

C A M B R I A

FEB 13 2002

February 7, 2002

Scott Seery
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502-6577

Re: **Fourth Quarter 2001 Groundwater Monitoring Report**
BP Oil Site No. 11105
3519 Castro Valley Boulevard
Castro Valley, California
Cambria Project No. 852-1740



Dear Mr. Seery:

On behalf of BP Oil Company, Cambria Environmental Technology, Inc. has prepared this *Fourth Quarter 2001 Groundwater Monitoring Report* for the above referenced site. This report summarizes chemical data collected since 1992 including analytical results associated with samples recently collected on December 13, 2001.

Water level and analytical results for this monitoring event are summarized in Figure 1 and on Table 1 of Appendix A. Based on the contoured elevations, water generally flowed toward the southeast. During this monitoring event, well ESE-1 reported 208 micrograms per liter ($\mu\text{g/L}$) of benzene. Wells ESE-1 and ESE-2 reported more than 1,000 $\mu\text{g/L}$ of methyl tert butyl ether (MTBE), with a maximum of 5,940 $\mu\text{g/L}$ in well ESE-2.

Benzene and MTBE concentration and water level trends for well ESE-2 are shown in Figure 2. Analytical results reported below method reporting limits are plotted at one half the detection limit (open symbol).

Oakland, CA
San Ramon, CA
Sonoma, CA

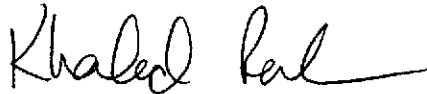
**Cambria
Environmental
Technology, Inc.**

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

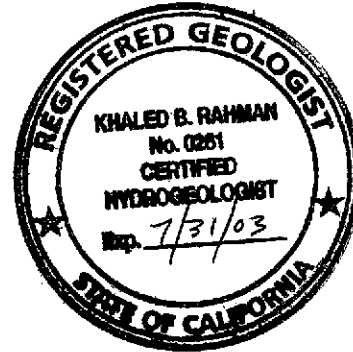
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We appreciate the opportunity to work with you on this project. If you have any questions or comments, please don't hesitate to call me at (510) 450-1985.

Sincerely,
Gambria Environmental Technology, Inc.



Khaled Rahman, R.G., C.H.G.
Associate Geologist



Attachments

- Figure 1 – Groundwater Elevation Contour Map
- Figure 2 – Concentration and Water Level Trends – Well ESE-2

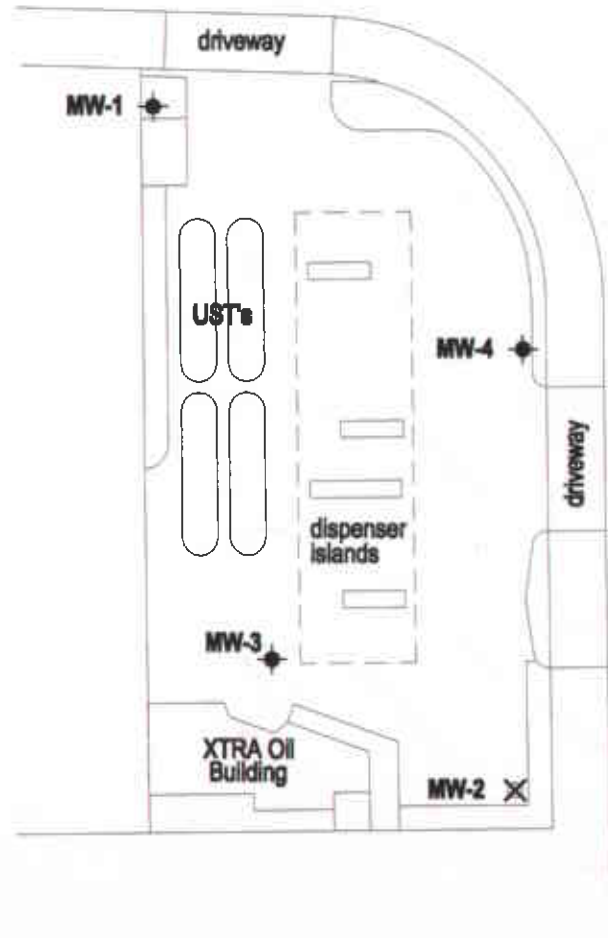
Appendix A – Blaine Tech Services, Inc., 4th Quarter 2001 Monitoring at 11105

- cc:
- Scott Hooton, BP Oil Company, Environmental Resources Management, 295 SW 41st Street, Building 13, Suite N, Renton, Washington 98055-4931 (1 original)
 - Ade Fagorala, San Francisco Bay Regional Water Quality Control Board, 1515 Clay Street, Suite 1400, Oakland, California 94612 (1 copy)
 - Azim Shakoori, Castro Valley Chevron, 3519 Castro Valley Boulevard, Castro Valley, California 94546 (1 copy)
 - Greg Cahill, 3551 "B" Castro Valley Boulevard, Castro Valley, California 94546 (1 copy)

