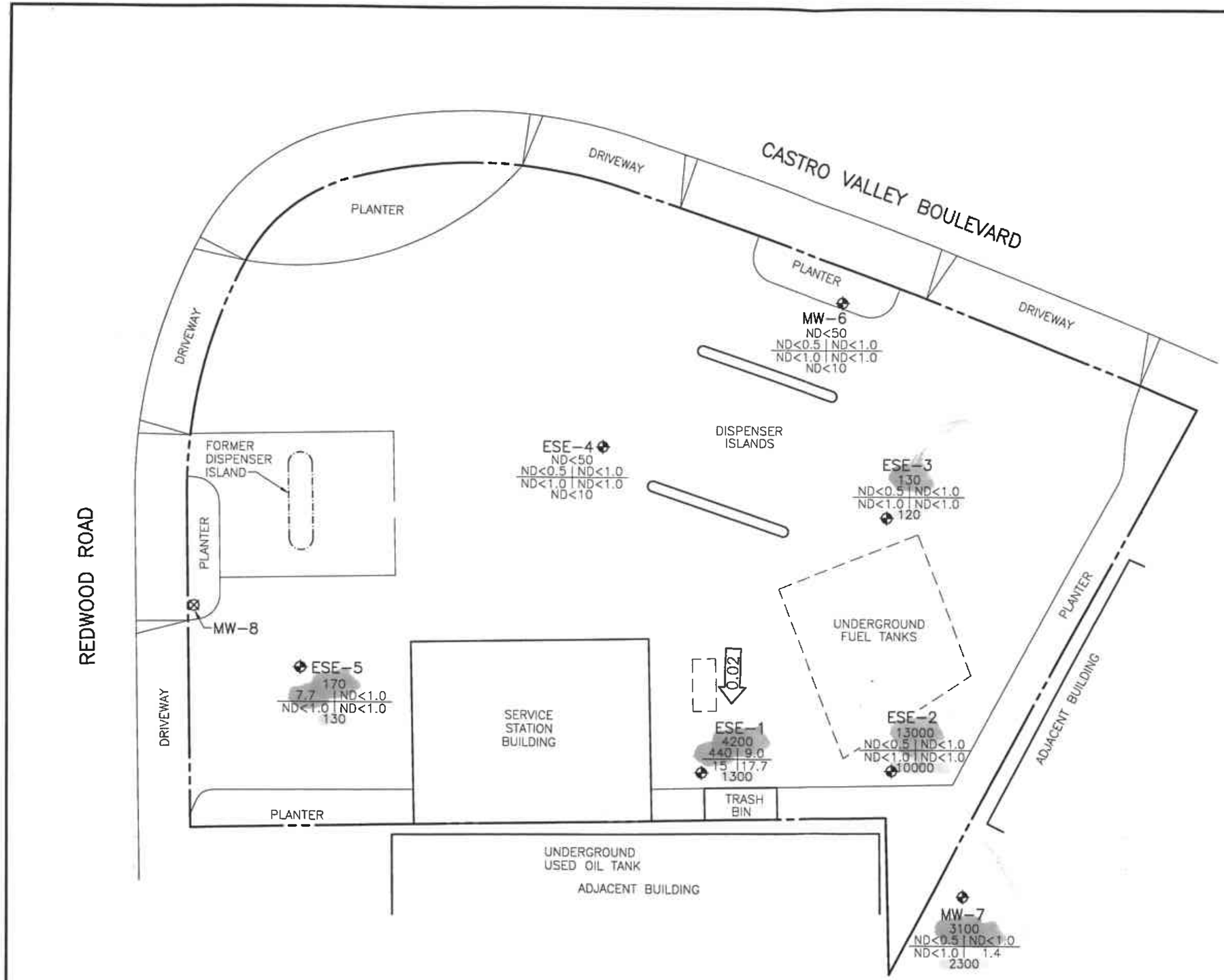
JANUARY 22 AND 24, 1998

BP OIL SERVICE STATION NO. 11105
3519 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

PROJECT NO. 10–138

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10138D-1.DWG 2-13-98 RKW 1=40



