

S. T. Hooton  
Team Leader  
Environmental Remediation Management

ENVIRONMENTAL  
PROTECTION

99 DEC 30 PM 2: 58



BP OIL

BP Exploration & Oil Inc.  
295 SW 41<sup>st</sup> Street, Bldg., 13, STE N  
Renton, WA 98055-4931  
Phone: 425-251-0689  
Fax: 425-251-0736

December 27, 1999

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

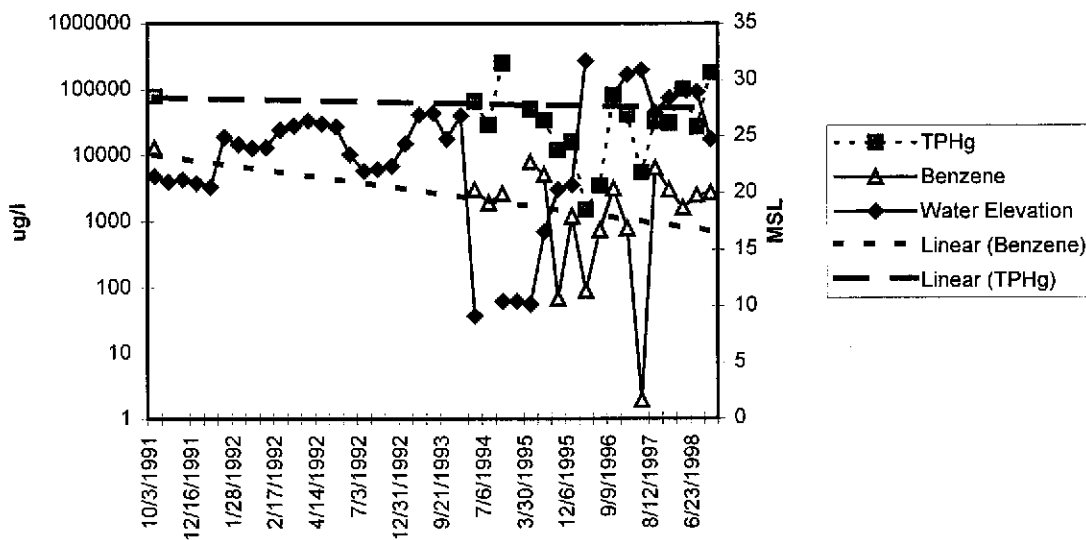
RE: Former BP Oil Site No. 11109  
4280 Foothill Boulevard (at High Street)  
Oakland, CA

Dear Mr. Chan:

Enclosed please find 23 November 1999 *Third Quarter 1999 Groundwater Monitoring* report prepared by Blaine Tech Services on behalf of BP. The report summarizes groundwater monitoring and sampling data obtained since 1990.

Upon review of the results reported this quarter, you will note that aromatic petroleum hydrocarbons were detected in a sample obtained from well MW-5 on 25 August 1999. Benzene, TPHg, and water elevation measurements for well MW-5 are shown below.

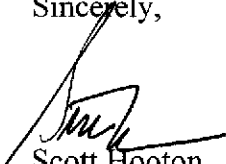
MW-5 TPHg, Benzene & Water Elevation



The trend lines show stable or declining concentration trends for TPHg and benzene.

Please contact me at your earliest convenience to discuss measures necessary to close the file for this site. I can be reached at (425) 251-0689.

Sincerely,



Scott Hooton

attachment

cc: site file  
Phil Briggs - Chevron Products Company, P.O. Box 5004, San Ramon, CA  
94583-0804 (w/attachment)  
David Camille - Tosco (w/attachment)

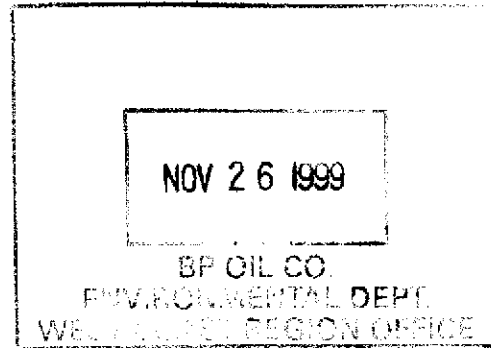
BLAINE  
TECH SERVICES INC.



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

November 23, 1999

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



### 3rd Quarter 1999 Monitoring at 11109

Third Quarter 1999 Groundwater Monitoring  
BP Service Station Number 11109  
4280 Foothill Blvd.  
Oakland, CA

Monitoring Performed on August 25, 1999

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#### Groundwater Sampling Report 990825-L-2

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,

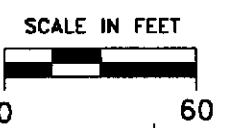
A handwritten signature in black ink, appearing to read 'Francis Thie', written in a cursive style.

