BP OIL

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

August 1, 1998

Alameda County Health Care Services Department
Attention Ms. Juliette Shin
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502-6577

RE: BP Oil Site No. 11117
7210 Bancroft Avenue (at 73rd)
Oakland, CA 94605

Dear Mr. Shin:

This letter transmits a Groundwater Monitoring and Sampling Report, dated 22 July 1998. A petroleum release was documented during 1991 when a site assessment was performed in support of the property owner's plans to refinance an adjacent shopping center property, which also includes the BP site. After BP performed several iterations of groundwater monitoring and site assessment, **the business and related improvements were sold to the current operator (Tosco Corporation) in 1994.** The UST system passed required precision tightness tests prior to the sale to Tosco. The single-wall-fiberglass tanks are believed to have been installed by Mobil Oil Corporation during 1984. Soil or groundwater data associated with the 1984 tank replacement was not reported to have been obtained when BP acquired the site from Mobil in 1989. **The cause and origin of the petroleum release(s) at this site has not – to the best of my knowledge – been established.** I understand that the double-walled tanks will be required at this site to comply with 1998 leak prevention requirements in Oakland.

The enclosed groundwater monitoring and sampling report includes laboratory data for samples collected on 6 May 1998. Upon review of the data, please note the following:

1. Aromatic petroleum hydrocarbons were not detected in a groundwater sample obtained from well MW-1, where aromatic petroleum concentrations have – with one exceptions – not been detected since the 12 January 1996 sampling event. Prior to 12 January 1996, aromatic petroleum hydrocarbons were reported to be present in every sample obtained from MW-1.

2. Accumulated liquid petroleum hydrocarbon was observed in well MW-2 (0.01 feet) on 6 May 1998. Liquid petroleum hydrocarbon was first observed in MW-2 on 7 June 1993 and has persisted since that time. Table 2 presents a tabular summary of product removed from MW-2, and shows that **a cumulative volume of approximately 25 gallons has been removed to date.**

3. Well MW-4, located south of the UST system and MW-2, has sampled petroleum hydrocarbon concentrations since 1992. Well MW-9, located south of MW-4 and 73rd Avenue, has – with three exceptions – not sampled petroleum hydrocarbons.

4. The extent of the release appears to have been established with the existing network of groundwater monitoring wells.

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

Sincerely,

Scott Hooton
Environmental Remediation Management

attachment

cc: site file
B. Nagle - AEG
T. Berry - Tosco (w/attachment)
Bancroft Oakland Investment Company, Attention Mr. Robert K. Barth, 9454 Wilshire Boulevard, Beverly Hills, CA 90212 (w/attachment)

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11117
7210 Bancroft Avenue
Oakland, California

Project No. 10-018-06-003

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

July 22, 1998

Brady Nagle
Project Manager

Al Sevilla, P.E.
Principal

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11117
7210 Bancroft Avenue
Oakland, California

Project No. 10-018-06-003

July 22, 1998

INTRODUCTION

This report presents the results and findings of the May 6, 1998 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11117, 7210 Bancroft Avenue, 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 relative to mean sea level. The survey data and groundwater elevation measurements collected to date are presented in Table 1.

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

FREE PRODUCT MONITORING AND RECOVERY

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

SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples for this and previous quarters are summarized in Table 1. The potentiometric groundwater elevations as interpreted from the results of this monitoring event are shown on Figure 2. The results of groundwater analysis are shown on Figure 3. The laboratory report and chain of custody record are presented in Appendix B.

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11117
7210 BANCROFT AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-018

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)	Organic Lead (ug/l)	DO (ppm)	LAB
MW-1	01/05/92	49.80	33.16	---	16.64	57000	50000	2400	1000	1100	3100	---	ND	---	---
MW-1	01/10/92	49.80	33.16	---	16.64	---	---	---	---	---	---	---	---	---	---
MW-1	06/05/92	49.80	29.01	---	20.79	31000	---	2800	2100	800	2300	---	---	---	---
MW-1	07/24/92	49.80	29.45	---	20.35	---	---	---	---	---	---	---	---	---	---
MW-1	07/27/92	49.80	29.45	---	20.35	---	---	---	---	---	---	---	---	---	---
MW-1	09/15/92	49.80	30.53	---	19.27	40000	1200 (c)	3400	3000	1300	3400	---	---	---	ANA
QC-1 (d)	09/15/92	---	---	---	---	36000	---	3800	3400	1400	3800	---	---	---	ANA
MW-1	12/15/92	49.80	31.26	---	18.54	27000	1100 (c)	1700	580	700	1900	---	---	---	ANA
QC-1 (d)	12/15/92	---	---	---	---	22000	---	1500	440	510	1300	---	---	---	ANA
MW-1	03/15/93	49.80	24.80	---	25.00	17000	580	1700	1200	590	1800	---	---	---	PACE
QC-1 (d)	03/15/93	---	---	---	---	15000	---	1100	860	440	1400	---	---	---	PACE
MW-1	06/07/93	49.80	25.01	---	24.79	750	100	0.8	0.8	ND<0.5	ND<0.5	---	---	---	PACE
QC-1 (d)	06/07/93	---	---	---	---	720	---	0.7	0.7	ND<0.5	ND<0.5	---	---	---	PACE
MW-1	09/23/93	49.80	28.70	---	21.10	40000	770	4000	500	920	3000	6600 (e)	---	---	PACE
MW-1	12/27/93	49.80	28.66	---	21.14	27000	---	2000	400	940	2600	14000 (e)	---	---	PACE
QC-1 (d)	12/27/93	---	---	---	---	21000	---	1700	380	830	2400	9200 (e)	---	---	PACE
MW-1	04/05/94	49.80	26.37	---	23.43	27000	---	3400	930	950	2900	8600 (e)	---	---	PACE
QC-1 (d)	04/05/94	---	---	---	---	29000	---	3700	1000	1000	3100	9700 (e)	---	1.3	PACE
MW-1	07/22/94	49.80	26.54	---	23.26	1700	---	220	2.3	2.0	3.4	220 (e)	---	2.0	PACE
MW-1	10/13/94	49.80	27.46	---	22.34	1200	---	250	21	ND<0.5	3.2	320 (e)	---	2.6	PACE
MW-1	01/25/95	49.80	20.96	---	28.84	1000	---	420	8	13	4	---	---	---	ATI
MW-1	04/19/95	49.80	19.59	---	30.21	5200	---	420	51	230	340	---	---	6.0	ATI
MW-1	07/05/95	49.80	19.61	---	30.19	320	---	4.2	ND<0.50	ND<0.50	ND<1.0	---	---	4.6	ATI
MW-1	10/05/95	49.80	24.40	---	25.40	5800	---	1000	40	31	180	7800	---	2.3	ATI
MW-1	01/12/96	49.80	25.44	---	24.36	370	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	3.7	ATI
MW-1	04/22/96	49.80	18.02	---	31.78	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	3.9	SPL
MW-1	07/02/96	49.80	19.72	---	30.08	---	---	---	---	---	---	---	---	---	---
MW-1	07/03/96	49.80	---	---	---	ND<250	---	ND<2.5	ND<5	ND<5	ND<5	ND<50	---	3.6	SPL
MW-1	11/08/96	49.80	19.98	---	29.82	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.3	SPL
MW-1	01/03/97	49.80	19.49	---	30.31	ND<50	---	ND<0.5	14	ND<1.0	ND<1.0	ND<10	---	4.6	SPL
MW-1	04/28/97	49.80	20.20	---	29.60	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.9	SPL
MW-1	07/01/97	49.80	22.53	---	27.27	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.9	SPL
MW-1	10/02/97	49.80	24.27	---	25.53	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.6	SPL
MW-1	01/09/98	49.80	21.07	---	28.73	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.2	SPL
MW-1	05/06/98	49.80	14.94	---	34.86	60	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.8	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11117
7210 BANCROFT AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-018