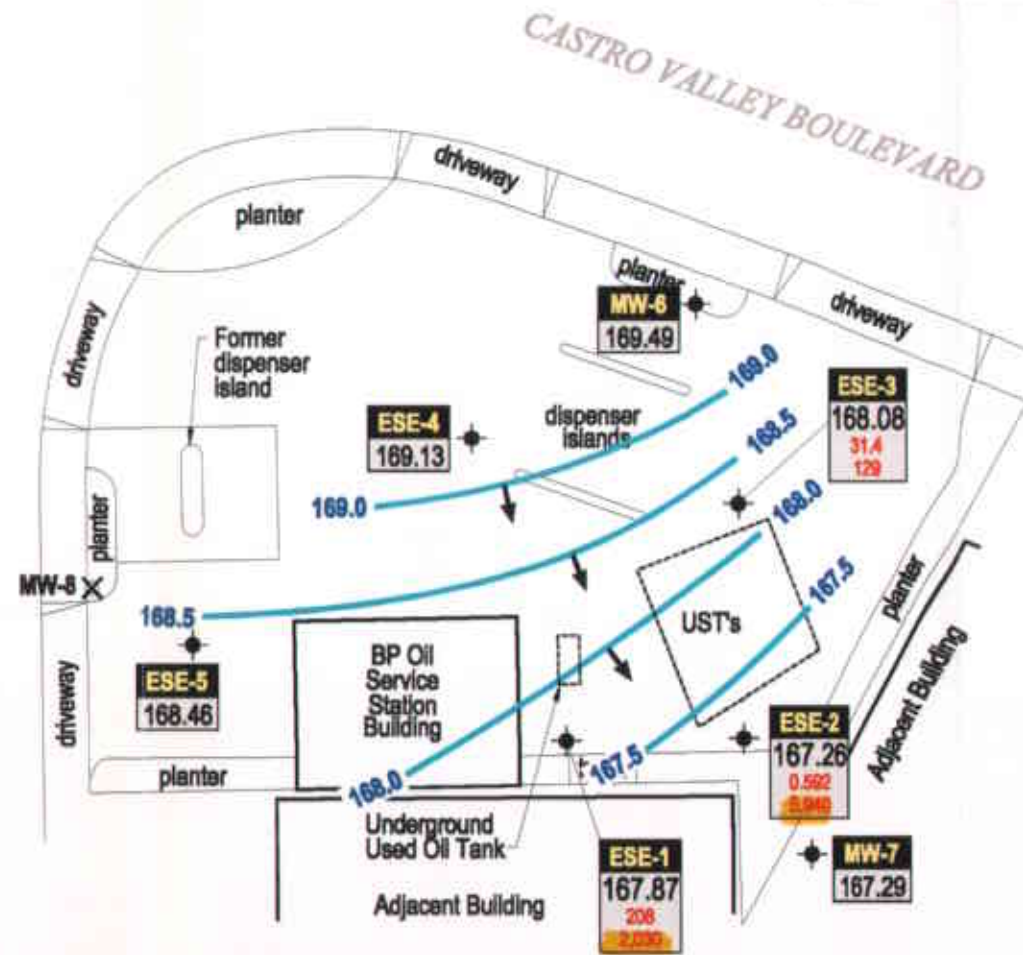
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FIGURES



REDWOOD ROAD



EXPLANATION

- MW-1  Monitoring well location
- MW-2  Abandoned monitoring well location
-  Groundwater flow direction. Approximate horizontal hydraulic gradient = 0.028
-  Groundwater elevation contour, in feet above mean sea level (msl), dashed where inferred

Well	ELEV	Benzene	MTBE
MW-1			
MW-2			
MW-3			
MW-4			
MW-5			
MW-6	169.49		
MW-7	167.29		
MW-8			
ESE-1	167.87	208	2,030
ESE-2	167.26	0.592	0.049
ESE-3	168.08	31.4	129
ESE-4	169.13		
ESE-5	168.46		

Well designation
Groundwater elevation (msl)
Benzene and MTBE concentrations are in micrograms per liter (µg/L)

