



**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  
Oakland, CA 94502-6577

RE: Former BP Oil Site No. 11266  
1541 Park Street (at Lincoln)  
Alameda, CA

ENVIRONMENTAL  
PROTECTION  
99 MAY 10 PM 3:06

Dear Ms. Chu:

This letter transmits a groundwater monitoring and sampling report dated 26 April 1999 prepared on behalf of BP by Blaine Tech Services.

The enclosed groundwater monitoring and sampling report includes laboratory data for samples collected on 9 March 1999. You will note that aromatic petroleum hydrocarbons were detected in samples obtained from monitoring well MW-1 and MW-3. The highest benzene concentration this quarter (93 µg/l) was detected in a samples obtained from well MW-1, located to the north of the product lines.

MTBE was detected in samples obtained from wells MW-1 (780 µg/l and 700 µg/l [by 8240]), MW-2 (190 µg/l), MW-3 (17000µg/l) and MW-6 (2.9 µg/l) on 9 March 1999.

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

Sincerely,

Scott Hooton  
Environmental Remediation Management

attachment

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

*Keep eye on MW-3 concentrations next sample. went. This qtr was 1st time for gas (17,000 ppb) and mtbe (17,000 ppb) in this well.*

**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 11266**

First Quarter 1999 Groundwater Monitoring  
BP Service Station Number 11266  
1541 Park Street  
Alameda, CA

Monitoring Performed on March 9, 1999

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### **Groundwater Sampling Report 990309-G-3**

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.

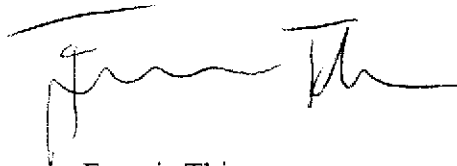
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL DATA AND ANALYTICAL RESULTS**. The full analytical report for the most recent samples is located in the **Analytical Appendix**. The **Professional Engineering Appendix** 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,

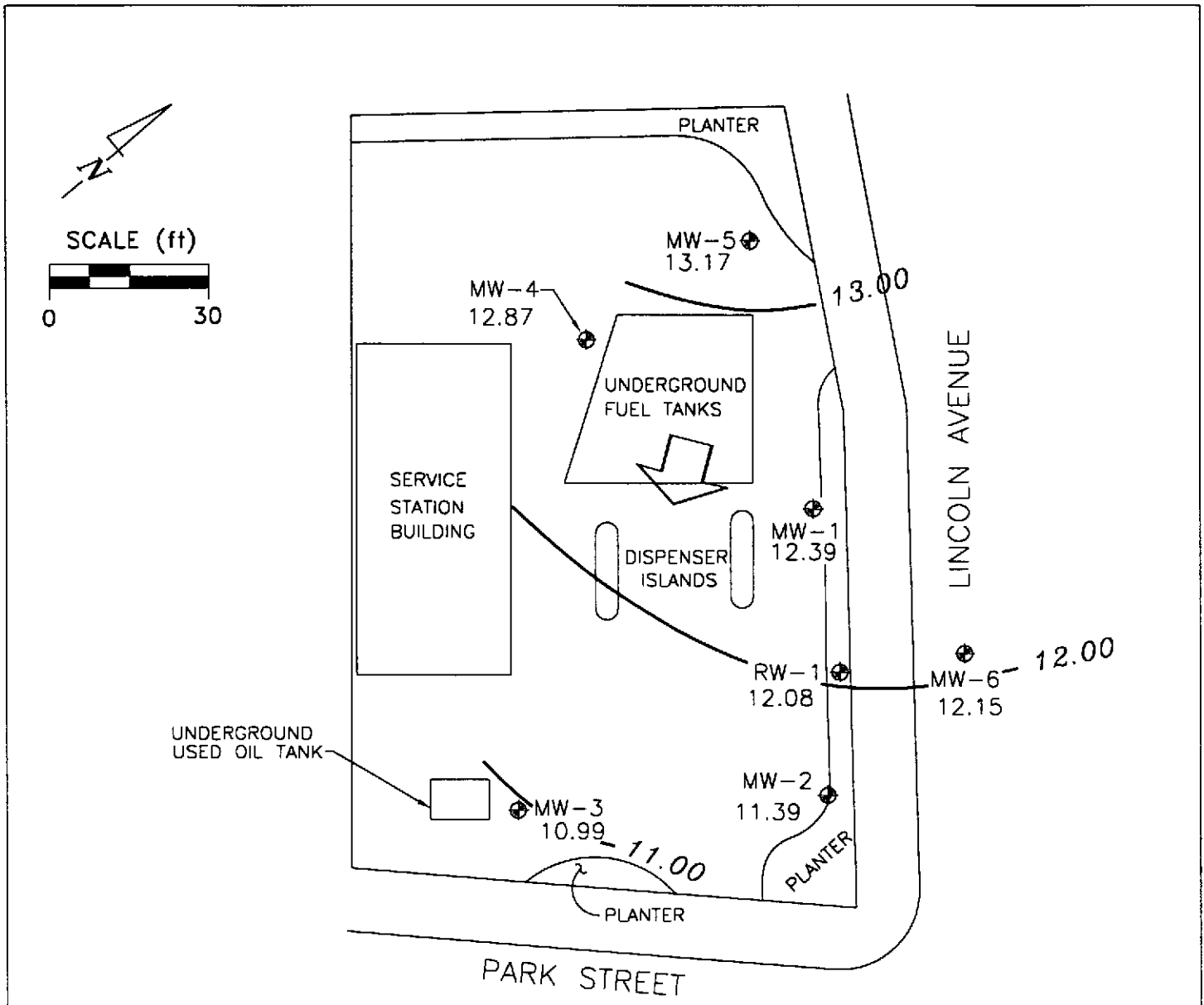
A handwritten signature in black ink, appearing to read 'Francis Thie', written in a cursive style.

Francis Thie  
Vice President

FPT/ld

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

# **Professional Engineering Appendix**



- EXPLANATION**
- ⊕ GROUNDWATER MONITORING WELL
  - 12.39 GROUNDWATER ELEVATION (FT, MSL)
  - 12.00 — GROUNDWATER ELEVATION CONTOUR (FT, MSL)
  - ↓ APPROXIMATE GROUNDWATER FLOW DIRECTION; APPROXIMATE GRADIENT = 0.02



