BP OIL

BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(425) 251-0667
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98 FEB 3 AM 8:30

January 27, 1998

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

RE: BP Oil Site No. 11126
1700 Powell St. (at Christie)
Emeryville, CA

Dear Ms. Hugo:

Enclosed please find the 19 December 1997 Groundwater Monitoring and Sampling Report prepared on behalf of BP by Alisto Engineering Group.

Aromatic petroleum constituents were detected in the subsurface when a soil gas survey was performed in conjunction with BP's 1989 acquisition of the site from Mobil Oil Corporation. The release of aromatic petroleum constituents was confirmed during 1992 when soil and groundwater samples were obtained in support of BP's plans to withdraw from the retail market in California. BP subsequently sold the business and related improvements were sold to the current operator (Tosco Corporation) in 1994, and is continuing to monitor the groundwater.

The cause and origin of the petroleum release(s) at this site has not – to the best of my knowledge – been established. The existing single-wall-fiberglass fuel tanks are believed to have been installed by Mobil Oil Corporation during 1982. Soil or groundwater data associated with the 1982 tank replacement was not reported to have been obtained when BP acquired the site from Mobil in 1989. While the UST system passed required precision tightness tests prior to and during BP's operation of the site, it is also noted that the underground storage tank system will require upgrading to comply with 1998 federal requirements for leak detection and prevention. I understand that this will include the installation of turbine riser sumps, dispenser pans and spill buckets around the fill tubes for the underground storage tanks.

The report shows that aromatic petroleum constituents were detected in groundwater samples collected from four of the eight monitoring wells sampled on 17 November 1997. The highest benzene concentration (22,000 ug/l) was reported in a sample obtained from well MW-9, located between the underground storage tanks and the product dispensers. It is also noted that MTBE was detected in samples obtained from six of the monitoring wells sampled on 17 December 1997. The highest MTBE concentration this quarter (400,000

ug/l) was reported in a sample obtained from well MW-1, located southeast of the underground storage tanks. It is also noted that the MTBE concentrations sampled in offsite well MW-5 this quarter (13,000 ug/l) has increased approximately an order of magnitude compared to the results reported for the previous quarter.

By copy of this letter to Tosco, please forward daily and monthly inventory reconciliation records and tightness testing results necessary to confirm that the underground storage tank system was operated within acceptable tolerances since Tosco's acquisition of the facility.

Please give me a call if you have any questions, comments or concerns regarding this matter. I can be reached at (206) 251-0689.

Sincerely,

Scott Hooton
Environmental Remediation Management

attachment

cc: B. Nagle - Alisto
K. Graves - CRWQCB-SFBR
T. Berry - Tosco (w/attachment)

GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-061-08-002

Prepared for:

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

Prepared by:

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

December 19, 1997

Brady Nagle
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. 10-061-08-002

December 19, 1997

INTRODUCTION

This report presents the results and findings of the November 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.

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.

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-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	---	---	---	---	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	225	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-1		08/11/97	7.76	4.90	---	2.86	25000	---	540	6.7	ND<5.0	57	360000	---	---	7.9	SPL
MW-1		11/17/97	7.76	6.12	---	1.64	93000	---	1200	31	180	40	400000	---	---	7.6	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	---	---	---	0.00	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	---	---	---	0.00	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	---	---	---	---	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	---	---	---	---	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
MW-2		08/11/97	8.56	5.71	---	2.85	6300	---	1800	130	86	397	2400	---	---	8.5	SPL
MW-2		11/17/97	8.56	6.91	---	1.65	2400	---	220	30	33	259	130	---	---	7.9	SPL

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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	---	---	---	0.00	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-3	08/11/97	8.25	6.15	---	2 10	490	1900	ND<2.5	ND<5.0	ND<5.0	ND<5.0	170		ND<5000	ND	7.4	SPL
MW-3	11/17/97	8.25	7 15	---	1.10	120	2500	ND<0.5	ND<1.0	ND<1.0	ND<1.0	46		ND<5000	ND	7.0	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 67	---	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-4	08/11/97	8.12	6.81	---	1.31	---	---	---	---	---	---	---		---	---	---	---
MW-4	11/17/97	8.12	9.19	---	-1.07	840	---	ND<0 5	ND<1.0	ND<1.0	ND<1.0	880		---	---	7.3	SPL
MW-5	10/12/93	7.69	6.01	---	1.68	---	---	---	---	---	---	---		---	---	---	---
MW-5	10/13/93	7.69	---	---	---	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
MW-5	08/11/97	7.69	6.72	---	0.97	2700	---	20	12	6 7	9.7	1900		---	---	8.5	SPL
MW-5	11/17/97	7 69	9.49	---	-1.80	8400	---	25	12	8 7	5.4	13000		---	---	7.9	SPL

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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-6	08/11/97	8.52	6 48	---	2 04	—	—	—	—	---	—	—	—	—	—	—
MW-6	11/17/97	8 52	9 27	—	-0.75	ND<50	—	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	---	7.7	SPL
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-7	08/11/97	7.61	6.06	---	1.55	—	—	—	—	---	—	—	—	---	—	—
MW-7	11/17/97	7.61	9.07	—	-1.46	ND<50	—	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	---	7.1	SPL
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	---	—	—	---	---	---	---	—	---	—	---
MW-8	08/11/97	8.60	6.05	—	2.55	—	—	—	—	—	—	---	—	—	—	---
MW-8	11/17/97	8.60	9.14	---	-0.54	ND<50	—	ND<0.5	ND<1 0	ND<1.0	ND<1.0	ND<10	—	---	7.7	SPL

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	---	---	---	---	97000	---	16000	8200	2300	17300	39000	---	---	---	SPL
MW-9		08/11/97	8.08	5.37	---	2.71	71000	---	12000	340	2100	4300	26000	---	---	9.1	SPL
QC-1	(e)	08/11/97	---	---	---	---	100000	---	14000	360	3200	5790	27000	---	---	---	SPL
MW-9		11/17/97	8.08	5.62	Sheen	2.46	100000	---	22000	4800	3100	17900	32000	---	---	8.3	SPL
QC-1	(e)	11/17/97	---	---	---	---	100000	---	24000	5300	3500	19300	35000	---	---	---	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\061-8-2.WQ2