N

0 20 40

SCALE IN FEET

LEGEND

◆	GROUNDWATER MONITORING WELL
⊠	DESTROYED 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

JANUARY 22, 1998

BP OIL SERVICE STATION NO. 11105
3519 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

PROJECT NO. 10-138

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10138C-1.DWG 2-13-98 RKW 1=20

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. 10-138-10-002 Date: 1/22/98
Address 3515 Castro Valley Blvd Day: M T W (TH) F
Contract No. H176918 City: Castro Valley
Station No. BP 11105 Sampler: LCB

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME MONITORED	COMMENTS: JOINT
ESE-1	S-6	2"	30.00	7.52	∅	0922	
ESE-2	S-7	2"	30.00	7.93		0924	QC-1 (S-8) From this well
ESE-3	S-5	2"	30.00	7.06		0920	
ESE-4	S-1	2"	25.00	6.59		0901	
ESE-5	S-4	2"	24.00	4.64		0910	
MW-6	S-2	2"	29.43	7.76		0904	
MW-7	S-3	2"	19.85	6.45	✓	0907	
MW-8	—	—	—	—	—	—	Destroyed Well

BY

FIELD INSTRUMENT CALIBRATION DATA

pH METER Im 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED (Y) N TIME 0810

D.O. METER Im ZERO d.O. SOLUTION ____ BAROMETRIC PRESSURE 760 TEMP 59 WEATHER clear

CONDUCTIVITY METER Im 10,000 ____ TURBIDITY METER ____ 5.0 NTU ____ OTHER X

LEAK DETECTOR OPERATION: ____ ALARM MODE X NON ALARM MODE

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
ESE-4	6.59	2"	OK	∅	Y (N)	3	0940	60.2	7.66	422µs	4.1
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			6		60.9	7.47	461µs	
25.00-6.59=18.41 X.16=2.95 X3=	8.85					9	0950	61.4	7.41	461µs	4.3

Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

Comments:

O EPA 601 ____
X TPH-G/BTEX ___
O TPH Diesel ____
O TOG 5520 ___
TIME/SAMPLE ID
0957

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-6	7.76	2"	OK	∅	Y (N)	4	1012	59.8	7.92	411µs	4.0
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			8		60.7	7.60	429µs	
29.43-7.76=21.67 X.16=3.47 X3=	10.41					11	1017	60.9	7.42	455µs	4.0

Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port

Comments:

O EPA 601 ____
X TPH-G/BTEX ___
O TPH Diesel ____
O TOG 5520 ___
TIME/SAMPLE ID
1022

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. 10-138-10-002 Date: 11/22/98
Address 3515 Castro Valley Blvd Day: M T W (H) F
Contract No. H176918 City: Castro Valley
Station No. BP 11105 Sampler: LSB

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-7	6.45	2"	OK	Ø	Y (N)	3	1031	58.2	7.69	397 µS	3.9
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			5		60.3	7.42	437 µS	
19.85-6.45=13.40	X .16 = 2.14	X3=	6.42			7	1040	60.7	7.37	459 µS	4.2
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

O EPA 601_____
(X) TPH-G/BTEX___
O TPH Diesel____
O TOG 5520 ___
TIME/SAMPLE ID
1043

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
ESE-5	4.64	2"	OK	Ø	Y (N)	3	1027	60.1	7.77	572 µS	4.4
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			7		61.1	7.59	615 µS	
24.00-4.64=19.36	X.16 = 3.10	X3=	9.30			10	1038	61.8	7.52	621 µS	4.6
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

ESE-5

O EPA 601_____
(X) TPH-G/BTEX___
O TPH Diesel____
O TOG 5520 ___
TIME/SAMPLE ID
1040

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
ESE-3	7.06	2"	OK	Ø	Y (N)	4	1056	60.7	7.97	488 µS	4.3
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			8		61.5	7.77	507 µS	
30.00-7.06=22.94	X.16 = 3.67	X3=	11.01			12	1107	62.1	7.68	517 µS	4.3
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments: Well below Grade Need Repair											