Ref. 11266bm.dwg  
Basemap from Alisto Engineering Group

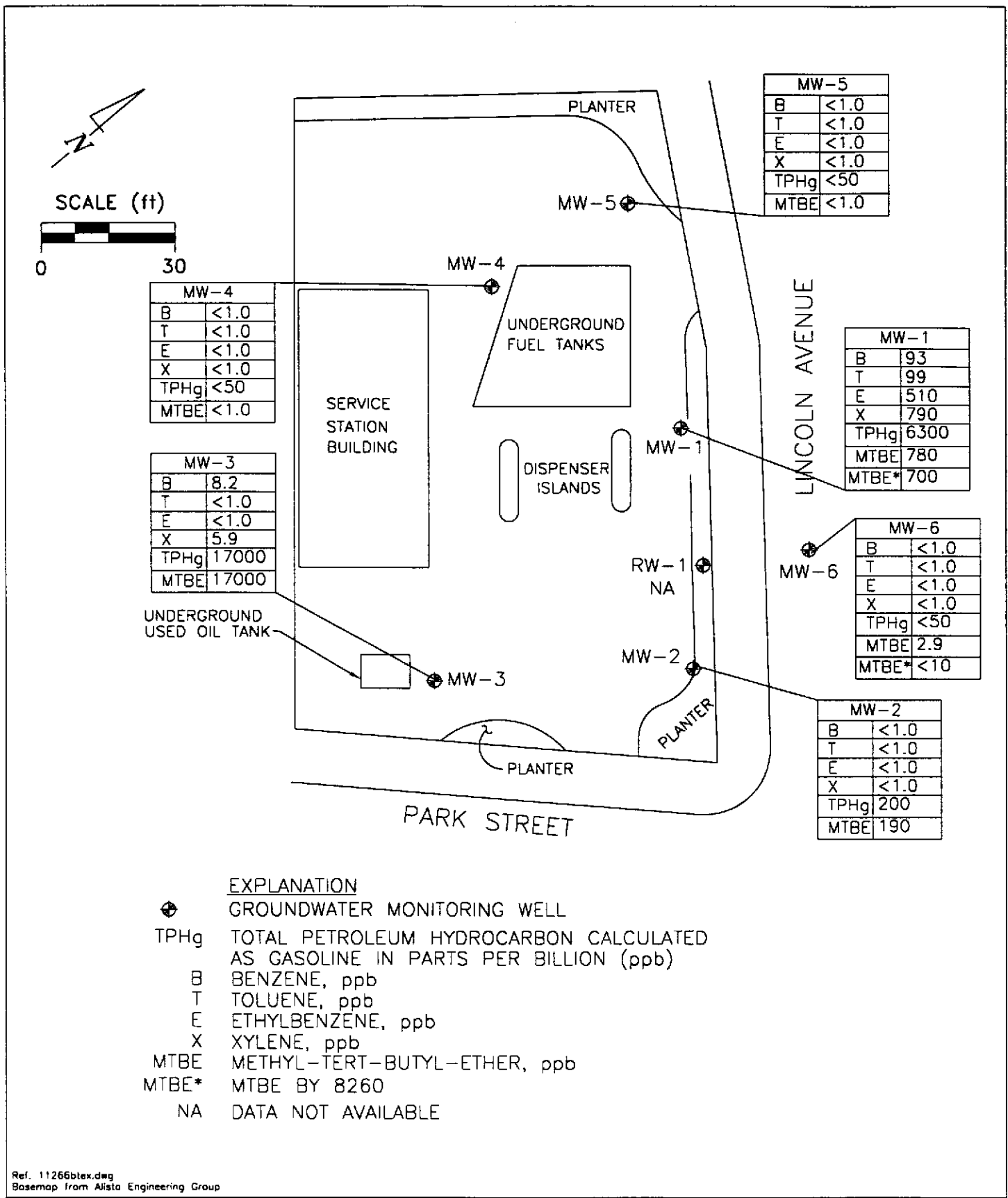
PREPARED BY

**RRM**  
engineering contracting firm

BP Oil Service Station No. 11266  
1541 Park Street  
Alameda, California

GROUNDWATER ELEVATION CONTOUR MAP,  
MARCH 9, 1999

FIGURE:  
**1**  
PROJECT:  
DAC04



PREPARED BY

**RRM**  
engineering contracting firm

**BP Oil Service Station No. 11266**  
1541 Park Street  
Alameda, California

**HYDROCARBON CONCENTRATION MAP,  
MARCH 9, 1999**

**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 (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-1	03/04/88	19.19	---	---	95000	2000	5900	1100	10000	---	---	---
MW-1	03/29/89	19.19	---	---	25000	930	2600	24	3100	---	---	---
MW-1	11/28/89	19.19	---	---	15000	280	880	340	1200	---	---	---
MW-1	02/13/91	19.19	---	---	25000	680	2700	1100	3200	---	---	---
MW-1	01/08/92	19.19	---	---	10000	260	1100	570	2000	---	---	---
MW-1	03/30/92	19.19	8.15	11.04	5800	290	570	500	1100	---	---	PACE
MW-1	07/02/92	19.19	9.38	9.81	2500	170	60	310	300	---	---	ANA
MW-1	07/22/92	19.19	9.62	9.57	---	---	---	---	---	---	---	---
MW-1	10/02/92	19.19	9.98	9.21	4000	86	190	270	350	---	---	ANA
QC-1 (c)	10/02/92	---	---	---	3600	89	180	270	340	---	---	ANA
MW-1	12/14/92	19.19	9.90	9.29	6800	75	540	200	670	---	---	ANA
QC-1 (c)	12/14/92	---	---	---	5900	68	480	190	600	---	---	ANA
MW-1	03/24/93	19.19	8.52	10.67	6400	150	310	370	710	1400	(d) ---	PACE
MW-1	06/17/93	19.19	9.37	9.82	3800	110	160	310	480	220	(d) ---	PACE
MW-1	09/29/93	19.19	10.80	8.39	1100	22	16	54	110	320	(d) ---	PACE
MW-1	12/28/93	19.19	9.27	9.92	1800	26	110	77	300	220	(d) ---	PACE
MW-1	03/29/94	19.19	8.77	10.42	22000	990	560	970	2000	---	3.1	PACE
MW-1	07/07/94	19.19	9.18	10.01	18000	67	32	250	140	30000	(d) ---	PACE
MW-1	10/18/94	19.19	9.85	9.34	270	1.9	0.6	ND<0.5	3.2	---	3.6	PACE
MW-1	02/01/95	19.19	7.04	12.15	5400	260	350	1100	980	---	6.5	ATI
MW-1	04/12/95	19.19	7.74	11.45	13000	260	620	960	2600	---	5.0	ATI
MW-1	09/13/95	19.19	9.58	9.61	5800	110	110	510	830	4300	5.2	ATI
QC-1 (c)	09/13/95	---	---	---	5800	110	100	490	800	4500	---	ATI
MW-1	01/11/96	19.19	8.95	10.24	5400	91	130	510	1000	1700	5.2	ATI
QC-1 (c)	01/11/96	---	---	---	5100	89	120	490	950	2000	---	ATI
MW-1	04/18/96	19.19	8.40	10.79	12000	190	420	1100	1560	2100	4.5	SPL
QC-1 (c)	04/18/96	---	---	---	12000	190	390	1100	1440	2000	---	SPL
MW-1	06/28/96	19.19	9.08	10.11	11000	100	130	670	1180	4600	---	SPL
QC-1 (c)	06/28/96	---	---	---	11000	100	140	690	1290	4600	---	SPL
MW-1	11/05/96	19.19	9.81	9.38	8800	55	28	520	430	5700	5.5	SPL
QC-1 (c)	11/05/96	---	---	---	8800	48	ND<25	490	413	5600	---	SPL
MW-1	01/17/97	19.19	7.81	11.38	12000	180	160	1200	1650	3200	8.0	SPL
QC-1 (c)	01/17/97	---	---	---	13000	190	160	1200	1770	3200	---	SPL
MW-1	05/01/97	19.19	9.13	10.06	8600	160	49	950	850	3200	7.0	SPL
QC-1 (c)	05/01/97	---	---	---	9000	160	39	940	820	3100	---	SPL
MW-1	07/09/97	19.19	9.55	9.64	10000	93	27	720	476	4500	6.3	SPL
QC-1 (c)	07/09/97	---	---	---	7600	42	13	340	175	4300	---	SPL
MW-1	10/16/97	19.19	9.77	9.42	2100	71	14	420	194	500	6.8	SPL
QC-1 (c)	10/16/97	---	---	---	2600	80	17	500	276	510	---	SPL