Francis Thie  
Vice President

FPT/cm

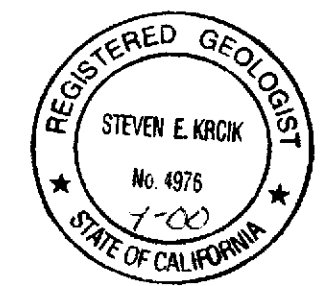
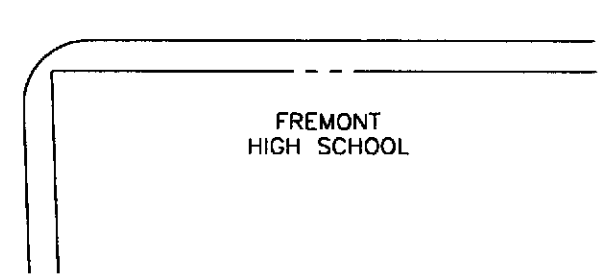
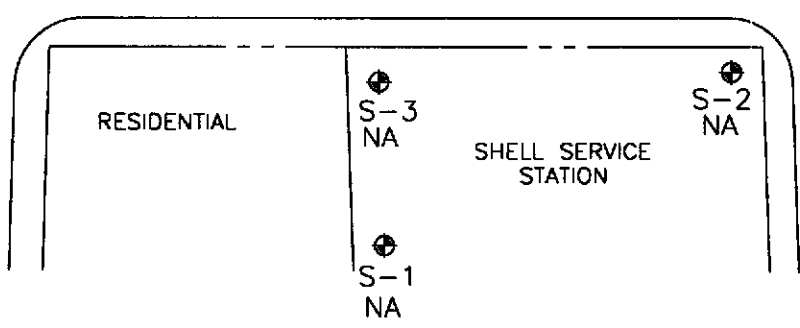
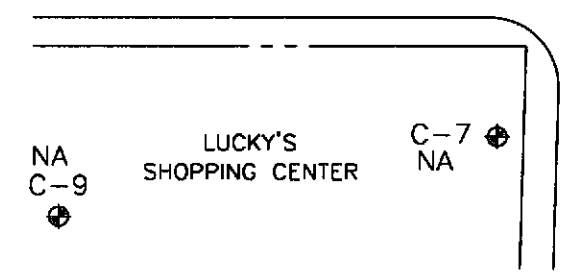
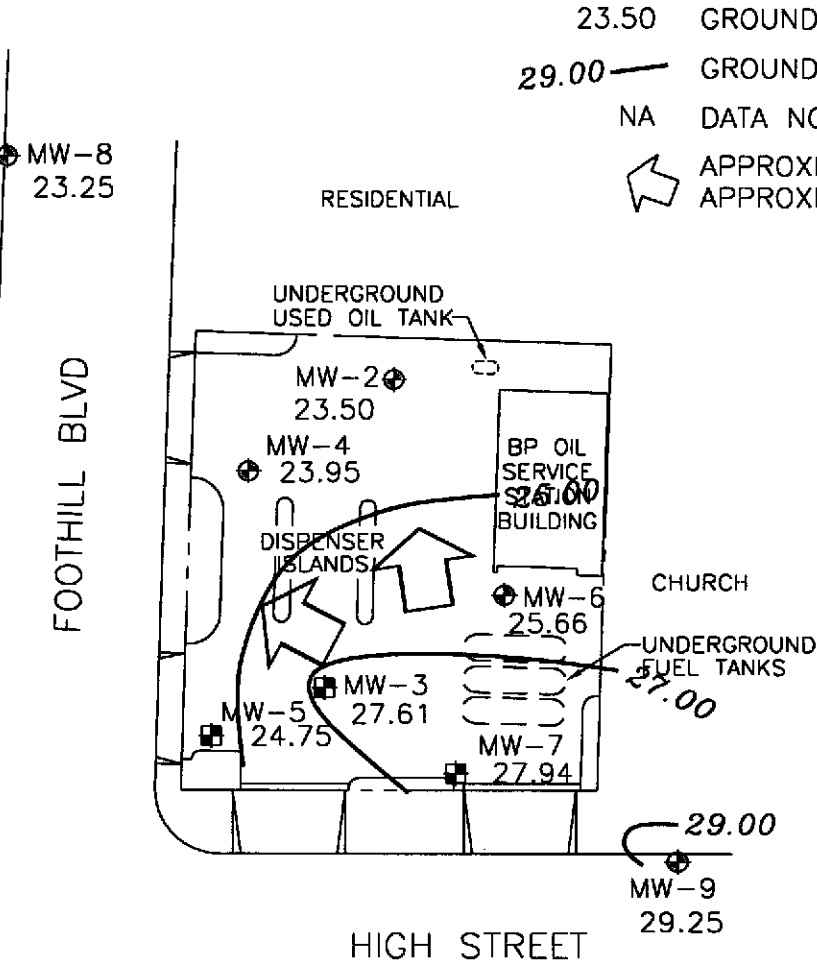
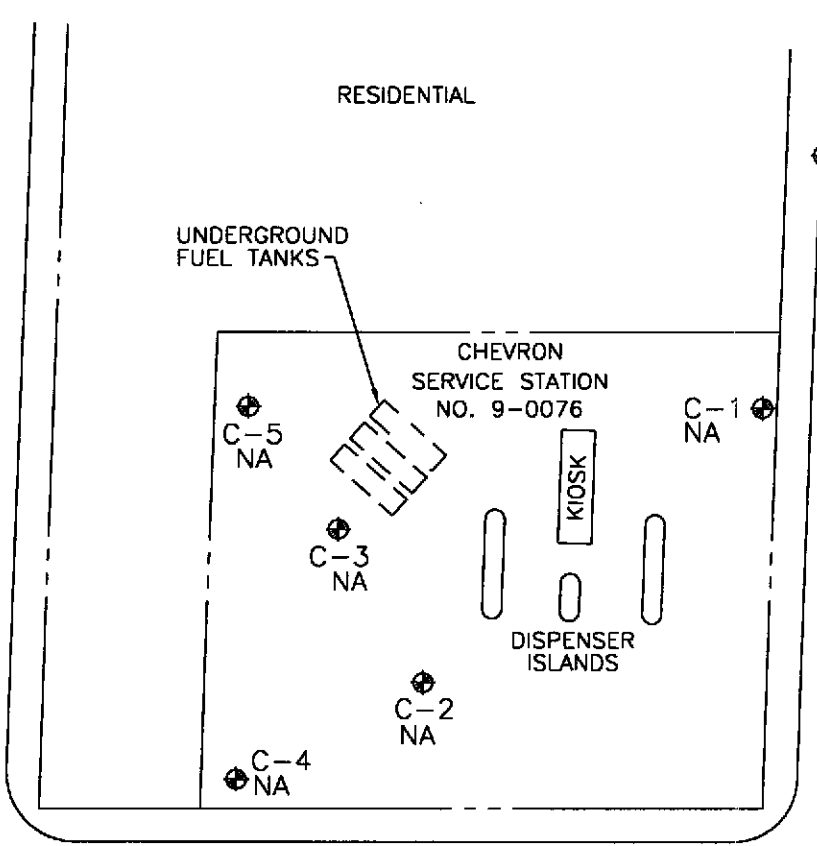
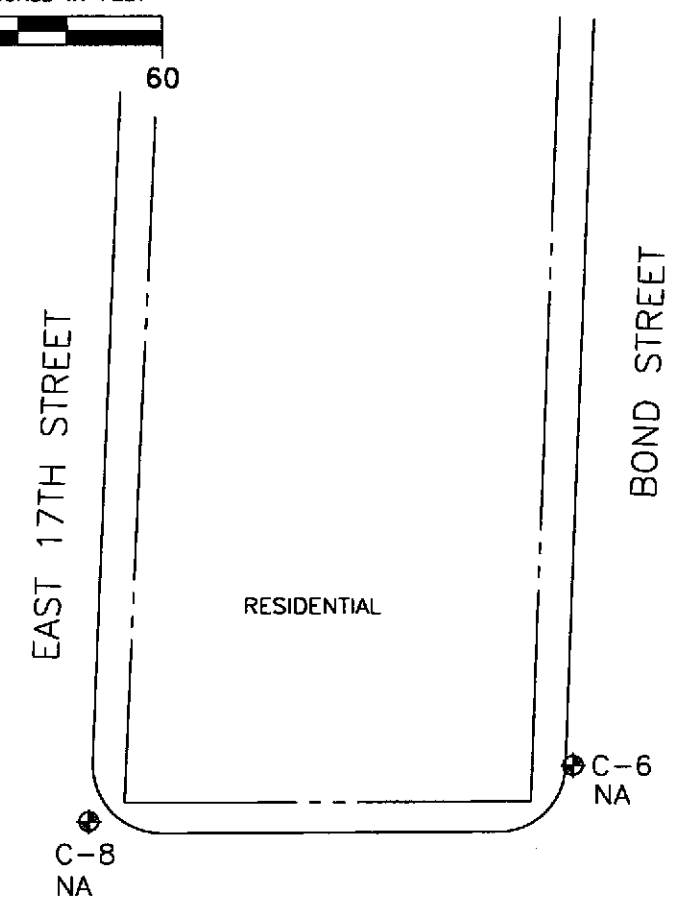
attachments: Professional Engineering Appendix  
Cumulative Table of Well Data and Analytical Results  
Analytical Appendix  
Field Data Sheets

# **Professional Engineering Appendix**



**EXPLANATION**

- ⊕ GROUNDWATER MONITORING WELL
- ⊞ GROUNDWATER RECOVERY WELL
- 23.50 GROUNDWATER ELEVATION (FT, MSL)
- 29.00 — GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- NA DATA NOT AVAILABLE
- ↗ APPROXIMATE GROUNDWATER FLOW DIRECTION;  
APPROXIMATE GRADIENT = 0.02



Ref. 11109bm1.dwg  
Basemap from Alisto Engineering Group

PREPARED BY

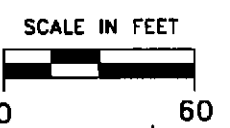
**RRM**

engineering contracting firm

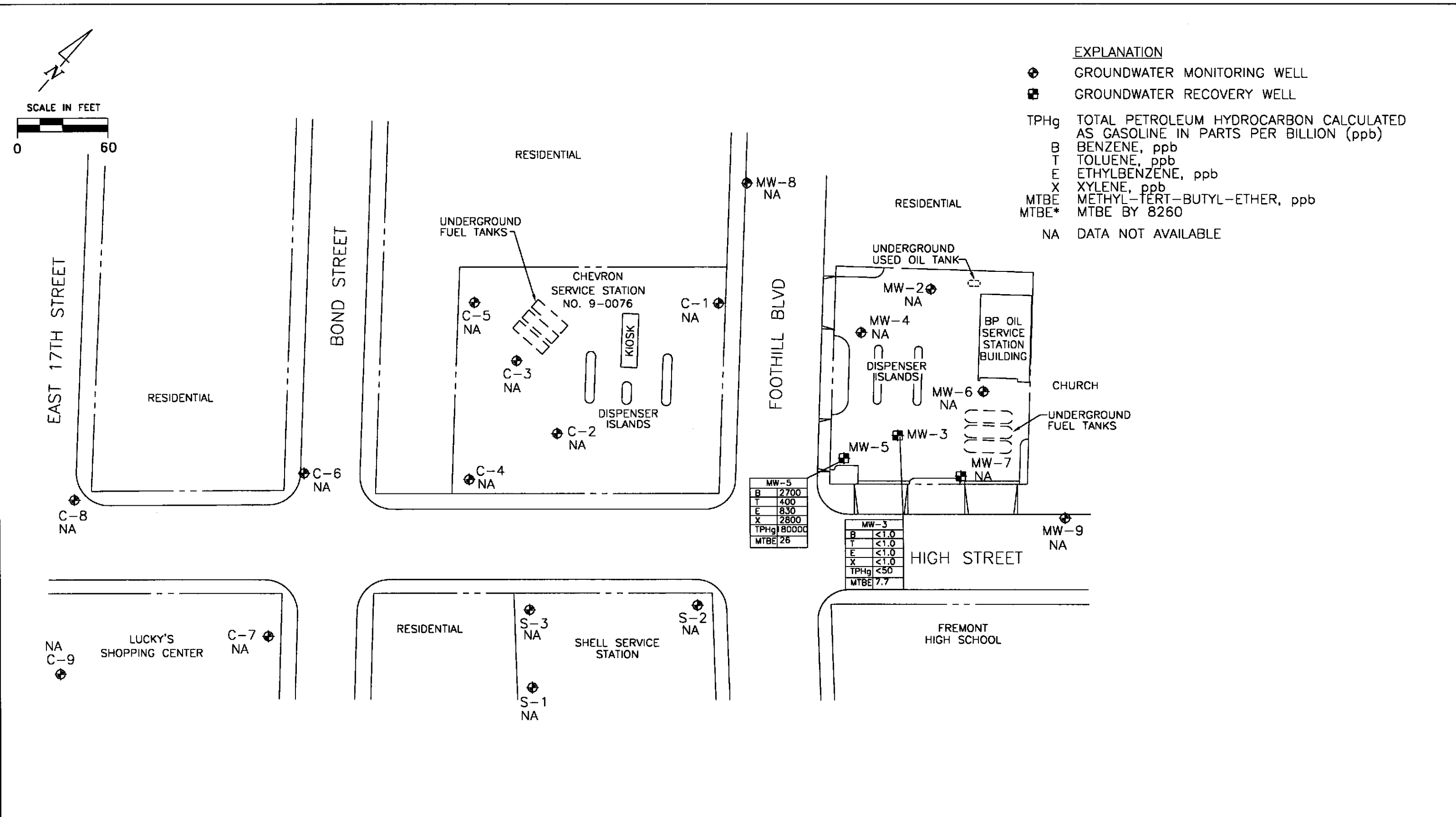
**GROUNDWATER ELEVATION CONTOUR MAP,**  
AUGUST 25, 1999