(X) EPA 601_____
(X) TPH-G/BTEX___
O TPH Diesel____
O TOG 5520 ___
TIME/SAMPLE ID
1110

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
ESE-1	7.52	2"	OK	Ø	Y (N)	4	1119	61.1	7.90	452 µS	4.1
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			8		62.3	7.63	480 µS	
30.00-7.52=22.48	X.16 = 3.60	X3=	10.80			11	1125	62.4	7.58	495 µS	4.2
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

(X) EPA 601_____
(X) TPH-G/BTEX___
O TPH Diesel____
O TOG 5520 ___
TIME/SAMPLE ID
1131

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
ESE-2	7.93	2"	OK	Ø	Y (N)	4	1142	58.7	7.52	450 µS	4.2
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			8		59.8	7.33	472 µS	
30.00-7.93=22.07	X.16 = 3.53	X3=	10.59			11	1200	60.4	7.26	481 µS	4.6
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments: Well below Grade Need Repair											

(X) EPA 601_____
(X) TPH-G/BTEX___
O TPH Diesel____
O TOG 5520 ___
TIME/SAMPLE ID
1202

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

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

February 4, 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 January 23, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9801A25 and analyzed for all parameters as listed on the chain of custody.

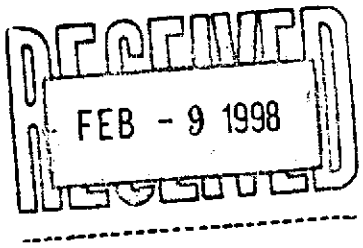
Any data flag or quality control exception associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s).

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: 98-01-A25

Approved for Release by:

Joel Grice, Project Manager Date: 2/4/98

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

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

Certificate of Analysis No. H9-9801A25-01

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

P.O.# H176918 , COC#086227
DATE: 02/04/98

PROJECT: #11105, N/A
SITE: Castro Valley, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-1

PROJECT NO: 10-138-10/001
MATRIX: WATER
DATE SAMPLED: 01/22/98
DATE RECEIVED: 01/23/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 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	97		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: LJ/			
Date: 02/02/98			
Gasoline Range Organics	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	77		
4-Bromofluorobenzene	97		
California LUFT Manual for Gasoline			
Analyzed by: LJ/			
Date: 02/01/98 07:57:00			

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. H9-9801A25-02

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

P.O.# H176918 , COC#086227
DATE: 02/04/98

PROJECT: #11105, N/A
SITE: Castro Valley, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-138-10/001
MATRIX: WATER
DATE SAMPLED: 01/22/98
DATE RECEIVED: 01/23/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 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	97		
4-Bromofluorobenzene	103		
Method 8020A***			
Analyzed by: LJ/			
Date: 02/03/98			
Gasoline Range Organics	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	77		
4-Bromofluorobenzene	93		
California LUFT Manual for Gasoline			
Analyzed by: LJ/			
Date: 02/01/98 08:23:00			

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. H9-9801A25-03

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

P.O.# H176918 , COC#086227
DATE: 02/04/98

PROJECT: #11105, N/A
SITE: Castro Valley, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-3

PROJECT NO: 10-138-10/001
MATRIX: WATER
DATE SAMPLED: 01/22/98
DATE RECEIVED: 01/23/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	2300	250 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	1.4	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	97		
Method 8020A***			
Analyzed by: LJ			
Date: 02/03/98			
Gasoline Range Organics	3.1	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	77		
4-Bromofluorobenzene	97		
California LUFT Manual for Gasoline			
Analyzed by: LJ/			
Date: 02/02/98 02:40:00			

(P) - Practical Quantitation Limit ND - Not detected.

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. H9-9801A25-04

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

P.O.# H176918 , COC#086227
DATE: 02/04/98

PROJECT: #11105, N/A
SITE: Castro Valley, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-4

PROJECT NO: 10-138-10/001
MATRIX: WATER
DATE SAMPLED: 01/22/98
DATE RECEIVED: 01/23/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	130	10 P	µg/L
Benzene	7.7	0.5 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	93		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: LJ/			
Date: 02/03/98			
Gasoline Range Organics	0.17	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	77		
4-Bromofluorobenzene	97		
California LUFT Manual for Gasoline			
Analyzed by: LJ/			
Date: 02/02/98 03:05:00			

(P) - Practical Quantitation Limit ND - Not detected.