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet) (a)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l) (b)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-1	01/08/98	19.19	8.36	10.83	2500	33	21	180	183	1200	6.1	SPL
QC-1 (c)	01/08/98	---	---	---	2400	32	20	170	154	1300	---	SPL
MW-1	04/17/98	19.19	7.48	11.71	14000	140	410	730	1980	2400	3.7	SPL
QC-1 (c)	04/17/98	---	---	---	14000	140	460	770	2220	2500	---	SPL
MW-1	09/11/98	19.19	9.30	9.89	7700	65	38	580	880	1700	5.6	SPL
QC-1 (c)	09/11/98	---	---	---	10000	81	59	710	1410	1800	---	SPL
MW-1	03/09/99	19.19	6.80	12.39	6300	93	99	510	790	780/700 (f)	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet) (a)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l) (b)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-2	03/04/88	19.32	---	---	ND	ND	ND	ND	ND	---	---	---
MW-2	03/29/89	19.32	---	---	ND	1.1	0.78	ND	1.7	---	---	---
MW-2	11/28/89	19.32	---	---	170	ND	ND	ND	ND	---	---	---
MW-2	02/13/91	19.32	---	---	150	1.4	ND	ND	0.9	---	---	---
MW-2	01/08/92	19.32	---	---	ND	1.4	ND	ND	1.1	---	---	---
MW-2	03/30/92	19.32	9.03	10.29	91	0.7	ND	ND	ND	---	---	PACE
MW-2	07/02/92	19.32	9.96	9.36	150	3.1	0.6	0.6	1.1	---	---	ANA
MW-2	07/22/92	19.32	10.12	9.20	---	---	---	---	---	---	---	---
MW-2	10/02/92	19.32	10.42	8.90	56	ND<0.5	0.8	0.8	1.2	---	---	ANA
MW-2	12/14/92	19.32	10.77	8.55	210	1.5	ND<0.5	0.9	2.7	---	---	ANA
MW-2	03/24/93	19.32	9.33	9.99	94	0.8	ND<0.5	ND<0.5	0.9	---	---	PACE
QC-1 (c)	03/24/93	---	---	---	150	1.8	0.6	1.3	1.3	---	---	PACE
MW-2	06/17/93	19.32	9.91	9.41	ND<50	ND<0.5	ND<0.5	ND<0.5	0.7	23	(d) ---	PACE
MW-2	09/29/93	19.32	11.39	7.93	68	ND<0.5	0.9	0.7	1.9	59	(d) ---	PACE
MW-2	12/28/93	19.32	9.75	9.57	260	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1300	(d) ---	PACE
QC-1 (c)	12/28/93	---	---	---	240	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1100	(d) ---	PACE
MW-2	03/29/94	19.32	9.39	9.93	150	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1600	(d) 4.9	PACE
QC-1 (c)	03/29/94	---	---	---	140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1600	(d) ---	PACE
MW-2	07/07/94	19.32	9.68	9.64	1100	0.6	1.7	0.6	3.2	2000	(d) ---	PACE
MW-2	10/18/94	19.32	10.22	9.10	290	3.1	0.8	ND<0.5	5.1	---	3.3	PACE
MW-2	02/01/95	19.32	8.03	11.29	100	ND<0.5	ND<0.5	ND<0.5	ND<1	---	6.0	ATI
MW-2	04/12/95	19.32	8.71	10.61	1200	ND<1.0	ND<1.0	ND<1.0	ND<2.0	---	8.3	ATI
MW-2	09/13/95	19.32	10.19	9.13	480	ND<2.5	ND<2.5	ND<2.5	ND<5.0	2300	7.8	ATI
MW-2	01/11/96	19.32	9.59	9.73	3400	ND<25	ND<25	ND<25	ND<50	11000	5.4	ATI
MW-2	04/18/96	19.32	9.04	10.28	130	ND<0.5	ND<1	ND<1	ND<1	170	5.5	SPL
MW-2	06/28/96	19.32	9.72	9.60	300	ND<0.5	ND<1	ND<1	ND<1	430	4.9	SPL
MW-2	11/05/96	19.32	10.43	8.89	710	ND<2.5	ND<5.0	ND<5.0	ND<5.0	960	5.3	SPL
MW-2	01/17/97	19.32	8.80	10.52	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	24	5.3	SPL
MW-2	05/01/97	19.32	10.06	9.26	80	ND<0.5	ND<1.0	ND<1.0	ND<1.0	100	5.2	SPL
MW-2	07/09/97	19.32	10.50	8.82	150	ND<0.5	ND<1.0	ND<1.0	ND<1.0	170	4.3	SPL
MW-2	10/16/97	19.32	10.18	9.14	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	260	5.0	SPL
MW-2	01/08/98	19.32	9.04	10.28	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	18	4.4	SPL
MW-2	04/17/98	19.32	8.56	10.76	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	3.9	SPL
MW-2	09/11/98	19.32	9.79	9.53	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.1	SPL
MW-2	03/09/99	19.32	7.93	11.39	200	ND<1.0	ND<1.0	ND<1.0	ND<1.0	190	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (a) (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (b) (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-3	03/04/88	19.99	---	---	ND	ND	ND	ND	ND	---	---	---
MW-3	03/29/89	19.99	---	---	ND	ND	ND	ND	ND	---	---	---
MW-3	11/28/89	19.99	---	---	ND	ND	ND	ND	ND	---	---	---
MW-3	02/13/91	19.99	---	---	ND	ND	ND	ND	ND	---	---	---
MW-3	01/08/92	19.99	---	---	ND	ND	ND	ND	ND	---	---	---
MW-3	03/30/92	19.99	9.71	10.28	ND	ND	ND	ND	ND	---	---	PACE
MW-3	07/02/92	19.99	10.52	9.47	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-3	07/22/92	19.99	10.62	9.37	---	---	---	---	---	---	---	---
MW-3	10/02/92	19.99	10.86	9.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-3	12/14/92	19.99	10.53	9.46	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-3	03/24/93	19.99	9.06	10.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-3	06/17/93	19.99	10.44	9.55	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-3	09/29/93	19.99	11.06	8.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-3	12/28/93	19.99	9.43	10.56	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-3	03/29/94	19.99	10.01	9.98	---	---	---	---	ND<0.5	---	---	---
MW-3	07/07/94	19.99	10.14	9.85	ND<50	ND<0.5	0.7	ND<0.5	ND<0.5	---	---	PACE
QC-1 (c)	07/07/94	---	---	---	ND<50	ND<0.5	0.7	ND<0.5	ND<0.5	---	---	PACE
MW-3	10/18/94	19.99	10.56	9.43	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	3.2	PACE
MW-3	02/01/95	19.99	8.98	11.01	ND<50	ND<0.5	1.0	0.5	1.9	---	5.9	ATI
MW-3	04/12/95	19.99	9.70	10.29	---	---	---	---	---	---	---	---
MW-3	09/13/95	19.99	10.70	9.29	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	5.7	ATI
MW-3	01/11/96	19.99	10.18	9.81	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	5.5	ATI
MW-3	04/18/96	19.99	9.53	10.46	---	---	---	---	---	---	---	---
MW-3	06/28/96	19.99	9.21	10.78	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.3	SPL
MW-3	11/05/96	19.99	9.94	10.05	---	---	---	---	---	---	---	---
MW-3	01/17/97	19.99	9.29	10.70	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.0	SPL
MW-3	05/01/97	19.99	10.53	9.46	---	---	---	---	---	---	---	---
MW-3	07/09/97	19.99	10.92	9.07	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.0	SPL
MW-3	10/16/97	19.99	11.24	8.75	---	---	---	---	---	---	---	---
MW-3	01/08/98	19.99	10.12	9.87	---	---	---	---	---	---	---	---
MW-3	04/17/98	19.99	9.62	10.37	---	---	---	---	---	---	---	---
MW-3	09/11/98	19.99	10.83	9.16	---	---	---	---	---	---	---	---
MW-3	03/09/99	19.99	9.00	10.99	17000	8.20	ND<1.0	ND<1.0	5.90	17000	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-4	03/04/88	20.17	---	---	ND	ND	ND	ND	ND	---	---	---
MW-4	03/29/89	20.17	---	---	ND	ND	ND	ND	ND	---	---	---
MW-4	11/28/89	20.17	---	---	430	6.2	0.6	12	3.3	---	---	---
MW-4	02/13/91	20.17	---	---	ND	ND	ND	ND	ND	---	---	---
MW-4	01/08/92	20.17	---	---	ND	ND	ND	ND	ND	---	---	---
MW-4	03/30/92	20.17	8.73	11.44	ND	ND	ND	ND	ND	---	---	PACE
MW-4	07/02/92	20.17	10.04	10.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-4	07/22/92	20.17	10.26	9.91	---	---	---	---	---	---	---	---
MW-4	10/02/92	20.17	10.63	9.54	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-4	12/14/92	20.17	10.02	10.15	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-4	03/24/93	20.17	9.08	11.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-4	06/17/93	20.17	10.03	10.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-4	09/29/93	20.17	10.96	9.21	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-4	12/28/93	20.17	9.33	10.84	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-4	03/29/94	20.17	9.42	10.75	---	---	---	---	---	---	---	---
MW-4	07/07/94	20.17	9.82	10.35	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-4	10/18/94	20.17	10.36	9.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	3.1	PACE
MW-4	02/01/95	20.17	7.50	12.67	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	9.3	ATI
MW-4	04/12/95	20.17	8.21	11.96	---	---	---	---	---	---	---	---
MW-4	09/13/95	20.17	10.20	9.97	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	4.3	ATI
MW-4	01/11/96	20.17	9.57	10.60	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	5.1	ATI
MW-4	04/18/96	20.17	9.03	11.14	---	---	---	---	---	---	---	---
MW-4	06/28/96	20.17	8.73	11.44	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.6	SPL
MW-4	11/05/96	20.17	9.47	10.70	---	---	---	---	---	---	---	---
MW-4	01/17/97	20.17	8.79	11.38	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.4	SPL
MW-4	05/01/97	20.17	10.08	10.09	---	---	---	---	---	---	---	---
MW-4	07/09/97	20.17	10.52	9.65	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.1	SPL
MW-4	10/16/97	20.17	10.85	9.32	---	---	---	---	---	---	---	---
MW-4	01/08/98	20.17	9.60	10.57	---	---	---	---	---	---	---	---
MW-4	04/17/98	20.17	9.11	11.06	---	---	---	---	---	---	---	---
MW-4	09/11/98	20.17	10.32	9.85	---	---	---	---	---	---	---	---
MW-4	03/09/99	20.17	7.30	12.87	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 (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-5	03/04/88	19.41	---	---	ND	ND	ND	ND	ND	---	---	---