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

FIGURE:  
**1**  
PROJECT:  
DAC04



- EXPLANATION**
- ⊕ GROUNDWATER MONITORING WELL
  - ⊞ GROUNDWATER RECOVERY 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
  - NA DATA NOT AVAILABLE



MW-5	
B	2700
T	400
E	830
X	2800
TPHg	80000
MTBE	26

MW-3	
B	<1.0
T	<1.0
E	<1.0
X	<1.0
TPHg	<50
MTBE	7.7

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



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-1	01/31/90	38.19	15.41	---	22.78	---	---	---	---	---	---	---	---	---	---	---
MW-1 (c)	02/05/90	38.19	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/05/90	41.22	21.90	---	19.31	1300	---	14	ND<0.1	9	13	---	---	---	---	SUP
MW-2	02/14/91	41.22	21.16	---	20.06	ND<50	ND<10000	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	51 (d)	---	SUP
MW-2	05/13/91	41.22	21.32	---	19.90	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	6000	0.5 (e)	---	SUP
MW-2	07/24/91	41.22	22.92	---	18.30	---	---	---	---	---	---	---	---	---	---	---
MW-2	10/03/91	41.22	24.90	---	16.32	ND<50	ND<50	ND<0.3	0.8	ND<0.3	ND<0.3	---	ND<5000	0.7 (e)	---	SUP
MW-2	10/15/91	41.22	24.10	---	17.12	---	---	---	---	---	---	---	---	---	---	---
MW-2 (f)	12/04/91	41.22	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	12/16/91	41.22	23.95	---	17.27	---	---	---	---	---	---	---	---	---	---	---
MW-2	01/06/92	41.22	23.30	---	17.92	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	ND	---	ANA
MW-2	01/22/92	41.22	23.14	---	18.08	---	---	---	---	---	---	---	---	---	---	---
MW-2	01/28/92	41.22	22.99	---	18.23	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/05/92	41.22	22.63	---	18.59	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/12/92	41.22	22.04	---	19.18	---	---	---	---	---	---	---	---	---	---	---
MW-2	02/17/92	41.22	20.84	---	20.38	---	---	---	---	---	---	---	---	---	---	---
MW-2	04/03/92	41.22	18.29	---	22.93	---	---	---	---	---	---	---	---	---	---	---
MW-2	04/08/92	41.22	18.86	---	22.36	ND<50	63	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	ANA
MW-2	04/14/92	41.22	19.45	---	21.77	---	---	---	---	---	---	---	---	---	---	---
MW-2	04/29/92	41.22	20.35	---	20.87	---	---	---	---	---	---	---	---	---	---	---
MW-2	05/07/92	41.22	20.84	---	20.38	---	---	---	---	---	---	---	---	---	---	---
MW-2	07/03/92	41.22	22.34	---	18.88	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-2	10/08/92	41.22	23.73	---	17.49	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-2	12/31/92	41.22	21.12	---	20.10	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-2	04/21/93	41.22	17.68	---	23.54	ND<50	ND<50 (g)	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	ND	---	PACE
MW-2	07/07/93	41.22	20.30	---	20.92	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	1.0 (e)	---	PACE
MW-2	09/21/93	41.22	21.93	---	19.29	ND<50	---	0.9	0.7	1	2.6	---	---	---	---	PACE
MW-2	12/17/93	41.22	21.48	---	19.74	---	---	---	---	---	---	---	---	---	---	---
MW-2	12/23/93	41.22	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.7	---	---	---	---	PACE
MW-2	04/07/94	41.22	20.25	---	20.97	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	5.9	PACE
MW-2	07/06/94	41.22	20.59	---	20.63	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	3.1	PACE
MW-2	10/07/94	41.22	22.04	---	19.18	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	2.8	PACE
MW-2	01/27/95	41.22	26.12	---	15.10	ND<50	440	ND<0.5	ND<0.5	ND<0.5	ND<1	---	ND<5000	---	4.8	ATI
MW-2	03/30/95	41.22	12.34	---	28.88	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	7.2	ATI
MW-2	06/20/95	41.22	16.42	---	24.80	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	6.0	ATI
MW-2	10/03/95	41.22	20.06	---	21.16	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	5.7	ATI
MW-2	12/06/95	41.22	21.31	---	19.91	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	46	---	---	5.4	ATI
MW-2	03/21/96	41.22	12.28	---	26.94	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	---	---	7.4	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-2	06/21/96	41.22	13.28	---	27.94	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	7.3	SPL
MW-2	09/06/96	41.22	13.94	---	27.28	---	---	---	---	---	---	---	---	---	---	---
MW-2	09/09/96	41.22	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.4	SPL
MW-2	12/19/96	41.22	12.19	---	29.03	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.9	SPL
MW-2	03/17/97	41.22	11.59	---	29.63	---	---	---	---	---	---	---	---	---	---	---
MW-2	08/12/97	41.22	13.21	---	28.01	---	---	---	---	---	---	---	---	---	---	---
MW-2	12/10/97	41.22	12.34	---	28.88	---	---	---	---	---	---	---	---	---	---	---
MW-2	03/12/98	41.22	11.04	---	30.18	---	---	---	---	---	---	---	---	---	---	---
MW-2	06/23/98	41.22	11.77	---	29.45	---	---	---	---	---	---	---	---	---	---	---
MW-2	03/31/99	41.22	12.38	---	28.84	---	---	---	---	---	---	---	---	---	---	---
MW-2	08/25/99	41.22	17.72	---	23.50	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-3	02/05/90	40.74	17.45	---	23.29	1400	---	15	ND<2.5	11	8	---	---	---	---	SUP
MW-3	02/14/91	40.74	18.52	---	22.22	320	---	8	ND<0.3	8	1	---	---	---	---	SUP
MW-3	05/13/91	40.74	19.32	---	21.42	640	---	13	ND<0.3	18	1	---	---	---	---	SUP
MW-3	07/24/91	40.74	20.69	---	20.05	---	---	---	---	---	---	---	---	---	---	---
MW-3	10/03/91	40.74	19.47	---	21.27	940	---	21	ND<0.3	23	2.1	---	---	---	---	SUP
MW-3	10/15/91	40.74	20.46	---	20.28	---	---	---	---	---	---	---	---	---	---	---
MW-3	12/04/91	40.74	18.29	---	22.45	---	---	---	---	---	---	---	---	---	---	---
MW-3	12/16/91	40.74	18.34	---	22.40	---	---	---	---	---	---	---	---	---	---	---
MW-3	01/06/92	40.74	18.50	---	22.24	580	---	6.1	1	6	7.1	---	---	---	---	ANA
MW-3	01/22/92	40.74	17.86	---	22.88	---	---	---	---	---	---	---	---	---	---	---
MW-3	01/28/92	40.74	15.84	---	24.90	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/05/92	40.74	17.53	---	23.21	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/12/92	40.74	17.15	---	23.59	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/17/92	40.74	16.18	---	24.56	---	---	---	---	---	---	---	---	---	---	---
MW-3	04/03/92	40.74	14.80	---	25.94	---	---	---	---	---	---	---	---	---	---	---
MW-3	04/08/92	40.74	17.06	---	23.68	1100	---	30	4.6	32	11	---	---	---	---	ANA
MW-3	04/14/92	40.74	15.22	---	25.52	---	---	---	---	---	---	---	---	---	---	---
MW-3	04/29/92	40.74	15.90	---	24.84	---	---	---	---	---	---	---	---	---	---	---
MW-3	05/07/92	40.74	16.35	---	24.39	---	---	---	---	---	---	---	---	---	---	---
MW-3	07/03/92	40.74	17.74	---	23.00	1200	---	38	ND<2.5	24	ND<2.5	---	---	---	---	ANA
MW-3	10/08/92	40.74	19.06	---	21.68	1400	---	31	ND<0.5	25	13	---	---	---	---	ANA
MW-3	12/31/92	40.74	16.61	---	24.13	820	---	12	4.1	13	5.9	---	---	---	---	ANA
QC-1 (h)	12/31/92	---	---	---	---	960	---	11	3.6	10	3.8	---	---	---	---	ANA
MW-3	04/21/93	40.74	14.24	---	26.50	420	---	5.6	ND<0.5	4	1.4	---	---	---	---	PACE
QC-1 (h)	04/21/93	---	---	---	---	390	---	5.0	ND<0.5	4	1.5	---	---	---	---	PACE
MW-3	07/07/93	40.13	(i) 15.19	---	24.94	54	---	0.6	0.6	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-3	09/21/93	40.13	16.58	---	23.55	540	---	7.9	0.9	5	2.4	---	---	---	---	PACE
MW-3	12/17/93	40.13	15.82	---	24.31	---	---	---	---	---	---	---	---	---	---	---
MW-3	12/23/93	40.13	---	---	---	500	---	9.8	1.5	3	2.1	---	---	---	---	PACE
QC-1 (h)	12/23/93	---	---	---	---	480	---	9.2	ND<0.5	5	5.3	---	---	---	---	PACE
MW-3	04/07/94	40.13	28.50	---	11.63	460	---	20	7.4	9	11	---	---	---	---	PACE
QC-1 (h)	04/07/94	---	---	---	---	460	---	20	7.7	9	11	---	---	---	---	PACE
MW-3	07/06/94	40.13	---	---	---	300	---	10	0.6	2	6.4	---	---	---	4.8	PACE
MW-3	10/07/94	40.13	27.65	---	12.48	620	---	28	ND<0.5	2	12	---	31	(j)	4.4	PACE
MW-3	01/27/95	40.13	27.65	---	12.48	---	---	---	---	---	---	---	---	---	---	---
MW-3	03/30/95	40.13	26.05	---	14.08	300	---	10	6.0	3	18	---	---	---	7.6	ATI
MW-3	06/20/95	40.13	19.49	---	20.64	170	---	7.2	3.4	1	15	---	---	---	---	ATI
MW-3	10/03/95	40.13	24.93	---	15.20	170	---	2.1	ND<0.50	1	8.0	6.7	---	---	---	ATI
MW-3	12/06/95	40.13	25.14	---	14.99	1700	---	6.7	3.1	3	210	64	---	---	---	ATI

