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BP OIL

ENVIRONMENTAL PROTECTION
97 MAR -7 PM 3:45

BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(206) 251-0667
Fax No: (206) 251-0736

March 4, 1997

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

RE: Former BP Oil Site No. 11109
4280 Foothill Boulevard (at High Street)
Oakland, CA

Dear Mr. Chan:

Enclosed please find 5 February 1997 Groundwater Monitoring and Sampling Report. The report summarizes groundwater monitoring and sammpling data obtained since 1990. Upon review of the results reported this quarter, you will note that aromatic petroleum hydrocarbons were detected in three of the wells sampled this quarter (MW-3, MW-5 and MW-7). Petroleum hydrocarbons were not detected in samples obtained from wells MW-2, MW-4, MW-6, MW-8, or MW-9. You will also note that MTBE was not detected in any of the wells sampled this quarter.

Based on the available data, it seems appropriate to discontinue sampling wells MW-2, MW-4, MW-6, MW-7, MW-8, and MW-9 at this time. We will continue to obtain groundwater elevation data from these wells and include it in future reports.

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: CRWQCB-SFBR, Attention Mr. E. So, 2101 Webster Street, Ste. 500, Oakland, CA 94612 (w/attachment)
site file
Brady Nagle - Alisto Engineering Group

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11109
4280 Foothill Boulevard
Oakland, California

Project No. 10-014-06-003

Prepared for:

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

Prepared by:

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

February 5, 1997

Ken Simas
Project Manager

Al Sevilla, P.E.
Principal

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11109
4280 Foothill Boulevard
Oakland, California

Project No. 10-014-06-003

February 5, 1997

INTRODUCTION

This report presents the results and findings of the December 19, 1996 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11109, 4280 Foothill Boulevard, Oakland, California. A site vicinity map is shown on Figure 1.

FIELD PROCEDURES

Field activities were performed in accordance with the procedures and guidelines of the Alameda County Health Care Services Agency and the California Regional Water Quality Control Board, San Francisco Bay Region.

Before purging and sampling, the groundwater level in each well was measured from a permanent mark on top of the casing to the nearest 0.01 foot using an electronic sounder. The depth to groundwater and top of casing elevation data were used to calculate the groundwater elevation in each well in reference to mean sea level. The survey data and groundwater elevation measurements collected to date are presented in Table 1.

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

Groundwater monitoring was performed concurrently at the neighboring Chevron service station, 4265 Foothill Boulevard, and the Shell service station, 4411 Foothill Boulevard. The results are presented in Tables 2 and 3.

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. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

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)	DO (ppm)	LAB
MW-1	01/31/90	38.19	15.41	---	22.78	---	---	---	---	---	---	---	---	---	---	---
MW-1 (c)	02/05/90	38.19	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/05/90	41.22	21.90	---	19.31	1300	---	14	ND<0.1	9	13	---	---	---	---	SUP
MW-2	02/14/91	41.22	21.16	---	20.06	ND<50	ND<10000	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	51 (d)	---	SUP
MW-2	05/13/91	41.22	21.32	---	19.90	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	6000	0.5 (e)	---	SUP
MW-2	07/24/91	41.22	22.92	---	18.30	---	---	---	---	---	---	---	---	---	---	---
MW-2	10/03/91	41.22	24.90	---	16.32	ND<50	ND<50	ND<0.3	0.8	ND<0.3	ND<0.3	---	ND<5000	0.7 (e)	---	SUP
MW-2	10/15/91	41.22	24.10	---	17.12	---	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	12/04/91	41.22	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	12/16/91	41.22	23.95	---	17.27	---	---	---	---	---	---	---	---	---	---	---
MW-2	01/06/92	41.22	23.30	---	17.92	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	ANA
MW-2	01/22/92	41.22	23.14	---	18.08	---	---	---	---	---	---	---	---	---	---	---
MW-2	01/28/92	41.22	22.99	---	18.23	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/05/92	41.22	22.63	---	18.59	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/12/92	41.22	22.04	---	19.18	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/17/92	41.22	20.84	---	20.38	---	---	---	---	---	---	---	---	---	---	---
MW-2	04/03/92	41.22	18.29	---	22.93	---	---	---	---	---	---	---	---	---	---	---
MW-2	04/08/92	41.22	18.86	---	22.36	ND<50	63	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-2	04/14/92	41.22	19.45	---	21.77	---	---	---	---	---	---	---	---	---	---	---
MW-2	04/29/92	41.22	20.35	---	20.87	---	---	---	---	---	---	---	---	---	---	---
MW-2	05/07/92	41.22	20.84	---	20.38	---	---	---	---	---	---	---	---	---	---	---
MW-2	07/03/92	41.22	22.34	---	18.88	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-2	10/08/92	41.22	23.73	---	17.49	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-2	12/31/92	41.22	21.12	---	20.10	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-2	04/21/93	41.22	17.68	---	23.54	ND<50	ND<50 (g)	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	PACE
MW-2	07/07/93	41.22	20.30	---	20.92	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	1.0 (e)	---	PACE
MW-2	09/21/93	41.22	21.93	---	19.29	ND<50	---	0.9	0.7	0.7	2.6	---	---	---	---	PACE
MW-2	12/17/93	41.22	21.48	---	19.74	---	---	---	---	---	---	---	---	---	---	---
MW-2	12/23/93	41.22	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.7	---	---	---	---	PACE
MW-2	04/07/94	41.22	20.25	---	20.97	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	5.9	PACE
MW-2	07/06/94	41.22	20.59	---	20.63	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	3.1	PACE
MW-2	10/07/94	41.22	22.04	---	19.18	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	2.8	PACE
MW-2	01/27/95	41.22	26.12	---	15.10	ND<50	440	ND<0.5	ND<0.5	ND<0.5	ND<1	---	ND<5000	---	4.8	ATI
MW-2	03/30/95	41.22	12.34	---	28.88	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	7.2	ATI
MW-2	06/20/95	41.22	16.42	---	24.80	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	6.0	ATI
MW-2	10/03/95	41.22	20.06	---	21.16	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	5.7	ATI
MW-2	12/06/95	41.22	21.31	---	19.91	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	46	---	---	5.4	ATI
MW-2	03/21/96	41.22	12.28	---	28.94	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	7.4	SPL
MW-2	06/21/96	41.22	13.28	---	27.94	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	7.3	SPL
MW-2	09/06/96	41.22	13.94	---	27.28	---	---	---	---	---	---	---	---	---	---	---
MW-2	09/09/96	41.22	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.4	SPL
MW-2	12/19/96	41.22	12.19	---	29.03	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.9	SPL

