BP OIL

BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(425) 251-0667
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August 11, 1997

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

RE: BP OIL FACILITY #11126
1700 Powell Street
Emeryville, California

Dear Ms. Hugo:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING REPORT DATED JULY 14, 1997** for the above referenced facility. Plans for the following quarter include additional groundwater monitoring.

On a final note, please note that BP and Mobil Oil Corporation have an agreement to cooperate in the filing for reimbursement applications to the UST Cleanup Fund. If you become aware of any notices or proposals to withdraw a Letter of Commitment for this site, please give me a call to let me know immediately.

If you should have any questions regarding this site, I may be reached at (425) 251-0689.

Sincerely,

Scott T. Hooton
Environmental Remediation Management

STH:sb msword\ERM11126

cc: Mr.Ed So, CRWQCB, San Francisco Bay Region,2101 Webster Street, Suite 500, Oakland CA 94612 (without attachment)

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

Mr. David Camille,TOSCO, 2000 Crow Canyon Place, Suite 400, San Ramon, CA 94583

Site File

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11126
1700 Powell Street
Emeryville, California

Project No. 10-061-07-004

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

July 14, 1997

William Howell
Project Manager

Al Sevilla, P.E.
Principal

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11126
1700 Powell Street
Emeryville, California

Project No. 10-061-07-004

July 14, 1997

INTRODUCTION

This report presents the results and findings of the May 17, 1997 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11126, 1700 Powell Street, Emeryville, 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.

FREE PRODUCT MONITORING AND RECOVERY

A passive product recovery canister has been installed in Monitoring Well MW-9 to recover liquid-phase product. Product thicknesses for this and previous monitoring events are presented in Table 1. The volume of free product recovered from the well is presented in Table 2.

SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples for this and previous quarters are summarized in Table 1. The potentiometric groundwater elevations as interpreted from the results of this monitoring event are shown on Figure 2. The results of groundwater analysis are shown on Figure 3. The laboratory report and chain of custody record are presented in Appendix B. Historical methyl tert butyl ether (MTBE) laboratory analysis data not previously tabulated are now included in Table 1. Copies of such 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 11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

ALISTO PROJECT NO. 10-061

WELL ID		DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	(b)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)		TOG (ug/l)	HVOC (ug/l)	(c)	DO (ppm)	LAB
MW-1		11/04/92	7.76		4.96	—	2.80		5300	---	1100	480	ND<0.5	1500	---		—	—		---	PACE
MW-1		10/12/93	7.76		5.26	---	2.50		3600	---	970	71	100	550	---		—	---		---	PACE
MW-1		02/15/94	7.76		4.98	—	2.78		17000	—	4200	510	360	1600	---		—	---		3.9	PACE
MW-1		05/11/94	7.76		4.55	—	3.21		5500	---	2900	37	56	64	---		—	—		8.0	PACE
MW-1		08/01/94	7.76		5.51	---	2.25		15000	—	3600	740	510	2800	9700	(d)	---	—		2.9	PACE
QC-1	(e)	08/01/94	8.56		—	—	—		16000	—	3600	750	510	2800	9800	(d)	—	—		---	PACE
MW-1		10/18/94	7.76		5.11	—	2.65		16000	—	1800	61	160	890	---		—	---		2.9	PACE
QC-1	(e)	10/18/94	---		—	---	—		16000	---	1900	64	170	950	—		—	—		---	PACE
MW-1		01/13/95	7.76		3.05	---	4.71		220	---	7	ND<0.5	1	23	---		—	—		6.6	ATI
QC-1	(e)	01/13/95	—		---	---	---		590	—	88	0.7	ND<0.5	55	---		—	---		—	ATI
MW-1		04/13/95	7.76		3.84	—	3.92		9300	—	4000	300	200	950	—		—	—		7.7	ATI
MW-1		07/11/95	7.76		3.60	—	4.16		15000	—	2200	84	ND<25	2500	—		—	—		8.8	ATI
MW-1		11/02/95	7.76		4.58	---	3.18		19000	—	920	ND<100	ND<100	430	52000		---	—		7.3	ATI
MW-1		02/05/96	7.76		4.43	---	3.33		4600	—	1400	330	54	247	8700		---	---		3.2	SPL
MW-1		04/24/96	7.76		4.00	---	3.76		2000	—	510	33	61	228	4500		---	---		7.5	SPL
MW-1		07/15/96	7.76		4.30	---	3.46		---	—	—	---	---	---	---		—	---		—	—
MW-1		07/16/96	7.76		—	---	---		12000	—	2800	170	390	1630	64000		---	---		7.9	SPL
QC-1	(e)	07/16/96	---		—	---	—		12000	—	2800	160	390	1610	63000		---	---		—	SPL
MW-1		07/30/96	7.76		4.64	---	3.12		---	—	—	---	—	---	—		—	—		—	—
MW-1		08/12/96	7.76		---	---	---		11000	—	2500	160	ND<10	1740	440000		—	---		7.0	SPL
MW-1		11/04/96	7.76		5.98	---	1.78		---	—	---	---	---	---	---		---	---		---	---
MW-1		11/05/96	7.76		---	---	---		53000	—	1300	43	100	349	42000/190000	(f)	---	---		6.6	SPL
MW-1		05/17/97	7.76		4.65	---	3.11		52000	—	1958	55	305	1216	140198		---	---		5.7	SPL
MW-2		11/04/92	8.56		5.88	---	2.68		12000	---	3900	1300	ND<0.5	2300	—		---	---		---	PACE
QC-1	(e)	11/04/92	8.56		5.88	---	2.68		12000	---	3200	980	ND<0.5	1900	---		—	---		---	PACE
MW-2		10/12/93	8.56		6.29	---	2.27		4500	---	3400	180	230	940	---		—	---		---	PACE
MW-2		02/15/94	8.56		5.56	---	3.00		2000	---	430	270	28	390	—		—	---		4.0	PACE
QC-1	(e)	02/15/94	8.56		5.56	---	3.00		1800	—	290	160	14	250	---		—	---		—	PACE
MW-2		05/11/94	8.56		5.17	---	3.39		14000	---	3900	1200	440	1900	---		—	---		8.9	PACE
QC-1	(e)	05/11/94	8.56		---	---	---		15000	---	5600	1500	470	2000	740	(d)	---	---		—	PACE
MW-2		08/01/94	8.56		5.43	---	3.13		8200	---	3000	420	230	680	---		—	---		2.6	PACE
MW-2		10/18/94	8.56		5.71	---	2.85		9000	---	2000	140	150	420	---		—	---		7.2	PACE
MW-2		01/13/95	8.56		4.67	---	3.89		7900	---	2200	42	ND<5	770	---		—	---		6.8	ATI
MW-2		04/13/95	8.56		4.37	---	4.19		33000	---	8000	2500	1100	6600	---		---	---		7.5	ATI
QC-1	(e)	04/13/95	8.56		—	---	---		25000	---	6500	1500	110	5300	---		—	---		—	ATI
MW-2		07/11/95	8.56		4.51	---	4.05		19000	---	3300	99	7.5	4600	---		---	---		7.8	ATI
QC-1	(e)	07/11/95	---		---	---	---		28000	---	6800	1000	900	4900	---		—	—		—	ATI
MW-2		11/02/95	8.56		5.55	---	3.01		20000	---	3800	1200	570	2700	15000		---	---		7.3	ATI
QC-1	(e)	11/02/95	---		---	---	---		22000	---	4000	1200	600	2700	19000		—	—		—	ATI
MW-2		02/05/96	8.56		5.10	---	3.46		1200	---	320	220	26	187	99		---	---		2.2	SPL
QC-1	(e)	02/05/96	---		---	---	---		910	---	290	180	19	137	93		---	---		---	SPL
MW-2		04/24/96	8.56		4.95	---	3.61		ND<500	---	70	22	ND<10	61	ND<50		—	—		7.0	SPL
QC-1	(e)	04/24/96	---		—	---	---		ND<500	---	100	30	ND<10	71	ND<100		—	—		—	SPL
MW-2		07/15/96	8.56		5.40	---	3.16		---	---	---	---	---	---	---		—	—		—	—
MW-2		07/16/96	8.56		---	---	---		12000	---	3300	1400	250	2610	1400		---	---		7.8	SPL
MW-2		07/30/96	8.56		5.44	---	3.12		---	---	—	---	---	---	—		—	---		—	---
MW-2		11/04/96	8.56		7.06	---	1.50		---	---	---	---	---	---	---		---	---		—	—
MW-2		11/05/96	8.56		—	---	—		7200	---	1400	230	38	2110	1100		---	---		7.4	SPL
QC-1	(e)	11/05/96	---		—	---	---		9200	---	1300	170	ND<25	2240	1100		—	—		—	SPL
MW-2		05/17/97	8.56		5.77	---	2.79		570	—	42	ND<5.0	5.0	60	210		---	—		6.9	SPL

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BP OIL COMPANY SERVICE STATION NO. 11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