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
QC-1 (h)	12/06/95	---	---	---	---	1400	---	6.1	3.0	2	190	53	---	---	---	ATI
MW-3	03/21/96	40.13	9.48	---	30.65	ND<50	---	0.5	ND<1	ND<1	1	ND<10	---	---	7.3	SPL
MW-3	06/21/96	40.13	11.60	---	28.53	ND<50	---	13	ND<1	ND<1	ND<1	12	---	---	7.6	SPL
MW-3	09/06/96	40.13	12.23	---	27.90	---	---	---	---	---	---	---	---	---	---	---
MW-3	09/09/96	40.13	---	---	---	ND<250	---	6.5	ND<5.0	ND<5.0	ND<5.0	ND<50	---	---	7.6	SPL
MW-3	12/19/96	40.13	10.46	---	29.67	ND<50	---	4.1	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	8.4	SPL
MW-3	03/17/97	40.13	9.86	---	30.27	50	---	ND<5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.4	SPL
MW-3	08/12/97	40.13	12.11	---	28.02	ND<50	---	0.79	ND<1.0	ND<1.0	ND<1.0	10	---	---	6.1	SPL
MW-3	12/10/97	40.13	10.90	---	29.23	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	3.2	SPL
MW-3	03/12/98	40.13	10.20	---	29.93	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	6.3	SPL
QC-1 (h)	03/12/98	---	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	SPL
MW-3	06/23/98	40.13	10.17	---	29.96	50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	3.4	SPL
MW-3	03/31/99	40.13	11.45	---	28.68	60	---	ND<1.0	ND<1.0	ND<1.0	ND<1.0	6.2	---	---	---	SPL
MW-3	08/25/99	40.13	12.52	---	27.61	ND<50	---	ND<1.0	ND<1.0	ND<1.0	ND<1.0	7.7	---	---	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-4	02/05/90	40.11	20.75	---	19.36	620	---	ND<0.5	9	ND<0.5	10	---	---	---	---	SUP
MW-4	02/14/91	40.11	21.73	---	18.38	180	---	ND<0.3	ND<0.3	0.4	2	---	---	---	---	SUP
MW-4	05/13/91	40.11	18.55	---	21.56	72	---	0.7	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SUP
MW-4	07/24/91	40.11	21.31	---	18.80	---	---	---	---	---	---	---	---	---	---	---
MW-4	10/03/91	40.11	22.57	---	17.54	57	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	SUP
MW-4	10/15/91	40.11	22.88	---	17.23	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/04/91	40.11	22.54	---	17.57	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/16/91	40.11	22.59	---	17.52	---	---	---	---	---	---	---	---	---	---	---
MW-4	01/06/92	40.11	22.00	---	18.11	480	---	0.8	3.2	2	7.7	---	---	---	---	ANA
MW-4	01/22/92	40.11	21.58	---	18.53	---	---	---	---	---	---	---	---	---	---	---
MW-4	01/28/92	40.11	21.42	---	18.69	---	---	---	---	---	---	---	---	---	---	---
MW-4	02/05/92	40.11	21.10	---	19.01	---	---	---	---	---	---	---	---	---	---	---
MW-4	02/12/92	40.11	20.74	---	19.37	---	---	---	---	---	---	---	---	---	---	---
MW-4	02/17/92	40.11	19.78	---	20.33	---	---	---	---	---	---	---	---	---	---	---
MW-4	04/03/92	40.11	16.80	---	23.31	---	---	---	---	---	---	---	---	---	---	---
MW-4	04/08/92	40.11	17.13	---	22.98	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-4	04/14/92	40.11	17.74	---	22.37	---	---	---	---	---	---	---	---	---	---	---
MW-4	04/29/92	40.11	18.56	---	21.55	---	---	---	---	---	---	---	---	---	---	---
MW-4	05/07/92	40.11	19.10	---	21.01	---	---	---	---	---	---	---	---	---	---	---
MW-4	07/03/92	40.11	20.71	---	19.40	ND<50	---	0.6	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-4	10/08/92	40.11	22.43	---	17.68	270	---	ND<0.5	2.1	3	3.2	---	---	---	---	ANA
MW-4	12/31/92	40.11	19.58	---	20.53	150	---	ND<0.5	ND<0.5	ND<0.5	1.3	---	---	---	---	ANA
MW-4	04/21/93	40.11	17.79	---	22.32	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-4	07/07/93	40.11	18.44	---	21.67	160	---	1.2	5.4	4	19	---	---	---	---	PACE
MW-4	09/21/93	40.11	20.14	---	19.97	71	---	ND<0.5	1.9	ND<0.5	2.1	---	---	---	---	PACE
MW-4	12/17/93	40.11	19.80	---	20.31	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/23/93	40.11	---	---	---	ND<50	---	3.1	1.6	1	3.8	---	---	---	---	PACE
MW-4	04/07/94	40.11	19.12	---	20.99	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	6.6	PACE
MW-4	07/06/94	40.11	19.90	---	20.21	62	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	4.1	PACE
MW-4	10/07/94	40.11	20.07	---	20.04	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	3.6	PACE
MW-4	01/27/95	40.11	13.72	---	26.39	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	2.7	ATI
MW-4	03/30/95	40.11	11.46	---	28.65	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	8.3	ATI
MW-4	06/20/95	40.11	14.78	---	25.33	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
MW-4	10/03/95	40.11	19.62	---	20.49	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	5.0	---	---	5.8	ATI
MW-4	12/06/95	40.11	19.91	---	20.20	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	47	---	---	5.7	ATI
MW-4	03/21/96	40.11	11.12	---	28.99	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	7.8	SPL
MW-4	06/21/96	40.11	12.21	---	27.90	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	7.9	SPL
MW-4	09/06/96	40.11	12.89	---	27.22	---	---	---	---	---	---	---	---	---	---	---
MW-4	09/09/96	40.11	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.2	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-4	12/19/96	40.11	11.01	---	29.10	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	8.4	SPL
MW-4	03/17/97	40.11	10.42	---	29.69	---	---	---	---	---	---	---	---	---	---	---
MW-4	08/12/97	40.11	12.77	---	27.34	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/10/97	40.11	11.22	---	28.89	---	---	---	---	---	---	---	---	---	---	---
MW-4	03/12/98	40.11	10.81	---	29.30	---	---	---	---	---	---	---	---	---	---	---
MW-4	06/23/98	40.11	10.61	---	29.50	---	---	---	---	---	---	---	---	---	---	---
MW-4	03/31/99	40.11	11.46	---	28.65	---	---	---	---	---	---	---	---	---	---	---
MW-4	08/25/99	40.11	16.16	---	23.95	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-5	10/03/91	39.55	18.08	---	21.47	79000	---	13000	7400	1400	6200	---	---	---	---	SUP
MW-5	10/15/91	39.55	18.55	---	21.00	---	---	---	---	---	---	---	---	---	---	---
MW-5	12/04/91	39.55	18.44	0.13	21.21	---	---	---	---	---	---	---	---	---	---	---
MW-5	12/16/91	39.55	18.66	0.01	20.90	---	---	---	---	---	---	---	---	---	---	---
MW-5	01/06/92	39.55	19.12	0.11	20.51	---	---	---	---	---	---	---	---	---	---	---
MW-5	01/22/92	39.55	14.59	---	24.96	---	---	---	---	---	---	---	---	---	---	---
MW-5	01/28/92	39.55	15.25	---	24.30	---	---	---	---	---	---	---	---	---	---	---
MW-5	02/05/92	39.55	15.58	SHEEN	23.97	---	---	---	---	---	---	---	---	---	---	---
MW-5	02/12/92	39.55	15.54	0.01	24.02	---	---	---	---	---	---	---	---	---	---	---
MW-5	02/17/92	39.55	13.98	SHEEN	25.57	---	---	---	---	---	---	---	---	---	---	---
MW-5	04/03/92	39.55	13.63	0.04	25.95	---	---	---	---	---	---	---	---	---	---	---
MW-5	04/06/92	39.55	13.17	0.01	26.39	---	---	---	---	---	---	---	---	---	---	---
MW-5	04/14/92	39.55	13.45	0.01	26.11	---	---	---	---	---	---	---	---	---	---	---
MW-5	04/29/92	39.55	13.75	0.07	25.85	---	---	---	---	---	---	---	---	---	---	---
MW-5	05/07/92	39.55	16.15	0.04	23.43	---	---	---	---	---	---	---	---	---	---	---
MW-5	07/03/92	39.55	17.67	0.08	21.94	---	---	---	---	---	---	---	---	---	---	---
MW-5	09/01/92	39.55	17.83	0.50	22.10	---	---	---	---	---	---	---	---	---	---	---
MW-5	10/06/92	39.55	17.86	0.92	22.38	---	---	---	---	---	---	---	---	---	---	---
MW-5	12/31/92	39.55	15.20	SHEEN	24.35	---	---	---	---	---	---	---	---	---	---	---
MW-5	04/21/93	39.55	12.64	0.02	26.93	---	---	---	---	---	---	---	---	---	---	---
MW-5	07/07/93	39.14	(i) 12.68	0.82	27.08	---	---	---	---	---	---	---	---	---	---	---
MW-5	09/21/93	39.14	14.35	SHEEN	24.79	---	---	---	---	---	---	---	---	---	---	---
MW-5	12/17/93	39.14	12.61	0.41	26.84	---	---	---	---	---	---	---	---	---	---	---
MW-5	04/07/94	39.14	30.00	---	9.14	66000	---	3000	1700	250	6800	---	---	---	---	PACE
MW-5	07/06/94	39.14	---	---	---	29000	---	1900	330	63	2700	---	---	---	---	PACE
MW-5	10/07/94	39.14	28.70	---	10.44	250000	---	2600	660	830	5200	---	---	---	4.2	PACE
QC-1 (h)	10/07/94	---	---	---	---	45000	---	2900	540	260	2600	---	---	---	---	PACE
MW-5	01/27/95	39.14	28.70	---	10.44	---	---	---	---	---	---	---	---	---	---	---
MW-5	03/30/95	39.14	28.95	---	10.19	50000	---	7900	2600	520	6400	---	---	---	5.5	ATI
QC-1 (h)	03/30/95	---	---	---	---	43000	---	7900	2500	440	6200	---	---	---	---	ATI
MW-5	06/20/95	39.14	22.54	---	16.60	34000	---	5100	1900	300	3700	---	---	---	---	ATI
QC-1 (h)	06/20/95	---	---	---	---	26000	---	3500	290	ND<25	3300	---	---	---	---	ATI
MW-5	10/03/95	39.14	18.84	---	20.30	12000	---	68	42	11	1600	330	---	---	---	ATI
QC-1 (h)	10/03/95	---	---	---	---	12000	---	46	39	10	1600	320	---	---	---	ATI
MW-5	12/06/95	39.14	19.07	---	20.07	16000	---	1200	93	51	700	600	---	---	---	ATI
MW-5	03/21/96	39.14	7.43	---	31.71	1500	---	89	28	6	250	ND<10	---	---	7.2	SPL
QC-1 (h)	03/21/96	---	---	---	---	1900	---	92	30	7	270	ND<10	---	---	---	SPL
MW-5	06/21/96	39.14	9.87	---	---	3500	---	740	150	19	400	ND<100	---	---	7.1	SPL
QC-1 (h)	06/21/96	---	---	---	---	2700	---	680	140	20	400	ND<50	---	---	---	SPL

