



BP OIL

S. T. Hooton

Team Leader

ENVIRONMENTAL PROTECTION
Environmental Remediation Management

96 DEC 30 11:25 AM

BP Exploration & Oil Inc.

295 SW 41st Street, Bldg., 13, STE N

Renton, WA 98055-4931

Phone: 425-251-0689

Fax: 425-251-0736

December 27, 1999

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

RE: Former BP Oil Site No. 11105
3159 Castro Valley Boulevard (at Redwood)
Castro Valley, CA

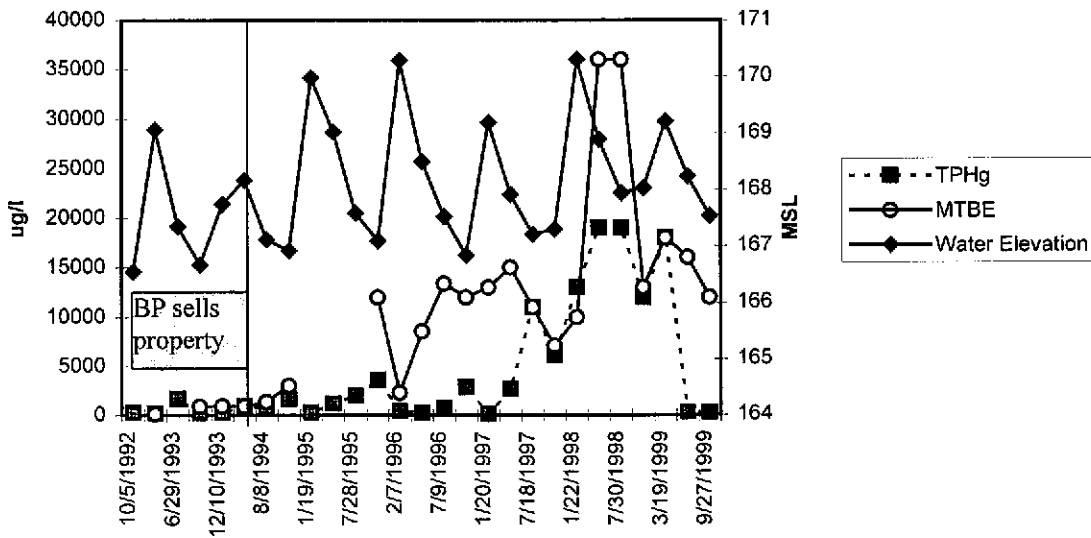
Dear Mr. Seery:

Enclosed find the 8 December 1999 report documenting groundwater monitoring data associated with 27 September 1999.

It is noted that petroleum hydrocarbons were reported to be present in the soil and groundwater at this site at the time the property was sold during 1994. Concentrations detected since that time have increased and raise the concern that petroleum releases have occurred subsequent to BP's operation of the facility.

To illustrate the basis for our concern, water elevation data, together with MTBE and TPHg concentration data for well ESE-2 is depicted below.

ESE-2 TPHg, MTBE & Water Elevation



In contrast to the ESE-1 and ESE-2 data, well ESE-5 shows decreasing TPHg concentrations. Well ESE-5 is located south of a former dispenser island, and west of Redwood Road and the XTRA retail gasoline

outlet.

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

Sincerely,



Scott Hooton

attachment

cc: site file
A. Fagorala - RWQCB-SFBR
Mr. Azim Shakoori, Castro Valley Chevron, 3519 Castro Valley Boulevard, Castro Valley, CA
94546 (w/attachment)

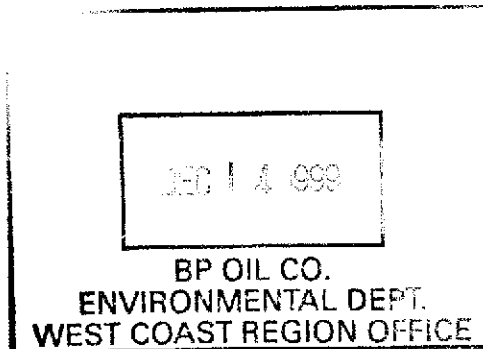
BLAINE
TECH SERVICES INC.



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

December 8, 1999

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



3rd Quarter 1999 Monitoring at 11105

Third Quarter 1999 Groundwater Monitoring at
BP Service Station Number 11105
3519 Castro Valley Blvd.
Castro Valley, CA

Monitoring Performed on September 27, 1999

Groundwater Sampling Report **990927-L-1**

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

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

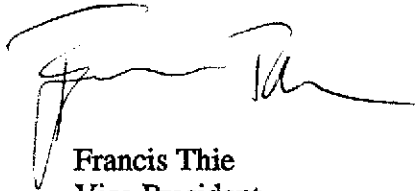
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL DATA AND ANALYTICAL RESULTS**. The full analytical report for the most recent samples is located in the **Analytical Appendix**. The table also contains new groundwater elevation calculations taken from the computer plotted gradient map, which is located in the **Professional Engineering Appendix**.

