



20-066

June 30, 2003

Susan Hugo  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Alameda County  
JUL 09 2003  
Environmental Health

Re: **Second Quarter 2003 Groundwater Monitoring Report  
Former BP Service Station #11126  
1700 Powell Street  
Emeryville, California  
URS Project #38486245**

Dear Ms. Hugo:

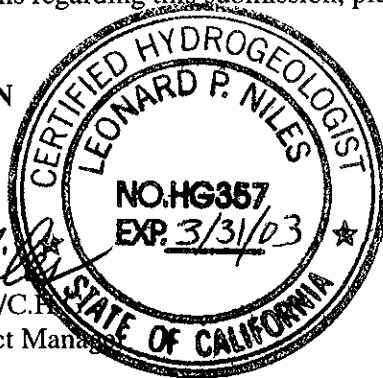
On behalf of the Group Environmental Management Company (an affiliated company of BP), URS Corporation (URS) is submitting the *Second Quarter 2003 Groundwater Monitoring Report* for the Former BP Service Station #11126, located at 1700 Powell Street, Emeryville, California.

If you have any questions regarding this submission, please call me at (510) 874-1720.

Sincerely,

URS CORPORATION

*Leonard P. Niles*  
Leonard P. Niles, R.G./C.H.  
Senior Geologist/Project Manager



Enclosure: Second Quarter 2003 Groundwater Monitoring Report

cc: Mr. Paul Supple, ARCO, P.O. Box 6549, Moraga, CA 94570  
Ms. Liz Sewell, ConocoPhillips, 76 Broadway, Sacramento, California 95818

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
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**REPORT**

Alameda County  
JUL 09 2003  
Environmental Health

**SECOND QUARTER 2003  
GROUNDWATER MONITORING**

FORMER BP SERVICE STATION #11126  
1700 POWELL STREET  
EMERYVILLE, CALIFORNIA

*Prepared for*  
BP GEM

June 30, 2003

**URS**

URS Corporation  
500 12th Street, Suite 200  
Oakland, California 94607

38486245

Date: June 30, 2003  
Quarter: 2Q 03

### BP GEM QUARTERLY GROUNDWATER MONITORING REPORT

Facility No.: 11126 Address: 1700 Powell Street, Emeryville, CA  
BP Environmental Engineer: Paul Supple  
Consulting Co./Contact Person: URS Corporation/ Leonard Niles  
Consultant Project No.: 38486245  
Primary Agency: Alameda County Health Care Services Agency (ACHSA)

#### WORK PERFORMED THIS QUARTER (Second – 2003):

1. Performed second quarter groundwater monitoring event on June 6, 2003.
2. Prepared and submitted first quarter 2003 groundwater monitoring report.
3. Prepared and submitted second quarter 2003 groundwater monitoring report.

#### WORK PROPOSED FOR NEXT QUARTER (Third – 2003):

1. Perform third quarter 2003 groundwater monitoring event.
2. Prepare and submit third quarter 2003 groundwater monitoring report.
3. Prepare and submit interim groundwater remediation work plan.

Current Phase of Project: GW monitoring/sampling  
Frequency of Groundwater Sampling: Wells MW-1 through MW-9 quarterly  
Frequency of Groundwater Monitoring: Quarterly  
Is Free Product (FP) Present On-Site: No  
Current Remediation Techniques: None currently  
Approximate Depth to Groundwater: 3.94 (MW-9) to 7.98 (MW-4) feet  
Groundwater Gradient (direction): Semi-radial (East to Southwest)  
Groundwater Gradient (magnitude): 0.018 to 0.041 feet per foot

#### DISCUSSION:

TPH-g was detected in seven of the nine wells sampled at concentrations ranging from 1,000 µg/L (MW-7) to 120,000 µg/L (MW-2). Benzene was detected in four of the nine wells sampled at concentrations ranging from 9.1 µg/L (MW-5) to 9,000 µg/L (MW-9). MTBE was detected in eight of the nine wells sampled at concentrations ranging from 140 µg/L (MW-6) to 72,000 µg/L (MW-2). TPH-d, and T.O.G were detected in the one well analyzed for these constituents at a concentrations of 620 µg/L and 7.9 µg/L, respectively (MW-3). Groundwater samples collected during this event were also analyzed for fuel oxygenates, including ethanol, by 8260. Other than MTBE, only TBA and TAME were detected. TBA was detected in one well at a concentration of 2,500 µg/L (MW-4). TAME was detected in five wells at concentrations ranging from 16 µg/L (MW-3) to 1,300 µg/L (MW-2)

The analytical method used during this sampling event, EPA Method 8260B, resulted in elevated detection limits for TPH-g and BTEX in several samples due to matrix interference from elevated MTBE concentrations.

URS is currently preparing a workplan for interim remediation of groundwater, and further delineation of the contaminant plume downgradient of the site , to be submitted to the ACHSA by July 13, 2003

**ATTACHMENTS:**

- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Fuel Oxygenate Analytical Data
- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – June 6, 2003
- Attachment A – Concentration and Water Level Trends (MW-4)
- Attachment B – Field Procedures and Field Data Sheets
- Attachment C – Laboratory Procedures, Certified Analytical Reports, and Chain-of-Custody Records
- Attachment D - EDCC Report and EDF/Geowell Submittal Confirmation

**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Former BP Service Station #11126**  
**1700 Powell Street, Emeryville, CA**

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB
MW-1	11/4/92	7.76	4.96	---	2.80	5300	---	1100	480	ND<0.5	1500	---	(k)	---	---	PACE
MW-1	10/12/93	7.76	5.26	---	2.50	3600	---	970	71	100	550	6111	(k)	---	---	PACE
MW-1	2/15/94	7.76	4.98	---	2.78	17000	---	4200	510	360	1600	5495	(k)	---	3.9	PACE
MW-1	5/11/94	7.76	4.55	---	3.21	5500	---	2900	37	56	64	705	(k)	---	8.0	PACE
MW-1	8/1/94	7.76	5.51	---	2.25	15000	---	3600	740	510	2800	9718	(d)(k)	---	2.9	PACE
MW-1	10/18/94	7.76	5.11	---	2.65	16000	---	1800	61	160	890	15668	(k)	---	2.9	PACE
MW-1	1/13/95	7.76	3.05	---	4.71	220	---	7	ND<0.5	1	23	---	---	---	6.6	ATI
MW-1	4/13/95	7.76	3.84	---	3.92	9300	---	4000	300	200	950	---	---	---	7.7	ATI
MW-1	7/11/95	7.76	3.60	---	4.16	15000	---	2200	84	ND<25	2500	---	---	---	8.8	ATI
MW-1	11/2/95	7.76	4.58	---	3.18	19000	---	920	ND<100	ND<100	430	52000	---	---	7.3	ATI
MW-1	2/5/96	7.76	4.43	---	3.33	4600	---	1400	330	54	247	8700	---	---	3.2	SPL
MW-1	4/24/96	7.76	4.00	---	3.76	2000	---	510	33	61	228	4500	---	---	7.5	SPL
MW-1	7/15/96	7.76	4.30	---	3.46	---	---	---	---	---	---	---	---	---	---	---
MW-1	7/16/96	7.76	---	---	---	12000	---	2800	170	390	1630	64000	---	---	7.9	SPL
QC-1 (e)	7/16/96	---	---	---	---	12000	---	2800	160	390	1610	63000	---	---	---	SPL
MW-1	7/30/96	7.76	4.64	---	3.12	---	---	---	---	---	---	---	---	---	---	---
MW-1	8/12/96	7.76	---	---	---	11000	---	2500	160	ND<10	1740	440000	---	---	7.0	SPL
MW-1	11/4/96	7.76	5.98	---	1.78	---	---	---	---	---	---	---	---	---	---	---
MW-1	11/5/96	7.76	---	---	---	53000	---	1300	43	100	349	42000/190000	(f)	---	6.6	SPL
MW-1	5/17/97	7.76	4.65	---	3.11	52000	---	1958	55	305	1216	140198	---	---	5.7	SPL
MW-1	8/11/97	7.76	4.90	---	2.86	25000	---	540	6.7	ND<5.0	57	360000	---	---	7.9	SPL
MW-1	11/17/97	7.76	6.12	---	1.64	93000	---	1200	31	180	40	400000	---	---	7.6	SPL
MW-1	1/29/98	7.76	4.90	---	2.86	4800	---	320	24	52	19.9	ND<50	---	---	6.6	SPL
MW-1	6/22/98	7.76	4.62	---	3.14	63000	---	180	ND<5.0	15	69	57000	---	---	6.0	---
MW-1	12/30/98	7.76	5.41	---	2.35	22000	---	2500	24	120	400	15000/13000	(f)	---	---	SPL
MW-1	3/9/99	7.76	3.40	---	4.36	16000	---	2000	84	290	510	13000	---	---	---	SPL
MW-1	6/23/99	7.76	4.60	---	3.16	9600	---	4500	21	160	260	24000	---	---	---	SPL
MW-1	9/23/99	7.76	4.21	---	3.55	3800	---	1600	32	150	240	7100	---	---	---	SPL
MW-1	12/28/99	7.76	4.10	---	3.66	3400	---	ND<2200	17	53	130	5500	---	---	---	PACE
MW-1	3/22/00	7.76	5.51	---	2.25	6400	---	1100	45	190	330	4900	---	---	---	PACE
MW-1	5/26/00	7.76	4.79	---	2.97	110000	---	700	44	140	250	320000	---	---	---	PACE
MW-1	9/6/00	7.76	5.19	---	2.57	5600	---	1000	13	57	90	19000	---	---	---	PACE
MW-1	9/15/00	7.76	5.73	---	2.03	---	---	---	---	---	---	---	---	---	---	---
MW-1	12/11/00	7.76	5.82	---	1.94	5500	---	1160	47.1	155	292	3900	---	---	---	PACE
MW-1 (h)	3/29/01	7.76	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	6/27/01	7.76	5.49	---	2.27	6100	---	1200	12.9	17.3	77.9	1780	---	---	---	PACE
MW-1	9/19/01	7.76	6.19	---	1.57	1800	---	102	ND<12.5	ND<12.5	ND<37.5	1090	---	---	---	PACE
MW-1	12/28/01	7.76	5.27	---	2.49	4000	---	540	11.8	20.4	64.6	1120	---	---	---	PACE
MW-1	3/12/02	7.76	5.68	---	2.08	3700	---	491	8.39	12.4	27.3	1020	---	---	---	PACE
MW-1	6/13/2002*	7.76	5.54	---	2.22	1900	---	255	ND<12.5	ND<12.5	ND<25	6490	---	---	---	PACE
MW-1	9/6/02	7.76	5.56	---	2.20	1100	---	170	5.1	2.2	20	550	---	---	---	SEQ
MW-1 (o)	12/13/02	7.76	5.45	---	2.31	2700	---	610	10	18	67	470	---	---	---	SEQ
MW-1 (p)	2/19/03	7.76	3.00	---	4.76	1500	---	180	ND<5.0	ND<5.0	15	610	---	---	---	SEQ
MW-1	6/6/03	7.76	5.52	---	2.24	4600	---	620	ND<25	ND<25	55	1400	---	---	---	SEQ

**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Former BP Service Station #11126**  
**1700 Powell Street, Emeryville, CA**

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB
MW-2	11/4/92	8.56	5.88	---	2.68	12000	---	3900	1300	ND<0.5	2300	---	(k)	---	---	PACE
QC-1 (e)	11/4/92	---	---	---	---	12000	---	3200	980	ND<0.5	1900	---	---	---	---	PACE
MW-2	10/12/93	8.56	6.29	---	2.27	4500	---	3400	180	230	940	442	(k)	---	---	PACE
MW-2	2/15/94	8.56	5.56	---	3.00	2000	---	430	270	28	390	127	(k)	---	4.0	PACE
QC-1 (e)	2/15/94	---	---	---	---	1800	---	290	160	14	250	---	---	---	---	PACE
MW-2	5/11/94	8.56	5.17	---	3.39	14000	---	3900	1200	440	1900	953	(k)	---	8.9	PACE
QC-1 (e)	5/11/94	---	---	---	---	15000	---	5600	1500	470	2000	740	(d)	---	---	PACE
MW-2	8/1/94	8.56	5.43	---	3.13	8200	---	3000	420	230	680	1676	(k)	---	2.6	PACE
MW-2	10/18/94	8.56	5.71	---	2.85	9000	---	2000	140	150	420	2417	(k)	---	7.2	PACE
MW-2	1/13/95	8.56	4.67	---	3.89	7900	---	2200	42	ND<5	770	---	---	---	6.8	ATI
MW-2	4/13/95	8.56	4.37	---	4.19	33000	---	8000	2500	1100	6600	---	---	---	7.5	ATI
QC-1 (e)	4/13/95	---	---	---	---	25000	---	6500	1500	110	5300	---	---	---	---	ATI
MW-2	7/11/95	8.56	4.51	---	4.05	19000	---	3300	99	7.5	4600	---	---	---	7.8	ATI
QC-1 (e)	7/11/95	---	---	---	---	28000	---	6800	1000	900	4900	---	---	---	---	ATI
MW-2	11/2/95	8.56	5.55	---	3.01	20000	---	3800	1200	570	2700	15000	---	---	7.3	ATI
QC-1 (e)	11/2/95	---	---	---	---	22000	---	4000	1200	600	2700	19000	---	---	---	ATI
MW-2	2/5/96	8.56	5.10	---	3.46	1200	---	320	220	26	187	99	---	---	2.2	SPL
QC-1 (e)	2/5/96	---	---	---	---	910	---	290	180	19	137	93	---	---	---	SPL
MW-2	4/24/96	8.56	4.95	---	3.61	ND<500	---	70	22	ND<10	61	ND<50	---	---	7.0	SPL
QC-1 (e)	4/24/96	---	---	---	---	ND<500	---	100	30	ND<10	71	ND<100	---	---	---	SPL
MW-2	7/15/96	8.56	5.40	---	3.16	---	---	---	---	---	---	---	---	---	---	---
MW-2	7/16/96	8.56	---	---	---	12000	---	3300	1400	250	2610	1400	---	---	7.8	SPL
MW-2	7/30/96	8.56	5.44	---	3.12	---	---	---	---	---	---	---	---	---	---	---
MW-2	11/4/96	8.56	7.06	---	1.50	---	---	---	---	---	---	---	---	---	---	---
MW-2	11/5/96	8.56	---	---	---	7200	---	1400	230	38	2110	1100	---	---	7.4	SPL
QC-1 (e)	11/5/96	---	---	---	---	9200	---	1300	170	ND<25	2240	1100	---	---	---	SPL
MW-2	5/17/97	8.56	5.77	---	2.79	570	---	42	ND<5.0	5.0	60	210	---	---	6.9	SPL
MW-2	8/11/97	8.56	5.71	---	2.85	6300	---	1800	130	86	397	2400	---	---	8.5	SPL
MW-2	11/17/97	8.56	6.91	---	1.65	2400	---	220	30	33	259	130	---	---	7.9	SPL
MW-2	1/29/98	8.56	4.61	---	3.95	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	---	---	6.2	SPL
MW-2	6/22/98	8.56	4.80	---	3.76	4200	---	640	150	120	650	560	---	---	5.4	SPL
MW-2	12/30/98	8.56	5.21	---	3.35	---	---	---	---	---	---	---	---	---	---	---
MW-2	6/23/99	8.56	5.30	---	3.26	---	---	---	---	---	---	---	---	---	---	---
MW-2	9/23/99	8.56	4.75	---	3.81	3800	---	760	19	210	960	910	---	---	---	SPL
MW-2	12/28/99	8.56	4.51	---	4.05	---	---	---	---	---	---	---	---	---	---	---
MW-2	3/22/00	8.56	4.21	---	4.35	2500	---	780	17	44	270	2800	---	---	---	PACE
MW-2	5/26/00	8.56	4.66	---	3.90	---	---	---	---	---	---	---	---	---	---	---
MW-2	9/6/00	8.56	4.71	---	3.85	3700	---	1200	5.5	12	170	12000	---	---	---	PACE
MW-2	9/15/00	8.56	4.74	---	3.82	---	---	---	---	---	---	---	---	---	---	---
MW-2	12/11/00	8.56	4.79	---	3.77	---	---	---	---	---	---	---	---	---	---	---
MW-2 (h)	3/29/01	8.56	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2 (j)	6/27/01	8.56	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2 (j)	9/19/01	8.56	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2 (j)	12/28/01	8.56	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Former BP Service Station #11126**  
**1700 Powell Street, Emeryville, CA**