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)	Organic Lead (ug/l)	DO (ppm)	LAB
MW-2	01/05/92	51.07	DRY	---	DRY	---	---	---	---	---	---	---	---	---	---
MW-2	01/10/92	51.07	DRY	---	DRY	---	---	---	---	---	---	---	---	---	---
MW-2	06/05/92	51.07	30.05	---	21.02	11000	---	2000	180	490	1900	---	---	---	---
MW-2	07/24/92	51.07	30.72	---	20.35	---	---	---	---	---	---	---	---	---	---
MW-2	07/27/92	51.07	30.52	---	20.55	---	---	---	---	---	---	---	---	---	---
MW-2	09/15/92	51.07	31.56	---	19.51	75000	3200 (c)	2000	6500	2300	13000	---	---	---	ANA
MW-2	12/15/92	51.07	32.40	---	18.67	34000	1600 (c)	6200	8900	2000	7900	---	---	---	ANA
MW-2	03/15/93	51.07	26.14	---	24.93	150000	8400	12000	18000	3200	22000	82000 (e)	---	---	PACE
MW-2 (f)	06/07/93	51.07	26.38	SHEEN	24.69	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	09/23/93	51.07	31.43	1.92	21.08	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	12/27/93	51.07	34.07	1.07	17.80	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	04/05/94	51.07	30.44	3.30	23.11	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	07/22/94	51.07	28.51	0.80	23.16	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	10/13/94	51.07	29.33	0.70	22.27	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	01/25/95	51.07	25.55	4.25	28.71	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	04/19/95	51.07	19.78	0.12	31.38	---	---	---	---	---	---	---	---	---	---
MW-2	07/05/95	51.07	20.88	0.09	30.26	140000	---	14000	30000	3500	26000	---	---	---	ATI
MW-2 (f)	10/05/95	51.07	24.68	0.10	26.47	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	01/12/96	51.07	25.72	0.06	25.40	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	04/22/96	51.07	19.33	0.08	31.80	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	07/02/96	51.07	20.01	0.04	31.09	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	11/08/96	51.07	20.28	0.01	30.80	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	01/03/97	51.07	19.87	0.02	31.22	---	---	---	---	---	---	---	---	---	---
MW-2	04/28/97	51.07	20.59	0.01	30.49	560000	---	1200	1300	290	2310	6100	---	3.9	SPL
MW-2	07/01/97	51.07	22.90	0.01	28.18	24000	---	15000	16000	4900	24400	63000	---	3.7	SPL
QC-1 (d)	07/01/97	---	---	---	---	150000	---	14000	13000	1800	14200	57000	---	---	SPL
MW-2	10/02/97	51.07	24.65	0.02	26.44	---	---	---	---	---	---	---	---	---	---
MW-2	10/03/97	51.07	---	---	---	250000	---	32000	39000	6000	42000	160000	---	4.5	SPL
MW-2	01/09/98	51.07	21.22	0.01	29.86	420000	---	23000	29000	5800	43000	75000	---	4.0	SPL
QC-1 (d)	01/09/98	---	---	---	---	300000	---	20000	25000	5200	37000	84000	---	---	SPL
MW-2	05/06/98	51.07	15.10	0.01	29.86	[illegible]	---	[illegible]	26000	3400	22900	35000	---	3.7	SPL

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7210 BANCROFT AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-018

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MW-3	01/05/92	49.95	33.69	---	16.26	7400	4000	790	23	210	40	---	ND	---	---
MW-3	01/10/92	49.95	33.74	---	16.21	---	---	---	---	---	---	---	---	---	---
MW-3	06/05/92	49.95	29.65	---	20.30	2000	---	130	5.3	93	20	---	---	---	---
MW-3	07/24/92	49.95	30.14	---	19.81	---	---	---	---	---	---	---	---	---	---
MW-3	07/27/92	49.95	30.14	---	19.81	---	---	---	---	---	---	---	---	---	---
MW-3	09/15/92	49.95	31.07	---	18.88	450	ND<50	55	3.1	34	7.1	---	---	---	ANA
MW-3	12/15/92	49.95	31.93	---	18.02	12000	710 (c)	940	ND<50	310	120	---	---	---	ANA
MW-3	03/15/93	49.95	25.71	---	24.24	ND<50	60	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-3	06/07/93	49.95	25.80	---	24.15	150	ND<50	3.6	ND<0.5	0.9	1.3	---	---	---	PACE
MW-3	09/23/93	49.95	29.18	---	20.77	---	---	---	---	---	---	---	---	---	---
MW-3	09/24/93	49.95	---	---	---	160	ND<50	8.4	ND<0.5	3.7	1.3	---	---	---	PACE
MW-3	12/27/93	49.95	29.25	---	20.70	9400	---	1100	48	530	120	2700 (e)	---	---	PACE
MW-3	04/05/94	49.95	26.84	---	23.11	7000	---	860	19	330	52	---	---	2.0	PACE
MW-3	07/22/94	49.95	26.90	---	23.11	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	2.1	PACE
MW-3	10/13/94	49.95	27.83	---	22.12	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	2.6	PACE
MW-3	01/25/95	49.95	21.65	---	28.30	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	ATI
MW-3	04/19/95	49.95	19.33	---	30.62	2400	---	170	8.0	130	27	---	---	5.0	ATI
MW-3	07/05/95	49.95	20.27	---	29.68	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	4.4	ATI
MW-3	10/05/95	49.95	23.73	---	26.22	2300	---	210	3.1	10	5.1	2400	---	4.2	ATI
MW-3	01/12/96	49.95	24.84	---	25.11	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	4.1	ATI
MW-3	04/22/96	49.95	18.60	---	31.35	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	4.4	SPL
MW-3	07/02/96	49.95	18.88	---	31.07	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	4.2	SPL
MW-3	11/08/96	49.95	19.14	---	30.81	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.4	SPL
MW-3	01/03/97	49.95	18.72	---	31.23	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.6	SPL
MW-3	04/28/97	49.95	19.38	---	30.57	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.2	SPL
MW-3	07/01/97	49.95	21.65	---	28.30	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.8	SPL
MW-3	10/02/97	49.95	23.45	---	26.50	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.5	SPL
MW-3	01/09/98	49.95	20.10	---	29.85	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.1	SPL
MW-3	05/06/98	49.95	15.57	---	34.38	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.8	SPL

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BP OIL COMPANY SERVICE STATION NO. 11117
7210 BANCROFT AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-018

