

S. T. Hooton
Team Leader
Environmental Remediation Management



BP OIL

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

September 13, 1999

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

- Seems like Pump + Treat should be re-instated to control plume migration
- is Oakland RSCA considered for site? have to wait until FP is gone.

RE: Former BP Oil Site No. 11133
2220 98th Avenue (at Bancroft)
Oakland, CA

Dear Ms. Chu:

This letter transmits the *Third Quarter 1999 Groundwater Monitoring* report prepared on behalf of BP by Blaine Tech Services, Inc.

A petroleum release was documented during the replacement of underground storage tanks by Mobil Oil Corporation during 1987. BP purchased the site from Mobil in 1989, and Mobil later transferred management of the cleanup to BP. BP subsequently sold the site to the current operator (Tosco Corporation) during 1994. I understand that Tosco removed the underground storage tanks shortly before the samples obtained for this report were collected. The closure report will be completed by others on behalf of Tosco.

The enclosed groundwater monitoring and sampling report includes laboratory data for samples collected on 9 July 1999. You will note that aromatic petroleum hydrocarbons were detected in samples obtained from wells MW-1, AW-1, and AW-4. The highest benzene concentration this quarter (12,000 µg/l) was detected in a sample obtained from well AW-4. Product observed in well RW-1 bailed from the well.

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

Sincerely,

Scott Hooton

attachment

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

99 SEP 17 PM 3:48
ENVIRONMENTAL PROTECTION

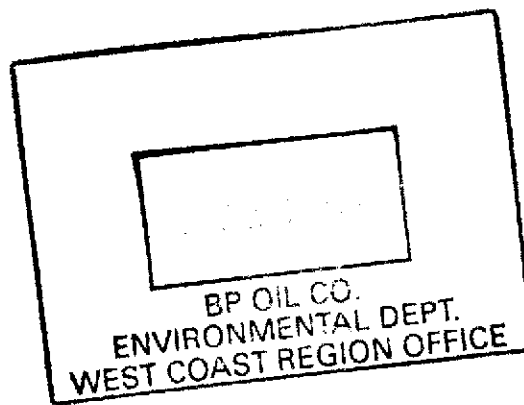
BLAINE
TECH SERVICES INC.



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

August 13, 1999

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



3rd Quarter 1999 Monitoring at 11133

Third Quarter 1999 Groundwater Monitoring
BP Service Station Number 11133
2220 98th Avenue
Oakland, CA

Monitoring Performed on July 9, 1999

Groundwater Sampling Report 990709-Z-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.

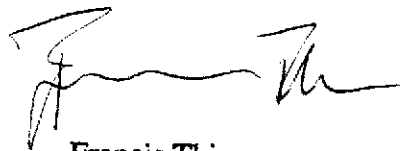
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL DATA AND ANALYTICAL RESULTS**. The full analytical report for the most recent samples is located in the **Analytical Appendix**. The **Professional Engineering Appendix**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

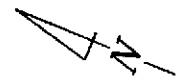
A handwritten signature in black ink, appearing to read 'Francis Thie', written over a horizontal line.

Francis Thie
Vice President

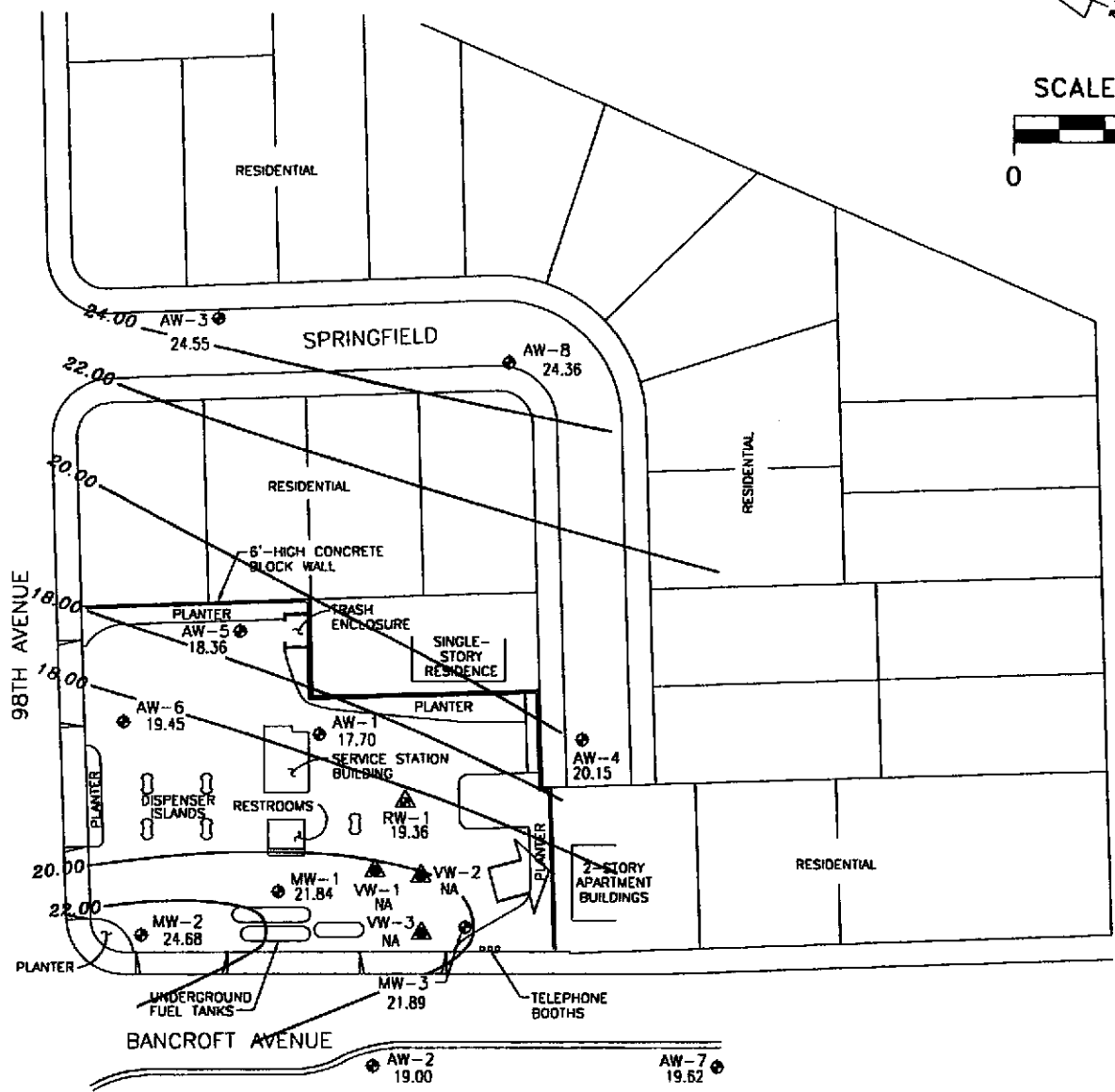
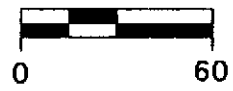
FPT/ld

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

Professional Engineering Appendix



SCALE (ft)



EXPLANATION

- ⊕ GROUNDWATER MONITORING WELL
- ▲ VAPOR EXTRACTION WELL
- ▲ COMBINED GROUNDWATER RECOVERY/VAPOR EXTRACTION WELL

- 24.36 GROUNDWATER ELEVATION (FT, MSL)
- 22.00 — GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- NA DATA NOT AVAILABLE
- APPROXIMATE GROUNDWATER FLOW DIRECTION; APPROXIMATE GRADIENT = 0.08



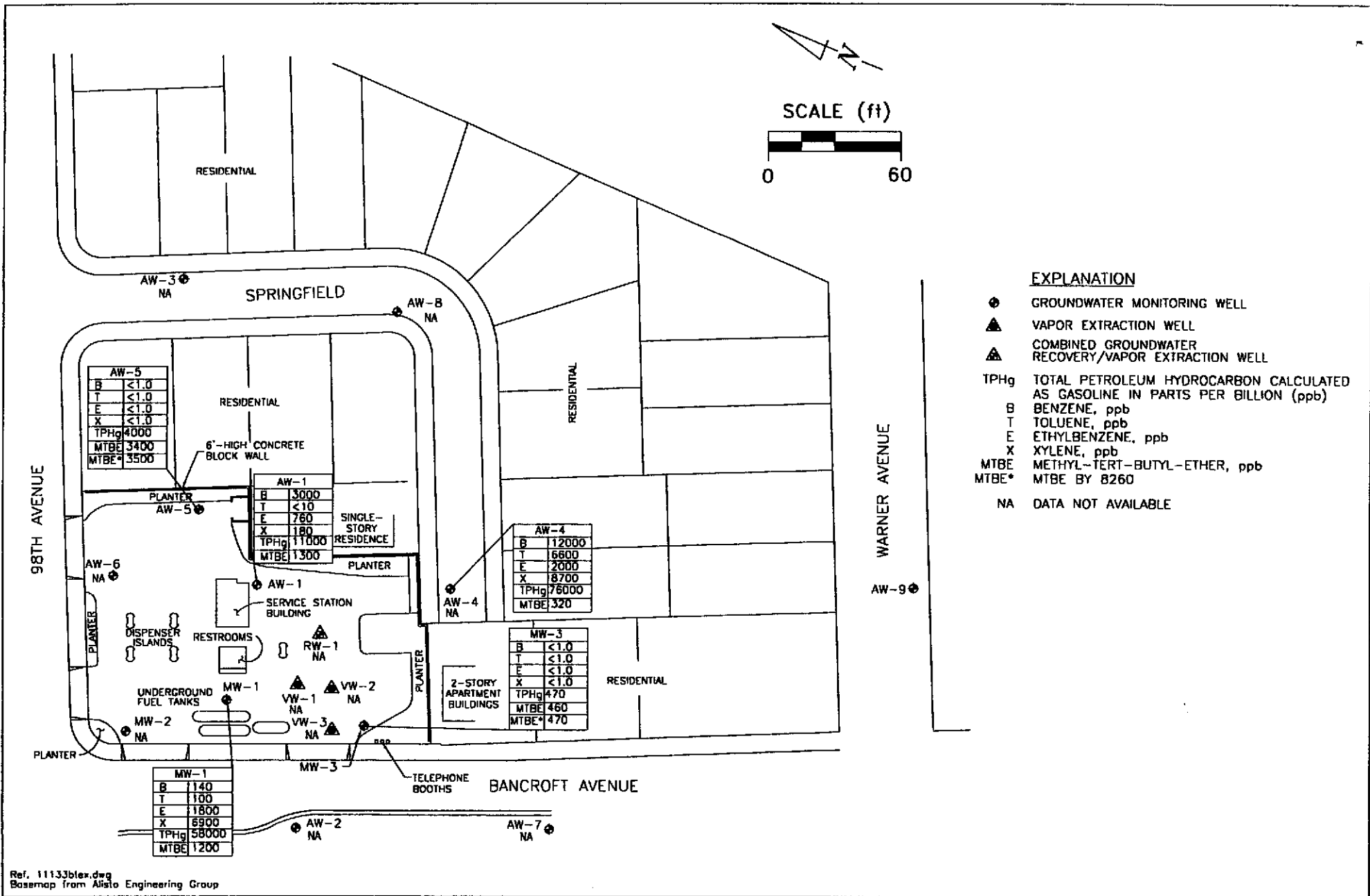
Ref. 11133bm.dwg
Basemap from Aista Engineering Group

PREPARED BY

BP Service Station 11133
2220 98th Avenue
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP,
JULY 9, 1999

FIGURE:
1
PROJECT:
DAC04



Ref. 11133blec.dwg
 Basemap from Alisto Engineering Group

PREPARED BY

RRM
 engineering contracting firm

BP Service Station 1133
 2220 98th Avenue
 Oakland, California

HYDROCARBON CONCENTRATION MAP,
 JULY 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 MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (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	04/05/91	34.46	---	---	---	---	---	---	---	---	---	---	---	
MW-1	04/01/92	34.46	11.25	0.01	23.22	---	---	---	---	---	---	---	---	
MW-1	07/06/92	34.46	13.61	0.02	20.87	---	---	---	---	---	---	---	---	
MW-1	10/07/92	34.46	15.15	0.09	19.38	---	---	---	---	---	---	---	---	
MW-1	01/14/93	34.46	10.73	0.01	23.74	---	---	---	---	---	---	---	---	
MW-1	04/22/93	34.46	11.64	0.16	22.94	---	---	---	---	---	---	---	---	
MW-1	07/15/93	34.46	13.50	1.11	21.79	---	---	---	---	---	---	---	---	
MW-1	10/21/93	34.46	15.21	1.00	20.00	---	---	---	---	---	---	---	---	
MW-1	01/27/94	34.46	17.48	0.81	17.59	---	---	---	---	---	---	---	---	
MW-1	04/21/94	34.46	10.94	---	23.52	110000	1400	9100	3400	30000	11000	(c)	1.6	PACE
MW-1	09/09/94	34.46	13.80	---	20.66	---	---	---	---	---	---	---	---	---
MW-1	12/21/94	34.46	12.60	0.02	21.88	---	---	---	---	---	---	---	---	---
MW-1	01/30/95	34.46	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	04/10/95	34.46	10.62	---	23.84	---	---	---	---	---	---	---	---	---
MW-1	06/29/95	34.46	18.72	---	15.74	---	---	---	---	---	---	---	---	---
MW-1	09/18/95	34.46	12.92	---	21.54	---	---	---	---	---	---	---	---	---
MW-1	12/07/95	34.46	13.82	---	20.64	---	---	---	---	---	---	---	---	---
MW-1	03/28/96	34.46	10.03	0.01	24.44	---	---	---	---	---	---	---	---	---
MW-1	06/20/96	34.46	11.29	0.02	23.19	---	---	---	---	---	---	---	---	---
MW-1	10/11/96	34.46	14.86	0.01	19.61	---	---	---	---	---	---	---	---	---
MW-1	01/02/97	34.46	11.03	0.01	23.44	---	---	---	---	---	---	---	---	---
MW-1	04/14/97	34.46	12.25	0.01	22.22	---	---	---	---	---	---	---	---	---
MW-1	04/15/97	34.46	---	---	---	35000	190	650	1700	8200	4800	---	---	SPL
MW-1	07/02/97	34.46	14.11	---	20.35	42000	ND<250	ND<500	2000	9600	ND<5000	5.5	---	SPL
MW-1	09/30/97	34.46	14.40	---	20.06	61000	130	1100	2700	14600	2000	6.7	---	SPL
MW-1	01/21/98	34.46	7.99	0.01	26.48	14000	11	60	310	1790	1300	4.5	---	SPL
MW-1	04/09/98	34.46	7.89	---	26.57	---	---	---	---	---	---	---	---	---
MW-1	04/10/98	34.46	---	---	---	45000	380	520	2100	6800	9300	5.3	---	SPL
MW-1	06/19/98	34.46	10.31	---	24.15	35000	170	100	1100	3590	5000	4.9	---	SPL
MW-1	11/30/98	34.46	11.16	---	23.30	10000	100	24	350	1040	1800/2800	(g)	---	SPL
MW-1	01/21/99	34.46	10.76	---	23.70	18000	120	37	590	1800	2700	---	---	SPL
MW-1	04/30/99	34.46	10.78	---	23.68	17000	240	89	1100	1900	1600	---	---	SPL
MW-1	07/09/99	34.46	12.62	---	21.84	58000	140	100	1800	6900	1200	---	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (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-2	04/05/91	35.50	16.62	---	18.88	ND<50	0.6	0.9	ND<0.3	ND<0.3	---	---	SUP
MW-2	04/01/92	35.50	11.25	---	24.25	---	---	---	---	---	---	---	---
MW-2	04/02/92	35.50	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	APP
MW-2	07/06/92	35.50	12.72	---	22.78	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-2	10/07/92	35.50	15.08	---	20.42	ND<50	ND<0.5	1.8	ND<0.5	2.3	---	---	ANA
MW-2	01/14/93	35.50	9.69	---	25.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-2	04/22/93	35.50	10.46	---	25.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	30	(c)	PACE
MW-2	07/15/93	35.50	12.02	---	23.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	22	(c)	PACE
MW-2	10/21/93	35.50	13.12	---	22.38	ND<50	0.7	0.9	ND<0.5	0.9	---	---	PACE
MW-2	01/27/94	35.50	12.01	---	23.49	ND<50	0.6	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-2	04/21/94	35.50	10.60	---	24.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	1.1	PACE
MW-2	09/09/94	35.50	12.42	---	23.08	ND<50	ND<0.5	ND<0.5	ND<0.5	0.6	---	2.2	PACE
MW-2	12/21/94	35.50	10.85	---	24.65	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	1.2	PACE
MW-2	01/30/95	35.50	8.38	---	27.12	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	1.7	ATI
MW-2	04/10/95	35.50	9.00	---	26.50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	7.8	ATI
MW-2	06/29/95	35.50	9.91	---	25.59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	9.1	ATI
MW-2	09/18/95	35.50	10.98	---	24.52	---	---	---	---	---	---	---	---
MW-2	09/19/95	35.50	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	7.2	ATI
MW-2	12/07/95	35.50	12.30	---	23.20	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	2.4	ATI
MW-2	03/28/96	35.50	8.57	---	26.93	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	3.2	SPL
MW-2	06/20/96	35.50	9.77	---	25.73	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.2	SPL
MW-2	10/11/96	35.50	13.32	---	22.18	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.3	SPL
MW-2	01/02/97	35.50	9.60	---	25.90	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.7	SPL
MW-2	04/14/97	35.50	10.93	---	24.57	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.7	SPL
MW-2	07/02/97	35.50	12.57	---	22.93	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.9	SPL
MW-2	09/30/97	35.50	12.91	---	22.59	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.3	SPL
MW-2	01/21/98	35.50	10.12	---	25.38	160	ND<0.5	ND<1.0	ND<1.0	ND<1.0	100	5.4	SPL
MW-2	04/09/98	35.50	6.82	---	28.68	---	---	---	---	---	---	---	---
MW-2	04/10/98	35.50	---	---	---	ND<50	1.0	ND<1.0	ND<1.0	ND<1.0	23	5.0	SPL
MW-2	06/19/98	35.50	9.00	---	26.50	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.9	SPL
MW-2	11/30/98	35.50	9.44	---	26.06	---	---	---	---	---	---	---	---
MW-2	01/21/99	35.50	8.96	---	26.54	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.9	---	SPL
MW-2	04/30/99	35.50	9.15	---	26.35	---	---	---	---	---	---	---	---
MW-2	07/09/99	35.50	10.82	---	24.68	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-3	04/05/91	36.53	17.84	---	18.69	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SUP
MW-3	04/01/92	36.53	15.64	---	20.89	---	---	---	---	---	---	---	---
MW-3	04/02/92	36.53	---	---	---	ND<50	1.4	ND<0.5	ND<0.5	ND<0.5	---	---	APP
MW-3	07/06/92	36.53	19.03	---	17.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-3	10/07/92	36.53	21.83	---	14.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-3	01/14/93	36.53	15.96	---	20.57	350	ND<0.5	ND<0.5	ND<0.5	ND<0.5	714	(c)	PACE
MW-3	04/22/93	36.53	16.20	---	20.33	2800	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3600	(c)	PACE
MW-3	07/15/93	36.53	16.82	---	19.71	1400	1.2	ND<0.5	2.0	3.5	2200	(c)	PACE
MW-3	10/21/93	36.53	18.84	---	17.69	370	2.1	2.3	2.3	6.0	850	(c)	PACE
MW-3	01/27/94	36.53	18.00	---	18.53	1300	6.3	ND<0.5	ND<0.5	ND<0.5	4000	(c)	PACE
MW-3	04/21/94	36.53	16.62	---	19.91	2000	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4300	(c)	PACE
MW-3	09/09/94	36.53	18.38	---	18.15	1300	ND<0.5	ND<0.5	0.5	1.2	---	1.4	PACE
MW-3	12/21/94	36.53	15.28	---	21.25	420	16	0.7	3.5	5.9	---	1.9	PACE
MW-3	01/30/95	36.53	12.62	---	23.91	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	2.5	ATI
MW-3	04/10/95	36.53	12.41	---	24.12	150	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	6.9	ATI
MW-3	06/29/95	36.53	14.95	---	21.58	100	(d) ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	6.4	ATI
MW-3	09/18/95	36.53	15.82	---	20.71	---	---	---	---	---	---	---	---
MW-3	09/19/95	36.53	---	---	---	82	ND<0.50	ND<0.50	ND<0.50	ND<1.0	260	7.0	ATI
MW-3	12/07/95	36.53	17.09	---	19.44	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	91	4.5	ATI
MW-3	03/28/96	36.53	11.90	---	24.63	ND<50	ND<0.5	ND<1	ND<1	ND<1	230	4.2	SPL
MW-3	06/20/96	36.53	12.66	---	23.87	260	ND<0.5	ND<1	ND<1	ND<1	370	4.4	SPL
MW-3	10/11/96	36.53	16.23	---	20.30	330	ND<0.5	ND<1.0	ND<1.0	ND<1.0	440	5.8	SPL
MW-3	01/02/97	36.53	12.17	---	24.36	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	140	6.0	SPL
MW-3	04/14/97	36.53	13.45	---	23.08	---	---	---	---	---	---	---	---
MW-3	04/15/97	36.53	---	---	---	1500	ND<0.5	ND<1.0	ND<1.0	ND<1.0	1800	5.6	SPL
MW-3	07/02/97	36.53	15.60	---	20.93	880	ND<0.5	ND<1.0	ND<1.0	ND<1.0	940	5.3	SPL
MW-3	09/30/97	36.53	17.16	---	19.37	40000	13000	2400	870	3100	510	6.6	SPL
MW-3	01/21/98	36.53	11.77	---	24.76	120	ND<0.5	ND<1.0	ND<1.0	ND<1.0	98	4.7	SPL
MW-3	04/09/98	36.53	9.42	---	27.11	950	ND<0.5	ND<1.0	ND<1.0	ND<1.0	890	5.7	SPL
MW-3	06/19/98	36.53	12.09	---	24.44	1800	ND<0.5	ND<1.0	ND<1.0	ND<1.0	1900	4.7	SPL
MW-3	06/19/98	36.53	15.28	---	21.25	1800	ND<0.5	ND<1.0	ND<1.0	ND<1.0	1900	4.7	SPL
MW-3	01/21/99	36.53	14.67	---	21.86	1100	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1200	---	SPL
MW-3	04/30/99	36.53	16.00	---	20.53	---	---	---	---	---	---	---	---
MW-3	07/09/99	36.53	14.64	---	21.89	470	ND<1.0	ND<1.0	ND<1.0	ND<1.0	460/470	(g)	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
AW-1	04/05/91	38.11	25.44	---	12.67	4100	1500	69	100	83	---	---	SUP
AW-1	04/01/92	38.11	23.22	---	14.89	---	---	---	---	---	---	---	---
AW-1	04/02/92	38.11	---	---	---	11000	1800	210	210	490	---	---	APP
AW-1	07/06/92	38.11	24.89	---	13.22	6500	4000	40	290	530	---	---	ANA
AW-1	10/07/92	38.11	26.55	---	11.56	4700	1500	41	47	300	---	---	ANA
QC-1 (e)	10/07/92	---	---	---	---	2900	1200	25	37	210	---	---	ANA
AW-1	01/14/93	38.11	23.73	---	14.38	2800	830	31	140	240	---	---	PACE
QC-1 (e)	01/14/93	---	---	---	---	4100	1700	28	130	230	---	---	PACE
AW-1	04/22/93	38.11	---	---	38.11	39000	14000	530	1800	6100	987	(c)	PACE
AW-1	07/15/93	38.11	22.50	---	15.61	6200	2200	28	210	540	840	(c)	PACE
AW-1	10/21/93	38.11	24.32	---	13.79	2400	820	13	55	120	830	(c)	PACE
AW-1	01/27/94	38.11	23.72	---	14.39	3500	1400	26	130	220	650	(c)	PACE
AW-1	04/21/94	38.11	22.48	---	15.63	40000	12000	1900	1600	5000	---	1.4	PACE
AW-1	09/09/94	38.11	23.04	---	15.07	3500	1600	5.0	200	250	---	2.1	PACE
QC-1 (e)	09/09/94	---	---	---	---	3900	1900	5.5	190	240	---	---	PACE
AW-1	12/21/94	38.11	21.70	---	16.41	7600	3100	36	370	320	---	1.6	PACE
AW-1	01/30/95	38.11	17.71	---	20.40	35000	23000	650	3200	4100	---	1.7	ATI
AW-1	04/10/95	38.11	20.04	---	18.07	60000	18000	2000	4300	11000	---	7.9	ATI
QC-1 (e)	04/10/95	---	---	---	---	56000	17000	2000	3900	10000	---	---	ATI
AW-1	06/29/95	38.11	20.60	---	17.51	72000	10000	7300	4200	15000	---	6.2	ATI
QC-1 (e)	06/29/95	---	---	---	---	86000	12000	8400	4800	18000	---	---	ATI
AW-1	09/18/95	38.11	21.87	---	16.24	---	---	---	---	---	---	---	---
AW-1	09/19/95	38.11	---	---	---	65000	12000	3100	4400	14000	1000	8.5	ATI
AW-1	12/07/95	38.11	22.06	---	16.05	25000	8700	ND<50	2500	1300	1100	2.9	ATI
AW-1	03/28/96	38.11	16.91	---	21.20	24000	11000	ND<100	3200	3390	ND<1000	6.6	SPL
AW-1	06/20/96	38.11	20.82	---	17.29	38000	6900	1100	3200	7300	ND<100	6.4	SPL
AW-1	10/11/96	38.11	23.20	---	14.91	33000	8500	69	3300	4230	580	6.3	SPL
AW-1	01/02/97	38.11	20.41	---	17.70	32000	8000	ND<50	3100	2300	700	6.7	SPL
AW-1	04/14/97	38.11	21.61	---	16.50	---	---	---	---	---	---	---	---
AW-1	04/15/97	38.11	---	---	---	31000	5000	160	2400	4540	340	5.4	SPL
AW-1	07/02/97	38.11	21.17	---	16.94	26000	5800	ND<100	2600	2200	ND<1000	6.2	SPL
AW-1	09/30/97	38.11	21.48	---	16.63	29000	9200	17	1400	130	560	6.9	SPL
AW-1	01/21/98	38.11	20.02	---	18.09	50000	6900	450	3200	4450	720	5.8	SPL
AW-1	04/09/98	38.11	13.37	---	24.74	---	---	---	---	---	---	---	---
AW-1	04/10/98	38.11	---	---	---	46000	5800	1900	3000	7400	1000	4.3	SPL
AW-1	06/19/98	38.11	19.12	---	18.99	42000	6600	200	3000	3350	660	4.9	SPL
QC-1 (e)	06/19/98	---	---	---	---	43000	6800	260	3100	3490	620	---	SPL
AW-1	11/30/98	38.11	21.13	---	16.98	23000	6700	ND<25	3100	130	710/820	(g)	SPL
AW-1	01/21/99	38.11	20.77	---	17.34	25000	4800	54	2800	780	1000	---	SPL
AW-1	04/30/99	38.11	20.80	---	17.31	21000	5300	67	2800	750	1500	---	SPL
AW-1	07/09/99	38.11	20.41	---	17.70	11000	3000	ND<10	760	180	1300	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
AW-2	04/05/91	36.83	22.36	---	14.47	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SUP
AW-2	04/01/92	36.83	20.81	---	16.02	---	---	---	---	---	---	---	---
AW-2	04/02/92	36.83	---	---	---	130	25	2.3	0.7	2.1	---	---	APP
AW-2	07/06/92	36.83	23.57	---	13.26	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-2	10/07/92	36.83	25.24	---	11.59	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-2	01/14/93	36.83	20.82	---	16.01	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-2	04/22/93	36.83	19.37	---	17.46	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-2	07/15/93	36.83	21.29	---	15.54	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-2	10/21/93	36.83	23.14	---	13.69	ND<50	1.3	1.1	0.9	2.1	---	---	PACE
AW-2	01/27/94	36.83	22.34	---	14.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-2	04/21/94	36.83	21.15	---	15.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	2.0	PACE
AW-2	09/09/94	36.83	22.09	---	14.74	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	4.1	PACE
AW-2	12/21/94	36.83	20.12	---	16.71	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	2.0	PACE
AW-2	01/30/95	36.83	16.65	---	20.18	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	2.5	ATI
AW-2	04/10/95	36.83	16.22	---	20.61	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	4.4	ATI
AW-2	06/29/95	36.83	17.55	---	19.28	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	7.8	ATI
AW-2	09/18/95	36.83	19.87	---	16.96	---	---	---	---	---	---	---	---
AW-2	09/19/95	36.83	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	4.5	ATI
QC-1 (e)	09/19/95	---	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
AW-2	12/07/95	36.83	21.31	---	15.52	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	4.9	ATI
AW-2	03/28/96	36.83	15.61	---	21.22	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.1	SPL
AW-2	06/20/96	36.83	16.30	---	20.53	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	5.2	SPL
AW-2	10/11/96	36.83	19.60	---	17.23	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.0	SPL
AW-2	01/02/97	36.83	15.97	---	20.86	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.1	SPL
AW-2	04/14/97	36.83	17.19	---	19.64	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.3	SPL
AW-2	07/02/97	36.83	18.11	---	18.72	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.7	SPL
AW-2	09/30/97	36.83	18.52	---	18.31	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	860	5.4	SPL
AW-2	01/21/98	36.83	14.46	---	22.37	160	13	ND<1.0	ND<1.0	ND<1.0	110	4.9	SPL
AW-2	04/09/98	36.83	12.85	---	23.98	---	---	---	---	---	---	---	---
AW-2	04/10/98	36.83	---	---	---	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	3.9	SPL
AW-2	06/19/98	36.83	14.37	---	22.46	60	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	3.6	SPL
AW-2	11/30/98	36.83	16.90	---	19.93	---	---	---	---	---	---	---	---
AW-2	01/21/99	36.83	16.87	---	19.96	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	---	SPL
AW-2	04/30/99	36.83	17.01	---	19.82	---	---	---	---	---	---	---	---
AW-2	07/09/99	36.83	17.83	---	19.00	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
AW-3	04/05/91	39.13	23.90	---	15.23	5200	980	450	95	310	---	---	SUP
AW-3	04/01/92	39.13	22.50	---	16.63	4700	890	47	43	110	---	---	APP
AW-3	07/06/92	39.13	23.26	---	15.87	3900	3100	30	80	99	---	---	ANA
AW-3	10/07/92	39.13	24.75	---	14.38	5000	2600	ND<0.5	ND<0.5	59	---	---	ANA
AW-3	01/14/93	39.13	23.59	---	15.54	350	250	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-3	04/22/93	39.13	19.42	---	19.71	240	71	2.4	0.6	4.0	---	---	PACE
AW-3	07/15/93	39.13	20.09	---	19.04	650	71	2.8	1.5	1.1	38	(c)	PACE
AW-3	10/21/93	39.13	21.88	---	17.25	160	4.8	1.7	1.6	3.6	---	---	PACE
QC-1 (e)	10/21/93	---	---	---	---	170	6.1	2.0	1.7	4.4	---	---	PACE
AW-3	01/27/94	39.13	22.33	---	16.80	92	2.1	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-1 (e)	01/27/94	---	---	---	---	80	2.9	0.5	ND<0.5	ND<0.5	---	---	PACE
AW-3	04/21/94	39.13	20.96	---	18.17	150	3.6	0.8	0.9	2.5	---	1.3	PACE
AW-3	09/08/94	39.13	21.60	---	17.53	53	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	1.9	PACE
AW-3 (f)	12/21/94	39.13	---	---	---	---	---	---	---	---	---	---	---
AW-3 (f)	01/30/95	39.13	---	---	---	---	---	---	---	---	---	---	---
AW-3 (f)	04/10/95	39.13	---	---	---	---	---	---	---	---	---	---	---
AW-3	06/29/95	39.13	15.41	---	23.72	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.0	ATI
AW-3	09/18/95	39.13	17.83	---	21.30	---	---	---	---	---	---	---	---
AW-3	09/19/95	39.13	---	---	---	61000	11000	2900	4100	13000	790	7.4	ATI
AW-3	12/07/95	39.13	19.27	---	19.86	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	3.4	ATI
QC-1 (e)	12/07/95	---	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
AW-3	03/28/96	39.13	13.85	---	25.28	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.1	SPL
QC-1 (e)	03/28/96	---	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
AW-3	06/20/96	39.13	14.47	---	24.66	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.2	SPL
QC-1 (e)	06/20/96	---	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
AW-3	10/11/96	39.13	17.97	---	21.16	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.7	SPL
QC-1 (e)	10/11/96	---	---	---	---	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	SPL
AW-3	01/02/97	39.13	13.00	---	26.13	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.6	SPL
AW-3	04/14/97	39.13	14.36	---	24.77	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.0	SPL
QC-1 (e)	04/15/97	---	---	---	---	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	SPL
AW-3	07/02/97	39.13	15.87	---	23.26	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.4	SPL
AW-3	09/30/97	39.13	17.50	---	21.63	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	810	5.7	SPL
AW-3	01/21/98	39.13	11.98	---	27.15	140	ND<0.5	ND<1.0	ND<1.0	ND<1.0	99	4.6	SPL
QC-1 (e)	01/21/98	---	---	---	---	150	ND<0.5	ND<1.0	ND<1.0	1.2	110	---	SPL
AW-3	04/09/98	39.13	9.45	---	29.68	---	---	---	---	---	---	---	---
AW-3	04/10/98	39.13	---	---	---	ND<50	ND<0.5	ND<1.0	ND<1.0	1.6	ND<10	4.5	SPL
QC-1 (e)	04/10/98	---	---	---	---	ND<50	ND<0.5	ND<1.0	1.4	1.7	ND<10	---	SPL
AW-3	06/19/98	39.13	12.13	---	27.00	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.4	SPL
AW-3	11/30/98	39.13	15.91	---	23.22	---	---	---	---	---	---	---	---
AW-3	01/21/99	39.13	15.93	---	23.20	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	---	SPL
AW-3	04/30/99	39.13	15.98	---	23.15	---	---	---	---	---	---	---	---
AW-3	07/09/99	39.13	14.58	---	24.55	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet) (b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
AW-4	04/05/91	39.08	25.12	---	13.96	110000	40000	13000	2000	5500	---	---	SUP
AW-4	04/01/92	39.08	23.56	---	15.52	230000	57000	31000	2900	7600	---	---	APP
QC-1 (e)	04/01/92	---	---	---	---	210000	55000	23000	2900	7000	---	---	APP
AW-4	07/06/92	39.08	25.87	---	13.21	38000	16000	5400	2000	6100	---	---	ANA
AW-4	10/07/92	39.08	27.53	---	11.55	120000	41000	26000	4700	13000	---	---	ANA
AW-4	01/14/93	39.08	24.12	---	14.96	62000	18000	14000	2700	7700	1400 (c)	---	PACE
AW-4	04/22/93	39.08	21.47	---	17.61	18000	1100	2100	320	3500	---	---	PACE
AW-4	07/15/93	39.08	23.30	---	15.78	21000	820	2300	590	3800	2000 (c)	---	PACE
AW-4	10/21/93	39.08	25.08	---	14.00	11000	570	83	630	2300	4600 (c)	---	PACE
AW-4	01/27/94	39.08	24.61	---	14.47	12000	420	460	600	2200	6400 (c)	---	PACE
AW-4	04/21/94	39.08	22.96	---	16.12	12000	110	250	150	1900	16 (c)	1.5	PACE
QC-1 (e)	04/21/94	---	---	---	---	14000	71	160	29	1200	13000 (c)	---	PACE
AW-4	09/09/94	39.08	23.85	---	15.23	9700	75	64	280	2000	---	2.1	PACE
AW-4 (f)	12/21/94	39.08	---	---	---	---	---	---	---	---	---	---	---
AW-4 (f)	01/30/95	39.08	---	---	---	---	---	---	---	---	---	---	---
AW-4	04/10/95	39.08	18.07	---	21.01	3700	69	8.7	44	130	---	8.5	ATI
AW-4	06/29/95	39.08	19.25	---	19.83	8000	62	190	190	1100	---	7.5	ATI
AW-4	09/18/95	39.08	20.73	---	18.35	---	---	---	---	---	---	---	---
AW-4	09/19/95	39.08	---	---	---	12000	660	1600	200	1900	7100	8.3	ATI
AW-4	12/07/95	39.08	22.49	---	16.59	41000	8400	7200	710	6300	5200	3.6	ATI
AW-4 (f)	03/28/96	39.08	16.49	---	22.59	---	---	---	---	---	---	---	---
AW-4	06/20/96	39.08	16.00	---	23.08	ND<50	ND<0.5	ND<1	ND<1	ND<1	12	---	SPL
AW-4	10/11/96	39.08	19.52	---	19.56	36000	12000	5500	ND<25	3800	880/1000 (g)	6.2	SPL
AW-4	01/02/97	39.08	15.80	---	23.28	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	22	6.4	SPL
QC-1 (e)	01/02/97	---	---	---	---	ND<50	61	3.8	3.5	8.1	110	---	SPL
AW-4	04/14/97	39.08	17.01	---	22.07	---	---	---	---	---	---	---	---
AW-4	04/15/97	39.08	---	---	---	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.4	SPL
AW-4	07/02/97	39.08	19.68	---	19.40	ND<50	21	ND<1.0	ND<1.0	ND<1.0	41	4.1	SPL
AW-4 (f)	09/30/97	39.08	22.71	---	16.37	---	---	---	---	---	---	---	---
AW-4	01/21/98	39.08	15.89	---	23.19	13000	2900	ND<10	230	314	3100	3.9	SPL
AW-4	04/09/98	39.08	13.50	---	25.58	---	---	---	---	---	---	---	---
AW-4	04/10/98	39.08	---	---	---	890	ND<0.5	ND<1	ND<1	ND<1	730	4.9	SPL
AW-4	06/19/98	39.08	14.75	---	24.33	60	ND<0.5	ND<1.0	ND<1.0	ND<1.0	34	4.3	SPL
AW-4	11/30/98	39.08	19.25	---	19.83	---	---	---	---	---	---	---	---
AW-4	01/21/99	39.08	18.94	---	20.14	3700	830	93	200	360	30	---	---
AW-4	04/30/99	39.08	19.10	---	19.98	---	---	---	---	---	---	---	---
AW-4	07/09/99	39.08	18.93	---	20.15	76000	12000	6600	2000	8700	320	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
AW-5	04/05/91	38.51	25.48	---	13.03	420	31	7.5	20	68	---	---	SUP
AW-5	04/01/92	38.51	23.95	---	14.56	---	---	---	---	---	---	---	---
AW-5	04/02/92	38.51	---	---	---	4000	270	63	190	290	---	---	APP
AW-5	07/06/92	38.51	26.48	---	12.03	1400	160	ND<2.5	250	58	---	---	ANA
AW-5	10/07/92	38.51	28.18	---	10.33	360	12	0.6	8.7	5	---	---	ANA
AW-5	01/14/93	38.51	24.15	---	14.36	1700	270	7.5	130	62	---	---	PACE
AW-5	04/22/93	38.51	22.43	---	16.08	2700	790	30	220	180	---	---	PACE
QC-1 (e)	04/22/93	---	---	---	---	3500	780	29	240	210	---	---	PACE
AW-5	07/15/93	38.51	24.31	---	14.20	1300	69	16	67	120	---	---	PACE
QC-1 (e)	07/15/93	---	---	---	---	1300	68	8.3	64	99	---	---	PACE
AW-5	10/21/93	38.51	26.05	---	12.46	510	9.6	1.5	17	45	75	(c)	PACE
AW-5	01/27/94	38.51	26.42	---	12.09	420	3.3	ND<0.5	1.0	0.9	---	---	PACE
AW-5	04/21/94	38.51	24.36	---	14.15	1000	110	25	56	27	75	(c)	1.3
AW-5	09/09/94	38.51	24.55	---	13.96	210	ND<0.5	ND<0.5	0.5	0.9	---	---	2.7
AW-5	12/21/94	38.51	22.30	---	16.21	410	ND<0.5	20	4.3	1.4	---	---	1.1
QC-1 (e)	12/21/94	---	---	---	---	340	ND<0.5	15	3.3	1.4	---	---	---
AW-5	01/30/95	38.51	18.88	---	19.63	210	0.6	11	8.8	2	---	---	1.5
AW-5	04/10/95	38.51	18.44	---	20.07	500	1.4	0.59	6.5	4.3	---	---	8.3
AW-5	06/29/95	38.51	19.92	---	18.59	490	(d) 1.2	0.58	7.3	2.2	---	---	6.9
AW-5	09/18/95	38.51	22.15	---	16.36	---	---	---	---	---	---	---	---
AW-5	09/19/95	38.51	---	---	---	260	0.62	ND<0.50	3.1	1.1	110	8.2	ATI
AW-5	12/07/95	38.51	23.75	---	14.76	60	ND<0.50	ND<0.50	ND<0.50	ND<1.0	210	4.3	ATI
AW-5	03/28/96	38.51	17.76	---	20.75	ND<50	ND<0.5	ND<1	ND<1	ND<1	63	3.0	SPL
AW-5	06/20/96	38.51	18.46	---	20.05	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	3.6	SPL
AW-5	10/11/96	38.51	21.84	---	16.67	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.5	SPL
AW-5	01/02/97	38.51	18.01	---	20.50	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.6	SPL
AW-5	04/14/97	38.51	19.35	---	19.16	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.1	SPL
AW-5	07/02/97	38.51	20.29	---	18.22	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.0	SPL
AW-5	09/30/97	38.51	23.15	---	15.36	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	1300	6.3	SPL
AW-5	01/21/98	38.51	17.33	---	21.18	6100	ND<0.5	2.1	ND<1.0	ND<1.0	3700	4.5	SPL
AW-5	04/09/98	38.51	15.25	---	23.26	---	---	---	---	---	---	---	---
AW-5	04/10/98	38.51	---	---	---	3500	ND<0.5	ND<1.0	ND<1.0	ND<1.0	3000	5.4	SPL
AW-5	06/19/98	38.51	17.39	---	21.12	3300	ND<0.5	ND<1.0	ND<1.0	ND<1.0	2500	5.2	SPL
AW-5 (f)	11/30/98	38.51	---	---	---	---	---	---	---	---	---	---	---
AW-5	01/21/99	38.51	21.22	---	17.29	2800	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1800	---	SPL
AW-5	04/30/99	38.51	21.50	---	17.01	---	---	---	---	---	---	---	---
AW-5	07/09/99	38.51	20.15	---	18.36	4000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3400/3500 (g)	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
AW-6	04/05/91	37.08	22.48	---	14.60	1100	80	19	1.4	230	---	---	SUP
AW-6	04/01/92	37.08	22.50	---	14.58	---	---	---	---	---	---	---	---
AW-6	04/02/92	37.08	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---
AW-6	07/06/92	37.08	22.74	---	14.34	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	APP
AW-6	10/07/92	37.08	24.64	---	12.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-6	01/14/93	37.08	22.36	---	14.72	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-6	04/22/93	37.08	22.82	---	14.26	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-6	07/15/93	37.08	20.49	---	16.59	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-6	10/21/93	37.08	22.84	---	14.24	ND<50	0.5	0.6	ND<0.5	0.7	---	---	PACE
AW-6	01/27/94	37.08	22.33	---	14.75	ND<50	ND<0.5	0.9	3.1	12	---	---	PACE
AW-6	04/21/94	37.08	20.66	---	16.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	1.7	PACE
AW-6	09/09/94	37.08	21.57	---	15.51	ND<50	0.9	ND<0.5	ND<0.5	0.5	---	2.9	PACE
AW-6	12/21/94	37.08	19.40	---	17.68	ND<50	1.8	0.8	0.8	3.2	---	1.1	PACE
AW-6	01/30/95	37.08	16.74	---	20.34	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	2.2	ATI
QC-1 (e)	01/30/95	---	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
AW-6	04/10/95	37.08	16.01	---	21.07	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.6	ATI
AW-6	06/29/95	37.08	17.54	---	19.54	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	6.3	ATI
AW-6	09/18/95	37.08	19.65	---	17.43	---	---	---	---	---	---	---	---
AW-6	09/19/95	37.08	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	25	8.3	ATI
AW-6	12/07/95	37.08	20.35	---	16.73	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	16	4.7	ATI
AW-6	03/28/96	37.08	14.99	---	22.09	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.0	SPL
AW-6	06/20/96	37.08	15.59	---	21.49	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	4.6	SPL
AW-6	10/11/96	37.08	19.09	---	17.99	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.3	SPL
AW-6	01/02/97	37.08	15.11	---	21.97	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.5	SPL
AW-6	04/14/97	37.08	16.25	---	20.83	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	3.9	SPL
AW-6	07/02/97	37.08	17.99	---	19.09	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.2	SPL
AW-6	09/30/97	37.08	20.50	---	16.58	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.0	SPL
AW-6	01/21/98	37.08	15.72	---	21.36	160	ND<0.5	ND<1.0	ND<1.0	ND<1.0	110	5.0	SPL
AW-6	04/09/98	37.08	13.31	---	23.77	---	---	---	---	---	---	---	---
AW-6	04/10/98	37.08	---	---	---	370	ND<0.5	ND<1.0	ND<1.0	ND<1.0	300	4.3	SPL
AW-6	06/19/98	37.08	15.18	---	21.90	830	2.0	ND<1.0	ND<1.0	ND<1.0	690	4.0	SPL
AW-6 (f)	11/30/98	37.08	---	---	---	---	---	---	---	---	---	---	---
AW-6	01/21/99	37.08	15.78	---	21.30	2300	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1900	---	SPL
AW-6	04/30/99	37.08	16.01	---	21.07	---	---	---	---	---	---	---	---
AW-6	07/09/99	37.08	17.63	---	19.45	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
AW-7	04/05/91	37.60	23.38	---	14.22	ND<50	0.4	0.7	ND<0.3	ND<0.3	---	---	SUP
AW-7	04/01/92	37.60	21.92	---	15.68	---	---	---	---	---	---	---	---
AW-7	04/02/92	37.60	---	---	---	ND<50	ND<0.5	3.2	1.0	5.4	---	---	---
AW-7	07/06/92	37.60	24.50	---	19.10	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	APP
AW-7	10/07/92	37.60	26.18	---	11.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-7	01/14/93	37.60	22.03	---	15.57	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-7	04/22/93	37.60	21.18	---	16.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-7	07/15/93	37.60	22.09	---	15.51	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-7	10/21/93	37.60	24.05	---	13.55	51	5.0	4.2	3.5	8.2	---	---	PACE
AW-7	01/27/94	37.60	23.40	---	14.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-7	04/21/94	37.60	22.24	---	15.36	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-7	09/09/94	37.60	22.94	---	14.66	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	2.5	PACE
AW-7	12/21/94	37.60	20.86	---	16.74	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	4.3	PACE
AW-7	01/30/95	37.60	17.51	---	20.09	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	2.2	PACE
AW-7	04/10/95	37.60	16.69	---	20.91	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	2.7	ATI
AW-7	06/29/95	37.60	18.33	---	19.27	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	4.8	ATI
AW-7	09/18/95	37.60	20.68	---	16.92	---	---	---	---	---	---	7.6	ATI
AW-7	09/19/95	37.60	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---
AW-7	12/07/95	37.60	22.15	---	15.45	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	5.1	ATI
AW-7	03/28/96	37.60	16.38	---	21.22	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	5.2	ATI
AW-7	06/20/96	37.60	17.02	---	20.58	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	3.9	SPL
AW-7	10/11/96	37.60	20.47	---	17.13	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	5.0	SPL
AW-7	01/02/97	37.60	16.70	---	20.90	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.3	SPL
AW-7	04/14/97	37.60	17.96	---	19.64	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.2	SPL
AW-7	07/02/97	37.60	19.11	---	18.49	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.0	SPL
AW-7	09/30/97	37.60	22.97	---	14.63	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<10	5.4	SPL
AW-7	01/21/98	37.60	16.50	---	21.10	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	1100	6.5	SPL
AW-7	04/09/98	37.60	13.56	---	24.04	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.9	SPL
AW-7	06/19/98	37.60	15.41	---	22.19	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.9	SPL
AW-7	11/30/98	37.60	18.90	---	18.70	---	---	---	---	---	ND<10	4.4	SPL
AW-7	01/21/99	37.60	18.39	---	19.21	---	---	---	---	---	---	---	---
AW-7	04/30/99	37.60	18.54	---	19.06	---	---	---	---	---	---	---	---
AW-7	07/09/99	37.60	17.98	---	19.62	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
AW-8	04/05/91	40.86	26.68	---	14.18	80	1.9	2.2	0.5	1.3	---	---	SUP
AW-8	04/01/92	40.86	25.11	---	15.75	73	ND<0.5	0.7	ND<0.5	0.6	---	---	APP
AW-8	07/06/92	40.86	26.43	---	14.43	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-8	10/07/92	40.86	28.59	---	12.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-8	01/14/93	40.86	25.55	---	15.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-8	04/22/93	40.86	22.29	---	18.57	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-8	07/15/93	40.86	23.42	---	17.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-8	10/21/93	40.86	25.15	---	15.71	ND<50	1.9	1.8	1.3	3.3	---	---	PACE
AW-8	01/27/94	40.86	25.42	---	15.44	ND<50	ND<0.5	0.5	0.6	8.5	---	---	PACE
AW-8	04/21/94	40.86	24.14	---	16.72	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	1.5	PACE
AW-8	09/09/94	40.86	24.55	---	16.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	2.4	PACE
AW-8	12/21/94	40.86	22.72	---	18.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	1.1	PACE
AW-8	01/30/95	40.86	19.75	---	21.11	ND<50	ND<0.50	1	ND<0.50	1	---	0.8	ATI
AW-8	04/10/95	40.86	17.78	---	23.08	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.3	ATI
AW-8	06/29/95	40.86	18.18	---	22.68	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.3	ATI
AW-8	09/18/95	40.86	20.20	---	20.66	---	---	---	---	---	---	---	---
AW-8	09/19/95	40.86	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	7.7	ATI
AW-8	12/07/95	40.86	21.54	---	19.32	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	4.4	ATI
AW-8	03/28/96	40.86	15.77	---	25.09	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	3.8	SPL
AW-8	06/20/96	40.86	16.41	---	24.45	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	3.6	SPL
AW-8	10/11/96	40.86	19.90	---	20.96	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.4	SPL
AW-8	01/02/97	40.86	15.89	---	24.97	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.9	SPL
AW-8	04/14/97	40.86	17.07	---	23.79	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.6	SPL
AW-8	07/02/97	40.86	18.67	---	22.19	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.6	SPL
AW-8	09/30/97	40.86	22.52	---	18.34	ND<50	ND<5	ND<10	ND<10	ND<10	820	6.7	SPL
AW-8	01/21/98	40.86	16.01	---	24.85	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.2	SPL
AW-8	04/09/98	40.86	11.18	---	29.68	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.4	SPL
AW-8	06/19/98	40.86	13.01	---	27.85	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.1	SPL
AW-8	11/30/98	40.86	17.46	---	23.40	---	---	---	---	---	---	---	---
AW-8	01/21/99	40.86	17.47	---	23.39	---	---	---	---	---	---	---	---
AW-8	04/30/99	40.86	17.60	---	23.26	---	---	---	---	---	---	---	---
AW-8	07/09/99	40.86	16.50	---	24.36	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
AW-9	01/02/97	37.78	10.00	---	27.78	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.7	SPL
AW-9 (f)	04/14/97	37.78	---	---	---	---	---	---	---	---	---	---	---
AW-9	07/02/97	37.78	12.71	---	25.07	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.0	SPL
AW-9	09/30/97	37.78	21.22	---	16.56	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.8	SPL
AW-9	01/21/98	37.78	10.26	---	27.52	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.3	SPL
AW-9	04/09/98	37.78	6.77	---	31.01	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.6	SPL
AW-9	06/19/98	37.78	8.96	---	28.82	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.8	SPL
RW-1	04/05/91	37.73	---	---	---	---	---	---	---	---	---	---	---
RW-1	04/01/92	37.73	22.81	0.30	15.15	---	---	---	---	---	---	---	---
RW-1	07/06/92	37.73	26.92	0.41	11.12	---	---	---	---	---	---	---	---
RW-1	10/07/92	37.73	26.51	1.26	10.17	---	---	---	---	---	---	---	---
RW-1	01/14/93	37.73	23.75	0.25	14.17	---	---	---	---	---	---	---	---
RW-1	04/22/93	37.73	22.70	1.38	16.07	---	---	---	---	---	---	---	---
RW-1	07/15/93	37.73	26.10	0.81	12.24	---	---	---	---	---	---	---	---
RW-1	10/21/93	37.73	25.40	0.49	12.70	---	---	---	---	---	---	---	---
RW-1	10/21/93	37.73	25.40	0.49	12.70	---	---	---	---	---	---	---	---
RW-1	01/27/94	37.73	28.02	0.37	9.99	---	---	---	---	---	---	---	---
RW-1	04/21/94	37.73	23.10	0.91	15.31	---	---	---	---	---	---	---	---
RW-1	09/09/94	37.73	24.39	1.04	14.12	---	---	---	---	---	---	---	---
RW-1 (h)	12/21/94	37.73	---	---	---	---	---	---	---	---	---	---	---
RW-1	12/07/95	37.73	25.71	1.04	12.80	150000	34000	35000	4300	21000	2700	---	ATI
RW-1	03/28/96	37.73	16.75	0.18	21.12	---	---	---	---	---	---	---	---
RW-1 (h)	06/20/96	37.73	25.10	0.02	12.65	---	---	---	---	---	---	---	---
RW-1	10/11/96	37.73	25.51	0.00	12.22	130000	20000	32000	2800	20700	1400/1200 (g)	7.4	SPL
RW-1	01/02/97	37.73	24.49	0.01	13.25	---	---	---	---	---	---	---	---
RW-1	04/14/97	37.73	23.99	0.04	13.77	---	---	---	---	---	---	---	---
RW-1	04/15/97	37.73	---	---	---	1800000	38000	190000	48000	281000	ND<25000	---	SPL
RW-1	07/02/97	37.73	16.40	0.20	21.48	140000	19000	55000	4400	32400	ND<10000	5.7	SPL
QC-1 (e)	07/02/97	---	---	---	---	130000	19000	54000	4700	33400	ND<10000	---	SPL
RW-1	09/30/97	37.73	27.97	0.02	9.78	110000	13000	22000	2000	12500	1100	7.0	SPL
QC-1 (e)	09/30/97	---	---	---	---	140000	17000	29000	2500	15900	1200	---	SPL
RW-1	01/21/98	37.73	14.14	0.44	23.92	270000	21000	48000	3500	25000	1100	4.8	SPL
RW-1	04/09/98	37.73	25.01	0.05	12.76	---	---	---	---	---	---	---	---
RW-1	04/10/98	37.73	---	---	---	220000	26000	46000	4400	24500	ND<2500	5.1	SPL
RW-1	06/19/98	37.73	11.43	---	26.30	180000	19000	32000	3000	17400	ND<2500	4.6	SPL
RW-1	11/30/98	37.73	7.87	---	29.86	---	---	---	---	---	---	---	---
RW-1	01/21/99	37.73	18.90	0.03	18.85	260000	24000	46000	5100	30000	1700	---	SPL
RW-1	07/09/99	37.73	18.58	0.26	19.36	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF MONITORING/ SAMPLING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (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	(i)	10/07/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
QC-2	(i)	01/14/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i)	04/22/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i)	07/15/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i)	10/21/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i)	01/27/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i)	04/21/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i)	09/09/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i)	12/21/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i)	01/30/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2	(i)	04/10/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2	(i)	06/27/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2	(i)	09/19/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2	(i)	12/07/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2	(i)	03/28/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
QC-2	(i)	06/20/96	---	---	---	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 available/applicable/measurable
 ND Not detected above reported detection limit
 PACE Pace, Inc.
 SUP Superior Analytical Laboratories, Inc.
 APP Applied Analytical Laboratory
 ANA Anametrix, Inc.
 ATI Analytical Technologies, Inc.
 SPL Southern Petroleum Laboratories

- (a) Top of casing elevations surveyed to the nearest 0.01 foot above mean sea level.
- (b) Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.
- (c) A copy of the documentation for this data is included in Appendix C of Allisto report 10-025-13-003.
- (d) MTBE peak. See documentation in Appendix C of Allisto report 10-025-13-003.
- (e) Blind duplicate.
- (f) Well inaccessible.
- (g) EPA Methods 8020/8260 used.
- (h) Well not monitored and/or sampled due to vapor extraction system.
- (i) Travel blank.

Analytical Appendix



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

July 21, 1999

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

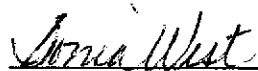
The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on July 10, 1999. The sample(s) was assigned to Certificate of Analysis No. (s) 9907312 and analyzed for all parameters as listed on the chain of custody.

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: 99-07-312

Approved for Release by:

Sonia West

Sonia West, Senior Project Manager

7-21-99

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. H9-9907312-01

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

P.O.#
 N/A, COC#118682
 DATE: 07/21/99

PROJECT: #11133, 2220 98th Avenue
 SITE: Oakland
 SAMPLED BY: Blaine Tech Services
 SAMPLE ID: A

PROJECT NO: 990709-Z2
 MATRIX: WATER
 DATE SAMPLED: 07/09/99 11:50:00
 DATE RECEIVED: 07/10/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	460	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
 4-Bromofluorobenzene

97
 97

Method 8020A ***

Analyzed by: DR

Date: 07/15/99

Gasoline Range Organics

0.47 0.050 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

73
 93

California LUFT Manual for Gasoline

Analyzed by: DR

Date: 07/14/99 20:08:00

(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



Certificate of Analysis No. H9-9907312-01

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

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

P.O.#
N/A, COC#118682
07/21/99

PROJECT: #11133, 2220 98th Avenue
SITE: Oakland
SAMPLED BY: Blaine Tech Services
SAMPLE ID: A

PROJECT NO: 990709-Z2
MATRIX: WATER
DATE SAMPLED: 07/09/99 11:50:00
DATE RECEIVED: 07/10/99

PARAMETER	ANALYTICAL DATA			UNITS
	RESULTS	PQL*		
Methyl t-Butyl Ether	470	50		ug/L
SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	100	80	120
Toluene-d8	50 ug/L	108	88	110
4-Bromofluorobenzene	50 ug/L	106	86	115

ANALYZED BY: JC
METHOD: 8260 Water, Volatile Organics
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

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. H9-9907312-02

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

P.O.#
 N/A, COC#118682
 DATE: 07/21/99

PROJECT: #11133, 2220 98th Avenue
 SITE: Oakland
 SAMPLED BY: Blaine Tech Services
 SAMPLE ID: B

PROJECT NO: 990709-Z2
 MATRIX: WATER
 DATE SAMPLED: 07/09/99 12:10:00
 DATE RECEIVED: 07/10/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	3400	10 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
 4-Bromofluorobenzene
 Method 8020A ***
 Analyzed by: DR
 Date: 07/16/99

107
 97

Gasoline Range Organics

4.0 0.050 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene
 California LUFT Manual for Gasoline
 Analyzed by: DR
 Date: 07/14/99 20:35:00

157MI
 90

(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. H9-9907312-02

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

P.O.#
N/A, COC#118682
07/21/99

PROJECT: #11133, 2220 98th Avenue
SITE: Oakland
SAMPLED BY: Blaine Tech Services
SAMPLE ID: B

PROJECT NO: 990709-Z2
MATRIX: WATER
DATE SAMPLED: 07/09/99 12:10:00
DATE RECEIVED: 07/10/99

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Methyl t-Butyl Ether	3500	200	ug/L	
SURROGATES				
	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	104	80	120
Toluene-d8	50 ug/L	108	88	110
4-Bromofluorobenzene	50 ug/L	104	86	115

ANALYZED BY: JC

DATE/TIME: 07/13/99 19:57:00

METHOD: 8260 Water, Volatile Organics

NOTES: * - Practical Quantitation Limit

ND - Not Detected

NA - Not Analyzed

COMMENTS:

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. H9-9907312-03

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

P.O.#
 N/A, COC#118682
 DATE: 07/21/99

PROJECT: #11133, 2220 98th Avenue
 SITE: Oakland
 SAMPLED BY: Blaine Tech Services
 SAMPLE ID: C

PROJECT NO: 990709-Z2
 MATRIX: WATER
 DATE SAMPLED: 07/09/99 12:35:00
 DATE RECEIVED: 07/10/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	320	25 P	ug/L
BENZENE	12000	25 P	ug/L
TOLUENE	6600	25 P	ug/L
ETHYLBENZENE	2000	25 P	ug/L
TOTAL XYLENE	8700	25 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	29300		ug/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

107
 95

Method 8020A ***

Analyzed by: DR

Date: 07/16/99

Gasoline Range Organics

76

1.25 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

123
 108

California LUFT Manual for Gasoline

Analyzed by: DR

Date: 07/14/99 21:01:00

(P) - Practical Quantitation Limit

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

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

Certificate of Analysis No. H9-9907312-04

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

P.O.#
 N/A, COC#118682
 DATE: 07/21/99

PROJECT: #11133, 2220 98th Avenue
 SITE: Oakland
 SAMPLED BY: Blaine Tech Services
 SAMPLE ID: D

PROJECT NO: 990709-Z2
 MATRIX: WATER
 DATE SAMPLED: 07/09/99 13:00:00
 DATE RECEIVED: 07/10/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	1200	25 P	ug/L
BENZENE	140	25 P	ug/L
TOLUENE	100	25 P	ug/L
ETHYLBENZENE	1800	25 P	ug/L
TOTAL XYLENE	6900	25 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	8940		ug/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

107
 100

Method 8020A ***

Analyzed by: DR

Date: 07/16/99

Gasoline Range Organics

58

12.5 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

83
 89

California LUFT Manual for Gasoline

Analyzed by: DR

Date: 07/14/99 22:48:00

(P) - Practical Quantitation Limit

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

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

Certificate of Analysis No. H9-9907312-05

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

P.O.#
 N/A, COC#118682
 DATE: 07/21/99

PROJECT: #11133, 2220 98th Avenue
 SITE: Oakland
 SAMPLED BY: Blaine Tech Services
 SAMPLE ID: E

PROJECT NO: 990709-Z2
 MATRIX: WATER
 DATE SAMPLED: 07/09/99 13:20:00
 DATE RECEIVED: 07/10/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	1300	10 P	ug/L
BENZENE	3000	10 P	ug/L
TOLUENE	ND	10 P	ug/L
ETHYLBENZENE	760	10 P	ug/L
TOTAL XYLENE	180	10 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	3940		ug/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

127
 97

Method 8020A ***

Analyzed by: DR

Date: 07/14/99

Gasoline Range Organics

11 0.50 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

110
 90

California LUFT Manual for Gasoline

Analyzed by: DR

Date: 07/14/99 23:15:00

(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

QUALITY CONTROL

DOCUMENTATION

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL

Contract:

Lab Code: Case No: 9907312

SAS No: SDG No:

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

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
1,1-Dichloroethene	250	0	190	76	61-145
Trichloroethene	250	0	250	100	71-120
Benzene	250	0	260	104	76-127
Toluene	250	0	240	96	76-125
Chlorobenzene	250	0	260	104	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC
1,1-Dichloroethene	250	180	72	5	14	61-145
Trichloroethene	250	250	100	0	14	71-120
Benzene	250	250	100	4	11	76-127
Toluene	250	240	96	0	13	76-125
Chlorobenzene	250	250	100	4	13	75-130

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

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

SPL Houston Labs

RECOVERY REPORT

Client Name:
 Sample Matrix: LIQUID
 Lab Smp Id: METHSPIKE-8260W/1X
 Level: LOW
 Data Type: MS DATA
 SpikeList File: 8240water.spk
 Sublist File: LCS.sub
 Method File: /var/chem/m.i/m990713.b/m8260aw.m
 Misc Info: M194W1//M194IW3

Client SDG: m990713
 Fraction: VOA
 Operator: JC
 SampleType: METHSPIKE
 Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
7 1,1-Dichloroethene	50	37	74.00	61-145
26 Trichloroethene	50	50	100.00	71-120
22 Benzene	50	52	104.00	76-127
33 Toluene	50	50	100.00	76-125
39 Chlorobenzene	50	51	102.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 19 1,2-Dichloroethane	50	50	100.00	80-120
\$ 32 Toluene-d8	50	55	110.00	88-110
\$ 47 Bromofluorobenzene	50	54	108.00	86-115



SPL Blank QC Report

Matrix: Aqueous
Sample ID: VBLK
Batch: M990713113701

Reported on: 07/19/99 16:52
Analyzed on: 07/13/99 18:12
Analyst: JC

METHOD 8260 M194B01

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

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	104	80-120	% Recovery
Toluene-d8	108	88-110	% Recovery
Bromofluorobenzene	106	86-115	% Recovery

Samples in Batch 9907312-01 9907312-02

Notes

ND - Not detected.



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

Matrix: Aqueous
 Units: ug/L

Batch Id: VARE990715100600

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	46	92.0	72 - 128
Benzene	ND	50	45	90.0	61 - 119
Toluene	ND	50	46	92.0	65 - 125
EthylBenzene	ND	50	44	88.0	70 - 118
O Xylene	ND	50	51	102	72 - 117
M & P Xylene	ND	100	95	95.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	9.1	20	29	99.5	31	110	10.0	20	39 - 150
BENZENE	ND	20	17	85.0	17	85.0	0	21	32 - 164
TOLUENE	ND	20	17	85.0	17	85.0	0	20	38 - 159
ETHYLBENZENE	ND	20	15	75.0	16	80.0	6.45	19	52 - 142
O XYLENE	ND	20	17	85.0	18	90.0	5.71	18	53 - 143
M & P XYLENE	ND	40	33	82.5	34	85.0	2.99	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: DR

Sequence Date: 07/15/99

SPL ID of sample spiked: 9907310-02A

Sample File ID: E_G2131.TX0

Method Blank File ID:

Blank Spike File ID: E_G2122.TX0

Matrix Spike File ID: E_G2125.TX0

Matrix Spike Duplicate File ID: E_G2126.TX0

SAMPLES IN BATCH(SPL ID):

9907289-05A 9907310-02A 9907310-04A 9907310-01A
 9907310-03A 9907310-05A 9907310-06A 9907310-07A
 9907310-08A 9907310-09A 9907312-01A 9907310-10A
 9907310-11A 9907310-12A 9907232-04A 9907232-01A
 9907432-01A 9907232-02A 9907232-05A 9907232-07A
 9907312-02A



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

Matrix: Aqueous
Units: ug/L

Batch Id: VARE990716042000

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	52	104	72 - 128
Benzene	ND	50	50	100	61 - 119
Toluene	ND	50	53	106	65 - 125
EthylBenzene	ND	50	48	96.0	70 - 118
O Xylene	ND	50	50	100	72 - 117
M & P Xylene	ND	100	100	100	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
			MTBE	ND	20	23			
BENZENE	1.6	20	23	107	23	107	0	21	32 - 164
TOLUENE	1.9	20	25	116	23	106	9.01	20	38 - 159
ETHYLBENZENE	ND	20	22	110	21	105	4.65	19	52 - 142
O XYLENE	ND	20	22	110	23	115	4.44	18	53 - 143
M & P XYLENE	1.1	40	45	110	45	110	0	17	53 - 144

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

Analyst: GS

< = Data outside Method Specification limits.

Sequence Date: 07/16/99

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

SPL ID of sample spiked: 9907507-01A

ND = Not Detected/Below Detection Limit

Sample File ID: E_G2185.TX0

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

Method Blank File ID:

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

Blank Spike File ID: E_G2158.TX0

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

Matrix Spike File ID: E_G2180.TX0

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

Matrix Spike Duplicate File ID: E_G2181.TX0

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

SAMPLES IN BATCH(SPL ID):

9907310-09A 9907232-03A 9907289-03A 9907312-03A
9907312-04A 9907232-04A 9907310-10A 9907310-11A
9907310-12A



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

Matrix: Aqueous
 Units: ug/L

Batch Id: VARE990713231500

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	50	100	72 - 128
Benzene	ND	50	48	96.0	61 - 119
Toluene	ND	50	50	100	65 - 125
EthylBenzene	ND	50	47	94.0	70 - 118
O Xylene	ND	50	53	106	72 - 117
M & P Xylene	ND	100	100	100	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	1800	20	1700	NC	1800	NC	NC	20	39 - 150
BENZENE	52	20	57	25.0 *	56	20.0 *	22.2 *	21	32 - 164
TOLUENE	ND	20	20	100	19	95.0	5.13	20	38 - 159
ETHYLBENZENE	11	20	27	80.0	25	70.0	13.3	19	52 - 142
O XYLENE	ND	20	21	105	22	110	4.65	18	53 - 143
M & P XYLENE	7.9	40	46	95.2	46	95.2	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: DR

Sequence Date: 07/14/99

SPL ID of sample spiked: 9907232-01A

Sample File ID: E_G2091.TX0

Method Blank File ID:

Blank Spike File ID: E_G2081.TX0

Matrix Spike File ID: E_G2086.TX0

Matrix Spike Duplicate File ID: E_G2087.TX0

SAMPLES IN BATCH(SPL ID):

9907232-05A 9907232-06A 9907232-07A 9907312-02A
 9907312-05A 9907314-01A 9907314-02A 9907314-03A
 9907285-12A 9907289-01A 9907289-02A 9907232-01A
 9907232-02A 9907232-03A



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

California LUFT Manual for Gasoline

Matrix: Aqueous
Units: mg/L

Batch Id: VARE990713234100

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	0.82	82.0	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	1.2	0.90	1.6			

* = 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 197)

(***) = Source: SPL-Houston Historical Data (1st Q 197)

Analyst: DR

Sequence Date: 07/14/99

SPL ID of sample spiked: 9907232-03A

Sample File ID: EEG2094.TX0

Method Blank File ID:

Blank Spike File ID: EEG2082.TX0

Matrix Spike File ID: EEG2088.TX0

Matrix Spike Duplicate File ID: EEG2089.TX0

SAMPLES IN BATCH(SPL ID):

9907232-05A 9907232-06A 9907232-07A 9907312-01A
9907312-02A 9907312-03A 9907312-04A 9907312-05A
9907314-01A 9907314-02A 9907314-03A 9907232-01A
9907232-02A 9907232-03A

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST



9907312

CHAIN OF CUSTODY

No. 118682

Page 1 of 1

BAF

CONSULTANT'S NAME Blain Tech Services, Inc.		CONSULTANT'S ADDRESS 1680 Rogers Ave., San Jose, CA 95112	
BP SITE NUMBER 11133	BP SITE / FACILITY ADDRESS 2220 98th Avenue, Oakland		
CONSULTANT PROJECT MANGER Doug Sanders		PHONE NUMBER (408)573-0555 X218	FAX NUMBER (408)573-7771
BP CONTACT Scott Hooton	BP ADDRESS 295 SW 41st St., Renton, WA		PHONE NUMBER (425)251-0689
LAB CONTACT SPL - Sonia West	LABORATORY ADDRESS P.O. Box 20807, Houston, TX		PHONE NUMBER (800)969-6775
BP CONTACT REQUESTING RUSH TAT (Print BP Contact Name)		RUSH REQUESTED OF (Print Consultant Contact Name)	DATE/TIME
			SHIPMENT DATE
			SHIPMENT METHOD

CONSULTANT PROJECT NUMBER 990709-22
CONSULTANT CONTRACT NUMBER
FAX NO. (425)251-0736
FAX NO. (713)660-8975
SHIPMENT METHOD
AIRBILL NUMBER 80403941605

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

* ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	LAB SAMPLE #	T-PH-GY	B-TEX	M-TBE (50%)	M-TBE (5260)							COMMENTS	
				NO.	TYPE (VOL.)	LAB													
A /	7/9/99	1150	W	5				X	X	X									* One time verification
B /		1200		5				X	X	X									
C /		1235		43				X	X	X									
D /		1300		33				X	X	X									
E /		1320		53				X	X	X									

SAMPLED BY (Please Print Name) Jeremy			SAMPLED BY (Signature) <i>[Signature]</i>			ADDITIONAL COMMENTS 3°C		
RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY / AFFILIATION (Print Name / Signature)	DATE	TIME			
<i>[Signature]</i>			<i>[Signature]</i>	7/10/99	1000			

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 7/10/99	Time: 1000
---------------	------------

SPL Sample ID: <div style="text-align: center; font-size: 1.2em; margin-top: 10px;">9907312</div>
--

		<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:	3°	C
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #)	80403944/605
		Other:	
11	Method of sample disposal:	SPL Disposal	✓
		HOLD	
		Return to Client	

Name: <div style="font-size: 1.5em; margin-top: 10px;">Jul C</div>	Date: 7/10/99
--	---------------

Field Data Sheets

WELL MONITORING DATA SHEET

Project #: 990709-22	Client: BP#11133
Sampler: JR	Start Date: 7-9-99
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8
Total Well Depth: 28.39	Depth to Water: 12.62
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer
Disposable Bailer
 Middleburg
 Electric Submersible
 Extraction Pump

Sampling Method: Bailer
Disposable Bailer
 Extraction Port
 Other: _____

Other: _____

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

2.5	(Gals.) X	3	=	7.5	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1250	69.9	6.8	731	/	2.5	odor, sheen
1253	68.6	6.7	547		5	
1256	69.1	6.6	540		7.5	
				*emptied skimmer but no SPH found		

Did well dewater? Yes No Gallons actually evacuated: 7.5

Sampling Time: 1300 Sampling Date: 7-9-99

Sample I.D.: " D " Laboratory: SPL

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

Equipment Blank I.D.: @ Time Duplicate I.D.:

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

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

WELL MONITORING DATA SHEET

Project #: 990709-22	Client: BP#11133
Sampler: JR	Start Date: 7-9-99
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8
Total Well Depth: 34.27	Depth to Water: 14.64
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer
~~Disposable Bailer~~
 Middleburg
 Electric Submersible
 Extraction Pump
 Other: _____

Sampling Method: Bailer
~~Disposable Bailer~~
 Extraction Port
 Other: _____

3.1 (Gals.) X	3	= 9.3 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1140	66.2	6.9	635	 	3.5	brown
1144	66.7	6.7	444	 	6.5	
1148	66.7	6.7	423	 	9.5	

Did well dewater? Yes No Gallons actually evacuated: 9.5

Sampling Time: 1150 Sampling Date: 7-9-99

Sample I.D.: "A" Laboratory: SPC

Analyzed for: TPH-G BTEX MTBE TPH-D Other: MTBE by 8260

Equipment Blank I.D.: @ Time Duplicate I.D.:

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

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

WELL MONITORING DATA SHEET

Project #: 990709-22	Client: BP #11133
Sampler: JR	Start Date: 7-9-99
Well I.D.: AW-1	Well Diameter: (2) 3 4 6 8
Total Well Depth: 38.60	Depth to Water: 20.41
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer
Disposable Bailer
 Middleburg
 Electric Submersible
 Extraction Pump

Sampling Method: Bailer
Disposable Bailer
 Extraction Port
 Other: _____

Other: _____

2.9	(Gals.) X	3	=	8.7	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1310	69.4	6.2	677	/	3	grey, odor, sheen
1314	69.3	6.1	704		6	
1317	69.0	6.2	709		8.75	

Did well dewater? Yes No Gallons actually evacuated: 8.75

Sampling Time: 1320 Sampling Date: 7-9-99

Sample I.D.: " E " Laboratory: SPL

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

Equipment Blank I.D.: @ Time Duplicate I.D.:

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

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

WELL MONITORING DATA SHEET

Project #: 990709-22	Client: B.P.#11133
Sampler: JR	Start Date: 7-9-99
Well I.D.: AW-4	Well Diameter: ② 3 4 6 8
Total Well Depth: 32.80	Depth to Water: 18.93
Before: After:	Before: After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer
 Disposable Bailer
 Middleburg
 Electric Submersible
 Extraction Pump
 Other: _____

Sampling Method: Bailer
 Disposable Bailer
 Extraction Port
 Other: _____

2.2 (Gals.) X 3 = 6.6 Gals.
 1 Case Volume Specified Volumes Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1225	68.0	6.2	1480	/	2.25	grey odor
1228	68.4	6.2	1497		4.5	
1231	68.6	6.2	1508		6.75	

Did well dewater? Yes No Gallons actually evacuated: 6.75

Sampling Time: 1235 Sampling Date: 7-9-99

Sample I.D.: " C " Laboratory: SPL

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

Equipment Blank I.D.: @ Time Duplicate I.D.:

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

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

WELL MONITORING DATA SHEET

Project #: 990709-22	Client: BP#11133
Sampler: JR	Start Date: 7-9-99
Well I.D.: AW-5	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 42.62	Depth to Water: 20.15
Before: _____ After: _____	Before: _____ After: _____
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer
 Disposable Bailer
 Middleburg
 Electric Submersible
 Extraction Pump

Sampling Method: Bailer
Disposable Bailer
 Extraction Port
 Other: _____

Other: _____

$14.6 \text{ (Gals.)} \times 3 = 43.8 \text{ Gals.}$
 1 Case Volume Specified Volumes Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1201	69.2	6.2	508	/	15	
1203	69.0	6.1	569		30	grey
1205	69.3	6.1	545		44	

Did well dewater? Yes No Gallons actually evacuated: 44

Sampling Time: 1210 Sampling Date: 7-9-99

Sample I.D.: " B " Laboratory: SPL

Analyzed for: TPH-G BTEX MTBE TPH-D Other: MTBE 5, 8260

Equipment Blank I.D.: @ Time Duplicate I.D.:

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

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

WELL MONITORING DATA SHEET

Project #: 990709-22	Client: BP#11133
Sampler: JR	Start Date:
Well I.D.: RW-1	Well Diameter: 2 3 4 <u>6</u> 8
Total Well Depth: —	Depth to Water: (8.58)
Before: After:	Before: After:
Depth to Free Product: 18.32	Thickness of Free Product (feet): 0.26
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer Disposable Bailer Middleburg Electric Submersible Extraction Pump

Other: _____

Sampling Method: Bailer Disposable Bailer Extraction Port

Other: _____

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

_____ (Gals.) X _____ = _____ Gals.

1 Case Volume Specified Volumes Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
						* Did not Bail SPH because I could not locate a designated steel Drum on site

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Time: _____ Sampling Date: 7-9-99

Sample I.D.: " " Laboratory: SPL

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

Equipment Blank I.D.: _____ @ _____ Time Duplicate I.D.: _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

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