



**BP OIL**

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

May 4, 1999

Alameda County Health Care Services Agency  
Attention Ms. Eva Chu  
1131 Harbor Bay Parkway, Room 250  
Alameda, CA 94502-6577

RE: Former BP Oil Site No. 11104  
1716 Webster Street (at Buena Vista)  
Alameda, CA

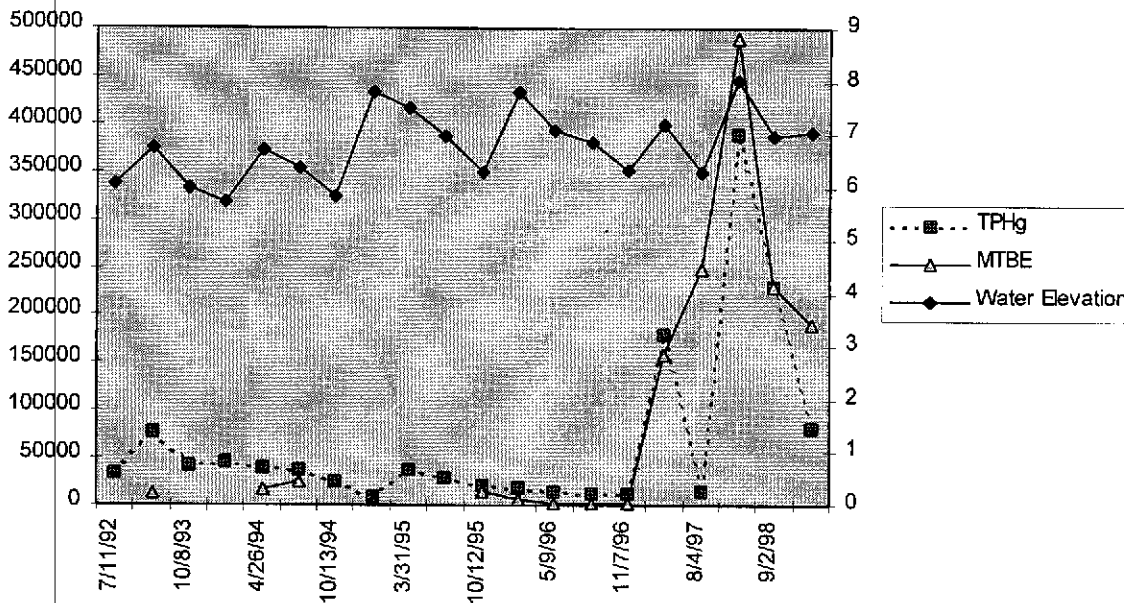
ENVIRONMENTAL  
PROTECTION  
99 MAY 10 PM 3:06

Dear Ms. Chu:

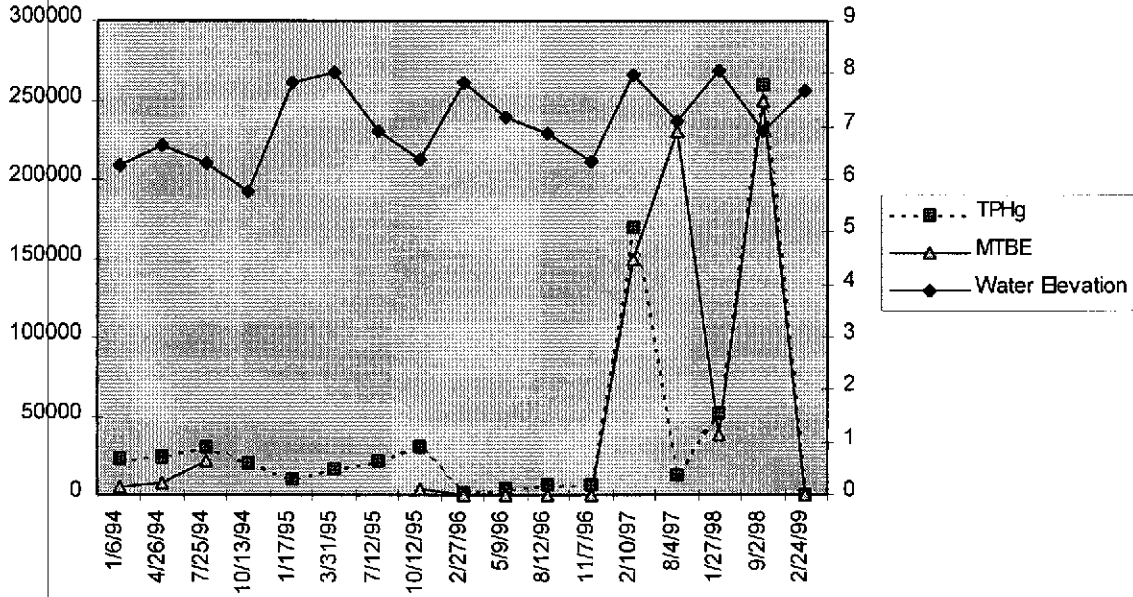
Enclosed find the 26 April 1999 *First Quarter 1999 Groundwater Monitoring* report prepared by Blaine Tech Services on behalf of BP. The report summarizes chemical data obtained since 1992, including the results associated with samples obtained on 24 February 1999.

The report shows that aromatic petroleum hydrocarbons were detected in samples obtained in two of the wells sampled this quarter. The highest benzene concentration (3000 ug/l) was detected in a sample obtained from well MW-1, located immediately adjacent to the underground storage tank area. You will also note that the aggregate increasing trend of MTBE concentrations reported for wells RW-1 and MW-1 since the August 1996 sampling event. TPHg and MTBE concentration trends are depicted on the graphs shown below.

**MW-1 Water Level, MTBE, TPHg**



RW-1 Water Elevation, TPHg & MTBE



Please contact me at (425) 251-0689 if you have any questions or concerns regarding this submittal.

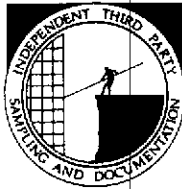
Sincerely,

  
Scott Hooton

attachment

cc: site file  
David Camille - Tosco (w/attachment)

**BLAINE**  
TECH SERVICES INC.



1680 ROGERS AVENUE  
SAN JOSE, CALIFORNIA 95112-1105  
(408) 573-7771 FAX  
(408) 573-0555 PHONE

April 26, 1999

Scott Hooton  
BP Oil Company  
295 SW 41st Street, Bldg. 13, Suite N  
Renton, WA 98055-4931

### **1st Quarter 1999 Monitoring at 11104**

First Quarter 1999 Groundwater Monitoring  
BP Service Station Number 11104  
1716 Webster Street  
Alameda, CA

Monitoring Performed on February 24, 1999

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### **Groundwater Sampling Report 990224-R-1**

This report covers the routine monitoring of groundwater wells at this BP facility. Blaine Tech Services, Inc.'s work at the site includes inspection, gauging, evacuation, purgewater containment, sample collection and sample handling in accordance with standard procedures that conform to Regional Water Quality Control Board requirements.

Routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, the appropriate calculated purge volume, elapsed evacuation time, total volume of water removed, and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater is, likewise, collected and transported to Seaport Petroleum Corporation for disposal.

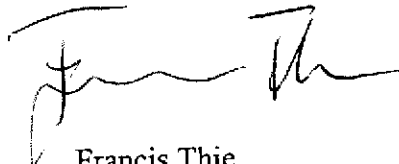
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL DATA AND ANALYTICAL RESULTS**. The full analytical report for the most recent samples is located in the **Analytical Appendix**. The **Professional Engineering Appendix** contains a **Groundwater Elevation Map** and a **Dissolved Petroleum Hydrocarbon Concentration Map**.

At a minimum, Blaine Tech Services, Inc. field personnel are certified upon completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight hour refresher courses.