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WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-5	09/06/96	39.14	10.52	---	28.62	---	---	---	---	---	---	---	---	---	---	---
MW-5	09/09/96	39.14	---	---	---	82000	---	3100	1700	850	9100	ND<2500	---	---	7.5	SPL
QC-1 (h)	09/09/96	---	---	---	---	90000	---	2900	1600	670	6900	ND<2500	---	---	---	SPL
MW-5	12/19/96	39.14	8.62	---	30.52	41000	---	790	820	120	2040	ND<500	---	---	7.7	SPL
QC-1 (h)	12/19/96	---	---	---	---	26000	---	490	430	63	1140	ND<500	---	---	---	SPL
MW-5	03/17/97	39.14	8.22	---	30.92	5500	---	1.9	2.4	ND<1.0	ND<1.0	29	---	---	6.4	SPL
QC-1 (h)	03/17/97	---	---	---	---	6600	---	2.5	2.7	ND<1.0	ND<1.0	28	---	---	---	SPL
MW-5	08/12/97	39.14	12.18	0.22	27.13	33000	---	6400	2400	680	4400	ND<1000	---	---	6.8	SPL
QC-1 (h)	08/12/97	---	---	---	---	36000	---	6100	2500	720	4500	ND<500	---	---	---	SPL
MW-5	12/10/97	39.14	10.78	0.06	28.41	31000	---	3000	2500	560	5100	500	---	---	1.8	SPL
QC-1 (h)	12/10/97	---	---	---	---	37000	---	2900	2500	440	4800	---	---	---	---	SPL
MW-5	03/12/98	39.14	10.11	0.22	29.20	100000	---	1600	870	250	2600	ND<250	---	---	6.1	SPL
MW-5	06/23/98	39.14	10.20	0.02	28.96	27000	---	2500	840	370	2900	ND<250	---	---	2.1	SPL
QC-1 (h)	06/23/98	---	---	---	---	27000	---	2600	840	400	2950	ND<500	---	---	---	SPL
MW-5 (f)	03/31/99	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	08/25/99	39.14	14.69	0.38	24.75	180000	---	2700	400	830	2800	26	---	---	---	SPL