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

N

0 1000' 2000'

FIGURE 1

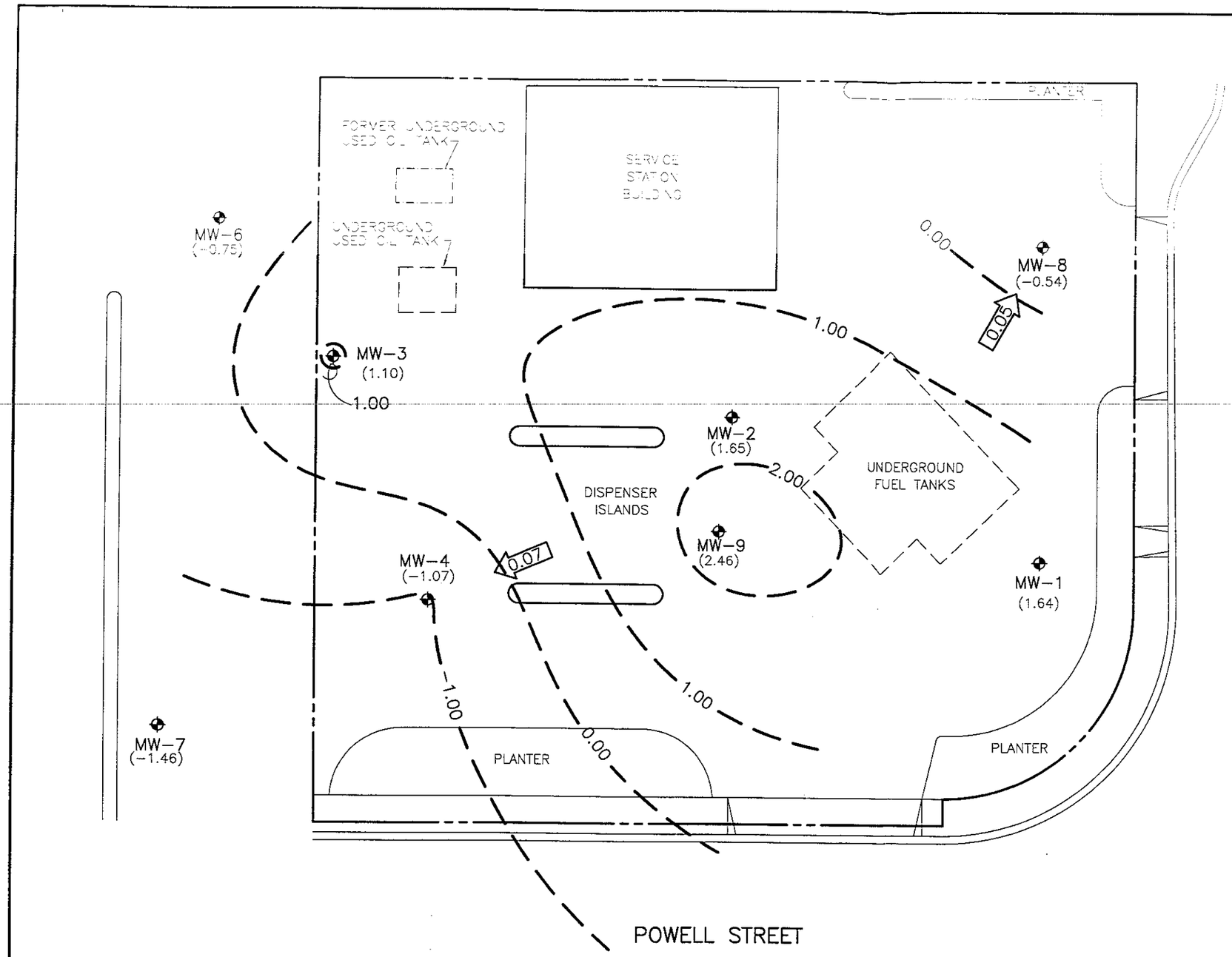
SITE VICINITY MAP

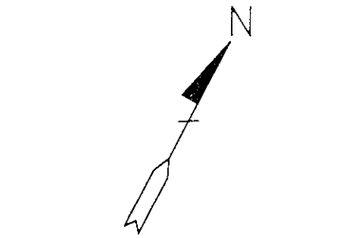
BP OIL SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-061

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10061B--- DWG 12-30-93 RKW 1=1





LEGEND

- ◆ GROUNDWATER MONITORING WELL
- (-0.54) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 0.00 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL=1.00 FEET)
- 0.05 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