ALISTO PROJECT NO. 10-061

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l) (c)	DO (ppm)	LAB
MW-3	11/04/92	8 25	6 38	---	1.87	200	690	1.6	ND<0.5	ND<0.5	1.1	---	ND<5000	ND	---	PACE
MW-3	10/12/93	8.25	5 84	---	2.41	270	2100	5.0	0.7	ND<0.5	2 6	---	ND<5000	ND	---	PACE
QC-1 (e)	10/12/93	8.25	5.84	---	2 41	150	---	5.6	0 6	ND<0.5	1 6	---	---	---	---	PACE
MW-3	02/15/94	8.25	6 60	---	1 65	140	2.3	5.7	ND<0.5	ND<0.5	ND<0.5	---	90	ND	3 9	PACE
MW-3	05/11/94	8 25	5 86	---	2.39	190	2500	2.7	1.9	ND<0.5	1.9	51 (d)	ND<5000	ND	9.2	PACE
MW-3	08/01/94	8.25	6.13	---	2.12	120	1300	1.3	ND<0.5	0.5	1.1	---	ND<5000	ND	2.9	PACE
MW-3	10/18/94	8.25	6.39	---	1.86	100	2200	2 3	ND<0.5	ND<0.5	ND<0 5	---	ND<5000	ND	3.6	PACE
MW-3	01/13/95	8 25	5.47	---	2.78	ND<50	970	0.8	ND<0.5	ND<0.5	ND<1	---	---	ND	7.7	ATI
MW-3	04/13/95	8 25	5 17	---	3 08	530	ND<500	8.7	1.9	ND<0.5	3 9	---	2100	ND	8.4	ATI
MW-3	07/11/95	8.25	5.37	---	2 88	78	2100	0.57	ND<0.50	ND<0.50	ND<1 0	---	1900	ND	8.3	ATI
MW-3	11/02/95	8.25	6.29	---	1.96	250	2000	0.73	ND<0.50	ND<0.50	1.8	270	1400	ND	8.3	ATI
MW-3	02/05/96	8.25	5.80	---	2 45	ND<50	1600	ND<0.5	ND<1	ND<1	2.7	11	9000	ND	3.5	SPL
MW-3	04/24/96	8.25	5.69	---	2.56	ND<50	2800	ND<5	ND<10	ND<10	ND<10	150	6000	ND	8.6	SPL
MW-3	07/15/96	8.25	6.18	---	2.07	ND<250	3700	ND<2.5	ND<5	ND<5	ND<5	ND<50	1000	ND	7.7	SPL
MW-3	07/30/96	8.25	6.04	---	2 21	---	---	---	---	---	---	---	---	---	---	---
MW-3	11/04/96	8.25	7.84	---	0.41	---	---	---	---	---	---	---	---	---	---	---
MW-3	11/05/96	8 25	---	---	---	90	890	ND<0.5	ND<1 0	ND<1.0	ND<1.0	30	2000	ND	6.8	SPL
MW-3	05/17/97	8 25	6.49	---	1.76	ND<50	2100	ND<0.5	ND<1.0	ND<1.0	ND<1.0	52	700	ND	6.3	SPL
MW-4	11/04/92	8.12	6 66	---	1.46	340	---	4.5	ND<0.5	4.3	ND<0 5	---	---	---	---	PACE
MW-4	10/12/93	8.12	6 87	---	1.25	160	---	5.8	1 4	0.8	2.7	---	---	---	---	PACE
MW-4	02/15/94	8.12	6 61	---	1.51	110	---	4.4	0.7	ND<0.5	2 5	120 (d)	---	---	4 3	PACE
MW-4	05/11/94	8 12	5.89	---	2.23	120	---	0.5	0.8	ND<0.5	ND<0 5	140 (d)	---	---	9.3	PACE
MW-4	08/01/94	8 12	6.87	---	1.25	140	---	0.7	2.0	5.2	15	---	---	---	3.3	PACE
MW-4	10/18/94	8 12	6 62	---	1.50	140	---	3.5	ND<0.5	0.5	ND<0.5	---	---	---	3.0	PACE
MW-4	01/13/95	8 12	7.27	---	0 85	ND<50	---	ND<0 5	ND<0.5	ND<0.5	ND<1	---	---	---	7.9	ATI
MW-4	04/13/95	8 12	6 51	---	1.61	73	---	1 2	ND<0.5	ND<0.5	ND<1	---	---	---	9.9	ATI
MW-4	07/11/95	8.12	6 21	---	1 91	82	---	0.57	ND<0 50	ND<0.50	ND<1 0	---	---	---	7.2	ATI
MW-4	11/02/95	8 12	6 78	---	1.34	71	---	1.4	0 96	0 99	2 8	140	---	---	8.6	ATI
MW-4	02/05/96	8.12	6 41	---	1.71	ND<50	---	ND<5	ND<10	ND<10	ND<10	200	---	---	4.4	SPL
MW-4	04/24/96	8 12	6.18	---	1.94	ND<250	---	ND<2 5	ND<5	ND<5	ND<5	510	---	---	8.3	SPL
MW-4	07/15/96	8 12	6 63	---	1 49	ND<50	---	5 7	ND<1	ND<1	ND<1	550	---	---	7 4	SPL
MW-4	07/30/96	8 12	6.34	---	1.78	---	---	---	---	---	---	---	---	---	---	---
MW-4	11/04/96	8.12	8 27	---	-0.15	---	---	---	---	---	---	---	---	---	---	---
MW-4	11/05/96	8.12	---	---	---	460	---	ND<2.5	11	ND<5 0	ND<5.0	620/610 (f)	---	---	7.3	SPL
MW-4	05/17/97	8.12	7.00	---	1 12	---	---	---	---	---	---	---	---	---	---	---
MW-5	10/12/93	7.69	6.01	---	1.68	---	---	---	---	---	---	---	---	---	---	---
MW-5	10/13/93	---	---	---	---	2300	---	160	10	ND<0.5	26	---	---	---	---	PACE
MW-5	02/15/94	7.69	5.74	---	1.95	5100	---	710	16	33	35	100 (d)	---	---	4.0	PACE
MW-5	05/11/94	7 69	5.28	---	2.41	11000	---	1100	39	110	57	160 (d)	---	---	8 0	PACE
MW-5	08/01/94	7.69	5.84	---	1.85	9000	---	730	35	61	41	200 (d)	---	---	2.6	PACE
MW-5	10/18/94	7.69	6.01	---	1.68	7800	---	330	30	27	27	---	---	---	5.6	PACE
MW-5	01/13/95	7.69	4 74	---	2.95	ND<500	---	290	6	ND<5	18	---	---	---	6 8	ATI
MW-5	04/13/95	7.69	5.50	---	2.19	9100	---	400	15	52	27	---	---	---	7.4	ATI
MW-5	07/11/95	7 69	5.75	---	1 94	7300	---	390	13	28	23	---	---	---	7.2	ATI
MW-5	11/03/95	7.69	6 65	---	1.04	7200	---	270	15	38	23	200	---	---	8.4	ATI
MW-5	02/05/96	7.69	4.83	---	2.86	4600	---	370	15	53	28	ND<50	---	---	1.9	SPL
MW-5	04/24/96	7.69	6.09	---	1 60	3000	---	180	ND<10	32	14	ND<100	---	---	8.1	SPL
MW-5	07/15/96	7 69	6 57	---	1.12	---	---	---	---	---	---	---	---	---	---	---
MW-5	07/16/96	7 69	---	---	---	ND<50	---	190	ND<10	31	16	ND<100	---	---	8.3	SPL
MW-5	07/30/96	7.69	5 61	---	2.08	---	---	---	---	---	---	---	---	---	---	---
MW-5	08/12/96	7.69	---	---	---	2000	---	150	12	25	18.2	ND<50	---	---	7.6	SPL
MW-5	11/04/96	7.69	8.25	---	-0.56	---	---	---	---	---	---	---	---	---	---	---
MW-5	11/05/96	7.69	---	---	---	5200	---	42	5.5	13	ND<5.0	1700	---	---	7 4	SPL
MW-5	05/17/97	7 69	6.95	---	0.74	80	---	0.56	ND<1.0	ND<1.0	ND<1.0	46	---	---	6 7	SPL

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BP OIL COMPANY SERVICE STATION NO. 11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