MW-5	03/29/89	19.41	---	---	ND	ND	ND	ND	ND	---	---	---
MW-5	11/28/89	19.41	---	---	ND	ND	ND	ND	ND	---	---	---
MW-5	02/13/91	19.41	---	---	ND	ND	ND	ND	ND	---	---	---
MW-5	01/08/92	19.41	---	---	ND	ND	ND	ND	ND	---	---	---
MW-5	03/30/92	19.41	7.85	11.56	ND	ND	ND	ND	ND	---	---	PACE
MW-5	07/02/92	19.41	9.27	10.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-5	07/22/92	19.41	9.55	9.86	---	---	---	---	---	---	---	---
MW-5	10/02/92	19.41	9.97	9.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-5	12/14/92	19.41	9.14	10.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-5	03/24/93	19.41	8.17	11.24	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-5	06/17/93	19.41	8.29	11.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-1 (c)	06/17/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-5	09/29/93	19.41	10.31	9.10	ND<50	ND<0.5	ND<0.5	ND<0.5	0.6	---	---	PACE
MW-5	12/28/93	19.41	8.91	10.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-5	03/29/94	19.41	8.50	10.91	---	---	---	---	---	---	---	---
MW-5	07/07/94	19.41	8.99	10.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-5	10/18/94	19.41	9.61	9.80	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	3.5	PACE
MW-5	02/01/95	19.41	6.55	12.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	7.6	ATI
MW-5	04/12/95	19.41	7.27	12.14	---	---	---	---	---	---	---	---
MW-5	09/13/95	19.41	9.49	9.92	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	4.9	ATI
MW-5	01/11/96	19.41	8.82	10.59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	4.9	ATI
MW-5	04/18/96	19.41	8.30	11.11	---	---	---	---	---	---	---	---
MW-5	06/28/96	19.41	8.96	10.45	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.2	SPL
MW-5	11/05/96	19.41	9.69	9.72	---	---	---	---	---	---	---	---
MW-5	01/17/97	19.41	9.02	10.39	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.2	SPL
MW-5	05/01/97	19.41	10.29	9.12	---	---	---	---	---	---	---	---
MW-5	07/09/97	19.41	10.71	8.70	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.2	SPL
MW-5	10/16/97	19.41	11.03	8.38	---	---	---	---	---	---	---	---
MW-5	01/08/98	19.41	10.00	9.41	---	---	---	---	---	---	---	---
MW-5	04/17/98	19.41	8.73	10.68	---	---	---	---	---	---	---	---
MW-5	09/11/98	19.41	9.91	9.50	---	---	---	---	---	---	---	---
MW-5	03/09/99	19.41	6.24	13.17	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 (Feet)	DEPTH TO WATER (Feet) (a)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l) (b)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-6	03/04/88	19.40	---	---	ND	ND	ND	ND	ND	---	---	---
MW-6	03/29/89	19.40	---	---	ND	ND	ND	ND	ND	---	---	---
MW-6	11/28/89	19.40	---	---	ND	ND	ND	ND	ND	---	---	---
MW-6	02/13/91	19.40	---	---	ND	ND	ND	ND	ND	---	---	---
MW-6	01/08/92	19.40	---	---	ND	ND	ND	ND	ND	---	---	---
MW-6	03/30/92	19.40	8.86	10.54	ND	ND	ND	ND	ND	---	---	PACE
MW-6	07/02/92	19.40	9.94	9.46	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-6	07/22/92	19.40	10.10	9.30	---	---	---	---	---	---	---	---
MW-6	10/02/92	19.40	10.48	8.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-6	12/14/92	19.40	10.76	8.64	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-6	03/24/93	19.40	9.19	10.21	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-6	06/17/93	19.40	9.91	9.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-6	09/29/93	19.40	11.49	7.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-6	12/28/93	19.40	9.88	9.52	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-6	03/29/94	19.40	9.36	10.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	5.0	PACE
MW-6	07/07/94	19.40	9.75	9.65	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	38	(d) ---	PACE
MW-6	10/18/94	19.40	10.30	9.10	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	3.3	PACE
MW-6	02/01/95	19.40	7.92	11.48	ND<50	ND<0.5	0.9	ND<0.5	1.1	---	5.4	ATI
MW-6	04/12/95	19.40	8.41	10.99	220	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	4.7	ATI
MW-6	09/13/95	19.40	10.05	9.35	180	ND<1.0	ND<1.0	ND<1.0	ND<2.0	770	4.9	ATI
MW-6	01/11/96	19.40	9.52	9.88	670	ND<2.5	ND<2.5	ND<2.5	ND<5.0	2400	4.6	ATI
MW-6	04/18/96	19.40	9.03	10.37	560	ND<0.5	ND<1	ND<1	ND<1	860	5.1	SPL
MW-6	06/28/96	19.40	8.76	10.64	620	ND<0.5	ND<1	ND<1	ND<1	540	4.9	SPL
MW-6	11/05/96	19.40	9.48	9.92	810	ND<5	ND<10	ND<10	ND<10	970	4.8	SPL
MW-6	01/17/97	19.40	8.58	10.82	830	ND<0.5	ND<1.0	ND<1.0	ND<1.0	960	8.9	SPL
MW-6	05/01/97	19.40	9.92	9.48	780	ND<5	ND<10	ND<10	ND<10	970	7.7	SPL
MW-6	07/09/97	19.40	10.33	9.07	990	ND<0.5	ND<1.0	ND<1.0	ND<1.0	1100	6.0	SPL
MW-6	10/16/97	19.40	10.66	8.74	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	750	6.7	SPL
MW-6	01/08/98	19.40	8.92	10.48	120	ND<0.5	ND<1.0	ND<1.0	ND<1.0	120	5.6	SPL
MW-6	04/17/98	19.40	8.12	11.28	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	62	3.9	SPL
MW-6	09/11/98	19.40	9.31	10.09	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	59	5.5	SPL
MW-6	03/09/99	19.40	7.25	12.15	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2.9/ND<10 (f)	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (a) (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (b) (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
RW-1	07/22/92	---	9.66	---	13000	1000	3400	380	2800	---	---	ANA
RW-1	10/02/92	---	10.28	---	---	---	---	---	---	---	---	---
RW-1	12/14/92	---	23.28	---	---	---	---	---	---	---	---	---
RW-1	03/24/93	---	8.93	---	660	21	25	8.3	100	315	(d)	PACE
RW-1	06/17/93	---	9.66	---	850	13	1.0	15	100	390	(d)	PACE
RW-1	09/29/93	19.27	23.40	-4.13	1200	26	27	11	150	1800	(d)	PACE
QC-1 (c)	09/29/93	---	---	---	1200	26	28	11	160	1900	(d)	PACE
RW-1	12/28/93	19.27	9.76	9.51	3500	300	220	180	480	1900	(d)	PACE
RW-1	03/29/94	19.27	8.93	10.34	12000	640	1700	450	2200	---	6.3	PACE
RW-1	07/07/94	19.27	9.45	9.82	7600	530	1100	380	1800	410	(d)	PACE
RW-1	10/18/94	19.27	10.11	9.16	5300	47	100	150	280	2500	(d)	PACE
QC-1 (c)	10/18/94	---	---	---	430	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
RW-1	02/01/95	19.27	8.54	10.73	27000	2400	6100	1800	5300	---	4.5	ATI
QC-1 (c)	02/01/95	---	---	---	15000	1300	3300	970	2900	---	---	ATI
RW-1	04/12/95	19.27	8.21	11.06	6200	330	910	350	1500	---	5.2	ATI
QC-1 (c)	04/12/95	---	---	---	7600	400	1100	440	1900	---	---	ATI
RW-1	09/13/95	19.27	9.84	9.43	920	140	60	34	110	1200	5.1	ATI
RW-1	01/11/96	19.27	9.25	10.02	ND<50	0.95	0.61	ND<0.50	2.1	43	5.4	ATI
RW-1	04/18/96	19.27	8.73	10.54	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.7	SPL
RW-1	06/28/96	19.27	9.40	9.87	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.5	SPL
RW-1	11/05/96	19.27	10.12	9.15	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.9	SPL
RW-1	01/17/97	19.27	8.10	11.17	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.8	SPL
RW-1	05/01/97	19.27	9.43	9.84	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.6	SPL
RW-1	07/09/97	19.27	10.83	8.44	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.1	SPL
RW-1	10/16/97	19.27	11.17	8.10	---	---	---	---	---	---	---	---
RW-1	01/08/98	19.27	10.03	9.24	---	---	---	---	---	---	---	---
RW-1	04/17/98	19.27	8.79	10.48	---	---	---	---	---	---	---	---
RW-1	09/11/98	19.27	9.98	9.29	---	---	---	---	---	---	---	---
RW-1	03/09/99	19.27	7.19	12.08	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
QC-2 (e)	10/02/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
QC-2 (e)	12/14/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
QC-2 (e)	03/24/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	06/17/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	09/29/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	12/28/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	03/29/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	07/07/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	10/18/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	02/01/95	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	ATI
QC-2 (e)	04/12/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2 (e)	09/13/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2 (e)	01/11/96	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2 (e)	04/18/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
QC-2 (e)	06/28/96	---	---	---	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
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
---	Not measured/applicable/analyzed
ND	Not detected above reported detection limit
PACE	Pace, Inc.
ANA	Anametrix, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories

NOTES:

- (a) Casing elevations surveyed to nearest 0.01 foot above mean sea level, with an assigned elevation of 22.82 feet (City datum).
- (b) Groundwater elevations in feet above mean sea level.
- (c) Blind duplicate.
- (d) A copy of the documentation for this data is included in Appendix C of Alisto report 10-050-07-004.
- (e) Travel blank.
- (f) EPA Methods 8020/8260 used



# **Analytical Appendix**



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

March 25, 1999

Mr. Scott Hooton  
BP OIL COMPANY  
295 SW 41<sup>st</sup> 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 March 12, 1999. The sample(s) was assigned to Certificate of Analysis No. (s) 9903526 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: 99-03-526

Approved for Release by:

*Sonia West*

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

*3-25-99*

\_\_\_\_\_  
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) 680-0901

Certificate of Analysis No. H9-9903526-01

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

P.O.#  
 N/A, COC#118684  
 DATE: 03/24/99

PROJECT: #11266, 1541 Park St.  
 SITE: Alameda, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: A

PROJECT NO: 990309-G3  
 MATRIX: WATER  
 DATE SAMPLED: 03/09/99 14:26:00  
 DATE RECEIVED: 03/12/99

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	107
4-Bromofluorobenzene	90

Method 8020A \*\*\*  
 Analyzed by: CJ  
 Date: 03/19/99

Gasoline Range Organics	ND	0.050 P	mg/L
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<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	80
4-Bromofluorobenzene	90

California LUFT Manual for Gasoline  
 Analyzed by: CJ  
 Date: 03/19/99 00:42:00

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. H9-9903526-02

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

P.O.#  
 N/A, COC#118684  
 DATE: 03/24/99

PROJECT: #11266, 1541 Park St.  
 SITE: Alameda, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: B

PROJECT NO: 990309-G3  
 MATRIX: WATER  
 DATE SAMPLED: 03/09/99 14:50:00  
 DATE RECEIVED: 03/12/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	2.9	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	107
4-Bromofluorobenzene	93

Method 8020A \*\*\*  
 Analyzed by: CJ  
 Date: 03/19/99

Gasoline Range Organics	ND	0.050 P	mg/L
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<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	80
4-Bromofluorobenzene	93

California LUFT Manual for Gasoline  
 Analyzed by: CJ  
 Date: 03/19/99 07:49:00

MTBE	ND	10 P	ug/L
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<b>Surrogate</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4	94
Toluene-d8	102

(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. H9-9903526-02

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

P.O.#  
 N/A, COC#118684  
 DATE: 03/24/99

PROJECT: #11266, 1541 Park St.  
 SITE: Alameda, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: B