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,

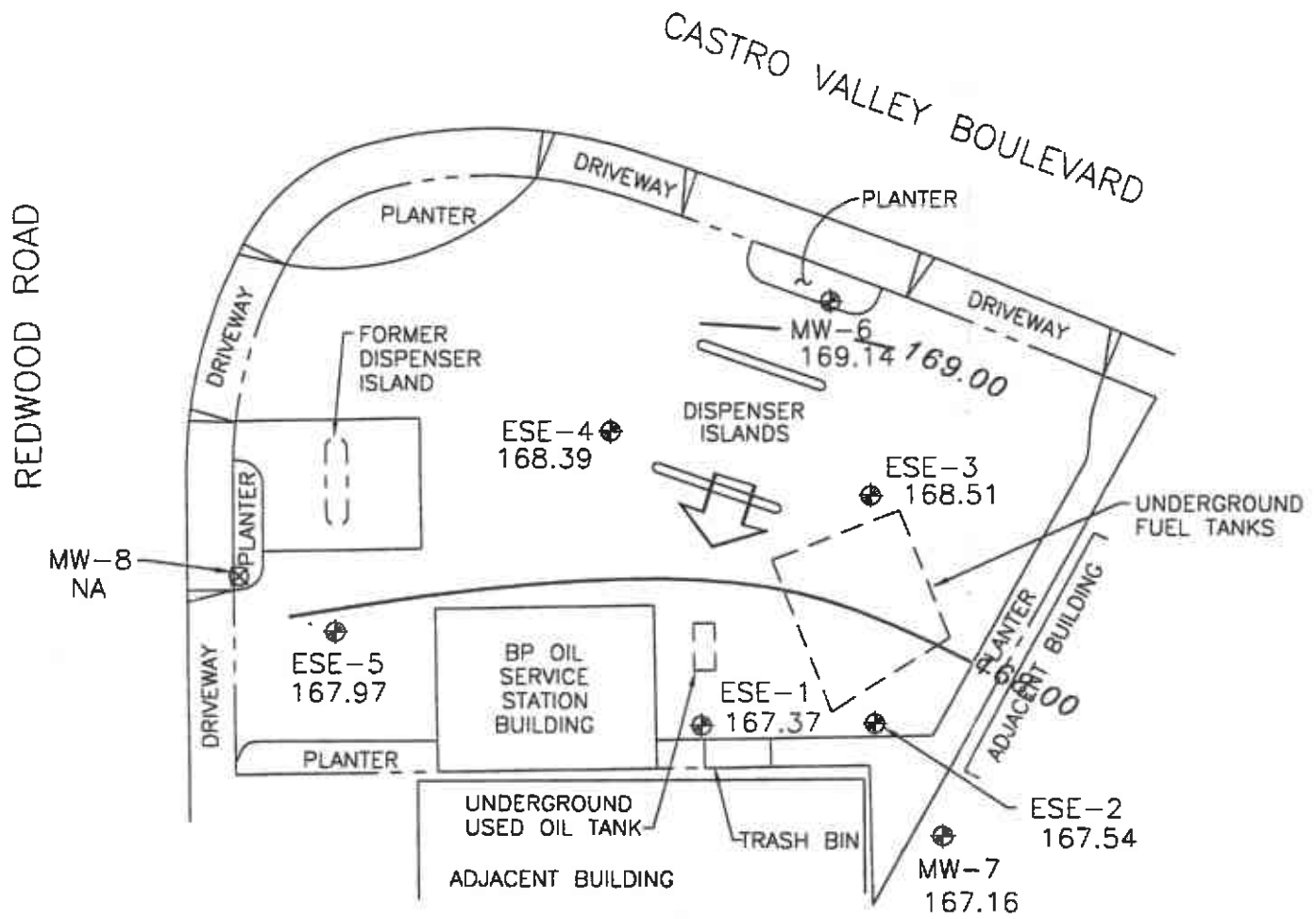
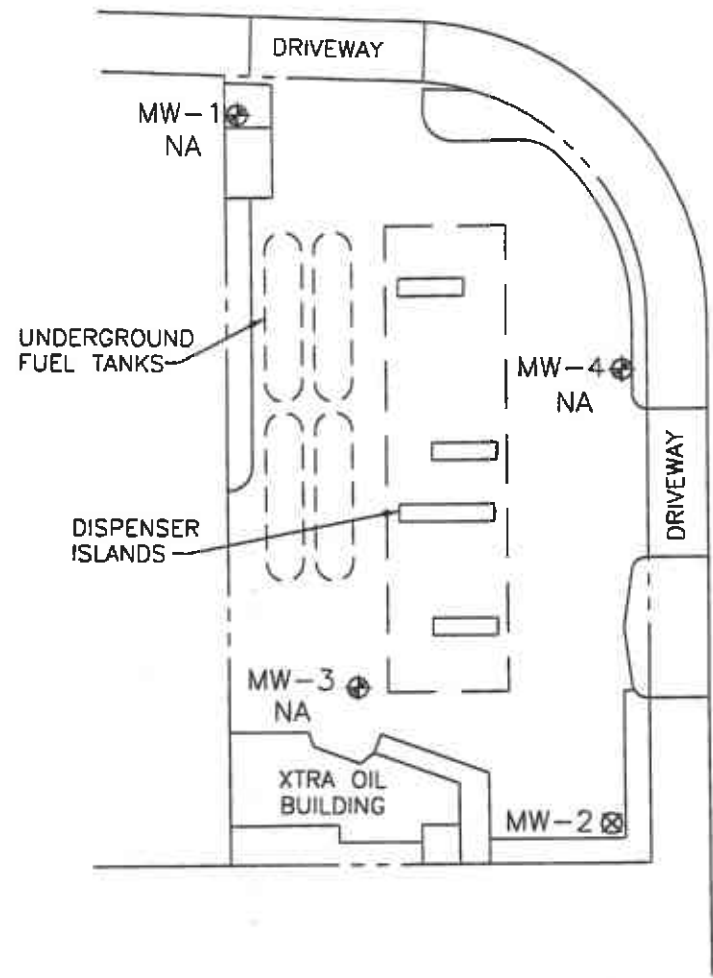
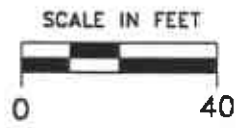
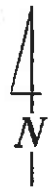
A handwritten signature in black ink, appearing to read 'Francis Thie', written over a horizontal line.

Francis Thie
Vice President

FPT/cm

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

Professional Engineering Appendix

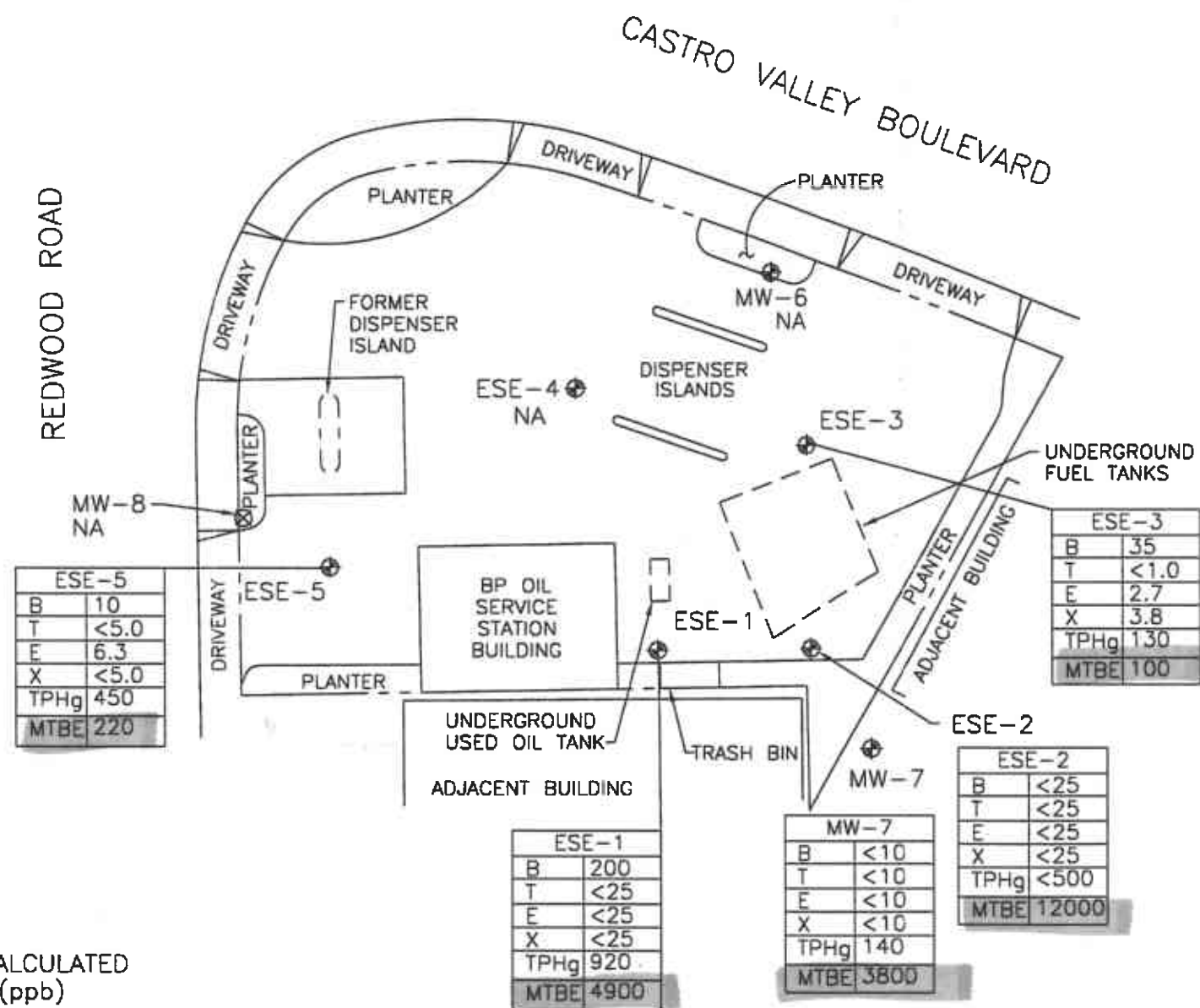
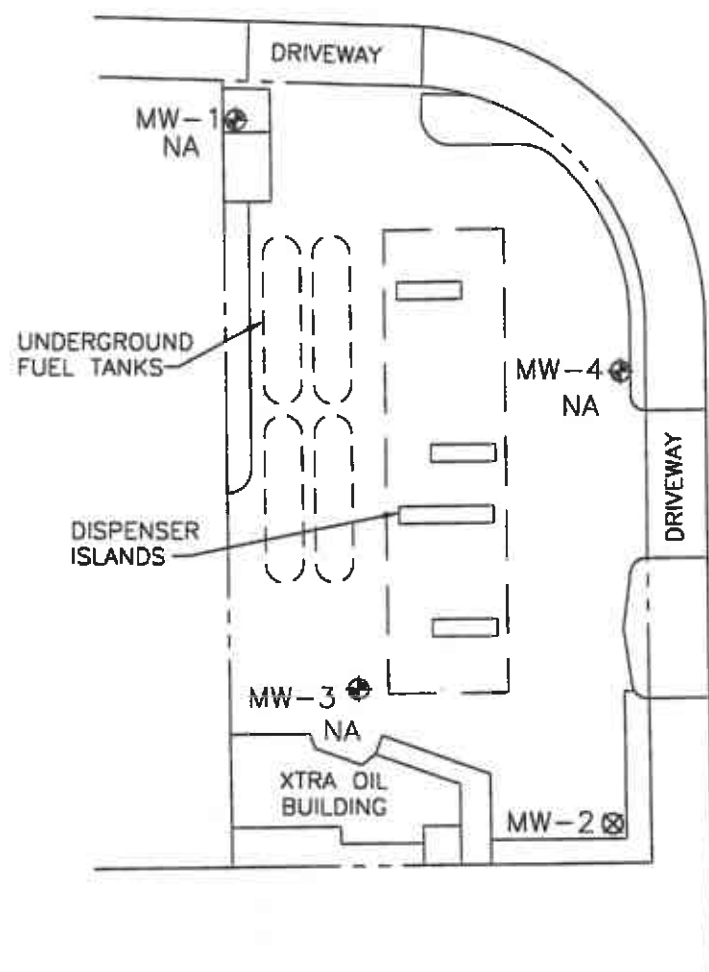
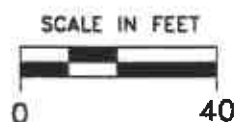
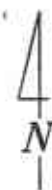