05-Feb-97

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

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)	DO (ppm)	LAB
MW-3		02/05/90	40.74		17.45	---	23.29		1400	---	15	ND<2.5	11	8	---	---	---	---	SUP
MW-3		02/14/91	40.74		18.52	---	22.22		320	---	8	ND<0.3	8	1	---	---	---	---	SUP
MW-3		05/13/91	40.74		19.32	---	21.42		640	---	13	ND<0.3	18	1	---	---	---	---	SUP
MW-3		07/24/91	40.74		20.69	---	20.05		---	---	---	---	---	---	---	---	---	---	---
MW-3		10/03/91	40.74		19.47	---	21.27		940	---	21	ND<0.3	23	2.1	---	---	---	---	SUP
MW-3		10/15/91	40.74		20.46	---	20.28		---	---	---	---	---	---	---	---	---	---	---
MW-3		12/04/91	40.74		18.29	---	22.45		---	---	---	---	---	---	---	---	---	---	---
MW-3		12/16/91	40.74		18.34	---	22.40		---	---	---	---	---	---	---	---	---	---	---
MW-3		01/06/92	40.74		18.50	---	22.24		580	---	6.1	1	6.1	7.1	---	---	---	---	ANA
MW-3		01/22/92	40.74		17.86	---	22.88		---	---	---	---	---	---	---	---	---	---	---
MW-3		01/28/92	40.74		15.84	---	24.90		---	---	---	---	---	---	---	---	---	---	---
MW-3		02/05/92	40.74		17.53	---	23.21		---	---	---	---	---	---	---	---	---	---	---
MW-3		02/12/92	40.74		17.15	---	23.59		---	---	---	---	---	---	---	---	---	---	---
MW-3		02/17/92	40.74		16.18	---	24.56		---	---	---	---	---	---	---	---	---	---	---
MW-3		04/03/92	40.74		14.80	---	25.94		---	---	---	---	---	---	---	---	---	---	---
MW-3		04/08/92	40.74		17.06	---	23.68		1100	---	30	4.6	32	11	---	---	---	---	ANA
MW-3		04/14/92	40.74		15.22	---	25.52		---	---	---	---	---	---	---	---	---	---	---
MW-3		04/29/92	40.74		15.90	---	24.84		---	---	---	---	---	---	---	---	---	---	---
MW-3		05/07/92	40.74		16.35	---	24.39		---	---	---	---	---	---	---	---	---	---	---
MW-3		07/03/92	40.74		17.74	---	23.00		1200	---	38	ND<2.5	24	ND<2.5	---	---	---	---	ANA
MW-3		10/08/92	40.74		19.06	---	21.68		1400	---	31	ND<0.5	25	13	---	---	---	---	ANA
MW-3		12/31/92	40.74		16.61	---	24.13		820	---	12	4.1	13	5.9	---	---	---	---	ANA
QC-1	(h)	12/31/92	40.74		---	---	---		960	---	11	3.6	10	3.8	---	---	---	---	ANA
MW-3		04/21/93	40.74		14.24	---	26.50		420	---	5.6	ND<0.5	3.9	1.4	---	---	---	---	PACE
QC-1	(h)	04/21/93	40.74		---	---	---		390	---	5.0	ND<0.5	3.7	1.5	---	---	---	---	PACE
MW-3		07/07/93	40.13	(i)	15.19	---	24.94		54	---	0.6	0.6	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-3		09/21/93	40.13		16.58	---	23.55		540	---	7.9	0.9	4.7	2.4	---	---	---	---	PACE
MW-3		12/17/93	40.13		15.82	---	24.31		---	---	---	---	---	---	---	---	---	---	---
MW-3		12/23/93	40.13		---	---	---		500	---	9.8	1.5	3.3	2.1	---	---	---	---	PACE
QC-1	(h)	12/23/93	40.13		---	---	---		480	---	9.2	ND<0.5	5.4	5.3	---	---	---	---	PACE
MW-3		04/07/94	40.13		28.50	---	11.63		460	---	20	7.4	8.9	11	---	---	---	---	PACE
QC-1	(h)	04/07/94	40.13		---	---	---		460	---	20	7.7	9.0	11	---	---	---	---	PACE
MW-3		07/06/94	40.13		---	---	---		300	---	10	0.6	1.7	6.4	---	---	---	4.8	PACE
MW-3		10/07/94	40.13		27.65	---	12.48		620	---	28	ND<0.5	2.2	12	---	---	---	4.4	PACE
MW-3		01/27/95	40.13		27.65	---	12.48		---	---	---	---	---	---	---	---	---	---	---
MW-3		03/30/95	40.13		26.05	---	14.08		300	---	10	6.0	3.4	18	---	---	---	7.6	ATI
MW-3		06/20/95	40.13		19.49	---	20.64		170	---	7.2	3.4	0.85	15	---	---	---	---	ATI
MW-3		10/03/95	40.13		24.93	---	15.20		170	---	2.1	ND<0.50	0.81	8.0	6.7	---	---	---	ATI
MW-3		12/06/95	40.13		25.14	---	14.99		1700	---	6.7	3.1	2.8	210	64	---	---	---	ATI
QC-1	(h)	12/06/95	40.13		---	---	---		1400	---	6.1	3.0	1.7	190	53	---	---	---	ATI
MW-3		03/21/96	40.13		9.48	---	30.65		ND<50	---	0.5	ND<1	ND<1	1	ND<10	---	---	7.3	SPL
MW-3		06/21/96	40.13		11.60	---	28.53		ND<50	---	13	ND<1	ND<1	ND<1	12	---	---	7.6	SPL
MW-3		09/06/96	40.13		12.23	---	27.90		---	---	---	---	---	---	---	---	---	---	---
MW-3		09/09/96	40.13		---	---	---		ND<250	---	6.5	ND<5.0	ND<5.0	ND<5.0	ND<50	---	---	7.6	SPL
MW-3		12/19/96	40.13		10.46	---	29.67		ND<50	---	4.1	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	8.4	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)	DO (ppm)	LAB
MW-4	02/05/90	40.11	20.75	---	19.36	620	---	ND<0.5	9	ND<0.5	10	—	---	---	---	SUP
MW-4	02/14/91	40.11	21.73	---	18.38	180	---	ND<0.3	ND<0.3	0.4	2	—	---	---	---	SUP
MW-4	05/13/91	40.11	18.55	---	21.56	72	---	0.7	ND<0.3	ND<0.3	ND<0.3	---	---	—	---	SUP
MW-4	07/24/91	40.11	21.31	---	18.80	---	---	---	---	---	---	---	---	---	---	---
MW-4	10/03/91	40.11	22.57	---	17.54	57	—	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	—	SUP
MW-4	10/15/91	40.11	22.88	---	17.23	---	—	---	---	---	---	---	---	---	—	---
MW-4	12/04/91	40.11	22.54	---	17.57	---	---	---	---	---	---	---	---	---	---	—
MW-4	12/16/91	40.11	22.59	---	17.52	---	---	---	---	---	---	---	---	---	---	---
MW-4	01/06/92	40.11	22.00	---	18.11	480	---	0.8	3.2	1.9	7.7	—	---	---	---	ANA
MW-4	01/22/92	40.11	21.58	---	18.53	---	---	---	---	---	---	---	---	---	---	—
MW-4	01/28/92	40.11	21.42	---	18.69	---	---	---	---	---	---	---	---	---	---	---
MW-4	02/05/92	40.11	21.10	---	19.01	---	---	---	---	---	---	---	---	---	---	—
MW-4	02/12/92	40.11	20.74	---	19.37	---	---	---	---	---	---	---	---	---	---	—
MW-4	02/17/92	40.11	19.78	---	20.33	---	---	---	---	---	---	---	---	---	---	---
MW-4	04/03/92	40.11	16.80	—	23.31	---	---	---	---	---	---	---	---	---	---	—
MW-4	04/08/92	40.11	17.13	---	22.98	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	---	---	—	ANA
MW-4	04/14/92	40.11	17.74	---	22.37	---	---	---	---	---	---	—	---	—	---	—
MW-4	04/29/92	40.11	18.56	---	21.55	---	---	---	---	---	—	---	---	---	---	---
MW-4	05/07/92	40.11	19.10	---	21.01	---	---	---	---	---	---	---	---	---	---	---
MW-4	07/03/92	40.11	20.71	---	19.40	ND<50	---	0.6	ND<0.5	ND<0.5	ND<0.5	---	---	---	—	ANA
MW-4	10/08/92	40.11	22.43	---	17.68	270	---	ND<0.5	2.1	2.5	3.2	---	---	---	---	ANA
MW-4	12/31/92	40.11	19.58	---	20.53	150	---	ND<0.5	ND<0.5	ND<0.5	1.3	---	---	---	—	ANA
MW-4	04/21/93	40.11	17.79	---	22.32	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	—	PACE
MW-4	07/07/93	40.11	18.44	---	21.67	160	---	1.2	5.4	3.8	19	—	---	—	---	PACE
MW-4	09/21/93	40.11	20.14	---	19.97	71	---	ND<0.5	1.9	ND<0.5	2.1	---	---	---	---	PACE
MW-4	12/17/93	40.11	19.80	---	20.31	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/23/93	40.11	---	---	---	ND<50	---	3.1	1.6	0.8	3.8	---	---	---	---	PACE
MW-4	04/07/94	40.11	19.12	---	20.99	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	6.6	PACE
MW-4	07/06/94	40.11	19.90	---	20.21	62	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	4.1	PACE
MW-4	10/07/94	40.11	20.07	—	20.04	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	3.6	PACE
MW-4	01/27/95	40.11	13.72	---	26.39	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	2.7	ATI
MW-4	03/30/95	40.11	11.46	---	28.65	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	---	---	8.3	ATI
MW-4	06/20/95	40.11	14.78	---	25.33	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	---	---	---	ATI
MW-4	10/03/95	40.11	19.62	---	20.49	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	5.0	---	---	5.8	ATI
MW-4	12/06/95	40.11	19.91	---	20.20	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	47	---	---	5.7	ATI
MW-4	03/21/96	40.11	11.12	---	28.99	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	7.8	SPL
MW-4	06/21/96	40.11	12.21	---	27.90	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	7.9	SPL
MW-4	09/06/96	40.11	12.89	---	27.22	---	---	---	---	---	---	---	---	---	---	---
MW-4	09/09/96	40.11	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	---	7.2	SPL
MW-4	12/19/96	40.11	11.01	—	29.10	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	—	8.4	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

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)	DO (ppm)	LAB
MW-5		10/03/91	39.55		18.08	—	21.47		79000	---	13000	7400	1400	6200	---	---	---	---	SUP
MW-5		10/15/91	39.55		18.55	---	21.00		---	---	---	---	---	---	---	---	---	---	---
MW-5		12/04/91	39.55		18.44	0.13	21.21		---	---	---	---	---	---	---	---	---	---	---
MW-5		12/16/91	39.55		18.66	0.01	20.90		---	---	---	---	---	---	---	---	---	---	---
MW-5		01/06/92	39.55		19.12	0.11	20.51		---	---	---	---	---	---	---	---	---	---	---
MW-5		01/22/92	39.55		14.59	---	24.96		---	---	---	---	---	---	---	---	---	---	---
MW-5		01/28/92	39.55		15.25	—	24.30		---	---	---	---	---	---	---	---	---	---	—
MW-5		02/05/92	39.55		15.58	SHEEN	23.97		---	---	---	---	---	---	---	---	---	---	---
MW-5		02/12/92	39.55		15.54	0.01	24.02		---	---	---	---	---	---	---	---	---	---	---
MW-5		02/17/92	39.55		13.98	SHEEN	25.57		---	---	---	---	---	---	---	---	---	---	---
MW-5		04/03/92	39.55		13.63	0.04	25.95		---	---	---	---	---	---	---	---	---	---	---
MW-5		04/08/92	39.55		13.17	0.01	26.39		---	---	---	---	---	---	---	---	---	---	---
MW-5		04/14/92	39.55		13.45	0.01	26.11		---	---	---	---	---	---	---	---	---	---	---
MW-5		04/29/92	39.55		13.75	0.07	25.85		---	---	---	---	---	---	---	---	---	---	---
MW-5		05/07/92	39.55		16.15	0.04	23.43		---	---	---	---	---	---	---	---	---	---	—
MW-5		07/03/92	39.55		17.67	0.08	21.94		---	---	---	---	---	---	---	---	---	---	---
MW-5		09/01/92	39.55		17.83	0.50	22.10		---	---	---	---	---	---	---	---	---	---	---
MW-5		10/08/92	39.55		17.86	0.92	22.38		---	---	---	---	---	---	---	---	---	---	---
MW-5		12/31/92	39.55		15.20	SHEEN	24.35		---	---	---	---	---	---	---	---	---	---	---
MW-5		04/21/93	39.55		12.64	0.02	26.93		---	---	---	---	---	---	---	---	---	---	—
MW-5		07/07/93	39.14	(l)	12.68	0.82	27.08		---	---	---	---	---	---	---	---	---	---	—
MW-5		09/21/93	39.14		14.35	SHEEN	24.79		---	---	---	---	---	---	---	---	---	---	---
MW-5		12/17/93	39.14		12.61	0.41	26.84		---	---	---	---	---	---	---	---	---	---	—
MW-5		04/07/94	39.14		30.00	---	9.14		66000	---	3000	1700	250	6800	---	---	---	---	PACE
MW-5		07/06/94	39.14		---	---	---		29000	—	1900	330	63	2700	---	---	---	---	PACE
MW-5		10/07/94	39.14		28.70	—	10.44		250000	---	2600	660	830	5200	---	---	---	4.2	PACE
QC-1	(h)	10/07/94	39.14		---	---	---		45000	---	2900	540	260	2600	—	---	---	---	PACE
MW-5		01/27/95	39.14		28.70	---	10.44		---	---	---	---	---	—	—	---	---	—	—
MW-5		03/30/95	39.14		28.95	---	10.19		50000	---	7900	2600	520	6400	---	---	---	5.5	ATI
QC-1	(h)	03/30/95	39.14		---	---	---		43000	---	7900	2500	440	6200	—	---	---	---	ATI
MW-5		06/20/95	39.14		22.54	---	16.60		34000	---	5100	1900	300	3700	---	---	---	---	ATI
QC-1	(h)	06/20/95	39.14		---	---	---		26000	---	3500	290	ND<25	3300	—	---	---	—	ATI
MW-5		10/03/95	39.14		18.84	---	20.30		12000	---	68	42	11	1600	330	---	---	---	ATI
QC-1	(h)	10/03/95	39.14		---	---	---		12000	---	46	39	10	1600	320	---	---	---	ATI
MW-5		12/06/95	39.14		19.07	---	20.07		16000	---	1200	93	51	700	600	---	---	---	ATI
MW-5		03/21/96	39.14		7.43	---	31.71		1500	---	89	28	6	250	ND<10	---	---	7.2	SPL
QC-1	(h)	03/21/96	39.14		---	---	---		1900	---	92	30	7	270	ND<10	—	---	—	SPL
MW-5		06/21/96	39.14		9.87	—	29.27		3500	---	740	150	19	400	ND<100	---	---	7.1	SPL
QC-1	(h)	06/21/96	39.14		---	---	---		2700	---	680	140	20	400	ND<50	---	---	---	SPL
MW-5		09/06/96	39.14		10.52	---	28.62		---	---	---	---	---	---	---	---	---	---	---
MW-5		09/09/96	39.14		---	---	---		82000	---	3100	1700	850	9100	ND<2500	—	—	7.5	SPL
QC-1	(h)	09/09/96	---		---	---	---		90000	---	2900	1600	670	6900	ND<2500	---	---	---	SPL
MW-5		12/19/96	39.14		8.62	---	30.52		41000	---	790	820	120	2040	ND<500	---	---	7.7	SPL
QC-1	(h)	12/19/96	---		---	---	—		26000	---	490	430	63	1140	ND<500	---	---	---	SPL