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

Certificate of Analysis No. H9-9801A25-05

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

P.O.# H176918 , COC#086227
DATE: 02/04/98

PROJECT: #11105, N/A
SITE: Castro Valley, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-5

PROJECT NO: 10-138-10/001
MATRIX: WATER
DATE SAMPLED: 01/22/98
DATE RECEIVED: 01/23/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	120	10 P	µg/L
Benzene	ND	0.5 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	93		
Method 8020A***			
Analyzed by: LJ			
Date: 02/03/98			
Gasoline Range Organics	0.13	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	77		
4-Bromofluorobenzene	93		
California LUFT Manual for Gasoline			
Analyzed by: LJ/			
Date: 02/02/98 03:30:00			

(P) - Practical Quantitation Limit ND - Not detected.

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. H9-9801A25-06

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

P.O.# H176918 , COC#086227
DATE: 02/04/98

PROJECT: #11105, N/A
SITE: Castro Valley, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-6

PROJECT NO: 10-138-10/001
MATRIX: WATER
DATE SAMPLED: 01/22/98
DATE RECEIVED: 01/23/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	1300	100 P	µg/L
Benzene	440	5 P	µg/L
Toluene	9.0	1.0 P	µg/L
Ethylbenzene	15	1.0 P	µg/L
Total Xylene	17.7	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: LJ			
Date: 02/03/98			
Gasoline Range Organics	4.2	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	93		
California LUFT Manual for Gasoline			
Analyzed by: LJ/			
Date: 02/02/98 03:55:00			

(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. H9-9801A25-07

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

P.O.# H176918 , COC#086227
DATE: 02/04/98

PROJECT: #11105, N/A
SITE: Castro Valley, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-7

PROJECT NO: 10-138-10/001
MATRIX: WATER
DATE SAMPLED: 01/22/98
DATE RECEIVED: 01/23/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	10000	500 P	µg/L
Benzene	ND	0.5 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	100		
Method 8020A***			
Analyzed by: LJ/			
Date: 02/03/98			
Gasoline Range Organics	13	2.5 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	80		
4-Bromofluorobenzene	93		
California LUFT Manual for Gasoline			
Analyzed by: LJ/			
Date: 02/03/98 04:36:00			

(P) - Practical Quantitation Limit ND - Not detected.

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. H9-9801A25-08

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

P.O.# H176918 , COC#086227
DATE: 02/04/98

PROJECT: #11105, N/A
SITE: Castro Valley, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-8

PROJECT NO: 10-138-10/001
MATRIX: WATER
DATE SAMPLED: 01/22/98
DATE RECEIVED: 01/23/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	10000	500 P	µg/L
Benzene	ND	0.5 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	100		
Method 8020A***			
Analyzed by: LJ/			
Date: 02/03/98			
Gasoline Range Organics	13	2.5 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	73		
4-Bromofluorobenzene	100		
California LUFT Manual for Gasoline			
Analyzed by: LJ/			
Date: 02/03/98 03:19:00			

(P) - Practical Quantitation Limit ND - Not detected.

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

SPL

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

SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020

Batch Id: VARE980201223900

Units: µg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50.0	37	74.0	72 - 128
Benzene	ND	50.0	44	88.0	61 - 119
Toluene	ND	50.0	43	86.0	65 - 125
EthylBenzene	ND	50.0	43	86.0	70 - 118
O Xylene	ND	50.0	43	86.0	72 - 117
M & P Xylene	ND	100.0	87	87.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	2300	20.0	2300	NC	2300	NC	NC	20	39 - 150
BENZENE	ND	20.0	15	75.0	15	75.0	0	21	32 - 164
TOLUENE	ND	20.0	15	75.0	15	75.0	0	20	38 - 159
ETHYLBENZENE	ND	20.0	15	75.0	14	70.0	6.90	19	52 - 142
O XYLENE	ND	20.0	15	75.0	16	80.0	6.45	18	53 - 143
M & P XYLENE	1.4	40.0	30	71.5	29	69.0	3.56	17	53 - 144