EXPLANATION

- ⊕ GROUNDWATER MONITORING WELL
- ⊗ DESTROYED WELL
- 167.37 GROUNDWATER ELEVATION (FT. MSL)
- 168.00 — GROUNDWATER ELEVATION CONTOUR (FT. MSL)
- NA DATA NOT AVAILABLE
- ↘ APPROXIMATE GROUNDWATER FLOW DIRECTION;
APPROXIMATE GRADIENT = 0.02



PREPARED BY RRM engineering contracting firm	GROUNDWATER ELEVATION CONTOUR MAP, SEPTEMBER 27, 1999	FIGURE: 1 PROJECT: DAC04
	BP Oil Service Station No. 1105 3519 Castro Valley Boulevard Castro Valley, California	



- EXPLANATION**
- ⊕ GROUNDWATER MONITORING WELL
 - ⊗ DESTROYED WELL
 - TPHg TOTAL PETROLEUM HYDROCARBON CALCULATED AS GASOLINE IN PARTS PER BILLION (ppb)
 - B BENZENE, ppb
 - T TOLUENE, ppb
 - E ETHYLBENZENE, ppb
 - X XYLENE, ppb
 - MTBE METHYL-TERT-BUTYL-ETHER, ppb
 - NA DATA NOT AVAILABLE

PREPARED BY

RRM
engineering contracting firm

HYDROCARBON CONCENTRATION MAP,
SEPTEMBER 27, 1999

BP Oil Service Station No. 1105
3519 Castro Valley Boulevard
Castro Valley, California