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB
MW-2	3/12/02	8.56	4.25	—	4.31	26000	---	1160	4.39	61.1	171	37300	—	—	---	PACE
MW-2	6/13/2002*	8.56	4.94	—	3.62	18000	—	578	ND<50	ND<50	ND<100	84600	—	—	---	PACE
MW-2	9/6/02	8.56	5.23	—	3.33	26000	---	440	ND<50	ND<50	ND<50	45000	—	—	---	SEQ
MW-2 (o)	12/13/02	8.56	4.94	---	3.62	69000	---	1200	ND<500	ND<500	ND<500	98000	—	—	---	SEQ
MW-2 (p)	2/19/03	8.56	4.14	---	4.42	78000	---	1100	ND<500	ND<500	ND<500	81000	—	—	---	SEQ
<b>MW-2</b>	<b>6/6/03</b>	<b>8.56</b>	<b>4.66</b>	<b>—</b>	<b>3.90</b>	<b>120000</b>	<b>—</b>	<b>1100</b>	<b>ND&lt;1000</b>	<b>ND&lt;1000</b>	<b>ND&lt;1000</b>	<b>72000</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>SEQ</b>

**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Former BP Service Station #11126**  
**1700 Powell Street, Emeryville, CA**

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB
MW-3	11/4/92	8.25	6.38	---	1.87	200	690	1.6	ND<0.5	ND<0.5	1.1	---	(k) ND<5000	ND	---	PACE
MW-3	10/12/93	8.25	5.84	---	2.41	270	2100	5.0	0.7	ND<0.5	2.6	96.3	(k) ND<5000	ND	---	PACE
QC-1 (e)	10/12/93	---	---	---	---	150	---	5.6	0.6	ND<0.5	1.6	---	---	---	---	PACE
MW-3	2/15/94	8.25	6.60	---	1.65	140	2.3	5.7	ND<0.5	ND<0.5	ND<0.5	30.1	(k) 90	ND	3.9	PACE
MW-3	5/11/94	8.25	5.86	---	2.39	190	2500	2.7	1.9	ND<0.5	1.9	51	(d)(k)ND<5000	ND	9.2	PACE
MW-3	8/1/94	8.25	6.13	---	2.12	120	1300	1.3	ND<0.5	0.5	1.1	17.6	(k) ND<5000	ND	2.9	PACE
MW-3	10/18/94	8.25	6.39	---	1.86	100	2200	2.3	ND<0.5	ND<0.5	ND<0.5	21	(k) ND<5000	ND	3.6	PACE
MW-3	1/13/95	8.25	5.47	---	2.78	ND<50	970	0.8	ND<0.5	ND<0.5	ND<1	---	---	ND	7.7	ATI
MW-3	4/13/95	8.25	5.17	---	3.08	530	ND<500	8.7	1.9	ND<0.5	3.9	---	2100	ND	8.4	ATI
MW-3	7/11/95	8.25	5.37	---	2.88	78	2100	0.57	ND<0.50	ND<0.50	ND<1.0	---	1900	ND	8.3	ATI
MW-3	11/2/95	8.25	6.29	---	1.96	250	2000	0.73	ND<0.50	ND<0.50	1.8	270	1400	ND	8.3	ATI
MW-3	2/5/96	8.25	5.80	---	2.45	ND<50	1600	ND<0.5	ND<1	ND<1	2.7	11	9000	ND	3.5	SPL
MW-3	4/24/96	8.25	5.69	---	2.56	ND<50	2800	ND<5	ND<10	ND<10	ND<10	150	6000	ND	8.6	SPL
MW-3	7/15/96	8.25	6.18	---	2.07	ND<250	3700	ND<2.5	ND<5	ND<5	ND<5	ND<50	1000	ND	7.7	SPL
MW-3	7/30/96	8.25	6.04	---	2.21	---	---	---	---	---	---	---	---	---	---	---
MW-3	11/4/96	8.25	7.84	---	0.41	---	---	---	---	---	---	---	---	---	---	---
MW-3	11/5/96	8.25	---	---	---	90	890	ND<0.5	ND<1.0	ND<1.0	ND<1.0	30	2000	ND	6.8	SPL
MW-3	5/17/97	8.25	6.49	---	1.76	ND<50	2100	ND<0.5	ND<1.0	ND<1.0	ND<1.0	52	700	ND	6.3	SPL
MW-3	8/11/97	8.25	6.15	---	2.10	490	1900	ND<2.5	ND<5.0	ND<5.0	ND<5.0	170	ND<5000	ND	7.4	SPL
MW-3	11/17/97	8.25	7.15	---	1.10	120	2500	ND<0.5	ND<1.0	ND<1.0	ND<1.0	46	ND<5000	ND	7.0	SPL
MW-3	1/29/98	8.25	5.10	---	3.15	270	1700	0.53	ND<1.0	ND<1.0	ND<1.0	330	2000	ND	6.4	SPL
MW-3	6/22/98	8.25	5.50	---	2.75	200	2200	ND<0.5	ND<1.0	ND<1.0	ND<1.0	130	ND<5	ND	5.5	SPL
MW-3	12/30/98	8.25	6.68	---	1.57	---	---	---	---	---	---	---	---	---	---	---
MW-3	3/9/99	8.25	5.53	---	2.72	60	840	ND<1.0	ND<1.0	ND<1.0	ND<1.0	19	7600	---	---	SPL
MW-3	6/23/99	8.25	6.60	---	1.65	---	---	---	---	---	---	---	---	---	---	---
MW-3	9/23/99	8.25	6.17	---	2.08	---	---	---	---	---	---	---	---	---	---	---
MW-3	12/28/99	8.25	6.00	---	2.25	---	---	---	---	---	---	---	---	---	---	---
MW-3	3/22/00	8.25	4.77	---	3.48	690	ND<58	4.2	3.1	0.81	2.7	2900	13000	---	---	PACE
MW-3	5/26/00	8.25	5.28	---	2.97	---	---	---	---	---	---	---	---	---	---	---
MW-3	9/15/00	8.25	5.58	---	2.67	---	---	---	---	---	---	---	---	---	---	---
MW-3	12/11/00	8.25	11.74	---	-3.49 (i)	---	---	---	---	---	---	---	---	---	---	---
MW-3	3/29/01	8.25	5.04	---	3.21	650	ND<50	ND<2.5	ND<2.5	ND<2.5	ND<7.5	680	6540	---	---	PACE
MW-3	6/27/01	8.25	5.62	---	2.63	460	690	ND<2.5	ND<2.5	ND<2.5	ND<7.5	560	ND<5000	---	---	PACE
MW-3	9/19/01	8.25	5.80	---	2.45	ND<500	520	ND<5.0	ND<5.0	ND<5.0	ND<1.5	464	ND<5000	---	---	PACE
MW-3	12/28/01	8.25	4.85	---	3.40	180	550	ND<0.5	ND<0.5	ND<0.5	ND<1.0	180	ND<5000	---	---	PACE
MW-3	3/12/02	8.25	4.39	---	3.86	410	1300	ND<2.5	ND<2.5	ND<2.5	ND<5.0	443	ND<5000	---	---	PACE
MW-3	6/13/2002*	8.25	5.38	---	2.87	ND<250	2600	ND<2.5	ND<2.5	ND<2.5	ND<5.0	395	ND<5000	---	---	PACE
MW-3	9/6/02	8.25	5.68	---	2.57	ND<200	---	ND<2.0	ND<2.0	ND<2.0	ND<2.0	650	---	---	---	SEQ
MW-3 (o)	12/13/02	8.25	5.37	---	2.88	ND<50	980	ND<0.5	ND<0.5	ND<0.5	ND<0.5	60	7000	---	---	SEQ
MW-3 (p)	2/19/03	8.25	4.80	---	3.45	ND<1000	380	ND<10	ND<10	ND<10	ND<10	120	6700	---	---	SEQ
MW-3	6/6/03	8.25	5.13	---	3.12	ND<500	620	ND<5.0	ND<5.0	ND<5.0	ND<5.0	180	7.9	---	---	SEQ



**Table 1**  
**Groundwater Elevation and Analytical Data**  
Former BP Service Station #11126  
1700 Powell Street, Emeryville, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB
MW-4	11/4/92	8.12	6.66	---	1.46	340	---	4.5	ND<0.5	4.3	ND<0.5	---	(k)	---	---	PACE
MW-4	10/12/93	8.12	6.87	---	1.25	160	---	5.8	1.4	0.8	2.7	261	(k)	---	---	PACE
MW-4	2/15/94	8.12	6.61	---	1.51	110	---	4.4	0.7	ND<0.5	2.5	118	(d)(k)	---	4.3	PACE
MW-4	5/11/94	8.12	5.89	---	2.23	120	---	0.5	0.8	ND<0.5	ND<0.5	137	(d)(k)	---	9.3	PACE
MW-4	8/1/94	8.12	6.87	---	1.25	140	---	0.7	2.0	5.2	15	138	(k)	---	3.3	PACE
MW-4	10/18/94	8.12	6.62	---	1.50	140	---	3.5	ND<0.5	0.5	ND<0.5	197	(k)	---	3.0	PACE
MW-4	1/13/95	8.12	7.27	---	0.85	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	7.9	ATI
MW-4	4/13/95	8.12	6.51	---	1.61	73	---	1.2	ND<0.5	ND<0.5	ND<1	---	---	---	9.9	ATI
MW-4	7/11/95	8.12	6.21	---	1.91	82	---	0.57	ND<0.50	ND<0.50	ND<1.0	---	---	---	7.2	ATI
MW-4	11/2/95	8.12	6.78	---	1.34	71	---	1.4	0.96	0.99	2.8	140	---	---	8.6	ATI
MW-4	2/5/96	8.12	6.41	---	1.71	ND<50	---	ND<5	ND<10	ND<10	ND<10	200	---	---	4.4	SPL
MW-4	4/24/96	8.12	6.18	---	1.94	ND<250	---	ND<2.5	ND<5	ND<5	ND<5	510	---	---	8.3	SPL
MW-4	7/15/96	8.12	6.63	---	1.49	ND<50	---	5.7	ND<1	ND<1	ND<1	550	---	---	7.4	SPL
MW-4	7/30/96	8.12	6.34	---	1.78	---	---	---	---	---	---	---	---	---	---	---
MW-4	11/4/96	8.12	8.27	---	-0.15	---	---	---	---	---	---	---	---	---	---	---
MW-4	11/5/96	8.12	---	---	---	460	---	ND<2.5	11	ND<5.0	ND<5.0	620/610	(f)	---	7.3	SPL
MW-4	5/17/97	8.12	7.00	---	1.12	---	---	---	---	---	---	---	---	---	---	---
MW-4	8/11/97	8.12	6.81	---	1.31	---	---	---	---	---	---	---	---	---	---	---
MW-4	11/17/97	8.12	9.19	---	-1.07	840	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	880	---	---	7.3	SPL
MW-4	1/29/98	8.12	7.94	---	0.18	---	---	---	---	---	---	---	---	---	---	---
MW-4	6/22/98	8.12	7.49	---	0.63	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/30/98	8.12	8.21	---	-0.09	---	---	---	---	---	---	---	---	---	---	---
MW-4	3/9/99	8.12	7.70	---	0.42	1200	---	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2000	---	---	---	SPL
MW-4	6/23/99	8.12	8.81	---	-0.69	---	---	---	---	---	---	---	---	---	---	---
MW-4	9/23/99	8.12	8.32	---	-0.20	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/28/99	8.12	8.21	---	-0.09	---	---	---	---	---	---	---	---	---	---	---
MW-4	3/22/00	8.12	6.74	---	1.38	910	---	ND<0.5	ND<0.5	0.54	1.7	3800	---	---	---	PACE
MW-4	5/26/00	8.12	5.13	---	2.99	---	---	---	---	---	---	---	---	---	---	---
MW-4	9/15/00	8.12	8.20	---	-0.08	---	---	---	---	---	---	---	---	---	---	---
MW-4	12/11/00	8.12	8.31	---	-0.19	---	---	---	---	---	---	---	---	---	---	---
MW-4 (h)	3/29/01	8.12	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	6/27/01	8.12	7.57	---	0.55	2800	---	18.9	ND<2.5	ND<2.5	ND<7.5	4220	---	---	---	PACE
MW-4	9/19/01	8.12	7.87	---	0.25	2500	---	ND<5.0	ND<5.0	ND<5.0	ND<15	3340	---	---	---	PACE
MW-4	12/28/01	8.12	7.80	---	0.32	4400	---	ND<5.0	ND<5.0	ND<5.0	ND<10	5330	---	---	---	PACE
MW-4	3/12/02	8.12	4.53	---	3.59	6400	---	71.5	ND<5.0	ND<5.0	ND<10	8440	---	---	---	PACE
MW-4	6/13/2002*	8.12	6.21	---	1.91	1800	---	7.5	ND<5.0	5.03	13.1	6870	---	---	---	PACE
MW-4	9/6/02	8.12	7.78	---	0.34	ND<2000	---	ND<20	ND<20	ND<20	ND<20	9600	---	---	---	SEQ
MW-4 (o)	12/13/02	8.12	7.87	---	0.25	5600	---	ND<50	ND<50	ND<50	ND<50	8600	---	---	---	SEQ
MW-4 (p)	2/19/03	8.12	4.84	---	3.28	ND<10000	---	ND<100	ND<100	ND<100	ND<100	8000	---	---	---	SEQ
MW-4	6/6/03	8.12	7.98	---	0.14	13000	---	ND<50	ND<50	ND<50	ND<50	6800	---	---	---	SEQ

