BP OIL

BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(425) 251-0687
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ENVIRONMENTAL PROTECTION
97 NOV 12 PM 2:22

November 4, 1997

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 Groundwater Monitoring and Sampling Report, dated 10 October 1997.

The report shows that aromatic petroleum hydrocarbons were detected in samples obtained in two of the seven wells sampled this quarter. The highest benzene concentration (1,400 ug/l) was detected in a sample obtained from well ESE-3, located between the dispenser islands and the underground storage tank area. This is the highest benzene concentration ever reported at this site, and is about an order-of-magnitude higher than prior concentrations reported for ESE-3. Note that benzene was not detected in well ESE-3 last quarter, and that there does not appear to be good correlation between groundwater elevation and concentration data.

You will also note that MTBE was detected in groundwater samples collected from wells located to the southeast of the underground storage tanks. I understand that the tanks UST system will be replaced to comply with December 1998 requirements for leak detection and prevention. The lack of these features most likely explains the variable and increasing MTBE concentrations detected in groundwater samples collected from the monitoring wells installed at this site.

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

Sincerely,

Scott Hooton

attachment

cc: site file
E. So - 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. 10-138-09-004

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

October 10, 1997

Brady Nagle
Project Manager

Al Sevilla, P.E.
Principal

GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-138-09-004

October 10, 1997

INTRODUCTION

This report presents the results and findings of the July 18, 1997 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. Historical methyl tert butyl ether (MTBE) laboratory analysis data not previously tabulated are now included in Table 1. Copies of the MTBE documentation are included in Appendix C of this report only.

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-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

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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-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

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-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
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

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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-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:\01\10-138\138-9-4.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	177.24	9.31	167.93	48	47	13	8.4	0.99	29
MW-1	09/17/91	177.24	9.50	167.74	39	19	4.9	4.1	1.2	5.9
MW-1	10/10/91	177.24	9.70	167.54	28	19	4.1	4.7	1.0	4.8
MW-1	11/25/91	177.24	9.41	167.83	170	36	5.6	5.6	1.6	8.4
MW-1	12/23/91	177.24	9.65	167.59	78	34	9.3	7.3	0.54	13
MW-1	01/14/92	177.24	8.57	168.67	39	19	7.3	8.7	1.3	8.9
MW-1	05/27/92	177.24	8.59	168.65	120	11	8.8	16	2.3	15
MW-1	11/13/92	177.24	9.13	168.11	120	4.4	5.8	10	2.1	13
MW-1	02/23/93	177.24	7.34	169.90	100	14	4.5	11	2.1	12
MW-1	05/18/93	177.24	8.12	169.12	92	30	4.0	11	2.5	15
MW-1	08/30/93	177.24	8.78	168.46	77	9.4	6.4	11	2.2	12
MW-1	11/24/93	177.24	8.74	168.50	66	8.2	8.3	8.9	2.0	11
MW-1	02/28/94	177.24	7.44	169.80	90	110	11	9.6	2.1	9.9
MW-1	05/19/94	177.24	8.05	169.19	---	---	---	---	---	---
MW-1	08/22/94	177.24	8.67	168.57	---	---	---	---	---	---
MW-1	11/18/94	177.24	7.14	170.10	---	---	---	---	---	---
MW-1	02/23/95	177.24	7.72	169.52	---	---	---	---	---	---
MW-1	05/02/95	177.24	6.96	170.28	---	---	---	---	---	---
MW-1	07/28/95	177.24	8.27	168.97	---	---	---	---	---	---
MW-1	10/26/95	177.24	8.45	168.79	---	---	---	---	---	---
MW-1	01/29/96	177.24	6.17	171.07	---	---	---	---	---	---
MW-1	02/07/96	177.24	6.09	171.15	---	---	---	---	---	---
MW-1	04/23/96	177.24	7.47	169.77	---	---	---	---	---	---
MW-1	07/09/96	177.24	8.16	169.08	---	---	---	---	---	---
MW-1	01/20/97	177.24	7.12	170.12	---	---	---	---	---	---
MW-1	04/25/97	177.24	7.98	169.26	---	---	---	---	---	---
MW-1	07/24/97	177.24	8.71	168.53	---	---	---	---	---	---
MW-2	08/19/91	176.30	9.60	166.70	69	19	26	22	2.1	18
MW-2	09/17/91	176.30	10.23	166.07	74	56	10	11	1.4	8.1
MW-2	10/10/91	176.30	10.39	165.91	85	360	21	25	2.1	14
MW-2	11/25/91	176.30	9.81	166.49	230	130	11	9.7	1.4	9.7
MW-2	12/23/91	176.30	10.39	165.91	2100	700	36	130	79	560
MW-2	01/14/92	176.30	8.97	167.33	59	1600	17	14	1.8	15
MW-2	05/27/95	176.30	9.31	166.99	89	130	18	19	1.7	14
MW-2	11/13/92	176.30	8.70	167.60	79	8.2	10	13	1.4	8.6
MW-2	02/23/93	176.30	6.39	169.91	76	7.0	12	17	1.6	9.6
MW-2	05/18/93	176.30	7.73	168.57	67	44	9.2	12	1.4	9.3
MW-2	08/30/93	176.30	8.64	167.66	110	110	11	14	1.8	11
MW-2	11/24/93	176.30	8.47	167.83	12	79	13	17	2.5	17
MW-2	02/28/94	176.30	6.99	169.31	91	13	13	16	1.5	9.0
MW-2	05/19/94	176.30	7.70	168.60	---	---	---	---	---	---
MW-2	08/22/94	176.30	8.59	167.71	---	---	---	---	---	---
MW-2	11/18/94	176.30	6.92	169.38	---	---	---	---	---	---
MW-2	02/23/95	176.30	7.51	168.79	---	---	---	---	---	---
MW-2	05/02/95	176.30	6.79	169.51	---	---	---	---	---	---
MW-2	07/28/95	176.30	7.99	168.31	---	---	---	---	---	---
MW-2	10/26/95	176.30	8.21	168.09	---	---	---	---	---	---
MW-2	01/29/96	176.30	5.16	171.14	---	---	---	---	---	---
MW-2	02/07/96	176.30	5.70	170.60	---	---	---	---	---	---
MW-2 (c)	04/23/96	176.30	---	---	---	---	---	---	---	---