FIGURE:
2
PROJECT:
DAC04

Table of Well Data and Analytical Results

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
ESE-1 (c)	10/05/92	177.69	11.22	166.47	2100	370	150	17	110	---	---	---
ESE-1D (d)	10/05/92	---	---	---	2300	370	160	16	110	---	---	---
ESE-1	04/01/93	177.69	8.79	168.90	5900	1500	410	110	390	---	---	PACE
ESE-1	06/29/93	177.69	10.34	167.35	7600	2900	390	130	460	---	---	PACE
ESE-1	09/23/93	177.69	10.91	166.78	2000	490	40	20	56	600	(e) ---	PACE
QC-1 (d)	09/23/93	---	---	---	1500	420	39	19	56	550	(e) ---	PACE
ESE-1	12/10/93	177.69	9.93	167.76	1800	480	42	19	66	921	(e) 3.2	PACE
QC-1 (d)	12/10/93	---	---	---	1500	380	38	17	55	770	(e) ---	PACE
ESE-1	02/17/94	177.69	9.64	168.05	1900	380	48	24	80	590	(e) ---	PACE
QC-1 (d)	02/17/94	---	---	---	2200	430	42	19	65	680	(e) ---	PACE
ESE-1	08/08/94	177.69	11.72	165.97	2100	450	46	16	50	760	(e) 5.1	PACE
ESE-1	10/12/94	177.69	10.48	167.21	760	240	16	51	39	230	(e) 3.5	PACE
ESE-1	01/19/95	177.69	7.77	169.92	840	600	120	22	58	---	8.0	ATI
ESE-1	05/02/95	177.69	8.69	169.00	2000	640	67	24	98	---	8.5	ATI
ESE-1	07/28/95	177.69	10.12	167.57	190	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	7.9	ATI
ESE-1	11/17/95	177.69	10.57	167.12	200	3.4	ND<1.0	1	ND<2.0	600	7.7	ATI
ESE-1	02/07/96	177.69	7.41	170.28	750	370	23	21	64	680	2.5	SPL
ESE-1	04/23/96	177.69	9.12	168.57	310	100	ND<1	ND<1	ND<1	1500	6.3	SPL
ESE-1	07/09/96	177.69	10.12	167.57	730	230	74	13	63	750	2.9	SPL
ESE-1	10/10/96	177.69	10.80	166.89	420	26	1.6	7.3	12	430	7.4	SPL
ESE-1	01/20/97	177.69	8.52	169.17	660	290	4.2	13	36	450	5.9	SPL
ESE-1	04/25/97	177.69	9.77	167.92	410	ND<0.5	ND<1.0	ND<1.0	ND<1.0	580	5.3	SPL
ESE-1	07/18/97	177.69	10.55	167.14	420	ND<0.5	ND<1.0	ND<1.0	ND<1.0	370	5.0	SPL
ESE-1	10/27/97	177.69	10.36	167.33	300	56	ND<1.0	6.5	ND<1.0	220	4.8	SPL
ESE-1	01/22/98	177.69	7.52	170.17	4200	440	9	15	17.7	1300	4.2	SPL
ESE-1	04/23/98	177.69	8.80	168.89	15000	3400	190	910	900	4900	4.2	SPL
QC-1	04/23/98	---	---	---	15000	2800	140	730	730	4400	---	SPL
ESE-1	07/29/98	177.69	9.73	167.96	---	---	---	---	---	---	---	---
ESE-1	07/30/98	---	---	---	15000	ND<2.5	ND<5.0	ND<5.0	ND<5.0	15000	4.0	SPL
ESE-1	12/17/98	177.69	9.51	168.18	2400	73	1.0	2.8	4.6	2000/2500*	---	SPL
ESE-1	03/19/99	177.69	8.65	169.04	4700	58	ND<1.0	ND>1.0	ND<1.0	4700	---	SPL
ESE-1	06/23/99	177.69	10.51	167.18	600	170	ND<1.0	7.2	5.0	3900	---	SPL
ESE-1	09/27/99	177.69	10.32	167.37	920	200	ND<25	ND<25	ND<25	4900	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
ESE-2	10/05/92	178.23	11.68	166.55	300	5.4	16	3.9	45	---	---	---
ESE-2	04/01/93	178.23	9.17	169.06	240	27	ND<0.5	17	2.6	123	(e) ---	PACE
ESE-2	06/29/93	178.23	10.88	167.35	1700	260	24	110	23	---	---	PACE
QC-1 (d)	06/29/93	---	---	---	1300	240	17	110	25	---	---	PACE
ESE-2	09/23/93	178.23	11.56	166.67	240	3.1	0.5	0.6	2.5	900	(e) ---	PACE
ESE-2	12/10/93	178.23	10.48	167.75	250	2.4	2.4	1.5	11	940	(e) 2.6	PACE
ESE-2	02/17/94	178.23	10.06	168.17	900	ND<0.5	ND<0.5	ND<0.5	ND<0.5	930	(e) ---	PACE
ESE-2	08/08/94	178.23	11.11	167.12	750	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1400	(e) 5.1	PACE
ESE-2	10/12/94	178.23	11.31	166.92	1700	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3000	(e) 3.6	PACE
ESE-2	01/19/95	178.23	8.25	169.98	300	2	0.9	0.7	1	---	8.1	ATI
ESE-2	05/02/95	178.23	9.21	169.02	1200	4	ND<2.5	ND<2.5	ND<5.0	---	8.4	ATI
ESE-2	07/28/95	178.23	10.64	167.59	2000	ND<2.5	ND<2.5	ND<2.5	ND<5.0	---	7.7	ATI
ESE-2	11/17/95	178.23	11.13	167.10	3600	ND<25	ND<25	ND<25	ND<50	12000	7.4	ATI
QC-1 (d)	11/17/95	---	---	---	3400	ND<25	ND<25	ND<25	ND<50	12000	---	ATI
ESE-2	02/07/96	178.23	7.94	170.29	450	ND<0.5	ND<1	ND<1	ND<1	2300	1.8	SPL
ESE-2	04/23/96	178.23	9.73	168.50	260	0.9	ND<1	ND<1	ND<1	8600	7.2	SPL
ESE-2	07/09/96	178.23	10.70	167.53	780	ND<2.5	ND<5	ND<5	ND<5	13393	3.0	SPL
ESE-2	10/10/96	178.23	11.39	166.84	2900	ND<0.5	ND<1.0	ND<1.0	ND<1.0	12000	7.0	SPL
ESE-2	01/20/97	178.23	9.04	169.19	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	13000	6.2	SPL
ESE-2	04/25/97	178.23	10.31	167.92	2700	ND<0.5	ND<1.0	ND<1.0	ND<1.0	15000	5.9	SPL
ESE-2	07/18/97	178.23	11.02	167.21	11000	ND<5	ND<10	ND<10	ND<10	11000	5.0	SPL
ESE-2	10/27/97	178.23	10.93	167.30	6100	ND<2.5	ND<5.0	ND<5.0	ND<5.0	7100	4.8	SPL
QC-1 (d)	10/27/97	---	---	---	6600	ND<2.5	ND<5.0	ND<5.0	ND<5.0	7400	---	SPL
ESE-2	01/22/98	178.23	7.93	170.30	13000	ND<0.5	ND<1.0	ND<1.0	ND<1.0	10000	4.6	SPL
QC-1 (d)	01/22/98	---	---	---	13000	ND<0.5	ND<1.0	ND<1.0	ND<1.0	10000	---	SPL
ESE-2	04/23/98	178.23	9.34	168.89	19000	ND<5	ND<10	ND<10	ND<10	36000	4.2	SPL
ESE-2	07/29/98	178.23	10.29	167.94	---	---	---	---	---	---	---	---
ESE-2	07/30/98	---	---	---	19000	ND<5	ND<10	ND<10	ND<10	36000	4.2	SPL
ESE-2	12/17/98	178.23	10.20	168.03	12000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	13000	---	SPL
ESE-2	03/19/99	178.23	9.02	169.21	18000	160	ND<1.0	ND<1.0	ND<1.0	13000	---	SPL
ESE-2	06/23/99	178.23	9.99	168.24	280	ND<1.0	ND<1.0	ND<1.0	ND<1.0	13000	---	SPL
ESE-2	09/27/99	178.23	10.69	167.54	ND<500	ND<25	ND<25	ND<25	ND<25	13000	---	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 (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
ESE-3	10/05/92	178.20	10.58	167.62	430	57	31	3.6	34	---	---	---
ESE-3	04/01/93	178.20	8.14	170.06	2400	460	220	74	210	---	---	PACE
ESE-3	06/29/93	178.20	9.72	168.48	280	56	14	15	13	---	---	PACE
ESE-3	09/23/93	178.20	10.46	167.74	72	13	3.5	1.7	4.1	---	---	PACE
ESE-3	12/10/93	178.20	9.30	168.90	270	71	32	6.1	33	---	2.7	PACE
ESE-3	02/17/94	178.20	8.97	169.23	520	140	10	20	33	---	---	PACE
ESE-3	08/08/94	178.20	10.02	168.18	ND<50	8.8	1.6	1.6	2.3	---	6.2	PACE
ESE-3	10/12/94	178.20	10.32	167.88	470	190	6.4	15	18	---	3.5	PACE
ESE-3	01/19/95	178.20	7.40	170.80	330	260	27	21	20	---	6.7	ATI
ESE-3	05/02/95	178.20	8.26	169.94	530	180	30	23	44	---	8.6	ATI
ESE-3	07/28/95	178.20	9.54	168.66	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.8	ATI
ESE-3	11/17/95	178.20	10.04	168.16	ND<50	1.7	ND<0.50	ND<0.50	ND<1.0	ND<5.0	7.3	ATI
ESE-3	02/07/96	178.20	7.08	171.12	ND<50	8.6	ND<1	ND<1	ND<1	ND<10	3.9	SPL
ESE-3	04/23/96	178.20	8.79	169.41	ND<50	7.6	ND<1	ND<1	ND<1	65	6.9	SPL
ESE-3	07/09/96	178.20	10.09	168.11	ND<50	12	2.6	2	3.9	26	3.4	SPL
ESE-3	10/10/96	178.20	10.48	167.72	---	---	---	---	---	---	---	---
ESE-3	10/11/96	178.20	---	---	260	140	ND<1.0	ND<1.0	2.6	ND<10	7.2	SPL
ESE-3	01/20/97	178.20	8.65	169.55	ND<50	1.5	1.7	ND<1.0	ND<1.0	14	5.7	SPL
ESE-3	04/25/97	178.20	10.02	168.18	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	14	5.4	SPL
ESE-3	07/18/97	178.20	10.66	167.54	10000	1400	1400	300	1280	ND<250	5.2	SPL
ESE-3	10/27/97	178.20	9.83	168.37	ND<250	ND<2.5	ND<5.0	ND<5.0	36	ND<50	5.0	SPL
ESE-3	01/22/98	178.20	7.06	171.14	130	ND<0.5	ND<1.0	ND<1.0	ND<1.0	120	4.3	SPL
ESE-3	04/23/98	178.20	8.44	169.76	4800	560	ND<10	15	ND<10	4000	3.9	SPL
ESE-3	07/29/98	178.20	9.27	168.93	---	---	---	---	---	---	---	---
ESE-3	07/30/98	---	---	---	1800	6.2	ND<5.0	ND<5.0	ND<5.0	1700	4.1	SPL