**Table 1**  
**Groundwater Elevation and Analytical Data**  
Former BP Service Station #11126  
1700 Powell Street, Emeryville, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB	
MW-5	10/12/93	7.69	6.01	---	1.68	---	---	---	---	---	---	---	(k)	---	---	---	PACE
MW-5	10/13/93	7.69	---	---	---	2300	---	160	10	ND<0.5	26	---	(k)	---	---	---	PACE
MW-5	2/15/94	7.69	5.74	---	1.95	5100	---	710	16	33	35	153	(d)(k)	---	---	4.0	PACE
MW-5	5/11/94	7.69	5.28	---	2.41	11000	---	1100	39	110	57	165	(d)(k)	---	---	8.0	PACE
MW-5	8/1/94	7.69	5.84	---	1.85	9000	---	730	35	61	41	196	(d)(k)	---	---	2.6	PACE
MW-5	10/18/94	7.69	6.01	---	1.68	7800	---	330	30	27	27	559	(k)	---	---	5.6	PACE
MW-5	1/13/95	7.69	4.74	---	2.95	ND<500	---	290	6	ND<5	18	---	---	---	---	6.8	ATI
MW-5	4/13/95	7.69	5.50	---	2.19	9100	---	400	15	52	27	---	---	---	---	7.4	ATI
MW-5	7/11/95	7.69	5.75	---	1.94	7300	---	390	13	28	23	---	---	---	---	7.2	ATI
MW-5	11/3/95	7.69	6.65	---	1.04	7200	---	270	15	38	23	200	---	---	---	8.4	ATI
MW-5	2/5/96	7.69	4.83	---	2.86	4600	---	370	15	53	28	ND<50	---	---	---	1.9	SPL
MW-5	4/24/96	7.69	6.09	---	1.60	3000	---	180	ND<10	32	14	ND<100	---	---	---	8.1	SPL
MW-5	7/15/96	7.69	6.57	---	1.12	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	7/16/96	7.69	---	---	---	ND<50	---	190	ND<10	31	16	ND<100	---	---	---	8.3	SPL
MW-5	7/30/96	7.69	5.61	---	2.08	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	8/12/96	7.69	---	---	---	2000	---	150	12	25	18.2	ND<50	---	---	---	7.6	SPL
MW-5	11/4/96	7.69	8.25	---	-0.56	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	11/5/96	7.69	---	---	---	5200	---	42	5.5	13	ND<5.0	1700	---	---	---	7.4	SPL
MW-5	5/17/97	7.69	6.95	---	0.74	80	---	0.56	ND<1.0	ND<1.0	ND<1.0	46	---	---	---	6.7	SPL
MW-5	8/11/97	7.69	6.72	---	0.97	2700	---	20	12	6.7	9.7	1900	---	---	---	8.5	SPL
MW-5	11/17/97	7.69	9.49	---	-1.80	8400	---	25	12	8.7	5.4	13000	---	---	---	7.9	SPL
MW-5	1/29/98	7.69	7.88	---	-0.19	110000	---	2500	110	180	589	180000	---	---	---	6.8	SPL
MW-5	6/22/98	7.69	7.40	---	0.29	4400	---	47	10	29	20.5	47	---	---	---	6.6	SPL
MW-5	12/30/98	7.69	6.13	---	1.56	6000	---	18	9.1	22	16	63/44	(f)	---	---	---	SPL
MW-5	3/9/99	7.69	4.79	---	2.90	4600	---	8.8	5.5	12	11	24	---	---	---	---	SPL
MW-5	6/23/99	7.69	5.95	---	1.74	3400	---	1500	8.9	54	87	7500	---	---	---	---	SPL
MW-5	9/23/99	7.69	5.43	---	2.26	2600	---	510	14	140	650	580	---	---	---	---	SPL
MW-5	12/28/99	7.69	5.30	---	2.39	3500	---	900	18	57	140	4800	---	---	---	---	PACE
MW-5 (h)	3/22/00	7.69	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5 (h)	5/26/00	7.69	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5 (h)	9/6/00	7.69	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5 (h)	9/15/00	7.69	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5 (h)	12/11/00	7.69	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5 (h)	3/29/01	7.69	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5 (j)	6/27/01	7.69	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5 (j)	9/19/01	7.69	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	12/28/01	7.69	4.65	---	3.04	4600	---	19.9	24.6	16.2	57	72.3	---	---	---	---	PACE
MW-5	3/12/02	7.69	5.35	---	2.34	5100	---	45.4	13.7	22	38.9	31.6	---	---	---	---	PACE
MW-5	6/13/02	7.69	5.34	---	2.35	2900	---	31.8	ND<12.5	ND<12.5	ND<2.5	616	---	---	---	---	PACE
MW-5	9/6/02	7.69	5.46	---	2.23	3400	---	23	5.5	ND<5.0	11	230	---	---	---	---	SEQ
MW-5 (o)	12/13/02	7.69	5.47	---	2.22	2500	---	12	9.3	4.6	8.8	110	---	---	---	---	SEQ
MW-5 (p)	2/19/03	7.69	5.29	---	2.40	2800	---	11	5.4	9.7	12	6.4	---	---	---	---	SEQ
MW-5	6/6/03	7.69	5.30	---	2.39	3200	---	9.1	ND<5.0	7.6	9.3	ND<5.0	---	---	---	---	SEQ

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Former BP Service Station #11126  
1700 Powell Street, Emeryville, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB	
MW-6	10/12/93	8.52	6.59	---	1.93	63	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	44.4	(k)	---	---	---	PACE
MW-6	2/15/94	8.52	6.31	---	2.21	68	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	38.1	(d)(k)	---	---	3.1	PACE
MW-6	5/11/94	8.52	6.15	---	2.37	68	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	48.5	(d)(k)	---	---	8.7	PACE
MW-6	8/1/94	8.52	6.46	---	2.06	91	---	ND<0.5	ND<0.5	ND<0.5	0.6	59.6	(k)	---	---	2.4	PACE
MW-6	10/18/94	8.52	6.72	---	1.80	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	84.6	(k)	---	---	6.0	PACE
MW-6	1/13/95	8.52	5.95	---	2.57	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	---	7.0	ATI
MW-6	4/13/95	8.52	5.44	---	3.08	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	---	8.5	ATI
MW-6	7/11/95	8.52	5.68	---	2.84	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	8.4	ATI
MW-6	11/2/95	8.52	6.57	---	1.95	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	35	---	---	---	8.3	ATI
MW-6	2/5/96	8.52	6.27	---	2.25	ND<50	---	ND<5	ND<10	ND<10	ND<10	ND<100	---	---	---	2.2	SPL
MW-6	4/24/96	8.52	5.95	---	2.57	ND<250	---	ND<2.5	ND<5	ND<5	ND<5	62	---	---	---	8.0	SPL
MW-6	7/15/96	8.52	6.39	---	2.13	ND<250	---	ND<2.5	ND<5	ND<5	ND<5	ND<50	---	---	---	8.0	SPL
MW-6	7/30/96	8.52	6.44	---	2.08	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	11/4/96	8.52	8.05	---	0.47	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	11/5/96	8.52	---	---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	7.3	SPL
MW-6	5/17/97	8.52	6.75	---	1.77	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	8/11/97	8.52	6.48	---	2.04	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	11/17/97	8.52	9.27	---	-0.75	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	7.7	SPL
MW-6	1/29/98	8.52	7.98	---	0.54	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	6/22/98	8.52	7.68	---	0.84	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	12/30/98	8.52	6.98	---	1.54	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	3/9/99	8.52	5.90	---	2.62	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	6/23/99	8.52	6.93	---	1.59	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	9/23/99	8.52	6.45	---	2.07	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	12/28/99	8.52	6.33	---	2.19	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	3/22/00	8.52	5.15	---	3.37	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	5/26/00	8.52	5.72	---	2.80	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	9/15/00	8.52	6.02	---	2.50	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	12/11/00	8.52	6.20	---	2.32	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	3/29/01	8.52	5.34	---	3.18	750	---	ND<2.5	2.91	ND<2.5	11.8	820	---	---	---	---	PACE
MW-6	6/27/01	8.52	6.00	---	2.52	760	---	32.9	ND<2.5	ND<2.5	ND<7.5	968	---	---	---	---	PACE
MW-6	9/19/01	8.52	6.22	---	2.30	ND<500	---	ND<5.0	ND<5.0	ND<5.0	ND<15	879	---	---	---	---	PACE
MW-6 (n)	12/28/01	8.52	4.71	---	3.81	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	3/12/02	8.52	4.96	---	3.56	ND<500	---	ND<5.0	ND<5.0	ND<5.0	ND<10	244	---	---	---	---	PACE
MW-6	6/13/2002*	8.52	5.78	---	2.74	ND<250	---	ND<2.5	ND<2.5	ND<2.5	ND<5.0	413	---	---	---	---	PACE
MW-6	9/6/02	8.52	6.14	---	2.38	130	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	240	---	---	---	---	SEQ
MW-6 (o)	12/13/02	8.52	6.05	---	2.47	140	---	ND<1.0	ND<1.0	ND<1.0	ND<1.0	200	---	---	---	---	SEQ
MW-6 (p)	2/19/03	8.52	5.40	---	3.12	ND<500	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	150	---	---	---	---	SEQ
MW-6	6/6/03	8.52	5.54	---	2.98	1100	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	140	---	---	---	---	SEQ