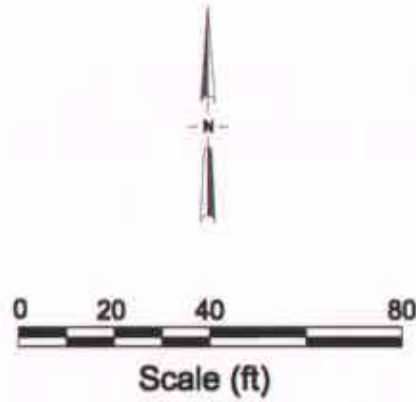
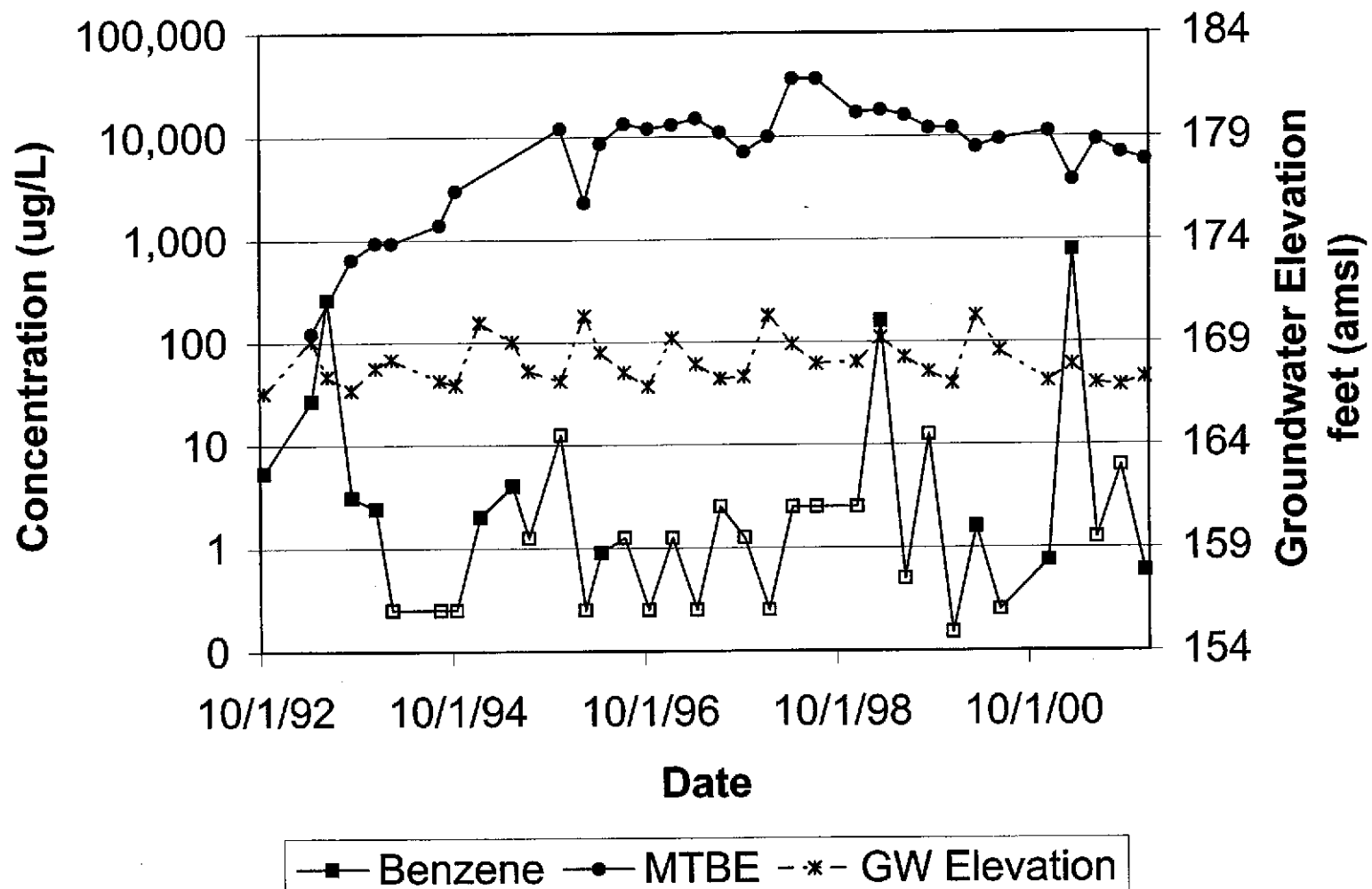


FIGURE 1

Concentration and Water Level Trends ESE-2



BP Oil Site 11105
3519 Castro Valley Boulevard
Castro Valley, California

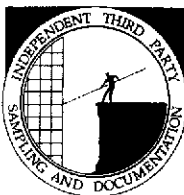
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APPENDIX A

Blaine Tech Services, Inc.
4th Quarter 2001 Monitoring

BLAINE
TECH SERVICES INC.



1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE
CONTRACTOR'S LICENSE #746684
www.blainetech.com

January 7, 2002

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

4th Quarter 2001 Monitoring at 11105

Fourth Quarter 2001 Groundwater Monitoring at
BP Service Station Number 11105
3519 Castro Valley Blvd.
Castro Valley, CA

Monitoring Performed on December 13, 2001

Groundwater Sampling Report 011213-CW-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.

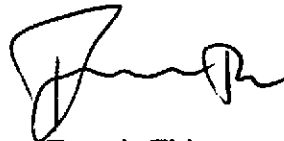
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL DATA AND ANALYTICAL RESULTS**. The full analytical report for the most recent samples is located in the **Analytical Appendix**.

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

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

Please call if you have any questions.

Yours truly,

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

Francis Thie
Vice President

FPT/mb

Cc: Khaled B. Rahman
Cambria Environmental Technology, Inc.
6262 Hollis Street
Emeryville, CA 94608

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

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	—	(l)	PACE
ESE-1D (d)	10/05/92	—	—	—	2300	370	160	16	110	—	(l)	PACE
ESE-1	04/01/93	177.69	8.79	168.90	5900	1500	410	110	390	—	(l)	PACE
ESE-1	06/29/93	177.69	10.34	167.35	7600	2900	390	130	460	—	(l)	PACE
ESE-1	09/23/93	177.69	10.91	166.78	2000	490	40	20	56	600	(e)(l)	PACE
QC-1 (d)	09/23/93	—	—	—	1500	420	39	19	56	550	(e)(l)	PACE
ESE-1	12/10/93	177.69	9.93	167.76	1800	480	42	19	66	921	(e)(l)	PACE
QC-1 (d)	12/10/93	—	—	—	1500	380	38	17	55	770	(e)(l)	PACE
ESE-1	02/17/94	177.69	9.64	168.05	1900	380	48	24	80	585	(e)(l)	PACE
QC-1 (d)	02/17/94	—	—	—	2200	430	42	19	65	491	(e)(l)	PACE
ESE-1	08/08/94	177.69	11.72	165.97	2100	450	46	16	50	760	(e)	PACE
ESE-1	10/12/94	177.69	10.48	167.21	760	240	16	51	39	230	(e)	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
ESE-1	12/09/99	177.69	10.24	167.45	460	130	1.2	5.2	1.5	5100	—	PACE
ESE-1	03/09/00	177.69	7.72	169.97	3000 (j)	1300	120	80	140	7300	—	PACE
ESE-1	06/08/00	177.69	9.40	168.29	2900	540	9.7	20	17	5200	—	PACE
ESE-1	09/18/00	177.69	10.05	167.64	890	3.4	ND<0.5	1.4	ND<0.5	2800	—	PACE
ESE-1	12/14/00	177.69	8.20	169.49	1600	11.1	ND<0.5	ND<0.5	ND<0.5	2730	—	PACE