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BP OIL COMPANY SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

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)	DO (ppm)	LAB
MW-6		10/03/91	41.59	20.73	—	20.86	ND<50	---	0.7	0.8	ND<0.3	1.3	---		---	---	—	SUP
MW-6		10/15/91	41.59	21.20	---	20.39	---	---	---	---	---	---	—		---	---	---	—
MW-6		12/04/91	41.59	21.26	—	20.33	---	---	---	---	---	—	---		---	---	---	—
MW-6		12/16/91	41.59	21.12	---	20.47	---	---	---	---	---	---	—		---	---	---	---
MW-6		01/06/92	41.59	20.29	---	21.30	ND<50	---	ND<0.5	ND<0.5	ND<0.5	1.6	---		---	---	---	ANA
MW-6		01/22/92	41.59	20.12	---	21.47	---	---	---	---	---	---	---		---	---	---	---
MW-6		01/28/92	41.59	20.20	---	21.39	---	---	---	---	---	---	—		---	---	---	---
MW-6		02/05/92	41.59	20.09	---	21.50	---	---	---	---	---	---	---		---	---	---	---
MW-6		02/12/92	41.59	19.15	---	22.44	---	---	---	---	---	---	---		---	---	---	---
MW-6		02/17/92	41.59	18.02	---	23.57	---	---	---	---	—	---	---		---	---	---	---
MW-6		04/03/92	41.59	16.62	---	24.97	---	---	---	---	---	---	---		---	---	---	---
MW-6		04/08/92	41.59	17.06	---	24.53	ND<50	---	0.6	ND<0.5	0.8	ND<0.5	---		---	---	---	ANA
MW-6		04/14/92	41.59	17.23	---	24.36	---	---	---	---	---	---	---		---	---	---	---
MW-6		04/29/92	41.59	18.12	---	23.47	---	---	---	---	---	---	---		---	---	---	---
MW-6		05/07/92	41.59	18.52	—	23.07	---	---	---	---	---	---	---		—	---	---	---
MW-6		07/03/92	41.59	19.71	---	21.88	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	---	—	ANA
MW-6		10/08/92	41.59	21.22	---	20.37	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		—	---	---	ANA
QC-1	(h)	10/08/92	41.59	21.22	---	20.37	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	---	—	ANA
MW-6		12/31/92	41.59	21.33	---	20.26	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	---	---	ANA
MW-6		04/21/93	41.59	16.45	---	25.14	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	---	---	PACE
MW-6		07/07/93	41.59	18.68	---	22.91	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	---	---	PACE
MW-6		09/21/93	41.59	19.64	---	21.95	ND<50	---	ND<0.5	ND<0.5	ND<0.5	1.6	---		—	---	---	PACE
MW-6		12/17/93	41.59	21.08	—	20.51	---	---	---	---	---	---	---		---	---	—	---
MW-6		12/23/93	41.59	---	---	---	ND<50	---	ND<0.5	0.5	ND<0.5	0.6	---		---	---	---	PACE
MW-6		04/07/94	41.59	21.27	---	20.32	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		—	---	6.1	PACE
MW-6		07/06/94	41.59	19.81	---	21.78	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		—	---	4.0	PACE
QC-1	(h)	07/06/94	41.59	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—		---	---	---	PACE
MW-6		10/07/94	41.59	21.25	---	20.34	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	---	3.5	PACE
MW-6		01/27/95	41.59	12.39	---	29.20	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---		---	---	4.2	ATI
MW-6		03/30/95	41.59	11.34	---	30.25	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---		---	---	6.1	ATI
MW-6		06/20/95	41.59	15.12	---	26.47	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---		---	---	---	ATI
MW-6		10/03/95	41.59	20.68	---	20.91	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	66		---	—	6.4	ATI
MW-6		12/06/95	41.59	23.77	---	17.82	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	45		---	---	5.7	ATI
MW-6		03/21/96	41.59	11.55	---	30.04	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	41		---	---	9.1	SPL
MW-6		06/21/96	41.59	12.60	---	28.99	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10		---	—	8.6	SPL
MW-6		09/06/96	41.59	13.25	—	28.34	---	---	---	---	---	---	---		---	---	—	---
MW-6		09/09/96	41.59	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	22/22	(j)	—	---	7.9	SPL
MW-6		12/19/96	41.59	11.45	---	30.14	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		—	---	7.7	SPL

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BP OIL COMPANY SERVICE STATION NO. 11109
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ALISTO PROJECT NO. 10-014

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)	DO (ppm)	LAB
MW-7		10/03/91	40.64		14.93	---	25.71	360	---	62	13	3.4	20	---	---	---	---	SUP
MW-7		10/15/91	40.64		15.16	---	25.48	---	---	---	---	---	---	---	---	---	---	---
MW-7		12/04/91	40.64		15.41	---	25.23	---	---	---	---	---	---	---	---	---	---	---
MW-7		12/16/91	40.64		15.21	---	25.43	---	---	---	---	---	---	---	---	---	---	---
MW-7		01/06/92	40.64		14.56	---	26.08	1100	---	170	ND<0.5	24	23	---	---	---	---	ANA
MW-7		01/22/92	40.64		14.63	---	26.01	---	---	---	---	---	---	---	---	---	---	---
MW-7		01/28/92	40.64		14.73	---	25.91	---	---	---	---	---	---	---	---	---	---	---
MW-7		02/05/92	40.64		14.58	---	26.06	---	---	---	---	---	---	---	---	---	---	---
MW-7		02/12/92	40.64		13.94	---	26.70	---	---	---	---	---	---	---	---	---	---	---
MW-7		02/17/92	40.64		13.10	---	27.54	---	---	---	---	---	---	---	---	---	---	---
MW-7		04/03/92	40.64		12.66	---	27.98	---	---	---	---	---	---	---	---	---	---	---
MW-7		04/08/92	40.64		12.77	---	27.87	750	---	150	ND<0.5	23	9.9	---	---	---	---	ANA
MW-7		04/14/92	40.64		13.02	---	27.62	---	---	---	---	---	---	---	---	---	---	---
MW-7		04/29/92	40.64		13.59	---	27.05	---	---	---	---	---	---	---	---	---	---	---
MW-7		05/07/92	40.64		13.95	---	26.69	---	---	---	---	---	---	---	---	---	---	---
MW-7		07/03/92	40.64		14.73	---	25.91	660	---	210	ND<2.5	33	8	---	---	---	---	ANA
MW-7		10/08/92	40.64		15.75	---	24.89	320	---	49	1.4	13	6.2	---	---	---	---	ANA
MW-7		12/31/92	40.64		13.57	---	27.07	900	---	100	ND<2.5	28	4.3	---	---	---	---	ANA
MW-7		04/21/93	40.64		14.56	---	26.08	510	---	83	1.2	10	5.8	---	---	---	---	PACE
MW-7		07/07/93	40.32	(i)	13.40	---	26.92	1100	---	160	2.0	27	4.0	---	---	---	---	PACE
QC-1	(h)	07/07/93	40.32		---	---	---	1100	---	170	1.9	29	2.8	---	---	---	---	PACE
MW-7		09/21/93	40.32		14.40	---	25.92	690	---	150	3.1	26	5.7	---	---	---	---	PACE
QC-1	(h)	09/21/93	40.32		---	---	---	640	---	140	1.7	23	2.4	---	---	---	---	PACE
MW-7		12/17/93	40.32		13.65	---	26.67	---	---	---	---	---	---	---	---	---	---	---
MW-7		12/23/93	40.32		---	---	---	250	---	64	1.2	9.0	1.8	---	---	---	---	PACE
MW-7		04/07/94	40.32		30.62	---	9.70	140	---	32	1.4	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-7		07/06/94	40.32		16.88	---	23.44	410	---	94	1.3	10	3.5	---	---	---	4.4	PACE
MW-7		10/07/94	40.32		25.59	---	14.73	ND<50	---	9.2	ND<0.5	ND<0.5	ND<0.5	---	---	---	4.9	PACE
MW-7		01/27/95	40.32		9.82	---	30.50	810	---	570	3	60	17	---	---	---	0	ATI
QC-1	(h)	01/27/95	---		---	---	---	930	---	620	4	77	21	---	---	---	---	ATI
MW-7		03/30/95	40.32		9.15	---	31.17	180	---	65	0.53	2.0	ND<1.0	---	---	---	7.8	ATI
MW-7		06/20/95	40.32		11.38	---	28.94	2800	---	980	ND<5.0	ND<5.0	43	---	---	---	---	ATI
MW-7		10/03/95	40.32		29.95	---	10.37	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	ATI
MW-7		12/06/95	40.32		29.85	---	10.47	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	ATI
MW-7		03/21/96	40.32		9.76	---	30.56	1000	---	390	2	40	13	ND<10	---	---	7.4	SPL
MW-7		06/21/96	40.32		11.01	---	29.31	ND<250	---	40	ND<5	ND<5	ND<5	ND<50	---	---	7.4	SPL
MW-7		09/06/96	40.32		11.68	---	28.64	---	---	---	---	---	---	---	---	---	---	---
MW-7		09/09/96	40.32		---	---	---	ND<250	---	13	ND<5.0	ND<5.0	ND<5.0	ND<50	---	---	7.2	SPL
MW-7		12/19/96	40.32		10.78	---	29.54	70	---	1.2	ND<1.0	1.4	ND<1.0	ND<10	---	---	8.3	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