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	178.07	8.95	169.12	170	150	82	31	4.4	22
MW-3	09/17/91	178.07	9.20	168.87	180	140	47	25	2.6	15
MW-3	10/10/91	178.07	9.43	168.64	140	39	57	31	2.2	14
MW-3	11/25/91	178.07	9.19	168.88	150	74	65	31	3.4	18
MW-3	12/23/91	178.07	9.37	168.70	740	540	30	61	31	180
MW-3	01/14/92	178.07	8.24	169.83	130	270	76	30	3.4	21
MW-3	05/27/92	178.07	8.45	169.62	370	27	91	57	3.0	21
MW-3	11/13/92	178.07	7.86	170.21	140	4.7	38	24	2.0	12
MW-3	02/23/93	178.07	8.01	170.06	110	8.1	31	18	1.9	11
MW-3	05/18/93	178.07	7.12	170.95	130	7.2	36	21	2.1	12
MW-3	08/30/93	178.07	7.64	170.43	130	32	36	21	1.9	8.2
MW-3	11/24/93	178.07	7.55	170.52	160	24	48	26	2.2	12
MW-3	02/28/94	178.07	6.68	171.39	110	210	36	21	1.9	11
MW-3	05/19/94	178.07	7.15	170.92	---	---	---	---	---	---
MW-3	08/22/94	178.07	7.65	170.42	---	---	---	---	---	---
MW-3	11/18/94	178.07	6.05	172.02	---	---	---	---	---	---
MW-3	02/23/95	178.07	7.24	170.83	---	---	---	---	---	---
MW-3	05/02/95	178.07	6.50	171.57	---	---	---	---	---	---
MW-3	07/28/95	178.07	7.80	170.27	---	---	---	---	---	---
MW-3	10/26/95	178.07	7.72	170.35	---	---	---	---	---	---
MW-3	01/29/96	178.07	5.77	172.30	---	---	---	---	---	---
MW-3	02/07/96	178.07	5.05	173.02	---	---	---	---	---	---
MW-3	04/23/96	178.07	6.81	171.26	---	---	---	---	---	---
MW-3	07/09/96	178.07	7.61	170.46	---	---	---	---	---	---
MW-3	01/20/97	178.07	6.35	171.72	---	---	---	---	---	---
MW-3	04/25/97	178.07	7.12	170.95	---	---	---	---	---	---
MW-3	07/24/97	178.07	7.90	170.17	---	---	---	---	---	---

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 destroyed February 7, 1996.

F:\01\10-138.K\OINT-1.WQ2

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

N

0 1000' 2000'

FIGURE 1

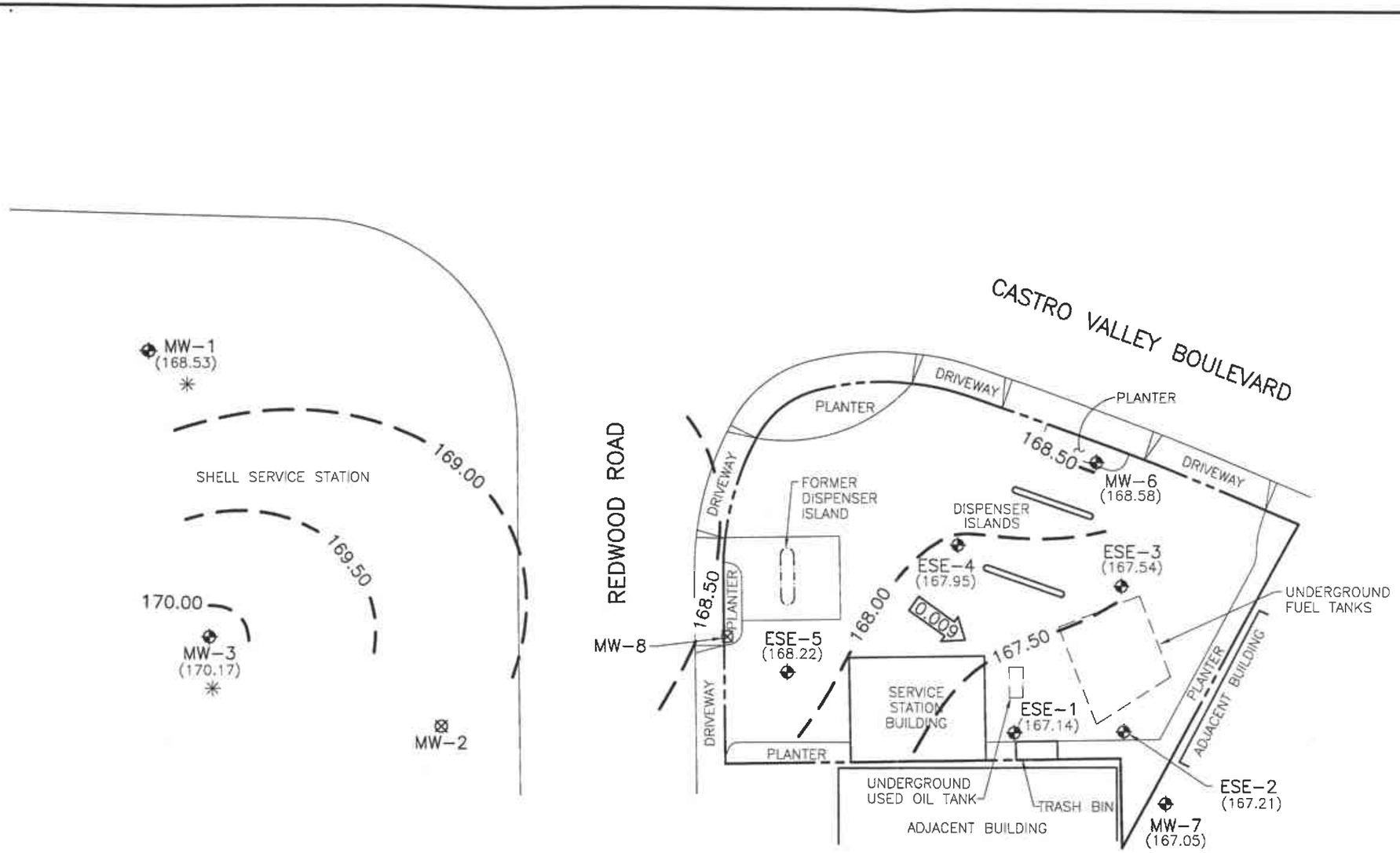
SITE VICINITY MAP

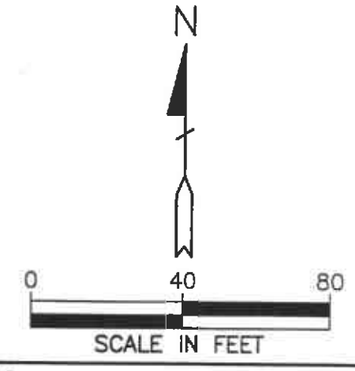
BP OIL SERVICE STATION NO. 11105
3519 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

PROJECT NO. 10-138

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

101.369---DWG 10-12-93 MAP 1=1





LEGEND

- ◆ GROUNDWATER MONITORING WELL
- ⊠ DESTROYED WELL
- (167.95) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 168.00 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL–0.50 FOOT)
- 0.009 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT
- ✳ WELL MONITORED ON JULY 24, 1997