**Table 1**  
**Groundwater Elevation and Analytical Data**  
Former BP Service Station #11126  
1700 Powell Street, Emeryville, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB
MW-7	10/12/93	7.61	6.14	--	1.47	ND<50	--	ND<0.5	ND<0.5	ND<0.5	0.7	ND<5.0	(k)	--	--	PACE
MW-7	2/15/94	7.61	5.88	--	1.73	78	--	ND<0.5	ND<0.5	ND<0.5	0.6	ND<5.0	(k)	--	4.0	PACE
MW-7	5/11/94	7.61	5.76	--	1.85	70	--	ND<0.5	ND<0.5	ND<0.5	0.9	11.5	(k)	--	9.1	PACE
MW-7	8/1/94	7.61	5.97	--	1.64	77	--	ND<0.5	ND<0.5	ND<0.5	0.5	182	(k)	--	2.5	PACE
MW-7	10/18/94	7.61	6.24	--	1.37	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	51.7	(k)	--	6.3	PACE
MW-7	1/13/95	7.61	5.39	--	2.22	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<1	--	--	--	8.2	ATI
MW-7	4/13/95	7.61	5.17	--	2.44	63	--	ND<0.5	ND<0.5	ND<0.5	1.4	--	--	--	8.4	ATI
MW-7	7/11/95	7.61	5.25	--	2.36	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	--	--	7.9	ATI
MW-7	11/2/95	7.61	6.19	--	1.42	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	55	--	--	8.0	ATI
MW-7	2/5/96	7.61	5.69	--	1.92	ND<50	--	ND<0.5	ND<1	ND<1	ND<1	40	--	--	1.9	SPL
MW-7	4/24/96	7.61	5.59	--	2.02	ND<250	--	ND<2.5	ND<5	ND<5	ND<5	53	--	--	8.2	SPL
MW-7	7/15/96	7.61	6.07	--	1.54	ND<250	--	ND<2.5	ND<5	ND<5	ND<5	ND<50	--	--	7.8	SPL
MW-7	7/30/96	7.61	6.04	--	1.57	--	--	--	--	--	--	--	--	--	--	--
MW-7	11/4/96	7.61	7.76	--	-0.15	--	--	--	--	--	--	--	--	--	--	--
MW-7	11/5/96	7.61	--	--	--	ND<50	--	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	--	--	7.8	SPL
MW-7	5/17/97	7.61	6.42	--	1.19	--	--	--	--	--	--	--	--	--	--	--
MW-7	8/11/97	7.61	6.06	--	1.55	--	--	--	--	--	--	--	--	--	--	--
MW-7	11/17/97	7.61	9.07	--	-1.46	ND<50	--	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	--	--	7.1	SPL
MW-7	1/29/98	7.61	7.44	--	0.17	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/22/98	7.61	7.39	--	0.22	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/30/98	7.61	5.51	--	2.10	--	--	--	--	--	--	--	--	--	--	--
MW-7	3/9/99	7.61	5.57	--	2.04	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/23/99	7.61	6.69	--	0.92	--	--	--	--	--	--	--	--	--	--	--
MW-7	9/23/99	7.61	6.23	--	1.38	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/28/99	7.61	6.08	--	1.53	--	--	--	--	--	--	--	--	--	--	--
MW-7	3/22/00	7.61	4.88	--	2.73	--	--	--	--	--	--	--	--	--	--	--
MW-7	5/26/00	7.61	5.42	--	2.19	--	--	--	--	--	--	--	--	--	--	--
MW-7	9/15/00	7.61	5.79	--	1.82	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/11/00	7.61	5.93	--	1.68	--	--	--	--	--	--	--	--	--	--	--
MW-7	3/29/01	7.61	5.24	--	2.37	600	--	ND<2.5	ND<2.5	ND<2.5	ND<7.5	636	--	--	--	PACE
MW-7	6/27/01	7.61	5.69	--	1.92	590	--	ND<2.5	ND<2.5	ND<2.5	ND<7.5	739	--	--	--	PACE
MW-7	9/19/01	7.61	5.89	--	1.72	560	--	ND<5.0	ND<5.0	ND<5.0	ND<15	1190	--	--	--	PACE
MW-7	12/28/01	7.61	4.53	--	3.08	910	--	22.7	ND<2.5	ND<2.5	ND<5.0	856	--	--	--	PACE
MW-7	3/12/02	7.61	4.71	--	2.90	620	--	ND<2.5	ND<2.5	ND<2.5	ND<5.0	675	--	--	--	PACE
MW-7	6/13/2002*	7.61	5.21	--	2.40	860	--	ND<2.5	ND<2.5	ND<2.5	ND<5.0	1470	--	--	--	PACE
MW-7	9/6/02	7.61	5.77	--	1.84	350	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5	690	--	--	--	SEQ
MW-7 (o)	12/13/02	7.61	5.65	--	1.96	1300	--	ND<10	ND<10	ND<10	ND<10	1800	--	--	--	SEQ
MW-7 (p)	2/19/03	7.61	5.07	--	2.54	1700	--	ND<10	ND<10	ND<10	ND<10	1600	--	--	--	SEQ
MW-7	6/6/03	7.61	5.27	--	2.34	1000	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	510	--	--	--	SEQ

**Table 1**  
**Groundwater Elevation and Analytical Data**  
Former BP Service Station #11126  
1700 Powell Street, Emeryville, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB
MW-8	10/12/93	8.60	5.86	--	2.74	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	11.1	(k)	--	--	PACE
MW-8	2/15/94	8.60	5.50	--	3.10	380	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	(k)	--	--	3.3 PACE
MW-8	5/11/94	8.60	5.09	--	3.51	330	--	ND<0.5	1.2	ND<0.5	1.9	ND<5.0	(k)	--	--	8.5 PACE
MW-8	8/1/94	8.60	5.20	--	3.40	260	--	ND<0.5	1.2	2.9	5.8	ND<5.0	(k)	--	--	2.3 PACE
MW-8	10/18/94	8.60	5.70	--	2.90	82	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	(k)	--	--	6.4 PACE
MW-8	1/13/95	8.60	4.96	--	3.64	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<1	--	--	--	--	6.9 ATI
MW-8	4/13/95	8.60	5.40	--	3.20	270	--	ND<0.5	ND<0.5	ND<0.5	4.4	--	--	--	--	8.4 ATI
MW-8	7/11/95	8.60	6.01	--	2.59	320	--	ND<0.50	ND<0.50	ND<0.50	3.5	--	--	--	--	8.0 ATI
MW-8	11/2/95	8.60	6.81	--	1.79	100	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	--	--	--	8.7 ATI
MW-8	2/5/96	8.60	6.12	--	2.48	ND<50	--	ND<5	ND<10	ND<10	ND<10	ND<100	--	--	--	1.5 SPL
MW-8	4/24/96	8.60	6.23	--	2.37	ND<50	--	ND<5	ND<10	ND<10	ND<10	ND<100	--	--	--	8.7 SPL
MW-8	7/15/96	8.60	6.70	--	1.90	ND<250	--	ND<2.5	ND<5	ND<5	ND<5	ND<50	--	--	--	8.4 SPL
MW-8	7/30/96	8.60	6.64	--	1.96	--	--	--	--	--	--	--	--	--	--	--
MW-8	11/4/96	8.60	8.36	--	0.24	--	--	--	--	--	--	--	--	--	--	--
MW-8	11/5/96	8.60	--	--	--	ND<50	--	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	--	--	--	7.2 SPL
MW-8	5/17/97	8.60	7.03	--	1.57	--	--	--	--	--	--	--	--	--	--	--
MW-8	8/11/97	8.60	6.05	--	2.55	--	--	--	--	--	--	--	--	--	--	--
MW-8	11/17/97	8.60	9.14	--	-0.54	ND<50	--	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	--	--	--	7.7 SPL
MW-8	1/29/98	8.60	7.90	--	0.70	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/22/98	8.60	7.72	--	0.88	--	--	--	--	--	--	--	--	--	--	--
MW-8 (h)	12/30/98	8.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8 (h)	3/9/99	8.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/23/99	8.60	4.70	--	3.90	--	--	--	--	--	--	--	--	--	--	--
MW-8	9/23/99	8.60	4.22	--	4.38	--	--	--	--	--	--	--	--	--	--	--
MW-8	12/28/99	8.60	4.12	--	4.48	--	--	--	--	--	--	--	--	--	--	--
MW-8	3/22/00	8.60	4.71	--	3.89	--	--	--	--	--	--	--	--	--	--	--
MW-8	5/26/00	8.60	4.98	--	3.62	--	--	--	--	--	--	--	--	--	--	--
MW-8	9/15/00	8.60	4.62	--	3.98	--	--	--	--	--	--	--	--	--	--	--
MW-8	12/11/00	8.60	4.77	--	3.83	--	--	--	--	--	--	--	--	--	--	--
MW-8 (h)	3/29/01	8.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/27/01	8.60	5.11	--	3.49	570	--	ND<2.5	ND<2.5	2.58	ND<7.5	3.43	--	--	--	PACE
MW-8	9/19/01	8.60	5.00	--	3.60	ND<500	--	ND<5.0	ND<5.0	ND<5.0	ND<15	ND<5.0	--	--	--	PACE
MW-8	12/28/01	8.60	4.15	--	4.45	440	--	ND<0.5	ND<0.5	0.975	ND<1.0	6.27	--	--	--	PACE
MW-8	3/12/02	8.60	4.35	--	4.25	330	--	ND<2.5	ND<2.5	ND<2.5	ND<5.0	8.69	--	--	--	PACE
MW-8	6/13/2002*	8.60	5.09	--	3.51	ND<500	--	ND<5.0	ND<5.0	ND<5.0	ND<10	16.4	--	--	--	PACE
MW-8	9/6/02	8.60	5.18	--	3.42	98	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	76	--	--	--	SEQ
MW-8 (o)	12/13/02	8.60	4.84	--	3.76	120	--	ND<0.5	ND<0.5	0.94	0.52	140	--	--	--	SEQ
MW-8 (p)	2/19/03	8.60	4.45	--	4.15	ND<2500	--	ND<25	ND<25	ND<25	ND<25	800	--	--	--	SEQ
MW-8	6/6/03	8.60	5.00	--	3.60	ND<50000	--	ND<500	ND<500	ND<500	ND<500	17000	--	--	--	SEQ

**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Former BP Service Station #11126**  
**1700 Powell Street, Emeryville, CA**

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB
MW-9	10/12/93	8.08	5.66	0.08	2.48	---	---	---	---	---	---	---	---	---	---	---
MW-9	2/15/94	8.08	5.32	0.05	2.80	---	---	---	---	---	---	---	---	---	---	---
MW-9	5/11/94	8.08	5.57	---	2.51	---	---	---	---	---	---	---	---	---	---	---
MW-9	8/1/94	8.08	6.25	---	1.83	---	---	---	---	---	---	---	---	---	---	---
MW-9	10/18/94	8.08	5.59	0.13	2.59	---	---	---	---	---	---	---	---	---	---	---
MW-9	1/13/95	8.08	4.42	0.14	3.77	---	---	---	---	---	---	---	---	---	---	---
MW-9	4/13/95	8.08	4.06	0.11	4.10	---	---	---	---	---	---	---	---	---	---	---
MW-9	7/11/95	8.08	4.21	0.08	3.93	---	---	---	---	---	---	---	---	---	---	---
MW-9	11/2/95	8.08	5.22	0.05	2.90	---	---	---	---	---	---	---	---	---	---	---
MW-9	2/5/96	8.08	4.76	0.01	3.33	---	---	---	---	---	---	---	---	---	---	---
MW-9	4/24/96	8.08	4.62	0.09	3.53	---	---	---	---	---	---	---	---	---	---	---
MW-9	7/15/96	8.08	5.11	0.04	3.00	---	---	---	---	---	---	---	---	---	---	---
MW-9	7/30/96	8.08	5.15	---	2.93	---	---	---	---	---	---	---	---	---	---	---
MW-9	11/4/96	8.08	6.75	0.01	1.34	---	---	---	---	---	---	---	---	---	---	---
MW-9	5/17/97	8.08	5.42	---	2.66	97000	---	16000	7700	2300	18400	40000	---	---	7.0	SPL
QC-1 (e)	5/17/97	---	---	---	---	97000	---	16000	8200	2300	17300	39000	---	---	---	SPL
MW-9	8/11/97	8.08	5.37	---	2.71	71000	---	12000	340	2100	4300	26000	---	---	9.1	SPL
QC-1 (e)	8/11/97	---	---	---	---	100000	---	14000	360	3200	5790	27000	---	---	---	SPL
MW-9	11/17/97	8.08	5.62	Sheen	2.46	100000	---	22000	4800	3100	17900	32000	---	---	8.3	SPL
QC-1 (e)	11/17/97	---	---	---	---	100000	---	24000	5300	3500	19300	35000	---	---	---	SPL
MW-9	1/29/98	8.08	4.07	Sheen	4.01	250000	---	20000	21000	3100	18500	110000	---	---	6.6	SPL
QC-1 (e)	1/29/98	---	---	---	---	250000	---	20000	20000	3100	18400	110000	---	---	---	SPL
MW-9	6/22/98	8.08	4.28	---	3.80	280000	---	21000	18000	3800	21200	110000	---	---	5.8	SPL
QC-1 (e)	6/22/98	---	---	---	---	290000	---	20000	17000	3800	21200	110000	---	---	---	SPL
MW-9	12/30/98	8.08	4.95	---	3.13	150000	---	10000	3800	2000	9600	86000/89000 (f)	---	---	---	SPL
MW-9	3/9/99	8.08	3.95	---	4.13	82000	---	6800	570	1400	4700	100000	---	---	---	SPL
MW-9	6/23/99	8.08	5.12	---	2.96	41000	---	11000	820	2300	5200	92000	---	---	---	SPL
MW-9	9/23/99	8.08	4.74	---	3.34	57000	---	12000	5400	1900	9500	89000	---	---	---	SPL
MW-9	12/23/99	8.08	4.58	---	3.50	46000	---	15000	490	2500	3500	100000	---	---	---	PACE
MW-9	3/22/00	8.08	3.90	---	4.18	86000	---	18000	1800	2300	6800	120000	---	---	---	PACE
MW-9	5/26/00	8.08	4.15	---	3.93	82000	---	17000	680	1800	3800	100000	---	---	---	PACE
MW-9	9/6/00	8.08	4.47	---	3.61	100000	---	19000	280	2400	6400	84000	---	---	---	PACE
MW-9	9/15/00	8.08	4.34	---	3.74	---	---	---	---	---	---	---	---	---	---	---
MW-9	12/11/00	8.08	4.41	---	3.67	110000	---	14400	768	2610	6670	123000	---	---	---	PACE
MW-9 (h)	3/29/01	8.08	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-9 (m)	6/26/01	8.08	5.03	0.13	3.15 (l)	---	---	---	---	---	---	---	---	---	---	---
MW-9 (m)	9/19/01	8.08	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-9	12/28/01	8.08	3.73	---	4.35	110000	---	15000	1500	2280	5530	60900	---	---	---	PACE
MW-9	3/12/02	8.08	4.93	---	3.15	88000	---	12500	2600	2800	8950	44000	---	---	---	PACE
MW-9	6/13/2002*	8.08	4.13	---	3.95	59000	---	9870	161	2560	5560	35600	---	---	---	PACE
MW-9	9/6/02	8.08	4.39	---	3.69	47000	---	10000	ND<100	2100	4600	31000	---	---	---	SEQ
MW-9 (o)	12/13/02	8.08	3.97	---	4.11	57000	---	11000	1000	2300	5800	28000	---	---	---	SEQ
MW-9 (p)	2/19/03	8.08	3.25	---	4.83	76000	---	10000	2100	3000	8900	11000	---	---	---	SEQ
MW-9	6/6/03	8.08	3.94	---	4.14	66000	---	9000	ND<500	2500	4400	17000	---	---	---	SEQ