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WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-6	10/03/91	41.59	20.73	---	20.86	ND<50	---	0.7	0.8	ND<0.3	1.3	---	---	---	---	SUP
MW-6	10/15/91	41.59	21.20	---	20.39	---	---	---	---	---	---	---	---	---	---	---
MW-6	12/04/91	41.59	21.26	---	20.33	---	---	---	---	---	---	---	---	---	---	---
MW-6	12/16/91	41.59	21.12	---	20.47	---	---	---	---	---	---	---	---	---	---	---
MW-6	01/06/92	41.59	20.29	---	21.30	ND<50	---	ND<0.5	ND<0.5	ND<0.5	1.6	---	---	---	---	ANA
MW-6	01/22/92	41.59	20.12	---	21.47	---	---	---	---	---	---	---	---	---	---	---
MW-6	01/28/92	41.59	20.20	---	21.39	---	---	---	---	---	---	---	---	---	---	---
MW-6	02/05/92	41.59	20.09	---	21.50	---	---	---	---	---	---	---	---	---	---	---
MW-6	02/12/92	41.59	19.15	---	22.44	---	---	---	---	---	---	---	---	---	---	---
MW-6	02/17/92	41.59	18.02	---	23.57	---	---	---	---	---	---	---	---	---	---	---
MW-6	04/03/92	41.59	16.62	---	24.97	---	---	---	---	---	---	---	---	---	---	---
MW-6	04/08/92	41.59	17.06	---	24.53	ND<50	---	0.6	ND<0.5	1	ND<0.5	---	---	---	---	ANA
MW-6	04/14/92	41.59	17.23	---	24.36	---	---	---	---	---	---	---	---	---	---	---
MW-6	04/29/92	41.59	18.12	---	23.47	---	---	---	---	---	---	---	---	---	---	---
MW-6	05/07/92	41.59	18.52	---	23.07	---	---	---	---	---	---	---	---	---	---	---
MW-6	07/03/92	41.59	19.71	---	21.88	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-6	10/08/92	41.59	21.22	---	20.37	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
QC-1 (h)	10/08/92	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-6	12/31/92	41.59	21.33	---	20.26	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-6	04/21/93	41.59	16.45	---	25.14	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-6	07/07/93	41.59	18.68	---	22.91	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	29	(i)	---	PACE
MW-6	09/21/93	41.59	19.64	---	21.95	ND<50	---	ND<0.5	ND<0.5	ND<0.5	1.6	---	---	---	---	PACE
MW-6	12/17/93	41.59	21.08	---	20.51	---	---	---	---	---	---	---	---	---	---	---
MW-6	12/23/93	41.59	---	---	---	ND<50	---	ND<0.5	0.5	ND<0.5	0.6	---	---	---	---	PACE
MW-6	04/07/94	41.59	21.27	---	20.32	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	6.1	PACE
MW-6	07/06/94	41.59	19.81	---	21.78	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	4.0	PACE
QC-1 (h)	07/06/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-6	10/07/94	41.59	21.25	---	20.34	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	24	(j)	---	3.5 PACE
MW-6	01/27/95	41.59	12.39	---	29.20	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	4.2	ATI
MW-6	03/30/95	41.59	11.34	---	30.25	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	6.1	ATI
MW-6	06/20/95	41.59	15.12	---	26.47	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
MW-6	10/03/95	41.59	20.68	---	20.91	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	66	---	---	6.4	ATI
MW-6	12/06/95	41.59	23.77	---	17.82	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	45	---	---	5.7	ATI
MW-6	03/21/96	41.59	11.55	---	30.04	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	41	---	---	9.1	SPL
MW-6	06/21/96	41.59	12.60	---	28.99	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	8.6	SPL
MW-6	09/06/96	41.59	13.25	---	28.34	---	---	---	---	---	---	---	---	---	---	---
MW-6	09/09/96	41.59	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	22/22	(k)	---	7.9	SPL
MW-6	12/19/96	41.59	11.45	---	30.14	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.7	SPL
MW-6	03/17/97	41.59	10.80	---	30.79	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-6	08/12/97	41.59	13.11	---	28.48	---	---	---	---	---	---	---	---	---	---	---
MW-6	12/10/97	41.59	13.84	---	27.75	---	---	---	---	---	---	---	---	---	---	---
MW-6	03/12/98	41.59	11.17	---	30.42	---	---	---	---	---	---	---	---	---	---	---
MW-6	06/23/98	41.59	13.27	---	28.32	---	---	---	---	---	---	---	---	---	---	---
MW-6	03/31/99	41.59	12.91	---	28.68	---	---	---	---	---	---	---	---	---	---	---
MW-6	08/25/99	41.59	15.93	---	25.66	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-7	10/03/91	40.64	14.93	---	25.71	360	---	62	13	3.4	20	---	---	---	---	SUP
MW-7	10/15/91	40.64	15.16	---	25.48	---	---	---	---	---	---	---	---	---	---	---
MW-7	12/04/91	40.64	15.41	---	25.23	---	---	---	---	---	---	---	---	---	---	---
MW-7	12/16/91	40.64	15.21	---	25.43	---	---	---	---	---	---	---	---	---	---	---
MW-7	01/06/92	40.64	14.56	---	26.08	1100	---	170	ND<0.5	24	23	---	---	---	---	ANA
MW-7	01/22/92	40.64	14.63	---	26.01	---	---	---	---	---	---	---	---	---	---	---
MW-7	01/28/92	40.64	14.73	---	25.91	---	---	---	---	---	---	---	---	---	---	---
MW-7	02/05/92	40.64	14.58	---	26.06	---	---	---	---	---	---	---	---	---	---	---
MW-7	02/12/92	40.64	13.94	---	26.70	---	---	---	---	---	---	---	---	---	---	---
MW-7	02/17/92	40.64	13.10	---	27.54	---	---	---	---	---	---	---	---	---	---	---
MW-7	04/03/92	40.64	12.66	---	27.98	---	---	---	---	---	---	---	---	---	---	---
MW-7	04/08/92	40.64	12.77	---	27.87	750	---	150	ND<0.5	23	9.9	---	---	---	---	ANA
MW-7	04/14/92	40.64	13.02	---	27.62	---	---	---	---	---	---	---	---	---	---	---
MW-7	04/29/92	40.64	13.59	---	27.05	---	---	---	---	---	---	---	---	---	---	---
MW-7	05/07/92	40.64	13.95	---	26.69	---	---	---	---	---	---	---	---	---	---	---
MW-7	07/03/92	40.64	14.73	---	25.91	660	---	210	ND<2.5	33	8	---	---	---	---	ANA
MW-7	10/08/92	40.64	15.75	---	24.89	320	---	49	1.4	13	6.2	---	---	---	---	ANA
MW-7	12/31/92	40.64	13.57	---	27.07	900	---	100	ND<2.5	28	4.3	---	---	---	---	ANA
MW-7	04/21/93	40.64	14.56	---	26.08	510	---	83	1.2	10	5.8	---	---	---	---	PACE
MW-7	07/07/93	40.32	(i) 13.40	---	26.92	1100	---	160	2.0	27	4.0	---	---	---	---	PACE
QC-1 (h)	07/07/93	---	---	---	---	1100	---	170	1.9	29	2.8	---	---	---	---	PACE
MW-7	09/21/93	40.32	14.40	---	25.92	690	---	150	3.1	26	5.7	---	---	---	---	PACE
QC-1 (h)	09/21/93	---	---	---	---	640	---	140	1.7	23	2.4	---	---	---	---	PACE
MW-7	12/17/93	40.32	13.65	---	26.67	---	---	---	---	---	---	---	---	---	---	---
MW-7	12/23/93	40.32	---	---	---	250	---	64	1.2	9	1.8	---	---	---	---	PACE
MW-7	04/07/94	40.32	30.62	---	9.70	140	---	32	1.4	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-7	07/06/94	40.32	16.88	---	23.44	410	---	94	1.3	10	3.5	---	---	---	4.4	PACE
MW-7	10/07/94	40.32	25.59	---	14.73	ND<50	---	9.2	ND<0.5	ND<0.5	ND<0.5	---	---	---	4.9	PACE
MW-7	01/27/95	40.32	9.82	---	30.50	810	---	570	3	60	17	---	---	---	0	ATI
QC-1 (h)	01/27/95	---	---	---	---	930	---	620	4	77	21	---	---	---	---	ATI
MW-7	03/30/95	40.32	9.15	---	31.17	180	---	65	0.53	2	ND<1.0	---	---	---	7.8	ATI
MW-7	06/20/95	40.32	11.38	---	28.94	2800	---	980	ND<5.0	ND<5.0	43	---	---	---	---	ATI
MW-7	10/03/95	40.32	29.95	---	10.37	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	ATI
MW-7	12/06/95	40.32	29.85	---	10.47	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	ATI
MW-7	03/21/96	40.32	9.76	---	30.56	1000	---	390	2	40	13	ND<10	---	---	7.4	SPL
MW-7	06/21/96	40.32	11.01	---	29.31	ND<250	---	40	ND<5	ND<5	ND<5	ND<50	---	---	7.4	SPL
MW-7	09/06/96	40.32	11.68	---	28.64	---	---	---	---	---	---	---	---	---	---	---
MW-7	09/09/96	40.32	---	---	---	ND<250	---	13	ND<5.0	ND<5.0	ND<5.0	ND<50	---	---	7.2	SPL
MW-7	12/19/96	40.32	10.78	---	29.54	70	---	1.2	ND<1.0	1	ND<1.0	ND<10	---	---	8.3	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-7	03/17/97	40.32	9.96	---	30.36	---	---	---	---	---	---	---	---	---	---	---
MW-7	08/12/97	40.32	11.44	---	28.88	---	---	---	---	---	---	---	---	---	---	---
MW-7	12/10/97	40.32	10.42	---	29.90	---	---	---	---	---	---	---	---	---	---	---
MW-7	03/12/98	40.32	9.51	---	30.81	---	---	---	---	---	---	---	---	---	---	---
MW-7	06/23/98	40.32	9.98	---	30.34	---	---	---	---	---	---	---	---	---	---	---
MW-7	03/31/99	40.32	10.38	---	29.94	---	---	---	---	---	---	---	---	---	---	---
MW-7	08/25/99	40.32	12.38	---	27.94	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-8	10/03/91	38.18	22.37	---	15.81	ND<50	---	ND<0.3	0.6	ND<0.3	0.9	---	---	---	---	SUP
MW-8	10/15/91	38.18	22.70	---	15.48	---	---	---	---	---	---	---	---	---	---	---
MW-8	12/04/91	38.18	22.44	---	15.74	---	---	---	---	---	---	---	---	---	---	---
MW-8	12/16/91	38.18	22.47	---	15.71	---	---	---	---	---	---	---	---	---	---	---
MW-8	01/06/92	38.18	21.94	---	16.24	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-8	01/22/92	38.18	21.44	---	16.74	---	---	---	---	---	---	---	---	---	---	---
MW-8	01/28/92	38.18	21.20	---	16.98	---	---	---	---	---	---	---	---	---	---	---
MW-8	02/05/92	38.18	20.88	---	17.30	---	---	---	---	---	---	---	---	---	---	---
MW-8	02/12/92	38.18	20.54	---	17.64	---	---	---	---	---	---	---	---	---	---	---
MW-8	02/17/92	38.18	19.99	---	18.19	---	---	---	---	---	---	---	---	---	---	---
MW-8	04/03/92	38.18	16.75	---	21.43	---	---	---	---	---	---	---	---	---	---	---
MW-8	04/08/92	38.18	16.57	---	21.61	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-8 (f)	04/14/92	38.18	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	04/29/92	38.18	18.61	---	19.57	---	---	---	---	---	---	---	---	---	---	---
MW-8	05/07/92	38.18	18.41	---	19.77	---	---	---	---	---	---	---	---	---	---	---
MW-8	07/03/92	38.18	20.35	---	17.83	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-8 (f)	10/08/92	38.18	21.74	---	16.44	---	---	---	---	---	---	---	---	---	---	---
MW-8	12/31/92	38.18	19.09	---	19.09	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
MW-8	04/21/93	38.18	18.92	---	19.26	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-8	07/07/93	38.18	17.76	---	20.42	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
MW-8	09/21/93	38.18	19.71	---	18.47	ND<50	---	2.9	2.2	2	7.1	---	---	---	---	PACE
MW-8	12/17/93	38.18	21.33	---	16.85	---	---	---	---	---	---	---	---	---	---	---
MW-8	12/23/93	38.18	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.6	---	---	---	---	PACE
MW-8	04/07/94	38.18	21.51	---	16.67	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	6.6	PACE
MW-8	07/06/94	38.18	17.41	---	20.77	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	4.4	PACE
MW-8	10/07/94	38.18	19.20	---	18.98	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	3.7	PACE
MW-8	01/27/95	38.18	12.25	---	25.93	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	2.9	ATI
MW-8	03/30/95	38.18	10.35	---	27.83	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	8.3	ATI
MW-8	06/20/95	38.18	13.37	---	24.81	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	6.9	ATI
MW-8 (f)	10/03/95	38.18	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	12/06/95	38.18	18.42	---	19.76	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	47	---	---	5.3	ATI
MW-8 (f)	03/21/96	38.18	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	06/21/96	38.18	13.03	---	25.15	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	7.0	SPL
MW-8	09/06/96	38.18	13.70	---	24.48	---	---	---	---	---	---	---	---	---	---	---
MW-8	09/09/96	38.18	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.0	SPL
MW-8	12/19/96	38.18	11.93	---	26.25	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	7.6	SPL
MW-8	03/17/97	38.18	11.29	---	26.89	---	---	---	---	---	---	---	---	---	---	---
MW-8	08/12/97	38.18	13.73	---	24.45	---	---	---	---	---	---	---	---	---	---	---
MW-8	12/10/97	38.18	11.88	---	26.30	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-8	03/12/98	38.18	11.89	---	26.29	---	---	---	---	---	---	---	---	---	---	---
MW-8	06/23/98	38.18	11.33	---	26.85	---	---	---	---	---	---	---	---	---	---	---
MW-8	03/31/99	38.18	12.68	---	25.50	---	---	---	---	---	---	---	---	---	---	---
MW-8	08/25/99	38.18	14.93	---	23.25	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-9	03/12/98	41.25	9.50	---	31.75	---	---	---	---	---	---	---	---	---	---	---
MW-9	06/23/98	41.25	10.06	---	31.19	---	---	---	---	---	---	---	---	---	---	---
MW-9	03/31/99	41.25	9.06	---	32.19	---	---	---	---	---	---	---	---	---	---	---
MW-9	08/25/99	41.25	12.00	---	29.25	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
QC-2 (I)	10/08/92	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
QC-2 (I)	12/31/92	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	ANA
QC-2 (I)	04/21/93	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	PACE
QC-2 (I)	07/07/93	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.6	---	---	---	---	PACE
QC-2 (I)	09/21/93	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (I)	12/23/93	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (I)	04/07/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (I)	07/06/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (I)	10/07/94	---	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (I)	01/27/95	---	---	---	---	ND<50	---	ND<0.5	0.5	ND<0.5	ND<1	---	---	---	---	ATI
QC-2 (I)	03/30/95	---	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
QC-2 (I)	06/20/95	---	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
QC-2 (I)	10/03/95	---	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	ATI
QC-2 (I)	12/06/95	---	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	ATI
QC-2 (I)	03/21/96	---	---	---	---	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	---	SPL
QC-2 (I)	06/21/96	---	---	---	---	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	---	SPL