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	03/21/01	177.69	9.75	167.94	5700	2.28	ND<0.5	0.51	ND<1.5	6810	--	PACE
ESE-1	06/18/01	177.69	10.21	167.48	2000	152	0.669	3.62	2.34	1980	--	PACE
ESE-1	09/18/01	177.69	10.30	167.39	2500	57.1	ND<5.0	6.25	ND<15	2090	--	PACE
ESE-1	12/13/01	177.69	9.82	167.87	2800	208	6.05	8.54	9.66	2030	--	PACE

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-2	10/05/92	178.23	11.68	166.55	300	5.4	16	3.9	45	---	(l)	---	PACE
ESE-2	04/01/93	178.23	9.17	169.06	240	27	ND<0.5	17	2.6	123	(e)(l)	---	PACE
ESE-2	06/29/93	178.23	10.88	167.35	1700	260	24	110	23	---	(l)	---	PACE
QC-1 (d)	06/29/93	---	---	---	1300	240	17	110	25	---	(l)	---	PACE
ESE-2	09/23/93	178.23	11.56	166.67	240	3.1	0.5	0.6	2.5	643	(e)(l)	---	PACE
ESE-2	12/10/93	178.23	10.48	167.75	250	2.4	2.4	1.5	11	940	(e)(l)	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)(l)	---	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	13000/17000*	---	---	SPL
ESE-2	03/19/99	178.23	9.02	169.21	18000	160	ND<1.0	ND<1.0	ND<1.0	18000	---	---	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	16000	---	---	SPL
ESE-2	09/27/99	178.23	10.69	167.54	ND<500	ND<25	ND<25	ND<25	ND<25	12000	---	---	SPL
ESE-2	12/09/99	178.23	11.26	166.97	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.6	12000	---	---	PACE
ESE-2	03/09/00	178.23	7.95	170.28	ND<50	1.6	ND<0.5	ND<0.5	ND<0.5	7900	---	---	PACE
ESE-2	06/08/00	178.23	9.66	168.57	1600	ND<0.5	0.73	ND<0.5	2.2	9400	---	---	PACE
ESE-2 (k)	09/18/00	178.23	---	---	---	---	---	---	---	---	---	---	---
ESE-2	12/14/00	178.23	11.15	167.08	6000	0.75	ND<0.5	ND<0.5	ND<0.5	11200	---	---	PACE
ESE-2	03/21/01	178.23	10.35	167.88	6900	786	45.7	37.7	71.5	3790	---	---	PACE
ESE-2	06/18/01	178.23	11.24	166.99	6400	ND<2.5	ND<2.5	ND<2.5	ND<7.5	9320	---	---	PACE
ESE-2	09/18/01	178.23	11.35	166.88	4800	ND<12.5	ND<12.5	ND<12.5	ND<37.5	6960	---	---	PACE
ESE-2	12/13/01	178.23	10.97	167.26	59000	0.592	ND<0.5	ND<0.5	ND<1.0	5940	---	---	PACE