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)	Organic Lead (ug/l)	DO (ppm)	LAB
MW-4	07/24/92	50.76	30.02	---	20.74	42000	---	3200	3600	1400	4100	---	---	---	---
MW-4	07/27/92	50.76	30.02	---	20.74	---	---	---	---	---	---	---	---	---	---
MW-4	09/15/92	50.76	31.14	---	19.62	55000	1700 (c)	7600	13000	2800	9500	---	---	---	ANA
MW-4	12/15/92	50.76	31.98	---	18.78	36000	2200 (c)	3700	4700	1200	4000	---	---	---	ANA
MW-4	03/15/93	50.76	25.34	---	25.42	69000	1200	7600	15000	2500	11000	---	---	---	PACE
MW-4	06/07/93	50.76	25.67	---	25.09	73000	2500	10000	19000	3400	14000	---	---	---	PACE
MW-4	09/23/93	50.76	29.37	---	21.39	---	---	---	---	---	---	---	---	---	---
MW-4	09/24/93	50.76	---	---	---	68000	5700	11000	2100	8600	990	---	---	---	PACE
QC-1 (d)	09/24/93	---	---	---	---	59000	---	5300	10000	2200	8400	---	---	---	PACE
MW-4	12/27/93	50.76	29.40	---	21.36	32000	---	2500	4400	1300	4400	---	---	---	PACE
MW-4	04/05/94	50.76	27.09	---	23.67	64000	---	6500	14000	1900	9600	---	---	1.4	PACE
MW-4	07/22/94	50.76	27.33	---	23.43	85000	---	10000	20000	3200	13000	---	---	0.8	PACE
QC-1 (d)	07/22/94	---	---	---	---	85000	---	11000	21000	3300	14000	---	---	---	PACE
MW-4	10/13/94	50.76	28.25	---	22.51	51000	---	7100	13000	2100	8900	790 (e)	---	2.9	PACE
QC-1 (d)	10/13/94	---	---	---	---	51000	---	7400	13000	2100	9100	---	---	---	PACE
MW-4	01/25/95	50.76	21.85	---	28.91	26000	---	3600	9600	1200	6400	---	---	---	ATI
QC-1 (d)	01/25/95	---	---	---	---	28000	---	4200	12000	1500	7800	---	---	---	ATI
MW-4	04/19/95	50.76	19.44	---	31.32	89000	---	12000	24000	3500	18000	---	---	5.1	ATI
QC-1 (d)	04/19/95	---	---	---	---	100000	---	12000	26000	3800	21000	---	---	---	ATI
MW-4	07/05/95	50.76	20.52	---	30.24	130000	---	13000	29000	3300	25000	---	---	4.3	ATI
MW-4	10/05/95	50.76	24.23	---	26.53	110000	---	10000	23000	3600	17000	34000	---	2.1	ATI
MW-4	01/12/96	50.76	25.34	---	25.42	46000	---	3500	8300	1100	8000	3000	---	3.3	ATI
QC-1 (d)	01/12/96	---	---	---	---	40000	---	3500	9000	1200	8700	4300	---	---	ATI
MW-4	04/22/96	50.76	19.13	---	31.63	40000	---	5100	9600	980	11800	29000	---	3.2	SPL
QC-1 (d)	04/22/96	---	---	---	---	61000	---	8300	16000	1600	15200	36000	---	---	SPL
MW-4	07/02/96	50.76	20.67	---	30.09	74000	---	9800	21000	2100	16600	41000	---	3.4	SPL
QC-1 (d)	07/02/96	---	---	---	---	78000	---	9800	21000	1900	15300	42000	---	---	SPL
MW-4	11/08/96	50.76	20.95	---	29.81	100000	---	7900	16000	2500	13700	37000	---	3.7	SPL
QC-1 (d)	11/08/96	---	---	---	---	110000	---	9100	20000	3000	15400	39000	---	---	SPL
MW-4	01/03/97	50.76	20.54	---	30.22	99000	---	17000	30000	4300	22700	79000	---	4.2	SPL
QC-1 (d)	01/03/97	---	---	---	---	66000	---	12000	19000	2900	15000	69000	---	---	SPL
MW-4	04/28/97	50.76	21.28	---	29.48	130000	---	12000	28000	3800	21000	37000	---	3.9	SPL
QC-1 (d)	04/28/97	---	---	---	---	110000	---	11000	26000	3200	18200	34000	---	---	SPL
MW-4	07/01/97	50.76	23.61	---	27.15	110000	---	16000	25000	4900	24400	37000	---	3.6	SPL
MW-4	10/02/97	50.76	25.39	---	25.37	---	---	---	---	---	---	---	---	---	---
MW-4	10/03/97	50.76	---	---	---	66000	---	8200	8600	2700	13400	80000	---	4.4	SPL
QC-1 (d)	10/03/97	---	---	---	---	71000	---	8600	8700	2900	13500	84000	---	---	SPL
MW-4	01/09/98	50.76	21.25	---	29.51	100000	---	9700	3200	1500	4700	92000	---	3.8	SPL
MW-4	05/06/98	50.76	15.96	---	34.80	[redacted]	---	[redacted]	31000	11000	56000	[redacted]	---	3.9	SPL
QC-1 (d)	05/06/98	---	---	---	---	[redacted]	---	[redacted]	39000	14000	70000	ND<25000	---	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11117
7210 BANCROFT AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-018

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)	Organic Lead (ug/l)	DO (ppm)	LAB
MW-6	07/24/92	50.32	30.63	—	19.69	ND	---	1.6	ND	ND	ND	---	---	---	---
MW-6	07/27/92	50.32	30.63	---	19.69	---	---	---	---	---	---	---	---	---	---
MW-6	09/15/92	50.32	31.52	---	18.80	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	ANA
MW-6	12/15/92	50.32	32.42	---	17.90	58	ND<50	1.3	ND<0.5	ND<0.5	ND<0.5	---	---	---	ANA
MW-6	03/15/93	50.32	26.29	---	24.03	ND<50	ND<50	ND<0.5	0.6	ND<0.5	0.7	---	---	---	PACE
MW-6	06/07/93	50.32	26.33	---	23.99	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	1.5	---	---	---	PACE
MW-6	09/23/93	50.32	29.64	---	20.68	---	---	---	---	---	---	---	---	---	---
MW-6	09/24/93	50.32	—	---	---	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	---	---	PACE
MW-6	12/27/93	50.32	29.75	---	20.57	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	55 (e)	---	---	PACE
MW-6	04/05/94	50.32	27.26	---	23.06	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	300 (e)	---	1.7	PACE
MW-6	07/22/94	50.32	27.34	---	22.98	350	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	800 (e)	---	4.5	PACE
MW-6 (g)	10/13/94	50.32	---	—	—	---	---	---	—	---	—	---	---	---	—
MW-6	01/25/95	50.32	22.16	—	28.16	240	---	6	ND<0.5	ND<0.5	ND<1	---	---	---	ATI
MW-6 (g)	04/19/95	50.32	---	—	—	---	---	---	---	---	---	---	---	—	—
MW-6	07/05/95	50.32	20.80	---	29.52	180	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	4.9	ATI
MW-6	10/05/95	50.32	24.20	---	26.12	860	---	ND<5.0	ND<5.0	ND<5.0	ND<10	3600	---	2.8	ATI
MW-6	01/12/96	50.32	25.30	---	25.02	860	---	ND<5.0	ND<5.0	ND<5.0	ND<10	2800	---	4.2	ATI
MW-6	04/22/96	50.32	19.13	---	31.19	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	470	---	4.3	SPL
MW-6	07/02/96	50.32	20.66	—	29.66	100	---	ND<0.5	ND<1	ND<1	ND<1	1100	—	4.2	SPL
MW-6	11/08/96	50.32	20.98	---	29.34	1100	---	ND<5	ND<10	ND<10	ND<10	1500	—	4.3	SPL
MW-6	01/03/97	50.32	20.53	---	29.79	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	450	—	4.5	SPL
MW-6	04/28/97	50.32	21.25	---	29.07	1400	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	3500	—	4.4	SPL
MW-6	07/01/97	50.32	23.40	---	26.92	6100	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	9100	—	3.9	SPL
MW-6	10/02/97	50.32	25.16	—	25.16	---	---	---	---	---	---	---	---	---	---
MW-6	10/03/97	50.32	—	---	---	330	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	2600	---	4.4	SPL
MW-6	01/09/98	50.32	21.13	---	29.19	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.3	SPL
MW-6	05/06/98	50.32	16.11	—	34.21	410	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	500	---	3.6	SPL
MW-7	01/25/95	51.40	21.67	---	29.73	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	—	---	7.0	ATI
MW-7	04/19/95	51.40	25.27	—	26.13	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	—	---	5.0	ATI
MW-7	07/05/95	51.40	24.63	—	26.77	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	---	4.2	ATI
MW-7	10/05/95	51.40	28.21	---	23.19	83	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	77	---	4.5	ATI
MW-7	01/12/96	51.40	29.29	---	22.11	63	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	120	---	4.8	ATI
MW-7	04/22/96	51.40	23.11	---	28.29	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	13	---	4.8	SPL
MW-7	07/02/96	51.40	23.56	—	27.84	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	4.8	SPL
MW-7	11/08/96	51.40	20.06	---	31.34	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	5.1	SPL
MW-7	01/03/97	51.40	23.42	---	27.98	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.7	SPL
MW-7	04/28/97	51.40	24.12	---	27.28	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.9	SPL
MW-7	07/01/97	51.40	26.40	---	25.00	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.2	SPL
MW-7	10/02/97	51.40	28.14	---	23.26	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.7	SPL
MW-7	01/09/98	51.40	24.02	---	27.38	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.1	SPL
MW-7	05/06/98	51.40	21.00	---	30.40	[illegible]	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	1800	---	3.5	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11117
7210 BANCROFT AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-018