FIGURE 2

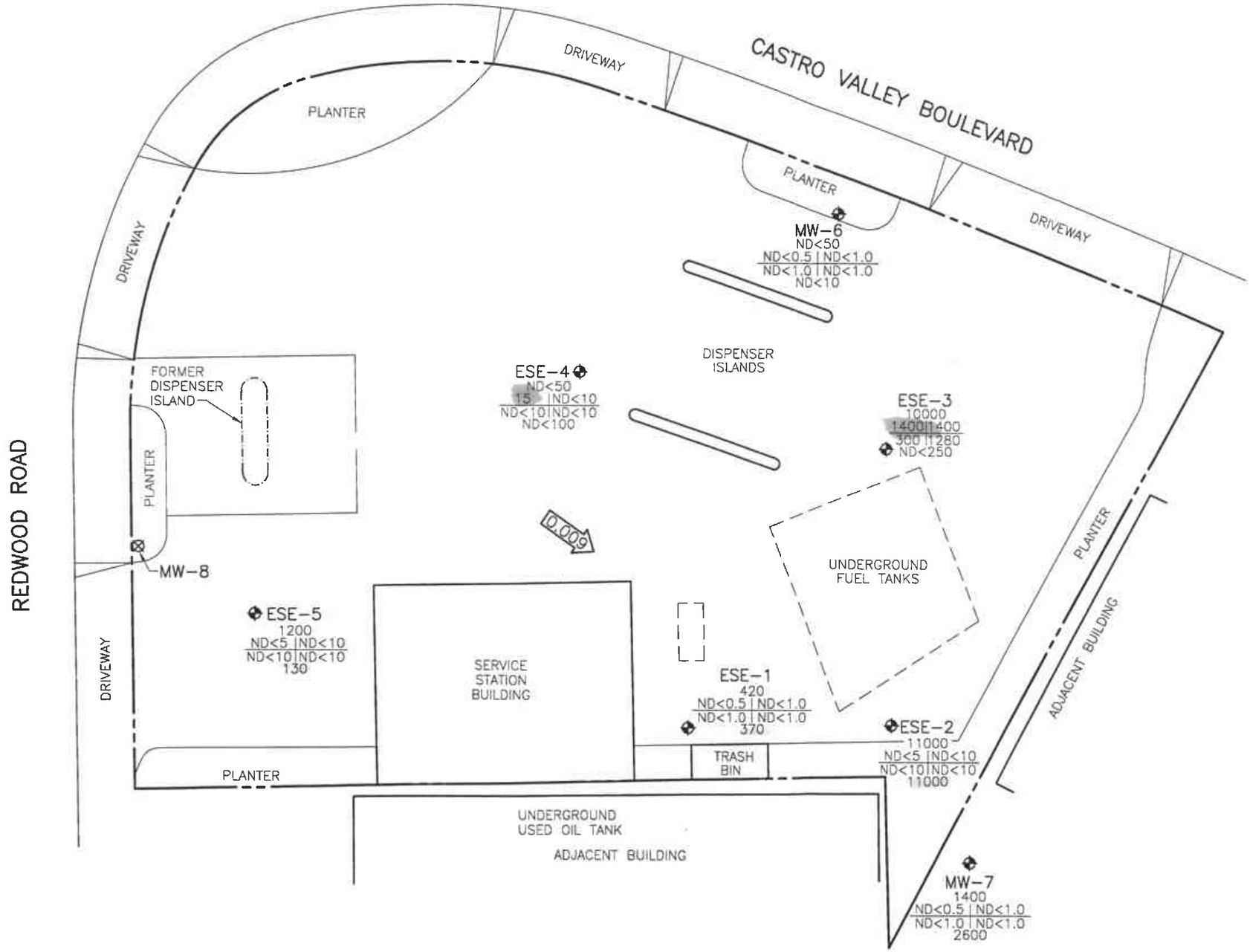
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

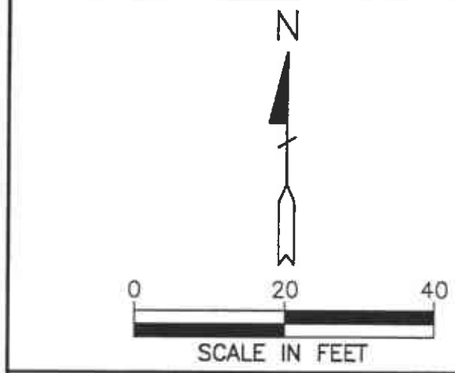
JULY 18, 1997

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
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
0.009	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

JULY 18, 1997

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

PROJECT NO. 10-138

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10138C-W.DWG 9-8-97 DUM 1=20

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

ALISTO

ENGINEERING

GROUP

1575 TREAT BOULEVARD, SUITE 201

Field Report / Sampling Data Sheet

Project No. 10-138-09-004 Date: 7/18/97

Address 3515 Castro Valley Blvd Day: M T W TH F

Contract No. G797425 City: Castro Valley

Station No. BP 11105 Sampler: CB

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	10.55	Ø	1014	
ESE-2	S-2	2"	30.00	11.02		1026	
ESE-3	S-4	2"	30.00	10.66		1037	
ESE-4	S-3	2"	25.00	9.71		1081	
ESE-5	S-7	2"	24.00	7.86		1048	QC-1 From this well
MW-6	S-1	2"	29.43	10.66		1020	
MW-7	S-5	2"	19.85	9.50		1040	~~QC-1 From This~~
MW-8	N/S	—	—	—	—	—	Destroyed Well

FIELD INSTRUMENT CALIBRATION DATA

pH METER Lcm 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED (Y) N TIME 1110

D.O. METER Lcm ZERO d.O. SOLUTION _____ BAROMETRIC PRESSURE 760 TEMP _____ WEATHER Clear

CONDUCTIVITY METER Lcm 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.
MW-6	10.66	2"	OK	Ø	Y (N)	3	1130	71.2	7.79	445 µS	4.6
Total Depth - Water Level=	x Well Vol. Factor=	x#Vol. to Purge	PurgeVol.			6		70.5	7.66	457 µS	
29.43-10.66=18.77	X.16= 3.00	X3= 9.00				9	1138	69.7	7.57	461 µS	4.8
Purge Method: ØSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

O EPA 601 _____
Ø TPH-G/BTEX ___
O TPH Diesel ____
O TOG 5520 ___
TIME/SAMPLE ID
1140

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
ESE-2	11.02	2"	OK	Ø	Y (N)	3	1156	69.4	7.27	410 µS	5.0
Total Depth - Water Level=	x Well Vol. Factor=	x#Vol. to Purge	PurgeVol.			6		68.7	7.14	431 µS	
30.00-11.02=18.98	X.16= 3.04	X3= 9.12				9.5	1210	68.2	7.11	442 µS	5.0
Purge Method: ØSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

O EPA 601 _____
Ø TPH-G/BTEX ___
O TPH Diesel ____
O TOG 5520 ___
TIME/SAMPLE ID
1217

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. 10-138-09-004 Date: 7/18/97
Address 3515 Castro Valley Blvd Day: M T W TH F
Contract No. G797425 City: Castro Valley
Station No. BP 11105 Sampler: CB