PROJECT NO: 990309-G3  
 MATRIX: WATER  
 DATE SAMPLED: 03/09/99 14:50:00  
 DATE RECEIVED: 03/12/99

ANALYTICAL DATA				
PARAMETER		RESULTS	DETECTION LIMIT	UNITS
4-Bromofluorobenzene		96		
Method 8260B ***				
Analyzed by: JC				
Date: 03/22/99				

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. H9-9903526-03

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

P.O.#  
 N/A, COC#118684  
 DATE: 03/24/99

PROJECT: #11266, 1541 Park St.  
 SITE: Alameda, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: C

PROJECT NO: 990309-G3  
 MATRIX: WATER  
 DATE SAMPLED: 03/09/99 15:11:00  
 DATE RECEIVED: 03/12/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	190	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	107
4-Bromofluorobenzene	93

Method 8020A \*\*\*  
 Analyzed by: CJ

Date: 03/19/99

Gasoline Range Organics	0.20	0.050 P	mg/L
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<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	83
4-Bromofluorobenzene	93

California LUFT Manual for Gasoline  
 Analyzed by: CJ

Date: 03/19/99 07:22:00

(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. H9-9903526-04**

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

P.O.#  
 N/A, COC#118684  
 DATE: 03/24/99

**PROJECT:** #11266, 1541 Park St.  
**SITE:** Alameda, CA  
**SAMPLED BY:** Blaine Tech Services  
**SAMPLE ID:** D

**PROJECT NO:** 990309-G3  
**MATRIX:** WATER  
**DATE SAMPLED:** 03/09/99 15:30:00  
**DATE RECEIVED:** 03/12/99

**ANALYTICAL DATA**

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	17000	100 P	ug/L
BENZENE	8.2	1.0 P	ug/L
TOLUENE	ND	1.0 P	ug/L
ETHYLBENZENE	ND	1.0 P	ug/L
TOTAL XYLENE	5.9	1.0 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	14.1		ug/L

<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	223MI
4-Bromofluorobenzene	100

Method 8020A \*\*\*

Analyzed by: CJ

Date: 03/19/99

Gasoline Range Organics	17	0.50 P	mg/L
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<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	100
4-Bromofluorobenzene	90

California LUFT Manual for Gasoline

Analyzed by: CJ

Date: 03/19/99 11:07:00

(P) - Practical Quantitation Limit      ND - Not detected.  
 MI - Matrix interference.

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. H9-9903526-05

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

P.O.#  
 N/A, COC#118684  
 DATE: 03/24/99

PROJECT: #11266, 1541 Park St.  
 SITE: Alameda, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: E

PROJECT NO: 990309-G3  
 MATRIX: WATER  
 DATE SAMPLED: 03/09/99 15:50:00  
 DATE RECEIVED: 03/12/99

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

107

4-Bromofluorobenzene

93

Method 8020A \*\*\*

Analyzed by: CJ

Date: 03/19/99

Gasoline Range Organics

ND 0.050 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

87

4-Bromofluorobenzene

87

California LUFT Manual for Gasoline

Analyzed by: CJ

Date: 03/19/99 01:08:00

ND - Not detected.

(P) - Practical Quantitation Limit

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

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

Certificate of Analysis No. H9-9903526-06

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

P.O.#  
 N/A, COC#118684  
 DATE: 03/24/99

PROJECT: #11266, 1541 Park St.  
 SITE: Alameda, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: F

PROJECT NO: 990309-G3  
 MATRIX: WATER  
 DATE SAMPLED: 03/09/99 16:11:00  
 DATE RECEIVED: 03/12/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	780	5.0 P	ug/L
BENZENE	93	1.0 P	ug/L
TOLUENE	99	1.0 P	ug/L
ETHYLBENZENE	510	5.0 P	ug/L
TOTAL XYLENE	790	1.0 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	1492		ug/L

<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	137
4-Bromofluorobenzene	103

Method 8020A \*\*\*  
 Analyzed by: CJ  
 Date: 03/19/99

Gasoline Range Organics	6.3	0.250 P	mg/L
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<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	93
4-Bromofluorobenzene	107

California LUFT Manual for Gasoline  
 Analyzed by: CJ  
 Date: 03/19/99 10:41:00

MTBE	700	100 P	ug/L
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<b>Surrogate</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4	92
Toluene-d8	102

(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. H9-9903526-06

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

P.O.#  
 N/A, COC#118684  
 DATE: 03/24/99

PROJECT: #11266, 1541 Park St.  
 SITE: Alameda, CA  
 SAMPLED BY: Blaine Tech Services  
 SAMPLE ID: F

PROJECT NO: 990309-G3  
 MATRIX: WATER  
 DATE SAMPLED: 03/09/99 16:11:00  
 DATE RECEIVED: 03/12/99

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
4-Bromofluorobenzene	102			
Method 8260B ***				
Analyzed by: JC				
Date: 03/22/99				

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

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.  
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*QUALITY CONTROL*

*DOCUMENTATION*

3A  
 WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL

Contract:

Lab Code:

Case No.: 9903788 SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: MW-24

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	55	110	61-145
Trichloroethene	50	0	54	108	71-120
Benzene	50	0	54	108	76-127
Toluene	50	0	53	106	76-125
Chlorobenzene	50	0	54	108	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	50	55	110	0	14	61-145
Trichloroethene	50	51	102	6	14	71-120
Benzene	50	51	102	6	11	76-127
Toluene	50	52	104	2	13	76-125
Chlorobenzene	50	52	104	4	13	75-130

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

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name: Client SDG: n990322  
Sample Matrix: LIQUID Fraction: VOA  
Lab Smp Id: LCS-8260W Operator: JC  
Level: LOW SampleType: METHSPIKE  
Data Type: MS DATA Quant Type: ISTD  
SpikeList File: 8260 water.spk  
Sublist File: lcs.sub  
Method File: /var/chem/n.i/n990322.b/n8260w.m  
Misc Info: N081W1//N081CW1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 1,1-Dichloroethene	50	54	108.00	61-145
29 Trichloroethene	50	50	100.00	71-120
25 Benzene	50	51	102.00	76-127
37 Toluene	50	52	104.00	76-125
45 Chlorobenzene	50	52	104.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 21 1,2-Dichloroethane	50	45	90.00	80-120
\$ 36 Toluene-d8	50	51	102.00	88-110
\$ 56 Bromofluorobenzene	50	51	102.00	86-115



SPL Blank QC Report

Matrix: Aqueous  
Sample ID: VLBLK  
Batch: N990322122720

Reported on: 03/24/99 15:25  
Analyzed on: 03/22/99 08:29  
Analyst: JC

METHOD 8260 N081B01

Compound	Result	Detection Limit	Units
Methyl t-Butyl Ether	ND	10	ug/L

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	94	80-120	% Recovery
Toluene-d8	100	88-110	% Recovery
Bromofluorobenzene	100	86-115	% Recovery

Samples in Batch 9903526-02 9903526-06

Notes

ND - Not detected.