**Table 1**  
**Groundwater Elevation and Analytical Data**  
Former BP Service Station #11126  
1700 Powell Street, Emeryville, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	DTW (a) (Feet)	PRODUCT THICKNESS (Feet)	GWE (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	TOG (ug/L)	HVOC (ug/L)	DO (ppm)	LAB
QC-2 (g)	11/5/92	--	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	PACE
QC-2 (g)	10/12/93	--	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	PACE
QC-2 (g)	2/15/94	--	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	PACE
QC-2 (g)	5/11/94	--	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	PACE
QC-2 (g)	8/1/94	--	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	PACE
QC-2 (g)	10/18/94	--	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	PACE
QC-2 (g)	1/13/95	--	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	--	ATI
QC-2 (g)	4/13/95	--	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<1	--	--	--	--	ATI
QC-2 (g)	7/11/95	--	--	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	--	--	--	ATI
QC-2 (g)	11/2/95	--	--	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	--	--	--	ATI
QC-2 (g)	2/5/96	--	--	--	--	ND<50	--	ND<0.5	ND<1	ND<1	ND<1	ND<10	--	--	--	SPL
QC-2 (g)	4/24/96	--	--	--	--	ND<50	--	ND<0.5	ND<1	ND<1	ND<1	ND<10	--	--	--	SPL
QC-2 (g)	7/16/96	--	--	--	--	ND<50	--	ND<0.5	ND<1	ND<1	ND<1	ND<10	--	--	--	SPL

**Table 1**  
**Groundwater Elevation and Analytical Data**  
 Former BP Service Station #11126  
 1700 Powell Street, Emeryville, CA

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline  
 TPH-D Total petroleum hydrocarbons as diesel  
 B Benzene  
 T Toluene  
 E Ethylbenzene  
 X Total xylenes  
 MTBE Methyl tert butyl ether  
 TOG Total oil and grease  
 HVOC Halogenated volatile organic compounds  
 DO Dissolved oxygen  
 ug/L Micrograms per liter  
 ppm Parts per million  
 ND Not detected above reported detection limit  
 — Not analyzed/applicable/measurable  
 PACE Pace, Inc.  
 ATI Analytical Technologies, Inc.  
 SPL Southern Petroleum Laboratories  
 SEQ Sequoia Analytical  
 TOC Top of Casing  
 DTW Depth to Water  
 GWE Groundwater Elevation

NOTES:

- (a) Top of casing elevations surveyed relative to an established benchmark with an elevation of 8.11 feet above mean sea level.
  - (b) Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.
  - (c) Detection limits vary; see laboratory report.
  - (d) A copy of the documentation for this data is included in Appendix C of Alisto report 10-061-07-004.
  - (e) Blind duplicate.
  - (f) EPA Methods 8020/8260 used.
  - (g) Travel blank.
  - (h) Inaccessible.
  - (i) Depth to water anomalous; groundwater elevation not used in contouring.
  - (j) Well paved over.
  - (k) A copy of the documentation for this data can be found in Blaine Tech Services report 010627-Z-1. MTBE data for the November 4, 1992 sampling event has been destroyed. No chromatograms could be located for MTBE data from well MW-5, sampled on October 12, 1993.
  - (l) Groundwater elevation is an estimate.
  - (m) Not sampled due to nature of SPH.
  - (n) Unable to sample.
  - (o) EPA Methods 8015B / 8021B used.
  - (p) Beginning in the first quarter 2003, TPHg and VOCs analyzed by EPA Method 8260B.
- \* During the second quarter of 2002, URS Corporation assumed groundwater monitoring activities for BP.

Source: The data within this table collected prior to June 2002 was provided to URS by BP Group Environmental Management Company and their previous consultants. URS has not verified the accuracy of this information.

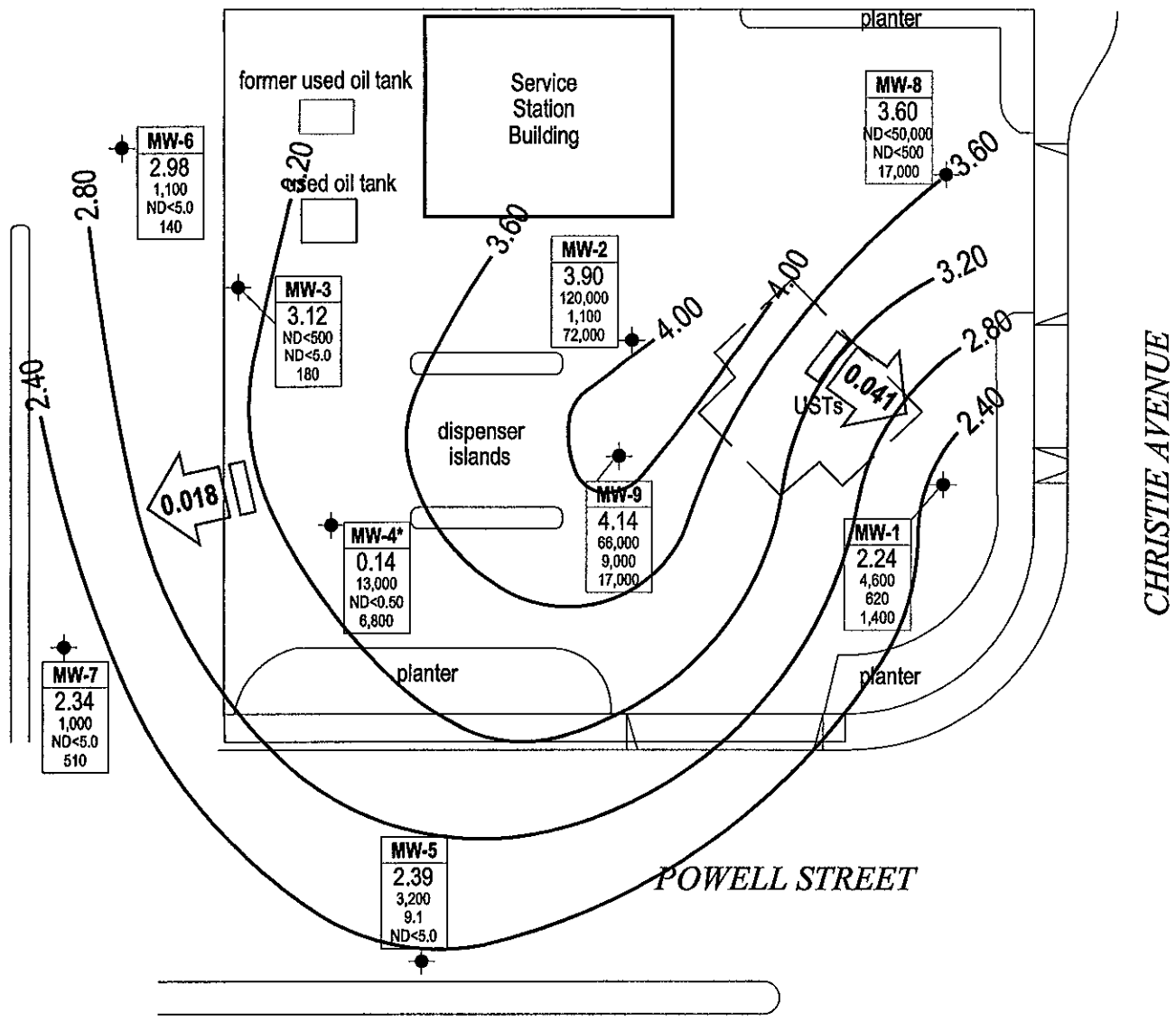


**Table 1**  
**Groundwater Elevation and Analytical Data**  
Former BP Service Station #11126  
1700 Powell Street, Emeryville, CA

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-1	06/06/03	ND<5,000	ND<1,000	1,400	ND<25	ND<25	ND<25
MW-2	06/06/03	ND<200,000	ND<40,000	72,000	ND<1,000	ND<1,000	1,300
MW-3	06/06/03	ND<1,000	ND<200	180	ND<5.0	ND<5.0	16
MW-4	06/06/03	ND<10,000	2,500	6,800	ND<50	ND<50	190
MW-5	06/06/03	ND<1,000	ND<200	ND<5.0	ND<5.0	ND<5.0	ND<5.0
MW-6	06/06/03	ND<1,000	ND<200	140	ND<5.0	ND<5.0	21
MW-7	06/06/03	ND<1,000	ND<200	510	ND<5.0	ND<5.0	41
MW-8	06/06/03	ND<100,000	ND<20,000	17,000	ND<500	ND<500	ND<500
MW-9	06/06/03	ND<100,000	ND<20,000	17,000	ND<500	ND<500	ND<500

Note: All fuel oxygenate compounds analyzed using EPA Method 8260B  
TBA = tert-Butyl alcohol  
MTBE = Methyl tert-butyl ether  
DIPE = Di-isopropyl ether  
ETBE = Ethyl tert butyl ether  
TAME = tert-Amyl methyl ether  
µg/L = micrograms per liter  
ND< = Not detected at or above the laboratory detection limit.  
NA = Data not available, not analyzed, or not applicable.

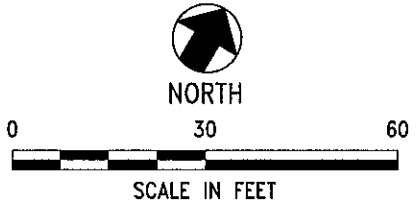
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**EXPLANATION**

- Monitoring well location
- Groundwater elevation contour (ft/MSL)
- Well** — Well designation
- ELEV** — Groundwater elevation (ft/MSL)
- TPH-g** — TPH-g, Benzene and MTBE concentrations in micrograms per liter (µg/L)
- Benzene**
- MTBE**
- ND<** — Not detected at or above laboratory reporting limits
- Groundwater flow direction and gradient (ft/MSL)

NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.

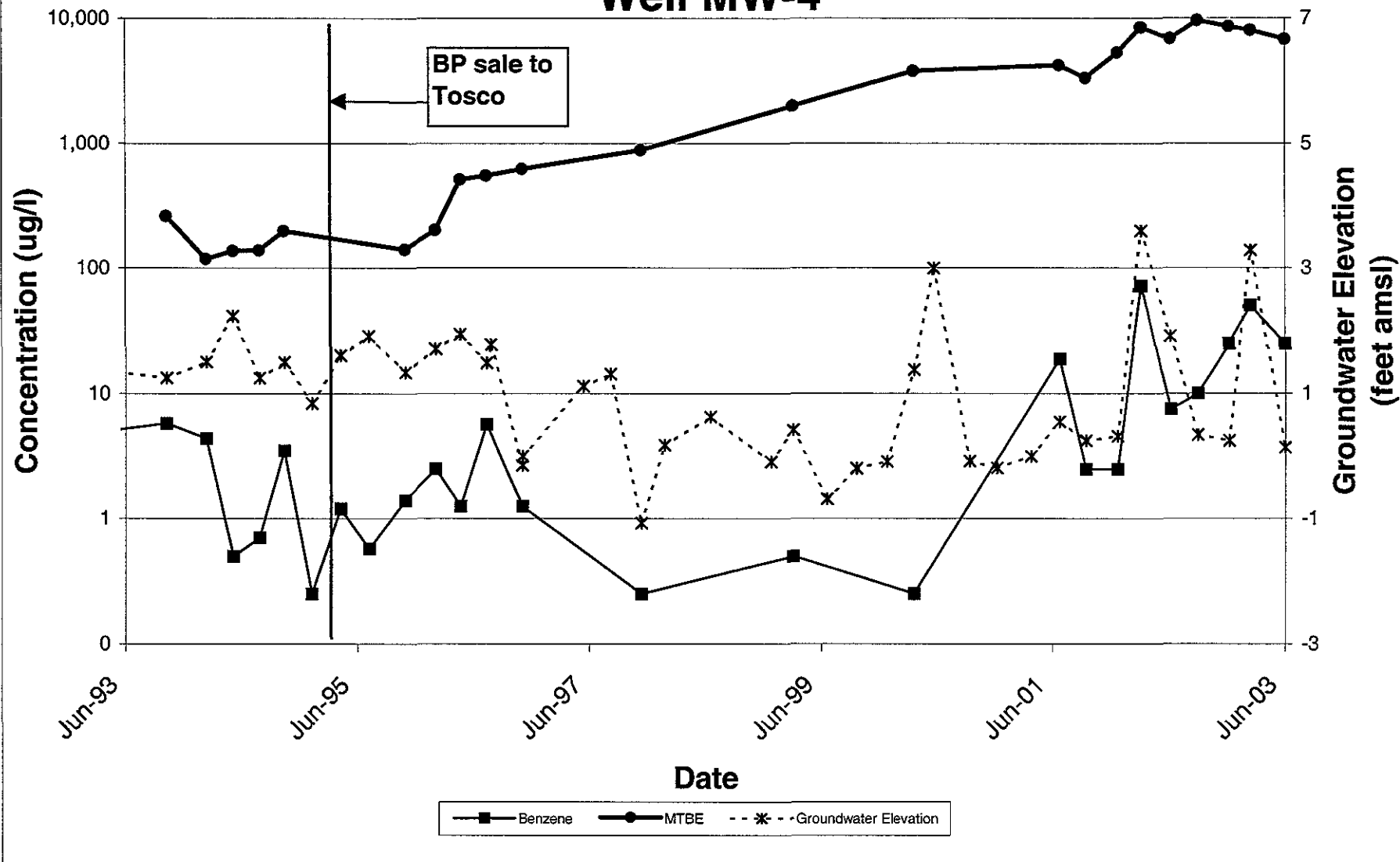


<b>URS</b>	Project No. 38486245	<b>GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP</b>	FIGURE <b>1</b>
	Former BP Service Station #11126 1700 Powell Street Emeryville, California		

**ATTACHMENT A**

**CONCENTRATION AND WATER LEVEL TRENDS  
(MW-4)**

# Concentration and Water Level Trends Well MW-4



**ATTACHMENT B**

**FIELD PROCEDURES AND FIELD DATA SHEETS**

## **FIELD PROCEDURES**

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### **Sampling Procedures**

The sampling procedure for each well consists first of measuring the water level and depth to bottom, and checking for the presence of free phase petroleum product (free product), using either an electronic indicator and a clear Teflon™ bailer or an oil-water interface probe.