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
TOG	Total oil and grease
HVOC	Halogenated volatile organic compounds
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
---	Not analyzed/measured/applicable
ND	Not detected above reported detection limit
SUP	Superior Analytical Laboratory
ANA	Anamatrix, Inc.
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories

NOTES:

- (a) Top of casing elevations surveyed in feet above mean sea level, relative to the NGVD (1929).
- (b) Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.
- (c) Well destroyed during tank removal in November 1990.
- (d) Methylene chloride.
- (e) 1,2-Dichloroethane.
- (f) Well inaccessible.
- (g) Sample collected from MW-2 for TPH-D analysis received in laboratory 7 days after collection; sample exceeded EPA recommended holding time for TPH-D on a water matrix.
- (h) Blind duplicate.
- (i) Top of casing lowered.
- (j) A copy of the documentation for this data is included in Appendix C of Alisto report 10-014-07-001.
- (k) EPA Methods 8020/8260 used.
- (l) Travel blank.

# **Analytical Appendix**



**HOUSTON LABORATORY**

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

September 1, 1999

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

The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on August 28, 1999. The sample(s) was assigned to Certificate of Analysis No. (s) 9908994 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: 99-08-994

Approved for Release by:

*Sonia West*

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

*9-1-99*

\_\_\_\_\_  
Date

Joel Grice  
Laboratory Director

Ted Yen  
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. H9-9908994-01

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

P.O.#  
 N/A, COC#118682  
 DATE: 08/31/99

PROJECT: #11109, 4280 Foothill  
 SITE: Oakland, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: A

PROJECT NO: 990825-L2  
 MATRIX: WATER  
 DATE SAMPLED: 08/25/99 15:55:00  
 DATE RECEIVED: 08/28/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	7.7	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

90

4-Bromofluorobenzene

90

Method 8020A \*\*\*

Analyzed by: WLR

Date: 08/30/99

Gasoline Range Organics

ND 0.050 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

93

4-Bromofluorobenzene

83

California LUFT Manual for Gasoline

Analyzed by: WLR

Date: 08/30/99 20:03:00

(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. H9-9908994-02

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

P.O.#  
 N/A, COC#118682  
 DATE: 08/31/99

PROJECT: #11109, 4280 Foothill  
 SITE: Oakland, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: B

PROJECT NO: 990825-L2  
 MATRIX: WATER  
 DATE SAMPLED: 08/25/99 16:35:00  
 DATE RECEIVED: 08/28/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	26	25 P	ug/L
BENZENE	2700	25 P	ug/L
TOLUENE	400	25 P	ug/L
ETHYLBENZENE	830	25 P	ug/L
TOTAL XYLENE	2800	25 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	6730		ug/L