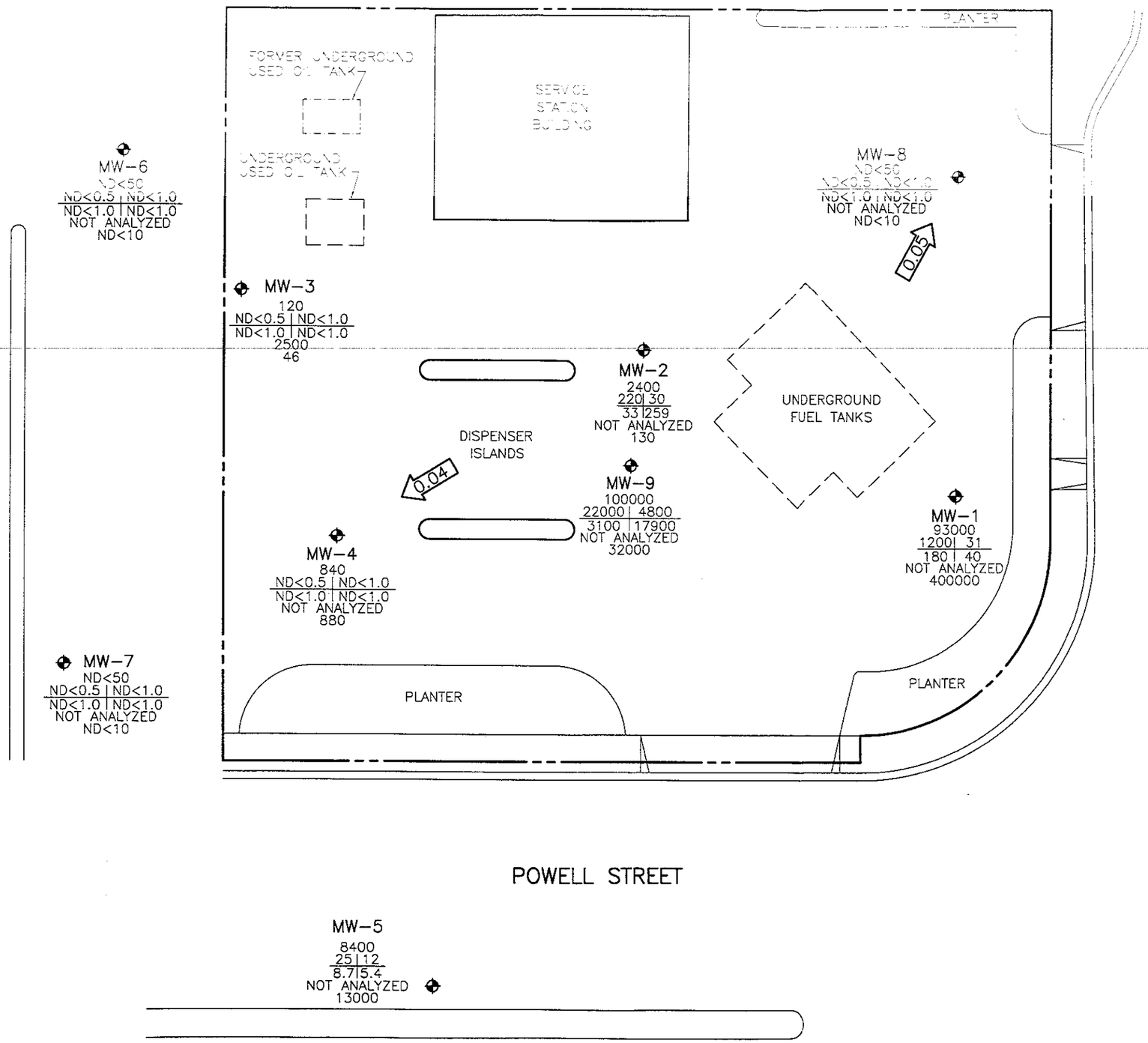
NOVEMBER 17, 1997

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

PROJECT NO. 10-061

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10061D-X.DWG 12-11-97 TAI 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
⇦ 0.05	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

NOVEMBER 17, 1997

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

PROJECT NO. 10-061

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10061C-X.DWG 12-11-97 1:20

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING
GROUP
1575 TREAT BOULEVARD, SUITE 201
WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Project No. 10-061-08-002 Date: 11/17/97
Address 1700 Powell St. Day: (M) T W TH F
Contract No. H177106 City: Emeryville
Station No. BP 11126 Sampler: L B

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME MONITORED	COMMENTS:
MW-1	S-8	2"	11.62'	6.92	Ø	1144	
MW-2	S-7	2"	11.91'	6.91		1140	
MW-3	S-5	2"	12.08'	7.15		1127	replaced 4" Cap + Lock
MW-4	S-4	2"	11.06'	9.19		1120	ANNUAL-Sample this event
MW-5	S-6	2"	13.70'	9.49		1133	
MW-6	S-1	2"	13.25'	9.27		1107	ANNUAL-Sample this event
MW-7	S-2	2"	13.72'	9.07		1110	ANNUAL-Sample this event
MW-8	S-3	2"	13.65'	9.14		1114	ANNUAL-Sample this event
MW-9	S-9	4"	13.85'	5.62	irridescence	1156	QC-1 (S-10) From this well

OK BN

FIELD INSTRUMENT CALIBRATION DATA

pH METER Ion 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED Y N TIME 1207

D.O. METER Ion ZERO d.O. SOLUTION BAROMETRIC PRESSURE 760 TEMP 63 WEATHER Cloudy

CONDUCTIVITY METER Ion 10,000 TURBIDITY METER 5.0 NTU OTHER X

LEAK DETECTOR : ALARM MODE 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	9.27	2"	OK	Ø	Y (N)	1	1222	68.7	7.34	1.10 ms	7.1
						2	1227	68.3	7.22	1.21 ms	7.7

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
13.25-9.27 = 3.98 X .16 = .63 X 3 = 1.89

Purge Method: OSurface Pump ODisp.Tube OWinch ⊗Disp. Bailer(s) OSys Port

Comments:

O EPA 601 ____
⊗ TPH-G/BTEX ___
O TPH Diesel ____
O TOG 5520 ___
TIME/SAMPLE ID
1234

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-7	9.07	2"	OK	Ø	Y (N)	1	1251	69.4	7.71	1.47 ms	6.4
						2		68.3	7.42	1.63 ms	
						3	1300	67.6	7.37	1.67 ms	7.1

Total Depth - Water Level= x Well Vol. Factor= x#Vol. to Purge PurgeVol.
13.72-9.07 = 4.65 X .16 = .74 X 3 = 2.22

Purge Method: OSurface Pump ODisp.Tube OWinch ⊗Disp. Bailer(s) OSys Port

Comments:

O EPA 601 ____
⊗ TPH-G/BTEX ___
O TPH Diesel ____
O TOG 5520 ___
TIME/SAMPLE ID
1303

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. 10-061-08-002 Date: 11/17/97
Address 1700 Powell St. Day: M T W TH F
Contract No. H177106 City: Emeryville
Station No. BP 11126 Sampler: CB

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-8	9.14	2"	OK	Ø	Y (N)	1	1311	69.9	7.40	1.67 ms	7.4
						2		69.0	7.21	1.79 ms	
						3	1316	68.3	7.14	1.88 ms	7.7

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
13.65 - 9.14 = 4.51 X .16 = .72 X 3 = 2.16
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1322

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-4	9.19	2"	OK	Ø	Y (N)	1	1333	71.4	7.29	1.79 ms	7.1
						2		70.1	7.39	1.97 ms	
						3	1340	69.1	7.44	2.11 ms	7.3

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
11.06 - 9.19 = 1.87 X .16 = .30 X 3 = .90
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1346