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
ESE-3	10/05/92	178.20	10.58	167.62	430	57	31	3.6	34	—	(l)	PACE
ESE-3	04/01/93	178.20	8.14	170.06	2400	460	220	74	210	—	(l)	PACE
ESE-3	06/29/93	178.20	9.72	168.48	280	56	14	15	13	—	(l)	PACE
ESE-3	09/23/93	178.20	10.46	167.74	72	13	3.5	1.7	4.1	—	(l)	PACE
ESE-3	12/10/93	178.20	9.30	168.90	270	71	32	6.1	33	—	(l)	PACE
ESE-3	02/17/94	178.20	8.97	169.23	520	140	10	20	33	5.74	(l)	PACE
ESE-3	08/08/94	178.20	10.02	168.18	ND<50	8.8	1.6	1.6	2.3	ND<5.0	(l)	PACE
ESE-3	10/12/94	178.20	10.32	167.88	470	190	6.4	15	18	ND<5.0	(l)	PACE
ESE-3	01/19/95	178.20	7.40	170.80	330	260	27	21	20	—	—	ATI
ESE-3	05/02/95	178.20	8.26	169.94	530	180	30	23	44	—	—	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	—	—	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	—	ATI
ESE-3	02/07/96	178.20	7.08	171.12	ND<50	8.6	ND<1	ND<1	ND<1	ND<10	—	SPL
ESE-3	04/23/96	178.20	8.79	169.41	ND<50	7.6	ND<1	ND<1	ND<1	65	—	SPL
ESE-3	07/09/96	178.20	10.09	168.11	ND<50	12	2.6	2	3.9	26	—	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	—	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	—	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	—	SPL
ESE-3	07/18/97	178.20	10.66	167.54	10000	1400	1400	300	1280	ND<250	—	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	—	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	—	SPL
ESE-3	04/23/98	178.20	8.44	169.76	4800	560	ND<10	15	ND<10	4000	—	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	—	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
ESE-3	12/09/99	178.20	10.99	167.21	380	84	1.7	8.7	6.3	160	—	PACE
ESE-3	03/09/00	178.20	7.12	171.08	950	190	4.6	39	62	350	—	PACE
ESE-3	06/08/00	178.20	10.92	167.28	300	37	ND<0.5	2.3	1.3	400	—	PACE
ESE-3	09/18/00	178.20	11.12	167.08	920	140	1.3	15	4.8	170	—	PACE
ESE-3	12/14/00	178.20	9.70	168.50	320	64	ND<0.5	6.24	1.76	201	—	PACE
ESE-3	03/21/01	178.20	10.07	168.13	680	80.5	0.546	21.1	18.2	398	—	PACE
ESE-3	06/18/01	178.20	11.42	166.78	380	47	ND<0.5	3.11	ND<1.5	242	—	PACE
ESE-3	09/18/01	178.20	11.55	166.65	340	54.8	ND<0.5	4.36	ND<1.5	79.7	—	PACE
ESE-3	12/13/01	178.20	10.12	168.08	270	31.4	ND<0.5	1.31	2.24	129	—	PACE

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
ESE-4	10/05/92	177.73	10.33	167.40	98	7.2	1.3	1.1	6.1	--	(l)	PACE
ESE-4	04/01/93	177.73	7.88	169.85	550	93	20	23	33	--	(l)	PACE
ESE-4	06/29/93	177.66	(f) 8.33	169.33	150	23	0.6	5.4	0.5	54	(e)(l)	PACE
ESE-4	09/23/93	177.66	10.05	167.61	110	14	1.7	3.2	4.6	--	(l)	PACE
ESE-4	12/10/93	177.66	8.95	168.71	110	21	7.2	4.2	10	28.75	(l)	PACE
ESE-4	02/17/94	177.66	8.65	169.01	210	26	1.2	4.7	11	113	(e)(l)	PACE
ESE-4	08/08/94	177.66	9.76	167.90	76	9.6	ND<0.5	2	ND<0.5	62	(e)	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)	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	--	--	--	--	--	--	--	--
ESE-4	12/09/99	177.66	9.21	168.45	--	--	--	--	--	--	--	--
ESE-4	03/09/00	177.66	6.82	170.84	--	--	--	--	--	--	--	--
ESE-4	06/08/00	177.66	8.72	168.94	--	--	--	--	--	--	--	--
ESE-4	09/18/00	177.66	9.02	168.64	--	--	--	--	--	--	--	--
ESE-4	12/14/00	177.66	8.61	169.05	--	--	--	--	--	--	--	--
ESE-4	03/21/01	177.66	8.61	169.05	--	--	--	--	--	--	--	--
ESE-4	06/18/01	177.66	9.24	168.42	--	--	--	--	--	--	--	--
ESE-4	09/18/01	177.66	9.35	168.31	--	--	--	--	--	--	--	--
ESE-4	12/13/01	177.66	8.53	169.13	--	--	--	--	--	--	--	--

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
ESE-5	10/05/92	176.08	9.22	166.86	1300	200	3.8	1.2	18	---	(l)	PACE
ESE-5	04/01/93	176.08	7.02	169.06	13000	2200	26	730	1000	---	(l)	PACE
QC-1 (d)	04/01/93	---	---	---	13000	2500	25	740	1100	---	(l)	PACE
ESE-5	06/29/93	176.08	10.21	165.87	7600	1500	9.3	170	100	---	(l)	PACE
ESE-5	09/23/93	176.08	10.64	165.44	560	19	1.2	0.9	1.8	---	(l)	PACE
ESE-5	12/10/93	176.08	9.42	166.66	1700	300	3	76	110	14.07	(l)	PACE
ESE-5	02/07/94	176.08	9.35	166.73	3500	640	7.8	90	130	45.13	(l)	PACE
ESE-5	08/08/94	176.08	8.76	167.32	2600	210	4.6	9.4	4.4	33	(e)	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	79.2	(l)	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
ESE-5	09/27/99	176.08	8.11	167.97	450	10	ND<5.0	6.3	ND<5.0	220	---	SPL
ESE-5	12/09/99	176.08	7.66	168.42	---	---	---	---	---	---	---	---

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	03/09/00	176.08	5.08	171.00	1700	170	2.5	45	6.4	140	---	PACE
ESE-5	06/08/00	176.08	7.36	168.72	---	---	---	---	---	---	---	---
ESE-5	09/18/00	176.08	7.71	168.37	130	0.65	ND<0.5	0.71	ND<0.5	51	---	PACE
ESE-5	12/14/00	176.08	2.36	173.72	---	---	---	---	---	---	---	---
ESE-5	03/21/01	176.08	7.42	168.66	1000	10.3	ND<2.5	11	ND<7.5	70.8	---	PACE
ESE-5	06/18/01	176.08	7.92	168.16	---	---	---	---	---	---	---	---
ESE-5	09/18/01	176.08	8.05	168.03	200	0.868	ND<0.5	0.55	ND<1.5	57.5	---	PACE
ESE-5	12/13/01	176.26 (m)	7.80	168.46	---	---	---	---	---	---	---	---