ESE-3	12/17/98	178.20	9.15	169.05	600	54	ND<1.0	2.1	4.9	340/480*	---	SPL
ESE-3	03/19/99	178.20	8.14	170.06	2000	260	4.4	13	28	870	---	SPL
ESE-3	06/23/99	178.20	9.44	168.76	290	91	ND<1.0	8.3	16	240	---	SPL
ESE-3	09/27/99	178.20	9.69	168.51	130	35	ND<1.0	2.7	3.8	100	---	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 (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
ESE-4	10/05/92	177.73	10.33	167.40	98	7.2	1.3	1.1	6.1	---	---	---
ESE-4	04/01/93	177.73	7.88	169.85	550	93	20	23	33	---	---	PACE
ESE-4	06/29/93	177.66	(f) 8.33	169.33	150	23	0.6	5.4	0.5	54	(e) ---	PACE
ESE-4	09/23/93	177.66	10.05	167.61	110	14	1.7	3.2	4.6	---	---	PACE
ESE-4	12/10/93	177.66	8.95	168.71	110	21	7.2	4.2	10	---	2.8	PACE
ESE-4	02/17/94	177.66	8.65	169.01	210	26	1.2	4.7	11	110	(e) ---	PACE
ESE-4	08/08/94	177.66	9.76	167.90	76	9.6	ND<0.5	2	ND<0.5	62	(e) 7.0	PACE
ESE-4	10/12/94	177.66	9.62	168.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	44	(e) 3.2	PACE
ESE-4	01/19/95	177.66	6.97	170.69	140	56	14	24	23	---	6.9	ATI
ESE-4	05/02/95	177.66	7.85	169.81	130	21	2.8	8.6	8.2	---	9.1	ATI
ESE-4	07/28/95	177.66	9.20	168.46	ND<50	ND<0.5	ND<0.50	ND<0.50	ND<1.0	---	8.1	ATI
ESE-4	11/17/95	177.66	9.68	167.98	ND<50	ND<0.5	0.6	ND<0.50	ND<1.0	18	5.7	ATI
ESE-4	02/07/96	177.66	6.59	171.07	100	2.6	ND<1	1.6	4.1	42	2.0	SPL
ESE-4	04/23/96	177.66	8.30	169.36	160	37	15	16	31	43	5.4	SPL
ESE-4	07/09/96	177.66	9.21	168.45	60	17	1.5	6.8	11.6	27	3.9	SPL
ESE-4	10/10/96	177.66	9.97	167.69	---	---	---	---	---	---	---	---
ESE-4	10/11/96	177.66	---	---	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	18	5.5	SPL
ESE-4	01/20/97	177.66	7.68	169.98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	130	4.9	SPL
ESE-4	04/25/97	177.66	9.15	168.51	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.3	SPL
ESE-4	07/18/97	177.66	9.71	167.95	ND<50	15	ND<10	ND<10	ND<10	ND<100	4.5	SPL
ESE-4	10/27/97	177.66	9.38	168.28	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.9	SPL
ESE-4	01/22/97	177.66	6.59	171.07	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.3	SPL
ESE-4	04/23/98	177.66	7.90	169.76	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.0	SPL
ESE-4	07/29/98	177.66	8.96	168.70	---	---	---	---	---	---	---	---
ESE-4	07/30/98	---	---	---	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.2	SPL
ESE-4	12/17/98	177.66	8.32	169.34	---	---	---	---	---	---	---	---
ESE-4	03/19/99	177.66	7.71	169.95	---	---	---	---	---	---	---	---
ESE-4	06/23/99	177.66	8.78	168.88	---	---	---	---	---	---	---	---
ESE-4	09/27/99	177.66	9.27	168.39	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
ESE-5	10/05/92	176.08	9.22	166.86	1300	200	3.8	1.2	18	---	---	---
ESE-5	04/01/93	176.08	7.02	169.06	13000	2200	26	730	1000	---	---	PACE
QC-1 (d)	04/01/93	---	---	---	13000	2500	25	740	1100	---	---	PACE
ESE-5	06/29/93	176.08	10.21	165.87	7600	1500	9.3	170	100	---	---	PACE
ESE-5	09/23/93	176.08	10.64	165.44	560	19	1.2	0.9	1.8	---	---	PACE
ESE-5	12/10/93	176.08	9.42	166.66	1700	300	3	76	110	---	2.5	PACE
ESE-5	02/07/94	176.08	9.35	166.73	3500	640	7.8	90	130	---	---	PACE
ESE-5	08/08/94	176.08	8.76	167.32	2600	210	4.6	9.4	4.4	33	(e) 5.8	PACE
QC-1 (d)	08/08/94	---	---	---	2500	230	4.6	13	4.8	32	(e) ---	PACE
ESE-5	10/12/94	176.08	8.95	167.13	5600	560	9.5	75	21	---	3.6	PACE
QC-1 (d)	10/12/94	---	---	---	6000	550	10	78	22	77	(e) ---	PACE
ESE-5	01/19/95	176.08	5.40	170.68	1900	620	ND<5	95	15	---	7.6	ATI
QC-1 (d)	01/19/95	---	---	---	1600	620	ND<5	93	17	---	---	ATI
ESE-5	05/02/95	176.08	6.48	169.60	5700	1100	ND<10	180	58	---	8.2	ATI
QC-1 (d)	05/02/95	---	---	---	5300	1100	ND<10	180	58	---	---	ATI
ESE-5	07/28/95	176.08	7.97	168.11	520	15	ND<0.50	1.7	1.3	---	8.2	ATI
QC-1 (d)	07/28/95	---	---	---	460	7.2	ND<0.50	1.9	1.5	---	---	ATI
ESE-5	11/17/95	176.08	8.39	167.69	850	39	1.8	7.6	2.7	24	6.3	ATI
ESE-5	02/07/96	176.08	4.71	171.37	4100	670	6	190	140	ND<50	1.5	SPL
ESE-5	04/23/96	176.08	7.35	168.73	3000	570	ND<5	79	100	84	6.5	SPL
ESE-5	07/09/96	176.08	9.40	166.68	620	150	1.7	9.3	6.4	25	3.7	SPL
ESE-5	10/10/96	176.08	9.04	167.04	1100	29	ND<5.0	ND<5.0	ND<5.0	ND<50	6.3	SPL
QC-1 (d)	10/10/96	---	---	---	1100	31	ND<5.0	ND<5.0	ND<5.0	ND<50	---	SPL
ESE-5	01/20/97	176.08	5.82	170.26	2100	980	ND<25	280	80	ND<250	5.4	SPL
QC-1 (d)	01/20/97	---	---	---	2700	910	8.8	280	84	180	---	SPL
ESE-5	04/25/97	176.08	7.24	168.84	---	---	---	---	---	---	---	---
ESE-5	04/28/97	176.08	---	---	ND<250	7.9	ND<5.0	ND<5.0	ND<5.0	ND<50	4.9	SPL
ESE-5	07/18/97	176.08	7.86	168.22	1200	ND<5	ND<10	ND<10	ND<10	ND<100	5.0	SPL
QC-1 (d)	07/18/97	---	---	---	630	31	ND<5.0	ND<5.0	ND<5.0	130	---	SPL
ESE-5	10/27/97	176.08	7.91	168.17	ND<250	5.4	ND<5.0	ND<5.0	ND<5.0	ND<50	5.2	SPL
ESE-5	01/22/98	176.08	4.64	171.44	170	7.7	ND<1.0	ND<1.0	ND<1.0	130	4.6	SPL
ESE-5	04/23/98	176.08	6.31	169.77	720	79	ND<5.0	9.0	ND<5.0	180	4.6	SPL
ESE-5	07/29/98	176.08	7.43	168.65	---	---	---	---	---	---	---	---
ESE-5	07/30/98	---	---	---	840	9.8	ND<1.0	4.0	ND<1.0	710	4.3	SPL
ESE-5	12/17/98	176.08	7.05	169.03	---	---	---	---	---	---	---	---
ESE-5	03/19/99	176.08	5.00	171.08	ND<250	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	---	SPL
ESE-5	06/23/99	176.08	7.77	168.31	---	---	---	---	---	---	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
ESE-5	09/27/99	176.08	8.11	167.97	450	10	ND<5.0	6.3	ND<5.0	220	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-6	07/28/95	179.24	10.00	169.24	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.1	ATI
MW-6	11/17/95	179.24	10.44	168.80	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	6.8	ATI
MW-6	02/07/96	179.24	7.68	171.56	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	2.4	SPL
MW-6	04/23/96	179.24	9.33	169.91	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	6.6	SPL
MW-6	07/09/96	179.24	10.10	169.14	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	2.7	SPL
MW-6	10/10/96	179.24	11.00	168.24	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.9	SPL
MW-6	01/20/97	179.24	8.70	170.54	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.5	SPL
MW-6	04/25/97	179.24	10.16	169.08	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.1	SPL
MW-6	07/18/97	179.24	10.66	168.58	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.8	SPL
MW-6	10/27/97	179.24	10.25	168.99	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.8	SPL
MW-6	01/22/98	179.24	7.76	171.48	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.0	SPL
MW-6	04/23/98	179.24	9.10	170.14	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.2	SPL
MW-6	07/29/98	179.24	10.40	168.84	---	---	---	---	---	---	---	---
MW-6	07/30/98	---	---	---	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	3.8	SPL
MW-6	12/17/98	179.24	9.40	169.84	---	---	---	---	---	---	---	---
MW-6	03/19/99	179.24	9.10	170.14	---	---	---	---	---	---	---	---
MW-6	06/23/99	179.24	9.79	169.45	---	---	---	---	---	---	---	---
MW-6	09/27/99	179.24	10.10	169.14	---	---	---	---	---	---	---	---