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-3	7.15	2"	Lock	Ø	Y (N)	1	1403	70.4	7.27	4.71 ms	7.0
						2		69.3	7.13	4.91 ms	
						3	1410	68.4	7.10	4.87 ms	7.0

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
12.08 - 7.15 = 4.93 X .16 = .79 X 3 = 2.37
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1416

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-5	9.49	2"	OK	Ø	Y (N)	1	1429	71.7	7.49	1.73 ms	7.6
						2		70.3	7.24	1.97 ms	
						3	1434	69.5	7.20	1.89 ms	7.9

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
13.70 - 9.49 = 4.21 X .16 = .67 X 3 = 2.01
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1437

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-2	6.91	2"	OK	Ø	Y (N)	1	1515	68.7	7.81	1.09 ms	7.3
						2		68.1	7.60	1.31 ms	
						3	1524	68.1	7.51	1.22 ms	7.9

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
11.91 - 6.91 = 5.00 X .16 = .80 X 3 = 2.40
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1530

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. 10-061-08-002 Date: 11/17/97
Address 1700 Powell St. Day: M T W TH F
Contract No. H177106 City: Emeryville
Station No. BP 11126 Sampler: LB

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-1	6.12	2"	OK	OK	Y (N)	1	1547	71.4	7.77	1.47ms	7.4
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2		70.3	7.49	1.69ms	
11.62-6.12=5.50	X.16=.88	X3=	2.64			3	1554	69.5	7.43	1.73ms	7.6
Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1601

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-9	5.62	4"	Locked	Irridescent	(Y) N	5	1612	69.7	7.42	1.87ms	7.7
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			11		68.6	7.30	2.07ms	
13.85-5.62=8.23	X.65=	5.35X3=	16.05			17	1627	68.1	7.49	2.14ms	8.3
Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1630

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

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

December 2, 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 November 19, 1997. The samples were assigned to Certificate of Analysis No.(s) 9711811 and analyzed for all parameters as listed on the chain of custody.

For the analysis of Purgeable Halocarbons by method 601, there were no Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries for the compound 2-Chloroethylvinyl ether (Batch ID:HP_F971121061400). This compound is degraded with the presence of acid, therefore, no recovery is expected. The sample spiked was not from this delivery group. A Laboratory Control Sample (LCS) was analyzed as a Quality Control check for the analytical batch and all recoveries were within acceptable limits.

Your sample "S-5" (SPL ID:9711811-05) was randomly selected as a Quality Control sample for the analysis of Volatile Aromatics by SW-846 method 8020. The Relative Percent Difference (RPD) between the recoveries of the MS and MSD was outside of QC criteria for MTBE (Batch ID:HP_U971125093900). However, the MS and MSD recoveries were within QC limits. An LCS was analyzed as a Quality Control check for the analytical batch and all recoveries were within acceptable limits.

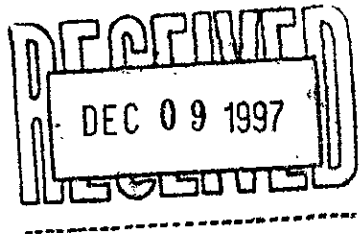
There were no other analytical problems encountered with this group of samples and all other quality control data was within acceptance limits.

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

James P. Adams
Client Services Manager



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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 97-11-811

Approved for Release by:

James P. Adams, Client Services Manager

Date: 12/3/97

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. H9-9711811-01

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

P.O.# H177106, COC#072088
DATE: 12/02/97

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

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

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	80		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: LJ			
Date: 11/24/97			
Gasoline Range Organics	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	90		
California LUFT Manual for Gasoline			
Analyzed by: LJ			
Date: 11/24/97 11:09:00			

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. H9-9711811-02

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

P.O.# H177106, COC#072088
DATE: 12/02/97

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

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

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	80		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: LJ			
Date: 11/24/97			
Gasoline Range Organics	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	90		
California LUFT Manual for Gasoline			
Analyzed by: LJ			
Date: 11/24/97 11:36:00			

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. H9-9711811-03

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

P.O.# H177106, COC#072088
DATE: 12/02/97

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

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

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	80		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: LJ			
Date: 11/25/97			
Gasoline Range Organics	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	90		
California LUFT Manual for Gasoline			
Analyzed by: LJ			
Date: 11/25/97 12:31:00			

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.

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. H9-9711811-04

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

P.O.# H177106, COC#072088
DATE: 12/02/97

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

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	880	50 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	80		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: VHZ			
Date: 11/25/97			
Gasoline Range Organics	0.84	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	97		
California LUFT Manual for Gasoline			
Analyzed by: LJ			
Date: 11/25/97 12:58:00			

(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. H9-9711811-05

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

P.O.# H177106, COC#072088
DATE: 12/02/97

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

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	46	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	107		
Method 8020A***			
Analyzed by: VHZ			
Date: 11/25/97			
Gasoline Range Organics	0.12	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	117		
4-Bromofluorobenzene	97		
California LUFT Manual for Gasoline			
Analyzed by: LJ			
Date: 11/25/97 01:25:00			
Diesel Range Organics	2.5	0.2 P	mg/L
Surrogate	**% Recovery**		

(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.

COMMENTS: Sample contains petroleum hydrocarbons from C10-C24 that do not resemble a diesel pattern.(C10-C24) RR

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. H9-9711811-05

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

P.O.# H177106, COC#072088
DATE: 12/02/97

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

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
n-Pentacosane California LUFT Manual for Diesel Analyzed by: APR Date: 11/25/97 05:51:00	MI 186		
California TPH-D Extraction Method 3510B *** Analyzed by: TC Date: 11/24/97 08:00:00	11/24/97		
Hydrocarbons by Gravimetry Method 5520 B & F ** Analyzed by: WV Date: 12/01/97 09:00:00	ND	5	mg/L

MI - Matrix interference. 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.