Analyst: LJ/
Sequence Date: 02/02/98
SPL ID of sample spiked: 9801A25-03A
Sample File ID: E_A4253.TX0
Method Blank File ID:
Blank Spike File ID: E_A4260.TX0
Matrix Spike File ID: E_A4248.TX0
Matrix Spike Duplicate File ID: E_A4249.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>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (1st Q '97)
(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID):

9801A11-10A 9801A09-09A 9801A11-04A 9801A11-09A
9801A25-07A 9801A09-06A 9801A11-05A 9801A11-08A
9801A11-11A 9801A11-12A 9801A11-13A 9801A11-14A
9801A25-01A 9801A25-03A 9801A25-06A 9801A25-08A

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

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020

Batch Id: VARE980202195500

Units: µg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	50	100	72 - 128
Benzene	ND	50	50	100	61 - 119
Toluene	ND	50	49	98.0	65 - 125
EthylBenzene	ND	50	49	98.0	70 - 118
O Xylene	ND	50	50	100	72 - 117
M & P Xylene	ND	100	100	100	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	4000	20	3800	NC	4000	NC	NC	20	39 - 150
BENZENE	ND	20	15	75.0	18	90.0	18.2	21	32 - 164
TOLUENE	ND	20	15	75.0	17	85.0	12.5	20	38 - 159
ETHYLBENZENE	ND	20	16	80.0	18	90.0	11.8	19	52 - 142
O XYLENE	ND	20	16	80.0	18	90.0	11.8	18	53 - 143
M & P XYLENE	ND	40	31	77.5	35	87.5	12.1	17	53 - 144

Analyst: LJ/
Sequence Date: 02/02/98
SPL ID of sample spiked: 9801B37-10A
Sample File ID: E_B1058.TX0
Method Blank File ID:
Blank Spike File ID: E_B1019.TX0
Matrix Spike File ID: E_B1021.TX0
Matrix Spike Duplicate File ID: E_B1022.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>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (1st Q '97)
(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID): 9801A25-02A 9801A25-04A

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

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020

Batch Id: HP_W980203130000

Units: µg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	50	100	72 - 128
Benzene	ND	50	55	110	61 - 119
Toluene	ND	50	57	114	65 - 125
EthylBenzene	ND	50	57	114	70 - 118
O Xylene	ND	50	57	114	72 - 117
M & P Xylene	ND	100	110	110	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	660	20	750	NC	670	NC	NC	20	39 - 150
BENZENE	ND	20	25	125	23	115	8.33	21	32 - 164
TOLUENE	ND	20	23	115	21	105	9.09	20	38 - 159
ETHYLBENZENE	ND	20	23	115	21	105	9.09	19	52 - 142
O XYLENE	ND	20	25	125	23	115	8.33	18	53 - 143
M & P XYLENE	ND	40	46	115	42	105	9.09	17	53 - 144

Analyst: LJ
Sequence Date: 02/03/98
SPL ID of sample spiked: 9801D56-03A
Sample File ID: W_B1046.TX0
Method Blank File ID:
Blank Spike File ID: W_B1045.TX0
Matrix Spike File ID: W_B1041.TX0
Matrix Spike Duplicate File ID: W_B1042.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>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (1st Q '97)
(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID): 9801A09-05A 9801A11-09A 9801A25-03A 9801A25-05A 9801A25-06A 9801D44-05A 9801D44-06A 9801D44-07A 9801D44-05A 9801940-03A

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

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020

Batch Id: VARE980203090300

Units: µg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	47	94.0	72 - 128
Benzene	ND	50	48	96.0	61 - 119
Toluene	ND	50	47	94.0	65 - 125
EthylBenzene	ND	50	47	94.0	70 - 118
O Xylene	ND	50	48	96.0	72 - 117
M & P Xylene	ND	100	95	95.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	18	90.0	17	85.0	5.71	20	39 - 150
BENZENE	ND	20	17	85.0	14	70.0	19.4	21	32 - 164
TOLUENE	ND	20	16	80.0	14	70.0	13.3	20	38 - 159
ETHYLBENZENE	ND	20	15	75.0	13	65.0	14.3	19	52 - 142
O XYLENE	ND	20	16	80.0	14	70.0	13.3	18	53 - 143
M & P XYLENE	ND	40	31	77.5	26	65.0	17.5 *	17	53 - 144