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-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	---	---	---	---	---	---	---	---
MW-6	12/09/99	179.24	9.97	169.27	---	---	---	---	---	---	---	---
MW-6	03/09/00	179.24	8.56	170.68	---	---	---	---	---	---	---	---
MW-6	06/08/00	179.24	9.11	170.13	---	---	---	---	---	---	---	---
MW-6	09/18/00	179.24	9.77	169.47	---	---	---	---	---	---	---	---
MW-6	12/14/00	179.24	9.17	170.07	---	---	---	---	---	---	---	---
MW-6	03/21/01	179.24	9.82	169.42	---	---	---	---	---	---	---	---
MW-6	06/18/01	179.24	10.19	169.05	---	---	---	---	---	---	---	---
MW-6	09/18/01	179.24	10.25	168.99	---	---	---	---	---	---	---	---
MW-6	12/13/01	179.24	9.75	169.49	---	---	---	---	---	---	---	---

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-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	06/23/99	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-7	12/09/99	176.55	9.94	166.61	---	---	---	---	---	---	---	---
MW-7	03/09/00	176.55	6.72	169.83	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1400	---	PACE
MW-7	06/08/00	176.55	7.38	169.17	---	---	---	---	---	---	---	---
MW-7	09/18/00	176.55	9.18	167.37	190	ND<0.5	ND<0.5	ND<0.5	ND<0.5	580	---	PACE
MW-7	12/14/00	176.55	8.13	168.42	---	---	---	---	---	---	---	---
MW-7	03/21/01	176.55	8.98	167.57	1300	ND<0.5	ND<0.5	ND<0.5	ND<1.5	1460	---	PACE
MW-7	06/18/01	176.55	9.68	166.87	---	---	---	---	---	---	---	---
MW-7	09/18/01	176.55	9.80	166.75	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	94.9	---	PACE
MW-7	12/13/01	176.55	9.26	167.29	---	---	---	---	---	---	---	---

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-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	--	--	--	--	--	--	--	--	--	--	--
QC-2 (i)	04/01/93	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	(i)	PACE
QC-2 (i)	06/29/93	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	(i)	PACE
QC-2 (i)	09/23/93	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	(i)	PACE
QC-2 (i)	12/10/93	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	(i)	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<0.5	--	--	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

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

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.
- (j) Gasoline does not include MTBE.
- (k) Well Inaccessible.
- (l) A copy of the documentation for this data can be found in Blaine Tech Services report 010618-J-1. MTBE data for the September 28, 1992, September 29, 1992, October 5, 1992, and April 1, 1993 sampling events have been destroyed. No chromatograms could be located for MTBE data from wells sampled on June 29, 1993; wells ESE-1, ESE-3, ESE-4, ESE-5, and the Trip Blank, sampled on September 23, 1993; and wells ESE-1, ESE-2, and ESE-3, sampled on December 10, 1993.
- (m) Top of casing altered due to wellhead maintenance.
- (*) MTBE by EPA 8020/8260.

Analytical Appendix



Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Phone: 281.488.1810
Fax: 281.488.4661

December 26, 2001

Ms. Cindy Magyar
Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112

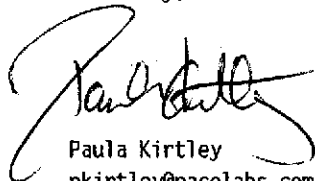
RE: Lab Project Number: 8525059
Client Project ID: BP Site# 11105

Dear Ms. Magyar:

Enclosed are the analytical results for sample(s) received by the laboratory on December 18, 2001. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,



Paula Kirtley
pkirtley@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112

Lab Project Number: 8525059
Client Project ID: BP Site# 11105

Attn: Ms. Cindy Magyar
Phone:

Lab Sample No: 851730337 Project Sample Number: 8525059-001 Date Collected: 12/13/01 10:40
Client Sample ID: ESE-1 Matrix: Water Date Received: 12/18/01 08:50

Parameters	Results	Units	Report Limit	Dilution	Analyzed	CAS No.	Ftnote	Reg Limit
GC Volatiles								
GAS by Mod 8015, Water Prep/Method: EPA 8015 Modified / EPA 8015 Modified								
Gasoline Range Organics	2800	ug/l	500	10.0	12/21/01 13:52	LJAS		
1,4-Difluorobenzene (S)	103	%		1.0	12/21/01 13:52	LJAS		
4-Bromofluorobenzene (S)	91	%		1.0	12/21/01 13:52	LJAS	460-00-4	
SW8021 Aromatics, Water Prep/Method: See analytical meth / EPA 8021								
Benzene	208.	ug/l	0.500	1.0	12/21/01 11:32	LJAS	71-43-2	
Ethylbenzene	8.54	ug/l	0.500	1.0	12/21/01 11:32	LJAS	100-41-4	
Toluene	6.05	ug/l	0.500	1.0	12/21/01 11:32	LJAS	108-88-3	
Xylene (Total)	9.66	ug/l	1.00	1.0	12/21/01 11:32	LJAS	1330-20-7	
Methyl-tert-butyl ether	2030	ug/l	5.00	10.0	12/21/01 11:32	LJAS	1634-04-4	
1,4-Difluorobenzene (S)	112	%		1.0	12/21/01 11:32	LJAS		
4-Bromofluorobenzene (S)	101	%		1.0	12/21/01 11:32	LJAS	460-00-4	