COMMENTS: Sample contains petroleum hydrocarbons from C10-C24 that do not resemble a diesel pattern.(C10-C24) RR

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. H9-9711811-05

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

P.O.# H177106, COC#072088
12/02/97

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

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Dichlorodifluoromethane	ND	1.0	µg/L
Chloromethane	ND	1.0	µg/L
Vinyl chloride	ND	1.0	µg/L
Bromomethane	ND	1.0	µg/L
Chloroethane	ND	1.0	µg/L
Trichlorofluoromethane	ND	1.0	µg/L
1,1-Dichloroethene	ND	1.0	µg/L
Methylene chloride	ND	1.0	µg/L
Trans-1,2-Dichloroethene	ND	1.0	µg/L
1,1-Dichloroethane	ND	1.0	µg/L
Chloroform	ND	1.0	µg/L
1,1,1-Trichloroethane	ND	1.0	µg/L
Carbon tetrachloride	ND	1.0	µg/L
1,2-Dichloroethane	ND	1.0	µg/L
2-Chloroethylvinyl ether	ND	1.0	µg/L
Trichloroethene	ND	1.0	µg/L
1,2-Dichloropropane	ND	1.0	µg/L
Bromodichloromethane	ND	1.0	µg/L
cis-1,3-Dichloropropene	ND	1.0	µg/L
trans-1,3-Dichloropropene	ND	1.0	µg/L
1,1,2-Trichloroethane	ND	1.0	µg/L
Tetrachloroethene	ND	1.0	µg/L
Dibromochloromethane	ND	1.0	µg/L
Chlorobenzene	ND	1.0	µg/L
Bromoform	ND	1.0	µg/L
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L
1,3-Dichlorobenzene	ND	1.0	µg/L
1,4-Dichlorobenzene	ND	1.0	µg/L
1,2-Dichlorobenzene	ND	1.0	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. H9-9711811-05

BP Oil Company

SAMPLE ID: S-5

SURROGATES	**% RECOVERY**
Fluorobenzene	103

ANALYZED BY: RL DATE/TIME: 11/21/97 01:44:00
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. H9-9711811-06

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

P.O.# H177106, COC#072088
DATE: 12/02/97

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

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	13000	250 P	µg/L
Benzene	25	0.5 P	µg/L
Toluene	12	1.0 P	µg/L
Ethylbenzene	8.7	1.0 P	µg/L
Total Xylene	5.4	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	83		
4-Bromofluorobenzene	103		
Method 8020A***			
Analyzed by: VHZ			
Date: 11/25/97			
Gasoline Range Organics	8.4	1.2 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	105		
4-Bromofluorobenzene	96		
California LUFT Manual for Gasoline			
Analyzed by: VHZ			
Date: 11/25/97 10:57:00			

(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. H9-9711811-07

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

P.O.# H177106, COC#072088
DATE: 12/02/97

PROJECT: #11126, NA
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-7

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	130	10 P	µg/L
Benzene	220	0.5 P	µg/L
Toluene	30	1.0 P	µg/L
Ethylbenzene	33	1.0 P	µg/L
Total Xylene	259	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: VHZ			
Date: 11/25/97			
Gasoline Range Organics	2.4	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	177MI		
4-Bromofluorobenzene	123		
California LUFT Manual for Gasoline			
Analyzed by: LJ			
Date: 11/25/97 02:20:00			

(P) - Practical Quantitation Limit MI - Matrix interference.

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. H9-9711811-08

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

P.O.# H177106, COC#072088
DATE: 12/02/97

PROJECT: #11126, NA
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-8

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	400000	10000 P	µg/L
Benzene	1200	12 P	µg/L
Toluene	31	25 P	µg/L
Ethylbenzene	180	25 P	µg/L
Total Xylene	40	25 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: VHZ			
Date: 11/25/97			
Gasoline Range Organics	93	1.2 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	125		
4-Bromofluorobenzene	96		
California LUFT Manual for Gasoline			
Analyzed by: LJ			
Date: 11/25/97 02:47:00			

(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. H9-9711811-09

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

P.O.# H177106, COC#072088
DATE: 12/02/97

PROJECT: #11126, NA
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-9

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	32000	2500 P	µg/L
Benzene	22000	120 P	µg/L
Toluene	4800	250 P	µg/L
Ethylbenzene	3100	250 P	µg/L
Total Xylene	17900	250 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	85		
4-Bromofluorobenzene	103		
Method 8020A***			
Analyzed by: VHZ			
Date: 11/25/97			
Gasoline Range Organics	100	1.2 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	127		
4-Bromofluorobenzene	121		
California LUFT Manual for Gasoline			
Analyzed by: LJ			
Date: 11/25/97 04:37:00			

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

Certificate of Analysis No. H9-9711811-10

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

P.O.# H177106, COC#072088
DATE: 12/02/97

PROJECT: #11126, NA
SITE: Emeryville, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-10

PROJECT NO: 10-061-8-2
MATRIX: WATER
DATE SAMPLED: 11/17/97
DATE RECEIVED: 11/19/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	35000	2500 P	µg/L
Benzene	24000	120 P	µg/L
Toluene	5300	250 P	µg/L
Ethylbenzene	3500	250 P	µg/L
Total Xylene	19300	250 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	103		
Method 8020A***			
Analyzed by: VHZ			
Date: 11/26/97			
Gasoline Range Organics	100	1.2 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	125		
4-Bromofluorobenzene	121		
California LUFT Manual for Gasoline			
Analyzed by: LJ			
Date: 11/25/97 05:04:00			

(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

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8010 & 601****

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F971121061400

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	14	70.0	9 - 168
Chloromethane	ND	20	17	85.0	11 - 139
Vinyl chloride	ND	20	17	85.0	51 - 126
Bromomethane	ND	20	17	85.0	34 - 141
Chloroethane	ND	20	17	85.0	27 - 174
Trichlorofluoromethane	ND	20	18	90.0	60 - 140
1,1-Dichloroethene	ND	20	20	100	51 - 132
Methylene chloride	ND	20	20	100	44 - 151
Trans-1,2-Dichloroethene	ND	20	20	100	50 - 155
1,1-Dichloroethane	ND	20	20	100	52 - 132
Chloroform	ND	20	20	100	75 - 124
1,1,1-Trichloroethane	ND	20	21	105	41 - 138
Carbon tetrachloride	ND	20	21	105	61 - 124
1,2-Dichloroethane	ND	20	20	100	79 - 121
2-Chloroethylvinyl ether	ND	20	19	95.0	38 - 122
Trichloroethene	ND	20	20	100	36 - 146
1,2-Dichloropropane	ND	20	20	100	44 - 151
Bromodichloromethane	ND	20	21	105	65 - 135
cis-1,3-Dichloropropene	ND	20	21	105	59 - 149
trans-1,3-Dichloropropene	ND	20	22	110	79 - 121
1,1,2-Trichloroethane	ND	20	20	100	66 - 129
Tetrachloroethene	ND	20	20	100	79 - 121
Dibromochloromethane	ND	20	21	105	52 - 148
Chlorobenzene	ND	20	20	100	84 - 126
Bromoform	ND	20	21	105	48 - 132
1,1,2,2-Tetrachloroethane	ND	20	18	90.0	51 - 151
1,3-Dichlorobenzene	ND	20	21	105	75 - 124
1,4-Dichlorobenzene	ND	20	20	100	72 - 125
1,2-Dichlorobenzene	ND	20	21	105	20 - 190