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-7	07/28/95	176.55	9.25	167.30	ND<50	0.54 (g)	0.54	ND<0.50	ND<1.0	---	7.1	ATI
MW-7	11/17/95	176.55	9.73	166.82	1100	ND<10	ND<10	ND<10	ND<20	4000	6.3	ATI
MW-7	02/07/96	176.55	6.48	170.07	610	ND<0.5	ND<1	ND<1	ND<1	2500	4.1	SPL
QC-1 (d)	02/07/96	---	---	---	280	ND<0.5	ND<1	ND<1	ND<1	2600	---	SPL
MW-7	04/23/96	176.55	8.37	168.18	110	ND<0.5	ND<1	ND<1	ND<1	3500	6.4	SPL
QC-1 (d)	04/23/96	---	---	---	230	ND<0.5	ND<1	ND<1	ND<1	3500	---	SPL
MW-7	07/09/96	176.55	9.24	167.31	230	ND<0.5	ND<1	ND<1	ND<1	4296	3.1	SPL
QC-1 (d)	07/09/96	---	---	---	220	ND<0.5	ND<1	ND<1	ND<1	4400	---	SPL
MW-7	10/10/96	176.55	10.05	166.50	---	---	---	---	---	---	---	---
MW-7	10/11/96	176.55	---	---	1600	ND<0.5	ND<1.0	ND<1.0	ND<1.0	3000	6.9	SPL
MW-7	01/20/97	176.55	7.51	169.04	ND<50	0.63	1	ND<1.0	ND<1.0	2600	5.7	SPL
MW-7	04/25/97	176.55	8.79	167.76	---	---	---	---	---	---	---	---
MW-7	04/28/97	176.55	---	---	1500	ND<0.5	ND<1.0	ND<1.0	ND<1.0	3600	5.1	SPL
QC-1 (d)	04/28/97	---	---	---	7700	3500	ND<25	74	37	ND<250	---	SPL
MW-7	07/18/97	176.55	9.50	167.05	1400	ND<0.5	ND<1.0	ND<1.0	ND<1.0	2600	5.2	SPL
MW-7	10/27/97	176.55	9.19	167.36	420	ND<0.5	ND<1.0	ND<1.0	ND<1.0	560	4.9	SPL
MW-7	01/22/98	176.55	6.45	170.10	3100	ND<0.5	ND<1.0	ND<1.0	1.4	2300	4.2	SPL
MW-7	04/23/98	176.55	8.02	168.53	3800	ND<0.5	ND<1.0	ND<1.0	ND<1.0	3800	3.9	SPL
MW-7	07/29/98	176.55	8.88	167.67	---	---	---	---	---	---	---	---
MW-7	07/30/98	---	---	---	500	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.1	SPL
QC-1 (d)	07/30/98	---	---	---	4700	ND<12	ND<25	ND<25	ND<25	4700	---	SPL
MW-7	12/17/98	176.55	8.62	167.93	---	---	---	---	---	---	---	---
MW-7	03/19/99	176.55	7.52	169.03	3800	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3800	---	SPL
MW-7	08/23/99	176.55	9.63	166.92	---	---	---	---	---	---	---	---
MW-7	09/27/99	176.55	9.39	167.16	140	ND<10	ND<10	ND<10	ND<10	3800	---	SPL
MW-8	07/28/95	176.34	7.80	168.54	1100	ND<2.5	ND<2.5	ND<2.5	ND<5.0	---	7.2	ATI
MW-8	11/17/95	176.34	8.29	168.05	8300	75	5.3	670	240	140	7.0	ATI
MW-8	02/07/96	176.34	4.99	171.35	2300	33	ND<10	190	216	ND<100	1.7	SPL
MW-8	04/23/96	176.34	6.09	170.25	2000	390	ND<20	150	26	ND<250	5.1	SPL
MW-8 (h)	07/09/96	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
QC-2	(i) 04/01/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i) 06/29/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i) 09/23/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i) 12/10/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i) 02/17/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i) 08/08/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i) 10/12/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2	(i) 01/19/95	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	ATI
QC-2	(i) 05/02/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2	(i) 07/28/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2	(i) 11/17/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2	(i) 02/07/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
QC-2	(i) 04/23/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
QC-2	(i) 07/09/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL

ABBREVIATIONS:

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

NOTES:

- (a) Top of casing elevations surveyed relative to mean sea level.
- (b) Groundwater elevations in feet relative to mean sea level.
- (c) Additional analysis of the sample collected from ESE-1 on 10/5/92 detected 96 ug/l total petroleum hydrocarbons as diesel and 1.8 ug/l 1,2-dichloroethane.
- (d) Blind duplicate.
- (e) A copy of the documentation for this data is included in Appendix C of Alisto report 10-138-09-004.
- (f) Top of casing lowered by 0.07 foot after the monitoring event on 4/01/93.
- (g) Sample result may be falsely elevated due to matrix interference.
- (h) Well destroyed.
- (i) Travel blank.
- (*) MTBE by EPA 8020/8260

Analytical Appendix



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

October 6, 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 September 28, 1999. The sample(s) was assigned to Certificate of Analysis No. (s) 9909883 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

A handwritten signature in cursive script that reads 'Sonia West'. The signature is written in black ink and is positioned above a horizontal line.

Sonia West
Senior Project Manager



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 680-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 99-09-883

Approved for Release by:

Sonia West

Sonia West, Senior Project Manager

10-6-99

Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer

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. H9-9909883-05

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

P.O.#
 N/A, COC#118682
 DATE: 10/05/99

PROJECT: #11105, 3519 Castro Valley
 SITE: Castro Valley
 SAMPLED BY: Blaine Tech Services
 SAMPLE ID: A

PROJECT NO: 990927-L1
 MATRIX: WATER
 DATE SAMPLED: 09/27/99 11:55:00
 DATE RECEIVED: 09/28/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	220	5.0 P	ug/L
BENZENE	10	5.0 P	ug/L
TOLUENE	ND	5.0 P	ug/L
ETHYLBENZENE	6.3	5.0 P	ug/L
TOTAL XYLENE	ND	5.0 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	16.3		ug/L

Surrogate	% Recovery
1,4-Difluorobenzene	93
4-Bromofluorobenzene	100

Method 8020A ***
 Analyzed by: WLR
 Date: 10/02/99

Gasoline Range Organics	0.45	0.25 P	mg/L
-------------------------	------	--------	------

Surrogate	% Recovery
1,4-Difluorobenzene	87
4-Bromofluorobenzene	93

California LUFT Manual for Gasoline
 Analyzed by: WLR
 Date: 10/02/99 05:19:00

(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. H9-9909883-01

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

P.O.#
 N/A, COC#118682
 DATE: 10/05/99

PROJECT: #11105, 3519 Castro Valley
 SITE: Castro Valley
 SAMPLED BY: Blaine Tech Services
 SAMPLE ID: B

PROJECT NO: 990927-L1
 MATRIX: WATER
 DATE SAMPLED: 09/27/99 12:25:00
 DATE RECEIVED: 09/28/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	12000	25 P	ug/L
BENZENE	ND	25 P	ug/L
TOLUENE	ND	25 P	ug/L
ETHYLBENZENE	ND	25 P	ug/L
TOTAL XYLENE	ND	25 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

104
 96

Method 8020A ***

Analyzed by: WLR

Date: 10/02/99

Gasoline Range Organics

ND

0.5 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

90
 93

California LUFT Manual for Gasoline

Analyzed by: WLR

Date: 10/02/99 01:46:00

(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. H9-9909883-02

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

P.O.#
 N/A, COC#118682
 DATE: 10/05/99

PROJECT: #11105, 3519 Castro Valley
 SITE: Castro Valley
 SAMPLED BY: Blaine Tech Services
 SAMPLE ID: C

PROJECT NO: 990927-L1
 MATRIX: WATER
 DATE SAMPLED: 09/27/99 12:54:00
 DATE RECEIVED: 09/28/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	100	1.0 P	ug/L
BENZENE	35	1.0 P	ug/L
TOLUENE	ND	1.0 P	ug/L
ETHYLBENZENE	2.7	1.0 P	ug/L
TOTAL XYLENE	3.8	1.0 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	41.5		ug/L

Surrogate

% Recovery

1,4-Difluorobenzene 103
 4-Bromofluorobenzene 100

Method 8020A ***

Analyzed by: WLR

Date: 10/02/99

Gasoline Range Organics 0.13 0.05 P mg/L

Surrogate

% Recovery

1,4-Difluorobenzene 87
 4-Bromofluorobenzene 93

California LUFT Manual for Gasoline

Analyzed by: WLR

Date: 10/02/99 05:51:00

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

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

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. H9-9909883-03

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

P.O.#
 N/A, COC#118682
 DATE: 10/05/99

PROJECT: #11105, 3519 Castro Valley
 SITE: Castro Valley
 SAMPLED BY: Blaine Tech Services
 SAMPLE ID: D

PROJECT NO: 990927-L1
 MATRIX: WATER
 DATE SAMPLED: 09/27/99 13:40:00
 DATE RECEIVED: 09/28/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	4900	25 P	ug/L
BENZENE	200	25 P	ug/L
TOLUENE	ND	25 P	ug/L
ETHYLBENZENE	ND	25 P	ug/L
TOTAL XYLENE	ND	25 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	200		ug/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

133
 97

Method 8020A ***

Analyzed by: WLR

Date: 10/02/99

Gasoline Range Organics

0.92 0.25 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

87
 93

California LUFT Manual for Gasoline

Analyzed by: WLR

Date: 10/01/99 07:34:00

(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. H9-9909883-04

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

P.O.#
 N/A, COC#118682
 DATE: 10/05/99

PROJECT: #11105, 3519 Castro Valley
 SITE: Castro Valley
 SAMPLED BY: Blaine Tech Services
 SAMPLE ID: E

PROJECT NO: 990927-L1
 MATRIX: WATER
 DATE SAMPLED: 09/27/99 14:05:00
 DATE RECEIVED: 09/28/99

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	3800	10 P	ug/L
BENZENE	ND	10 P	ug/L
TOLUENE	ND	10 P	ug/L
ETHYLBENZENE	ND	10 P	ug/L
TOTAL XYLENE	ND	10 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/L

Surrogate

% Recovery

1,4-Difluorobenzene

97

4-Bromofluorobenzene

87

Method 8020A ***

Analyzed by: WLR

Date: 10/04/99

Gasoline Range Organics

0.14

0.05 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

90

4-Bromofluorobenzene

93

California LUFT Manual for Gasoline

Analyzed by: WLR

Date: 10/02/99 06:24:00

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

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

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

SPL California License # 1903

QUALITY CONTROL
DOCUMENTATION



* 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: HP_N991004095700

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	55	110	72 - 128
Benzene	ND	50	53	106	61 - 119
Toluene	ND	50	53	106	65 - 125
EthylBenzene	ND	50	53	106	70 - 118
O Xylene	ND	50	53	106	72 - 117
M & P Xylene	ND	100	110	110	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	1455	20	1899	NC	1926	NC	NC	20	39 - 150
BENZENE	ND	20	21	105	20	100	4.88	21	32 - 164
TOLUENE	ND	20	22	110	21	105	4.65	20	38 - 159
ETHYLBENZENE	ND	20	21	105	21	105	0	19	52 - 142
O XYLENE	ND	20	21	105	21	105	0	18	53 - 143
M & P XYLENE	ND	40	42	105	41	102	2.90	17	53 - 144

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

◁ = Data outside Method Specification limits.

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

ND = Not Detected/Below Detection Limit

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

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

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

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

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

Analyst: WLR

Sequence Date: 10/04/99

SPL ID of sample spiked: 9909790-02A

Sample File ID: N_J1022.TX0

Method Blank File ID:

Blank Spike File ID: N_J1003.TX0

Matrix Spike File ID: N_J1016.TX0

Matrix Spike Duplicate File ID: N_J1017.TX0

SAMPLES IN BATCH(SPL ID): 9909882-03A 9909883-04A 9909882-06A 9909959-01A
9909882-01A



Matrix: Aqueous
Units: ug/L

Batch Id: HP_S991001093600

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	Recovery	
			<1>	%	
MTBE	ND	50	51	102	72 - 128
Benzene	ND	50	51	102	61 - 119
Toluene	ND	50	52	104	65 - 125
EthylBenzene	ND	50	51	102	70 - 118
O Xylene	ND	50	51	102	72 - 117
M & P Xylene	ND	100	100	100	72 - 116

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	Recovery	Result	Recovery		RPD Max.	Recovery Range
			<1>	<4>	<1>	<5>			
MTBE	2.6	20	23	102	23	102	0	20	39 - 150
BENZENE	ND	20	21	105	21	105	0	21	32 - 164
TOLUENE	7.9	20	28	100	26	90.5	9.97	20	38 - 159
ETHYLBENZENE	2.7	20	23	102	22	96.5	5.54	19	52 - 142
O XYLENE	2.8	20	23	101	22	96.0	5.08	18	53 - 143
M & P XYLENE	9.3	40	50	102	47	94.2	7.95	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: WLR

Sequence Date: 10/01/99

SPL ID of sample spiked: 9909885-01A

Sample File ID: S_I4201.TX0

Method Blank File ID:

Blank Spike File ID: S_I4184.TX0

Matrix Spike File ID: S_I4196.TX0

Matrix Spike Duplicate File ID: S_I4197.TX0

SAMPLES IN BATCH(SPL ID):

9909882-04A	9909882-05A	9909885-03A	9909885-05A
9909885-06A	9909885-07A	9909885-08A	9909883-05A
9909883-02A	9909885-02A	9909882-02A	9909883-01A
9909883-03A	9909885-01A	9909885-04A	9909881-01A



Matrix: Aqueous
Units: mg/L

Batch Id: HP_S990930102100

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	0.96	96.0	64 - 131

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
GASOLINE RANGE ORGANICS	0.07	0.90	0.97	100	0.92	94.4	5.76	36	36 - 160

Analyst: WLR

Sequence Date: 09/30/99

SPL ID of sample spiked: 9909882-01A

Sample File ID: SSI4158.TX0

Method Blank File ID:

Blank Spike File ID: SSI4138.TX0

Matrix Spike File ID: SSI4154.TX0

Matrix Spike Duplicate File ID: SSI4155.TX0

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

< = Data outside Method Specification limits.