Wells not containing free product are purged approximately three casing volumes of water (or until dewatered) using a centrifugal pump, gas displacement pump, or bailer. Equipment and purging method used for the current sampling event is noted on the attached field data sheets. During purging, temperature, pH, and electrical conductivity are monitored to document that these parameters are stable prior to collecting samples. After purging, water levels are allowed to partially (approximately 80%) recover. Groundwater samples (both purge and no purge) are collected using a Teflon bailer, placed into appropriate Environmental Protection Agency- (EPA) approved containers, labeled, logged onto chain-of-custody records, and transported on ice to a California State-certified laboratory. Wells with free product are not sampled and free product is removed according to California Code of Regulation, Title 23, Div. 3, Chap. 16, Section 2655, UST Regulations.

WELL GAUGING DATA

Project # 030606-MMI

Date 6/6/03

Client BP/ARCO

Site 1700 POWELL ST, EMERYVILLE

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 or TOC	
6 MW-1	2					5.52	11.27	TOC	
8 MW-2	2					4.66	11.90	↓	
1 MW-3	2					5.13	11.70		
5 MW-4	2					7.98	10.77		
7 MW-5	2					5.30	12.67		
1 MW-6	2					5.54	12.73		
4 MW-7	2					5.27	13.68		
5 MW-8	2					5.00	13.75		
9 MW-9	(4)					3.84	13.95		

3 HCl vials +  
2 HCl amber liter  
2 vials

\*-traffic

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030606 - MM1	Station # 11126
Sampler: MM	Date: 6/6/03
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8
Total Well Depth: 11.27	Depth to Water: 5.52
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 <sup>2</sup> * 0.163

Purge Method: Bailer      Sampling Method: (Bailer) 90% = 6.67

Disposable Bailer  
 Middleburg  
 Electric Submersible Extraction Pump

Disposable Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

Other: \_\_\_\_\_

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>.9</u>	x	<u>3</u>	=	<u>2.7</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μS)	Gals. Removed	Observations
1416	69.0	6.8	2242	.9	cloudy
1418	69.3	6.8	2210	1.0	
1420	68.5	6.9	2265	2.7	
					DTW = 5.6

Did well dewater? Yes  No  Gallons actually evacuated: 2.7

Sampling Time: 1425      Sampling Date: 6/6/03

Sample I.D.: MW1      Laboratory: Pace (Sequoia) Other \_\_\_\_\_

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other: Oxy's, ETM-1 (92.66)

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



## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030606 - MM1	Station # 11126
Sampler: MM	Date: 6/6/03
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8
Total Well Depth: 11.90	Depth to Water: 4.46
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 <sup>2</sup> * 0.163

Purge Method:

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

Other: \_\_\_\_\_

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port

Other: \_\_\_\_\_

20% = 6.4

Top of Screen: \_\_\_\_\_

If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

1.2	x	3	=	3.6	Gals.
I Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μS)	Gals. Removed	Observations
1444	69.5	6.9	2076	1.2	Black, very silty
1447	68.4	6.9	2114	2.4	
1450	67.9	7.0	2130	3.6	
					DTW = 6.43

Did well dewater? Yes  No

Gallons actually evacuated: 3.6

Sampling Time: 1455

Sampling Date: 6/6/03

Sample I.D.: MW-2

Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Oxys, ETHANOL (B260)

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

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030606 - MM1	Station # 11126
Sampler: MM	Date: 6/6/03
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 _____
Total Well Depth: 11.70	Depth to Water: 5.13
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 <sup>2</sup> * 0.163

Purge Method:

Bailer

Disposable Bailer

Middleburg

~~Electric Submersible  
Extraction Pump~~

Other: \_\_\_\_\_

Sampling Method:

~~Bailer~~

Disposable Bailer

Extraction Port

Other: \_\_\_\_\_

Top of Screen: \_\_\_\_\_

If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

1.1	x	3	=	3.3	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μS)	Gals. Removed	Observations
1245	65.7	7.7	4390	1.1	cloudy
1247	66.2	7.4	1974	2.2	clear
1249	65.8	7.6	1704	3.3	
					DTW = 5.41

Did well dewater? Yes  No  Gallons actually evacuated: 3.3

Sampling Time: 1255 Sampling Date: 6/6/03

Sample I.D.: MW-3 Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: TDB, MS, PHENOL (9260)

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
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## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030606 - MM1	Station # 11126
Sampler: MM	Date: 6/6/03
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8
Total Well Depth: 10.77	Depth to Water: 7.98
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 <sup>2</sup> * 0.163

8.5f = 80%

Purge Method:

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

Other: \_\_\_\_\_

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port

Other: \_\_\_\_\_

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

1.3	x	3	=	3.6	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μS)	Gals. Removed	Observations
1356	65.8	7.5	2539	1.3	Cloudy
					DP watered @ 1.5 gals
1404	66.1	7.4	2998		DTW = 10.11
					DTW = 9.36

Did well dewater? (Yes) <input checked="" type="checkbox"/> No <input type="checkbox"/>	Gallons actually evacuated: 1.5
Sampling Time: 1405	Sampling Date: 6/6/03
Sample I.D.: MW-4	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>MTBE</u> TPH-D Other: <u>oxy's</u> , <u>Ext (160)</u> <u>(3266)</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV Post-purge: _____ mV



# ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030606 - MM1	Station # 11126
Sampler: MM	Date: 6/6/03
Well I.D.: MW-6	Well Diameter: (2) 3 4 6 8
Total Well Depth: 12.73	Depth to Water: 5.54
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) 2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

5.13 = DTW  
6.9 = P0%

Purge Method:  Bailer  Disposable Bailer  Middleburg  Electric Submersible Extraction Pump  
Other: \_\_\_\_\_

Sampling Method:  Bailer  Disposable Bailer  Extraction Port  
Other: \_\_\_\_\_

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

1.2	x	3	=	3.6	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1006	68.5	7.4	6338	1.2	cloudy, black
1008	69.5	7.2	2509	2.4	
1610	69.8	7.1	2264	3.6	
					DTW = 6.90

Did well dewater? Yes  No  Gallons actually evacuated: 3.6

Sampling Time: 1015 Sampling Date: 6/6/03

Sample I.D.: MW-6 Laboratory: Pace (Sequoia) Other: \_\_\_\_\_

Analyzed for: TPH-C BTEX MTBE TPH-D Other: oxy's Ethanol (B260)

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

# ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030606 - MM1	Station # 11126
Sampler: MM	Date: 6/6/03
Well I.D.: MW-7	Well Diameter: (2) 3 4 6 8
Total Well Depth: 13.63	Depth to Water: 5.27
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) 2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

80% = 6.25

Purge Method:  Bailer  Disposable Bailer  Middleburg  Electric Submersible Extraction Pump  Other: \_\_\_\_\_

Sampling Method:  Bailer  Disposable Bailer  Extraction Port  Other: \_\_\_\_\_

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

1.3	x	3	=	3.9	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μS)	Gals. Removed	Observations
1051	68.4	7.2	9920	1.3	Black, cloudy
1053	71.3	7.0	3282	2.6	clear
1055	71.6	7.0	2728	3.9	
					PTW = 6.2

Did well dewater? Yes  No  Gallons actually evacuated: 3.9

Sampling Time: 1100 Sampling Date: 6/6/03

Sample I.D.: MW-7 Laboratory: Pace (Sequoia) Other: \_\_\_\_\_

Analyzed for: (TPH-G) (BTEX) (MTBE) (TPH-D) Other: oxy's All (no) (B260)

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

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030606-MM1	Station # 11126
Sampler: MM	Date: 6/6/03
Well I.D.: MW-8	Well Diameter: (2) 3 4 6 8
Total Well Depth: 13.75	Depth to Water: 5.00
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) 2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method: Bailer      Sampling Method: Bailer 6.75

Disposable Bailer       Disposable Bailer  
 Middleburg       Extraction Port  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

1.4	x	3	=	4.2	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μS)	Gals. Removed	Observations
1326	69.1	7.2	2260	1.4	clear
1328	71.6	7.4	2182	2.8	
1330	71.4	7.6	2211	4.2	
					DM=5710 site departure

Did well dewater? Yes  No  Gallons actually evacuated: 4.2

Sampling Time: 1530      Sampling Date: 6/6/03

Sample I.D.: MW-8      Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: TPH-C BTEX MTBE TPH-D Other: oxy's, ethanol (9260)

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

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030606 - MM1	Station # 11126
Sampler: MM	Date: 6/6/03
Well I.D.: MW-9	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 13.95	Depth to Water: 3.94
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 <sup>2</sup> * 0.163

Purge Method: Bailer  
 Disposable Bailer  
 Middleburg  
Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
Disposable Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

80% = 5.94

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

6.5	x	3	=	19.5	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1518	dewatered (g)		4.5 gal		
	67.7	7.1	1211		DTW = 10.01
					site deplete

Did well dewater? (Yes)  No  Gallons actually evacuated: 4.5

Sampling Time: 1525 Sampling Date: 6/6/03

Sample I.D.: MW-9 Laboratory: Pace Sequoia Other: \_\_\_\_\_

Analyzed for: TPH-C BTEX MTBE TPH-D Other: oxyls at hand (8266)

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 GEM OIL COMPANY TYPE A BILL OF LADING**

SOURCE RECORD **BILL OF LADING** FOR NON-HAZARDOUS PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT BP GEM OIL COMPANY FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED BY DILLARD ENVIRONMENTAL TO THE ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY IN LIVERMORE, CALIFORNIA.

The contractor performing this work is PLAINE TECH SERVICES, INC. (BTS), 1680 Rogers Avenue, San Jose, CA 95112 (phone [408] 573-0555). Blaine Tech Services, Inc. is authorized by BP GEM OIL COMPANY to recover, collect, apportion into loads the Non-Hazardous Well Purgewater that is drawn from wells at the BP GEM Oil Company facility indicated below and deliver that purgewater to BTS. Transport routing of the Non-Hazardous Well Purgewater may be direct from one BP GEM facility to the designated destination point; from one BP GEM facility to the designated destination point via another BP GEM facility; from a BP GEM facility to the designated destination point via the contractor's facility, or any combination thereof. The Non-Hazardous Well Purgewater is and remains the property of BP GEM Oil Company.

This **Source Record BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the BP GEM Oil Company facility described below:

11126

Station #

1700 POWELL ST, EMERYVILLE

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

30.9

added equip. 10  
rinse water \_\_\_\_\_

any other adjustments \_\_\_\_\_

**TOTAL GALS. RECOVERED** 47.9

loaded onto BTS vehicle # 12

BTS event #

030606-MM11

time

1600

date

6/6/03

signature

\*\*\*\*\*

REC'D AT

BTS

time

1730

date

6/6/03

unloaded by signature

# WELLHEAD INSPECTION CHECKLIST

Client ~~D30606-MM1~~ BP/ARLO Date 6/6/03

Site Address 1700 POWELL ST, EMERYVILLE

Job Number D30606-MM1 Technician MM

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1		X						X <sup>1</sup>
MW-2		X			X	X <sup>2</sup>		X <sup>2</sup>
MW-3		X			X	X <sup>1</sup>		X <sup>1</sup>
MW-4		X				X <sup>2</sup>		X <sup>2</sup>
MW-5								
MW-6				X	X	X <sup>1,2</sup>		X <sup>1,2,3</sup>
MW-7		X		X	X			
MW-8		X				X <sup>2,1</sup>		X <sup>1,2</sup>
MW-9								

NOTES: (1) BOLTS STRIPPED  
(2) BOLTS MISSING  
(3) Apron cracked all over

**ATTACHMENT C**  
**LABORATORY PROCEDURES,**  
**CERTIFIED ANALYTICAL REPORTS,**  
**AND CHAIN-OF-CUSTODY RECORDS**

## **LABORATORY PROCEDURES**

---

### **Laboratory Procedures**

The groundwater samples were analyzed for the presence of the chemicals mentioned in the chain of custody using standard EPA methods. The methods of analysis for the groundwater samples are documented in the certified analytical report. The certified analytical reports and chain-of-custody record are presented in this attachment. The analytical data provided by the laboratory approved by Group Environmental Management Company have been reviewed and verified by that laboratory.



24 June, 2003

Leonard Niles  
URS Corporation [Arco]  
500 12th Street, Suite 100  
Oakland, CA 94607

RE: BP Heritage #11126, Emeryville, CA  
Sequoia Work Order: MMF0250

Enclosed are the results of analyses for samples received by the laboratory on 06/09/03 18:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt  
Project Manager

CA ELAP Certificate #1210

URS Corporation [Arco]  
500 12th Street, Suite 100  
Oakland CA, 94607

Project: BP Heritage #11126, Emeryville, CA  
Project Number: N/P  
Project Manager: Leonard Niles

MMF0250  
Reported:  
06/24/03 08:06

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MMF0250-01	Water	06/06/03 14:25	06/09/03 18:55
MW-2	MMF0250-02	Water	06/06/03 14:55	06/09/03 18:55
MW-3	MMF0250-03	Water	06/06/03 12:55	06/09/03 18:55
MW-4	MMF0250-04	Water	06/06/03 14:05	06/09/03 18:55
MW-5	MMF0250-05	Water	06/06/03 11:45	06/09/03 18:55
MW-6	MMF0250-06	Water	06/06/03 10:15	06/09/03 18:55
MW-7	MMF0250-07	Water	06/06/03 11:00	06/09/03 18:55
MW-8	MMF0250-08	Water	06/06/03 15:30	06/09/03 18:55
MW-9	MMF0250-09	Water	06/06/03 15:25	06/09/03 18:55

There were no custody seals that were received with this project.