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	14	70.0	14	70.0	0	48	36 - 152
CHLOROMETHANE	ND	20	17	85.0	17	85.0	0	29	39 - 175
VINYL CHLORIDE	ND	20	18	90.0	18	90.0	0	44	32 - 156
BROMOMETHANE	ND	20	18	90.0	17	85.0	5.71	52	26 - 180
CHLOROETHANE	ND	20	18	90.0	17	85.0	5.71	42	27 - 174

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8010 & 601****

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

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F971121061400

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
TRICHLOROFLUOROMETHANE	ND	20	18	90.0	18	90.0	0	38	36 - 163
1,1-DICHLOROETHENE	ND	20	19	95.0	20	100	5.13	42	57 - 140
METHYLENE CHLORIDE	ND	20	20	100	20	100	0	32	67 - 137
TRANS-1,2-DICHLOROETHENE	ND	20	20	100	19	95.0	5.13	31	58 - 154
1,1-DICHLOROETHANE	ND	20	20	100	20	100	0	50	47 - 132
CHLOROFORM	ND	20	20	100	20	100	0	40	53 - 132
1,1,1-TRICHLOROETHANE	ND	20	20	100	20	100	0	27	34 - 135
CARBON TETRACHLORIDE	ND	20	21	105	20	100	4.88	32	54 - 111
1,2-DICHLOROETHANE	ND	20	20	100	20	100	0	50	49 - 155
2-CHLOROETHYLVINYL ETHER	ND	20	0	0 *	0	0 *	0	20	38 - 152
TRICHLOROETHENE	ND	20	19	95.0	19	95.0	0	29	30 - 146
1,2-DICHLOROPROPANE	ND	20	21	105	20	100	4.88	41	44 - 123
BROMODICHLOROMETHANE	ND	20	21	105	21	105	0	38	49 - 179
CIS-1,3-DICHLOROPROPENE	ND	20	22	110	21	105	4.65	34	38 - 137
TRANS-1,3-DICHLOROPROPENE	ND	20	23	115	22	110	4.44	47	38 - 164
1,1,2-TRICHLOROETHANE	ND	20	21	105	21	105	0	43	45 - 128
TETRACHLOROETHENE	ND	20	19	95.0	19	95.0	0	38	17 - 138
DIBROMOCHLOROMETHANE	ND	20	23	115	22	110	4.44	41	38 - 162
CHLOROBENZENE	ND	20	20	100	19	95.0	5.13	50	58 - 122
BROMOFORM	ND	20	24	120	22	110	8.70	49	31 - 174
1,1,2,2-TETRACHLOROETHANE	ND	20	23	115	22	110	4.44	50	21 - 181
1,3-DICHLOROBENZENE	ND	20	21	105	21	105	0	36	24 - 151
1,4-DICHLOROBENZENE	ND	20	20	100	20	100	0	12	46 - 150
1,2-DICHLOROBENZENE	ND	20	21	105	21	105	0	12	44 - 153

Analyst: RL
Sequence Date: 11/21/97
SPL ID of sample spiked: 9711786-06B
Sample File ID: FFK7294.TXO
Method Blank File ID:
Blank Spike File ID: FFK7288.TXO
Matrix Spike File ID: FFK7290.TXO
Matrix Spike Duplicate File ID: FFK7291.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 Limits (1st Q '97)
(***) = Source: SPL-Houston Historicals 1st Quarter'97

SAMPLES IN BATCH(SPL ID):

9711894-02A	9711894-03A	9711894-04A	9711894-05A
9711894-06A	9711781-01C	9711781-03C	9711781-02C
9711894-07A	9711894-08A	9711894-09A	9711894-10A
9711894-11A	9711894-12A	9711894-13A	9711786-06B
9711811-05C	9711894-19A	9711894-20A	9711894-01A

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

Matrix: Aqueous
Units: µg/L

Batch Id: HP_U971124114800

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	52	104	72 - 128
Benzene	ND	50	52	104	61 - 119
Toluene	ND	50	52	104	65 - 125
EthylBenzene	ND	50	51	102	70 - 118
O Xylene	ND	50	51	102	72 - 117
M & P Xylene	ND	100	99	99.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	18	90.0	18	90.0	0	20	39 - 150
BENZENE	ND	20	18	90.0	17	85.0	5.71	21	32 - 164
TOLUENE	ND	20	18	90.0	17	85.0	5.71	20	38 - 159
ETHYLBENZENE	ND	20	18	90.0	18	90.0	0	19	52 - 142
O XYLENE	ND	20	17	85.0	17	85.0	0	18	53 - 143
M & P XYLENE	ND	40	32	80.0	28	70.0	13.3	17	53 - 144

Analyst: LJ
Sequence Date: 11/24/97
SPL ID of sample spiked: 9711811-01A
Sample File ID: U_K7751.TX0
Method Blank File ID:
Blank Spike File ID: U_K7730.TX0
Matrix Spike File ID: U_K7777.TX0
Matrix Spike Duplicate File ID: U_K7778.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 (1st Q '97)
(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID): 9711811-06A 9711811-08A 9711690-02A 9711811-01A 9711811-02A 9711606-04A 9711811-03A 9711811-04A

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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