Analyst: LJ/
Sequence Date: 02/03/98
SPL ID of sample spiked: 9801B37-06A
Sample File ID: E_B1056.TX0
Method Blank File ID:
Blank Spike File ID: E_B1050.TX0
Matrix Spike File ID: E_B1051.TX0
Matrix Spike Duplicate File ID: E_B1052.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>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (1st Q '97)
(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID): 9801B43-06A 9801A25-07A 9801B37-06A 9801B37-07A 9801A25-08A

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

** SPL BATCH QUALITY CONTROL REPORT **

California LUFT Manual for Gasoline

Batch Id: VARE980203092900

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Gasoline Range Organics	ND	0.9	0.94	104	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
GASOLINE RANGE ORGANICS	ND	0.90	0.62	68.9	0.62	68.9	0	36	36 - 160

Analyst: LJ/

Sequence Date: 02/03/98

SPL ID of sample spiked: 9801B37-07A

Sample File ID: EEB1057.TX0

Method Blank File ID:

Blank Spike File ID: EEB1049.TX0

Matrix Spike File ID: EEB1053.TX0

Matrix Spike Duplicate File ID: EEB1054.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>] x 100

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

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

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

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

SAMPLES IN BATCH(SPL ID): 9801A25-07A 9801B37-06A 9801B37-07A 9801A25-08A

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

** SPL BATCH QUALITY CONTROL REPORT **

California LUFT Manual for Gasoline

Matrix: Aqueous

Batch Id: VARE980201225500

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Gasoline Range Organics	0	1.0	0.99	99.0	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
GASOLINE RANGE ORGANICS	0.17	0.90	0.76	65.6	0.63	51.1	24.8	36	36 - 160

Analyst: LJ/

Sequence Date: 02/01/98

SPL ID of sample spiked: 9801A25-04A

Sample File ID: EEA4254.TX0

Method Blank File ID:

Blank Spike File ID: EEA4246.TX0

Matrix Spike File ID: EEA4250.TX0

Matrix Spike Duplicate File ID: EEA4251.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>] x 100

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

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

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

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

SAMPLES IN BATCH(SPL ID): 9801A11-10A 9801A11-04A 9801A11-09A 9801A09-09A 9801A25-03A 9801A25-04A 9801A25-05A 9801A25-06A

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

** SPL BATCH QUALITY CONTROL REPORT **

California LUFT Manual for Gasoline

Batch Id: VARE980201054600

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Gasoline Range Organics	ND	1.0	1.04	104	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
GASOLINE RANGE ORGANICS	ND	0.90	0.48	53.3	0.41	45.6	15.6	36	36 - 160

Analyst: LJ

Sequence Date: 02/01/98

SPL ID of sample spiked: 9801A11-07A

Sample File ID: EEA4220.TX0

Method Blank File ID:

Blank Spike File ID: EEA4213.TX0

Matrix Spike File ID: EEA4216.TX0

Matrix Spike Duplicate File ID: EEA4217.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>] x 100

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

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

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

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

SAMPLES IN BATCH(SPL ID):

9801A11-05A 9801A11-08A 9801A11-14A 9801A25-01A
9801A25-02A 9801A11-11A 9801A11-12A 9801A11-13A
9801A11-01A 9801A11-06A 9801A11-07A 9801A09-05A
9801A11-03A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
1-23-98	1000

SPL Sample ID:
9801A25

			Yes	No
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:		3° C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	384847901	
		Other:		
11	Method of sample disposal:	SPL Disposal		
		HOLD		
		Return to Client		