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
ESE-4	9.71	2"	OIL	Ø	Y (N)	3	1327	71.9	7.71	466µS	4.5
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			5		71.0	7.47	492µS	
25.00 - 9.71 = 15.29 x .16 =	2.45 x 3 =	7.35				8	1340	70.5	7.42	502µS	4.5
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: 1342

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
ESE-3	10.66	2"	OIL	Ø	Y (N)	3	1401	70.7	7.87	430µS	5.2
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			6		70.1	7.62	461µS	
30.00 - 10.66 = 19.34 x .16 =	3.09 x 3 =	9.27				10	1411	69.4	7.55	467µS	5.2
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: 1416

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-7	9.50	2"	OK	Ø	Y (N)	2	1422	71.2	7.52	437µS	5.1
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			3		70.3	7.33	460µS	
19.85 - 9.50 = 10.35 x .16 =	1.66 x 3 =	4.98				5	1431	69.7	7.26	472µS	5.2
Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

(X) EPA 601_____
O TPH-G/BTEX___
O TPH Diesel_____
O TOG 5520 ___
TIME/SAMPLE ID: 1440

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
ESE-1	10.55	2"	OIL	Ø	Y (N)	3	1451	70.4	7.61	471µS	5.1
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			7		69.3	7.42	499µS	
30.00 - 10.55 = 19.45 x .16 =	3.11 x 3 =	9.33				10	1501	68.7	7.33	497µS	5.0
Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

(X) EPA 601_____
O TPH-G/BTEX___
O TPH Diesel_____
O TOG 5520 ___
TIME/SAMPLE ID: 1504

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
ESE-5	7.86	2"	OIL	Ø	Y (N)	3	1516	71.3	7.33	590µS	4.7
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			5		70.6	7.17	610µS	
24.00 - 7.86 = ~~16.14~~ 16.14 x .16 =	2.58 x 3 =	7.74				8	1529	70.1	7.10	617µS	5.0
Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

(X) EPA 601_____
O TPH-G/BTEX___
O TPH Diesel_____
O TOG 5520 ___
TIME/SAMPLE ID: 1537

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

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

August 1, 1997

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

The following report contains analytical results for samples received at Southern Petroleum Laboratories (SPL) on July 23, 1997. The samples were assigned to Certificate of Analysis No(s).9707A78 and analyzed for the parameters specified on the chain of custody.

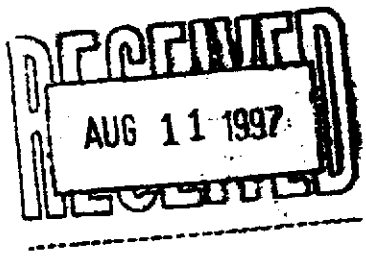
There were no analytical problems encountered with this group of samples and all quality control data was within acceptance limits.

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 Number(s) 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

Ed Fry
Project Manager



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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 97-07-A78

Approved for Release by:

Ed Fry, Project Manager

Date: 8/1/97

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. H9-9707A78-01

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

P.O.# G797425, COC#076994
DATE: 07/31/97

PROJECT: BP Oil #11105
SITE: Castro Valley
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-1

PROJECT NO: 10-138-9-4
MATRIX: WATER
DATE SAMPLED: 07/18/97
DATE RECEIVED: 07/23/97

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	100		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: HS			
Date: 07/26/97			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	67		
4-Bromofluorobenzene	90		
California LUFT Manual			
Analyzed by: HS			
Date: 07/26/97 10:05:00			

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. H9-9707A78-02

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

P.O.# G797425, COC#076994
DATE: 07/31/97

PROJECT: BP Oil #11105
SITE: Castro Valley
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-138-9-4
MATRIX: WATER
DATE SAMPLED: 07/18/97
DATE RECEIVED: 07/23/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	11000	1000 P	µg/L
Benzene	ND	5 P	µg/L
Toluene	ND	10 P	µg/L
Ethylbenzene	ND	10 P	µg/L
Total Xylene	ND	10 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	97		
Method 8020A***			
Analyzed by: HS			
Date: 07/26/97			
Total Petroleum Hydrocarbons-Gasoline	11	5 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	67		
4-Bromofluorobenzene	90		
California LUFT Manual			
Analyzed by: HS			
Date: 07/27/97 05:32:00			

(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.

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

Certificate of Analysis No. H9-9707A78-03

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

P.O.# G797425, COC#076994
DATE: 07/31/97

PROJECT: BP Oil #11105
SITE: Castro Valley
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-3

PROJECT NO: 10-138-9-4
MATRIX: WATER
DATE SAMPLED: 07/18/97
DATE RECEIVED: 07/23/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	100 P	µg/L
Benzene	15	5 P	µg/L
Toluene	ND	10 P	µg/L
Ethylbenzene	ND	10 P	µg/L
Total Xylene	ND	10 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: DN			
Date: 07/25/97			
Total Petroleum Hydrocarbons-Gasoline	ND	0.5 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	67		
4-Bromofluorobenzene	103		
California LUFT Manual			
Analyzed by: DN			
Date: 07/25/97 04:28:00			

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

Certificate of Analysis No. H9-9707A78-04

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

P.O.# G797425, COC#076994
DATE: 07/31/97

PROJECT: BP Oil #11105
SITE: Castro Valley
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-4

PROJECT NO: 10-138-9-4
MATRIX: WATER
DATE SAMPLED: 07/18/97
DATE RECEIVED: 07/23/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	250 P	µg/L
Benzene	1400	12 P	µg/L
Toluene	1400	25 P	µg/L
Ethylbenzene	300	25 P	µg/L
Total Xylene	1280	25 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	104		
4-Bromofluorobenzene	101		
Method 8020A***			
Analyzed by: DN			
Date: 07/25/97			
Total Petroleum Hydrocarbons-Gasoline	10	1.2 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	67		
4-Bromofluorobenzene	95		
California LUFT Manual			
Analyzed by: DN			
Date: 07/25/97 03:59:00			

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.

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HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707A78-05

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

P.O.# G797425, COC#076994
DATE: 07/31/97

PROJECT: BP Oil #11105
SITE: Castro Valley
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-5

PROJECT NO: 10-138-9-4
MATRIX: WATER
DATE SAMPLED: 07/18/97
DATE RECEIVED: 07/23/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	2600	100 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	97		
Method 8020A***			
Analyzed by: HS			
Date: 07/27/97			
Total Petroleum Hydrocarbons-Gasoline	1.4	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	67		
4-Bromofluorobenzene	90		
California LUFT Manual			
Analyzed by: DN			
Date: 07/25/97 05:25:00			

(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.

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HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707A78-06

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

P.O.# G797425, COC#076994
DATE: 07/31/97

PROJECT: BP Oil #11105
SITE: Castro Valley
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-6

PROJECT NO: 10-138-9-4
MATRIX: WATER
DATE SAMPLED: 07/18/97
DATE RECEIVED: 07/23/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	370	100 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	97		
Method 8020A***			
Analyzed by: HS			
Date: 07/26/97			
Total Petroleum Hydrocarbons-Gasoline	0.42	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	70		
4-Bromofluorobenzene	97		
California LUFT Manual			
Analyzed by: DN			
Date: 07/25/97 04:57:00			

(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.

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HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707A78-07

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

P.O.# G797425, COC#076994
DATE: 07/31/97

PROJECT: BP Oil #11105
SITE: Castro Valley
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-7

PROJECT NO: 10-138-9-4
MATRIX: WATER
DATE SAMPLED: 07/18/97
DATE RECEIVED: 07/23/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	100 P	µg/L
Benzene	ND	5 P	µg/L
Toluene	ND	10 P	µg/L
Ethylbenzene	ND	10 P	µg/L
Total Xylene	ND	10 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	103		
4-Bromofluorobenzene	103		
Method 8020A***			
Analyzed by: DN			
Date: 07/25/97			
Total Petroleum Hydrocarbons-Gasoline	1.2	0.5 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	70		
4-Bromofluorobenzene	110		
California LUFT Manual			
Analyzed by: DN			
Date: 07/25/97 03:31:00			

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.

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

Certificate of Analysis No. H9-9707A78-08

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

P.O.# G797425, COC#076994
DATE: 07/31/97

PROJECT: BP Oil #11105
SITE: Castro Valley
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-8

PROJECT NO: 10-138-9-4
MATRIX: WATER
DATE SAMPLED: 07/18/97
DATE RECEIVED: 07/23/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	130	50 P	µg/L
Benzene	31	2.5 P	µg/L
Toluene	ND	5.0 P	µg/L
Ethylbenzene	ND	5.0 P	µg/L
Total Xylene	ND	5.0 P	µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	93

Method 8020A***
Analyzed by: HS
Date: 07/27/97

Total Petroleum Hydrocarbons-Gasoline	0.63	0.25 P	mg/L

Surrogate	% Recovery
1,4-Difluorobenzene	65
4-Bromofluorobenzene	87

California LUFT Manual
Analyzed by: HS
Date: 07/27/97 12:28:00

(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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QUALITY CONTROL

DOCUMENTATION

SPL COMPOUND

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

SURROGATE RECOVERY SUMMARY
07/31/97 15:51:11

Method 8020A* BATCH#:HP_S970725112000**
WORK ORDER: 9707A78-03A **CLIENT SAMPLE ID:** S-3

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30.0000	100	70- 131
4-Bromofluorobenzene	30	30.0000	100	43- 135

Method 8020A* BATCH#:HP_S970725112000**
WORK ORDER: 9707A78-04A **CLIENT SAMPLE ID:** S-4

1,4-Difluorobenzene	30	31.2000	104	70- 131
4-Bromofluorobenzene	30	30.4000	101	43- 135

Method 8020A* BATCH#:HP_S970725112000**
WORK ORDER: 9707A78-05A **CLIENT SAMPLE ID:** S-5

1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	29	97	43- 135

Method 8020A* BATCH#:HP_S970725112000**
WORK ORDER: 9707A78-06A **CLIENT SAMPLE ID:** S-6

1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	29	97	43- 135

Method 8020A* BATCH#:HP_S970725112000**
WORK ORDER: 9707A78-07A **CLIENT SAMPLE ID:** S-7

1,4-Difluorobenzene	30	31.0000	103	70- 131
4-Bromofluorobenzene	30	31.0000	103	43- 135

Method 8020A* BATCH#:HP_S970725112000**
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	29	29.4	70- 131
4-Bromofluorobenzene	30	29	29.5	43- 135

Method 8020A* BATCH#:HP_S970725112000**
WORK ORDER: LCS **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

Method 8020A* BATCH#:HP_S970725112000**
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:** 9707A81-01A

1,4-DIFLUOROBENZENE	30	29	97	70- 131

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

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-BROMOFLUOROBENZENE	30	30	100	43- 135

Method 8020A* BATCH#:HP_S970725112000**
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9707A81-01A

1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

California LUFT Manual BATCH#:HP_S970725112010
WORK ORDER: 9707A78-03A **CLIENT SAMPLE ID:**S-3

1,4-Difluorobenzene	30	20.0000	67	50- 150
4-Bromofluorobenzene	30	31.0000	103	50- 150

California LUFT Manual BATCH#:HP_S970725112010
WORK ORDER: 9707A78-04A **CLIENT SAMPLE ID:**S-4

1,4-Difluorobenzene	30	20.0000	67	50- 150
4-Bromofluorobenzene	30	28.4000	95	50- 150

California LUFT Manual BATCH#:HP_S970725112010
WORK ORDER: 9707A78-05A **CLIENT SAMPLE ID:**S-5

1,4-Difluorobenzene	30	20	67	50- 150
4-Bromofluorobenzene	30	27	90	50- 150

California LUFT Manual BATCH#:HP_S970725112010
WORK ORDER: 9707A78-06A **CLIENT SAMPLE ID:**S-6

1,4-Difluorobenzene	30	21	70	50- 150
4-Bromofluorobenzene	30	29	97	50- 150

California LUFT Manual BATCH#:HP_S970725112010
WORK ORDER: 9707A78-07A **CLIENT SAMPLE ID:**S-7

1,4-Difluorobenzene	30	21.0000	70	50- 150
4-Bromofluorobenzene	30	33.0000	110	50- 150

California LUFT Manual BATCH#:HP_S970725112010
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	20	20.1	50- 150
4-Bromofluorobenzene	30	27	27.3	50- 150

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HOUSTON, TEXAS 77054
PHONE (713)660-0901

California LUFT Manual **BATCH#:**HP_S970725112010
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9707A81-02A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

California LUFT Manual **BATCH#:**HP_S970725112010
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9707A81-02A

1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

Method 8020A* ** **BATCH#:**HP_S970726123000
WORK ORDER: 9707A78-01A **CLIENT SAMPLE ID:**S-1

1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

Method 8020A* ** **BATCH#:**HP_S970726123000
WORK ORDER: 9707A78-02A **CLIENT SAMPLE ID:**S-2

1,4-Difluorobenzene	30	30.0000	100	70- 131
4-Bromofluorobenzene	30	29.0000	97	43- 135

Method 8020A* ** **BATCH#:**HP_S970726123000
WORK ORDER: 9707A78-08A **CLIENT SAMPLE ID:**S-8

1,4-Difluorobenzene	30	30.0000	100	70- 131
4-Bromofluorobenzene	30	28.0000	93	43- 135

Method 8020A* ** **BATCH#:**HP_S970726123000
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	30	29.6	70- 131
4-Bromofluorobenzene	30	29	29.2	43- 135

Method 8020A* ** **BATCH#:**HP_S970726123000
WORK ORDER: LCS **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	29	96.7	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

Method 8020A* ** **BATCH#:**HP_S970726123000
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9707A43-03A

1,4-DIFLUOROBENZENE	30	29	97	70- 131

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

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-BROMOFLUOROBENZENE	30	30	100	43- 135

Method 8020A* BATCH#:HP_S970726123000**
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9707A43-03A

1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

California LUFT Manual BATCH#:HP_S970726123010
WORK ORDER: 9707A78-01A **CLIENT SAMPLE ID:**S-1

1,4-Difluorobenzene	30	20	67	50- 150
4-Bromofluorobenzene	30	27	90	50- 150

California LUFT Manual BATCH#:HP_S970726123010
WORK ORDER: 9707A78-08A **CLIENT SAMPLE ID:**S-8

1,4-Difluorobenzene	30	19.6000	65	50- 150
4-Bromofluorobenzene	30	26.0000	87	50- 150

California LUFT Manual BATCH#:HP_S970726123010
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	20	20.0	50- 150
4-Bromofluorobenzene	30	27	27.3	50- 150

California LUFT Manual BATCH#:HP_S970726123010
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9707A78-01A

1,4-Difluorobenzene	30	29	97	50- 150
4-Bromofluorobenzene	30	49	163 «	50- 150

California LUFT Manual BATCH#:HP_S970726123010
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9707A78-01A

1,4-Difluorobenzene	30	30	100	50- 150
4-Bromofluorobenzene	30	49	163 «	50- 150

Method 8020A* BATCH#:HP_S970727031710**
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	29	97	70- 131
4-Bromofluorobenzene	30	29	97	43- 135

COMPOUND

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

SURROGATE RECOVERY SUMMARY
07/31/97 15:51:11

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
Method 8020A* **		**BATCH#:** HP_S970727031710		
WORK ORDER: LCS		**CLIENT SAMPLE ID:**		
1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	30	100	43- 135
Method 8020A* **		**BATCH#:** HP_S970727031710		
WORK ORDER: Matrix Spike		**CLIENT SAMPLE ID:** 9707A80-01A		
1,4-DIFLUOROBENZENE	30	30	100	70- 131
4-BROMOFLUOROBENZENE	30	30	100	43- 135
Method 8020A* **		**BATCH#:** HP_S970727031710		
WORK ORDER: Matrix Spike Dup.		**CLIENT SAMPLE ID:** 9707A80-01A		
1,4-Difluorobenzene	30	29	97	70- 131
4-Bromofluorobenzene	30	30	100	43- 135
California LUFT Manual		**BATCH#:** HP_S970727091000		
WORK ORDER: 9707A78-02A		**CLIENT SAMPLE ID:** S-2		
1,4-Difluorobenzene	30	20.0000	67	50- 150
4-Bromofluorobenzene	30	27.0000	90	50- 150
California LUFT Manual		**BATCH#:** HP_S970727091000		
WORK ORDER: Method Blank		**CLIENT SAMPLE ID:**		
1,4-Difluorobenzene	30	20	20.4	50- 150
4-Bromofluorobenzene	30	27	27.3	50- 150
California LUFT Manual		**BATCH#:** HP_S970727091000		
WORK ORDER: Matrix Spike		**CLIENT SAMPLE ID:** 9707A80-03A		
1,4-Difluorobenzene	30	25	83	50- 150
4-Bromofluorobenzene	30	28	93	50- 150
California LUFT Manual		**BATCH#:** HP_S970727091000		
WORK ORDER: Matrix Spike Dup.		**CLIENT SAMPLE ID:** 9707A80-03A		
1,4-Difluorobenzene	30	27	90	50- 150
4-Bromofluorobenzene	30	29	97	50- 150

COMPOUND

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

SURROGATE RECOVERY SUMMARY
07/31/97 15:51:11

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS

« = Recovery outside of control limits
* = Methods for Chemical Analysis of Water & Wastes,1983,EPA
** = Standard Methods for Examination of Water & Wastewater,17th
*** = Test Methods for Evaluating Solid Waste,EPA SW846,3rd

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Aqueous
Units: µg/L

Batch Id: HP_S970726123000

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	41	82.0	20 - 110
Benzene	ND	50	40	80.0	62 - 121
Toluene	ND	50	48	96.0	66 - 136
Ethyl_Benzene	ND	50	48	96.0	70 - 136
O-Xylene	ND	50	51	102	74 - 134
M and P Xylene	ND	100	100	100	77 - 140

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	23	115	22	110	4.44	20	39 - 150
BENZENE	ND	20	19	95.0	18	90.0	5.41	25	39 - 150
TOLUENE	ND	20	19	95.0	18	90.0	5.41	26	56 - 134
ETHYL_BENZENE	ND	20	17	85.0	17	85.0	0	38	61 - 128
O-XYLENE	ND	20	20	100	19	95.0	5.13	29	40 - 130
M AND P XYLENE	ND	40	35	87.5	35	87.5	0	20	43 - 152

Analyst: DN
Sequence Date: 07/26/97
SPL ID of sample spiked: 9707A43-03A
Sample File ID: S_G7995.TXO
Method Blank File ID:
Blank Spike File ID: S_G7990.TXO
Matrix Spike File ID: S_G7993.TXO
Matrix Spike Duplicate File ID: S_G7994.TXO

* = Values Outside QC Range. « = 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 (4th Q '95)
(***) = Source: SPL-Houston Historical Data (3rd Q '96)

SAMPLES IN BATCH(SPL ID): 9707A79-01A 9707A78-01A 9707B28-01A 9707B28-02A 9707B28-03A 9707B28-04A 9707A78-08A 9707A80-04A 9707A80-05A 9707A79-02A 9707A43-03A 9707A43-02A 9707A43-01A 9707A42-01A 9707A79-03A 9707A78-02A 9707A78-06A

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HOUSTON, TEXAS 77054
PHONE (713)660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Aqueous
Units: µg/L

Batch Id: HP_S970725112000

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	36	72.0	20 - 110
Benzene	ND	50	36	72.0	62 - 121
Toluene	ND	50	44	88.0	66 - 136
Ethyl_Benzene	ND	50	46	92.0	70 - 136
O-Xylene	ND	50	46	92.0	74 - 134
M and P Xylene	ND	100	91	91.0	77 - 140

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	24	120	24	120	0	20	39 - 150
BENZENE	ND	20	22	110	21	105	4.65	25	39 - 150
TOLUENE	ND	20	22	110	21	105	4.65	26	56 - 134
ETHYL_BENZENE	ND	20	21	105	21	105	0	38	61 - 128
O-XYLENE	ND	20	23	115	21	105	9.09	29	40 - 130
M AND P XYLENE	ND	40	46	115	43	108	6.28	20	43 - 152

Analyst: DN
Sequence Date: 07/25/97
SPL ID of sample spiked: 9707A81-01A
Sample File ID: S_G7965.TXO
Method Blank File ID:
Blank Spike File ID: S_G7957.TXO
Matrix Spike File ID: S_G7960.TXO
Matrix Spike Duplicate File ID: S_G7961.TXO

* = Values Outside QC Range. « = 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 (4th Q '95)
(***) = Source: SPL-Houston Historical Data (3rd Q '96)

SAMPLES IN BATCH(SPL ID): 9707A81-01A 9707A81-02A 9707A81-03A 9707933-05A 9707995-01A 9707A78-07A 9707A78-04A 9707A78-03A 9707A78-06A 9707A78-05A

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

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Aqueous
Units: µg/L

Batch Id: HP_S970727031710

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	34	68.0	20 - 110
Benzene	ND	50	34	68.0	62 - 121
Toluene	ND	50	41	82.0	66 - 136
Ethyl_Benzene	ND	50	42	84.0	70 - 136
O-Xylene	ND	50	44	88.0	74 - 134
M and P Xylene	ND	100	88	88.0	77 - 140

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	22	110	22	110	0	20	39 - 150
BENZENE	1.2	20	23	109	24	114	4.48	25	39 - 150
TOLUENE	ND	20	22	110	23	115	4.44	26	56 - 134
ETHYL_BENZENE	ND	20	21	105	21	105	0	38	61 - 128
O-XYLENE	ND	20	22	110	22	110	0	29	40 - 130
M AND P XYLENE	ND	40	44	110	45	112	1.80	20	43 - 152

Analyst: HS
Sequence Date: 07/27/97
SPL ID of sample spiked: 9707A80-01A
Sample File ID: S_7G032.TXO
Method Blank File ID:
Blank Spike File ID: S_7G024.TXO
Matrix Spike File ID: S_7G027.TXO
Matrix Spike Duplicate File ID: S_7G028.TXO

* = Values Outside QC Range. « = 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 (4th Q '95)
(***) = Source: SPL-Houston Historical Data (3rd Q '96)

SAMPLES IN BATCH(SPL ID): 9707A78-02A 9707A80-06A 9707B28-06A 9707B28-07A 9707B28-08A 9707B28-09A 9707B29-01A 9707B29-02A 9707B29-04A 9707B29-05A 9707B29-06A 9707B29-03A 9707A78-05A 9707A80-01A 9707A80-03A 9707B29-16A 9707B29-17A

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** SPL BATCH QUALITY CONTROL REPORT **
CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_S970726123010

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.0	1.1	110	50 - 150

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
PETROLEUM HYDROCARBONS-GAS	ND	0.9	0.91	101	0.92	102	0.985	50	50 - 150

Analyst: HS
Sequence Date: 07/26/97
SPL ID of sample spiked: 9707A78-01A
Sample File ID: SS7G012.TX0
Method Blank File ID:
Blank Spike File ID: SSG7992.TX0
Matrix Spike File ID: SS7G010.TX0
Matrix Spike Duplicate File ID: SS7G011.TX0

* = Values Outside QC Range. « = 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: Temporary Limits
(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID): 9707A79-01A 9707A78-01A 9707B28-01A 9707B28-02A 9707B28-03A 9707B28-04A 9707A78-08A 9707A80-06A 9707A79-02A 9707A80-04A 9707A80-05A 9707A79-03A

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

** SPL BATCH QUALITY CONTROL REPORT **
CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_S970727091000

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.0	1.1	110	50 - 150

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
PETROLEUM HYDROCARBONS-GAS	ND	0.9	.75	83.3	.77	85.6	2.72	50	50 - 150

Analyst: HS
Sequence Date: 07/27/97
SPL ID of sample spiked: 9707A80-03A
Sample File ID: SS7G033.TXO
Method Blank File ID:
Blank Spike File ID: SS7G026.TXO
Matrix Spike File ID: SS7G029.TXO
Matrix Spike Duplicate File ID: SS7G030.TXO

* = Values Outside QC Range. « = 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: Temporary Limits
(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID): 9707A80-06A 9707A80-01A 9707A80-03A 9707B29-16A 9707B29-17A 9707A78-02A

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** SPL BATCH QUALITY CONTROL REPORT **
CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_S970725112010

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.0	1.0	100	50 - 150

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
PETROLEUM HYDROCARBONS-GAS	0.74	0.9	1.29	61.1	1.27	58.9	3.67	50	50 - 150

Analyst: DN
Sequence Date: 07/25/97
SPL ID of sample spiked: 9707A81-02A
Sample File ID: SSG7966.TX0
Method Blank File ID:
Blank Spike File ID: SSG7958.TX0
Matrix Spike File ID: SSG7962R.TX0
Matrix Spike Duplicate File ID: SSG7963R.TX0

* = Values Outside QC Range. « = 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: Temporary Limits
(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID): 9707A78-04A 9707A78-03A 9707A78-06A 9707A78-05A 9707A81-01A 9707A81-02A 9707A81-03A 9707995-01A 9707A78-07A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9707A78

CHAIN OF CUSTODY

No. 076994 Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering	ADDRESS: 1575 Treat Blvd #201	CITY: W.C.	STATE: Ca ZIP CODE: 94598
BP SITE NUMBER: 11105	BP CORNER ADDRESS/CITY: Castro Valley		CONSULTANT PROJECT NUMBER: 10-138-9-4
CONSULTANT PROJECT MANAGER: Brady Nagle	PHONE NUMBER: (510) 295-1650	FAX NUMBER: 295-1823	CONSULTANT CONTRACT NUMBER: G797425
BP CONTACT: Scott Hooton	BP ADDRESS: Renton, WA	PHONE NUMBER:	FAX NO.
LAB CONTACT: SPL	LABORATORY ADDRESS: Texas	PHONE NUMBER:	FAX NO.
SAMPLED BY (Please Print Name): Larry Buenrostro	SAMPLED BY (Signature):	SHIPMENT DATE:	SHIPMENT METHOD: FedEx
TAT: ☐ 24 Hours ☐ 48 Hours ☐ 1 Week ☒ Standard 2 Weeks	ANALYSIS REQUIRED		AIRBILL NUMBER: 384 844 71196

SAMPLE DESCRIPTION	COLLECTION DATE / TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPH (8015)	BTEX (8020)	COMMENTS
S-1	7/18/97	W	3	HCL		X	X	
S-2								
S-3								
S-4								
S-5								
S-6								
S-7								
S-8								
								Intact ROI 4C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	7/21/97		Ruben Estrada	7/22/97	0930

ADDITIONAL COMMENTS: HM

CLV-16722
PKG/50

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

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
7/23/97	0930

SPL Sample ID:
9707A78

			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:		4° C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	384847119L	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
[signature]	7/23/97

Calculation of RPD
for BP Oil QA/QC Program
BP Oil Station No. 11105 07/18/97 Event

Analytical Data	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Primary Sample	1200	ND<5	ND<10	ND<10	ND<10	ND<100
QC-1 Duplicate	630	31	ND<5.0	ND<5.0	ND<5.0	130
Sample Mean	915	15.5	0	0	0	65
RPD	62.30%	-200.00%	N/A	N/A	N/A	-200.00%
Significant Result?	YES	YES	NO	NO	NO	YES

Notes:

(1) Significance is defined as an RPD greater than 30% (or less than -30).

(2) "A negative" RPD will result if the value of the Primary Sample Result is smaller than QC-1. The determination of Significant Result is not affected by sign of RPD.

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

BP Site Number:	11105
ERM Contact:	G797425
Sampling Date:	07/18/97
Matrix Description:	Water
Date Final Report Received:	08/11/97
Laboratory & Location:	SPL, Houston, Texas

		Yes	No	N/A
1.	Is BP contract release number consistent with analytical report?	√		
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 20 %?	see attached		
7.	Are holding times met?	X		
8.	Are surrogates within limits using laboratory criteria?	√		
9.	Are MS/MSD acceptable using laboratory criteria?	√		
10.	Are LCS results acceptable using laboratory criteria?	√		

Notes: On 9/30/97, SPL was contacted to verify the results of S-7 and S-8 (dups). Review of the chromatograms and data was performed by a laboratory supervisor, and no discrepancies were noted (10/8/97)

Data Validation Completed by: Brady Nagle

(signature): _____

Date: 10/8/97

APPENDIX C

HISTORICAL MTBE LABORATORY ANALYSIS DOCUMENTATION

Mr. Brady Nagle
Page 8

FOOTNOTES
for pages 1 through 7

April 16, 1993
PACE Project Number: 430402511

Client Reference: BP Station # 11105

MDL	Method Detection Limit
ND	Not detected at or above the MDL.
(MT)	A peak eluting earlier than Benzene and suspected to be methyl tert butyl ether was present in your sample at approximately 123 ppb.

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

REPORT OF LABORATORY ANALYSIS

April 16, 1993
PACE Project Number: 430402511

Client Reference: BP Station # 11105

PACE Sample Number:			70 0041449	
Date Collected:			04/01/93	
Date Received:			04/02/93	
Client Sample ID:			ESE-2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/13/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	240	04/13/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/13/93
Benzene	ug/L	0.5	27(MT)	04/13/93
Toluene	ug/L	0.5	ND	04/13/93
Ethylbenzene	ug/L	0.5	17	04/13/93
Xylenes, Total	ug/L	0.5	2.6	04/13/93

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

10-138-01-002

pace
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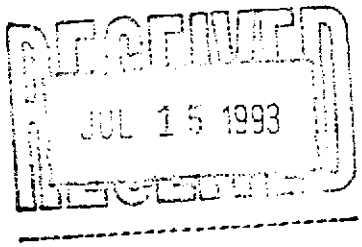
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS



July 14, 1993

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

RE: PACE Project No. 430629.512
Client Reference: BP Station # 11105

Dear Mr. Howell:

Enclosed is the report of laboratory analyses for samples received June 29, 1993.

Please note that a peak eluting earlier than Benzene and suspected to be Methyl tert-butly ether was detected in the following sample at the approximated level:

70 0105510/ESE-4 54ug/L

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Jim J. Oys
Project Manager

Enclosures

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

10-138-01-003

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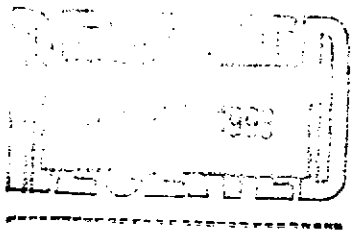

October 05, 1993

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

RE: PACE Project No. 430924.522
Client Reference: BP Station # 11105

Dear Mr. Howell:

Enclosed is the report of laboratory analyses for samples received September 24, 1993.

Please note that methyl tertiary butyl ether (MTBE) was detected in the following samples:

70 0160731/ESE-1	600ug/L
70 0160740/ESE-2	900ug/L(over range)
70 0160782/ QC-1	550ug/L

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Jim J. Oys

Jim J. Oys
Project Manager

Enclosures

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10-138-01-004

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REPORT OF LABORATORY ANALYSIS

December 28, 1993

RECEIVED
DEC 29 1993

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

RE: PACE Project No. 431216.524
Client Reference: BP Station # 11105/10-138-01/004

Dear Mr. Howell:

Enclosed is the report of laboratory analyses for samples received December 16 - 17, 1993.

Please note that methyl tertiary butyl ether (MTBE) was detected in the following samples at the approximate level:

70 0215676/QC-1	770ug/L
70 0215684/ESE-1	921ug/L
70 0215692/ESE-2	940ug/L

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Jim J. Oys

Jim J. Oys
Project Manager

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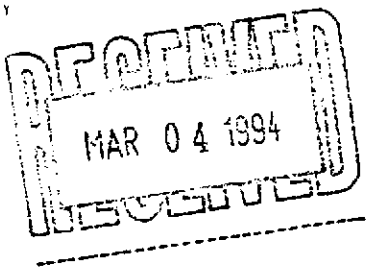

March 02, 1994

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

RE: PACE Project No. 440222.507
Client Reference: BP Station # 11105/10-138-02-001

Dear Mr. Nagle:

Enclosed is the report of laboratory analyses for samples received February 22, 1994.

Please note that a peak eluting earlier than Benzene and suspected to be Methyl Tert Butyl Ether was detected in the following samples at the approximated levels:

700251346/QC-1	680 ug/L
700251354/ESE-1	590 ug/L
700251435/ESE-2	930 ug/L
700251486/ESE-4	110 ug/L

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Ronald M. Chew

Ronald M. Chew
Project Manager

Enclosures

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Novato, CA 94949
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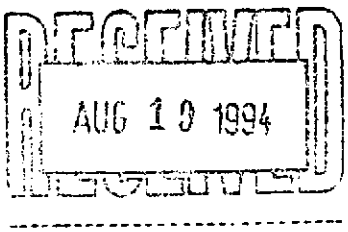
August 18, 1994



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

RE: PACE Project No. 440809.518
Client Reference: BP Site #11105/10-138-02-002

Dear Mr. Howell:

Enclosed is the report of laboratory analyses for samples received August 09, 1994.

Please note that a peak eluting earlier than Benzene and suspected to be Methyl tert-butyl ether was detected in the following samples at the approximated levels:

S-1	1400ug/L
S-2	62ug/L
S-4	760ug/L
S-5	33ug/L
S-6	32ug/L

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Stacy P. Hoch
for Ronald M. Chew
Project Manager

Enclosures

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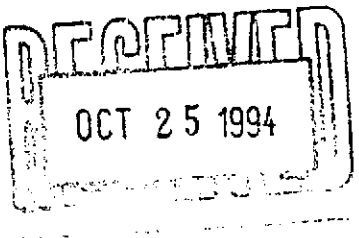

October 24, 1994

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

RE: PACE Project No. 441013.510
Client Reference: BP Site #11105/10-138-02/003

Dear Mr. Howell:

Enclosed is the report of laboratory analyses for samples received October 13, 1994.

Please note that a peak eluting earlier than Benzene and suspected to be Methyl tert-butyl ether was detected in the following samples at the approximated levels:

S-1/70 0423392	44 ug/L
S-3/70 0423414	3000 ug/L
S-4/70 0423422	230 ug/L
S-6/70 0423449	77 ug/L

In addition, please note that the hydrocarbons present in sample S-3/70 0423414 do not match the profile of the laboratory standard for gasoline.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Stacy P. Finch

for Ronald M. Chew
Project Manager

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