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)	DO (ppm)	LAB
MW-8		10/03/91	38.18	22.37	---	15.81	ND<50	---	ND<0.3	0.6	ND<0.3	0.9	---	---	---	---	SUP
MW-8		10/15/91	38.18	22.70	---	15.48	---	---	---	---	---	---	---	---	---	---	---
MW-8		12/04/91	38.18	22.44	---	15.74	---	---	---	---	---	---	---	---	---	---	---
MW-8		12/16/91	38.18	22.47	---	15.71	---	---	---	---	---	---	---	---	---	---	---
MW-8		01/06/92	38.18	21.94	---	16.24	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-8		01/22/92	38.18	21.44	---	16.74	---	---	---	---	---	---	---	---	---	---	---
MW-8		01/28/92	38.18	21.20	---	16.98	---	---	---	---	---	---	---	---	---	---	---
MW-8		02/05/92	38.18	20.88	---	17.30	---	---	---	---	---	---	---	---	---	---	---
MW-8		02/12/92	38.18	20.54	---	17.64	---	---	---	---	---	---	---	---	---	---	---
MW-8		02/17/92	38.18	19.99	---	18.19	---	---	---	---	---	---	---	---	---	---	---
MW-8		04/03/92	38.18	16.75	---	21.43	---	---	---	---	---	---	---	---	---	---	---
MW-8		04/08/92	38.18	16.57	---	21.61	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-8	(f)	04/14/92	38.18	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8		04/29/92	38.18	18.61	---	19.57	---	---	---	---	---	---	---	---	---	---	---
MW-8		05/07/92	38.18	18.41	---	19.77	---	---	---	---	---	---	---	---	---	---	---
MW-8		07/03/92	38.18	20.35	---	17.83	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-8	(f)	10/08/92	38.18	21.74	---	16.44	---	---	---	---	---	---	---	---	---	---	---
MW-8		12/31/92	38.18	19.09	---	19.09	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-8		04/21/93	38.18	18.92	---	19.26	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-8		07/07/93	38.18	17.76	---	20.42	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-8		09/21/93	38.18	19.71	---	18.47	ND<50	---	2.9	2.2	2.2	7.1	---	---	---	---	PACE
MW-8		12/17/93	38.18	21.33	---	16.85	---	---	---	---	---	---	---	---	---	---	---
MW-8		12/23/93	38.18	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.6	---	---	---	---	PACE
MW-8		04/07/94	38.18	21.51	---	16.67	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	6.6	PACE
MW-8		07/06/94	38.18	17.41	---	20.77	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	4.4	PACE
MW-8		10/07/94	38.18	19.20	---	18.98	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	3.7	PACE
MW-8		01/27/95	38.18	12.25	---	25.93	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	2.9	ATI
MW-8		03/30/95	38.18	10.35	---	27.83	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	8.3	ATI
MW-8		06/20/95	38.18	13.37	---	24.81	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	6.9	ATI
MW-8	(f)	10/03/95	38.18	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8		12/06/95	38.18	18.42	---	19.76	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	47	---	---	5.3	ATI
MW-8	(f)	03/21/96	38.18	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8		06/21/96	38.18	13.03	---	25.15	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	7.0	SPL
MW-8		09/06/96	38.18	13.70	---	24.48	---	---	---	---	---	---	---	---	---	---	---
MW-8		09/09/96	38.18	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.0	SPL
MW-8		12/19/96	38.18	11.93	---	26.25	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.6	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

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)	DO (ppm)	LAB
MW-9	10/03/91	41.25	14.12	---	27.13	ND<50	---	ND<0.3	0.4	ND<0.3	ND<0.3	---	---	---	---	SUP
MW-9	10/15/91	41.25	14.27	---	26.98	---	---	---	---	---	---	---	---	---	---	---
MW-9	12/04/91	41.25	13.84	---	27.41	---	---	---	---	---	---	---	---	---	---	---
MW-9	12/16/91	41.25	14.18	---	27.07	---	---	---	---	---	---	---	---	---	---	---
MW-9	01/06/92	41.25	13.42	---	27.83	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.9	---	---	---	---	ANA
MW-9	01/22/92	41.25	13.75	---	27.50	---	---	---	---	---	---	---	---	---	---	---
MW-9	01/28/92	41.25	14.76	---	26.49	---	---	---	---	---	---	---	---	---	---	---
MW-9	02/05/92	41.25	13.38	---	27.87	---	---	---	---	---	---	---	---	---	---	---
MW-9	02/12/92	41.25	11.86	---	29.39	---	---	---	---	---	---	---	---	---	---	---
MW-9	02/17/92	41.25	10.78	---	30.47	---	---	---	---	---	---	---	---	---	---	---
MW-9	04/03/92	41.25	11.63	---	29.62	---	---	---	---	---	---	---	---	---	---	---
MW-9	04/08/92	41.25	12.25	---	29.00	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-9	04/14/92	41.25	12.32	---	28.93	---	---	---	---	---	---	---	---	---	---	---
MW-9	04/29/92	41.25	13.07	---	28.18	---	---	---	---	---	---	---	---	---	---	---
MW-9	05/07/92	41.25	14.43	---	26.82	---	---	---	---	---	---	---	---	---	---	---
MW-9	07/03/92	41.25	13.85	---	27.40	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-9	10/08/92	41.25	14.89	---	26.36	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-9	12/31/92	41.25	11.90	---	29.35	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-9	04/21/93	41.25	13.68	---	27.57	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-9	07/07/93	41.25	13.12	---	28.13	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-9	09/21/93	41.25	14.00	---	27.25	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.9	---	---	---	---	PACE
MW-9	12/17/93	41.25	12.98	---	28.27	---	---	---	---	---	---	---	---	---	---	---
MW-9	12/23/93	41.25	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.9	---	---	---	---	PACE
MW-9	04/07/94	41.25	13.24	---	28.01	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	4.7	PACE
MW-9	07/06/94	41.25	13.77	---	27.48	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	3.9	PACE
MW-9	10/07/94	41.25	14.60	---	26.65	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	3.0	PACE
MW-9	01/27/95	41.25	8.47	---	32.78	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	2.5	ATI
MW-9	03/30/95	41.25	8.19	---	33.06	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	8.4	ATI
MW-9	06/20/95	41.25	11.25	---	30.00	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	8.1	ATI
MW-9	10/03/95	41.25	14.68	---	26.57	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	6.0	ATI
MW-9	12/06/95	41.25	16.07	---	25.18	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	46	---	---	5.4	ATI
MW-9	03/21/96	41.25	9.60	---	31.65	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	8.0	SPL
MW-9	06/21/96	41.25	10.86	---	30.39	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	7.8	SPL
MW-9	09/06/96	41.25	11.52	---	29.73	---	---	---	---	---	---	---	---	---	---	---
MW-9	09/09/96	41.25	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	20/21 (j)	---	---	7.3	SPL
MW-9	12/19/96	41.25	10.43	---	30.82	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.3	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

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)	DO (ppm)	LAB
QC-2	(k)	10/08/92	—	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
QC-2	(k)	12/31/92	---	---	---	---	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	—	ANA
QC-2	(k)	04/21/93	---	---	—	---	---	---	---	---	---	---	---	---	ND	---	PACE
QC-2	(k)	07/07/93	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.6	---	---	---	---	PACE
QC-2	(k)	09/21/93	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(k)	12/23/93	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(k)	04/07/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	---	---	—	PACE
QC-2	(k)	07/06/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2	(k)	10/07/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	—	---	PACE
QC-2	(k)	01/27/95	---	---	---	---	ND<50	---	ND<0.5	0.5	ND<0.5	ND<1	---	---	---	---	ATI
QC-2	(k)	03/30/95	---	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
QC-2	(k)	06/20/95	---	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
QC-2	(k)	10/03/95	---	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	ATI
QC-2	(k)	12/06/95	—	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	ATI
QC-2	(k)	03/21/96	---	---	---	---	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	---	SPL
QC-2	(k)	06/21/96	—	---	---	---	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
---	Not analyzed/measured/applicable
ND	Not detected above reported detection limit
SUP	Superior Analytical Laboratory
ANA	Anametrix, Inc.
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories

NOTES:

(a) Top of casing elevations surveyed in feet above mean sea level, relative to the NGVD (1929).

(b) Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.

(c) Well destroyed during tank removal in November 1990.

(d) Methylene chloride.

(e) 1,2-Dichloroethane.

(f) Well inaccessible.

(g) Sample collected from MW-2 for TPH-D analysis received in laboratory 7 days after collection; sample exceeded EPA recommended holding time for TPH-D on a water matrix.

(h) Blind duplicate.

(i) Top of casing lowered.

(j) EPA Methods 8020/8260 used.

(k) Travel blank.

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TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING
CHEVRON U.S.A. SERVICE STATION NO. 9-0076
4265 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

WELL ID	DATE OF MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)
C-1	07/14/92	38.41	27.61	---	10.80
C-1	10/08/92	38.41	24.44	---	13.97
C-1	09/21/93	38.41	21.42	---	16.99
C-1	03/30/95	38.41	12.02	---	26.39
C-1	06/20/95	38.41	14.40	---	24.01
C-1	03/21/96	38.41	11.65	---	26.76
C-1	09/06/96	38.41	16.75	---	21.66
C-1	12/19/96	38.41	13.98	---	24.43
C-2	07/14/92	37.47	---	---	---
C-2	10/08/92	37.47	---	---	---
C-2	09/21/93	37.47	26.29	---	11.18
C-2	03/30/95	37.47	17.18	---	20.29
C-2	06/20/95	37.47	18.95	---	18.52
C-2	03/21/96	37.47	16.17	---	21.30
C-2	09/06/96	37.47	21.14	0.04	16.36
C-2	12/19/96	37.47	17.55	0.03	19.94
C-3	07/14/92	38.37	27.87	---	10.50
C-3	10/08/92	38.37	28.55	---	9.82
C-3	09/21/93	38.37	26.22	---	12.15
C-3	03/30/95	38.37	18.42	---	19.95
C-3	06/20/95	38.37	19.79	---	18.58
C-3	03/21/96	38.37	17.85	---	20.52
C-3	09/06/96	38.37	21.63	---	16.74
C-3	12/19/96	38.37	22.30	---	16.07
C-4	07/14/92	36.49	26.89	---	9.60
C-4	10/08/92	36.49	27.79	---	8.70
C-4	09/21/93	36.49	25.51	---	10.98
C-4	03/30/95	36.49	14.86	---	21.63
C-4	06/20/95	36.49	16.90	---	19.59
C-4	03/21/96	36.49	14.10	---	22.39
C-4	09/06/96	36.49	20.13	---	16.36
C-4	12/19/96	36.49	16.92	---	19.57
C-5	07/14/92	38.50	28	---	10.50
C-5	10/08/92	38.50	28.65	---	9.85
C-5	09/21/93	38.50	26.36	---	12.14
C-5	03/30/95	38.50	18.54	---	19.96
C-5	06/20/95	38.50	20.13	---	18.37
C-5	03/21/96	38.50	18.40	---	20.10
C-5	09/06/96	38.50	21.90	---	16.60
C-5	12/19/96	38.50	21.15	---	17.35

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING
CHEVRON U.S.A. SERVICE STATION NO. 9-0076
4265 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

WELL ID	DATE OF MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)
C-6	07/14/92	35.40	38.89	---	-3.49
C-6	10/08/92	35.40	38.67	---	-3.27
C-6	09/21/93	35.40	33.98	---	1.42
C-6	03/30/95	35.40	26.38	---	9.02
C-6	06/20/95	35.40	25.01	---	10.39
C-6	03/21/96	35.40	23.12	---	12.28
C-6	09/06/96	35.40	24.83	---	10.57
C-6	12/19/96	35.40	24.50	---	10.90
C-7	07/14/92	35.19	39.77	---	-4.58
C-7	10/08/92	35.19	39.14	---	-3.95
C-7	09/21/93	35.19	35.46	---	-0.27
C-7	03/30/95	35.19	27.60	---	7.59
C-7	06/20/95	35.19	27.87	---	7.32
C-7	03/21/96	35.19	27.85	---	7.34
C-7	09/06/96	35.19	28.35	---	6.84
C-7	12/19/96	35.19	29.11	---	6.08
C-8	07/14/92	34.68	39.02	---	-4.34
C-8	10/08/92	34.68	38.68	---	-4.00
C-8	09/21/93	34.68	35.30	---	-0.62
C-8	03/30/95	34.68	29.24	---	5.44
C-8	06/20/95	34.68	28.34	---	6.34
C-8	03/21/96	34.68	28.65	---	6.03
C-8	09/06/96	34.68	28.70	---	5.98
C-8	12/19/96	34.68	29.70	---	4.98

NOTES:

(a) Top of casing elevations surveyed relative to 1929 NGVD. Measured in feet above mean sea level.

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

--- Not measured/available.

Source: Groundwater data collected by Blaine Tech Services Inc.

TABLE 3 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING
SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

WELL ID	DATE OF MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)
S-1	03/30/95	38.31	6.09	32.22
S-1	06/20/95	38.31	7.30	31.01
S-1	12/06/95	38.31	11.64	26.67
S-1	03/21/96	38.31	6.87	31.44
S-1	06/21/96	38.31	8.65	29.66
S-1	09/06/96	38.31	10.50	27.81
S-1	12/19/96	38.31	8.24	30.07
S-2	03/30/95	38.79	7.86	30.93
S-2	06/20/95	38.79	9.51	29.28
S-2	12/06/95	38.79	10.52	28.27
S-2	03/21/96	38.79	8.60	30.19
S-2	06/21/96	38.79	9.95	28.84
S-2	09/06/96	38.79	10.50	28.29
S-2	12/19/96	38.79	9.40	29.39
S-3	03/30/95	37.33	7.06	30.27
S-3	06/20/95	37.33	8.15	29.18
S-3	12/06/95	37.33	10.53	26.80
S-3	03/21/96	37.33	7.32	30.01
S-3	06/21/96	37.33	8.85	28.48
S-3	09/06/96	37.33	10.10	27.23
S-3	12/19/96	37.33	8.36	28.97

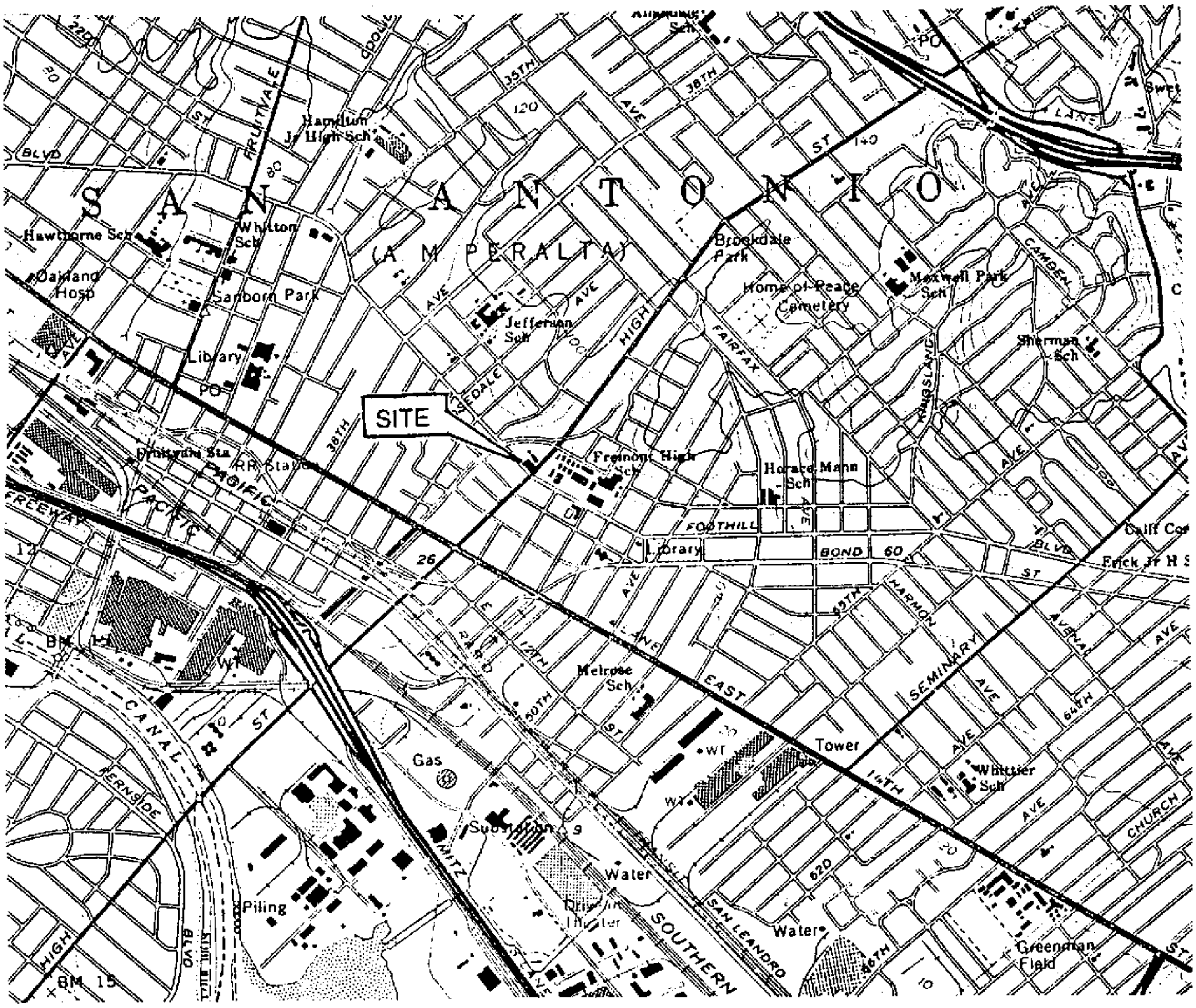
NOTES:

(a) Top of casing elevations surveyed relative to 1929 NGVD. Measured in feet above mean sea level.

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

SOURCE: Groundwater data collected by Weiss Associates

F:\0\10-014\014-6-3B.WQ2



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

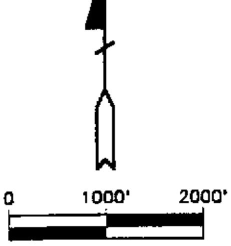


FIGURE 1

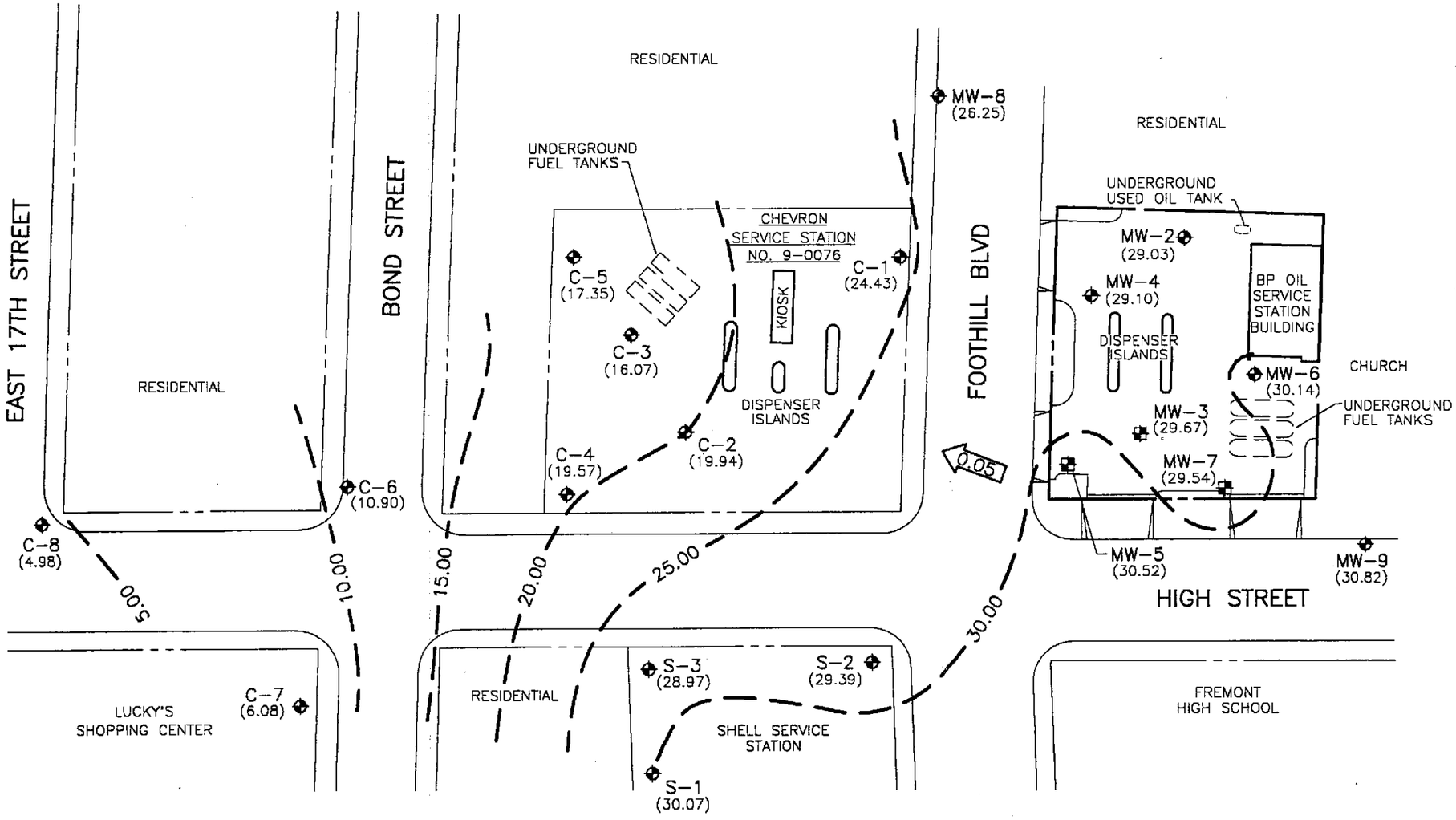
SITE VICINITY MAP

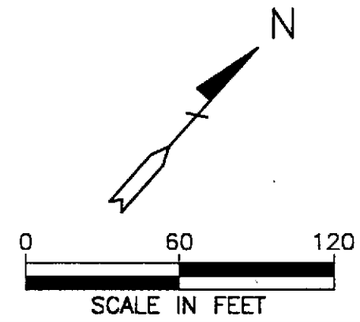
BP OIL SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. 10-014

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

100148--.DWG 3-28-93 RKW 1=1





LEGEND

- ◆ GROUNDWATER MONITORING WELL
- ◆ GROUNDWATER RECOVERY WELL
- (29.39) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 30.00 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL–5.00 FEET)
- 0.05 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

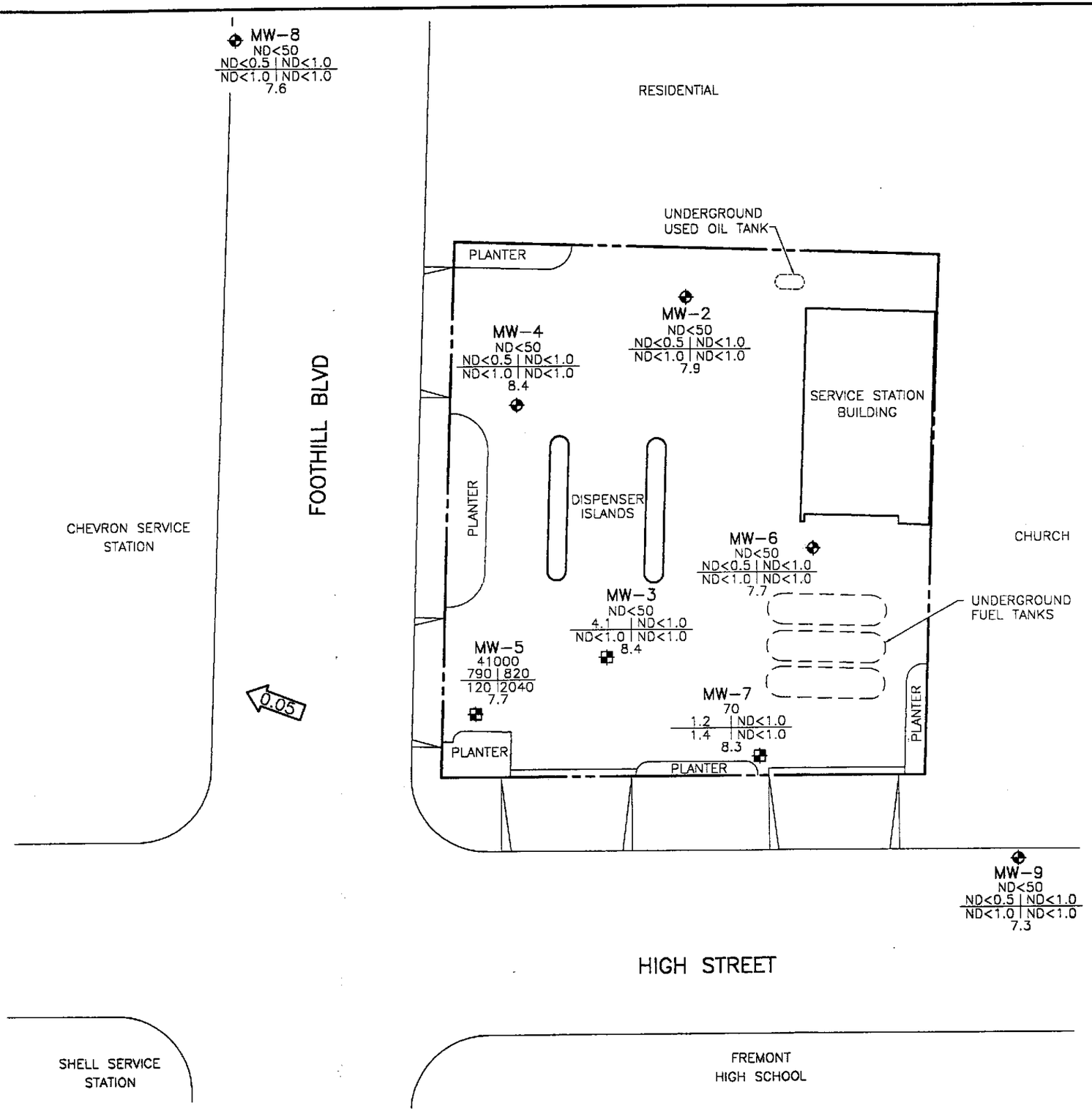
DECEMBER 19, 1996

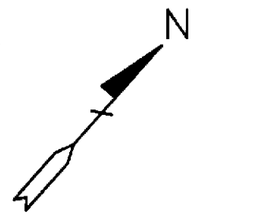
BP OIL SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. 10–014

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10014D-1.DWG 2-6-97 DDM 1"=60





LEGEND

⊕	GROUNDWATER MONITORING WELL
⊠	GROUNDWATER RECOVERY WELL
TPH-G / B | T / E | X / DO	CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER, EXCEPT DISSOLVED OXYGEN, WHICH IS IN PARTS PER MILLION
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
DO	DISSOLVED OXYGEN
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

DECEMBER 19, 1996

BP OIL SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. 10-014

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10014E-1.DWG 1-24-97 DDM 1=30

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

ALISTO

ENGINEERING
GROUP
1575 TREAT BOULEVARD, SUITE 201

Field Report / Sampling Data Sheet

Project No. 10-014-06-003 Date: 12/19/96
Address 4280 Foothill Blvd Day: M T W (TH) F
Contract No. G797448 City: Oakland
Station No. BP 11109 Sampler: LCB

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME MONITORED	COMMENTS:
MW-2	S-1	2"	30.10	12.19	Ø	1015	
MW-3	S-6	4"	31.80	10.46		1040	
MW-4	S-2	4"	34.28	11.01		1022	
MW-5	S-8	4"	35.00	8.62	Globules	1050	Presence of FP (Globules) QC-1 From this well
MW-6	S-3	4"	34.28	11.45	Ø	1025	
MW-7	S-7	6"	33.42	10.78		1045	
MW-8	S-4	2"	29.71	11.93		1030	
MW-9	S-5	2"	29.31	10.43		1334	

FIELD INSTRUMENT CALIBRATION DATA

pH METER Icm 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED (Y) N TIME 1101

D.O. METER Icm ZERO d.O. SOLUTION 0 BAROMETRIC PRESSURE 760 TEMP 63 WEATHER clear

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

LEAK DETECTOR: _____ ALARM MODE X NON ALARM MODE

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-2	12.19	2"	OK	Ø	Y (N)	3	1117	64.9	7.71	710 µS	6.4
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			6		66.2	7.31	671 µS	
30.10 - 12.19 = 17.91	X .16 = 2.87	X3 =	8.61			9	1122	66.6	7.26	651 µS	7.9
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

O EPA 601_____
X TPH-G/BTEX HCl
O TPH Diesel____
O TOG 5520 __
TIME/SAMPLE ID
1130

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-4	11.01	4"	OK	Ø	Y (N)	15	1137	65.3	7.14	817 µS	6.9
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			30		67.1	6.81	721 µS	
34.28 - 11.01 = 23.27	X .65 = 15.13	X3 =	45.39			46	1156	67.5	6.81	710 µS	8.4
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

O EPA 601_____
X TPH-G/BTEX HCl
O TPH Diesel____
O TOG 5520 __
TIME/SAMPLE ID
1200

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. 10-014-06-003 Date: 12/19/96
Address 4280 Foothill Blvd Day: M T W TH F
Contract No. G797448 City: Oakland
Station No. BP 11109 Sampler: CS

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-6	11.45	4"	OIC	∅	Y (N)	14	1213	65.4	7.41	681 µS	6.9
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			29		67.2	7.22	621 µS	
34.28 - 11.45 = 22.83 X .65 = 14.84 X 3 = 44.52						46	1230	67.9	7.14	615 µS	7.7
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

EPA 601_____ TPH-G/BTEX HCl TPH Diesel____ TOG 5520 ___ TIME/SAMPLE ID 1233

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-8	11.93	2"	OIC	∅	Y (N)	3	1241	67.2	7.21	742 µS	6.4
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			6		68.4	7.11	721 µS	
29.71 - 11.93 = 17.78 X .16 = 2.84 X 3 = 8.52						9	1250	68.3	7.07	711 µS	7.6
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

EPA 601_____ TPH-G/BTEX HCl TPH Diesel____ TOG 5520 ___ TIME/SAMPLE ID 1253

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-9	10.43	2"	OIC	∅	Y (N)	3	1259	66.3	7.09	671 µS	6.6
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			6		67.4	6.84	622 µS	
29.31 - 10.43 = 18.88 X .16 = 3.02 X 3 = 9.06						9.5	1305	68.3	6.77	614 µS	7.3
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

EPA 601_____ TPH-G/BTEX HCl TPH Diesel____ TOG 5520 ___ TIME/SAMPLE ID 1310

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-3	10.46	4"	OIC	∅	Y (N)	14	1322	65.3	7.20	1.31 mS	7.7
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			28		66.9	7.09	1.14 mS	
31.80 - 10.46 = 21.34 X .65 = 13.87 X 3 = 41.61						42	1340	67.3	7.09	1.10 mS	8.4
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

EPA 601_____ TPH-G/BTEX HCl TPH Diesel____ TOG 5520 ___ TIME/SAMPLE ID 1344

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-7	10.78	6"	OIC	∅	Y (N)	35	1354	64.7	7.63	941 µS	6.8
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			70		66.3	7.41	911 µS	
33.42 - 10.78 = 22.64 X 1.47 = 33.28 X 3 = 99.84						100	1440	67.9	7.34	903 µS	8.3
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments:											

EPA 601_____ TPH-G/BTEX HCl TPH Diesel____ TOG 5520 ___ TIME/SAMPLE ID 1442

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. 10-014-06-003 Date: 12/19/96
Address 4280 Foothill Blvd Day: M T W (TH) F
Contract No. G797448 City: Oakland
Station No. BP 11109 Sampler: CS

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-5	8.62	4"	O/C	Ø	(N) S	15	1451	64.7	7.30	7195	6.2
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			30		65.9	7.17	1925	
35.00-8.62 = 26.38X.65 = 17.15X3 =			51.45			52	1530	66.7	7.11	6875	7.7
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port											
Comments: QC-1 (5-9) From this well											

O EPA 601_____
Ø TPH-G/BTEX HL
O TPH Diesel____
O TOG 5520 ___

TIME/SAMPLE ID
1536

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

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

SOUTHERN PETROLEUM LABORATORIES, INC.

Certificate of Analysis Number: 96-12-B79

Approved for Release by:

Ed Fry, Project Manager — Date: 1/2/97

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. H9-9612B79-01

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

P.O.# G-797448 , COC#071239
DATE: 01/02/97

PROJECT: BP Oil #11109
SITE: Oakland,CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-1

PROJECT NO: 10-014-6-3
MATRIX: WATER
DATE SAMPLED: 12/19/96
DATE RECEIVED: 12/21/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: YN			
Date: 12/27/96			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	103		
4-Bromofluorobenzene	107		
CA LUFT - Gasoline			
Analyzed by: YN			
Date: 12/27/96 04:48:00			

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. H9-9612B79-02

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

P.O.# G-797448 , COC#071239
DATE: 01/02/97

PROJECT: BP Oil #11109
SITE: Oakland,CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-014-6-3
MATRIX: WATER
DATE SAMPLED: 12/19/96
DATE RECEIVED: 12/21/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: YN			
Date: 12/27/96			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	103		
4-Bromofluorobenzene	100		
CA LUFT - Gasoline			
Analyzed by: YN			
Date: 12/27/96 01:59:00			

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

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

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. H9-9612B79-03

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

P.O.# G-797448 , COC#071239
DATE: 01/02/97

PROJECT: BP Oil #11109
SITE: Oakland,CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-3

PROJECT NO: 10-014-6-3
MATRIX: WATER
DATE SAMPLED: 12/19/96
DATE RECEIVED: 12/21/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: YN			
Date: 12/27/96			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	103		
4-Bromofluorobenzene	103		
CA LUFT - Gasoline			
Analyzed by: YN			
Date: 12/27/96 02:27:00			

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. H9-9612B79-04

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

P.O.# G-797448 , COC#071239
DATE: 01/02/97

PROJECT: BP Oil #11109
SITE: Oakland,CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-4

PROJECT NO: 10-014-6-3
MATRIX: WATER
DATE SAMPLED: 12/19/96
DATE RECEIVED: 12/21/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: YN			
Date: 12/27/96			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	103		
CA LUFT - Gasoline			
Analyzed by: YN			
Date: 12/27/96 02:56:00			

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. H9-9612B79-05

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

P.O.# G-797448 , COC#071239
DATE: 01/02/97

PROJECT: BP Oil #11109
SITE: Oakland,CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-5

PROJECT NO: 10-014-6-3
MATRIX: WATER
DATE SAMPLED: 12/19/96
DATE RECEIVED: 12/21/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: YN			
Date: 12/27/96			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	103		
CA LUFT - Gasoline			
Analyzed by: YN			
Date: 12/27/96 11:08:00			

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. H9-9612B79-07

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

P.O.# G-797448 , COC#071239
DATE: 01/02/97

PROJECT: BP Oil #11109
SITE: Oakland,CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-7

PROJECT NO: 10-014-6-3
MATRIX: WATER
DATE SAMPLED: 12/19/96
DATE RECEIVED: 12/21/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	1.2	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	1.4	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	103		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: YN			
Date: 12/27/96			
Total Petroleum Hydrocarbons-Gasoline	0.070	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	103		
4-Bromofluorobenzene	100		
CA LUFT - Gasoline			
Analyzed by: YN			
Date: 12/27/96 10:40:00			

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. H9-9612B79-08

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

P.O.# G-797448 , COC#071239
DATE: 01/02/97

PROJECT: BP Oil #11109
SITE: Oakland,CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-8

PROJECT NO: 10-014-6-3
MATRIX: WATER
DATE SAMPLED: 12/19/96
DATE RECEIVED: 12/21/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	500 P	µg/L
Benzene	790	25 P	µg/L
Toluene	820	50 P	µg/L
Ethylbenzene	120	50 P	µg/L
Total Xylene	2040	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	113		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: YN			
Date: 12/27/96			
Total Petroleum Hydrocarbons-Gasoline	41	2.5 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	113		
CA LUFT - Gasoline			
Analyzed by: YN			
Date: 12/27/96 11:39:00			

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

Certificate of Analysis No. H9-9612B79-09

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

P.O.# G-797448 , COC#071239
DATE: 01/02/97

PROJECT: BP Oil #11109
SITE: Oakland,CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-9

PROJECT NO: 10-014-6-3
MATRIX: WATER
DATE SAMPLED: 12/19/96
DATE RECEIVED: 12/21/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	500 P	µg/L
Benzene	490	25 P	µg/L
Toluene	430	50 P	µg/L
Ethylbenzene	63	50 P	µg/L
Total Xylene	1140	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	107		
METHOD 8020***			
Analyzed by: YN			
Date: 12/28/96			
Total Petroleum Hydrocarbons-Gasoline	26	2.5 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	127		
CA LUFT - Gasoline			
Analyzed by: YN			
Date: 12/28/96 01:03:00			

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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QUALITY CONTROL

DOCUMENTATION

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

SURROGATE RECOVERY SUMMARY

01/02/97 11:02:16

METHOD 8020A *** **BATCH#:HP_N961224101900**
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	29.0	74- 131
4-Bromofluorobenzene	30	29	29.3	43- 135

METHOD 8020A *** **BATCH#:HP_N961224101900**
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9612B80-01A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-DIFLUOROBENZENE	30	32	107	70- 131
4-BROMOFLUOROBENZENE	30	32	107	43- 135

METHOD 8020A *** **BATCH#:HP_N961224101900**
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9612B80-01A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	32	107	70- 131
4-Bromofluorobenzene	30	31	103	43- 135

CA LUFT - Gasoline **BATCH#:HP_N961224111500**
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	31	30.5	50- 150
4-Bromofluorobenzene	30	31	31.1	50- 150

CA LUFT - Gasoline **BATCH#:HP_N961224111500**
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9612B81-02A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	33	110	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

CA LUFT - Gasoline **BATCH#:HP_N961224111500**
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9612B81-02A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	32	107	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

METHOD 8020*** **BATCH#:HP_N961226091800**
WORK ORDER: 9612B79-01A **CLIENT SAMPLE ID:**S-1

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

METHOD 8020*** **BATCH#:HP_N961226091800**
WORK ORDER: 9612B79-02A **CLIENT SAMPLE ID:**S-2

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	70- 131

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

METHOD 8020* BATCH#:HP_N961226091800**
WORK ORDER: 9612B79-03A **CLIENT SAMPLE ID:** S-3

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

METHOD 8020* BATCH#:HP_N961226091800**
WORK ORDER: 9612B79-04A **CLIENT SAMPLE ID:** S-4

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

METHOD 8020* BATCH#:HP_N961226091800**
WORK ORDER: 9612B79-05A **CLIENT SAMPLE ID:** S-5

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

METHOD 8020* BATCH#:HP_N961226091800**
WORK ORDER: 9612B79-07A **CLIENT SAMPLE ID:** S-7

1,4-Difluorobenzene	30	31	103	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

METHOD 8020A * BATCH#:HP_N961226091800**
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	29	29.3	74- 131
4-Bromofluorobenzene	30	30	30.4	43- 135

METHOD 8020A * BATCH#:HP_N961226091800**
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:** 9612B83-02A

1,4-DIFLUOROBENZENE	30	40	133 «	70- 131
4-BROMOFLUOROBENZENE	30	28	93	43- 135

METHOD 8020A * BATCH#:HP_N961226091800**
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:** 9612B83-02A

1,4-Difluorobenzene	30	40	133 «	70- 131
4-Bromofluorobenzene	30	28	93	43- 135

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CA LUFT - Gasoline BATCH#:HP_N961226101500
WORK ORDER: 9612B79-01A CLIENT SAMPLE ID:S-1

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	31	103	50- 150
4-Bromofluorobenzene	30	32	107	50- 150

CA LUFT - Gasoline BATCH#:HP_N961226101500
WORK ORDER: 9612B79-02A CLIENT SAMPLE ID:S-2

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	31	103	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

CA LUFT - Gasoline BATCH#:HP_N961226101500
WORK ORDER: 9612B79-03A CLIENT SAMPLE ID:S-3

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	31	103	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

CA LUFT - Gasoline BATCH#:HP_N961226101500
WORK ORDER: 9612B79-04A CLIENT SAMPLE ID:S-4

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

CA LUFT - Gasoline BATCH#:HP_N961226101500
WORK ORDER: 9612B79-05A CLIENT SAMPLE ID:S-5

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

CA LUFT - Gasoline BATCH#:HP_N961226101500
WORK ORDER: 9612B79-07A CLIENT SAMPLE ID:S-7

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	31	103	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

CA LUFT - Gasoline BATCH#:HP_N961226101500
WORK ORDER: Method Blank CLIENT SAMPLE ID:

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	30.2	50- 150
4-Bromofluorobenzene	30	31	31.4	50- 150

CA LUFT - Gasoline BATCH#:HP_N961226101500
WORK ORDER: Matrix Spike CLIENT SAMPLE ID:9612B83-04A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	31	103	50- 150

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	32	107	50- 150

CA LUFT - Gasoline **BATCH#:**HP_N961226101500
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9612B83-04A

1,4-Difluorobenzene	30	32	107	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

METHOD 8020* ** **BATCH#:**HP_N961227055800
WORK ORDER: 9612B79-08A **CLIENT SAMPLE ID:**S-8

1,4-Difluorobenzene	30	34.0000	113	70- 131
4-Bromofluorobenzene	30	30.0000	100	43- 135

METHOD 8020* ** **BATCH#:**HP_N961227055800
WORK ORDER: 9612B79-09A **CLIENT SAMPLE ID:**S-9

1,4-Difluorobenzene	30	30.0000	100	70- 131
4-Bromofluorobenzene	30	32.0000	107	43- 135

METHOD 8020A * ** **BATCH#:**HP_N961227055800
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	30	30.2	74- 131
4-Bromofluorobenzene	30	30	30.3	43- 135

METHOD 8020A * ** **BATCH#:**HP_N961227055800
WORK ORDER: LCS **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	33	110	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

METHOD 8020A * ** **BATCH#:**HP_N961227055800
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9612B28-03A

1,4-DIFLUOROBENZENE	30	32	107	70- 131
4-BROMOFLUOROBENZENE	30	29	97	43- 135

METHOD 8020A * ** **BATCH#:**HP_N961227055800
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9612B28-03A

1,4-Difluorobenzene	30	32	107	70- 131
4-Bromofluorobenzene	30	29	97	43- 135

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CA LUFT - Gasoline BATCH#:HP_N961227065500
WORK ORDER: 9612B79-08A CLIENT SAMPLE ID:S-8

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30.0000	100	50- 150
4-Bromofluorobenzene	30	34.0000	113	50- 150

CA LUFT - Gasoline BATCH#:HP_N961227065500
WORK ORDER: 9612B79-09A CLIENT SAMPLE ID:S-9

1,4-Difluorobenzene	30	30.0000	100	50- 150
4-Bromofluorobenzene	30	38.0000	127	50- 150

CA LUFT - Gasoline BATCH#:HP_N961227065500
WORK ORDER: Method Blank CLIENT SAMPLE ID:

1,4-Difluorobenzene	30	30	30.5	50- 150
4-Bromofluorobenzene	30	30	29.8	50- 150

CA LUFT - Gasoline BATCH#:HP_N961227065500
WORK ORDER: Matrix Spike CLIENT SAMPLE ID:9612B28-04A

1,4-Difluorobenzene	30	35	117	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

CA LUFT - Gasoline BATCH#:HP_N961227065500
WORK ORDER: Matrix Spike Dup. CLIENT SAMPLE ID:9612B28-04A

1,4-Difluorobenzene	30	35	117	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

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

SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

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

Matrix: Aqueous
Units: µg/L

Batch Id: HP_N961226091800

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	45	90.0	63 - 120
Benzene	ND	50	42	84.0	62 - 121
Toluene	ND	50	45	90.0	66 - 136
EthylBenzene	ND	50	45	90.0	70 - 136
O Xylene	ND	50	45	90.0	74 - 134
M & P Xylene	ND	100	90	90.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	18	20	30	60.0	29	55.0	8.70	20	39 - 150
BENZENE	160	20	180	NC	180	NC	NC	25	39 - 150
TOLUENE	46	20	61	75.0	63	85.0	12.5	26	56 - 134
ETHYLBENZENE	48	20	64	80.0	64	80.0	0	38	61 - 128
O XYLENE	43	20	60	85.0	59	80.0	6.06	29	40 - 130
M & P XYLENE	100	40	130	75.0	130	75.0	0	20	43 - 152

Analyst: YN
Sequence Date: 12/26/96
SPL ID of sample spiked: 9612B83-02A
Sample File ID: N_L6991.TX0
Method Blank File ID:
Blank Spike File ID: N_L6982.TX0
Matrix Spike File ID: N_L6986.TX0
Matrix Spike Duplicate File ID: N_L6987.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (3rd Q '95)
(***) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID):