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

Matrix: Aqueous
Units: µg/L

Batch Id: HP_U971125093900

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	40	80.0	72 - 128
Benzene	ND	50	43	86.0	61 - 119
Toluene	ND	50	42	84.0	65 - 125
EthylBenzene	ND	50	42	84.0	70 - 118
O Xylene	ND	50	41	82.0	72 - 117
M & P Xylene	ND	100	80	80.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	46	20	60	70.0	73	135	63.4 *	20	39 - 150
BENZENE	ND	20	22	110	26	130	16.7	21	32 - 164
TOLUENE	ND	20	21	105	25	125	17.4	20	38 - 159
ETHYLBENZENE	ND	20	21	105	25	125	17.4	19	52 - 142
O XYLENE	ND	20	21	105	25	125	17.4	18	53 - 143
M & P XYLENE	ND	40	40	100	47	118	16.5	17	53 - 144

Analyst: LJ
Sequence Date: 11/25/97
SPL ID of sample spiked: 9711811-05A
Sample File ID: U_K7784.TXO
Method Blank File ID:
Blank Spike File ID: U_K7775.TXO
Matrix Spike File ID: U_K7779.TXO
Matrix Spike Duplicate File ID: U_K7780.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 (1st Q '97)
(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID): 9711811-05A 9711B15-01A 9711811-07A 9711811-04A 9711811-06A 9711811-08A 9711811-09A 9711811-10A 9711901-01A

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

** SPL BATCH QUALITY CONTROL REPORT **

State of Tennessee Method for Gasoline

Matrix: Aqueous
Units: mg/L

Batch Id: HP_U971124195700

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Gasoline Range Organics	ND	1.0	0.85	85.0	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
GASOLINE RANGE ORGANICS	ND	0.90	0.91	101	0.88	97.8	3.22	36	36 - 160

Analyst: LJ
Sequence Date: 11/24/97
SPL ID of sample spiked: 9711811-02A
Sample File ID: UUK7752.TX0
Method Blank File ID:
Blank Spike File ID: UUK7742.TX0
Matrix Spike File ID: UUK7747.TX0
Matrix Spike Duplicate File ID: UUK7748.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 Historical Limits (1st Q.'97)
(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID): 9711811-03A 9711811-04A 9711811-05A 9711811-07A 9711811-08A 9711811-09A 9711811-10A 9711811-01A 9711811-02A

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** SPL BATCH QUALITY CONTROL REPORT **
California LUFT Manual for Gasoline

Matrix: Aqueous
Units: mg/L

Batch Id: HP_U971125100600

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Gasoline Range Organics	ND	1.00	0.82	82.0	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
GASOLINE RANGE ORGANICS	4.60	0.90	5.00	NC	5.00	NC	NC	36	36 - 160

Analyst: VHZ
Sequence Date: 11/25/97
SPL ID of sample spiked: 9711B15-01A
Sample File ID: UUK7785.TXO
Method Blank File ID:
Blank Spike File ID: UUK7776.TXO
Matrix Spike File ID: UUK7781.TXO
Matrix Spike Duplicate File ID: UUK7782.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 (1st Q '97)
(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID): 9711B15-01A 9711811-06A

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HOUSTON, TEXAS 77054
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** SPL BATCH QUALITY CONTROL REPORT **
State of Tennessee Method for Diesel

Matrix: Aqueous
Units: mg/L

Batch Id: HP_V971125050600

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Diesel	ND	5.0	5.2	104	53 - 148

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
DIESEL	0.23	5.0	5.0	95.4	4.0	75.4	23.4	39	21 - 175

Analyst: APR
Sequence Date: 11/25/97
SPL ID of sample spiked: 9711788-18E
Sample File ID: V_K3134.TXO
Method Blank File ID:
Blank Spike File ID: V_K3133.TXO
Matrix Spike File ID: V_K3135.TXO
Matrix Spike Duplicate File ID: V_K3136.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 Historical Limits 1st Qtr'97 and 4th Qtr'97
(***) = Source: SPL Historical Limits 1st Qtr.'97 and 4th Qtr.'97

SAMPLES IN BATCH(SPL ID):

9711813-03B 9711811-05B 9711879-01A 9711790-01A
9711790-02A 9711790-03A 9711790-04A 9711790-05A
9711790-06A 9711790-07A 9711790-08A 9711792-01A
9711792-02A 9711792-03A 9711788-18E 9711788-19E
9711813-01B 9711813-02B

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 12/01/97
Analyzed on: 12/01/97
Analyst: WV

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 ID Number	Method Blank mg/L	Sample Result mg/L	Spike Added mg/L	Matrix Spike Result mg/L	Matrix Spike Recovery %	Matrix Spike Duplicate Result mg/L	Matrix Spike Duplicate Recovery %	RPD (%)	QC LIMITS (Advisory) RPD Max	QC LIMITS (Advisory) % REC
BLANK	ND	ND	40.0	41.7	104	40.9	102	1.9	7.9	84 -108

971201WV -9712035

Samples in batch:

9711811-05D 9711813-03D

COMMENTS:

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.

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
QC-1	(e)	08/01/94	---	---	—	2.25	15000	---	3600	740	510	2800	9700	(d)	---	—	2.9	PACE
MW-1		10/18/94	7.76	5 11	—	---	16000	—	3600	750	510	2800	9800	(d)	—	---	---	PACE
QC-1	(e)	10/18/94	---	---	—	2.65	16000	---	1800	61	160	890	---		—	---	2.9	PACE
MW-1		01/13/95	7.76	3.05	—	---	16000	---	1900	64	170	950	---		—	---	---	PACE
QC-1	(e)	01/13/95	---	---	—	4.71	220	—	7	ND<0 5	1	23	---		---	—	6.6	ATI
MW-1		04/13/95	7 76	3 84	---	---	590	---	88	0.7	ND<0 5	55	---		---	---	---	ATI
MW-1		07/11/95	7 76	3.60	---	3 92	9300	---	4000	300	200	950	---		---	---	7.7	ATI
MW-1		11/02/95	7.76	4.58	—	4.16	15000	---	2200	84	ND<25	2500	---		---	---	8 8	ATI
MW-1		02/05/96	7 76	4.43	—	3.18	19000	---	920	ND<100	ND<100	430	52000		—	---	7.3	ATI
MW-1		04/24/96	7.76	4.00	—	3.33	4600	—	1400	330	54	247	8700		—	---	3.2	SPL
MW-1		07/15/96	7.76	4 30	---	3.76	2000	—	510	33	61	228	4500		—	—	7.5	SPL
MW-1		07/16/96	7.76	---	—	3.46	---	—	---	---	---	---	---		---	---	---	---
QC-1	(e)	07/16/96	---	---	—	---	12000	---	2800	170	390	1630	64000		—	---	7.9	SPL
MW-1		07/30/96	7.76	4 64	—	---	12000	---	2800	160	390	1610	63000		—	---	---	SPL
MW-1		08/12/96	7 76	---	—	3.12	---	---	---	---	---	---	---		—	---	---	---
MW-1		11/04/96	7.76	5 98	—	---	11000	---	2500	160	ND<10	1740	440000		—	---	7 0	SPL
MW-1		11/05/96	7 76	---	—	1.78	---	---	---	---	---	---	---		---	---	---	---
MW-1		05/17/97	7 76	4.65	—	---	53000	---	1300	43	100	349	42000/190000	(f)	—	—	6 6	SPL
MW-1		08/11/97	7.76	4.90	—	3.11	52000	---	1958	55	305	1216	140198		—	---	5.7	SPL
						2 86	25000	---	540	6.7	ND<5 0	57	360000		---	---	7 9	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	—	---	---	0.00	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	---	---	—	0 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	---	---	—	---	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	---	---	---	---	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
MW-2		08/11/97	8.56	5.71	—	2.85	6300	—	1800	130	86	397	2400		—	—	8.5	SPL

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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	—	—	—	0 00	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-3	08/11/97	8.25	6.15	—	2.10	490	1900	ND<2 5	ND<5.0	ND<5.0	ND<5 0	170	ND<5000	ND	7 4	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-4	08/11/97	8.12	6 81	—	1.31	—	—	—	—	—	—	—	—	—	—	—
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
MW-5	08/11/97	7.69	6.72	—	0.97	2700	—	20	12	6 7	9 7	1900	—	—	8.5	SPL

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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-6	08/11/97	8 52	6 48	---	2.04	---	---	---	---	---	---	---		---	---	---	---
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-7	08/11/97	7 61	6.06	---	1 55	---	---	---	---	---	---	---		---	---	---	---
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	---	---	---	---	---	---	---		---	---	---	---
MW-8	08/11/97	8 60	6 05	---	2 55	---	---	---	---	---	---	---		---	---	---	---

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	---	---	---	---	---	---	---	---	---	---	---
QC-1	(e)	05/17/97	---	---	---	---	97000	---	16000	7700	2300	18400	40000	---	---	7.0	SPL
MW-9		08/11/97	8.08	5.37	---	2.71	97000	---	16000	8200	2300	17300	39000	---	---	---	SPL
QC-1	(e)	08/11/97	---	---	---	---	71000	---	12000	340	2100	4300	26000	---	---	9.1	SPL
							100000	---	14000	360	3200	5790	27000	---	---	---	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\061-8-1 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

100618---.DWG 12-30-93 RKW 1=1

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
11-19-97	1650

SPL Sample ID:
9711811

			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:		1 °C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	384847734	
		Other:		
11	Method of sample disposal:	SPL Disposal		
		HOLD		
		Return to Client		

Name:	Date:
[signature]	11-19-97

9711811

BP

CHAIN OF CUSTODY

No. 072088 Page 1 of 1

CONSULTANT'S NAME	ADDRESS	CITY	STATE	ZIP CODE
Alisto Engineering	1575 Treat Blvd #201	W.C.	Ca	94598

BP SITE NUMBER	BP CORNER ADDRESS/CITY	CONSULTANT PROJECT NUMBER
11126	Emeryville	10-061-8-2

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
Brady Nagle	(510) 295-1650	295-1823	H177106
BP CONTACT	**BP ADDRESS**	**PHONE NUMBER**	**FAX NO**
Scott Hooten	Renton, WA	—	—
LAB CONTACT	**LABORATORY ADDRESS**	**PHONE NUMBER**	**FAX NO**
SPL	Texas	—	—

SAMPLED BY (Please Print Name)	SAMPLED BY (Signature)	SHIPMENT DATE	SHIPMENT METHOD
Larry Buenvenida	[signature]	11/18/97	Fed Ex

TAT: ☐ 24 Hours ☐ 48 Hours ☐ 1 Week ☒ Standard 2 Weeks

ANALYSIS REQUIRED

AIRBILL NUMBER 3848471734

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO	TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPH-G BTEX	MTBE	Lo. Level VOCs	TPH-D	TOG 5520						COMMENTS
S-1	11/17/97	W	3	HCL		X	X									
S-2	↓	↓	↓	↓		↓	↓									
S-3	↓	↓	↓	↓		↓	↓									
S-4	↓	↓	↓	↓		↓	↓									
S-5	↓	↓	10	↓		↓	↓	X	X	X						
S-6	↓	↓	3	↓		↓	↓									
S-7	↓	↓	↓	↓		↓	↓									
S-8	↓	↓	↓	↓		↓	↓									pH RT
S-9	↓	↓	↓	↓		↓	↓									
S-10	↓	W	↓	↓		↓	↓									

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	11/18/97	0830	P. Yelton	11/18/97	0830
P. Yelton		1500	[signature]	11-19-97	1000

ADDITIONAL COMMENTS

Temp 4°C RT

CLV-16722
PKG/50

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

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

BP Site Number:	11126
ERM Contact:	H177106
Sampling Date:	11/17/97
Matrix Description:	Water
Date Final Report Received:	12/09/97
Laboratory & Location:	SPL, Houston, Texas

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

Notes: Surrogate recovery (n-Pentacosane) during diesel analysis of 5-5 and during gasoline analysis (1,4-difluorobenzene) of 5-7 were outside of QC range due to matrix interferences. MS/MSD recovery for 2-chloroethylvinyl ether values outside QC range. MS/MSD relative % difference for MTBE outside QC range and MS/MSD recovery and relative % difference for TPH-G was not calculated (sample exceeded spike by a factor of 4 or more)

Data Validation Completed by: ~~Bill Howell~~ Brady Nagy

(signature): Brady Nagy

Date: 12/17/97