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

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

Matrix: Aqueous  
Units: ug/L

Batch Id: VARE990318091900

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	43	86.0	61 - 119
Toluene	ND	50	47	94.0	65 - 125
EthylBenzene	ND	50	45	90.0	70 - 118
O Xylene	ND	50	46	92.0	72 - 117
M & P Xylene	ND	100	91	91.0	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	23		115	23
BENZENE	8.8	20	27	91.0	27	91.0	0	21	32 - 164
TOLUENE	48	20	57	45.0	59	55.0	20.0	20	38 - 159
ETHYLBENZENE	1.4	20	22	103	22	103	0	19	52 - 142
O XYLENE	9.2	20	27	89.0	28	94.0	5.46	18	53 - 143
M & P XYLENE	11	40	48	92.5	48	92.5	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: CJ

Sequence Date: 03/18/99

SPL ID of sample spiked: 9903474-02A

Sample File ID: E\_C3169.TX0

Method Blank File ID:

Blank Spike File ID: E\_C3168.TX0

Matrix Spike File ID: E\_C3171.TX0

Matrix Spike Duplicate File ID: E\_C3172.TX0

SAMPLES IN BATCH(SPL ID):

9903474-05A 9903474-02A 9903474-06A 9903681-03A  
 9903681-01A 9903474-07A 9903474-08A 9903474-09A  
 9903526-01A 9903526-05A 9903526-04A 9903526-06A  
 9903638-08A 9903638-06A 9903638-07A 9903638-09A  
 9903474-01A 9903474-03A 9903474-04A





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

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

Matrix: Aqueous  
Units: ug/L

Batch Id: VARE990319025500

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	47	94.0	72 - 128
Benzene	ND	50	42	84.0	61 - 119
Toluene	ND	50	43	86.0	65 - 125
EthylBenzene	ND	50	44	88.0	70 - 118
O Xylene	ND	50	43	86.0	72 - 117
M & P Xylene	ND	100	85	85.0	72 - 116

MATRIX SPIKES

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	190	20	190		NC	200
BENZENE	ND	20	19	95.0	20	100	5.13	21	32 - 164
TOLUENE	ND	20	19	95.0	20	100	5.13	20	38 - 159
ETHYLBENZENE	ND	20	19	95.0	20	100	5.13	19	52 - 142
O XYLENE	ND	20	19	95.0	20	100	5.13	18	53 - 143
M & P XYLENE	ND	40	35	87.5	38	95.0	8.22	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 =  $[( <1> - <2> ) / <3> ] \times 100$

LCS % Recovery =  $( <1> / <3> ) \times 100$

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

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

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

Analyst: CJ

Sequence Date: 03/19/99

SPL ID of sample spiked: 9903526-03A

Sample File ID: E\_C3200.TX0

Method Blank File ID:

Blank Spike File ID: E\_C3193.TX0

Matrix Spike File ID: E\_C3195.TX0

Matrix Spike Duplicate File ID: E\_C3196.TX0

SAMPLES IN BATCH(SPL ID):

9903681-02A 9903682-01A 9903682-02A 9903526-04A  
 9903697-02A 9903669-02A 9903669-03A 9903669-04A  
 9903669-05A 9903669-06A 9903669-07A 9903696-04A  
 9903526-03A 9903682-03A 9903526-02A 9903526-06A



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

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

Matrix: Aqueous  
Units: mg/L

Batch Id: VARE990318094620

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 %	
Gasoline Range Organics	ND	1.0	0.97	97.0	64 - 131

MATRIX SPIKES

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
			GASOLINE RANGE ORGANICS	ND	0.90	0.84			

\* = 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 =  $[( <1> - <2> ) / <3> ] \times 100$   
 LCS % Recovery =  $( <1> / <3> ) \times 100$   
 Relative Percent Difference =  $\{ ( <4> - <5> ) / [ ( <4> + <5> ) \times 0.5 ] \} \times 100$   
 (\*\*) = Source: SPL-Houston Historical data (1st Q '97)  
 (\*\*\*) = Source: SPL-Houston Historical Data (1st Q '97)

Analyst: CJ  
 Sequence Date: 03/18/99  
 SPL ID of sample spiked: 9903474-06A  
 Sample File ID: EEC3170.TX0  
 Method Blank File ID:  
 Blank Spike File ID: EEC3157.TX0  
 Matrix Spike File ID: EEC3173.TX0  
 Matrix Spike Duplicate File ID: EEC3174.TX0

SAMPLES IN BATCH(SPL ID):            9903526-01A 9903526-05A 9903638-08A 9903638-09A



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

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

Matrix: Aqueous  
Units: mg/L

Batch Id: VARE990319032200

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 %	
Gasoline Range Organics	ND	1.0	0.94	94.0	64 - 131

MATRIX SPIKES

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
GASOLINE RANGE ORGANICS	ND	0.90	0.87	96.7	0.88	97.8	1.13	36	36 - 160

\* = 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 =  $[( <1> - <2> ) / <3> ] \times 100$

LCS % Recovery =  $( <1> / <3> ) \times 100$

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

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

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

Analyst: CJ

Sequence Date: 03/19/99

SPL ID of sample spiked: 9903526-02A

Sample File ID: EEC3201.TX0

Method Blank File ID:

Blank Spike File ID: EEC3194.TX0

Matrix Spike File ID: EEC3197.TX0

Matrix Spike Duplicate File ID: EEC3198.TX0

SAMPLES IN BATCH(SPL ID):

9903697-02A 9903669-02A 9903669-03A 9903669-04A  
9903669-05A 9903669-06A 9903669-07A 9903526-03A  
9903526-02A 9903526-06A 9903526-04A

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



9903526

BAF

### CHAIN OF CUSTODY

No. 118684

Page 1 of 1

CONSULTANT'S NAME <i>Blaine Tech Services</i>		CONSULTANT'S ADDRESS <i>1680 Rogers Ave, San Jose, CA</i>	
BP SITE NUMBER <i>11266</i>	BP SITE / FACILITY ADDRESS <i>1541 Park St., Alameda, CA</i>		CONSULTANT PROJECT NUMBER <i>990309-63</i>
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 *804039490154*

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	TPH-G	BTEX	MTBE	MIBK	PPE 8	COMMENTS
				NO.	TYPE (VOL.)	LAB SAMPLE #						
<i>A</i>	<i>3/9/99</i>	<i>1426</i>	<i>Water</i>	<i>3</i>	<i>40ml</i>		<i>X</i>	<i>X</i>	<i>X</i>			
<i>X B</i>	<i>↓</i>	<i>1450</i>	<i>↓</i>	<i>5</i>	<i>↓</i>		<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>		
<i>C</i>	<i>↓</i>	<i>1511</i>	<i>↓</i>	<i>3</i>	<i>↓</i>		<i>X</i>	<i>X</i>	<i>X</i>			
<i>D</i>	<i>↓</i>	<i>1530</i>	<i>↓</i>	<i>3</i>	<i>↓</i>		<i>X</i>	<i>X</i>	<i>X</i>			
<i>E</i>	<i>↓</i>	<i>1550</i>	<i>↓</i>	<i>3</i>	<i>↓</i>		<i>X</i>	<i>X</i>	<i>X</i>			
<i>X F</i>	<i>↓</i>	<i>1611</i>	<i>↓</i>	<i>5</i>	<i>↓</i>		<i>X</i>	<i>X</i>	<i>X</i>			

SAMPLED BY (Please Print Name) <i>Morgan Gillies</i>			SAMPLED BY (Signature) <i>[Signature]</i>			ADDITIONAL COMMENTS		
RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY / AFFILIATION (Print Name / Signature)	DATE	TIME			
<i>Morgan Gillies / [Signature]</i>	<i>3/11/99</i>	<i>1550</i>						
			<i>[Signature]</i>	<i>3/12/99</i>	<i>1000</i>			

# SPL Houston Environmental Laboratory

## Sample Login Checklist

Date: <span style="font-size: 1.2em;">3/12/99</span>	Time: <span style="font-size: 1.2em;">1000</span>
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SPL Sample ID: 9903526