9612B83-05A 9612C55-01A 9612B79-07A 9612B83-02A
9612B83-04A 9612B79-02A 9612B79-03A 9612B79-04A
9612B79-01A 9612B79-05A 9612C55-03A 9612C63-05A
9612C65-02A 9612B83-01A 9612C63-02A 9612C63-03A
9612C55-02A

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

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

Matrix: Aqueous
Units: µg/L

Batch Id: HP_N961227055800

L A B O R A T O R Y C O N T R O L S A M P L E

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	44	88.0	63 - 120
Benzene	ND	50	39	78.0	62 - 121
Toluene	ND	50	42	84.0	66 - 136
EthylBenzene	ND	50	44	88.0	70 - 136
O Xylene	ND	50	44	88.0	74 - 134
M & P Xylene	ND	100	86	86.0	77 - 140

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

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	950	20	900	NC	890	NC	NC	20	39 - 150
BENZENE	ND	20	21	105	21	105	0	25	39 - 150
TOLUENE	ND	20	19	95.0	20	100	5.13	26	56 - 134
ETHYLBENZENE	ND	20	19	95.0	19	95.0	0	38	61 - 128
O XYLENE	ND	20	20	100	20	100	0	29	40 - 130
M & P XYLENE	ND	40	39	97.5	39	97.5	0	20	43 - 152

Analyst: YN
Sequence Date: 12/27/96
SPL ID of sample spiked: 9612B28-03A
Sample File ID: N_6L038.TX0
Method Blank File ID:
Blank Spike File ID: N_6L016.TX0
Matrix Spike File ID: N_6L020.TX0
Matrix Spike Duplicate File ID: N_6L021.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (3rd Q '95)
(***) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID):

9612B28-05A 9612C36-04A 9612C37-10A 9612B80-02A
9612B79-08A 9612B83-03A 9612B79-09A 9612C36-01A
9612B28-01A 9612B28-02A 9612B28-03A 9612B28-04A
9612C36-03A 9612C37-03A 9612C37-09A

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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_N961226101500

L A B O R A T O R Y C O N T R O L S A M P L E

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.00	0.90	90.0	50 - 150

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

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	ND	0.9	1.06	118	1.07	119	0.844	50	50 - 150

Analyst: YN
Sequence Date: 12/26/96
SPL ID of sample spiked: 9612B83-04A
Sample File ID: NNL6992.TX0
Method Blank File ID:
Blank Spike File ID: NNL6984.TX0
Matrix Spike File ID: NNL6988.TX0
Matrix Spike Duplicate File ID: NNL6989.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: Temporary Limits
(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID): 9612B83-04A 9612B79-02A 9612B79-03A 9612B79-04A 9612B79-01A 9612B83-05A 9612B79-07A 9612B79-05A 9612B83-01A 9612C55-02A 9612C55-01A 9612B83-02A

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** SPL BATCH QUALITY CONTROL REPORT **

CA LUFT

Matrix: Aqueous

Units: mg/L

Batch Id: HP_N961227065500

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.00	0.93	93.0	50 - 150

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	0.52	0.9	1.62	122	1.60	120	1.65	50	50 - 150

Analyst: YN

Sequence Date: 12/27/96

SPL ID of sample spiked: 9612B28-04A

Sample File ID: NN6L051.TX0

Method Blank File ID:

Blank Spike File ID: NN6L018.TX0

Matrix Spike File ID: NN6L022.TX0

Matrix Spike Duplicate File ID: NN6L023.TX0

* = Values Outside QC Range

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

ND = Not Detected/Below Detection Limit

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

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

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

(**) = Source: Temporary Limits

(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID): 9612B79-09A 9612B80-02A 9612B79-08A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9612B79

BP

CHAIN OF CUSTODY

No. 071239 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
1107	Oakland	10-014-6-3

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
Brady Nagle	(510) 295-1650	295-1823	679744 8
BP CONTACT	**BP ADDRESS**	**PHONE NUMBER**	**FAX NO.**
Scott Hooton	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 Buenavida	[signature]	12/20/96	Fed EX

AIRBILL NUMBER: 9402779635

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

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	TYPE (VOL.)	PRESERVATIVE / LAB SAMPLE #	TPH-G	BTEX								COMMENTS
S-1	12/20/96	W	3	HCL		X	X		1	pH 12-21-96					
S-2	↓	↓	↓	↓		↓	↓		1						
S-3	↓	↓	↓	↓		↓	↓		1						
S-4	↓	↓	↓	↓		↓	↓		1						
S-5	↓	↓	↓	↓		↓	↓		1						
S-6	↓	↓	↓	↓		↓	↓								
S-7	↓	↓	↓	↓		↓	↓		1						
S-8	↓	↓	↓	↓		↓	↓		1						
S-9	↓	↓	↓	↓		↓	↓		1						

4°C intact

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	12/20/96		[signature]	12/20/96	
[signature]	12/20/96		[signature]	12/20/96	1030

ADDITIONAL COMMENTS

CIV 16722
PKG/50

Distribution: White - Original (with Data) Pink - Lab

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 12/21/96	Time: 1145

SPL Sample ID: 9612B79

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		4 C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	940477963 5	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name: Ruben Estrada	Date: 12/21/96

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

SOUTHERN PETROLEUM LABORATORIES, INC.

Certificate of Analysis Number: 96-12-E56

Approved for Release by:

Ed Fry, Project Manager

Date: 1/3/97

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. H9-9612E56-01

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

P.O.# G797448 , COC# 071239
DATE: 01/03/97

PROJECT: BP Oil #11109
SITE: Oakland,CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-6

PROJECT NO: 10-014-6-3
MATRIX: WATER
DATE SAMPLED: 12/19/96
DATE RECEIVED: 12/31/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	4.1	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	103		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: VHZ			
Date: 01/02/97			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	103		
4-Bromofluorobenzene	107		
CA LUFT - Gasoline			
Analyzed by: VHZ			
Date: 01/02/97 02:47:00			

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

QUALITY CONTROL

DOCUMENTATION

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

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

Matrix: Aqueous
Units: µg/L

Batch Id: HP_N961231034400

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50.0	42	84.0	63 - 120
Benzene	ND	50.0	40	80.0	62 - 121
Toluene	ND	50.0	43	86.0	66 - 136
EthylBenzene	ND	50.0	44	88.0	70 - 136
O Xylene	ND	50.0	44	88.0	74 - 134
M & P Xylene	ND	100.0	87	87.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20.0	20	100	21	105	4.88	20	39 - 150
BENZENE	ND	20.0	24	120	24	120	0	25	39 - 150
TOLUENE	ND	20.0	24	120	25	125	4.08	26	56 - 134
ETHYLBENZENE	ND	20.0	23	115	23	115	0	38	61 - 128
O XYLENE	ND	20.0	24	120	24	120	0	29	40 - 130
M & P XYLENE	ND	40.0	47	118	47	118	0	20	43 - 152

Analyst: YN
Sequence Date: 12/31/96
SPL ID of sample spiked: 9612D77-01A
Sample File ID: N_6L173.TX0
Method Blank File ID:
Blank Spike File ID: N_6L167.TX0
Matrix Spike File ID: N_6L169.TX0
Matrix Spike Duplicate File ID: N_6L170.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (3rd Q '95)
(***) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID):

9612D65-01A 9612D77-07A 9612D77-08A 9612D77-04A
9612D77-09A 9612D66-02A 9612E57-01A 9612E56-01A
9612D66-11A 9612D66-10A 9612D96-01A 9612E55-04A
9612E55-03A 9612E55-02A 9612E68-01A 9612D77-10A
9612D77-01A 9612D77-05A 9612D77-06A

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

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

Matrix: Aqueous
Units: mg/L

Batch Id: HP_N970102122400

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Gasoline Petr. Hydrocarbon	ND	1.0	0.94	94.0	56 - 130

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
GASOLINE PETR. HYDROCARBON	ND	0.9	0.78	86.7	0.74	82.2	5.33	22	37 - 169

Analyst: VHZ
Sequence Date: 01/02/97
SPL ID of sample spiked: 9612E57-01A
Sample File ID: NNA7008.TX0
Method Blank File ID:
Blank Spike File ID: NNA7003.TX0
Matrix Spike File ID: NNA7005.TX0
Matrix Spike Duplicate File ID: NNA7006.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical data (3rd Q '95)
(***) = Source: SPL-Houston Historical Data (3rd Q '95)

SAMPLES IN BATCH(SPL ID): 9612D96-01A 9612E55-04A 9612E55-03A 9612E55-02A 9612E56-01A 9612D66-11A 9612D66-10A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9612E56

CHAIN OF CUSTODY

No. 071239

Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering	ADDRESS: 1515 Tenth Blvd #201	CITY: W.C.	STATE: CA	ZIP CODE: 94597
BP SITE NUMBER: 11127	BP CORNER ADDRESS/CITY: Oakland			CONSULTANT PROJECT NUMBER: 10-014-L-3
CONSULTANT PROJECT MANAGER: Brady Hayle	PHONE NUMBER: (510) 295-1150	FAX NUMBER: 295-1223		CONSULTANT CONTRACT NUMBER: 797448
BP CONTACT: Scott Hooton	BP ADDRESS: Concord, CA	PHONE NUMBER:		FAX NO.:
LAB CONTACT: SPL	LABORATORY ADDRESS: Texas	PHONE NUMBER:		FAX NO.:
SAMPLED BY (Please Print Name): Larry Brownside	SAMPLED BY (Signature):	SHIPMENT DATE: 12/30/96		SHIPMENT METHOD: FedEX
TAT: ☐ 24 Hours ☐ 48 Hours ☐ 1 Week ☒ Standard 2 Weeks		ANALYSIS REQUIRED		AIRBILL NUMBER: 940477964[illegible]

SAMPLE DESCRIPTION	COLLECTION DATE / TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPH-D	TPH-G	COMMENTS
S-1	12/30/96	W	3	1L		X	X	
S-2								
S-3								
S-4								
S-5								
S-6						1	1	
S-7								
S-8								
S-9								

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	12/31/96		[signature]	12/31/96	
[signature]	12/31/96		[signature]	12/31/96	1000

ADDITIONAL COMMENTS: missing S-6 on first shipment. 3°C Intact FEDEX # 940477964[illegible]

CLV 16722
PKG/50

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

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
12/31/96	1000

SPL Sample ID:
9612E56

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		3° C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	940477646	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
S. West	12/31/96

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

BP Site Number: 11189
ERM Contact: Scott Hooton
Sampling Date: 12/19/96
Matrix Description: WATER
Date Final Report Received: 1/6/97
Laboratory & Location: SPL - Houston, Tx

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

Notes: 1) RPD was exceeded for TPH-G & BTEX (MW-5 & QC-1)

Data Validation Completed by (print): Ken Lines
(signature): [signature]
Date: 2/5/97

Calculation of RPD
for BP Oil QA/QC Program
BP Oil Station No. 11109 12/19/96 Event

Analytical Data	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Primary Sample	41000	790	820	120	2040	ND<500
QC-1 Duplicate	26000	490	430	63	1140	ND<500
Sample Mean	33500	640	625	92	1590	500
RPD	44.78%	46.88%	62.40%	62.30%	56.60%	0.00%
Significant Result?	YES	YES	YES	YES	YES	NO

Notes:

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

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