URS Corporation [Arco]  
500 12th Street, Suite 100  
Oakland CA, 94607

Project: BP Heritage #11126, Emeryville, CA  
Project Number: N/P  
Project Manager: Leonard Niles

MMF0250  
Reported:  
06/24/03 08:06

**Diesel Hydrocarbons (C10-C28) by EPA 8015B modified  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (MMF0250-03) Water</b> <b>Sampled: 06/06/03 12:55</b> <b>Received: 06/09/03 18:55</b>									
<b>Diesel Range Organics (C10-C28)</b>	<b>620</b>	<b>47</b>	ug/l	1	3F11037	06/11/03	06/16/03	8015Bm	HC-12
<i>Surrogate: n-Octacosane</i>		143 %	34-123		"	"	"	"	S-04

URS Corporation [Arco]  
 500 12th Street, Suite 100  
 Oakland CA, 94607

 Project: BP Heritage #11126, Emeryville, CA  
 Project Number: N/P  
 Project Manager: Leonard Niles

 MMF0250  
 Reported:  
 06/24/03 08:06

**Volatile Organic Compounds by EPA Method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MMF0250-01) Water</b> <b>Sampled: 06/06/03 14:25</b> <b>Received: 06/09/03 18:55</b>									
Ethanol	ND	5000	ug/l	50	3F18013	06/18/03	06/18/03	EPA 8260B	
tert-Butyl alcohol	ND	1000	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>1400</b>	25	"	"	"	"	"	"	
Di-isopropyl ether	ND	25	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	25	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	25	"	"	"	"	"	"	
<b>Benzene</b>	<b>620</b>	25	"	"	"	"	"	"	
Toluene	ND	25	"	"	"	"	"	"	
Ethylbenzene	ND	25	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>55</b>	25	"	"	"	"	"	"	
<b>Gasoline Range Organics (C6-C10)</b>	<b>4600</b>	2500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.4 %	78-129		"	"	"	"	
<b>MW-2 (MMF0250-02) Water</b> <b>Sampled: 06/06/03 14:55</b> <b>Received: 06/09/03 18:55</b>									
Ethanol	ND	200000	ug/l	2000	3F18013	06/18/03	06/18/03	EPA 8260B	
tert-Butyl alcohol	ND	40000	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>72000</b>	1000	"	"	"	"	"	"	
Di-isopropyl ether	ND	1000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
tert-Amyl methyl ether	<b>1300</b>	1000	"	"	"	"	"	"	
<b>Benzene</b>	<b>1100</b>	1000	"	"	"	"	"	"	
Toluene	ND	1000	"	"	"	"	"	"	
Ethylbenzene	ND	1000	"	"	"	"	"	"	
Xylenes (total)	ND	1000	"	"	"	"	"	"	
<b>Gasoline Range Organics (C6-C10)</b>	<b>120000</b>	100000	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.4 %	78-129		"	"	"	"	



URS Corporation [Arco]  
 500 12th Street, Suite 100  
 Oakland CA, 94607

 Project: BP Heritage #11126, Emeryville, CA  
 Project Number: N/P  
 Project Manager: Leonard Niles

 MMF0250  
 Reported:  
 06/24/03 08:06

**Volatile Organic Compounds by EPA Method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (MMF0250-03) Water</b> <b>Sampled: 06/06/03 12:55</b> <b>Received: 06/09/03 18:55</b>									
Ethanol	ND	1000	ug/l	10	3F18013	06/18/03	06/18/03	EPA 8260B	
tert-Butyl alcohol	ND	200	"	"	"	"	"	"	
Methyl tert-butyl ether	180	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
tert-Amyl methyl ether	16	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.4 %	78-129	"	"	"	"	"	
<b>MW-4 (MMF0250-04) Water</b> <b>Sampled: 06/06/03 14:05</b> <b>Received: 06/09/03 18:55</b>									
Ethanol	ND	10000	ug/l	100	3F18013	06/18/03	06/18/03	EPA 8260B	
tert-Butyl alcohol	2500	2000	"	"	"	"	"	"	
Methyl tert-butyl ether	6800	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	50	"	"	"	"	"	"	
tert-Amyl methyl ether	190	50	"	"	"	"	"	"	
Benzene	ND	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Ethylbenzene	ND	50	"	"	"	"	"	"	
Xylenes (total)	ND	50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	13000	5000	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.0 %	78-129	"	"	"	"	"	

URS Corporation [Arco]  
 500 12th Street, Suite 100  
 Oakland CA, 94607

 Project: BP Heritage #11126, Emeryville, CA  
 Project Number: N/P  
 Project Manager: Leonard Niles

 MMF0250  
 Reported:  
 06/24/03 08:06

**Volatile Organic Compounds by EPA Method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-5 (MMF0250-05) Water</b> <b>Sampled: 06/06/03 11:45</b> <b>Received: 06/09/03 18:55</b>									
Ethanol	ND	1000	ug/l	10	3F19010	06/19/03	06/19/03	EPA 8260B	
tert-Butyl alcohol	ND	200	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	5.0	"	"	"	"	"	"	
<b>Benzene</b>	<b>9.1</b>	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>7.6</b>	5.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>9.3</b>	5.0	"	"	"	"	"	"	
<b>Gasoline Range Organics (C6-C10)</b>	<b>3200</b>	500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %		78-129	"	"	"	"	
<b>MW-6 (MMF0250-06) Water</b> <b>Sampled: 06/06/03 10:15</b> <b>Received: 06/09/03 18:55</b>									
Ethanol	ND	1000	ug/l	10	3F18013	06/18/03	06/18/03	EPA 8260B	
tert-Butyl alcohol	ND	200	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>140</b>	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
tert-Amyl methyl ether	<b>21</b>	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
<b>Gasoline Range Organics (C6-C10)</b>	<b>1100</b>	500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.6 %		78-129	"	"	"	"	

URS Corporation [Arco]  
 500 12th Street, Suite 100  
 Oakland CA, 94607

 Project: BP Heritage #11126, Emeryville, CA  
 Project Number: N/P  
 Project Manager: Leonard Niles

 MMF0250  
 Reported:  
 06/24/03 08:06

**Volatile Organic Compounds by EPA Method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-7 (MMF0250-07) Water</b> <b>Sampled: 06/06/03 11:00</b> <b>Received: 06/09/03 18:55</b>									
Ethanol	ND	1000	ug/l	10	3F18013	06/18/03	06/18/03	EPA 8260B	
tert-Butyl alcohol	ND	200	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>510</b>	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<b>tert-Amyl methyl ether</b>	<b>41</b>	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
<b>Gasoline Range Organics (C6-C10)</b>	<b>1000</b>	500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.0 %	78-129		"	"	"	"	
<b>MW-8 (MMF0250-08) Water</b> <b>Sampled: 06/06/03 15:30</b> <b>Received: 06/09/03 18:55</b>									
Ethanol	ND	100000	ug/l	1000	3F18013	06/18/03	06/18/03	EPA 8260B	
tert-Butyl alcohol	ND	20000	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>17000</b>	500	"	"	"	"	"	"	
Di-isopropyl ether	ND	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	500	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	500	"	"	"	"	"	"	
Benzene	ND	500	"	"	"	"	"	"	
Toluene	ND	500	"	"	"	"	"	"	
Ethylbenzene	ND	500	"	"	"	"	"	"	
Xylenes (total)	ND	500	"	"	"	"	"	"	
<b>Gasoline Range Organics (C6-C10)</b>	<b>ND</b>	50000	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.4 %	78-129		"	"	"	"	

URS Corporation [Arco]  
500 12th Street, Suite 100  
Oakland CA, 94607

Project: BP Heritage #11126, Emeryville, CA  
Project Number: N/P  
Project Manager: Leonard Niles

MMF0250  
Reported:  
06/24/03 08:06

**Volatile Organic Compounds by EPA Method 8260B  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-9 (MMF0250-09) Water</b> <b>Sampled: 06/06/03 15:25</b> <b>Received: 06/09/03 18:55</b>									
Ethanol	ND	100000	ug/l	1000	3F18013	06/18/03	06/18/03	EPA 8260B	
tert-Butyl alcohol	ND	20000	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>17000</b>	500	"	"	"	"	"	"	
Di-isopropyl ether	ND	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	500	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	500	"	"	"	"	"	"	
<b>Benzene</b>	<b>9000</b>	500	"	"	"	"	"	"	
Toluene	ND	500	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>2500</b>	500	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>4400</b>	500	"	"	"	"	"	"	
<b>Gasoline Range Organics (C6-C10)</b>	<b>66000</b>	50000	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.4 %		78-129	"	"	"	"	

URS Corporation [Arco]  
500 12th Street, Suite 100  
Oakland CA, 94607

Project: BP Heritage #11126, Emeryville, CA  
Project Number: N/P  
Project Manager: Leonard Niles

MMF0250  
**Reported:**  
06/24/03 08:06

**Conventional Chemistry Parameters by APHA/EPA Methods  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (MMF0250-03) Water</b> <b>Sampled: 06/06/03 12:55</b> <b>Received: 06/09/03 18:55</b>									
Oil & Grease	7.9	4.7	mg/l	1	3F12033	06/12/03	06/19/03	EPA 1664A	



URS Corporation [Arco] 500 12th Street, Suite 100 Oakland CA, 94607	Project: BP Heritage #11126, Emeryville, CA Project Number: N/P Project Manager: Leonard Niles	MMF0250 Reported: 06/24/03 08:06
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**Diesel Hydrocarbons (C10-C28) by EPA 8015B modified - Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 3F11037 - EPA 3510C</b>										
<b>Blank (3F11037-BLK1)</b> Prepared: 06/11/03 Analyzed: 06/12/03										
Diesel Range Organics (C10-C28)	ND	50	ug/l							
<i>Surrogate: n-Octacosane</i>	43.6		"	50.0		87.2	34-123			
<b>Laboratory Control Sample (3F11037-BS1)</b> Prepared: 06/11/03 Analyzed: 06/16/03										
Diesel Range Organics (C10-C28)	455	50	ug/l	500		91.0	51-128			
<i>Surrogate: n-Octacosane</i>	51.5		"	50.0		103	34-123			
<b>Laboratory Control Sample Dup (3F11037-BSD1)</b> Prepared: 06/11/03 Analyzed: 06/16/03										
Diesel Range Organics (C10-C28)	424	50	ug/l	500		84.8	51-128	7.05	27	
<i>Surrogate: n-Octacosane</i>	48.5		"	50.0		97.0	34-123			

URS Corporation [Arco]  
 500 12th Street, Suite 100  
 Oakland CA, 94607

 Project: BP Heritage #11126, Emeryville, CA  
 Project Number: N/P  
 Project Manager: Leonard Niles

 MMF0250  
 Reported:  
 06/24/03 08:06

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3F18013 - EPA 5030B P/T**
**Blank (3F18013-BLK1)**

Prepared &amp; Analyzed: 06/18/03

Ethanol	ND	100	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C6-C10)	ND	50	"							

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.76		"	5.00		95.2	78-129			
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**Laboratory Control Sample (3F18013-BS1)**

Prepared &amp; Analyzed: 06/18/03

Methyl tert-butyl ether	8.91	0.50	ug/l	10.0		89.1	63-137			
Benzene	10.2	0.50	"	10.0		102	78-124			
Toluene	10.0	0.50	"	10.0		100	78-129			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.69		"	5.00		93.8	78-129			
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**Laboratory Control Sample (3F18013-BS2)**

Prepared &amp; Analyzed: 06/18/03

Methyl tert-butyl ether	8.00	0.50	ug/l	9.92		80.6	63-137			
Benzene	5.56	0.50	"	6.40		86.9	78-124			
Toluene	31.7	0.50	"	29.7		107	78-129			
Gasoline Range Organics (C6-C10)	486	50	"	440		110	70-113			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.89		"	5.00		97.8	78-129			
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URS Corporation [Arco]  
500 12th Street, Suite 100  
Oakland CA, 94607

Project: BP Heritage #11126, Emeryville, CA  
Project Number: N/P  
Project Manager: Leonard Niles

MMF0250  
Reported:  
06/24/03 08:06

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3F18013 - EPA 5030B P/T**

<b>Matrix Spike (3F18013-MS1)</b>		<b>Source: MMF0250-01</b>			<b>Prepared &amp; Analyzed: 06/18/03</b>					
Methyl tert-butyl ether	1780	25	ug/l	496	1400	76.6	63-137			
Benzene	872	25	"	320	620	78.8	78-124			
Toluene	1630	25	"	1480	10	109	78-129			
Gasoline Range Organics (C6-C10)	28500	2500	"	22000	4600	109	70-113			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.76		"	5.00		95.2	78-129			
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<b>Matrix Spike Dup (3F18013-MSD1)</b>		<b>Source: MMF0250-01</b>			<b>Prepared &amp; Analyzed: 06/18/03</b>					
Methyl tert-butyl ether	1740	25	ug/l	496	1400	68.5	63-137	2.27	13	
Benzene	838	25	"	320	620	68.1	78-124	3.98	12	QM-07
Toluene	1570	25	"	1480	10	105	78-129	3.75	10	
Gasoline Range Organics (C6-C10)	27500	2500	"	22000	4600	104	70-113	3.57	9	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.81		"	5.00		96.2	78-129			
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**Batch 3F19010 - EPA 5030B P/T**

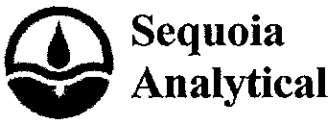
<b>Blank (3F19010-BLK1)</b>		<b>Prepared &amp; Analyzed: 06/19/03</b>								
Ethanol	ND	100	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C6-C10)	ND	50	"							

<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.12		"	5.00		102	78-129			
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Sequoia Analytical - Morgan Hill

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.*





URS Corporation [Arco]  
 500 12th Street, Suite 100  
 Oakland CA, 94607

Project: BP Heritage #11126, Emeryville, CA  
 Project Number: N/P  
 Project Manager: Leonard Niles

MMF0250  
 Reported:  
 06/24/03 08:06

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3F19010 - EPA 5030B P/T**

**Blank (3F19010-BLK2)**

Prepared: 06/19/03 Analyzed: 06/20/03

Ethanol	ND	100	ug/l							O-12
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C6-C10)	ND	50	"							

*Surrogate: 1,2-Dichloroethane-d4*      5.12      "      5.00      102      78-129

**Laboratory Control Sample (3F19010-BS1)**

Prepared & Analyzed: 06/19/03

Methyl tert-butyl ether	10.2	0.50	ug/l	10.0		102	63-137
Benzene	9.54	0.50	"	10.0		95.4	78-124
Toluene	9.63	0.50	"	10.0		96.3	78-129