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 8525059

Client Project ID: BP Site# 11105

Lab Sample No: 851730338

Project Sample Number: 8525059-002

Date Collected: 12/13/01 11:21

Client Sample ID: ESE-2

Matrix: Water

Date Received: 12/18/01 08:50

Parameters	Results	Units	Report Limit	Dilution	Analyzed	CAS No.	Ftnote	Reg Limit
GC Volatiles								
GAS by Mod 8015, Water	Prep/Method: EPA 8015 Modified / EPA 8015 Modified							
Gasoline Range Organics	59000	ug/l	500	10.0	12/21/01 14:11	LJAS		
1,4-Difluorobenzene (S)	109	%		1.0	12/21/01 14:11	LJAS		
4-Bromofluorobenzene (S)	89	%		1.0	12/21/01 14:11	LJAS 460-00-4		
SW8021 Aromatics, Water	Prep/Method: See analytical meth / EPA 8021							
Benzene	0.592	ug/l	0.500	1.0	12/21/01 14:11	LJAS 71-43-2		
Ethylbenzene	ND	ug/l	0.500	1.0	12/21/01 14:11	LJAS 100-41-4		
Toluene	ND	ug/l	0.500	1.0	12/21/01 14:11	LJAS 108-88-3		
Xylene (Total)	ND	ug/l	1.00	1.0	12/21/01 14:11	LJAS 1330-20-7		
Methyl-tert-butyl ether	5940	ug/l	12.5	25.0	12/21/01 14:11	LJAS 1634-04-4		
1,4-Difluorobenzene (S)	116	%		1.0	12/21/01 14:11	LJAS		
4-Bromofluorobenzene (S)	95	%		1.0	12/21/01 14:11	LJAS 460-00-4		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 8525059

Client Project ID: BP Site# 11105

Lab Sample No: 851730339

Project Sample Number: 8525059-003

Date Collected: 12/13/01 09:44

Client Sample ID: ESE-3

Matrix: Water

Date Received: 12/18/01 08:50

Parameters	Results	Units	Report Limit	Dilution	Analyzed	CAS No.	Ftnote	Reg Limit
GC Volatiles								
GAS by Mod 8015, Water								
Prep/Method: EPA 8015 Modified / EPA 8015 Modified								
Gasoline Range Organics	270	ug/l	50.	1.0	12/21/01 12:31	LJAS		
1,4-Difluorobenzene (S)	100	%		1.0	12/21/01 12:31	LJAS		
4-Bromofluorobenzene (S)	96	%		1.0	12/21/01 12:31	LJAS	460-00-4	
SW8021 Aromatics, Water								
Prep/Method: See analytical meth / EPA 8021								
Benzene	31.4	ug/l	0.500	1.0	12/21/01 12:31	LJAS	71-43-2	
Ethylbenzene	1.31	ug/l	0.500	1.0	12/21/01 12:31	LJAS	100-41-4	
Toluene	ND	ug/l	0.500	1.0	12/21/01 12:31	LJAS	108-88-3	
Xylene (Total)	2.24	ug/l	1.00	1.0	12/21/01 12:31	LJAS	1330-20-7	
Methyl-tert-butyl ether	129.	ug/l	0.500	1.0	12/21/01 12:31	LJAS	1634-04-4	
1,4-Difluorobenzene (S)	101	%		1.0	12/21/01 12:31	LJAS		
4-Bromofluorobenzene (S)	98	%		1.0	12/21/01 12:31	LJAS	460-00-4	

REPORT OF LABORATORY ANALYSIS

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www.pacelabs.com

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Phone: 281.488.1810
Fax: 281.488.4661

Lab Project Number: 8525059
Client Project ID: BP Site# 11105

PARAMETER FOOTNOTES

ND Not Detected
NC Not Calculable
(S) Surrogate

Date: 12/26/01

Page: 4

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Lab Project Number: 8525059
Client Project ID: BP Site# 11105

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 851731281 851731282

Parameter	Units	851730337	Spike Conc.	MS	MSD	MS	MSD	RPD	Footnotes
		Result		Result	Result	% Rec	% Rec		
Methyl-tert-butyl ether	ug/l	2025	50.00	1740	1769	0	0	2	
1,4-Difluorobenzene (S)						112	111		
4-Bromofluorobenzene (S)						101	102		

Comments : The spike recovery was outside acceptance limits for the MS and /or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 8525059

Client Project ID: BP Site# 11105

QC Batch: 63343

Analysis Method: EPA 8015 Modified

QC Batch Method: EPA 8015 Modified

Analysis Description: GAS by Mod 8015, Water

Associated Lab Samples: 851730337 851730338 851730339

METHOD BLANK: 851731283

Associated Lab Samples: 851730337 851730338 851730339

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Gasoline Range Organics	ug/l	ND	50.	
1,4-Difluorobenzene (S)	%	97		
4-Bromofluorobenzene (S)	%	94		