		<u>Yes</u>	<u>No</u>
1	Chain-of-Custody (COC) form is present.	✓	
2	COC is properly completed.	✓	
3	If no, Non-Conformance Worksheet has been completed.		
4	Custody seals are present on the shipping container.	✓	
5	If yes, custody seals are intact.	✓	
6	All samples are tagged or labeled.	✓	
7	If no, Non-Conformance Worksheet has been completed.		
8	Sample containers arrived intact	✓	
9	Temperature of samples upon arrival:	<span style="font-size: 1.5em;">2<sup>o</sup></span>	<b>C</b>
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #) <span style="font-size: 1.2em;">1804039490154</span>	
		Other:	
11	Method of sample disposal:	SPL Disposal	✓
		HOLD	
		Return to Client	

Name: <span style="font-size: 1.2em; font-family: cursive;">Rockrum</span>	Date: <span style="font-size: 1.2em;">3/12/99</span>
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# **Field Data Sheets**





## BP WELL MONITORING DATA SHEET

Project #: <u>990309-63</u>	Job # <u>11266</u>
Sampler: <u>MB</u>	Date: <u>3/9/99</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth: <u>22.82</u>	Depth to Water: <u>6.80</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: <u>Bailer</u>	Sampling Method: <u>Bailer</u>
<del>Disposable Bailer</del>	<del>Disposable Bailer</del>
<u>Middleburg</u>	<u>Extraction Port</u>
<u>Electric Submersible</u>	Other: _____
<u>Extraction Pump</u>	
Other: _____	

<u>2.6</u>	x	<u>3</u>	=	<u>7.8</u> Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1600	62.4	6.8	500	123	3.0	
1603	62.6	6.9	500	>200	6.0	
1606	63.0	6.9	470	>200	8.0	
		<u>Removed ORC's to Sample</u>				

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>8.0</u>	
Sampling Time: <u>1611</u>	Sampling Date: <u>3/9/99</u>	
Sample I.D.: <u>F</u>	Laboratory: <u>SPL</u> Other _____	
Analyzed for: <u>TPH-G BTEX MTBE</u> TPH-D	Other: <u>MTBE by 8-69</u>	
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>990309-63</u>	Job # <u>11266</u>
Sampler: <u>MB</u>	Date: <u>3/9/99</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth: <u>24.60</u>	Depth to Water: <u>7.93</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: <u>Bailer</u>	Sampling Method: <u>Bailer</u>
<input checked="" type="checkbox"/> Disposable Bailer	<input checked="" type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Middleburg	<input type="checkbox"/> Extraction Port
<input type="checkbox"/> Electric Submersible	Other: _____
<input type="checkbox"/> Extraction Pump	
Other: _____	

<u>2.7</u>	x	<u>3</u>	=	<u>8.1</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1500	66.2	6.8	640	>200	3	
1503	66.4	6.9	640	>200	6	
1506	66.0	6.9	650	>200	9	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>9</u>
Sampling Time: <u>1511</u>	Sampling Date: <u>3/9/99</u>
Sample I.D.: <u>C</u>	Laboratory: <u>SPL</u> Other: _____

Analyzed for: <u>TPH-G BTEX 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>990309-63</u>	Job # <u>11266</u>
Sampler: <u>MB</u>	Date: <u>3/9/99</u>
Well I.D.: <u>MU-3</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u>   </u>
Total Well Depth: <u>19.55</u>	Depth to Water: <u>9.00</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: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Middleburg <input type="checkbox"/> Electric Submersible <input type="checkbox"/> Extraction Pump Other: _____	Sampling Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port Other: _____
--	---

<u>1.7</u>	x	<u>3</u>	=	<u>5.1</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1520	66.1	6.9	850	>200	2.0	
1522	65.9	6.9	860	>200	4.0	
1524	66.2	6.9	860	>200	5.5	

Did well dewater? Yes <input type="checkbox"/> <input checked="" type="checkbox"/> No	Gallons actually evacuated: <u>5.5</u>
Sampling Time: <u>1530</u>	Sampling Date: <u>3/9/99</u>
Sample I.D.: <u>P</u>	Laboratory: <u>SPL</u> Other _____
Analyzed for: <u>TPH-G BTEX 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>990309-63</u>	Job # <u>11266</u>
Sampler: <u>MB</u>	Date: <u>3/9/99</u>
Well I.D.: <u>MW-4</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u>   </u>
Total Well Depth: <u>21.90</u>	Depth to Water: <u>7.30</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: <u>Bailer</u>	Sampling Method: <u>Bailer</u>
<input checked="" type="checkbox"/> Disposable Bailer	<input checked="" type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Middleburg	<input type="checkbox"/> Extraction Port
<input type="checkbox"/> Electric Submersible	Other: <u>                    </u>
<input type="checkbox"/> Extraction Pump	
Other: <u>                    </u>	

<u>2.3</u>	x	<u>3</u>	=	<u>6.9</u> Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1540	62.9	7.0	620	>200	2.5	
1543	63.4	7.0	600	>200	5.0	
1545	63.7	7.0	600	>200	7.0	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>7.0</u>
Sampling Time: <u>1550</u>	Sampling Date: <u>3/9/99</u>
Sample I.D.: <u><del>MW-4</del> E</u>	Laboratory: <u>SPI</u> Other <u>          </u>
Analyzed for: <u>TPH-G BTEX MTBE</u> TPH-D Other: <u>          </u>	

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>990309-63</u>	Job # <u>11266</u>
Sampler: <u>MB</u>	Date: <u>3/9/89</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u>    </u>
Total Well Depth: <u>24.20</u>	Depth to Water: <u>6.24</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: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Middleburg <input type="checkbox"/> Electric Submersible <input type="checkbox"/> Extraction Pump Other: _____	Sampling Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port Other: _____
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<u>2.9</u>	x	<u>3</u>	=	<u>8.7</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1415	62.9	7.5	900	>200	3	
1418	62.8	7.5	880	>200	6	
1421	63.4	7.4	870	>200	9	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>9</u>
Sampling Time: <u>1426</u>	Sampling Date: <u>3/9/89</u>
Sample I.D.: <u>A</u>	Laboratory: <u>SPL</u> Other: _____

Analyzed for: <u>TPH-G BTEX 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>990309-63</u>	Job # <u>11266</u>
Sampler: <u>MB</u>	Date: <u>3/9/99</u>
Well I.D.: <u>MTW-6</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth: <u>18.60</u>	Depth to Water: <u>7.25</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:  Bailer      Sampling Method:  Bailer  
 Disposable Bailer       Disposable Bailer  
 Middleburg       Extraction Port  
 Electric Submersible      Other: \_\_\_\_\_  
 Extraction Pump

<u>1.8</u>	x	<u>3</u>	=	<u>5.4</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
<u>1438</u>	<u>63.6</u>	<u>7.1</u>	<u>830</u>	<u>&gt;200</u>	<u>2.0</u>	
<u>1441</u>	<u>63.9</u>	<u>7.0</u>	<u>820</u>	<u>&gt;200</u>	<u>4.0</u>	
<u>1444</u>	<u>64.2</u>	<u>7.0</u>	<u>810</u>	<u>&gt;200</u>	<u>6.0</u>	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>6.0</u>
Sampling Time: <u>1450</u>	Sampling Date: <u>3/9/99</u>
Sample I.D.: <u>B</u>	Laboratory: <u>SPL</u> Other _____
Analyzed for: <u>TPH-G BTEX MTBE</u> TPH-D	Other: <u>MTBE by 8260</u>
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