ALISTO PROJECT NO. 10-061

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l) (c)	DO (ppm)	LAB
MW-6	10/12/93	8 52	6.59	---	1.93	63	---	ND<0 5	ND<0 5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-6	02/15/94	8.52	6 31	---	2.21	68	---	ND<0.5	ND<0 5	ND<0.5	ND<0.5	38 (d)	---	---	3 1	PACE
MW-6	05/11/94	8.52	6.15	---	2 37	68	---	ND<0.5	ND<0 5	ND<0.5	ND<0.5	48 (d)	---	---	8.7	PACE
MW-6	08/01/94	8.52	6 46	---	2.06	91	---	ND<0.5	ND<0.5	ND<0.5	0.6	---	---	---	2.4	PACE
MW-6	10/18/94	8.52	6 72	---	1.80	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	6.0	PACE
MW-6	01/13/95	8.52	5 95	---	2.57	ND<50	---	ND<0 5	ND<0.5	ND<0 5	ND<1	---	---	---	7.0	ATI
MW-6	04/13/95	8.52	5.44	---	3.08	ND<50	---	ND<0.5	ND<0 5	ND<0.5	ND<1	---	---	---	8.5	ATI
MW-6	07/11/95	8 52	5 68	---	2.84	ND<50	---	ND<0 50	ND<0.50	ND<0.50	ND<1.0	---	---	---	8.4	ATI
MW-6	11/02/95	8 52	6 57	---	1.95	ND<50	---	ND<0 50	ND<0.50	ND<0.50	ND<1.0	35	---	---	8.3	ATI
MW-6	02/05/96	8 52	6 27	---	2.25	ND<50	---	ND<5	ND<10	ND<10	ND<10	ND<100	---	---	2.2	SPL
MW-6	04/24/96	8 52	5.95	---	2.57	ND<250	---	ND<2.5	ND<5	ND<5	ND<5	62	---	---	8 0	SPL
MW-6	07/15/96	8.52	6.39	---	2 13	ND<250	---	ND<2.5	ND<5	ND<5	ND<5	ND<50	---	---	8 0	SPL
MW-6	07/30/96	8 52	6 44	---	2.08	---	---	---	---	---	---	---	---	---	---	---
MW-6	11/04/96	8 52	8 05	---	0.47	---	---	---	---	---	---	---	---	---	---	---
MW-6	11/05/96	8 52	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1 0	ND<10	---	---	7.3	SPL
MW-6	05/17/97	8 52	6.75	---	1.77	---	---	---	---	---	---	---	---	---	---	---
MW-7	10/12/93	7.61	6.14	---	1.47	ND<50	---	ND<0.5	ND<0 5	ND<0.5	0.7	---	---	---	---	PACE
MW-7	02/15/94	7.61	5 88	---	1.73	78	---	ND<0 5	ND<0.5	ND<0.5	0.6	---	---	---	4.0	PACE
MW-7	05/11/94	7.61	5.76	---	1.85	70	---	ND<0.5	ND<0 5	ND<0 5	0 9	---	---	---	9.1	PACE
MW-7	08/01/94	7.61	5 97	---	1.64	77	---	ND<0.5	ND<0.5	ND<0 5	0.5	---	---	---	2.5	PACE
MW-7	10/18/94	7 61	6 24	---	1.37	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	6 3	PACE
MW-7	01/13/95	7 61	5.39	---	2 22	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	8.2	ATI
MW-7	04/13/95	7 61	5.17	---	2 44	63	---	ND<0.5	ND<0.5	ND<0.5	1.4	---	---	---	8.4	ATI
MW-7	07/11/95	7.61	5.25	---	2 36	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	7.9	ATI
MW-7	11/02/95	7.61	6.19	---	1.42	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	55	---	---	8.0	ATI
MW-7	02/05/96	7.61	5 69	---	1.92	ND<50	---	ND<0 5	ND<1	ND<1	ND<1	40	---	---	1.9	SPL
MW-7	04/24/96	7.61	5.59	---	2.02	ND<250	---	ND<2 5	ND<5	ND<5	ND<5	53	---	---	8 2	SPL
MW-7	07/15/96	7.61	6 07	---	1.54	ND<250	---	ND<2.5	ND<5	ND<5	ND<5	ND<50	---	---	7 8	SPL
MW-7	07/30/96	7.61	6 04	---	1.57	---	---	---	---	---	---	---	---	---	---	---
MW-7	11/04/96	7 61	7 76	---	-0.15	---	---	---	---	---	---	---	---	---	---	---
MW-7	11/05/96	7.61	---	---	---	ND<50	---	ND<0 5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.8	SPL
MW-7	05/17/97	7.61	6.42	---	1.19	---	---	---	---	---	---	---	---	---	---	---
MW-8	10/12/93	8 60	5 86	---	2.74	ND<50	---	ND<0.5	ND<0.5	ND<0 5	ND<0 5	---	---	---	---	PACE
MW-8	02/15/94	8.60	5.50	---	3 10	380	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	3.3	PACE
MW-8	05/11/94	8 60	5.09	---	3.51	330	---	ND<0 5	1.2	ND<0.5	1.9	---	---	---	8.5	PACE
MW-8	08/01/94	8 60	5.20	---	3.40	260	---	ND<0 5	1.2	2 9	5 8	---	---	---	2 3	PACE
MW-8	10/18/94	8.60	5.70	---	2.90	82	---	ND<0.5	ND<0 5	ND<0.5	ND<0 5	---	---	---	6.4	PACE
MW-8	01/13/95	8.60	4.96	---	3.64	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	6.9	ATI
MW-8	04/13/95	8 60	5 40	---	3 20	270	---	ND<0.5	ND<0.5	ND<0.5	4.4	---	---	---	8.4	ATI
MW-8	07/11/95	8 60	6.01	---	2 59	320	---	ND<0.50	ND<0 50	ND<0.50	3.5	---	---	---	8.0	ATI
MW-8	11/02/95	8 60	6 81	---	1 79	100	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	8.7	ATI
MW-8	02/05/96	8.60	6.12	---	2 48	ND<50	---	ND<5	ND<10	ND<10	ND<10	ND<100	---	---	1.5	SPL
MW-8	04/24/96	8 60	6.23	---	2 37	ND<50	---	ND<5	ND<10	ND<10	ND<10	ND<100	---	---	8.7	SPL
MW-8	07/15/96	8 60	6.70	---	1.90	ND<250	---	ND<2 5	ND<5	ND<5	ND<5	ND<50	---	---	8.4	SPL
MW-8	07/30/96	8 60	6 64	---	1.96	---	---	---	---	---	---	---	---	---	---	---
MW-8	11/04/96	8 60	8.36	---	0.24	---	---	---	---	---	---	---	---	---	---	---
MW-8	11/05/96	8 60	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7 2	SPL
MW-8	05/17/97	8.60	7 03	---	1 57	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

ALISTO PROJECT NO. 10-061

WELL ID		DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l) (c)	DO (ppm)	LAB
MW-9		10/12/93	8.08	5.66	0.08	2 48	---	---	---	---	---	---	---	---	---	---	---
MW-9		02/15/94	8.08	5 32	0.05	2 80	---	---	---	---	---	---	---	---	---	---	---
MW-9		05/11/94	8.08	5 57	---	2.51	---	---	---	---	---	---	---	---	---	---	---
MW-9		08/01/94	8.08	6.25	---	1.83	---	---	---	---	---	---	---	---	---	---	---
MW-9		10/18/94	8.08	5.59	0.13	2.59	---	---	---	---	---	---	---	---	---	---	---
MW-9		01/13/95	8.08	4.42	0 14	3.77	---	---	---	---	---	---	---	---	---	---	---
MW-9		04/13/95	8.08	4.06	0.11	4.10	---	---	---	---	---	---	---	---	---	---	---
MW-9		07/11/95	8.08	4.21	0 08	3.93	---	---	---	---	---	---	---	---	---	---	---
MW-9		11/02/95	8.08	5 22	0 05	2 90	---	---	---	---	---	---	---	---	---	---	---
MW-9		02/05/96	8 08	4.76	0.01	3.33	---	---	---	---	---	---	---	---	---	---	---
MW-9		04/24/96	8.08	4 62	0.09	3 53	---	---	---	---	---	---	---	---	---	---	---
MW-9		07/15/96	8.08	5 11	0.04	3 00	---	---	---	---	---	---	---	---	---	---	---
MW-9		07/30/96	8 08	5.15	---	2.93	---	---	---	---	---	---	---	---	---	---	---
MW-9		11/04/96	8.08	6.75	0.01	1.34	---	---	---	---	---	---	---	---	---	---	---
MW-9		05/17/97	8.08	5.42	---	2.66	97000	---	16000	7700	2300	18400	40000	---	---	7.0	SPL
QC-1	(e)	05/17/97	8.08	---	---	---	97000	---	16000	8200	2300	17300	39000	---	---	---	SPL
QC-2	(g)	11/05/92	---	---	---	---	ND<50	---	ND<0 5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(g)	10/12/93	---	---	---	---	ND<50	---	ND<0 5	ND<0 5	ND<0 5	ND<0.5	---	---	---	---	PACE
QC-2	(g)	02/15/94	---	---	---	---	ND<50	---	ND<0 5	ND<0.5	ND<0 5	ND<0.5	---	---	---	---	PACE
QC-2	(g)	05/11/94	---	---	---	---	ND<50	---	ND<0 5	ND<0.5	ND<0 5	ND<0.5	---	---	---	---	PACE
QC-2	(g)	08/01/94	---	---	---	---	ND<50	---	ND<0.5	ND<0 5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(g)	10/18/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0 5	---	---	---	---	PACE
QC-2	(g)	01/13/95	---	---	---	---	ND<50	---	ND<0.5	ND<0 5	ND<0.5	ND<1	---	---	---	---	ATI
QC-2	(g)	04/13/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	---	ATI
QC-2	(g)	07/11/95	---	---	---	---	ND<50	---	ND<0 50	ND<0.50	ND<0.50	ND<1 0	---	---	---	---	ATI
QC-2	(g)	11/02/95	---	---	---	---	ND<50	---	ND<0.50	ND<0 50	ND<0.50	ND<1 0	ND<5.0	---	---	---	ATI
QC-2	(g)	02/05/96	---	---	---	---	ND<50	---	ND<0 5	ND<1	ND<1	ND<1	ND<10	---	---	---	SPL
QC-2	(g)	04/24/96	---	---	---	---	ND<50	---	ND<0 5	ND<1	ND<1	ND<1	ND<10	---	---	---	SPL
QC-2	(g)	07/16/96	---	---	---	---	ND<50	---	ND<0 5	ND<1	ND<1	ND<1	ND<10	---	---	---	SPL

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
TOG	Total oil and grease
HVOC	Halogenated volatile organic compounds
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
ND	Not detected above reported detection limit
---	Not analyzed/applicable/measurable
PACE	Pace, Inc
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories

NOTES:

(a) Top of casing elevations surveyed relative to an established benchmark with an elevation of 8.11 feet above mean sea level.

(b) Groundwater elevations adjusted assuming a specific gravity of 0 75 for free product.

(c) Detection limits vary; see laboratory report.

(d) A copy of the documentation for this data is included in Appendix C of Alisto report 10-061-07-004.

(e) Blind duplicate.

(f) EPA Methods 8020/8260 used

(g) Travel blank.

F:\0\10-061\061-7-4.WQ2

TABLE 2
PRODUCT REMOVAL STATUS
BP OIL COMPANY SERVICE STATION NO. 11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

ALISTO PROJECT NO. 10-061

WELL ID	DATE	PRODUCT THICKNESS (Feet)	PRODUCT REMOVED (Gallons)	PRODUCT REMOVED CUMULATIVE (Gallons)
MW-9	12/02/93	4.62	0.15	0.15
MW-9	12/09/93	2.45	0.15	0.30
MW-9	12/30/93	2.39	0.15	0.45
MW-9	01/12/94	2.15	0.02	0.47
MW-9	02/02/94	1.82	Sheen	0.47
MW-9	02/15/94	3.75	0.35	0.82
MW-9	05/11/94	3.00	Sheen	0.82
MW-9	05/27/94	1.50	Sheen	0.82
MW-9	06/25/94	1.32	Sheen	0.82
MW-9	08/01/94	---	Sheen	0.82
MW-9	10/18/94	0.13	---	0.82
MW-9	01/13/95	0.14	---	0.82
MW-9	04/13/95	0.11	---	0.82
MW-9	07/11/95	0.08	0.13	0.95
MW-9	04/24/96	0.09	0.06	1.01
MW-9	07/16/96	0.04	---	1.01
MW-9	07/30/96	---	---	1.01
MW-9	11/05/96	0.01	ND<0.01	1.01

ABBREVIATIONS:

--- Not applicable

E:\0\10-061\PRODUCT.WQ2

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

N

0 1000' 2000'

FIGURE 1

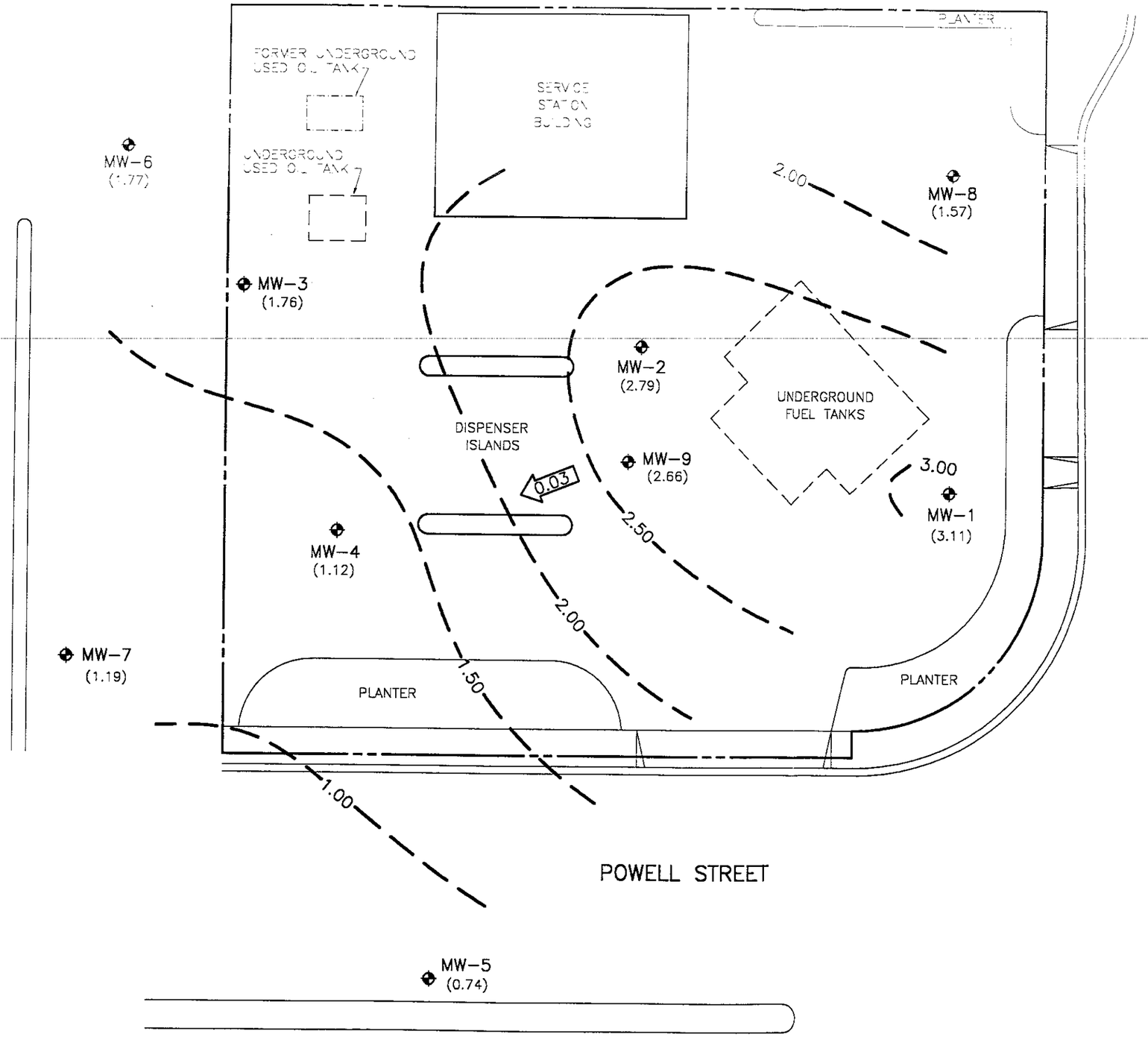
SITE VICINITY MAP

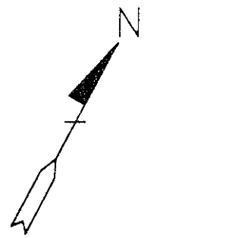
BP OIL SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-061

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10D819--.DWG 12-30-93 RKW 1-1





LEGEND

- ◆ GROUNDWATER MONITORING WELL
- (1.12) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 1.50 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL—0.50 FOOT)
- 0.03 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

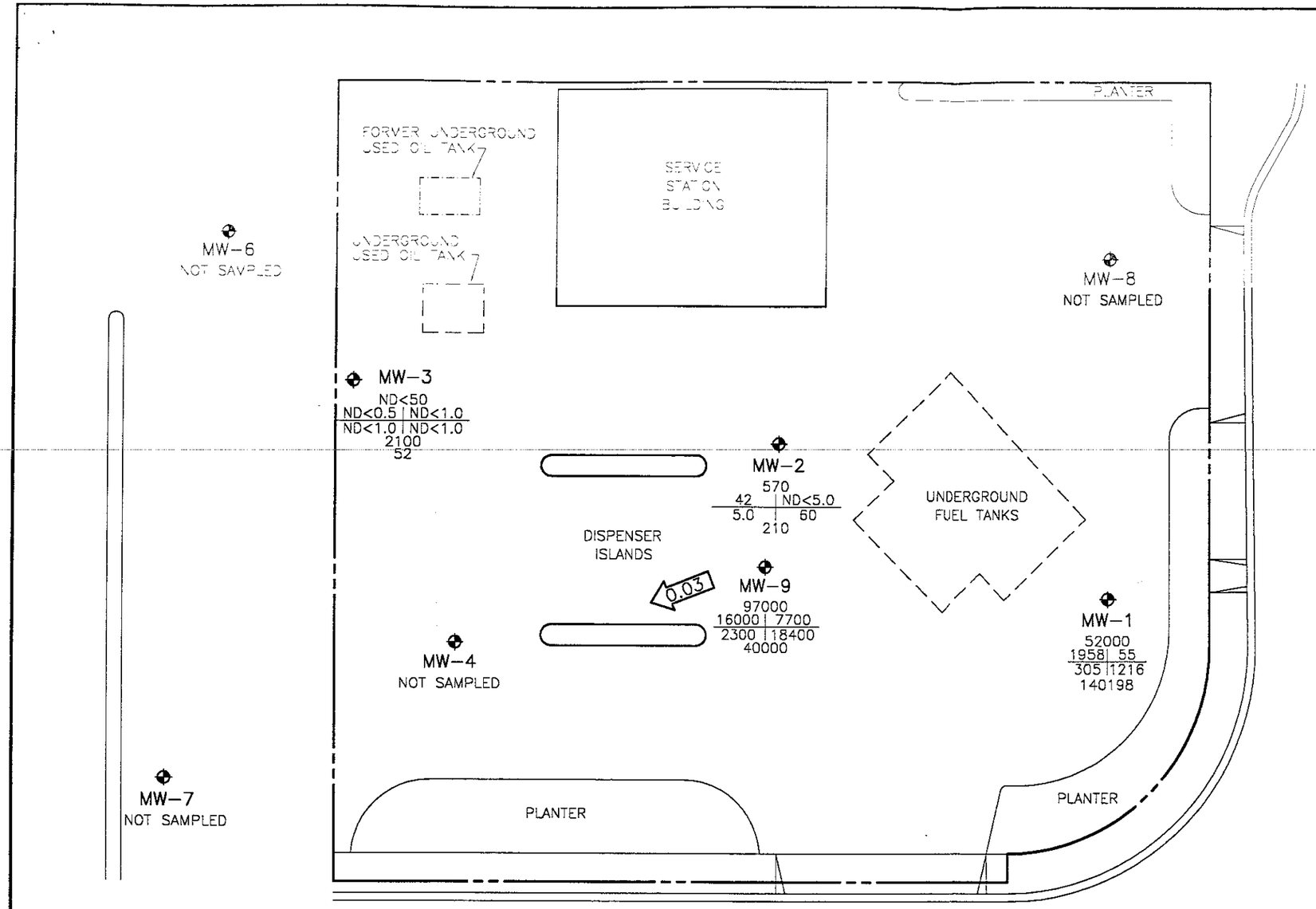
MAY 17, 1997

BP OIL SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-061

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10061d-w .DWG 8-20-97 WH 1-20



N

0 20 40

SCALE IN FEET

LEGEND

⊕	GROUNDWATER MONITORING WELL
TPH-G / B | T / E | X / TPH-D / MTBE	CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER,
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
TPH-D	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
MTBE	METHYL TERT BUTYL ETHER
ND	NOT DETECTED ABOVE REPORTED DETECTION LIMIT
0.03	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

MAY 17, 1997

BP OIL SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-061

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10081E-V.DWG 7-10-97 RKW 1=20

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING
GROUP
1575 TREAT BOULEVARD, SUITE 201

Project No. 10-061-07-004 Date: 5/17/97
Address 1700 Powell St. Day: M T W TH F (Sat.)
Contract No. G797467 City: Emeryville
Station No. BP 11126 Sampler: LB

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME MONITORED	COMMENTS:
MW-1	S-1	2"	11.62'	4.65	Ø	0900	
MW-2	S-4	2"	11.91'	5.77		0909	
MW-3	S-2	2"	12.08'	6.49		0903	
MW-4	N/S	2"	11.06'	7.00		0845	ANNUAL
MW-5	S-3	2"	13.70'	6.95		0907	
MW-6	N/S	2"	13.25'	6.75		0850	ANNUAL
MW-7	↓	2"	13.72'	6.47		0853	ANNUAL
MW-8	↓	2"	13.65'	7.03		0857	ANNUAL
MW-9	S-5	4"	13.85'	5.42	↓	0911	QC-4 (S-6) From this well

FIELD INSTRUMENT CALIBRATION DATA

pH METER Inn 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED (Y) N TIME 0919

D.O. METER Inn ZERO d.O. SOLUTION ____ BAROMETRIC PRESSURE 760 TEMP 69 WEATHER clear

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

LEAK DETECTOR : ____ ALARM MODE X NON ALARM MODE

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-1	4.65	2"	OIC	Ø	Y (N)	1	0940	76.4	7.71	1.21mg	5.7
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2		70.3	7.60	1.37mg	
11.62 - 4.65 = 6.97 X .16 = 1.12 X 3 = 3.36						3.5	0948	70.3	7.54	1.44mg	5.7
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

(X) EPA 601 ____
(X) TPH-G/BTEX Hill
( ) TPH Diesel ____
( ) TOG 5520 ____
TIME/SAMPLE ID: 0953

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-3	6.49	2"	OIC	Ø	Y (N)	1	1002	70.3	7.62	4.49mg	5.9
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2		69.7	7.51	4.63mg	
12.08 - 6.49 = 5.59 X .16 = .89 X 3 = 2.67						3	1010	69.3	7.44	4.61mg	6.3
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

(X) EPA 601 Hill
(X) TPH-G/BTEX Hill
(X) TPH Diesel Hill
(X) TOG 5520 Hill
TIME/SAMPLE ID: 1019

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. 10-061-07-004 Date: 5/17/97 BF
Address 1700 Powell St. Day: M T W TH F (SAT)
Contract No. G797467 City: Emeryville
Station No. BP 11126 Sampler: JB

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-5	6.95	2"	OIC	Ø	Y (N)	1	1027	71.9	7.53	3.3 ms	6.4
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2		71.3	7.42	3.7 ms	
13.70-6.95=6.75 X .16 = 1.08 X 3 =			3.24			3.5	1036	70.7	7.40	3.7 ms	6.7
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

O EPA 601_____
X TPH-G/BTEX Hcl
O TPH Diesel____
O TOG 5520 ___
TIME/SAMPLE ID
1040

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-2	5.77	2"	OIC	Ø	Y (N)	1	1049	72.1	7.97	2.1 ms	6.7
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2		71.4	7.73	1.87 ms	
11.91-5.77=6.14 X .16 = .98 X 3 =			2.94			3	1057	71.0	7.73	1.83 ms	6.9
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

X EPA 601 Hcl
X TPH-G/BTEX
O TPH Diesel____
O TOG 5520 ___
TIME/SAMPLE ID
1101

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-9	5.42	4"	OIC	Ø	Y (N)	6	1111	71.4	7.42	1.6 ms	7.0
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			12		70.8	7.33	1.73 ms	
13.85-5.42=8.43 X .65 = 5.48 X 3 =			16.44			17	1132	70.1	7.24	1.81 ms	7.0
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

X EPA 601 Hcl
X TPH-G/BTEX
O TPH Diesel____
O TOG 5520 ___
TIME/SAMPLE ID
1134

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
					Y N						
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.								
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

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

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
					Y N						
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.								
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

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

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

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

May 30, 1997

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 May 20, 1997. The samples were assigned to Certificate of Analysis No. 9705996 and analyzed for all parameters as listed 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 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

Ed Fry
Project Manager

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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 97-05-996

Approved for Release by:

Ed Fry, Project Manager

Date: 5/30/97

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. H9-9705996-01

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

P.O.# G797467 , COC#088202
DATE: 05/30/97

PROJECT: BP Oil #11126
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-1

PROJECT NO: 10-061-7-4
MATRIX: WATER
DATE SAMPLED: 05/17/97
DATE RECEIVED: 05/20/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	140198	5000 P	µg/L
Benzene	1958	25 P	µg/L
Toluene	55	50 P	µg/L
Ethylbenzene	305	50 P	µg/L
Total Xylene	1216	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	89		
4-Bromofluorobenzene	64		
Method 8020A***			
Analyzed by: AA			
Date: 05/29/97			
Total Petroleum Hydrocarbons-Gasoline	52	2.5 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	120		
4-Bromofluorobenzene	100		
California LUFT Manual			
Analyzed by: RL			
Date: 05/28/97 02:45:00			

(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. H9-9705996-02

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

P.O.# G797467 , COC#088202
DATE: 05/30/97

PROJECT: BP Oil #11126
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-061-7-4
MATRIX: WATER
DATE SAMPLED: 05/17/97
DATE RECEIVED: 05/20/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	52	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	83		
4-Bromofluorobenzene	67		
Method 8020A***			
Analyzed by: AA			
Date: 05/28/97			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	67		
Total Petroleum Hydrocarbons-Diesel	2.1	0.25 P	mg/L
n-Pentacosane	125		
California LUFT Manual			
Analyzed by: RR			
Date: 05/24/97 02:46:00			
Liquid-liquid extraction	05/20/97		
Method 3510B ***			
Analyzed by: SW			
Date: 05/21/97 09:00:00			

(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. H9-9705996-02

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

P.O.# G797467 , COC#088202
05/30/97

PROJECT: BP Oil #11126
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-061-7-4
MATRIX: WATER
DATE SAMPLED: 05/17/97
DATE RECEIVED: 05/20/97

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Dichlorodifluoromethane	ND	5.0	µg/L
Chloromethane	ND	5.0	µg/L
Vinyl chloride	ND	5.0	µg/L
Bromomethane	ND	5.0	µg/L
Chloroethane	ND	5.0	µg/L
Trichlorofluoromethane	ND	5.0	µg/L
1,1-Dichloroethene	ND	5.0	µg/L
Methylene chloride	ND	5.0	µg/L
Trans-1,2-Dichloroethene	ND	5.0	µg/L
1,1-Dichloroethane	ND	5.0	µg/L
Chloroform	ND	5.0	µg/L
1,1,1-Trichloroethane	ND	5.0	µg/L
Carbon tetrachloride	ND	5.0	µg/L
1,2-Dichloroethane	ND	5.0	µg/L
2-Chloroethylvinyl ether	ND	5.0	µg/L
Trichloroethene	ND	5.0	µg/L
1,2-Dichloropropane	ND	5.0	µg/L
Bromodichloromethane	ND	5.0	µg/L
cis-1,3-Dichloropropene	ND	5.0	µg/L
trans-1,3-Dichloropropene	ND	5.0	µg/L
1,1,2-Trichloroethane	ND	5.0	µg/L
Tetrachloroethene	ND	5.0	µg/L
Dibromochloromethane	ND	5.0	µg/L
Chlorobenzene	ND	5.0	µg/L
Bromoform	ND	5.0	µg/L
1,1,2,2-Tetrachloroethane	ND	5.0	µg/L
1,3-Dichlorobenzene	ND	5.0	µg/L
1,4-Dichlorobenzene	ND	5.0	µg/L
1,2-Dichlorobenzene	ND	5.0	µg/L

METHOD: 601, Halogenated Volatile Organics

(continued on next page)

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

Certificate of Analysis No. H9-9705996-02

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

P.O.# G797467 , COC#088202
DATE: 05/30/97

PROJECT: BP Oil #11126
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-061-7-4
MATRIX: WATER
DATE SAMPLED: 05/17/97
DATE RECEIVED: 05/20/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Hydrocarbons by Gravimetry Method 5520 B & F ** Analyzed by: RN Date: 05/28/97 15:00:00	0.7	0.5	mg/L

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. H9-9705996-02

BP Oil Company

SAMPLE ID: S-2

SURROGATES	% RECOVERY
1-Chloro-2-Fluorobenzene	90

ANALYZED BY: RL DATE/TIME: 05/29/97 01:03:00
METHOD: 601, Halogenated Volatile Organics
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

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. H9-9705996-03

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

P.O.# G797467 , COC#088202
DATE: 05/30/97

PROJECT: BP Oil #11126
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-3

PROJECT NO: 10-061-7-4
MATRIX: WATER
DATE SAMPLED: 05/17/97
DATE RECEIVED: 05/20/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	46	10 P	µg/L
Benzene	0.56	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	83		
Method 8020A***			
Analyzed by: RL			
Date: 05/28/97			
Total Petroleum Hydrocarbons-Gasoline	0.080	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	110		
4-Bromofluorobenzene	77		
California LUFT Manual			
Analyzed by: RL			
Date: 05/28/97 12:55:00			

(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. H9-9705996-04

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

P.O.# G797467 , COC#088202
DATE: 05/30/97

PROJECT: BP Oil #11126
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-4

PROJECT NO: 10-061-7-4
MATRIX: WATER
DATE SAMPLED: 05/17/97
DATE RECEIVED: 05/20/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	210	50 P	µg/L
Benzene	42	2.5 P	µg/L
Toluene	ND	5.0 P	µg/L
Ethylbenzene	5.0	5.0 P	µg/L
Total Xylene	60	5.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	93		
Method 8020A***			
Analyzed by: RL			
Date: 05/28/97			
Total Petroleum Hydrocarbons-Gasoline	0.57	0.25 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	113		
4-Bromofluorobenzene	87		
California LUFT Manual			
Analyzed by: RL			
Date: 05/28/97 01:22:00			

(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. H9-9705996-05

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

P.O.# G797467 , COC#088202
DATE: 05/30/97

PROJECT: BP Oil #11126
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-5

PROJECT NO: 10-061-7-4
MATRIX: WATER
DATE SAMPLED: 05/17/97
DATE RECEIVED: 05/20/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	40000	5000 P	µg/L
Benzene	16000	250 P	µg/L
Toluene	7700	500 P	µg/L
Ethylbenzene	2300	500 P	µg/L
Total Xylene	18400	500 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	87		
Method 8020A***			
Analyzed by: RL			
Date: 05/28/97			
Total Petroleum Hydrocarbons-Gasoline	97	25 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	107		
4-Bromofluorobenzene	93		
California LUFT Manual			
Analyzed by: RL			
Date: 05/28/97 04:34:00			

(P) - Practical Quantitation Limit

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

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

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

Certificate of Analysis No. H9-9705996-06

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

P.O.# G797467 , COC#088202
DATE: 05/30/97

PROJECT: BP Oil #11126
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-6

PROJECT NO: 10-061-7-4
MATRIX: WATER
DATE SAMPLED: 05/17/97
DATE RECEIVED: 05/20/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	39000	5000 P	µg/L
Benzene	16000	250 P	µg/L
Toluene	8200	500 P	µg/L
Ethylbenzene	2300	500 P	µg/L
Total Xylene	17300	500 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	113		
4-Bromofluorobenzene	93		
Method 8020A***			
Analyzed by: RL			
Date: 05/28/97			
Total Petroleum Hydrocarbons-Gasoline	97	25 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	113		
4-Bromofluorobenzene	93		
California LUFT Manual			
Analyzed by: RL			
Date: 05/28/97 04:06:00			

(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

QUALITY CONTROL

DOCUMENTATION

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

SURROGATE RECOVERY SUMMARY
05/30/97 09:22:24

COMPOUND	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
California LUFT Manual		**BATCH#:**HPVV970523023400		
WORK ORDER: 9705996-02C		**CLIENT SAMPLE ID:**S-2		
n-Pentacosane		25.0000	125	-
Modified 8015A - Diesel ***		**BATCH#:**HPVV970523023400		
WORK ORDER: Method Blank		**CLIENT SAMPLE ID:**		
n-Pentacosane	50	51		50- 150
Modified 8015A - Diesel ***		**BATCH#:**HPVV970523023400		
WORK ORDER: Matrix Spike		**CLIENT SAMPLE ID:**970521SFBS		
n-Pentacosane	50	0.0	0 «	50- 150
Method 502.2 EPA 600/4-88/039		**BATCH#:**HP_F970527044800		
WORK ORDER: Method Blank		**CLIENT SAMPLE ID:**		
1-Chloro-2-Fluorobenzene		97	0	-
Method 502.2 EPA 600/4-88/039		**BATCH#:**HP_F970527044800		
WORK ORDER: LCS		**CLIENT SAMPLE ID:**		
1-Chloro-2-Fluorobenzene	100	103	103	-
Method 601 40 CFR PART 136		**BATCH#:**HP_F970529082200		
WORK ORDER: 9705996-02B		**CLIENT SAMPLE ID:**S-2		
1-Chloro-2-Fluorobenzene	100	90.0000	90	56- 130
Method 601 40 CFR PART 136		**BATCH#:**HP_F970529082200		
WORK ORDER: Method Blank		**CLIENT SAMPLE ID:**		
1-Chloro-2-Fluorobenzene		90		56- 130
Method 601 40 CFR PART 136		**BATCH#:**HP_F970529082200		
WORK ORDER: LCS		**CLIENT SAMPLE ID:**		
1-Chloro-2-Fluorobenzene	100	100	100	56- 130
Method 601 40 CFR PART 136		**BATCH#:**HP_F970529082200		
WORK ORDER: Matrix Spike		**CLIENT SAMPLE ID:**9705D01-07A		
1-CHLORO-2-FLUOROBENZENE		94	94	56- 130

COMPOUND

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

SURROGATE RECOVERY SUMMARY
05/30/97 09:22:24

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
Method 601 40 CFR PART 136		**BATCH#:**HP_F970529082200		
WORK ORDER: Matrix Spike Dup.		**CLIENT SAMPLE ID:**9705D01-07A		
1-Chloro-2-Fluorobenzene		94	94	56- 130
California LUFT Manual		**BATCH#:**HP_W970527080700		
WORK ORDER: 9705996-01A		**CLIENT SAMPLE ID:**S-1		
1,4-Difluorobenzene	30	36.0000	120	50- 150
4-Bromofluorobenzene	30	30.0000	100	50- 150
California LUFT Manual		**BATCH#:**HP_W970527080700		
WORK ORDER: 9705996-03A		**CLIENT SAMPLE ID:**S-3		
1,4-Difluorobenzene	30	33	110	50- 150
4-Bromofluorobenzene	30	23	77	50- 150
California LUFT Manual		**BATCH#:**HP_W970527080700		
WORK ORDER: 9705996-04A		**CLIENT SAMPLE ID:**S-4		
1,4-Difluorobenzene	30	34.0000	113	50- 150
4-Bromofluorobenzene	30	26.0000	87	50- 150
California LUFT Manual		**BATCH#:**HP_W970527080700		
WORK ORDER: 9705996-05A		**CLIENT SAMPLE ID:**S-5		
1,4-Difluorobenzene	30	32.0000	107	50- 150
4-Bromofluorobenzene	30	28.0000	93	50- 150
California LUFT Manual		**BATCH#:**HP_W970527080700		
WORK ORDER: 9705996-06A		**CLIENT SAMPLE ID:**S-6		
1,4-Difluorobenzene	30	34.0000	113	50- 150
4-Bromofluorobenzene	30	28.0000	93	50- 150
Modified 8015A - Gasoline* **		**BATCH#:**HP_W970527080700		
WORK ORDER: Method Blank		**CLIENT SAMPLE ID:**		
4-Bromofluorobenzene	30	25		52- 152
1,4-Difluorobenzene	30	30		54- 137
Modified 8015A - Gasoline* **		**BATCH#:**HP_W970527080700		
WORK ORDER: Matrix Spike		**CLIENT SAMPLE ID:**9705995-01A		
4-Bromofluorobenzene	30	32	107	52- 152
1,4-Difluorobenzene	30	30	100	54- 137

COMPOUND

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

SURROGATE RECOVERY SUMMARY
05/30/97 09:22:24

Modified 8015A - Gasoline***
BATCH#:HP_W970527080700
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9705995-01A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	31	103	52- 152
1,4-Difluorobenzene	30	30	100	54- 137

Method 8020A***
BATCH#:HP_W970527083400
WORK ORDER: 9705996-01A **CLIENT SAMPLE ID:**S-1

1,4-Difluorobenzene	30	38.0000	127	70- 131
4-Bromofluorobenzene	30	28.0000	93	43- 135

Method 8020A***
BATCH#:HP_W970527083400
WORK ORDER: 9705996-03A **CLIENT SAMPLE ID:**S-3

1,4-Difluorobenzene	30	29	97	70- 131
4-Bromofluorobenzene	30	25	83	43- 135

Method 8020A***
BATCH#:HP_W970527083400
WORK ORDER: 9705996-04A **CLIENT SAMPLE ID:**S-4

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

Method 8020A***
BATCH#:HP_W970527083400
WORK ORDER: 9705996-05A **CLIENT SAMPLE ID:**S-5

1,4-Difluorobenzene	30	30.0000	100	70- 131
4-Bromofluorobenzene	30	26.0000	87	43- 135

Method 8020A***
BATCH#:HP_W970527083400
WORK ORDER: 9705996-06A **CLIENT SAMPLE ID:**S-6

1,4-Difluorobenzene	30	34.0000	113	70- 131
4-Bromofluorobenzene	30	28.0000	93	43- 135

Method 8020A ***
BATCH#:HP_W970527083400
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	29		74- 131
4-Bromofluorobenzene	30	28		43- 135

Method 8020A ***
BATCH#:HP_W970527083400
WORK ORDER: LCS **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	35	117	70- 131

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

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	29	96.7	43- 135

Method 8020A *** **BATCH#:**HP_W970527083400
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9705893-10A

1,4-DIFLUOROBENZENE	30	36	120	70- 131
4-BROMOFLUOROBENZENE	30	29	97	43- 135

Method 8020A *** **BATCH#:**HP_W970527083400
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9705893-11A

1,4-Difluorobenzene	30	39	130	70- 131
4-Bromofluorobenzene	30	29	97	43- 135

Method 8020A*** **BATCH#:**HP_W970528052800
WORK ORDER: 9705996-01A **CLIENT SAMPLE ID:**S-1

1,4-Difluorobenzene	30	32.0600	107	70- 131
4-Bromofluorobenzene	30	22.8800	76	43- 135

Method 8020A*** **BATCH#:**HP_W970528052800
WORK ORDER: 9705996-02A **CLIENT SAMPLE ID:**S-2

1,4-Difluorobenzene	30	25	83	70- 131
4-Bromofluorobenzene	30	20	67	43- 135

Method 8020A *** **BATCH#:**HP_W970528052800
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	27	90	74- 131
4-Bromofluorobenzene	30	23	77	43- 135

Method 8020A *** **BATCH#:**HP_W970528052800
WORK ORDER: LCS **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	24	80.0	43- 135

Method 8020A *** **BATCH#:**HP_W970528052800
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9705A19-07A

1,4-DIFLUOROBENZENE	30	26	87	70- 131
4-BROMOFLUOROBENZENE	30	23	77	43- 135

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COMPOUND

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
Method 8020A * ** BATCH#:HP_W970528052800				
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9705A19-07A				
1,4-Difluorobenzene	30	28	93	70- 131
4-Bromofluorobenzene	30	24	80	43- 135
California LUFT Manual **BATCH#:**HP_W970528055600				
WORK ORDER: 9705996-02A **CLIENT SAMPLE ID:**S-2				
1,4-Difluorobenzene	30	29	97	50- 150
4-Bromofluorobenzene	30	20	67	50- 150
California LUFT Manual **BATCH#:**HP_W970528055600				
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**				
1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	21	70	50- 150
California LUFT Manual **BATCH#:**HP_W970528055600				
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9705A37-01A				
1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	27	90	50- 150
California LUFT Manual **BATCH#:**HP_W970528055600				
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9705A37-01A				
1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	26	87	50- 150
Method 8020A* ** BATCH#:HP_W970529013700				
WORK ORDER: 9705996-01A **CLIENT SAMPLE ID:**S-1				
1,4-Difluorobenzene	30	26.7340	89	70- 131
4-Bromofluorobenzene	30	19.1080	64	43- 135

« = 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 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_W970529013700

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	37.3	74.6	63 - 120
Benzene	ND	50	37.7	75.4	62 - 121
Toluene	ND	50	42.1	84.2	66 - 136
EthylBenzene	ND	50	42.5	85.0	70 - 136
O Xylene	ND	50	40.9	81.8	74 - 134
M & P Xylene	ND	100	85.0	85.0	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	4.9	20	31.1	131	31.3	132	0.760	20	39 - 150
Benzene	ND	20	15.8	79.0	15.7	78.5	0.635	25	39 - 150
Toluene	ND	20	16.3	81.5	16.2	81.0	0.615	26	56 - 134
EthylBenzene	ND	20	15.2	76.0	15.0	75.0	1.32	38	61 - 128
O Xylene	ND	20	14.7	73.5	14.5	72.5	1.37	29	40 - 130
M & P Xylene	ND	40	30.6	76.5	30.2	75.5	1.32	20	43 - 152

Analyst: AA
Sequence Date: 05/29/97
SPL ID of sample spiked: 9705A37-01A
Sample File ID: W_E7133.TX0
Method Blank File ID:
Blank Spike File ID: W_E7136.TX0
Matrix Spike File ID: W_E7138.TX0
Matrix Spike Duplicate File ID: W_E7139.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: SPL-Houston Historical Data (3rd Q '95)
(***) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID): 9705A64-06A 9705A64-01A 9705B40-01A 9705B40-04A 9705B40-05A 9705A64-01A 9705996-01A 9705997-02A

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_W970528052800

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	38	76.0	63 - 120
Benzene	ND	50.0	40	80.0	62 - 121
Toluene	ND	50.0	44	88.0	66 - 136
EthylBenzene	ND	50.0	42	84.0	70 - 136
O Xylene	ND	50.0	43	86.0	74 - 134
M & P Xylene	ND	100.0	90	90.0	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	16.9	84.5	16.8	84.0	0.593	20	39 - 150
BENZENE	ND	20	14.6	73.0	14.6	73.0	0	25	39 - 150
TOLUENE	ND	20	15.1	75.5	14.6	73.0	3.37	26	56 - 134
ETHYLBENZENE	ND	20	14.0	70.0	13.7	68.5	2.17	38	61 - 128
O XYLENE	ND	20	13.6	68.0	13.4	67.0	1.48	29	40 - 130
M & P XYLENE	ND	40	27.9	69.8	27.1	67.8	2.91	20	43 - 152

Analyst: AA
Sequence Date: 05/29/97
SPL ID of sample spiked: 9705A19-07A
Sample File ID: W_7E096.TX0
Method Blank File ID:
Blank Spike File ID: W_7E119.TX0
Matrix Spike File ID: W_7E101.TX0
Matrix Spike Duplicate File ID: W_7E102.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: SPL-Houston Historical Data (3rd Q '95)
(***) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID):

9705997-05A 9705995-02A 9705A19-07A 9705A19-08A
9705A19-06A 9705A19-10A 9705997-03A 9705C01-02C
9705996-01A 9705997-01A 9705997-04A 9705997-05A
9705A10-03A 9705996-02A 9705A98-01A 9705997-04A

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_W970527083400

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	48	96.0	63 - 120
Benzene	ND	50	49	98.0	62 - 121
Toluene	ND	50	55	110	66 - 136
EthylBenzene	ND	50	56	112	70 - 136
O Xylene	ND	50	53	106	74 - 134
M & P Xylene	ND	100	110	110	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	41	20.0	62	105	63	110	4.65	20	39 - 150
BENZENE	330	20.0	300	NC	310	NC	NC	25	39 - 150
TOLUENE	78	20.0	78	0 *	82	20.0 *	200 *	26	56 - 134
ETHYLBENZENE	29	20.0	40	55.0 *	42	65.0	16.7	38	61 - 128
O XYLENE	48	20.0	59	55.0	61	65.0	16.7	29	40 - 130
M & P XYLENE	110	40.0	120	25.0 *	130	50.0	66.7 *	20	43 - 152

Analyst: RL
Sequence Date: 05/27/97
SPL ID of sample spiked: 9705893-09A
Sample File ID: W_7E073.TX0
Method Blank File ID:
Blank Spike File ID: W_7E057.TX0
Matrix Spike File ID: W_7E070.TX0
Matrix Spike Duplicate File ID: W_7E071.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: SPL-Houston Historical Data (3rd Q '95)
(***) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID):

9705A10-02A 9705893-08A 9705893-07A 9705996-03A
9705996-04A 9705893-13A 9705996-01A 9705996-06A
9705996-05A 9705C87-02A 9705690-02B 9705995-01A
9705995-03A

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** SPL BATCH QUALITY CONTROL REPORT **
Modified 8015 - Gasoline

Matrix: Aqueous
Units: mg/L

Batch Id: HP_W970527080700

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 Petr. Hydrocarbon	ND	1.0	0.96	96.0	56 - 130

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 PETR. HYDROCARBON	ND	0.9	0.70	77.8	0.66	73.3	5.96	22	37 - 169

Analyst: RL
Sequence Date: 05/27/97
SPL ID of sample spiked: 9705995-01A
Sample File ID: WW7E059.TX0
Method Blank File ID:
Blank Spike File ID: WW7E058.TX0
Matrix Spike File ID: WW7E068.TX0
Matrix Spike Duplicate File ID: WW7E069.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: SPL-Houston Historical data (3rd Q '95)
(***) = Source: SPL-Houston Historical Data (3rd Q '95)

SAMPLES IN BATCH(SPL ID):

9705893-07A 9705996-03A 9705996-04A 9705893-13A
9705996-01A 9705997-01A 9705996-06A 9705996-05A
9705C87-02A 9705865-03A 9705995-01A 9705995-03A
9705893-08A

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** SPL BATCH QUALITY CONTROL REPORT **
CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_W970528055600

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	0.76	76.0	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	0.65	72.2	0.60	66.7	7.92	50	50 - 150

Analyst: AA
Sequence Date: 05/29/97
SPL ID of sample spiked: 9705A37-01A
Sample File ID: WW7E106.TX0
Method Blank File ID:
Blank Spike File ID: WW7E120.TX0
Matrix Spike File ID: WW7E103.TX0
Matrix Spike Duplicate File ID: WW7E104.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): 9705995-02A 9705996-02A 9705997-04A 9705997-05A

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** SPL BATCH QUALITY CONTROL REPORT ** PAGE
Mod. 8015 - Diesel

Matrix: Aqueous
Units: mg/L

Batch Id: HPVV970523023400

B L A N K S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike 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
DIESEL PETR. HYDROCARBONS	ND	5.0	4.51	88.8	4.86	95.8	7.58	43	60 - 139

Analyst: RR
Sequence Date: 05/23/97
Method Blank File ID:
Sample File ID:
Blank Spike File ID: VVE7399.TX0
Matrix Spike File ID:
Matrix Spike Duplicate File ID:

* = 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
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (2nd Q '97)

SAMPLES IN BATCH(SPL ID):

9705895-05D 9705895-06D 9705895-07D 9705895-08D
9705895-09D 9705996-02C 9705A13-01B 9705A14-01B
9705A14-02B 9705895-03D 9705895-04D

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 601**

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F970529082200

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Dichlorodifluoromethane	ND	20	18	90.0	1 - 200
Chloromethane	ND	20	23	115	1 - 193
Vinyl chloride	ND	20	20	100	28 - 163
Bromomethane	ND	20	22	110	1 - 144
Chloroethane	ND	20	27	135	46 - 137
Trichlorofluoromethane	ND	20	20	100	21 - 156
1,1-Dichloroethene	ND	20	16	80.0	28 - 167
Methylene chloride	ND	20	16	80.0	25 - 162
Trans-1,2-Dichloroethene	ND	20	16	80.0	38 - 155
1,1-Dichloroethane	ND	20	17	85.0	34 - 132
Chloroform	ND	20	17	85.0	49 - 133
1,1,1-Trichloroethane	ND	20	17	85.0	41 - 138
Carbon tetrachloride	ND	20	17	85.0	43 - 143
1,2-Dichloroethane	ND	20	17	85.0	51 - 147
2-Chloroethylvinyl ether	ND	20	21	105	14 - 186
Trichloroethene	ND	20	18	90.0	35 - 146
1,2-Dichloropropane	ND	20	17	85.0	44 - 156
Bromodichloromethane	ND	20	18	90.0	42 - 172
cis-1,3-Dichloropropene	ND	20	17	85.0	22 - 178
trans-1,3-Dichloropropene	ND	20	17	85.0	33 - 178
1,1,2-Trichloroethane	ND	20	17	85.0	39 - 136
Tetrachloroethene	ND	20	17	85.0	26 - 162
Dibromochloromethane	ND	20	18	90.0	24 - 191
Chlorobenzene	ND	20	17	85.0	38 - 150
Bromoform	ND	20	19	95.0	13 - 159
1,1,2,2-Tetrachloroethane	ND	20	18	90.0	8 - 184
1,3-Dichlorobenzene	ND	20	18	90.0	7 - 187
1,4-Dichlorobenzene	ND	20	18	90.0	42 - 143
1,2-Dichlorobenzene	ND	20	18	90.0	1 - 208

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
DICHLORODIFLUOROMETHANE	ND	20	21	105	20	100	4.88	20	1 - 200
CHLOROMETHANE	ND	20	24	120	24	120	0	20	1 - 193
VINYL CHLORIDE	ND	20	25	125	24	120	4.08	20	28 - 163
BROMOMETHANE	ND	20	1.6	8.00	1.6	8.00	0	20	1 - 144
CHLOROETHANE	ND	20	29	145 *	30	150 *	3.39	20	46 - 137

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 601**

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F970529082200

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

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike 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
TRICHLOROFLUOROMETHANE	ND	20	23	115	23	115	0	20	21 - 156
1,1-DICHLOROETHENE	ND	20	23	115	23	115	0	20	28 - 167
METHYLENE CHLORIDE	ND	20	22	110	22	110	0	20	25 - 162
TRANS-1,2-DICHLOROETHENE	ND	20	23	115	23	115	0	20	38 - 155
1,1-DICHLOROETHANE	ND	20	22	110	22	110	0	20	47 - 132
CHLOROFORM	ND	20	20	100	20	100	0	20	49 - 133
1,1,1-TRICHLOROETHANE	ND	20	21	105	21	105	0	20	41 - 138
CARBON TETRACHLORIDE	ND	20	21	105	21	105	0	20	43 - 143
1,2-DICHLOROETHANE	ND	20	21	105	20	100	4.88	20	51 - 147
2-CHLOROETHYLVINYL ETHER	ND	20	19	95.0	18	90.0	5.41	20	14 - 186
TRICHLOROETHENE	ND	20	21	105	20	100	4.88	20	35 - 146
1,2-DICHLOROPROPANE	ND	20	21	105	20	100	4.88	20	44 - 156
BROMODICHLOROMETHANE	ND	20	21	105	20	100	4.88	20	42 - 172
CIS-1,3-DICHLOROPROPENE	ND	20	2.9	14.5 *	2.3	11.5 *	23.1 *	20	22 - 178
TRANS-1,3-DICHLOROPROPENE	ND	20	11	55.0	10	50.0	9.52	20	33 - 178
1,1,2-TRICHLOROETHANE	ND	20	20	100	20	100	0	20	39 - 136
TETRACHLOROETHENE	ND	20	19	95.0	18	90.0	5.41	20	26 - 162
DIBROMOCHLOROMETHANE	ND	20	20	100	20	100	0	20	24 - 191
CHLOROBENZENE	ND	20	15	75.0	13	65.0	14.3	20	38 - 150
BROMOFORM	ND	20	20	100	20	100	0	20	13 - 159
1,1,2,2-TETRACHLOROETHANE	ND	20	22	110	22	110	0	20	8 - 184
1,3-DICHLOROBENZENE	ND	20	18	90.0	18	90.0	0	20	7 - 187
1,4-DICHLOROBENZENE	ND	20	17	85.0	16	80.0	6.06	20	42 - 143
1,2-DICHLOROBENZENE	ND	20	18	90.0	17	85.0	5.71	20	1 - 208

Analyst: RL
Sequence Date: 05/29/97
SPL ID of sample spiked: 9705D01-07A
Sample File ID: FFE7487.TX0
Method Blank File ID:
Blank Spike File ID: FFE7481.TX0
Matrix Spike File ID: FFE7483.TX0
Matrix Spike Duplicate File ID: FFE7484.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: 601, Table 2
(***) = Source: SPL Temporary Limits

SAMPLES IN BATCH(SPL ID): 9705996-02B 9705D01-07A

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 05/28/97
Analyzed on: 05/28/97
Analyst: RN

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Hydrocarbons by Gravimetry
Method 5520 B & F **

SPL Sample	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)	
ID Number	Blank mg/L	Result mg/L	Added mg/L	Result mg/L	Recovery %	Result mg/L	Recovery %	(%)	RPD Max	% REC
BLANK	ND	ND	4.0	3.8	95.0	3.7	92.5	2.7	7.9	84 -108

970528RN -9705A87

Samples in batch:

9705863-01C 9705996-02D 9705A84-01B 9705B70-02C

COMMENTS:

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9705996

CHAIN OF CUSTODY

No. 088202

Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering	CONSULTANT'S ADDRESS: 1575 Treat Blvd #201 W.C., Ca 94598		
BP SITE NUMBER: 11126	BP SITE / FACILITY ADDRESS: Emeryville, Ca		CONSULTANT PROJECT NUMBER: 10-061-7-4
CONSULTANT PROJECT MANGER: Brady Nagle	PHONE NUMBER: (510) 295-1650	FAX NUMBER: 295-1823	CONSULTANT CONTRACT NUMBER: 6797467
BP CONTACT: ~~Sft~~ 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: 5-19-97 / SHIPMENT METHOD: Fed Ex

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

AIRBILL NUMBER: 3848470614

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPH-G BTEX	MTBE	601 HVOCs	TPH-D	TOG 5520						COMMENTS
S-1	5/17/97		W	3	HCl		X	X									
S-2	↓		↓	9	↓		X	X	X	X	X						
S-3	↓		↓	3	↓		X	X									
S-4	↓		↓	↓	↓		X	X									
S-5	↓		↓	↓	↓		X	X									
S-6	↓		↓	↓	↓		X	X									

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]	5/19/97	0839	Patricia Yelton	5/19/97	0839
Patricia Yelton	5/19/97	1540	[signature]	5/20/97	0945

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

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

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 5/20/97	Time: 0945

SPL Sample ID: 9705996

			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 #)	384847006 14	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
	5/20/97

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

BP Site Number:	11126
ERM Contact:	G79746 7
Sampling Date:	05/17/97
Matrix Description:	Water
Date Final Report Received:	06/02/97
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?	✓		
3.	Does report agree with the COC?	✓		
4.	Are units consistent with the given matrix?	✓		
5.	Were any target analytes/compounds detected in blanks (i.e., trip or equipment)?			X
6.	Are duplicate water samples within 30%?	✓		
7.	Are holding times met?	✓		
8.	Are surrogates within limits using laboratory criteria?	✓		
9.	Are MS/MSD acceptable using laboratory criteria?		✓ ①	
10.	Are LCS results acceptable using laboratory criteria?			

Notes: ① only flag is for VOC - cis 1,3-dichloropropene

Data Validation Completed by: William Howell

(signature): Bill Howell

Date: 7/8/97

APPENDIX C

HISTORICAL MTBE DOCUMENTATION

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THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

February 25, 1994

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

RE: PACE Project No. 440216.505
Client Reference: BP Station # 11126/10-061-03/001

Dear Mr. Howell:

Enclosed is the report of laboratory analyses for samples received February 16, 1994.

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

700247306/MW-5	100 ug/L
700247314/MW-6	38 ug/L
700247322/MW-4	120 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

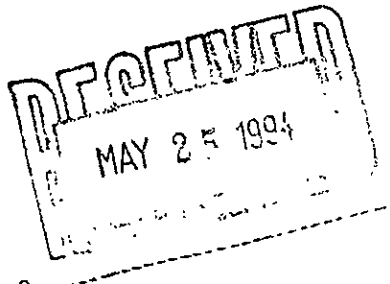
Enclosures

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

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

May 23, 1994



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

RE: PACE Project No. 440512.512
Client Reference: BP Site #11126/ 10-061-3-2

Dear Mr. Howell:

Enclosed is the report of laboratory analyses for samples received May 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:

700320356/MW-3	51 ug/L
700320364/MW-4	140 ug/L
700320372/MW-5	160 ug/L
700320380/MW-6	48 ug/L
700320410/QC-1	740 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
Project Manager

Enclosures

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

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

August 12, 1994

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

RE: PACE Project No. 440803.536
Client Reference: BP Site #11126/10-061-03-003

Dear Mr. Howell:

Enclosed is the report of laboratory analyses for samples received August 03, 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:

700364914/S-1	200 ug/L
700364981/S-8	9700 ug/L
700364990/S-9	9800 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

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