LABORATORY CONTROL SAMPLE: 851731284

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
Gasoline Range Organics	ug/l	1000	1024	102	
1,4-Difluorobenzene (S)				98	
4-Bromofluorobenzene (S)				100	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 851731285 851731286

Parameter	Units	851730339 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	RPD	Footnotes
Gasoline Range Organics	ug/l	270.7	1000.00	1002	984.6	73	71	2	
1,4-Difluorobenzene (S)						100	99		
4-Bromofluorobenzene (S)						102	101		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY

CONSULTANT'S NAME Blaine 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 011213-CW-1
CONSULTANT PROJECT MANAGER Scott Boor	PHONE NUMBER (408) 573-0555 x 223	FAX NUMBER (408) 573-7771	CONSULTANT CONTRACT NUMBER J587918
BP CONTACT Scott Hooton	BP ADDRESS 295 SW 41st Street, Suite N, Renton WA	PHONE NUMBER (425) 251-0689	FAX NO. (425) 251-0736
LAB CONTACT Pace - Paula Kirtley	LABORATORY ADDRESS 900 Gemini Ave., Houston, TX 77058	PHONE NUMBER (281) 488-1810	FAX NO. (281) 488-4661
BP CONTACT REQUESTING RUSH TAT (Print BP Contact Name)	RUSH REQUESTED OF (Print Consultant Contact Name)	DATE/TIME	SHIPMENT DATE SHIPMENT METHOD

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

ANALYSIS REQUIRED

AIRBILL NUMBER

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	TPH-G + BTEX / MTBE (8015M)	TPH-D (8015M)	FUEL OXYGENATES (8260)	1,2 DCA + EDB (8010)							COMMENTS	
				NO.	TYPE (VOL)	LAB SAMPLE #												
ESE-1	12/13	1040	W	3	40 mL	HCl	X											851730337
ESE-2	12/13	1121	W	3	↓	↓	X											338
ESE-3	12/13	944	W	3			X											339

SAMPLED BY (Please Print Name) CHRIS WAGNER			SAMPLED BY (Signature) 				ADDITIONAL COMMENTS	
RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY / AFFILIATION (Print Name / Signature)	DATE	TIME			
<i>Ken Shih / Airborne</i>	12/17/01	1305	<i>AIRBORNE EXPRESS</i>	12/17/01	1305			
<i>Airborne</i>	12/18/01	0350	<i>Tracy Moody / Pace</i>	12/18/01	0350			

Field Data Sheets

WELL GAUGING DATA

Project # 011213-CW-1 Date 12-13-01 Client BP

Site 3519 Castro Valley Blvd, Castro Valley

GAUGE ONLY

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB of TOC
ESE-1	2	odor				9.82	29.23	↓
ESE-2	2					10.97	27.04	
ESE-3	2					10.12	29.70	
ESE-4	2					8.53	22.55	
ESE-5	2					7.80	23.71	
MW-6	2					9.75	29.39	
MW-7	2					9.26	28.77	

BP WELL MONITORING DATA SHEET

Project #: 011213-CW-1	Station # 11105
Sampler: Chris W.	Date: 12-13-01
Well I.D.: ESE-1	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth: 29.23	Depth to Water: 9.82
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
1"	0.04	4"	0.65
2"	<u>0.16</u>	6"	1.47
3"	0.37	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>3.1</u>	\times	<u>3</u>	$=$	<u>9.3</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1021	60.7	6.9	1000	3.1	odor / green
1026	63.5	6.8	991	8.2	"
1031	64.0	6.8	1006	9.3	"

Did well dewater? Yes No

Gallons actually evacuated: 9.3

Sampling Time: 1040 Sampling Date: 12-13-01

Sample I.D. (Blind): ESE-1 Laboratory: Pace 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 #: 011213-CW-1	Station # 11105
Sampler: Chris W.	Date: 12-13-01
Well I.D.: ESE-2	Well Diameter: (2) 3 4 6 8
Total Well Depth: 27.04	Depth to Water: 10.97
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
1"	0.04	4"	0.65
2"	(0.16)	6"	1.47
3"	0.37	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>2.6</u>	X	<u>3</u>	=	<u>7.8</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1101	61.4	6.9	1006	2.6	odor/green
1107	63.6	6.9	966	5.2	"
1112	64.0	6.9	970.5	7.8	"

Did well dewater? Yes No Gallons actually evacuated: 7.8

Sampling Time: 1121 Sampling Date: 12-13-01

Sample I.D. (Blind): ESE-2 Laboratory: Pace 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 #: 011213-CW-1	Station # 11105
Sampler: Chris W.	Date: 12-13-01
Well I.D.: ESE-3	Well Diameter: (2) 3 4 6 8
Total Well Depth: 29.70	Depth to Water: 10.12
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
1"	0.04	4"	0.65
2"	(0.16)	6"	1.47
3"	0.37	Other	radius ² * 0.163

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

Sampling Method: Bailer Disposable Bailer Extraction Port Other: _____

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

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
922	62.0	6.7	1111	3.1	cloudy / slight odor
927	63.9	6.7	1040	6.2	clearing up / slight odor
933	64.6	6.7	1014	9.3	clear / odor

Did well dewater? Yes No Gallons actually evacuated: 9.3

Sampling Time: 944 Sampling Date: 12-13-01

Sample I.D. (Blind): ESE-3 Laboratory: Pace 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