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. concentrates on objective data collection and does not participate in the interpretation of analytical results, the definition of geological or hydrological conditions, the formulation of recommendations, or the marketing of remedial systems.

Please call if you have any questions.

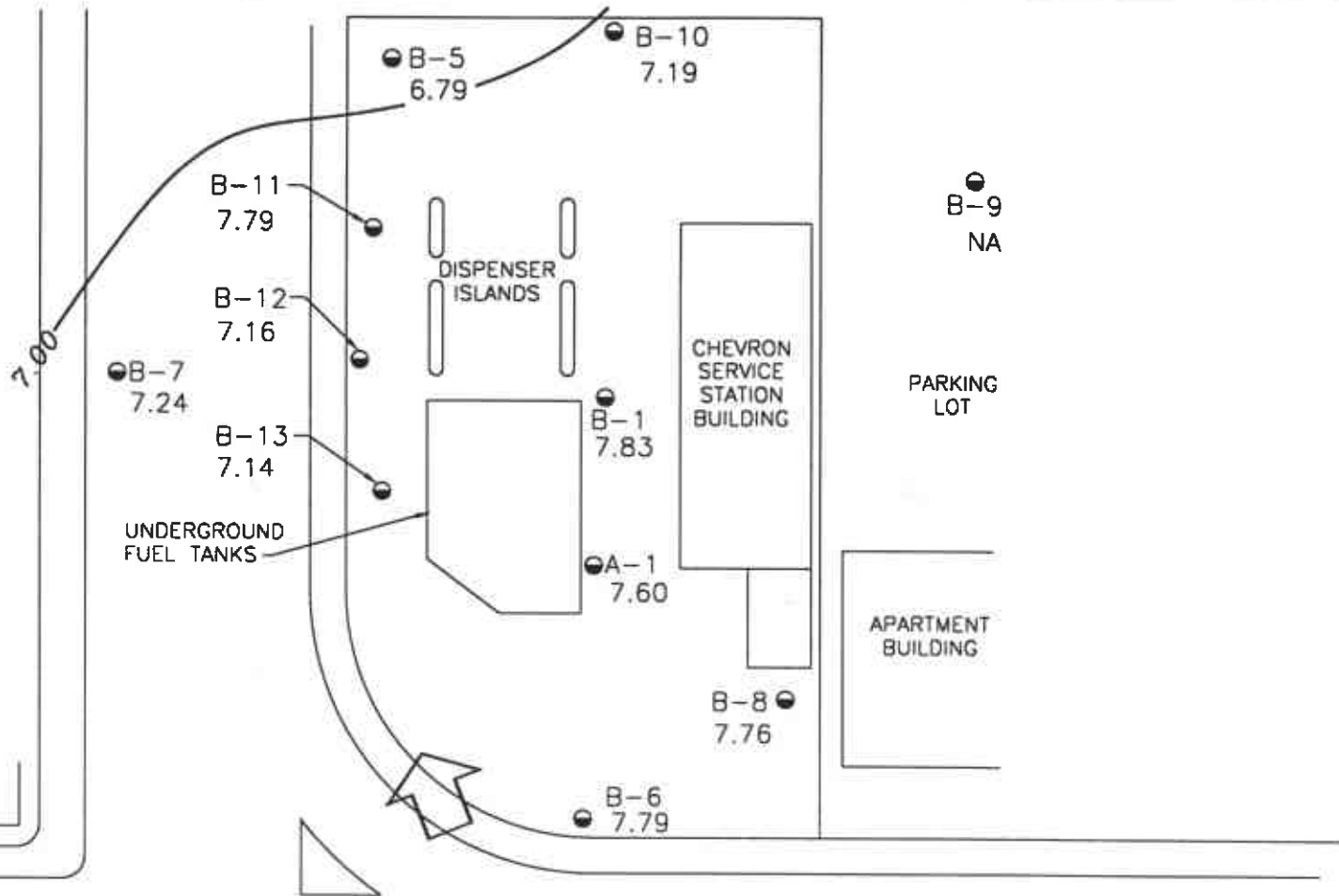
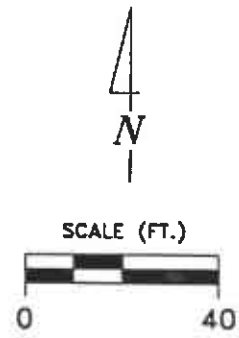
Yours truly,

A handwritten signature in black ink, appearing to read "Francis Thie". The signature is fluid and cursive, with a large initial "F" and a distinct "Thie" at the end.

Francis Thie  
Vice President

FPT/ld

attachments: Professional Engineering Appendix  
Cumulative Table of Well Data and Analytical Results  
Analytical Appendix  
Field Data Sheets



- EXPLANATION**
- BP OIL GROUNDWATER MONITORING WELL
  - GROUNDWATER RECOVERY WELL
  - CHEVRON GROUNDWATER MONITORING WELL
  - 7.91 GROUNDWATER ELEVATION (FT, MSL)
  - 9.00 — GROUNDWATER ELEVATION CONTOUR (FT, MSL)
  - NA DATA NOT AVAILABLE
  - APPROXIMATE GROUNDWATER FLOW DIRECTION;  
APPROXIMATE GRADIENT = 0.006

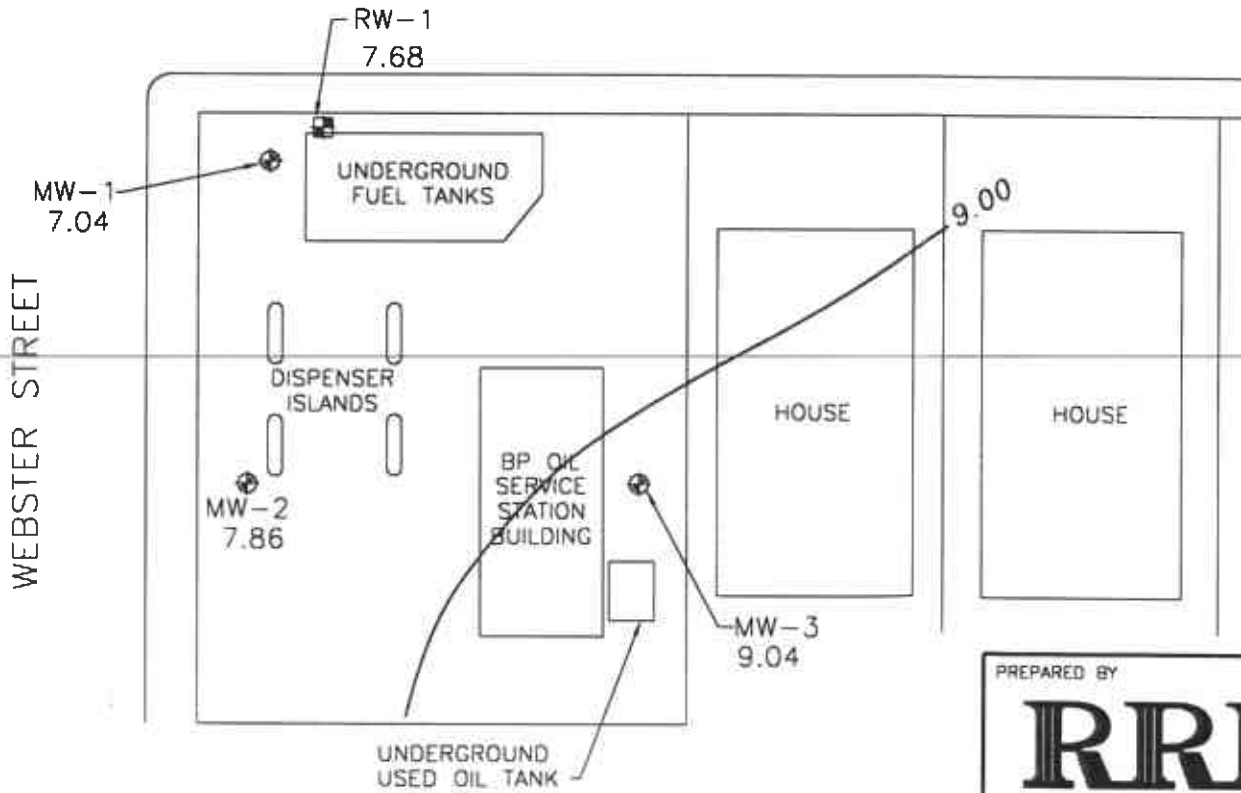
LIQUOR STORE

BUENA VISTA AVENUE

MW-5  
7.10

KENTUCKY FRIED CHICKEN

BUILDING



Ref. 11104bm1.dwg  
Base map from Aisla Engineering Group

PREPARED BY  
**RRM**  
engineering contracting firm

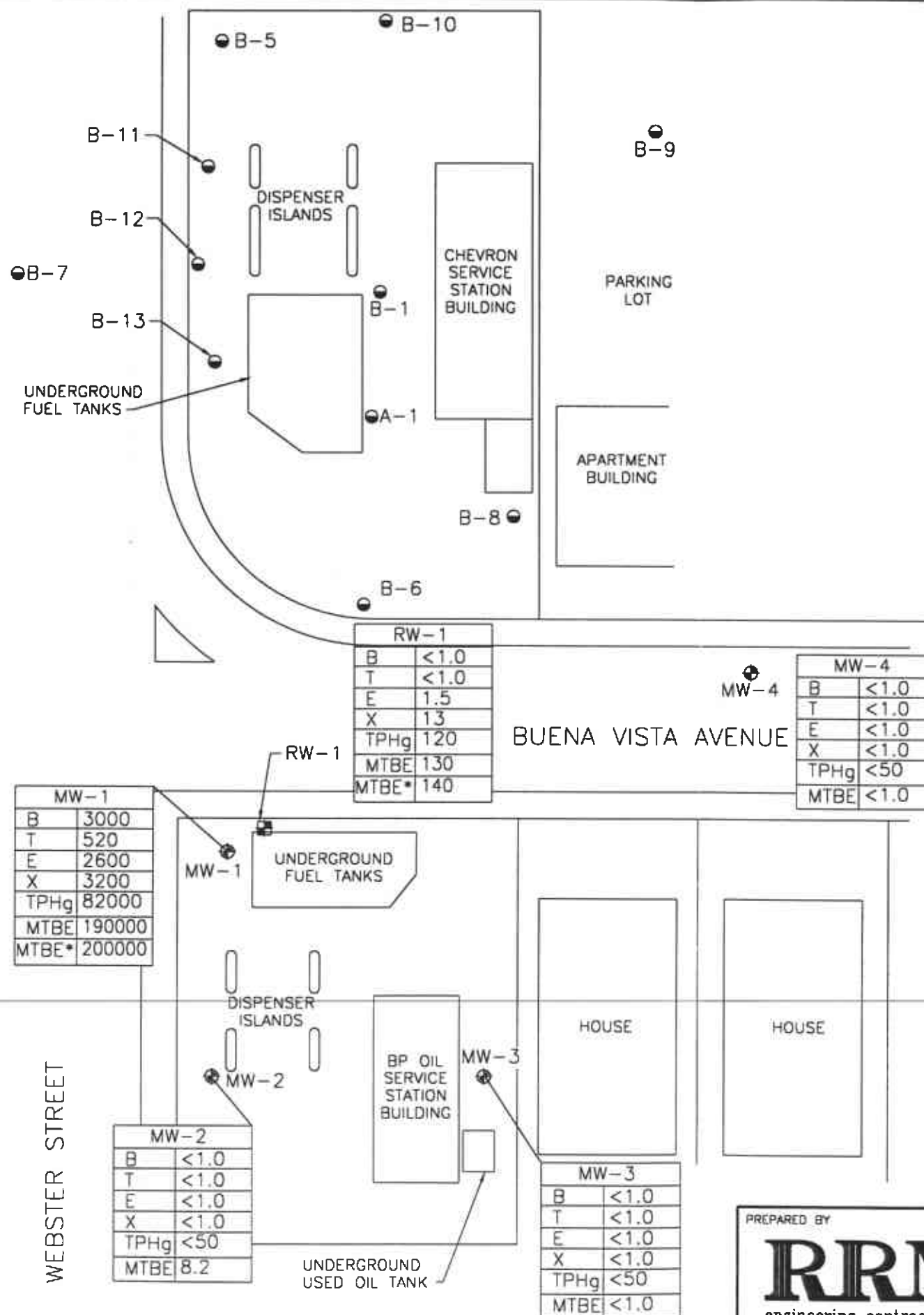
GROUNDWATER ELEVATION CONTOUR MAP,  
FEBRUARY 24, 1999

BP Oil Service Station No. 11104  
1716 Webster Street  
Alameda, California

FIGURE:  
1  
PROJECT:  
DAC04



SCALE (FT.)



**EXPLANATION**

- ⊕ BP OIL GROUNDWATER MONITORING WELL
- ⊞ GROUNDWATER RECOVERY WELL
- CHEVRON GROUNDWATER MONITORING WELL
- TPHg TOTAL PETROLEUM HYDROCARBON CALCULATED AS GASOLINE IN PARTS PER BILLION (ppb)
- B BENZENE, ppb
- T TOLUENE, ppb
- E ETHYLBENZENE, ppb
- X XYLENE, ppb
- MTBE METHYL-TERT-BUTYL-ETHER, ppb
- MTBE\* MTBE BY 8260

MW-5	
B	<1.0
T	<1.0
E	<1.0
X	<1.0
TPHg	<50
MTBE	<1.0

RW-1	
B	<1.0
T	<1.0
E	1.5
X	13
TPHg	120
MTBE	130
MTBE*	140

MW-4	
B	<1.0
T	<1.0
E	<1.0
X	<1.0
TPHg	<50
MTBE	<1.0

MW-1	
B	3000
T	520
E	2600
X	3200
TPHg	82000
MTBE	190000
MTBE*	200000

MW-2	
B	<1.0
T	<1.0
E	<1.0
X	<1.0
TPHg	<50
MTBE	8.2

MW-3	
B	<1.0
T	<1.0
E	<1.0
X	<1.0
TPHg	<50
MTBE	<1.0

PREPARED BY

**RRM**  
engineering contracting firm

HYDROCARBON CONCENTRATION MAP,  
FEBRUARY 24, 1999

BP Oil Service Station No. 11104  
1716 Webster Street  
Alameda, California

FIGURE:  
**2**  
PROJECT:  
DAC04

# **Table of Well Data and Analytical Results**

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (mg/l)	DO (ppm)	LAB
MW-1	07/21/92	11.98	5.91	6.07	34000	7000	1700	2500	6900	---	---	---	---
MW-1	10/20/92	11.98	6.66	5.32	---	---	---	---	---	---	---	---	---
MW-1	03/05/93	11.98	4.56	7.42	---	---	---	---	---	---	---	---	---
MW-1	04/01/93	11.98	4.57	7.41	---	---	---	---	---	---	---	---	---
MW-1	07/09/93	11.98	5.25	6.73	77000	15000	1400	2100	7400	13,000	(c)	---	PACE
QC-1 (d)	07/09/93	---	---	---	79000	16000	1500	2200	7700	14,000	(c)	---	PACE
MW-1	10/08/93	11.98	6.01	5.97	42000	7100	270	2700	4700	---	---	---	PACE
MW-1	01/06/94	11.98	6.24	5.74	45000	12000	4300	3000	6700	---	---	---	PACE
MW-1	04/26/94	11.98	5.26	6.72	39000	6500	500	1800	1200	17000	(c)	6.3	PACE
MW-1	07/25/94	11.98	5.60	6.38	38000	6300	240	1500	1100	26000	(c)	1.7	PACE
MW-1	10/13/94	11.98	6.15	5.83	25000	6300	130	1300	830	---	---	2.3	PACE
QC-1 (d)	10/13/94	---	---	---	25000	7300	120	1200	740	---	---	---	PACE
MW-1	01/17/95	11.98	4.19	7.79	7800	3100	1100	460	850	---	---	7.9	ATI
QC-1 (d)	01/17/95	---	---	---	8400	3100	1200	470	1000	---	---	---	ATI
MW-1	03/31/95	11.98	4.48	7.50	37000	6700	6900	1200	4500	---	---	6.4	ATI
QC-1 (d)	03/31/95	---	---	---	40000	6900	7300	1300	5000	---	---	---	ATI
MW-1	05/01/95	11.98	4.39	7.59	---	---	---	---	---	---	---	---	---
MW-1	07/12/95	11.98	5.02	6.96	29000	7000	300	1500	3900	---	---	7.2	ATI
QC-1 (d)	07/12/95	---	---	---	29000	6600	380	1500	3900	---	---	---	ATI
MW-1	10/12/95	11.98	5.68	6.30	20000	3400	310	1100	3000	15000	---	6.3	ATI
QC-1 (d)	10/12/95	---	---	---	20000	3500	310	1100	3000	14000	---	---	ATI
MW-1	02/27/96	11.98	4.18	7.80	18000	4400	2900	860	2380	5500	472	7.9	SPL
MW-1	05/08/96	11.98	4.89	7.09	---	---	---	---	---	---	---	---	---
MW-1	05/09/96	11.98	---	---	14000	2300	1900	540	3340	2700	---	6.1	SPL
MW-1	08/09/96	11.98	5.13	6.85	---	---	---	---	---	---	---	---	---
MW-1	08/12/96	11.98	---	---	13000	2800	190	1300	3040	1800	---	7.1	SPL
MW-1	11/07/96	11.98	5.65	6.33	12000	2100	35	ND<25	ND<25	2100	---	7.2	SPL
MW-1	02/10/97	11.98	4.80	7.18	180000	1900	ND<500	ND<500	ND<500	160000	---	6.8	SPL
QC-1 (d)	02/10/97	---	---	---	180000	2100	ND<500	ND<500	ND<500	160000	---	---	SPL
MW-1	08/04/97	11.98	5.69	6.29	14000	2700	ND<50	1200	1220	250000	---	7.2	SPL
QC-1 (d)	08/04/97	---	---	---	ND<25000	2600	ND<50	1200	1100	260000	---	---	SPL
MW-1	01/27/98	11.98	3.96	8.02	390000	4400	4300	1600	2890	490000	---	6.4	SPL
MW-1	09/02/98	11.98	5.03	6.95	230000	3900	ND<50	1900	1000	230000	---	6.3	SPL
MW-1	02/24/99	11.98	4.94	7.04	82000	3000	520	2600	3200	190000/200000 (h)	---	---	SPL



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (b) (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (mg/l)	DO (ppm)	LAB
MW-2	07/21/92	12.98	6.44	6.54	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---
MW-2	10/20/92	12.98	7.39	5.59	---	---	---	---	---	---	---	---	---
MW-2	03/05/93	12.98	4.91	8.07	---	---	---	---	---	---	---	---	---
MW-2	04/01/93	12.98	4.92	8.06	---	---	---	---	---	---	---	---	---
MW-2	07/09/93	12.98	5.60	7.38	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-2	10/08/93	12.98	6.50	6.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-1 (d)	10/08/93	12.98	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-2	01/06/94	12.98	6.25	6.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-2	04/26/94	12.98	5.73	7.25	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.5	PACE
MW-2	07/25/94	12.98	6.07	6.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	2.4	PACE
MW-2	10/13/94	12.98	6.80	6.18	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	2.4	PACE
MW-2	01/17/95	12.98	5.10	7.88	---	---	---	---	---	---	---	---	---
MW-2	03/31/95	12.98	4.69	8.29	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	7.3	ATI
MW-2	05/01/95	12.98	5.23	7.75	---	---	---	---	---	---	---	---	---
MW-2	07/12/95	12.98	5.40	7.58	---	---	---	---	---	---	---	---	---
MW-2	10/12/95	12.98	6.06	6.92	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	6.9	ATI
MW-2	02/27/96	12.98	4.66	8.32	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	412	8.7	SPL
MW-2	05/08/96	12.98	5.28	7.70	---	---	---	---	---	---	---	---	---
MW-2	08/09/96	12.98	5.59	7.39	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	7.8	SPL
MW-2	11/07/96	12.98	6.11	6.87	---	---	---	---	---	---	---	---	---
MW-2	02/10/97	12.98	5.26	7.72	---	---	---	---	---	---	---	---	---
MW-2	08/04/97	12.98	6.14	6.84	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	6.5	SPL
MW-2	01/27/98	12.98	4.42	8.56	---	---	---	---	---	---	---	---	---
MW-2	09/02/98	12.98	5.47	7.51	100	0.56	3.6	ND<1.0	3.0	110	---	6.9	SPL
MW-2	02/24/99	12.98	5.12	7.86	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	8.2	---	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (mg/l)	DO (ppm)	LAB
MW-3 (e)	07/21/92	13.38	7.07	6.31	ND<50	0.95	ND<0.5	ND<0.5	ND<0.5	---	---	---	---
MW-3	10/20/92	13.38	8.06	5.32	---	---	---	---	---	---	---	---	---
MW-3	03/05/93	13.38	5.16	8.22	---	---	---	---	---	---	---	---	---
MW-3	04/01/93	13.38	5.25	8.13	---	---	---	---	---	---	---	---	---
MW-3	07/09/93	13.38	5.80	7.58	ND<50	0.6	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-3	10/08/93	13.38	7.17	6.21	ND<50	0.6	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-3	01/06/94	13.38	6.94	6.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-3	04/26/94	13.38	6.18	7.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	3.1	PACE
MW-3	07/25/94	13.38	6.67	6.71	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	2.2	PACE
MW-3	10/13/94	13.38	7.43	5.95	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	2.1	PACE
MW-3	01/17/95	13.38	5.07	8.31	---	---	---	---	---	---	---	---	---
MW-3	03/31/95	13.38	4.03	9.35	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	6.6	ATI
MW-3	05/01/95	13.38	4.94	8.44	---	---	---	---	---	---	---	---	---
MW-3	07/12/95	13.38	5.80	7.58	---	---	---	---	---	---	---	---	---
MW-3	10/12/95	13.38	6.64	6.74	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	6.4	ATI
MW-3	02/27/96	13.38	4.75	8.63	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	316	8.5	SPL
MW-3	05/08/96	13.38	5.86	7.52	---	---	---	---	---	---	---	---	---
MW-3	08/09/96	13.38	5.70	7.68	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	7.9	SPL
MW-3	11/07/96	13.38	6.21	7.17	---	---	---	---	---	---	---	---	---
MW-3	02/10/97	13.38	5.14	8.24	---	---	---	---	---	---	---	---	---
MW-3	08/04/97	13.38	6.01	7.37	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	6.6	SPL
MW-3	01/27/98	13.38	4.30	9.08	---	---	---	---	---	---	---	---	---
MW-3	09/02/98	13.38	5.80	7.58	ND<50	ND<0.5	2.2	ND<1.0	ND<1.0	ND<10	---	6.6	SPL
MW-3	02/24/99	13.38	4.34	9.04	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	---	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (mg/l)	DO (ppm)	LAB
MW-4	03/05/93	11.80	4.81	6.99	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---
MW-4	04/01/93	11.80	4.80	7.00	---	---	---	---	---	---	---	---	---
MW-4	07/09/93	11.80	5.54	6.26	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-4	10/08/93	11.80	6.28	5.52	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-4	01/06/94	11.80	5.82	5.98	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-4	04/26/94	11.80	5.50	6.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.4	PACE
MW-4	07/25/94	11.80	5.83	5.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.2	PACE
MW-4	10/13/94	11.80	6.26	5.54	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	6.7	PACE
MW-4	01/17/95	11.80	4.19	7.61	---	---	---	---	---	---	---	---	---
MW-4	03/31/95	11.80	3.96	7.84	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	7.1	ATI
MW-4	05/01/95	11.80	4.49	7.31	---	---	---	---	---	---	---	---	---
MW-4	07/12/95	11.80	5.16	6.64	---	---	---	---	---	---	---	---	---
MW-4	10/12/95	11.80	5.80	6.00	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	6.9	ATI
MW-4	02/27/96	11.80	4.22	7.58	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	256	8.9	SPL
MW-4	05/08/96	11.80	5.00	6.80	---	---	---	---	---	---	---	---	---
MW-4	08/09/96	11.80	5.13	6.67	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	8.5	SPL
MW-4	11/07/96	11.80	5.65	6.15	---	---	---	---	---	---	---	---	---
MW-4	02/10/97	11.80	4.81	6.99	---	---	---	---	---	---	---	---	---
MW-4	08/04/97	11.80	5.72	6.08	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	6.4	SPL
MW-4	01/27/98	11.80	4.06	7.74	---	---	---	---	---	---	---	---	---
MW-4	09/02/98	11.80	4.89	6.91	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	5.8	SPL
MW-4	02/24/99	11.80	3.89	7.91	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	---	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (mg/l)	DO (ppm)	LAB
MW-5	04/01/93	11.62	4.77	6.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---
MW-5	07/09/93	11.62	5.40	6.22	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-5	10/08/93	11.62	5.87	5.75	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-5	01/06/94	11.62	5.75	5.87	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-5	04/26/94	11.62	5.49	6.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.1	PACE
MW-5	07/25/94	11.62	5.69	5.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	6.6	PACE
MW-5	10/13/94	11.62	6.03	5.59	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	3.0	PACE
MW-5	01/17/95	11.62	4.74	6.88	---	---	---	---	---	---	---	---	---
MW-5	03/31/95	11.62	4.58	7.04	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	7.1	ATI
MW-5	05/01/95	11.62	4.79	6.83	---	---	---	---	---	---	---	---	---
MW-5	07/12/95	11.62	5.32	6.30	---	---	---	---	---	---	---	---	---
MW-5	10/12/95	11.62	5.70	5.92	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	6.7	ATI
MW-5 (f)	02/27/96	11.62	---	---	---	---	---	---	---	---	---	---	---
MW-5	05/08/96	11.62	4.91	6.71	---	---	---	---	---	---	---	---	---
MW-5	08/09/96	11.62	5.01	6.61	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	7.7	SPL
MW-5	11/07/96	11.62	5.54	6.08	---	---	---	---	---	---	---	---	---
MW-5	02/10/97	11.62	4.66	6.96	---	---	---	---	---	---	---	---	---
MW-5	08/04/97	11.62	5.51	6.11	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	6.9	SPL
MW-5	01/27/98	11.62	4.01	7.61	---	---	---	---	---	---	---	---	---
MW-5	09/02/98	11.62	5.17	6.45	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	6.4	SPL
MW-5	02/24/99	11.62	4.52	7.10	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	---	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (mg/l)	DO (ppm)	LAB
RW-1	01/06/94	11.84	5.59	6.25	23000	3800	210	840	2100	4600	(c) ---	---	PACE
QC-1 (d)	01/06/94	---	---	---	24000	3700	210	830	2000	4700	(c) ---	---	PACE
RW-1	04/26/94	11.84	5.21	6.63	24000	3500	120	800	1700	8100	(c) ---	6.4	PACE
QC-1 (d)	04/26/94	---	---	---	22000	3300	110	700	1700	6900	(c) ---	---	PACE
RW-1	07/25/94	11.84	5.52	6.32	31000	4800	290	1100	1700	21000	(c) ---	5.5	PACE
QC-1 (d)	07/25/94	---	---	---	28000	4400	240	960	1400	19000	(c) ---	---	PACE
RW-1	10/13/94	11.84	6.05	5.79	20000	4200	46	990	440	---	---	6.8	PACE
RW-1	01/17/95	11.84	4.02	7.82	9600	1500	65	300	2700	---	---	7.7	ATI
RW-1	03/31/95	11.84	3.81	8.03	16000	1500	780	370	2000	---	---	7.8	ATI
RW-1	05/01/95	11.84	4.21	7.63	---	---	---	---	---	---	---	---	---
RW-1	07/12/95	11.84	4.93	6.91	22000	3700	150	950	2800	---	---	---	---
RW-1	10/12/95	11.84	5.46	6.38	30000	1600	1500	1700	8500	4300	---	7.2	ATI
RW-1	02/27/96	11.84	4.00	7.84	1800	30	24	41	440	52	194	7.7	ATI
QC-1 (d)	02/27/96	---	---	---	1600	30	23	38	420	50	---	---	SPL
RW-1	05/08/96	11.84	4.65	7.19	---	---	---	---	---	---	---	---	SPL
RW-1	05/09/96	11.84	---	---	3200	19	19	97	800	---	---	---	---
QC-1 (d)	05/09/96	---	---	---	2900	15	15	78	700	ND<50	---	7.1	SPL
RW-1	08/09/96	11.84	4.96	6.88	---	---	---	---	---	ND<50	---	---	SPL
RW-1	08/12/96	11.84	---	---	6900	210	270	390	1920	---	---	---	---
QC-1 (d)	08/12/96	---	---	---	8200	270	330	450	2330	ND<100	---	7.9	SPL
RW-1	11/07/96	11.84	5.50	6.34	6100	320	45	ND<10	ND<10	430	---	6.9	SPL
QC-1 (d)	11/07/96	---	---	---	6800	360	45	ND<10	ND<10	500	---	---	SPL
RW-1	02/10/97	11.84	3.85	7.99	170000	ND<120	ND<250	ND<250	ND<250	150000	---	6.7	SPL
RW-1	08/04/97	11.84	4.72	7.12	ND<25000	580	450	630	3700	230000	---	6.9	SPL
RW-1	01/27/98	11.84	3.80	8.04	52000	380	330	490	2970	38000	---	6.1	SPL
QC-1 (d)	01/27/98	---	---	---	51000	380	300	480	2980	36000	---	---	SPL
RW-1	09/02/98	11.84	4.91	6.93	260000	2500	56	1400	3070	250000	---	6.6	SPL
QC-1 (d)	09/02/98	---	---	---	280000	2400	ND<50	1400	3170	270000	---	---	SPL
RW-1	02/24/99	11.84	4.16	7.68	120	ND<1.0	ND<1.0	1.5	13	130/140	(h) ---	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (mg/l)	DO (ppm)	LAB
QC-2	(g) 07/09/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2	(g) 10/08/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2	(g) 01/06/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2	(g) 04/26/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2	(g) 07/25/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2	(g) 10/13/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2	(g) 01/17/95	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	ATI
QC-2	(g) 03/31/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
QC-2	(g) 07/12/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
QC-2	(g) 10/12/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	ATI
QC-2	(g) 02/27/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	SPL
QC-2	(g) 05/09/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	SPL

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline  
 B Benzene  
 T Toluene  
 E Ethylbenzene  
 X Total xylenes  
 MTBE Methyl tert butyl ether  
 TDS Total dissolved solids  
 DO Dissolved oxygen  
 ug/l Micrograms per liter  
 mg/l Milligrams per liter  
 ppm Parts per million  
 --- Not applicable/available/analyzed/measured  
 ND Not detected above reported detection limit  
 PACE Pace, Inc.  
 ATI Analytical Technologies, Inc.  
 SPL Southern Petroleum Laboratories

NOTES:

- (a) Top of casing elevations surveyed in reference to USGS benchmark (14.108 feet above mean sea level) at northwest corner of Webster Street and Pacific Avenue.
- (b) Groundwater elevations in feet above mean sea level.
- (c) A copy of the documentation for this data is included in Appendix C of Alisto report 10-155-07-001.
- (d) Blind duplicate.
- (e) Sample also analyzed for cadmium, nickel, chromium, lead, and zinc. None were detected above the reported detection limit.
- (f) Well inaccessible.
- (g) Travel blank.
- (h) MTBE by EPA Methods 8020/8260

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING	CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)
A-1	05/01/95	11.56		5.80	0.60	6.21
A-1	05/08/96	11.56		5.49	0.28	6.28
A-1	08/23/96	11.56		6.43	0.22	5.30
A-1	02/10/97	11.56		4.45	0.17	7.24
A-1	08/05/97	11.56		5.96	0.10	5.68
A-1	02/04/98	11.56		3.20	0.04	8.39
A-1	02/24/99	11.56		4.41	0.60	7.60
B-1	02/15/95	12.12		5.37	--	6.75
B-1	05/01/95	12.12		5.12	--	7.00
B-1	05/08/96	12.12		4.80	--	7.32
B-1	08/23/96	12.12		5.54	--	6.58
B-1	02/10/97	12.12		4.59	--	7.53
B-1	08/05/97	12.12		6.44	--	5.68
B-1	02/04/98	12.12		3.01	--	9.11
B-1	02/24/99	12.12		4.29	--	7.83
B-5	02/15/95	10.18		4.15	--	6.03
B-5	05/01/95	10.18		4.43	--	5.75
B-5	05/08/96	10.18		4.40	--	5.78
B-5	08/23/96	10.18		4.99	--	5.19
B-5	02/10/97	10.18		3.63	--	6.55
B-5	08/05/97	10.18		4.89	--	5.29
B-5	02/04/98	10.18		2.53	--	7.65
B-5	02/24/99	10.18		3.39	--	6.79
B-6	02/15/95	11.97		4.70	--	7.27
B-6	05/01/95	11.97		5.03	--	6.94
B-6	05/08/96	11.97		5.23	--	6.74
B-6	08/23/96	11.97		6.05	--	5.92
B-6	02/10/97	11.97		4.37	--	7.60
B-6	08/05/97	11.97		5.75	--	6.22
B-6	02/04/98	11.97		2.71	--	9.26
B-6	02/24/99	11.97		4.18	--	7.79
B-7	02/15/95	10.54		4.22	--	6.32
B-7	05/01/95	10.54		4.50	--	6.04
B-7	08/23/96	10.54		--	--	--
B-7	02/10/97	10.54		--	--	--
B-7	08/05/97	10.54		--	--	--
B-7	02/04/98	10.54		--	--	--
B-7	02/24/99	10.54		3.30	--	7.24
B-8	02/15/95	11.99		4.72	--	7.27
B-8	05/01/95	11.99		5.00	--	6.99
B-8	08/23/96	11.99		--	--	--
B-8	02/10/97	11.99		--	--	--
B-8	08/05/97	11.99		--	--	--
B-8	02/04/98	11.99		--	--	--
B-8	02/24/99	11.99		4.23	--	7.76

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING	CASING ELEVATION (Feet) (a)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)
B-9	02/15/95	10.70	3.61	—	7.09
B-9	05/01/95	10.70	4.29	—	6.41
B-9	08/23/96	10.70	—	—	—
B-9	02/10/97	10.70	—	—	—
B-9	08/05/97	10.70	—	—	—
B-9	02/04/98	10.70	—	—	—
B-10	05/08/96	11.42	5.55	—	5.87
B-10	08/23/96	11.42	6.19	—	5.23
B-10	02/10/97	11.42	4.58	—	6.84
B-10	08/05/97	11.42	6.30	—	5.12
B-10	02/04/98	11.42	2.89	—	8.53
B-10	02/24/99	11.42	4.23	—	7.19
B-11	05/08/96	11.98	5.00	—	6.98
B-11	08/23/96	11.98	5.61	—	6.37
B-11	02/10/97	11.98	4.07	—	7.91
B-11	08/05/97	11.98	5.60	—	6.38
B-11	02/04/98	11.98	2.59	—	9.39
B-11	2.24/99	11.98	4.19	—	7.79
B-12	05/08/96	11.16	5.08	—	6.08
B-12	08/23/96	11.16	5.65	—	5.51
B-12	02/10/97	11.16	4.11	—	7.05
B-12	08/05/97	11.16	5.61	—	5.55
B-12	02/04/98	11.16	2.63	—	8.53
B-12	02/24/99	11.16	4.00	—	7.16
B-13	05/08/96	11.17	4.97	—	6.20
B-13	08/23/96	11.17	5.63	—	5.54
B-13	02/10/97	11.17	4.12	—	7.05
B-13	08/05/97	11.17	5.65	—	5.52
B-13	02/04/98	11.17	2.69	—	8.48
B-13	02/24/99	11.17	4.03	—	7.14

NOTES:

- (a) Top of casing elevations surveyed relative to 1929 NGVD. Measured in feet above mean sea level.
- (b) Groundwater elevations assuming a specific gravity of 0.75 for separate-phase product.
- Not measured.



# Analytical Appendix



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

March 10, 1999

Mr. Scott Hooton  
BP OIL COMPANY  
295 SW 41 Street Bldg13, Ste N  
Renton, WA 98055

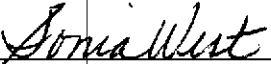
The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on March 2, 1999. The sample(s) was assigned to Certificate of Analysis No. (s) 9903032 and analyzed for all parameters as listed on the chain of custody.

Any data flags or quality control exceptions associated with this report will be footnoted in the analytical result 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

  
\_\_\_\_\_  
Sonia West  
Senior Project Manager



HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

**Southern Petroleum Laboratories, Inc.**

**Certificate of Analysis Number: 99-03-032**

Approved for Release by:

*Sonia West*

\_\_\_\_\_  
Sonia West, Senior Project Manager

*3-10-99*

\_\_\_\_\_  
Date

Greg Grandits  
Laboratory Director

Idelis Williams  
Corporate Quality Assurance Director

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.  
The results relate only to the samples tested.  
Results reported on a Wet Weight Basis unless otherwise noted.



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

**Certificate of Analysis No. H9-9903032-01**

BP Oil Company  
 295 SW 41 Street Bldg.13,SteN  
 Renton, WA 98055  
 ATTN: Scott Hooton

P.O.#  
 N/A, COC#118695  
 DATE: 03/09/99

**PROJECT:** #11104, 1716 Webster St.  
**SITE:** Alameda, CA  
**SAMPLED BY:** Blaine Tech Services  
**SAMPLE ID:** A

**PROJECT NO:** 990224-R1  
**MATRIX:** WATER  
**DATE SAMPLED:** 02/24/99 09:31:00  
**DATE RECEIVED:** 03/02/99

**ANALYTICAL DATA**

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	1.0 P	ug/L
BENZENE	ND	1.0 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
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/L

<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	100
4-Bromofluorobenzene	100

Method 8020A \*\*\*  
 Analyzed by: WLR  
 Date: 03/02/99

Gasoline Range Organics	ND	0.05 P	mg/L
-------------------------	----	--------	------

<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	100
4-Bromofluorobenzene	90

California LUFT Manual for Gasoline  
 Analyzed by: WLR  
 Date: 03/02/99 17:54:00

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. H9-9903032-02

BP Oil Company  
295 SW 41 Street Bldg.13,SteN  
Renton, WA 98055  
ATTN: Scott Hooton

P.O.#  
N/A, COC#118695  
DATE: 03/09/99

PROJECT: #11104, 1716 Webster St.  
SITE: Alameda, CA  
SAMPLED BY: Blaine Tech Services  
SAMPLE ID: B

PROJECT NO: 990224-R1  
MATRIX: WATER  
DATE SAMPLED: 02/24/99 10:02:00  
DATE RECEIVED: 03/02/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	1.0 P	ug/L
BENZENE	ND	1.0 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
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/L

Surrogate

% Recovery

1,4-Difluorobenzene 100  
4-Bromofluorobenzene 100

Method 8020A \*\*\*

Analyzed by: WLR

Date: 03/02/99

Gasoline Range Organics ND 0.05 P mg/L

Surrogate

% Recovery

1,4-Difluorobenzene 97  
4-Bromofluorobenzene 90

California LUFT Manual for Gasoline

Analyzed by: WLR

Date: 03/02/99 21:24:00

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. H9-9903032-03**

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

P.O.#  
 N/A, COC#118695  
 DATE: 03/09/99

PROJECT: #11104, 1716 Webster St.  
 SITE: Alameda, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: C

PROJECT NO: 990224-R1  
 MATRIX: WATER  
 DATE SAMPLED: 02/24/99 10:31:00  
 DATE RECEIVED: 03/02/99

**ANALYTICAL DATA**

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	1.0 P	ug/L
BENZENE	ND	1.0 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
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/L

<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	100
4-Bromofluorobenzene	100

Method 8020A \*\*\*  
 Analyzed by: WLR  
 Date: 03/03/99

Gasoline Range Organics	ND	0.05 P	mg/L
-------------------------	----	--------	------

<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	100
4-Bromofluorobenzene	87

California LUFT Manual for Gasoline  
 Analyzed by: WLR  
 Date: 03/03/99 00:24:00

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. H9-9903032-04

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

P.O.#  
N/A, COC#118695  
DATE: 03/09/99

PROJECT: #11104, 1716 Webster St.  
SITE: Alameda, CA  
SAMPLED BY: Blaine Tech Services  
SAMPLE ID: D

PROJECT NO: 990224-R1  
MATRIX: WATER  
DATE SAMPLED: 02/24/99 11:03:00  
DATE RECEIVED: 03/02/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	8.2	1.0 P	ug/L
BENZENE	ND	1.0 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
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/L

Surrogate

% Recovery

1,4-Difluorobenzene

100

4-Bromofluorobenzene

100

Method 8020A \*\*\*

Analyzed by: WLR

Date: 03/03/99

Gasoline Range Organics

ND

0.05 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

103

4-Bromofluorobenzene

87

California LUFT Manual for Gasoline

Analyzed by: WLR

Date: 03/03/99 00:51:00

(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.

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**HOUSTON LABORATORY**

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

**Certificate of Analysis No. H9-9903032-05**

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

P.O.#  
N/A, COC#118695  
DATE: 03/09/99

**PROJECT:** #11104, 1716 Webster St.  
**SITE:** Alameda, CA  
**SAMPLED BY:** Blaine Tech Services  
**SAMPLE ID:** E

**PROJECT NO:** 990224-R1  
**MATRIX:** WATER  
**DATE SAMPLED:** 02/24/99 11:35:00  
**DATE RECEIVED:** 03/02/99

**ANALYTICAL DATA**

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	190000	1000 P	ug/L
BENZENE	3000	100 P	ug/L
TOLUENE	520	100 P	ug/L
ETHYLBENZENE	2600	100 P	ug/L
TOTAL XYLENE	3200	100 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	9320		ug/L

<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	107
4-Bromofluorobenzene	103

Method 8020A \*\*\*  
Analyzed by: WLR  
Date: 03/03/99

Gasoline Range Organics 82 5 P mg/L

<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	110
4-Bromofluorobenzene	93

California LUFT Manual for Gasoline  
Analyzed by: WLR  
Date: 03/03/99 01:17:00

(P) - Practical Quantitation Limit

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

**QUALITY ASSURANCE:** These analyses are performed in accordance with EPA guidelines for quality assurance.  
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HOUSTON LABORATORY  
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HOUSTON, TEXAS 77054  
PHONE (713) 660-0901

Certificate of Analysis No. H9-9903032-05

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

P.O.#  
N/A, COC#118695  
DATE: 03/09/99

PROJECT: #11104, 1716 Webster St.  
SITE: Alameda, CA  
SAMPLED BY: Blaine Tech Services  
SAMPLE ID: E

PROJECT NO: 990224-R1  
MATRIX: WATER  
DATE SAMPLED: 02/24/99 11:35:00  
DATE RECEIVED: 03/02/99

PARAMETER	ANALYTICAL DATA		DETECTION LIMIT	UNITS
	RESULTS			
MTBE	200000		10000 P	ug/L
Surrogate	% Recovery			
1,2-Dichloroethane-d4		104		
Toluene-d8		108		
4-Bromofluorobenzene		98		
Method 8260B ***				
Analyzed by: GT				
Date: 03/04/99				

(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.

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

Certificate of Analysis No. H9-9903032-06

BP Oil Company  
 295 SW 41 Street Bldg.13,SteN  
 Renton, WA 98055  
 ATTN: Scott Hooton

P.O.#  
 N/A, COC#118695  
 DATE: 03/09/99

PROJECT: #11104, 1716 Webster St.  
 SITE: Alameda, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: F

PROJECT NO: 990224-R1  
 MATRIX: WATER  
 DATE SAMPLED: 02/24/99 12:20:00  
 DATE RECEIVED: 03/02/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	130	1.0 P	ug/L
BENZENE	ND	1.0 P	ug/L
TOLUENE	ND	1.0 P	ug/L
ETHYLBENZENE	1.5	1.0 P	ug/L
TOTAL XYLENE	13	1.0 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	14.5		ug/L

Surrogate % Recovery  
 1,4-Difluorobenzene 107  
 4-Bromofluorobenzene 103

Method 8020A \*\*\*  
 Analyzed by: WLR  
 Date: 03/03/99

Gasoline Range Organics 0.12 0.05 P mg/L

Surrogate % Recovery  
 1,4-Difluorobenzene 103  
 4-Bromofluorobenzene 90

California LUFT Manual for Gasoline  
 Analyzed by: WLR  
 Date: 03/03/99 01:43:00

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

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

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.  
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HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TEXAS 77054  
PHONE (713) 660-0901

Certificate of Analysis No. H9-9903032-06

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

P.O.#  
N/A, COC#118695  
DATE: 03/09/99

PROJECT: #11104, 1716 Webster St.  
SITE: Alameda, CA  
SAMPLED BY: Blaine Tech Services  
SAMPLE ID: F

PROJECT NO: 990224-R1  
MATRIX: WATER  
DATE SAMPLED: 02/24/99 12:20:00  
DATE RECEIVED: 03/02/99

PARAMETER	ANALYTICAL DATA			UNITS
	RESULTS	DETECTION LIMIT		
MTBE	140	10 P		ug/L
Surrogate	% Recovery			
1,2-Dichloroethane-d4	102			
Toluene-d8	108			
4-Bromofluorobenzene	100			
Method 8260B ***				
Analyzed by: GT				
Date: 03/04/99				

(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.

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SPL California License # 1903

*QUALITY CONTROL*

*DOCUMENTATION*

## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL Contract:

Lab Code: Case No: 9902A12 SAS No: SDG No:

Matrix Spike - EPA Sample No: Quail Cleaners Level (low/med): Low

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
1,1-Dichloroethene	50	0	36	72	61-145
Trichloroethene	50	0	46	92	71-120
Benzene	50	0	50	100	76-127
Toluene	50	0	45	90	76-125
Chlorobenzene	50	0	48	96	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC
1,1-Dichloroethene	50	40	80	11	14	61-145
Trichloroethene	50	45	90	2	14	71-120
Benzene	50	49	98	2	11	76-127
Toluene	50	44	88	2	13	76-125
Chlorobenzene	50	51	102	6	13	75-130

# Column to be used to flag recovery and RPD values with an asterisk

RPD: 0 out of 5 outside limits  
 Spike Recovery: 0 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name: Client SDG: m990304  
Sample Matrix: LIQUID Fraction: VOA  
Lab Smp Id: LCS Operator: GT  
Level: LOW SampleType: METHSPIKE  
Data Type: MS DATA Quant Type: ISTD  
SpikeList File: 8240water.spk  
Sublist File: LCS.sub  
Method File: /var/chem/m.i/m990304.b/m8260aw.m  
Misc Info: M063W1//M063CW1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
7 1,1-Dichloroethene	50	55	110.00	61-145
26 Trichloroethene	50	49	98.00	71-120
22 Benzene	50	52	104.00	76-127
33 Toluene	50	50	100.00	76-125
39 Chlorobenzene	50	49	98.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 19 1,2-Dichloroethane	50	57	114.00	80-120
\$ 32 Toluene-d8	50	55	110.00	88-110
\$ 47 Bromofluorobenzene	50	47	94.00	86-115



SPL Blank QC Report

Matrix: Aqueous  
Sample ID: VBLK  
Batch: M990304113701

Reported on: 03/09/99 17:05  
Analyzed on: 03/04/99 11:50  
Analyst: GT

METHOD 8260 M063B01

Compound	Result	Detection Limit	Units
Methyl t-butyl ether	ND	10	ug/L

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	106	80-120	% Recovery
Toluene-d8	106	88-110	% Recovery
Bromofluorobenzene	94	86-115	% Recovery

Samples in Batch 9903032-05 9903032-06

Notes

ND - Not detected.



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

**\*\* SPL BATCH QUALITY CONTROL REPORT \*\***  
 METHOD 8020

Matrix: Aqueous  
 Units: ug/L

Batch Id: HP\_U990302122900

**LABORATORY CONTROL SAMPLE**

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	100	110	110	72 - 128
Benzene	ND	100	110	110	61 - 119
Toluene	ND	100	110	110	65 - 125
EthylBenzene	ND	100	100	100	70 - 118
O Xylene	ND	100	100	100	72 - 117
M & P Xylene	ND	200	210	105	72 - 116

**MATRIX SPIKES**

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	ND	20	22	110	21	105	4.65	20	39 - 150
BENZENE	ND	20	22	110	21	105	4.65	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	21	105	20	100	4.88	18	53 - 143
M & P XYLENE	ND	40	42	105	38	95.0	10.0	17	53 - 144

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

< = Data outside Method Specification limits.

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

ND = Not Detected/Below Detection Limit

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

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

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

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

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

Analyst: WLR

Sequence Date: 03/02/99

SPL ID of sample spiked: 9903029-01A

Sample File ID: U\_C1033.TX0

Method Blank File ID:

Blank Spike File ID: U\_C1026.TX0

Matrix Spike File ID: U\_C1028.TX0

Matrix Spike Duplicate File ID: U\_C1029.TX0

**SAMPLES IN BATCH(SPL ID):**

9903029-03A 9903029-04A 9903029-05A 9903029-06A  
 9903032-02A 9903032-03A 9903032-04A 9903032-05A  
 9902992-08A 9902992-09A 9902992-25A 9902992-32A  
 9902992-33A 9903032-06A 9903029-07A 9903029-05A  
 9903029-06A 9903032-05A 9902992-18A 9903029-01A  
 9903032-01A 9903030-01A 9903029-02A





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

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

Matrix: Aqueous  
 Units: ng/L

Batch Id: HP\_U990302125500

**LABORATORY CONTROL SAMPLE**

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Gasoline Range Organics	ND	1.0	0.82	82.0	64 - 131

**MATRIX SPIKES**

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
GASOLINE RANGE ORGANICS	ND	0.90	0.93	103	0.93	103	0	36	36 - 160

Analyst: WLR  
 Sequence Date: 03/02/99  
 SPL ID of sample spiked: 9903032-01A  
 Sample File ID: UUC1034.TX0  
 Method Blank File ID:  
 Blank Spike File ID: UUC1027.TX0  
 Matrix Spike File ID: UUC1030.TX0  
 Matrix Spike Duplicate File ID: UUC1031.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):**

9903029-04A	9903029-05A	9903029-06A	9903029-07A
9903032-02A	9903032-03A	9903032-04A	9903032-05A
9903032-06A	9902992-08A	9902992-09A	9902992-25A
9902992-32A	9902992-33A	9902992-18A	9903029-01A
9903032-01A	9903029-02A	9903029-03A	

*CHAIN OF CUSTODY*  
*AND*  
*SAMPLE RECEIPT CHECKLIST*



9903032



# CHAIN OF CUSTODY

No. 118695

Page 1 of 1

CONSULTANT'S NAME <b>Blame Tech Services</b>		CONSULTANT'S ADDRESS <b>1680 Rogers Ave San Jose, CA</b>	
BP SITE NUMBER <b>11104</b>	BP SITE / FACILITY ADDRESS <b>1716 Webster St. Alameda, CA</b>		CONSULTANT PROJECT NUMBER <b>990224 R-1</b>
CONSULTANT PROJECT MANGER		PHONE NUMBER	FAX NUMBER
BP CONTACT		BP ADDRESS	PHONE NUMBER
LAB CONTACT		LABORATORY ADDRESS	PHONE NUMBER
BP CONTACT REQUESTING RUSH TAT (Print BP Contact Name)		RUSH REQUESTED OF (Print Consultant Contact Name)	DATE/TIME
		SHIPMENT DATE	SHIPMENT METHOD

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

ANALYSIS REQUIRED

AIRBILL NUMBER **804039489621**

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	LAB SAMPLE #	COMMENTS
				NO.	TYPE (VOL.)			
✓ A	2/24/99	9:31	W	3	V90			<b>RUSH</b>
✓ B	2/24/99	10:02	W	3				
✓ C	2/24/99	10:31	W	3				
✓ D	2/24/99	11:03	W	3				
✓ E	2/24/99	11:35	W	5				
✓ F	2/24/99	12:20	W	5				
								3c

SAMPLER BY (Please Print Name) <b>Jim Rosa</b>			SAMPLER BY (Signature) <i>Jim M. Rosa</i>			ADDITIONAL COMMENTS		
RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY / AFFILIATION (Print Name / Signature)	DATE	TIME			
<i>Jim M. Rosa</i>	3/1/99	1602						
			<i>Melvin S. ...</i>	3/2/99	1000			



# SPL Houston Environmental Laboratory

## Sample Login Checklist

Date: <span style="font-size: 1.2em; font-family: cursive;">3/2/99</span>	Time: <span style="font-size: 1.2em; font-family: cursive;">1000</span>
---	---

SPL Sample ID: <div style="text-align: center; font-size: 1.5em; font-family: cursive; margin-top: 10px;">9903032</div>
--

		Yes	No
1	Chain-of-Custody (COC) form is present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	COC is properly completed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	If no, Non-Conformance Worksheet has been completed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Custody seals are present on the shipping container.	<input type="checkbox"/>	<input type="checkbox"/>
5	If yes, custody seals are intact.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	All samples are tagged or labeled.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7	If no, Non-Conformance Worksheet has been completed.	<input type="checkbox"/>	<input type="checkbox"/>
8	Sample containers arrived intact	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	Temperature of samples upon arrival:	3° C	
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #) <span style="font-size: 1.2em; font-family: cursive;">804039489621</span>	
		Other:	
11	Method of sample disposal:	SPL Disposal	
		HOLD	
		Return to Client	

Name: <span style="font-size: 1.2em; font-family: cursive; display: block;">V. Rockrum</span>	Date: <span style="font-size: 1.2em; font-family: cursive; display: block;">3/2/99</span>
---	---

# Field Data Sheets