Name:	Date:
[signature]	1-23-98

9801A25

CHAIN OF CUSTODY

No. 086227

Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering	CONSULTANT'S ADDRESS: 1575 Treat Blvd #201 Walnut Creek, Ca 94598		
BP SITE NUMBER: 11105	BP SITE / FACILITY ADDRESS: Castro Valley, Ca		CONSULTANT PROJECT NUMBER: 10-138-10/001
CONSULTANT PROJECT MANGER: Brady Nagle	PHONE NUMBER: (510) 295-1650	FAX NUMBER: 295-1823	CONSULTANT CONTRACT NUMBER: H176918
BP CONTACT: Scott Hooton	BP ADDRESS: Renton, WA	PHONE NUMBER: —	FAX NO. —
LAB CONTACT: SPL	LABORATORY ADDRESS: Texas	PHONE NUMBER: —	FAX NO. —
BP CONTACT REQUESTING RUSH TAT (Print BP Contact Name)	RUSH REQUESTED OF (Print Consultant Contact Name)	DATE/TIME	SHIPMENT DATE: 1-22-98 / SHIPMENT METHOD: Fed Ex

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

ANALYSIS REQUIRED

AIRBILL NUMBER: 384847170

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPH-E	BTEX	COMMENTS
S-1	1/22/98		W	3	HCl		X	X	
S-2	"		"	"	"		"	"	
S-3	"		"	"	"		"	"	
S-4	"		"	"	"		"	"	
S-5	"		"	"	"		"	"	
S-6	"		"	"	"		"	"	
S-7	"		"	"	"		"	"	
S-8	"		"	"	"		"	"	

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
[signature]	1/22/98	0800	[signature]	1/22/98	0500
[signature]	1/22/98	1600	[signature] (SPL	1/23/98	1000

2 coolers

CLV-16722-A (8/96)
PKG/50

DISTRIBUTION: WHITE - ORIGINAL (WITH DATA) YELLOW - BP PINK - LAB BLUE - CONSULTANT FIELD STAFF

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

BP Site Number:	11105
ERM Contact:	H176918
Sampling Date:	01/22/98
Matrix Description:	Water
Date Final Report Received:	02/09/98
Laboratory & Location:	SPL, Houston, Texas

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

MS/MSD recovery and relative % difference in three of four matrix spikes for MTBE not calculated due to sample exceeding spike by a factor of 4 or more; MS/MSD relative % difference in one four matrix spikes for M & P xylenes values outside QC range due to matrix interference. 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: 2/20/98

BP OIL

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

August 17, 1998

Alameda County Health Care Services Agency
Attention Mr. Scott Seery
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502-6577

RE: Former BP Oil Site No. 11105
3159 Castro Valley Boulevard (at Redwood)
Castro Valley, CA

Dear Mr. Seery:

Enclosed find a 7 August 1998 Groundwater Monitoring and Sampling Report prepared on behalf of BP by Alisto Engineering Group.

The report shows that aromatic petroleum hydrocarbons were detected in samples obtained in three of the seven wells sampled this quarter. The highest benzene concentration (3400 ug/l) was detected in a sample obtained from well ESE-1, located southwest of the underground storage tank area. This represents the highest benzene concentration ever detected at the site.

You will also note that MTBE was detected in groundwater samples collected from wells ESE-1(4,900 ug/l), ESE-2 (36,000 ug/l), ESE-3 (4,000 ug/l), MW-7 (3,800 ug/l), and ESE-5 (180 ug/l). With the exception of well MW-7, these MTBE concentrations are higher than MTBE concentrations previously reported for each of these wells.

By copy of this letter to Brady Nagle at Alisto Engineering Group, samples obtained from wells ESE-1, ESE-2, ESE-3 and MW-7 should be tested for MTBE (and aromatics) by Methods 8240 or 8260 during the next sampling event. This will help corroborate prior data obtained by Method 8020.

Petroleum hydrocarbons were reported to be present in the soil and groundwater at this site at the time the property was sold during 1994. Concentrations detected since that time have increased and raise the concern that petroleum releases have occurred subsequent to BP's operation of the facility.

Please contact me at (425) 251-0689 if you have any questions or concerns regarding this submittal.

Sincerely,

Scott Hooton

attachment

cc: site file
Brady Nagle - Alisto
A. Fagorala - RWQCB-SFBR
Mr. Azim Shakoori, Castro Valley Chevron, 3519 Castro Valley Boulevard, Castro Valley, CA 94546 (w/attachment)