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)	Organic Lead (ug/l)	DO (ppm)	LAB
MW-8	01/25/95	50.88	31.59	---	19.29	54	---	ND<0.5	ND<0.5	ND<0.5	ND<1	—	---	7.1	ATI
MW-8	04/19/95	50.88	19.18	---	31.70	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	—	---	5.1	ATI
MW-8	07/05/95	50.88	19.03	—	31.85	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	4.5	ATI
MW-8	10/05/95	50.88	24.40	—	26.48	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	4.1	ATI
MW-8	01/12/96	50.88	25.51	---	25.37	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	4.6	ATI
MW-8	04/22/96	50.88	18.00	---	32.88	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	4.8	SPL
MW-8	07/02/96	50.88	19.83	---	31.05	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	4.5	SPL
MW-8	11/08/96	50.88	20.09	---	30.79	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.7	SPL
MW-8	01/03/97	50.88	19.72	—	31.16	ND<50	—	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	4.4	SPL
MW-8	04/28/97	50.88	20.44	---	30.44	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.1	SPL
MW-8	07/01/97	50.88	22.72	---	28.16	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.8	SPL
MW-8	10/02/97	50.88	24.51	—	26.37	ND<50	—	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.2	SPL
MW-8	01/09/98	50.88	21.17	—	29.71	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	3.5	SPL
MW-8	05/06/98	50.88	18.34	---	32.54	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.6	SPL
MW-9	01/25/95	51.05	22.32	---	28.73	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	—	---	7.4	ATI
MW-9	04/19/95	51.05	19.86	—	31.19	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	5.2	ATI
MW-9	07/05/95	51.05	20.78	---	30.27	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	4.4	ATI
MW-9	10/05/95	51.05	24.33	—	26.72	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	2.3	ATI
QC-1 (d)	10/05/95	—	---	---	—	52	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	160	---	---	ATI
MW-9	01/12/96	51.05	25.44	---	25.61	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	3.2	ATI
MW-9	04/22/96	51.05	18.01	—	33.04	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	11	---	3.5	SPL
MW-9	07/02/96	51.05	19.70	—	31.35	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	3.3	SPL
MW-9	11/08/96	51.05	19.96	---	31.09	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.7	SPL
MW-9	01/03/97	51.05	19.52	—	31.53	ND<250	---	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	—	4.4	SPL
MW-9	04/28/97	51.05	20.22	---	30.83	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.0	SPL
MW-9	07/01/97	51.05	22.59	---	28.46	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.9	SPL
MW-9	10/02/97	51.05	24.33	---	26.72	---	---	---	---	---	---	---	---	---	---
MW-9	10/03/97	51.05	—	---	—	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.4	SPL
MW-9	01/09/98	51.05	21.11	---	29.94	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	3.9	SPL
MW-9	05/06/98	51.05	18.26	—	32.79	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.0	SPL
MW-10	01/09/98	--- (h)	20.97	—	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	4.3	SPL
MW-10	05/06/98	--- (h)	18.07	---	—	[illegible]	—	ND<0.5	ND<1.0	ND<1.0	ND<1.0	980	---	3.9	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11117
7210 BANCROFT AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-018

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)	Organic Lead (ug/l)	DO (ppm)	LAB
QC-2 (i)	09/15/92	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	ANA
QC-2 (i)	12/15/92	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	ANA
QC-2 (i)	03/15/93	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (i)	06/07/93	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (i)	09/24/93	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (i)	12/27/93	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (i)	04/05/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (i)	07/22/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (i)	10/13/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (i)	01/25/95	---	---	---	---	ND<50	---	ND<0.5	2	0.6	1	---	---	---	ATI
QC-2 (i)	04/19/95	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	ATI
QC-2 (i)	07/05/95	---	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
QC-2 (i)	10/05/95	---	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	ATI
QC-2 (i)	01/12/96	---	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	ATI
QC-2 (i)	04/22/96	---	---	---	---	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	SPL
QC-2 (i)	07/02/96	---	---	---	---	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
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
ND	Not detected above reported detection limit
---	Not analyzed/applicable/measurable
ANA	Anametrix, Inc.
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories

NOTES:

(a) Casing elevations surveyed to the nearest 0.01 foot relative to mean sea level.

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

(c) Concentrations reported as diesel from MW-1, MW-2 and MW-4 are primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene.

(d) Blind duplicate.

(e) A copy of the documentation for this data is included in Appendix C of Alisto report 10-018-05-004.

(f) Well not sampled due to presence of free product.

(g) Well inaccessible.

(h) Top of casing not surveyed.

(i) Travel blank.

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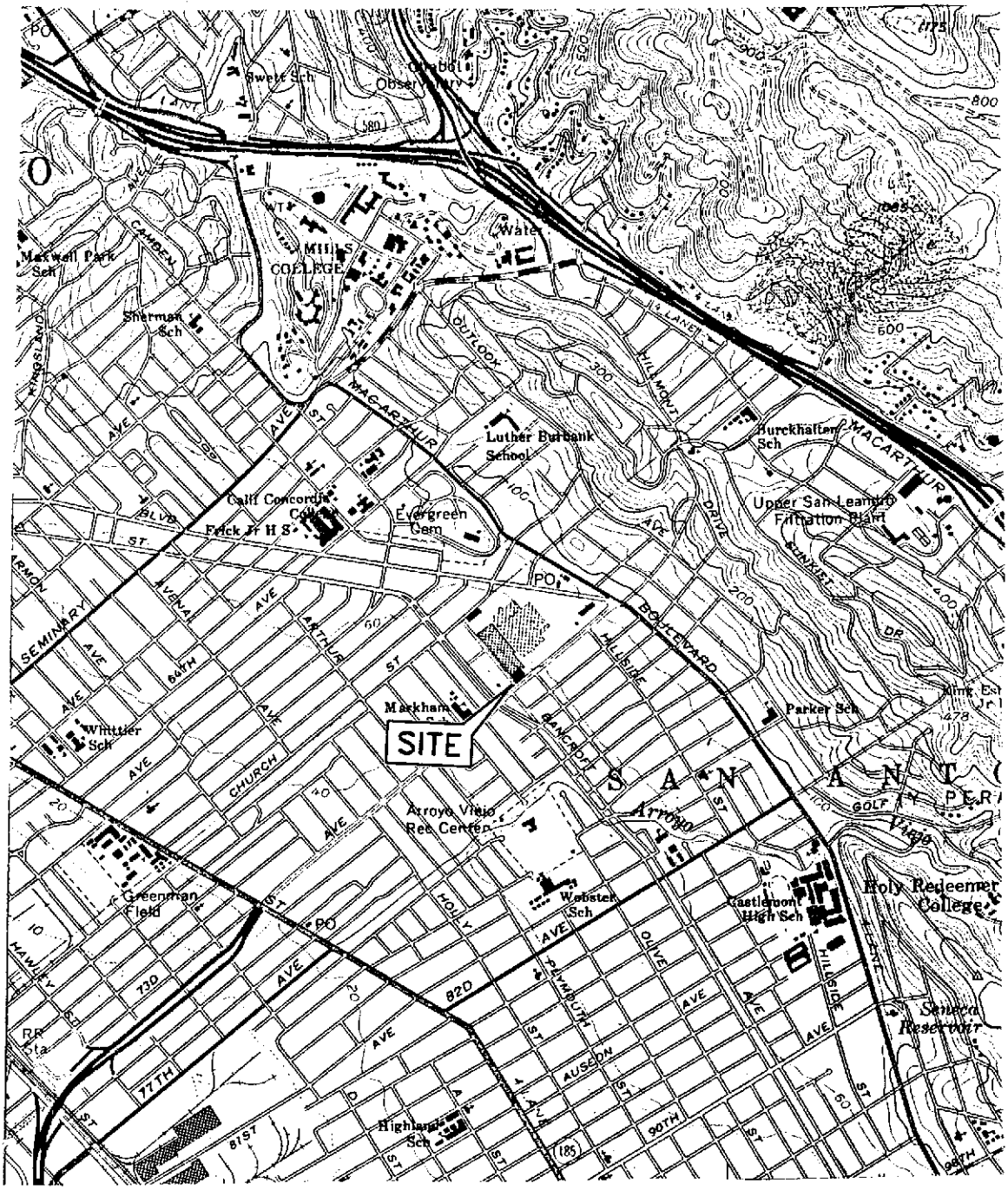
TABLE 2 - PRODUCT REMOVAL STATUS
BP OIL COMPANY SERVICE STATION NO. 11117
7210 BANCROFT AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-018

WELL ID	DATE	PRODUCT THICKNESS	PRODUCT REMOVED (Gallons)	PRODUCT REMOVE CUMULATIVE (Gallons)
MW-2	02/01/94	1.78	<0.01	<0.01
MW-2	02/11/94	1.55	0.10	0.10
MW-2	02/18/94	1.62	0.90	1.00
MW-2	02/25/94	3.21	0.10	1.10
MW-2	03/04/94	3.92	0.10	1.20
MW-2	03/30/94	4.06	2.60	3.80
MW-2	04/13/95	3.10	0.10	3.90
MW-2	04/21/94	2.88	0.10	4.00
MW-2	04/24/95	6.00	0.10	4.10
MW-2	05/06/94	8.00	0.60	4.70
MW-2	05/13/94	7.00	0.10	4.80
MW-2	05/20/94	7.38	2.10	6.90
MW-2	05/26/94	2.00	2.00	8.90
MW-2	06/02/94	1.09	1.00	9.90
MW-2	06/09/94	1.70	1.00	10.90
MW-2	06/16/94	1.13	1.00	11.90
MW-2	06/23/94	1.24	0.75	12.65
MW-2	06/29/94	0.72	0.60	13.25
MW-2	07/07/94	0.56	0.50	13.75
MW-2	07/12/94	1.00	1.10	14.85
MW-2	07/20/94	0.72	0.75	15.60
MW-2	07/29/94	1.42	1.10	16.70
MW-2	08/05/94	1.04	0.76	17.46
MW-2	08/12/94	1.22	0.76	18.22
MW-2	08/18/94	1.33	0.43	18.65
MW-2	09/16/94	0.42	0.76	19.41
MW-2	09/23/94	0.19	0.17	19.58
MW-2	10/26/94	1.13	0.76	20.34
MW-2	11/03/94	0.77	1.10	21.44
MW-2	11/12/94	0.64	0.60	22.04
MW-2	11/16/94	0.67	0.67	22.71
MW-2	11/23/94	0.56	0.50	23.21
MW-2	12/01/94	0.49	0.60	23.81
MW-2	12/08/94	0.61	0.76	24.57
MW-2	04/19/05	0.12	<0.01	24.57
MW-2	05/23/95	SHEEN	<0.01	24.57
MW-2	06/15/95	0.10	<0.01	24.57
MW-2	10/05/95	0.10	0.25	24.82
MW-2	01/12/96	0.06	0.01	24.83
MW-2	02/08/96	0.06	0.01	24.84
MW-2	04/22/96	0.08	0.01	24.85
MW-2	07/02/96	0.04	<0.01	24.85
MW-2	11/08/96	0.01	<0.01	24.85
MW-2	01/03/97	0.02	<0.01	24.85
MW-2	04/28/97	0.01	<0.01	24.85
MW-2	07/01/97	0.26	0.05	24.90
MW-2	10/02/97	0.02	<0.01	24.90
MW-2	01/09/98	0.01	<0.01	24.90
MW-2	05/06/98	0.01	<0.01	24.90

F:\0\10-018\PRODUCT.WQ2



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

N

0 1000' 2000'

FIGURE 1

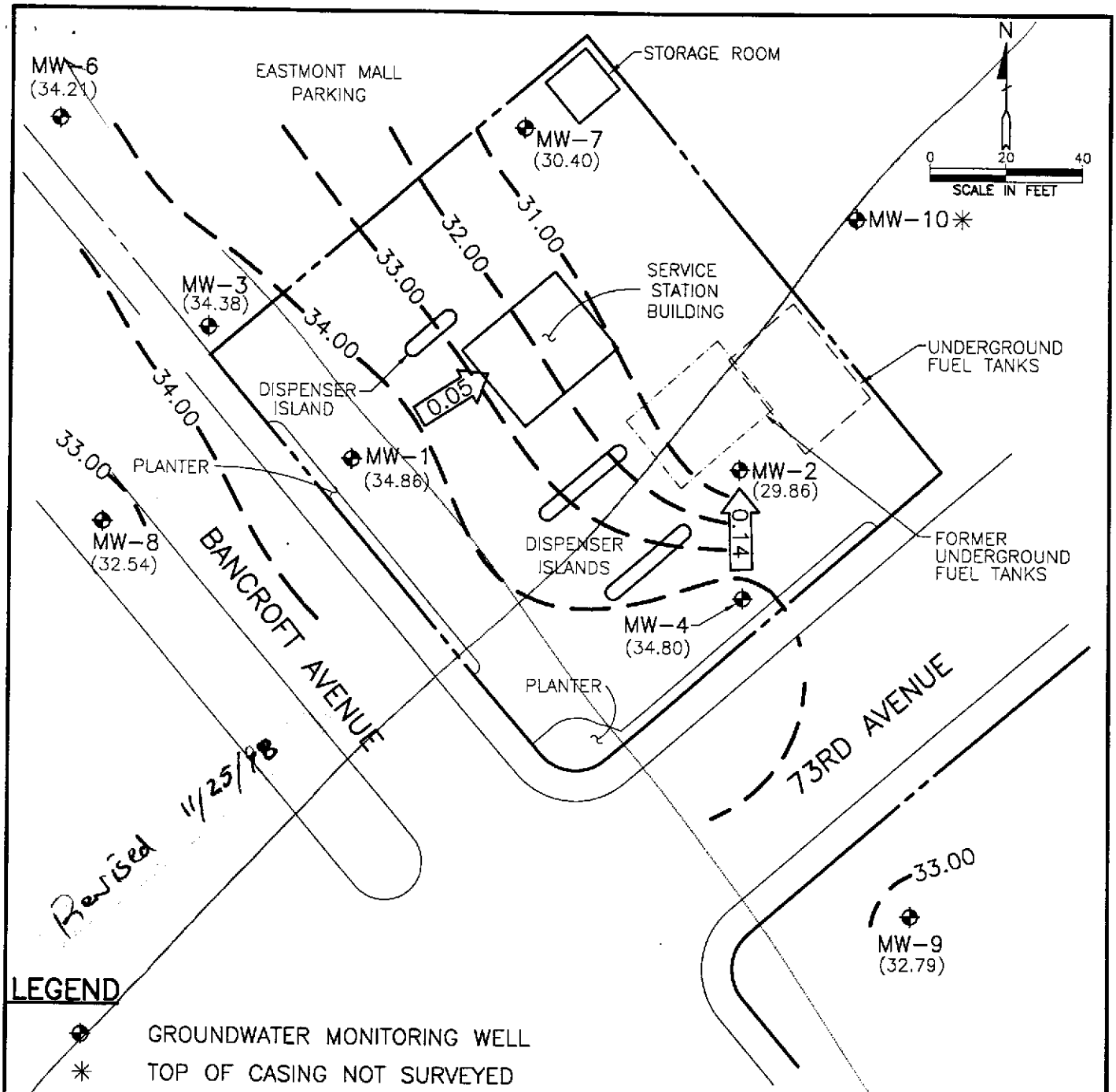
SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11117
7210 BANCROFT AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 10-018

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10018B---.DWG 11-12-93 RKW 1=1



LEGEND

- GROUNDWATER MONITORING WELL
- * TOP OF CASING NOT SURVEYED
- (32.79) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 33.00 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL–1.00 FOOT)
- 0.05 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

NOTE:
Potentiometric groundwater elevation contours were generated with Quicksurf using the Kriging method with a spherical variogram on a triangulated grid surface.

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

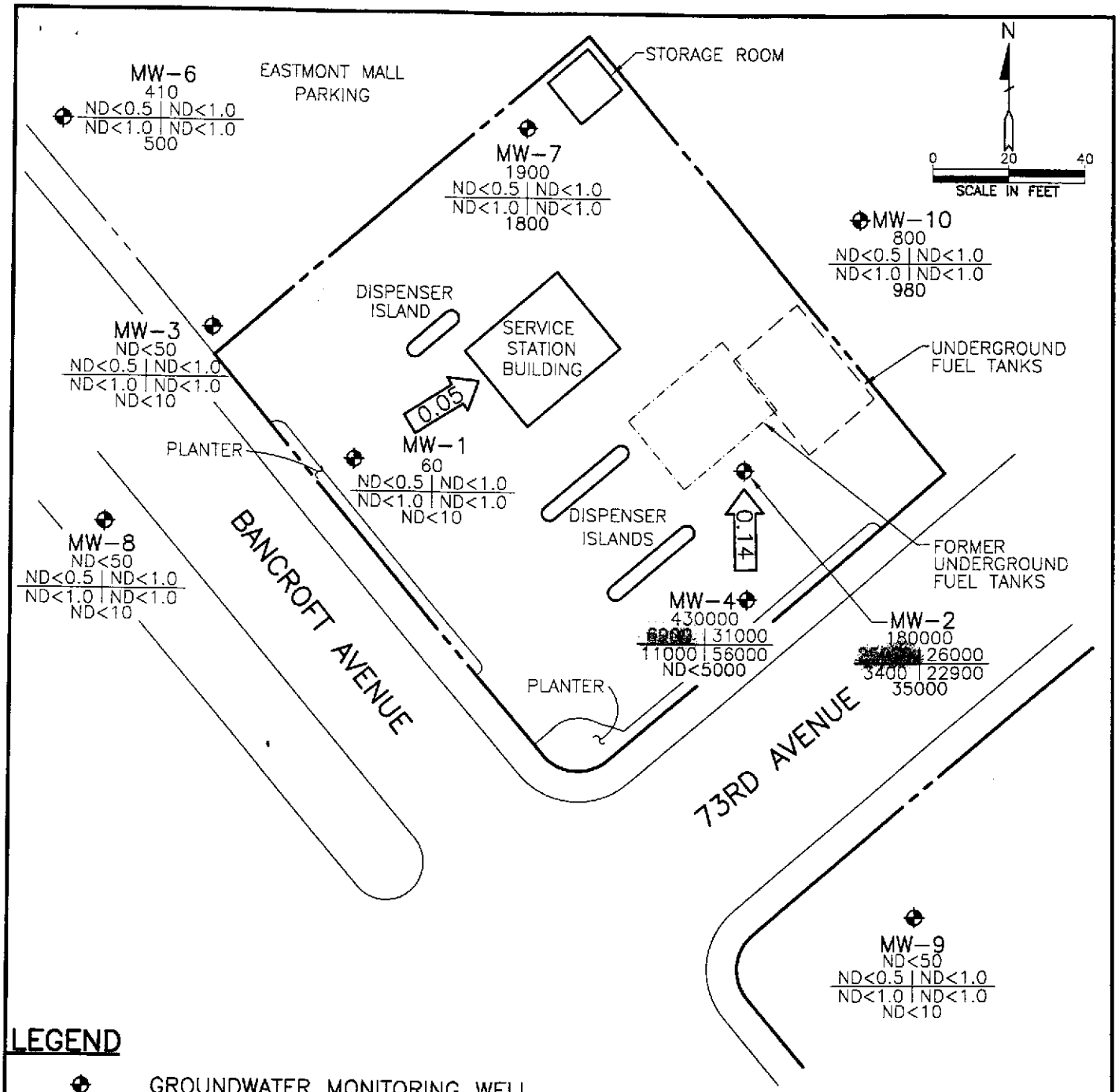
MAY 6, 1998

BP OIL SERVICE STATION NO. 11117
7210 BANCROFT AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 10–018

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10018D-2.DWG 7-10-98 1=40



LEGEND

⊕	GROUNDWATER MONITORING WELL
TPH-G / B | T / E | X / MTBE	CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
[illegible]	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
MTBE	METHYL TERT BUTYL ETHER
ND	NOT DETECTED ABOVE REPORTED DETECTION LIMIT
← 0.05	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

MAY 6, 1998

BP OIL SERVICE STATION NO. 11117
7210 BANCROFT AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 10-018

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10018E-2.DWG 7-10-98 TAH 1=40

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. 10-018-06-003 Date: 5/6/98
Address 7210 Bancroft Ave. Day: M T W TH F
Contract No. H177100 City: Oakland
Station No. BP 11117 Sampler: LCB

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME MONITORED	COMMENTS:
MW-1	S-2	2"	36.12'	14.94	Ø	1101	
MW-2	S-8	2"	39.56'	15.10	.01	1124	
MW-3	S-1	2"	42.40'	15.57	Ø	1047	
MW-4	S-9	2"	44.72'	15.96	iridescen	1128	QC-1 (S-10) From this well
MW-6	S-3	2"	40.00'	16.11	Ø	1103	
MW-7	S-4	2"	44.72'	21.00		1110	
MW-8	S-5	2"	39.50'	18.34		1113	
MW-9	S-6	2"	38.86'	18.26		1117	
MW-10	S-7	2"	37.50'	18.07	↓	1121	

FIELD INSTRUMENT CALIBRATION DATA

pH METER ICm 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED (Y) N TIME 0849
D.O. METER _____ ZERO d.O. SOLUTION _____ BAROMETRIC PRESSURE 760 TEMP 60 WEATHER Cloudy/Rain
CONDUCTIVITY METER _____ 10,000 _____ TURBIDITY METER _____ 5.0 NTU _____ OTHER X
LEAK DETECTOR : _____ ALARM MODE X NON ALARM MODE

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp. °F	pH	E.C.	D.O.
MW-3	15.57	2"	Replaced	Ø	Y (N)	4	1203	57.8	7.17	887µS	3.4
Total Depth - Water Level=	x Well Vol. Factor=		x#vol. to Purge	PurgeVol.		8		60.3	7.06	926µS	
42.40-15.57 = 26.83 X .16 = 4.29 X 3 =				12.87		13	1213	60.9	6.91	929µS	3.8

Purge Method: (X) Surface Pump O Disp. Tube O Winch O Disp. Bailer(s) ___ O Sys Port
Comments:

O EPA 601 ____
(X) TPH-G/BTEX ____
O TPH Diesel ____
O TOG 5520 ____

TIME/SAMPLE ID
1217

ALISTO

Field Report / Sampling Data Sheet

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

Project No. 10-018-06-003 Date: 5/6/97
Address 7210 Bancroft Ave. Day: M T W TH F
Contract No. H177100 City: Oakland
Station No. BP 11117 Sampler: LCS

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-1	14.94	2"	Replaced	Ø	Y (N)	4	1236	60.7	7.12	727µs	3.4
						8		61.4	6.97	767µs	
						11	1250	61.9	6.87	774µs	3.8

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
36.12-14.94=21.18X.16=3.39X3= 10.17
Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

O EPA 601___ (X) TPH-G/BTEX___ O TPH Diesel___ O TOG 5520___
TIME/SAMPLE ID: 1253

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-6	16.11	2"	OK	Ø	Y (N)	4	1305	60.1	7.21	951µs	3.1
						8		61.9	7.06	976µs	
						12	1316	62.8	6.96	993µs	3.6

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
40.00-16.11=23.89X.16=3.82X3= 11.46
Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

O EPA 601___ (X) TPH-G/BTEX___ O TPH Diesel___ O TOG 5520___
TIME/SAMPLE ID: 1319

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-7	21.00	2"	Replaced	Ø	Y (N)	4	1331	59.1	6.93	967µs	3.0
						8		61.0	6.84	1.02ms	
						12	1350	62.3	6.78	1.05ms	3.5

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
44.72-21.00=23.72X.16=3.80X3= 11.40
Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

O EPA 601___ (X) TPH-G/BTEX___ O TPH Diesel___ O TOG 5520___
TIME/SAMPLE ID: 1352

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-8	18.34	2"	OK	Ø	Y (N)	4	1410	58.7	7.30	477µs	2.7
						8		60.6	7.11	533µs	
						11	1423	61.8	6.94	546µs	3.6

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
39.50-18.34=21.16X.16=3.39X3=10.17
Purge Method: (X)Surface Pump ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

O EPA 601___ (X) TPH-G/BTEX___ O TPH Diesel___ O TOG 5520___
TIME/SAMPLE ID: 1429

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. 10-018-06-003 Date: 5/6/98
Address 7210 Bancroft Ave. Day: M T W TH F
Contract No. H177100 City: Oakland
Station No. BP 11117 Sampler: LS

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-9	18.26	2"	OK	Ø	Y (N)	3	1446	60.9	7.60	918µs	3.1
						7		62.1	7.30	966µs	
						10	1501	62.6	7.21	977µs	4.0

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
38.86 - 18.26 = 20.60 X .16 = 3.30 X 3 = 9.90
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1504

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-10	18.07	2"	Replaced	Ø	Y (N)	3	1517	58.0	6.54	1.09ms	3.6
						7		60.1	6.67	1.20ms	
						10	1530	61.0	6.71	1.20ms	3.9

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
37.50 - 18.07 = 19.43 X .16 = 3.11 X 3 = 9.33
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1535

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-2	15.10	2"	Replaced	15.09	(Y) N	4	1546	60.3	7.33	836µs	3.4
						8		61.2	7.17	891µs	
						12	1558	61.9	7.08	907µs	3.7

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
39.56 - 15.10 = 24.46 X .16 = 3.91 X 3 = 11.73
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1604

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-4	15.96	2"	Replaced	Ø	(Y) N	4	1617	59.2	7.27	1.11ms	3.3
						8		60.3	7.10	1.26ms	
						14	1629	61.7	7.09	1.33ms	3.9

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.
44.72 - 15.96 = ~~28.76~~ 28.76 X .16 = 4.60 X 3 = 13.80
Purge Method: (Surface Pump) ODisp.Tube OWinch ODisp. Bailer(s)___ OSys Port
Comments:

EPA 601___ TPH-G/BTEX___ TPH Diesel___ TOG 5520___
TIME/SAMPLE ID: 1634

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

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

May 19, 1998

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

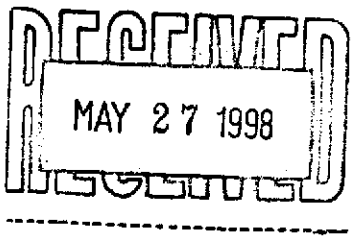
The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on May 8, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9805381 and analyzed for all parameters as listed on the chain of custody.

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
Project Manager

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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-05-381

Approved for Release by:

Joel Grice, Project Manager Date: 5/20/98

Greg Grandits
Laboratory Director

Cynthia Schreiner
Quality Assurance Officer

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

Certificate of Analysis No. H9-9805381-01

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

P.O.# H177100, COC#098771
DATE: 05/19/98

PROJECT: #11117, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-1

PROJECT NO: 10-018-06/003
MATRIX: WATER
DATE SAMPLED: 05/06/98
DATE RECEIVED: 05/08/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	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	103		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: VHZ			
Date: 05/15/98			
Gasoline Range Organics	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	110		
California LUFT Manual for Gasoline			
Analyzed by: VHZ			
Date: 05/15/98 09:45:00			

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. H9-9805381-02

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

P.O.# H177100, COC#098771
DATE: 05/19/98

PROJECT: #11117, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-018-06/003
MATRIX: WATER
DATE SAMPLED: 05/06/98
DATE RECEIVED: 05/08/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	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	100		
4-Bromofluorobenzene	110		
Method 8020A***			
Analyzed by: HS			
Date: 05/16/98			
Gasoline Range Organics	0.060	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	110		
California LUFT Manual for Gasoline			
Analyzed by: HS			
Date: 05/16/98 07:33:00			

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. H9-9805381-03

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

P.O.# H177100, COC#098771
DATE: 05/19/98

PROJECT: #11117, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-3

PROJECT NO: 10-018-06/003
MATRIX: WATER
DATE SAMPLED: 05/06/98
DATE RECEIVED: 05/08/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	500	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	103		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: HS			
Date: 05/16/98			
Gasoline Range Organics	0.41	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	103		
California LUFT Manual for Gasoline			
Analyzed by: HS			
Date: 05/16/98 07:59:00			

(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. H9-9805381-04

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

P.O.# H177100, COC#098771
DATE: 05/19/98

PROJECT: #11117, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-4

PROJECT NO: 10-018-06/003
MATRIX: WATER
DATE SAMPLED: 05/06/98
DATE RECEIVED: 05/08/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	1800	100 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	83		
4-Bromofluorobenzene	110		
Method 8020A***			
Analyzed by: LJ/			
Date: 05/19/98			
Gasoline Range Organics	1.9	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	103		
California LUFT Manual for Gasoline			
Analyzed by: HS			
Date: 05/16/98 08:24:00			

(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. H9-9805381-05

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

P.O.# H177100, COC#098771
DATE: 05/19/98

PROJECT: #11117, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-5

PROJECT NO: 10-018-06/003
MATRIX: WATER
DATE SAMPLED: 05/06/98
DATE RECEIVED: 05/08/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	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	100		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: HS			
Date: 05/16/98			
Gasoline Range Organics	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	103		
California LUFT Manual for Gasoline			
Analyzed by: HS			
Date: 05/16/98 06:45:00			

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. H9-9805381-06

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

P.O.# H177100, COC#098771
DATE: 05/19/98

PROJECT: #11117, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-6

PROJECT NO: 10-018-06/003
MATRIX: WATER
DATE SAMPLED: 05/06/98
DATE RECEIVED: 05/08/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	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	100		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: HS			
Date: 05/16/98			
Gasoline Range Organics	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	100		
California LUFT Manual for Gasoline			
Analyzed by: HS			
Date: 05/16/98 07:11:00			

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. H9-9805381-07

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

P.O.# H177100, COC#098771
DATE: 05/19/98

PROJECT: #11117, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-7

PROJECT NO: 10-018-06/003
MATRIX: WATER
DATE SAMPLED: 05/06/98
DATE RECEIVED: 05/08/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	980	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	93		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: LJ/			
Date: 05/19/98			
Gasoline Range Organics	0.80	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	103		
California LUFT Manual for Gasoline			
Analyzed by: HS			
Date: 05/16/98 07:37:00			

(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. H9-9805381-08

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

P.O.# H177100, COC#098771
DATE: 05/19/98

PROJECT: #11117, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-8

PROJECT NO: 10-018-06/003
MATRIX: WATER
DATE SAMPLED: 05/06/98
DATE RECEIVED: 05/08/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	35000	5000 P	ug/L
Benzene	25000	250 P	ug/L
Toluene	26000	500 P	ug/L
Ethylbenzene	3400	500 P	ug/L
Total Xylene	22900	500 P	ug/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	83		
4-Bromofluorobenzene	113		
Method 8020A***			
Analyzed by: LJ/			
Date: 05/19/98			
Gasoline Range Organics	180	25 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	100		
California LUFT Manual for Gasoline			
Analyzed by: HS			
Date: 05/16/98 08:03:00			

(P) - Practical Quantitation Limit

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

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

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

Certificate of Analysis No. H9-9805381-09

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

P.O.# H177100, COC#098771
DATE: 05/20/98

PROJECT: #11117, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-9

PROJECT NO: 10-018-06/003
MATRIX: WATER
DATE SAMPLED: 05/06/98
DATE RECEIVED: 05/08/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	5000 P	ug/L
Benzene	6900	250 P	ug/L
Toluene	31000	500 P	ug/L
Ethylbenzene	11000	500 P	ug/L
Total Xylene	56000	500 P	ug/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	93		
Method 8020A***			
Analyzed by: LJ/			
Date: 05/19/98			
Gasoline Range Organics	430	25 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	107		
California LUFT Manual for Gasoline			
Analyzed by: LJ/			
Date: 05/19/98 05:35:00			

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. H9-9805381-10

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

P.O.# H177100, COC#098771
DATE: 05/20/98

PROJECT: #11117, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-10

PROJECT NO: 10-018-06/003
MATRIX: WATER
DATE SAMPLED: 05/06/98
DATE RECEIVED: 05/08/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	5000 P	ug/L
Benzene	8000	250 P	ug/L
Toluene	39000	500 P	ug/L
Ethylbenzene	14000	500 P	ug/L
Total Xylene	70000	500 P	ug/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: LJ/			
Date: 05/19/98			
Gasoline Range Organics	440	25 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	100		
California LUFT Manual for Gasoline			
Analyzed by: LJ/			
Date: 05/19/98 06:12:00			

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

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

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

Matrix: Aqueous
Batch Id: VARE980516065600
Units: ug/L

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	53	106	72 - 128
Benzene	ND	50	58	116	61 - 119
Toluene	ND	50	58	116	65 - 125
EthylBenzene	ND	50	57	114	70 - 118
O Xylene	ND	50	58	116	72 - 117
M & P Xylene	ND	100	110	110	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	16	80.0	18	90.0	11.8	20	39 - 150
BENZENE	ND	20	23	115	18	90.0	24.4 *	21	32 - 164
TOLUENE	ND	20	21	105	18	90.0	15.4	20	38 - 159
ETHYLBENZENE	ND	20	22	110	17	85.0	25.6 *	19	52 - 142
O XYLENE	ND	20	21	105	17	85.0	21.1 *	18	53 - 143
M & P XYLENE	ND	40	41	102	30	75.0	30.5 *	17	53 - 144

Analyst: VHZ
Sequence Date: 05/15/98
SPL ID of sample spiked: 9805299-02A
Sample File ID: E_E2218.TX0
Method Blank File ID:
Blank Spike File ID: E_E2212.TX0
Matrix Spike File ID: E_E2213.TX0
Matrix Spike Duplicate File ID: E_E2214.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):

9805299-08A 9805299-07A 9805299-09A 9805299-10A
9805299-03A 9805299-04A 9805371-01B 9805371-03B
9805371-05B 9805381-01A 9805381-02A 9805381-03A
9805381-04A 9805371-04B 9805299-06A

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

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

Matrix: Aqueous
Units: ug/L

Batch Id: VARE980516021200

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	64	128	72 - 128
Benzene	ND	50	53	106	61 - 119
Toluene	ND	50	53	106	65 - 125
EthylBenzene	ND	50	51	102	70 - 118
O Xylene	ND	50	53	106	72 - 117
M & P Xylene	ND	100	110	110	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	24	120	24	120	0	20	39 - 150
BENZENE	ND	20	23	115	21	105	9.09	21	32 - 164
TOLUENE	ND	20	22	110	20	100	9.52	20	38 - 159
ETHYLBENZENE	ND	20	22	110	20	100	9.52	19	52 - 142
O XYLENE	ND	20	22	110	21	105	4.65	18	53 - 143
M & P XYLENE	ND	40	43	108	40	100	7.69	17	53 - 144

Analyst: HS
Sequence Date: 05/16/98
SPL ID of sample spiked: 9805408-01H
Sample File ID: E_E2262.TX0
Method Blank File ID:
Blank Spike File ID: E_E2249.TX0
Matrix Spike File ID: E_E2277.TX0
Matrix Spike Duplicate File ID: E_E2278.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): 9805381-09A 9805381-10A 9805371-05B 9805371-01B 9805371-03B 9805371-04B 9805408-01H 9805381-05A 9805381-06A 9805381-07A 9805381-08A

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

** SPL BATCH QUALITY CONTROL REPORT **

California LUFT Manual for Gasoline

Batch Id: VARE980516085600

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Gasoline Range Organics	ND	1.0	0.84	84.0	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
GASOLINE RANGE ORGANICS	0.08	0.90	0.93	94.4	0.76	75.6	22.1	36	36 - 160

Analyst: VHZ
Sequence Date: 05/15/98
SPL ID of sample spiked: 9805299-01A
Sample File ID: EEE2219.TX0
Method Blank File ID:
Blank Spike File ID: EEE2210.TX0
Matrix Spike File ID: EEE2215.TX0
Matrix Spike Duplicate File ID: EEE2216.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):

9805299-08A 9805299-07A 9805299-09A 9805299-10A
9805299-11A 9805299-12A 9805299-03A 9805299-04A
9805371-01B 9805371-03B 9805371-05B 9805381-01A
9805381-02A 9805381-03A 9805381-04A 9805299-02A
9805299-01A 9805299-05A 9805299-06A

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

** SPL BATCH QUALITY CONTROL REPORT **

California LUFT Manual for Gasoline

Matrix: Aqueous

Batch Id: VARE980516114600

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Gasoline Range Organics	ND	1.0	0.90	90.0	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
GASOLINE RANGE ORGANICS	ND	0.90	0.65	72.2	0.54	60.0	18.5	36	36 - 160

Analyst: HS

Sequence Date: 05/16/98

SPL ID of sample spiked: 9805408-02H

Sample File ID: EEE2263.TX0

Method Blank File ID:

Blank Spike File ID: EEE2250.TX0

Matrix Spike File ID: EEE2279.TX0

Matrix Spike Duplicate File ID: EEE2280.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): 9805381-09A 9805381-10A 9805371-04B 9805408-02H 9805381-05A 9805381-06A 9805381-07A 9805381-08A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
5-8-98	10⁰⁰

SPL Sample ID:
9805381

			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 #)	384847219 1	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
[signature]	5-8-98

9805381

CHAIN OF CUSTODY

No. 098771

Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering	CONSULTANT'S ADDRESS: 1575 Treat Blvd # 201, W.C. Ca 94598		
BP SITE NUMBER: 11117	BP SITE / FACILITY ADDRESS: Oakland, Ca		CONSULTANT PROJECT NUMBER: 10-018-06/003
CONSULTANT PROJECT MANGER: Brady Nagle	PHONE NUMBER: (510) 295-1650	FAX NUMBER: 295-1823	CONSULTANT CONTRACT NUMBER: H177100
BP CONTACT: Scott Hooton	BP ADDRESS: Renton, WA	PHONE NUMBER: —	FAX NO.: —
LAB CONTACT: SPL	LABORATORY ADDRESS: Texas	PHONE NUMBER: —	FAX NO.: —
BP CONTACT REQUESTING RUSH TAT (Print BP Contact Name)	RUSH REQUESTED OF (Print Consultant Contact Name)	DATE/TIME	SHIPMENT DATE: 5-7-98	SHIPMENT METHOD: FedEx

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

ANALYSIS REQUIRED

AIRBILL NUMBER: 384547219 1

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPH 8015	BTEX 8020	COMMENTS
S-1	5/6/98		W	3	HCL		X	X	
S-2									
S-3									
S-4									
S-5									
S-6									
S-7									
S-8									
S-9									
S-10									32

SAMPLED BY (Please Print Name)

SAMPLED BY (Signature)

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY /AFFILIATION (Print Name / Signature)	DATE	TIME
[signature]	5/7/98		P. Yeeton	5/7/98	0800
P. Yeeton	5/7/98	1200			
			Randy Turnell/[signature]	5-8-98	1000

CLV-16722-A (2/97)
PKG/50

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

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

BP Site Number:	11117
ERM Contact:	H177100
Sampling Date:	5/6/98
Matrix Description:	Water
Date Final Report Received:	5/27/98
Laboratory & Location:	SPL, Houston, Texas

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

MS/MSD relative % difference values for benzene, ethylbenzene, and xylenes in one of two matrix spikes were outside 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): B Nagle

Date: 7/20/98