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

ND = Not Detected/Below Detection Limit

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

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)

SAMPLES IN BATCH(SPL ID):

9909819-03A	9909819-04A	9909880-01A	9909880-02A
9909880-03A	9909880-04A	9909881-01A	9909881-02A
9909881-03A	9909882-02A	9909882-04A	9909883-03A
9909882-03A	9909882-01A	9909819-02A	



Matrix: Aqueous
Units: mg/L

Batch Id: HP_S991001144200

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	1.0	100	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	1.0	111	1.0	111	0	36	36 - 160

Analyst: WLR

Sequence Date: 10/01/99

SPL ID of sample spiked: 9909885-04A

Sample File ID: SSI4202.TX0

Method Blank File ID:

Blank Spike File ID: SSI4194.TX0

Matrix Spike File ID: SSI4198.TX0

Matrix Spike Duplicate File ID: SSI4199.TX0

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

< = Data outside Method Specification limits.

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

ND = Not Detected/Below Detection Limit

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

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)

SAMPLES IN BATCH(SPL ID):

9909883-01A 9909885-02A 9909885-03A 9909885-05A
 9909885-06A 9909885-07A 9909885-08A 9909883-05A
 9909883-02A 9909883-04A 9909885-01A 9909885-04A
 9909882-05A 9909882-06A

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST



9909883

CHAIN OF CUSTODY

No. 118682

Page 1 of 1

CONSULTANT'S NAME Blain Tech Services, Inc.		CONSULTANT'S ADDRESS 1680 Rogers Ave., San Jose, CA 95112	
BP SITE NUMBER 11105	BP SITE / FACILITY ADDRESS 3519 Castro Valley Blvd., Castro Valley		CONSULTANT PROJECT NUMBER 990927-L1
CONSULTANT PROJECT MANAGER Don Sanders Morgan Hengrave		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

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

ANALYSIS REQUIRED

AMBI NUMBER **806999045983**

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	TTHG	BTX	MTBE	COMMENTS
				NO.	TYPE (VOL.)	LAB SAMPLE #				
X A	9-27-99	1225	WATER		AG		X	X	X	
X B	↓	1254	↓		HEX		X	X	X	
X C	↓	1340	↓		VOL		X	X	X	
X D	↓	1405	↓		↓		X	X	X	
X E	↓	1155	↓		↓		X	X	X	

SAMPLED BY (Please Print Name) LAD GILCHRIST			SAMPLED BY (Signature) <i>[Signature]</i>			ADDITIONAL COMMENTS 3C		
RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY / AFFILIATION (Print Name / Signature)	DATE	TIME			
LAD GILCHRIST / [Signature]	9/27/99	4:15 PM						
			<i>[Signature]</i>	9/28/99	1000			

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 9/28/99	Time: 1000
---------------	------------

SPL Sample ID: 9909883

		<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 #)	806949045983
		Other:	
11	Method of sample disposal:	SPL Disposal	✓
		HOLD	
		Return to Client	

Name: 	Date: 9/28/99
---	---------------

Field Data Sheets

BP WELL MONITORING DATA SHEET

Project #: 990927-L1	Job # 11105
Sampler: Lad	Date: 09-27-99
Well I.D.: ESE-1	Well Diameter: (2) 3 4 6 8
Total Well Depth: 29.22	Depth to Water: 10.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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 ² * 0.163

Purge Method:

- Bailer
- Disposable Bailer
- Middleburg
- Electric Submersible
- Extraction Pump

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port

Other: _____

Other: _____

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1327 1327	74.1	6.7	931	—	3	
1331 1331	72.5	6.8	943	—	6	
1337 1337	72.0	6.8	945	—	9	

Did well dewater? Yes No Gallons actually evacuated: 9

Sampling Time: ~~1340~~ 1340 Sampling Date: 9/27/99

Sample I.D.: ~~Ø~~ D Laboratory: (SPL) Other _____

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

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

BP WELL MONITORING DATA SHEET

Project #: 990927-L1	Station # 11105
Sampler: Lact	Date: 09/27/99
Well I.D.: ESE-2	Well Diameter: (2) 3 4 6 8
Total Well Depth: 29.92	Depth to Water: 10.69
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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 ² * 0.163

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

Other: _____

3.08 3.1	x	3	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
12:05	70.2	7.1	1045	4	
12:16	69.9	6.9	1032	7	
12:24	69.6	7.0	1011	10	

Did well dewater? Yes No Gallons actually evacuated: 10

Sampling Time: 12:25/12:25 Sampling Date: 9-27-99

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

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

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

BP WELL MONITORING DATA SHEET

Project #: <u>09 990927-L1</u>	Job # <u>11105</u>
Sampler: <u>Lad</u>	Date: <u>09-27-99</u>
Well I.D.: <u>ESE-3</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth: <u>29.74</u>	Depth to Water: <u>9.69</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
<u>2"</u>	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius ² * 0.163

Purge Method: Bailer Sampling Method: Bailer
(Disposable Bailer) (Disposable Bailer)
 Middleburg Extraction Port
 Electric Submersible
 Extraction Pump
 Other: ~~3-2~~

<u>3.2</u>	x	<u>3</u>	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
12:36	74.8	7.0 <u>6.8</u>	864		4	
12:39	72.9	6.8	957		7	
12:48	73.8	6.8	964		10	

Did well dewater? Yes (No) Gallons actually evacuated: 10

Sampling Time: 12:54 Sampling Date: 09/27/99

Sample I.D.: C Laboratory: (SPL) Other: _____

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

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

BP WELL MONITORING DATA SHEET

Project #: 990927-21	Station # 11105
Sampler: Lead	Date: 09/27/99
Well I.D.: ESE-5	Well Diameter: ② 3 4 6 8
Total Well Depth: 23.65	Depth to Water: 8.11
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC 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 ² * 0.163

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

Sampling Method: Bailer
 Disposable Bailer
 Extraction Port
 Other: _____

<u>2.48</u>	x	<u>3</u>	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
11:30	73.9	6.1	1022	2.5 3	
11:39	70.6	6.6	1224	5.0 45.	
11:43	70.7	6.6	1441	7.5 98.	
11:50	70.4	6.8	1490	10.	

Did well dewater? Yes No Gallons actually evacuated: 10

Sampling Time: 1155 Sampling Date: 9-27-99

Sample I.D. (Blind): A Laboratory: SPL Other: _____

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

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

BP WELL MONITORING DATA SHEET

Project #: 990927-L1	Job # 11105
Sampler: Lad	Date: 9-27-99
Well I.D.: Mw-7	Well Diameter: ② 3 4 6 8
Total Well Depth: 28.65	Depth to Water: 9.39
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC 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 ² * 0.163

Purge Method:

Bailer
 Disposable Bailer
 Middleburg
 Electric Submersible
 Extraction Pump

Sampling Method:

Bailer
 Disposable Bailer
 Extraction Port

Other: _____

Other: _____

3.1	x	3	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1:51	72.3	7.2	784		4	
1:56	71.1	7.1	838		7	
2:00	71.7	7.0	849		10	

Did well dewater? Yes No Gallons actually evacuated: 10

Sampling Time: 14:05 Sampling Date: 9-27-99

Sample I.D.: E Laboratory: SPL Other: _____

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

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