Surrogate

% Recovery

1,4-Difluorobenzene

133

4-Bromofluorobenzene

79

Method 8020A \*\*\*

Analyzed by: WLR

Date: 08/31/99

Gasoline Range Organics

180

25 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

100

4-Bromofluorobenzene

93

California LUFT Manual for Gasoline

Analyzed by: WLR

Date: 08/31/99 03:18:00

(P) - Practical Quantitation Limit

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

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

*QUALITY CONTROL*

*DOCUMENTATION*



Matrix: Aqueous  
Units: ug/L

Batch Id: HP\_N990830084100

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	44	88.0	72 - 128
Benzene	ND	50	52	104	61 - 119
Toluene	ND	50	53	106	65 - 125
EthylBenzene	ND	50	51	102	70 - 118
O Xylene	ND	50	51	102	72 - 117
M & P Xylene	ND	100	100	100	72 - 116

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

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		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	21		105	20
BENZENE	12	20	31	95.0	30	90.0	5.41	21	32 - 164
TOLUENE	ND	20	23	115	20	100	14.0	20	38 - 159
ETHYLBENZENE	ND	20	21	105	21	105	0	19	52 - 142
O XYLENE	ND	20	21	105	20	100	4.88	18	53 - 143
M & P XYLENE	ND	40	43	108	42	105	2.82	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: 08/30/99

SPL ID of sample spiked: 9908995-01A

Sample File ID: N\_H5026.TX0

Method Blank File ID:

Blank Spike File ID: N\_H5003.TX0

Matrix Spike File ID: N\_H5021.TX0

Matrix Spike Duplicate File ID: N\_H5022.TX0

SAMPLES IN BATCH(SPL ID):

9908A25-02A 9908A25-01A 9908917-04A 9908992-01A  
 9908995-03A 9908993-01A 9908917-05A 9908917-03A  
 9908917-04A 9908916-06A 9908995-02A 9908994-02A  
 9908994-01A 9908995-01A 9908916-03A





\*\* SPL BATCH QUALITY CONTROL REPORT \*\*

California LUFT Manual for Gasoline

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

Matrix: Aqueous

Batch Id: HP\_N990830151300

Units: mg/L

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	0.11	0.90	0.95		93.3	0.99

Analyst: WLR

Sequence Date: 08/30/99

SPL ID of sample spiked: 9908969-03A

Sample File ID: NNH5027.TX0

Method Blank File ID:

Blank Spike File ID: NNH5019.TX0

Matrix Spike File ID: NNH5023.TX0

Matrix Spike Duplicate File ID: NNH5024.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):

9908917-03A 9908917-04A 9908917-05A 9908992-01A  
 9908993-01A 9908994-02A 9908995-02A 9908995-03A  
 9908916-06A 9908995-01A 9908994-01A

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



9908994

**CHAIN OF CUSTODY**

No. 118682

Page 1 of 1

CONSULTANT'S NAME <b>Blain Tech Services, Inc.</b>		CONSULTANT'S ADDRESS <b>1680 Rogers Ave., San Jose, CA 95112</b>		
BP SITE NUMBER <b>11109</b>	BP SITE / FACILITY ADDRESS <b>4280 Foothill, Oakland</b>			CONSULTANT PROJECT NUMBER <b>990825L2</b>
CONSULTANT PROJECT MANGER <b>Doug Sanders</b>	PHONE NUMBER <b>(408)573-0555 X218</b>	FAX NUMBER <b>(408)573-7771</b>	CONSULTANT CONTRACT NUMBER	
BP CONTACT <b>Scott Hooton</b>	BP ADDRESS <b>295 SW 41st St., Renton, WA</b>	PHONE NUMBER <b>(425)251-0689</b>	FAX NO. <b>(425)251-0736</b>	
LAB CONTACT <b>SPL - Sonia West</b>	LABORATORY ADDRESS <b>P.O. Box 20807, Houston, TX</b>	PHONE NUMBER <b>(800)969-6775</b>	FAX NO. <b>(713)660-8975</b>	
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  
**806949645505**

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE LAB SAMPLE #	XTPH-G	XBTEX	XMTBE											COMMENTS	
				NO.	TYPE (VOL.)																
A	8/25/99	1555	H <sub>2</sub> O	3	40ml		X	X	X												
B	8/25/99	1635	H <sub>2</sub> O	3	HCl VOA's		X	X	X												

SAMPLED BY (Please Print Name) <b>Malcolm Salway</b>			SAMPLED BY (Signature) <i>Malcolm Salway</i>				ADDITIONAL COMMENTS <b>30</b> <b>BTB</b>		
RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY / AFFILIATION (Print Name / Signature)	DATE	TIME				
<i>Malcolm Salway</i>	8/27/99	4:00							
			<i>Danna Kelly</i>	8/28	1000				

# SPL Houston Environmental Laboratory

## Sample Login Checklist

Date: 8/28	Time: 1000
------------	------------

SPL Sample ID:

9908994

		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 type="checkbox"/>	<input type="checkbox"/>								
4	Custody seals are present on the shipping container.	<input checked="" 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:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 2px;">SPL Delivery</td> <td style="width: 30%;"></td> </tr> <tr> <td style="padding: 2px;">Client Delivery</td> <td></td> </tr> <tr> <td style="padding: 2px;">FedEx Delivery (airbill #)</td> <td style="padding: 2px;">806949045505</td> </tr> <tr> <td style="padding: 2px;">Other:</td> <td></td> </tr> </table>		SPL Delivery		Client Delivery		FedEx Delivery (airbill #)	806949045505	Other:	
SPL Delivery											
Client Delivery											
FedEx Delivery (airbill #)	806949045505										
Other:											
11	Method of sample disposal:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 2px;">SPL Disposal</td> <td style="width: 30%; text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">HOLD</td> <td></td> </tr> <tr> <td style="padding: 2px;">Return to Client</td> <td></td> </tr> </table>		SPL Disposal	<input checked="" type="checkbox"/>	HOLD		Return to Client			
SPL Disposal	<input checked="" type="checkbox"/>										
HOLD											
Return to Client											

Name: Danna Kelly	Date: 8/28/99
-------------------	---------------

# **Field Data Sheets**



## BP WELL MONITORING DATA SHEET

Project #: <u>990825-12</u>	Station # <u>11109</u>
Sampler: <u>LAD</u>	Date: <u>8/25/99</u>
Well I.D.: <u>MU-3</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 ___
Total Well Depth: <u>31.51</u>	Depth to Water: <u>12.52</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method:	Sampling Method:
Bailer	Bailer
Disposable Bailer	<u>Disposable Bailer</u>
Middleburg	Extraction Port
<u>Electric Submersible</u>	Other: _____
Extraction Pump	
Other: _____	

<u>12.3</u>	x	<u>3-5</u>	=	<u>36.9</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1545	78.5	6.6	1220	13	
1548	76.3	6.8	1245	25	
1549	<del>76.2</del>	6.7	1230	37	
	76.2				

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Gallons actually evacuated: <u>37</u>	
Sampling Time: <u>1555</u>	Sampling Date: <u>8/25/99</u>	
Sample I.D. (Blind): <del>MU-3</del> <u>A</u>	Laboratory: <u>SPL</u> Other: <u>SR</u>	
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>MTBE</u> TPH-D Other:		
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

## BP WELL MONITORING DATA SHEET

Project #: <u>990825-42</u>	Station # <u>11109</u>
Sampler: <u>LAD</u>	Date: <u>8/25/99</u>
Well I.D.: <u>MW-5</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u>    </u>
Total Well Depth: <u>32.08</u>	Depth to Water: <u>14.69</u>
Depth to Free Product: <u>    </u>	Thickness of Free Product (feet): <u>    </u>
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
<u>4"</u>	<u>0.653</u>	Other	radius <sup>2</sup> * 0.163

Purge Method:

Bailer 3" PVC  
 Disposable Bailer  
 Middleburg  
 Electric Submersible  
 Extraction Pump

Sampling Method:

Bailer  
Disposable Bailer  
 Extraction Port

Other:     

Other:     

<u>11.30</u>	x	<u>(3-5)</u>	=	<u>33.9</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<u>1610</u>	<u>74.7</u>	<u>6.7</u>	<u>880</u>	<u>12</u>	<u>Removed approx 250ml SPH</u>
<u><del>1625</del> 1425</u>	<u><del>73.8</del> 73.8</u>	<u>7.0</u>	<u>735</u>	<u>23</u>	
<u><del>1625</del> 1425</u>				<u><del>34</del></u>	<u>De-water at 23 gallons</u>
<u><del>1630</del> 1430</u>		<u>30.34</u>			
<u><del>1633</del> 1433</u>	<u>75.1</u>	<u>6.6</u>	<u>654</u>	<u>    </u>	

Did well dewater? Yes No Gallons actually evacuated: 23

Sampling Time: ~~1425~~ 1435 Sampling Date: 8/25/99

Sample I.D. (Blind): B Laboratory: SPL Other:     

Analyzed for: TPH-C BTEX MTBE TPH-D Other:     

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV