



BP OIL

STID 780
BU
BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(425) 251-0667
Fax No: (425) 251-0736

September 22, 1998

Alameda County Health Care Services Agency
Attention Mr. Brian Oliva
1131 Harbour Bay Parkway, Room 250
Alameda, CA 94502-6577

RE: Former BP Oil Site No. 11107
18501 Hesperian Boulevard (at Bockman)
San Lorenzo, CA
STID 780

Dear Mr. Oliva:

Enclosed find the 2 September 1998 Groundwater Monitoring and Sampling Report prepared on behalf of BP by Alisto Engineering Group.

The petroleum release at this site was documented during 1992 when BP performed a site assessment in support of plans to withdraw from the California retail market.

The enclosed report shows the aromatic petroleum hydrocarbons were not detected in samples obtained from the four wells sampled on 8 December 1997. MTBE was detected in samples obtained from wells MW-4,5,6, and 7. In aggregate, MTBE concentrations appear to be declining

Please give me a call at (425) 251-0689 if you have any comments or questions regarding this matter.

Sincerely,

Scott Hooton

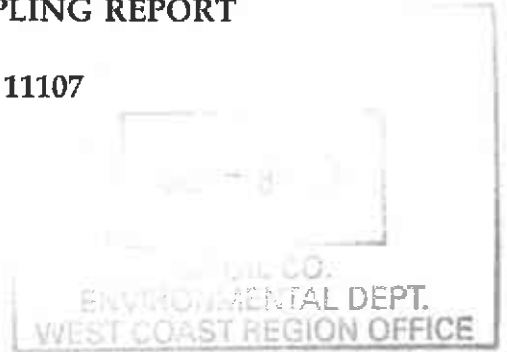
attachment

cc: site file
T. Berry - Tosco (w/attachment)

GROUNDWATER MONITORING AND SAMPLING REPORT

**BP Oil Company Service Station No. 11107
18501 Hesperian Boulevard
San Lorenzo, California**

Project No. 10-060-07-002



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**

September 2, 1998



**Brady Nagle
Project Manager**



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



GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11107
18501 Hesperian Boulevard
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Project No. 10-060-07-002

September 2, 1998

INTRODUCTION

This report presents the results of the July 8, 1998 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11107, 18501 Hesperian Boulevard, San Lorenzo, 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 collected during this and previous quarters are summarized in Table 1. The potentiometric groundwater elevations as interpreted from the results of this monitoring event are shown on Figure 2. The results of laboratory analysis are shown on Figure 3. The laboratory report and chain of custody record are presented in Appendix B.



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11107
 18501 HESPERIAN BOULEVARD, SAN LORENZO, CALIFORNIA

ALISTO PROJECT NO. 10-060

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (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)	1,1,1-TCA (ug/l)	PCE (ug/l)	DO (ppm)	LAB
MW-1	11/04/92	41.07	20.78	20.29	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	2.8	ND	---	PACE
QC-1 (c)	11/04/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
MW-1	02/24/94	41.07	20.70	20.37	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
MW-1	05/12/94	41.07	18.12	22.95	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	1.5	0.9	---	PACE
MW-1	09/09/94	41.07	21.74	19.33	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND<0.5	ND<0.5	2.3	PACE
MW-1	11/03/94	41.07	20.01	21.06	ND<50	50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND<0.5	ND<0.5	4.3	PACE
MW-1	03/01/95	41.07	17.44	23.63	ND<50	ND<500	ND<0.5	ND<0.50	ND<0.50	ND<1.0	---	420	0.54	0.3	2.3	ATI
MW-1	06/06/95	41.07	17.55	23.52	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	09/01/95	41.07	18.19	22.88	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	60	---	---	8.8	ATI
MW-1	11/29/95	41.07	18.84	22.23	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	03/23/96	41.07	16.97	24.10	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	---	9.6	SPL
MW-1	09/05/96	41.07	17.74	23.33	110	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	3.6	SPL
MW-1	03/11/97	41.07	17.62	23.45	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	5.2	SPL
MW-1	12/08/97	41.07	16.30	24.77	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	5.3	SPL
MW-1	07/08/98	41.07	16.66	24.41	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	11/04/92	40.56	20.16	20.40	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
MW-2	02/24/94	40.56	20.12	20.44	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
MW-2	05/12/94	40.56	17.49	23.07	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	7.4	PACE
MW-2	09/09/94	40.56	21.12	19.44	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	2.1	PACE
MW-2	11/03/94	40.56	19.36	21.20	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	4.2	PACE
MW-2	03/01/95	40.56	16.83	23.73	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	2.2	ATI
MW-2	06/06/95	40.56	16.96	23.60	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	09/01/95	40.56	17.54	23.02	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	7.9	ATI
MW-2	11/29/95	40.56	18.19	22.37	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	03/23/96	40.56	16.35	24.21	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	---	8.5	SPL
MW-2	09/05/96	40.56	17.55	23.01	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	3.2	SPL
MW-2	03/11/97	40.56	16.95	23.61	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	2.9	SPL
MW-2	12/08/97	40.56	16.01	24.55	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	3.0	SPL
MW-2	07/08/98	40.56	16.41	24.15	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	11/04/92	40.45	20.23	20.22	760	---	3.7	15	1.9	57	---	---	---	---	---	PACE
MW-3	02/24/94	40.45	20.24	20.21	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
MW-3	05/12/94	40.45	17.61	22.84	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	7.3	PACE
MW-3	09/09/94	40.45	21.22	19.23	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	2.0	PACE
MW-3	11/03/94	40.45	19.48	20.97	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	3.6	PACE
MW-3	03/01/95	40.45	17.08	23.37	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	1.9	ATI
MW-3	06/06/95	40.45	17.21	23.24	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	09/01/95	40.45	17.69	22.76	200	---	2.7	33	7.2	43	ND<5.0	---	---	---	7.8	ATI
MW-3	09/01/95	40.45	18.29	22.16	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	03/23/96	40.45	16.59	23.86	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	---	7.3	SPL
MW-3	09/05/96	40.45	17.71	22.74	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	3.2	SPL
MW-3	03/11/97	40.45	17.17	23.28	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	1.5	SPL
MW-3	12/08/97	40.45	16.12	24.33	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	1.9	SPL
MW-3	07/08/98	40.45	16.40	24.05	---	---	---	---	---	---	---	---	---	---	---	---

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TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11107
18501 HESPERIAN BOULEVARD, SAN LORENZO, CALIFORNIA

ALISTO PROJECT NO. 10-060

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (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)	1,1,1-TCA (ug/l)	PCE (ug/l)	DO (ppm)	LAB
MW-4	11/04/92	39.24	19.18	20.06	900	---	150	4.1	0.8	53	---	---	---	---	---	PACE
MW-4	02/24/94	39.24	19.22	20.02	240	---	110	3.8	1.8	11	1400 (d)	---	---	---	---	PACE
QC-1 (c)	02/24/94	---	---	---	310	---	95	5.3	2.2	17	1500 (d)	---	---	---	---	PACE
MW-4	05/12/94	39.24	16.62	22.62	ND<50	---	2.2	1.0	ND<0.5	ND<0.5	860 (d)	---	---	---	7.3	PACE
QC-1 (c)	05/12/94	---	---	---	430	---	2.6	1.3	ND<0.5	ND<0.5	780 (d)	---	---	---	---	PACE
MW-4	09/09/94	39.24	20.27	18.97	240	---	9.1	1.3	0.6	2.5	---	---	---	---	2.2	PACE
QC-1 (c)	09/09/94	---	---	---	57	---	1.7	ND<0.5	ND<0.5	0.5	---	---	---	---	---	PACE
MW-4	11/03/94	39.24	18.46	20.78	250	---	3.1	2.8	1.0	3.3	---	---	---	---	3.2	PACE
QC-1 (c)	11/03/94	---	---	---	110	---	2.4	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
MW-4	03/01/95	39.24	16.15	23.09	8900	---	1500	26	450	400	---	---	---	---	2.0	ATI
QC-1 (c)	03/01/95	---	---	---	7600	---	1700	25	410	370	---	---	---	---	---	ATI
MW-4	06/06/95	39.24	16.28	22.96	3100	---	530	25	170	85	---	---	---	---	---	ATI
QC-1 (c)	06/06/95	---	---	---	3000	---	530	27	170	92	---	---	---	---	---	ATI
MW-4 (f)	09/01/95	39.24	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	11/29/95	39.24	17.31	21.93	ND<50	---	1.8	ND<0.50	ND<0.50	ND<1.0	440	---	---	---	3.2	ATI
QC-1 (c)	11/29/95	---	---	---	ND<50	---	1.5	ND<0.50	ND<0.50	ND<1.0	490	---	---	---	---	ATI
MW-4	03/23/96	39.24	15.74	23.50	2700	---	480	ND<25	180	176	13000	---	---	---	7.8	SPL
MW-4	09/05/96	39.24	16.75	22.49	1100	---	ND<12	ND<25	ND<25	ND<25	3200	---	---	---	4.0	SPL
MW-4	03/11/97	39.24	16.10	23.14	2400	---	46	ND<10	66	106	3400	---	---	---	4.0	SPL
MW-4	12/08/97	39.24	15.96	23.28	590	---	11	ND<1.0	ND<1.0	ND<1.0	1200	---	---	---	4.4	SPL
QC-1 (c)	12/08/97	---	---	---	620	---	11	ND<1.0	ND<1.0	ND<1.0	1100	---	---	---	---	SPL
MW-4	07/08/98	39.24	16.28	22.96	1700	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	---	---	---	---	3.9	SPL
QC-1 (c)	07/08/98	---	---	---	1600	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	1100	---	---	---	---	SPL
MW-5	06/06/95	39.07	16.16	22.91	1100	---	42	ND<2.5	15	4.0	---	---	---	---	---	ATI
MW-5	09/01/95	39.07	16.63	22.44	1600	---	55	ND<2.5	15	8.0	1200	---	---	---	7.4	ATI
QC-1 (c)	09/01/95	---	---	---	1200	---	64	ND<2.5	14	3.1	---	---	---	---	---	ATI
MW-5	11/29/95	39.07	17.19	21.88	2300	---	140	4.0	36	11	1500	---	---	---	4.1	ATI
MW-5	03/23/96	39.07	15.54	23.53	90	---	2.8	ND<1	ND<1	ND<1	1500	---	---	---	7.5	SPL
MW-5	09/05/96	39.07	16.72	22.35	2300	---	5.1	ND<1.0	ND<1.0	ND<1.0	3300	---	---	---	3.2	SPL
QC-1 (c)	09/05/96	---	---	---	2000	---	4.9	ND<1.0	ND<1.0	ND<1.0	2900	---	---	---	---	SPL
MW-5	03/11/97	39.07	16.12	22.95	470	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	580	---	---	---	3.0	SPL
QC-1 (c)	03/11/97	---	---	---	460	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	540	---	---	---	---	SPL
MW-5	12/08/97	39.07	15.85	23.22	370	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	840	---	---	---	3.0	SPL
MW-5	07/08/98	39.07	16.11	22.96	430	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	---	---	---	---	2.5	SPL
MW-6	03/01/95	38.46	15.66	22.80	270	---	11	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	1.6	ATI
MW-6	06/06/95	38.46	15.82	22.64	220	---	2.3	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	---	ATI
MW-6	09/01/95	38.46	16.25	22.21	780	---	ND<2.5	ND<2.5	ND<2.5	ND<5.0	2800	---	---	---	7.5	ATI
MW-6	11/29/95	38.46	16.80	21.66	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	1100	---	---	---	3.9	ATI
MW-6	03/23/96	38.46	15.27	23.19	50	---	ND<0.5	ND<1	ND<1	ND<1	910	---	---	---	8.0	SPL
MW-6	09/05/96	38.46	16.30	22.16	4400	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	7400	---	---	---	3.0	SPL
MW-6	03/11/97	38.46	15.75	22.71	1100	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	2000	---	---	---	3.1	SPL
MW-6	12/08/97	38.46	15.51	22.95	150	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	140	---	---	---	3.4	SPL
MW-6	07/08/98	38.46	15.78	22.68	370	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	150	---	---	---	3.6	SPL

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WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet) (a)	DEPTH TO WATER (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)	1,1,1-TCA (ug/l)	PCE (ug/l)	DO (ppm)	LAB
MW-7	03/01/95	39.50	16.21	23.29	1400	---	14	ND<1.0	14	27	---	---	---	---	1.8	ATI
MW-7	06/06/95	39.50	16.34	23.16	540	---	(e) 5.5	ND<0.50	15	1.1	---	---	---	---	---	ATI
MW-7	09/01/95	39.50	16.74	22.76	190	---	2.8	ND<0.50	5.0	ND<1.0	10	---	---	---	7.5	ATI
MW-7	11/29/95	39.50	17.33	22.17	230	---	31	ND<0.50	3.8	1.9	ND<5.0	---	---	---	4.6	ATI
MW-7	03/23/96	39.50	15.86	23.64	ND<50	---	5.0	ND<1	ND<1	ND<1	360	---	---	---	7.2	SPL
QC-1 (c)	03/23/96	---	---	---	60	---	7.6	ND<1	ND<1	ND<1	360	---	---	---	---	SPL
MW-7	09/05/96	39.50	16.80	22.70	200	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	430	---	---	---	3.1	SPL
MW-7	03/11/97	39.50	18.32	21.18	120	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	140	---	---	---	4.7	SPL
MW-7	12/08/97	39.50	16.02	23.48	240	---	0.8	ND<1.0	ND<1.0	ND<1.0	200	---	---	---	5.2	SPL
MW-7	07/05/98	39.50	16.32	23.18	270	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	---	---	---	---	4.8	SPL
QC-2 (g)	11/04/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
QC-2 (g)	11/04/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
QC-2 (g)	03/01/95	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1.0	---	---	---	---	---	PACE
QC-2 (g)	05/12/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
QC-2 (g)	09/09/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
QC-2 (g)	11/03/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	PACE
QC-2 (g)	06/06/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	---	ATI
QC-2 (g)	09/01/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	---	ATI
QC-2 (g)	11/29/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	---	ATI
QC-2 (g)	03/23/96	---	---	---	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
1,1,1-TCA	1,1,1-Trichloroethane
PCE	Tetrachloroethane
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
ND	Not detected above reported detection limit
---	Not measured/analyzed/applicable
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 39.95 feet above mean sea level.
- (b) Groundwater elevations in feet above mean sea level.
- (c) Blind duplicate.
- (d) A copy of the documentation for this data is included in Appendix C of Alisto report 10-060-07-001.
- (e) MTBE peak present. See documentation in Appendix C of Alisto report 10-060-07-001.
- (f) Well inaccessible.
- (g) Travel blank.



SOURCE:
 USGS MAP, HAYWARD & SAN LEANDRO QUADRANGLES,
 7.5 MINUTE SERIES, 1959.
 PHOTOREVISED 1980.



QUADRANGLE LOCATION



FIGURE 1

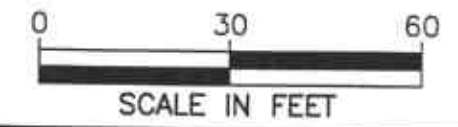
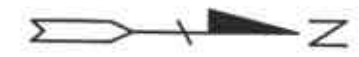
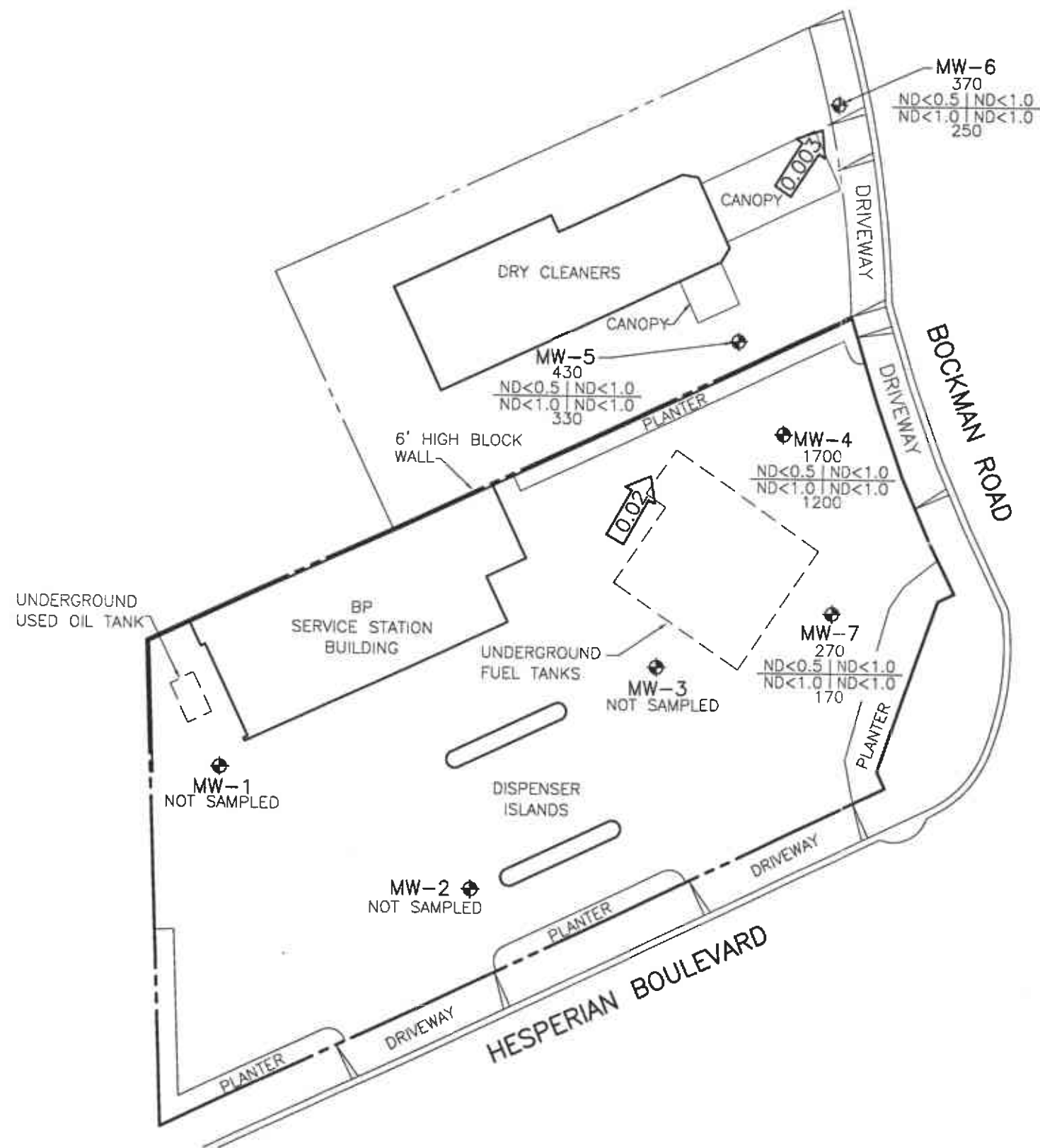
VICINITY MAP

BP OIL SERVICE STATION NO. 11107
18501 HESPERIAN BOULEVARD
SAN LORENZO, CALIFORNIA

PROJECT NO. 10-060



ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA



LEGEND

- ◆ GROUNDWATER MONITORING WELL
- TPH-G CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER
- B
- T
- E
- X
- MTBE
- ND
- ←0.02→ CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
JULY 8, 1998
 BP OIL SERVICE STATION NO. 11107
 18501 HESPERIAN BOULEVARD
 SAN LORENZO, CALIFORNIA
 PROJECT NO. 10-060

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. 10-060-07-002

Date: 7/8/98

Address 18501 Hesperian Blvd

Day: M T W T H F

Contract No. H176921

City: San Lorenzo

Station No. BP 11107

Sampler: LCB

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME MONITORED	COMMENTS: DBA
MW-1	NIS	2"	30.70	16.66	Ø	1231	Annual/ Do Not Sample
MW-2		2"	25.00	16.41		1236	Annual/ Do Not Sample
MW-3		2"	25.00	16.40		1238	Annual/ Do Not Sample
MW-4	S-4	2"	26.00	16.28		1255	QC-1 (S-5) from this well
MW-5	S-3	2"	26.00	16.11		1250	Replaced 2" Cap + Lock
MW-6	S-1	2"	26.00	15.78		1239	Replaced 2" Cap
MW-7	S-2	2"	26.00	16.32		1242	

FIELD INSTRUMENT CALIBRATION DATA

pH METER Ilm 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED N TIME 1259 WEATHER clear

D.O. METER Ilm ZERO d.O. SOLUTION _____ BAROMETRIC PRESSURE 760 TEMP 69

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

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.	
MW-6	15.78	2"	Replaced	Ø	Y (N)	2	1320	71.9	6.92	1.11ms	3.1	<input type="radio"/> EPA 601
Total Depth - Water Level=						4		71.3	6.71	1.14ms		<input checked="" type="radio"/> TPH-G/BTEX
$26.00 - 15.78 = 10.22 \times 1.6 = 1.64 \times 3 = 4.92$						5	1329	70.4	6.73	1.09ms	3.6	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> ODisp. Tube <input type="checkbox"/> OWinch <input type="checkbox"/> ODisp. Bailer(s) <input type="checkbox"/> OSys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1333

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.	
MW-7	16.32	2"	Replaced	Ø	Y (N)	2	1342	72.4	7.05	1.01ms	4.6	<input type="radio"/> EPA 601
Total Depth - Water Level=						4		71.9	6.87	1.09ms		<input checked="" type="radio"/> TPH-G/BTEX
$26.00 - 16.32 = 9.68 \times 1.6 = 1.55 \times 3 = 4.65$						5	1351	71.1	6.82	1.14ms	4.8	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> ODisp. Tube <input type="checkbox"/> OWinch <input type="checkbox"/> ODisp. Bailer(s) <input type="checkbox"/> OSys Port												<input type="radio"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1356

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. 10-060-07-002

Address 18501 Hesperian Blvd

Contract No. H176921

Station No. BP 11107

Date: 7/2/98

Day: M T W T H F

City: San Lorenzo

Sampler: UCS

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
Mw-5	16.11	2"	Repl	Ø	Y (N)	2	1420	72.4	7.05	1.03ms	2.2
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge		Purge Vol.		
26.00 - 16.11 = 9.89						1.6 = 1.58	3 = 4.74	4	71.5	6.87	1.08ms
						5	1430	71.0	6.80	1.11ms	2.5
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port											
Comments:											

- EPA 601
- TPH-G/BTEX
- TPH Diesel
- TOG 5520

TIME/SAMPLE ID

1437

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
Mw-4	16.28	2"	OK	Ø	Y (N)	2	1450	71.3	6.92	1.14ms	3.6
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge		Purge Vol.		
26.00 - 16.28 = 9.72						1.6 = 1.56	3 = 4.68	4	70.4	6.83	1.24ms
						5	1500	70.0	6.72	1.27ms	3.9
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port											
Comments:											

- EPA 601
- TPH-G/BTEX
- TPH Diesel
- TOG 5520

TIME/SAMPLE ID

1501

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD



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

July 22, 1998

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


The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on July 14, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9807663 and analyzed for all parameters as listed on the chain of custody.

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

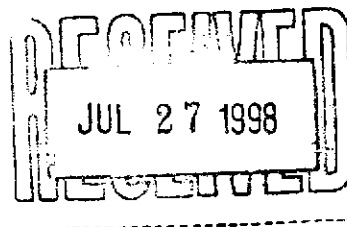
If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis No. during any inquiries.

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

Southern Petroleum Laboratories



Joel Grice
Senior Organic Project Manager






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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-07-663

Approved for Release by:



Joel Grice, Senior Organic Project Manager



Date: 7/23/98

Greg Grandits
Laboratory Director

Cynthia Schreiner
Quality Assurance Officer

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



Certificate of Analysis No. H9-9807663-01

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

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

P.O.#
H176921, COC#098642
DATE: 07/23/98

PROJECT: #11107, N/A
SITE: San Lorenzo, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-1

PROJECT NO: 10-060-7-2
MATRIX: WATER
DATE SAMPLED: 07/08/98
DATE RECEIVED: 07/14/98

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include MTBE, Benzene, Toluene, Ethylbenzene, Total Xylene.

Surrogate % Recovery
1,4-Difluorobenzene 97
4-Bromofluorobenzene 103

Method 8020A***
Analyzed by: LJ
Date: 07/21/98

Gasoline Range Organics 0.37 0.05 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 110
4-Bromofluorobenzene 87

California LUFT Manual for Gasoline
Analyzed by: LJ
Date: 07/21/98 04:00:00

(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



Certificate of Analysis No. H9-9807663-02

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

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

P.O.#
H176921, COC#098642
DATE: 07/23/98

PROJECT: #11107, N/A
SITE: San Lorenzo, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-060-7-2
MATRIX: WATER
DATE SAMPLED: 07/08/98
DATE RECEIVED: 07/14/98

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include MTBE, Benzene, Toluene, Ethylbenzene, Total Xylene.

Surrogate % Recovery
1,4-Difluorobenzene 97
4-Bromofluorobenzene 103

Method 8020A***
Analyzed by: LJ
Date: 07/21/98

Gasoline Range Organics 0.27 0.05 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 123
4-Bromofluorobenzene 87

California LUFT Manual for Gasoline
Analyzed by: LJ
Date: 07/21/98 04:37:00

(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. H9-9807663-03

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

P.O.#
 H176921, COC#098642
 DATE: 07/23/98

PROJECT: #11107, N/A
 SITE: San Lorenzo, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-3

PROJECT NO: 10-060-7-2
 MATRIX: WATER
 DATE SAMPLED: 07/08/98
 DATE RECEIVED: 07/14/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	330	10 P	ug/L
Benzene	ND	0.5 P	ug/L
Toluene	ND	1.0 P	ug/L
Ethylbenzene	ND	1.0 P	ug/L
Total Xylene	ND	1.0 P	ug/L

Surrogate

% Recovery

1,4-Difluorobenzene

97

4-Bromofluorobenzene

97

Method 8020A***

Analyzed by: LJ

Date: 07/21/98

Gasoline Range Organics

0.43

0.05 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

110

4-Bromofluorobenzene

87

California LUFT Manual for Gasoline

Analyzed by: LJ

Date: 07/21/98 05:15:00

(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. H9-9807663-04

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

P.O.#
 H176921, COC#098642
 DATE: 07/23/98

PROJECT: #11107, N/A
 SITE: San Lorenzo, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-4

PROJECT NO: 10-060-7-2
 MATRIX: WATER
 DATE SAMPLED: 07/08/98
 DATE RECEIVED: 07/14/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	1200	50 P	ug/L
Benzene	ND	0.5 P	ug/L
Toluene	ND	1.0 P	ug/L
Ethylbenzene	ND	1.0 P	ug/L
Total Xylene	ND	1.0 P	ug/L

Surrogate

% Recovery

1,4-Difluorobenzene

97

4-Bromofluorobenzene

100

Method 8020A***

Analyzed by: LJ

Date: 07/22/98

Gasoline Range Organics

1.7

0.05 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

110

4-Bromofluorobenzene

80

California LUFT Manual for Gasoline

Analyzed by: LJ

Date: 07/21/98 05:54:00

(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



Certificate of Analysis No. H9-9807663-05

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

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

P.O.#
H176921, COC#098642
DATE: 07/23/98

PROJECT: #11107, N/A
SITE: San Lorenzo, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-5

PROJECT NO: 10-060-7-2
MATRIX: WATER
DATE SAMPLED: 07/08/98
DATE RECEIVED: 07/14/98

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include MTBE, Benzene, Toluene, Ethylbenzene, Total Xylene.

Table with 2 columns: Surrogate, % Recovery. Rows include 1,4-Difluorobenzene, 4-Bromofluorobenzene.

Method 8020A***
Analyzed by: LJ
Date: 07/22/98

Gasoline Range Organics 1.6 0.05 P mg/L

Table with 2 columns: Surrogate, % Recovery. Rows include 1,4-Difluorobenzene, 4-Bromofluorobenzene.

California LUFT Manual for Gasoline
Analyzed by: LJ
Date: 07/21/98 06:32:00

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

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

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

QUALITY CONTROL

DOCUMENTATION



** SPL BATCH QUALITY CONTROL REPORT **
Method 8020A***

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 680-0901

MATRIX: Aqueous
Units: ug/L

Batch Id: VARD980720200000

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	46	92.0	72 - 128
Benzene	ND	50	48	96.0	61 - 119
Toluene	ND	50	48	96.0	65 - 125
EthylBenzene	ND	50	48	96.0	70 - 118
O Xylene	ND	50	51	102	72 - 117
M & P Xylene	ND	100	93	93.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	ND	20	22	110	25	125	12.8	20	39 - 150
BENZENE	11	20	28	85.0	29	90.0	5.71	21	32 - 164
TOLUENE	19	20	31	60.0	32	65.0	8.00	20	38 - 159
ETHYLBENZENE	2.8	20	22	96.0	22	96.0	0	19	52 - 142
O XYLENE	1.6	20	24	112	25	117	4.37	18	53 - 143
M & P XYLENE	5.1	40	38	82.2	38	82.2	0	17	53 - 144

Analyst: LJ
Sequence Date: 07/20/98
SPL ID of sample spiked: 9807492-09A
Sample File ID: D_G3025.TX0
Method Blank File ID:
Blank Spike File ID: D_G3017.TX0
Matrix Spike File ID: D_G3019.TX0
Matrix Spike Duplicate File ID: D_G3020.TX0

* = Values outside QC Range due to Matrix Interference (except RPD)
« = Data outside Method Specification Limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = [(<4> - <5>) / [(<4> + <5>) x 0.5]] x 100
(**) = Source: SPL-Houston Historical Data (1ST Q '97)
(***) = Source: SPL-Houston Historical Data (1ST Q '97)

SAMPLES IN BATCH(SPL ID):
9807663-03A 9807663-04A 9807663-05A 9807664-01A
9807664-02A 9807663-01A 9807663-02A



SPL BATCH QUALITY CONTROL REPORT **
Method 8020A***

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

MATRIX: Aqueous
Units: ug/L

Batch Id: VARD980721210200

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	49	98.0	72 - 128
Benzene	ND	50	49	98.0	61 - 119
Toluene	ND	50	50	100	65 - 125
EthylBenzene	ND	50	50	100	70 - 118
O Xylene	ND	50	46	92.0	72 - 117
M & P Xylene	ND	100	94	94.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	ND	20	30	150	21	105	35.3 *	20	39 - 150
BENZENE	ND	20	18	90.0	19	95.0	5.41	21	32 - 164
TOLUENE	ND	20	18	90.0	18	90.0	0	20	38 - 159
ETHYLBENZENE	ND	20	15	75.0	17	85.0	12.5	19	52 - 142
O XYLENE	ND	20	15	75.0	17	85.0	12.5	18	53 - 143
M & P XYLENE	ND	40	29	72.5	34	85.0	15.9	17	53 - 144

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

« = Data outside Method Specification limits.

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

ND = Not Detected/Below Detection Limit

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

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

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

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

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

Analyst: LJ

Sequence Date: 07/21/98

SPL ID of sample spiked: 9807656-02A

Sample File ID: D_G3057.TX0

Method Blank File ID:

Blank Spike File ID: D_G3050.TX0

Matrix Spike File ID: D_G3052.TX0

Matrix Spike Duplicate File ID: D_G3053.TX0

SAMPLES IN BATCH(SPL ID):

9807664-05A 9807656-01A 9807656-04A 9807656-05A
 9807656-06A 9807656-07A 9807663-04A 9807663-05A
 9807664-02A 9807664-03A 9807664-04A 9807664-05A
 9807656-09A 9807656-10A 9807656-02A 9807656-03A
 9807664-03A 9807664-04A



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

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

Matrix: Aqueous
 Units: mg/L

Batch Id: VARD980720203201

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Gasoline Range Organics	ND	1.0	1.30	130	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
GASOLINE RANGE ORGANICS	0.17	0.90	0.76	65.6	0.73	62.2	5.32	36	36 - 160

Analyst: LJ
 Sequence Date: 07/20/98
 SPL ID of sample spiked: 9807492-10A
 Sample File ID: DDG3026.TX0
 Method Blank File ID:
 Blank Spike File ID: DDG3018.TX0
 Matrix Spike File ID: DDG3021.TX0
 Matrix Spike Duplicate File ID: DDG3022.TX0

* = Values outside QC Range due to Matrix Interference (except RPD)
 « = Data outside Method Specification limits.
 NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
 ND = Not Detected/Below Detection Limit
 % Recovery = [(<1> - <2>) / <3>] x 100
 LCS % Recovery = (<1> / <3>) x 100
 Relative Percent Difference = | (<4> - <5>) | / [(<4> + <5>) x 0.5] x 100
 (**) = Source: SPL-Houston Historical data (1st Q '97)
 (***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID):
 9807663-03A 9807663-04A 9807663-05A 9807664-01A
 9807664-02A 9807663-01A 9807663-02A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: <div style="text-align: center; font-size: 1.2em;">7-14-98</div>	Time: <div style="text-align: center; font-size: 1.2em;">1000</div>
---	--

SPL Sample ID:

9807

		<u>Yes</u>	<u>No</u>	
1	Chain-of-Custody (COC) form is present.	✓		
2	COC is properly completed.	✓		
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.	✓		
5	If yes, custody seals are intact.	✓		
6	All samples are tagged or labeled.	✓		
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact	✓		
9	Temperature of samples upon arrival:	7° C		
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	915188475265	
		Other:		
11	Method of sample disposal:	SPL Disposal		
		HOLD		
		Return to Client		

Name: <div style="text-align: center; font-size: 1.5em; font-family: cursive;">[Signature]</div>	Date: <div style="text-align: center; font-size: 1.5em;">7/14/98</div>
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9807643

CHAIN OF CUSTODY

No. 098642

Page _____ of _____

CONSULTANT'S NAME Alsto Engineering		CONSULTANT'S ADDRESS 1575 Treat Blvd #201, W.C., Ca 94598	
BP SITE NUMBER 11107	BP SITE / FACILITY ADDRESS San Lorenzo		CONSULTANT PROJECT NUMBER 10-060-7-2
CONSULTANT PROJECT MANGER Barry Nagle	PHONE NUMBER (510) 295-1650	FAX NUMBER 295-1823	CONSULTANT CONTRACT NUMBER H176921
BP CONTACT Scott Hooten	BP ADDRESS Kenton, 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 7/13/98
		SHIPMENT DATE	SHIPMENT METHOD Fed Ex

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

ANALYSIS REQUIRED

AIRBILL NUMBER
805188475265

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	LAB SAMPLE #	PH-9	K125H	L125H	COMMENTS
				NO.	TYPE (VOL.)						
S-1	7/8/98		W	3	REL			X	X		
S-2	↓		↓	↓	↓			↓	↓		
S-3	↓		↓	↓	↓			↓	↓		
S-4	↓		↓	↓	↓			↓	↓		
S-5	↓		↓	↓	↓			↓	↓		

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	2.
		7/10/98		P. Yelton		7/13/98		
P. Yelton		7/13/98	1600	Scott Hooten		7/14/98	1000	

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

BP Site Number: 11107
ERM Contact: H176921
Sampling Date: 7/8/98
Matrix Description: Water
Date Final Report Received: 7/27/98
Laboratory & Location: SPL, Houston, Texas

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

MS/MSD relative % difference value for MTBE in one of two matrix spikes was outside of QC range due to matrix interference. MS/MSD limits are advisory only; as stated in SW-846, Section 8.7 to 8.8, if the MS/MSD results fall outside the advisable ranges, a laboratory control samples (LCS) must be analyzed and fall within those ranges. LCS results are within quality control limits.

Data Validation Completed by: Brady Nagle

(signature):

Brady Nagle

Date:

7/2/98