*Surrogate: 1,2-Dichloroethane-d4*      4.92      "      5.00      98.4      78-129

**Laboratory Control Sample (3F19010-BS2)**

Prepared & Analyzed: 06/19/03

Methyl tert-butyl ether	9.17	0.50	ug/l	9.92		92.4	63-137
Benzene	5.37	0.50	"	6.40		83.9	78-124
Toluene	33.2	0.50	"	29.7		112	78-129
Gasoline Range Organics (C6-C10)	445	50	"	440		101	70-113

*Surrogate: 1,2-Dichloroethane-d4*      5.05      "      5.00      101      78-129

URS Corporation [Arco]  
 500 12th Street, Suite 100  
 Oakland CA, 94607

 Project: BP Heritage #11126, Emeryville, CA  
 Project Number: N/P  
 Project Manager: Leonard Niles

 MMF0250  
 Reported:  
 06/24/03 08:06

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3F19010 - EPA 5030B P/T**
**Laboratory Control Sample Dup (3F19010-BSD1)**

Prepared &amp; Analyzed: 06/19/03

Methyl tert-butyl ether	9.59	0.50	ug/l	10.0		95.9	63-137	6.16	13	
Benzene	9.07	0.50	"	10.0		90.7	78-124	5.05	12	
Toluene	8.94	0.50	"	10.0		89.4	78-129	7.43	10	

*Surrogate: 1,2-Dichloroethane-d4*      5.18      "      5.00      104      78-129

**Laboratory Control Sample Dup (3F19010-BSD2)**

Prepared: 06/19/03 Analyzed: 06/20/03

Methyl tert-butyl ether	8.64	0.50	ug/l	9.92		87.1	63-137	5.95	13	
Benzene	5.15	0.50	"	6.40		80.5	78-124	4.18	12	
Toluene	30.6	0.50	"	29.7		103	78-129	8.15	10	
Gasoline Range Organics (C6-C10)	398	50	"	440		90.5	70-113	11.2	9	QR-02

*Surrogate: 1,2-Dichloroethane-d4*      5.09      "      5.00      102      78-129

**Matrix Spike (3F19010-MS1)**

Source: MMF0262-03

Prepared &amp; Analyzed: 06/19/03

Methyl tert-butyl ether	102	5.0	ug/l	99.2	ND	103	63-137			
Benzene	54.4	5.0	"	64.0	1.7	82.3	78-124			
Toluene	319	5.0	"	297	ND	107	78-129			
Gasoline Range Organics (C6-C10)	5720	500	"	4400	7900	NR	70-113			QM-07

*Surrogate: 1,2-Dichloroethane-d4*      5.31      "      5.00      106      78-129

**Matrix Spike Dup (3F19010-MSD1)**

Source: MMF0262-03

Prepared &amp; Analyzed: 06/19/03

Methyl tert-butyl ether	97.1	5.0	ug/l	99.2	ND	97.9	63-137	4.92	13	
Benzene	53.6	5.0	"	64.0	1.7	81.1	78-124	1.48	12	
Toluene	317	5.0	"	297	ND	107	78-129	0.629	10	
Gasoline Range Organics (C6-C10)	6210	500	"	4400	7900	NR	70-113	8.21	9	QM-07

*Surrogate: 1,2-Dichloroethane-d4*      5.31      "      5.00      106      78-129



URS Corporation [Arco]  
500 12th Street, Suite 100  
Oakland CA, 94607

Project: BP Heritage #11126, Emeryville, CA  
Project Number: N/P  
Project Manager: Leonard Niles

MMF0250  
**Reported:**  
06/24/03 08:06

**Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 3F12033 - General Prep</b>									
<b>Blank (3F12033-BLK1)</b>					Prepared: 06/12/03 Analyzed: 06/16/03				
Oil & Grease	ND	5.0	mg/l						
<b>Laboratory Control Sample (3F12033-BS1)</b>					Prepared: 06/12/03 Analyzed: 06/16/03				
Oil & Grease	19.3	5.0	mg/l	20.0		96.5 78-114			
<b>Laboratory Control Sample Dup (3F12033-BSD1)</b>					Prepared: 06/12/03 Analyzed: 06/16/03				
Oil & Grease	19.1	5.0	mg/l	20.0		95.5 78-114	1.04	15	



URS Corporation [Arco]  
500 12th Street, Suite 100  
Oakland CA, 94607

Project: BP Heritage #11126, Emeryville, CA  
Project Number: N/P  
Project Manager: Leonard Niles

MMF0250  
**Reported:**  
06/24/03 08:06

### Notes and Definitions

- HC-12 Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
- O-12 "The continuing calibration verification was outside of client contractual acceptance limits by 5.8% high. However, it was within method acceptance limits. The data should still be useful for its intended purpose."
- QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- QR-02 The RPD result exceeded the control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- S-04 The surrogate recovery for this sample is outside control limits due to interference from the sample matrix.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference



# Chain of Custody Record

mmF0250

Project Name 070606-MMI  
 BP BU/GEM CO Portfolio: \_\_\_\_\_  
 BP Laboratory Contract Number: \_\_\_\_\_  
 Requested Due Date (mm/dd/yy) \_\_\_\_\_

On-site Time: 7:15 Temp: 60  
 Off-site Time: 6:00 Temp: 85  
 Sky Conditions: Blue Skies  
 Meteorological Events: Blue Skies  
 Wind Speed: \_\_\_\_\_ Direction: \_\_\_\_\_

Date: 6/6/03

Send To:	BP/GEM Facility No.:	Consultant/Contractor: URS
Lab Name: SEQUOIA	BP/GEM Facility Address: 1700 POWELL ST., EMERYVILLE, CA	Address: 500 12th St., Ste. 200
Lab Address: 885 Jarvis Dr.	Site ID No. 11126	Oakland, CA 94608-4014
Morgan Hill, CA 95037	Site Lat/Long:	e-mail RDD: syed_rehan@urscorp.com
Lab PM: Latonya Pelt	California Global ID #: T0600100208	Consultant/Contractor Project No.:
Tele/Fax: 408-776-9800 / 408-782-6308	BP/GEM PM Contact: PAUL SUPPLE	Consultant Tele/Fax: 510-874-1720 / 510-874-3268
Report Type & QC Level: Send EDF Reports	Address: P.O. Box 6549	Consultant/Contractor PM: Leonard Niles
BP/GEM Account No.: 400-6-21124	Morega, CA 94570	Invoice to: Consultant/Contractor of BP/GEM (Circle one)
	Tele/Fax: 925-299-8891/925-299-8872	BP/GEM Work Release No:

Item No.	Sample Description	Time	Matrix				Laboratory No.	No. of containers	Preservatives				Requested Analysis				Sample Point Lat/Long and Comments		
			Soil/Solid	Water/Liquid	Sediments	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	TPH-G / BTEX / CUST. OILS (8260)	TPH-D (8015)	MTEB (8021)	MTEB (8260)		MTEB, TAME, ETBE / DPE, TBA (8260)	1,2-DCA & EDB (8260)
1	MW-1	1425	X	X			01	3					X	X	X	X	X	X	
2	MW-2	1405	X	X			02	3					X	X	X	X	X	X	
3	MW-3	1255	X	X			03	7	X				X	X	X	X	X	X	
4	MW-4	1408	X	X			04	3					X	X	X	X	X	X	
5	MW-5	1145	X	X			05	3					X	X	X	X	X	X	
6	MW-6	1018	X	X			06	3					X	X	X	X	X	X	
7	MW-7	1100	X	X			07	7					X	X	X	X	X	X	
8	MW-8	1530	X	X			08	3					X	X	X	X	X	X	
9	MW-9	1525	X	X			09	3					X	X	X	X	X	X	
10																			

Sampler's Name: <u>MICHAEL MCNAMARA</u>	Relinquished By / Affiliation: <u>[Signature] / B.T.S.</u>	Date: <u>6/7/03</u>	Time: <u>12:00</u>	Accepted By / Affiliation: <u>[Signature] / B.T.S.</u>	Date: <u>6/9/03</u>	Time: <u>1:30</u>
Sampler's Company: <u>BLAINE TECH SERVICES</u>						
Shipment Date: _____						
Shipment Method: _____						
Shipment Tracking No: _____						

Instructions: Address Invoice to BP/GEM but send to URS for approval

Seals in Place Yes No  Temperature Blank Yes No  Cooler Temperature on Receipt 5.9°C Trip Blank Yes No

## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: BP  
 REC. BY (PRINT) [Signature]  
 WORKORDER: MR0250

DATE REC'D AT LAB: 6/9/03  
 TIME REC'D AT LAB: 18:55  
 DATE LOGGED IN: 6-11-03

Drinking water for  
 regulatory purposes: YES  NO   
 Wastewater for  
 regulatory purposes: YES  NO

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present <input checked="" type="radio"/> Absent <input type="radio"/> Intact / Broken*	01		KW-1	(3) vials	HCL	L	6/6/03	
2. Chain-of-Custody Present <input checked="" type="radio"/> Absent <input type="radio"/> *	02		2	↓	↓	↓	↓	
3. Traffic Reports or Packing List: Present <input checked="" type="radio"/> Absent <input type="radio"/> *	03		3	(2) canisters	↓	↓	↓	
4. Airbill: Airbill / Sticker Present <input checked="" type="radio"/> Absent <input type="radio"/> *	04		4	(3) vials	HCL	↓	↓	
5. Airbill #:	05		5	↓	↓	↓	↓	
6. Sample Labels: Present <input checked="" type="radio"/> Absent <input type="radio"/>	06		6	↓	↓	↓	↓	
7. Sample IDs: Listed <input checked="" type="radio"/> Not Listed <input type="radio"/> on Chain-of-Custody	07		7	↓	↓	↓	↓	
8. Sample Condition: Intact <input checked="" type="radio"/> Broken* / Leaking*	08		8	↓	↓	↓	↓	
9. Does information on custody reports, traffic reports and sample labels agree? <input checked="" type="radio"/> Yes <input type="radio"/> No*	09		9	↓	↓	↓	↓	
10. Sample received within hold time: <input checked="" type="radio"/> Yes <input type="radio"/> No*								
11. Proper Preservatives used: <input checked="" type="radio"/> Yes <input type="radio"/> No*								
12. Temp Rec. at Lab: Is temp 4 ± 2°C? <input checked="" type="radio"/> Yes <input type="radio"/> No** <small>(Acceptance range for samples requiring thermal pres.)</small>								

**\*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.**

**ATTACHMENT D**

**EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION**

---

## Error Summary Log

06/24/03

EDF 1.2i All files present in deliverable.

---

Laboratory:	Sequoia Analytical Laboratories, Inc., Morgan Hill, CA
Project Name:	BP Heritage #11126, Emery
Work Order Number:	MMF0250
Global ID:	T0600100208
Lab Report Number:	MMF0250062420030806



## Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
MMF02500624200 MW-1 30806		MMF025001	W	CS	8260+OX	SW5030B	06/06/03	06/18/03	06/18/03	3F18013	1	
MMF02500624200 MW-2 30806		MMF025002	W	CS	8260+OX	SW5030B	06/06/03	06/18/03	06/18/03	3F18013	1	
MMF02500624200 MW-3 30806		MMF025003	W	CS	8260+OX	SW5030B	06/06/03	06/18/03	06/18/03	3F18013	1	
MMF02500624200 MW-3 30806		MMF025003	W	CS	E1664A	METHOD	06/06/03	06/12/03	06/19/03	3F12033	1	
MMF02500624200 MW-3 30806		MMF025003	W	CS	M8015	3510ARO	06/06/03	06/11/03	06/16/03	3F11037	1	
MMF02500624200 MW-4 30806		MMF025004	W	CS	8260+OX	SW5030B	06/06/03	06/18/03	06/18/03	3F18013	1	
MMF02500624200 MW-5 30806		MMF025005	W	CS	8260+OX	SW5030B	06/06/03	06/19/03	06/19/03	3F19010	1	
MMF02500624200 MW-6 30806		MMF025006	W	CS	8260+OX	SW5030B	06/06/03	06/18/03	06/18/03	3F18013	1	
MMF02500624200 MW-7 30806		MMF025007	W	CS	8260+OX	SW5030B	06/06/03	06/18/03	06/18/03	3F18013	1	
MMF02500624200 MW-8 30806		MMF025008	W	CS	8260+OX	SW5030B	06/06/03	06/18/03	06/18/03	3F18013	1	
MMF02500624200 MW-9 30806		MMF025009	W	CS	8260+OX	SW5030B	06/06/03	06/18/03	06/18/03	3F18013	1	
		MMF026203	W	NC	8260+OX	SW5030B	//	06/19/03	06/19/03	3F19010	1	
		3F11037BSD1	WQ	BD1	M8015	3510ARO	//	06/11/03	06/16/03	3F11037	1	
		3F11037BS1	WQ	BS1	M8015	3510ARO	//	06/11/03	06/16/03	3F11037	1	
		3F11037BLK1	WQ	LB1	M8015	3510ARO	//	06/11/03	06/12/03	3F11037	1	
		3F12033BSD1	WQ	BD1	E1664A	METHOD	//	06/12/03	06/16/03	3F12033	1	
		3F12033BS1	WQ	BS1	E1664A	METHOD	//	06/12/03	06/16/03	3F12033	1	
		3F12033BLK1	WQ	LB1	E1664A	METHOD	//	06/12/03	06/16/03	3F12033	1	
		3F18013BS1	WQ	BS1	8260+OX	SW5030B	//	06/18/03	06/18/03	3F18013	1	
		3F18013BS2	WQ	BS2	8260+OX	SW5030B	//	06/18/03	06/18/03	3F18013	1	
		3F18013BLK1	WQ	LB1	8260+OX	SW5030B	//	06/18/03	06/18/03	3F18013	1	
		3F18013MS1	W	MS1	8260+OX	SW5030B	//	06/18/03	06/18/03	3F18013	1	
		3F18013MSD1	W	SD1	8260+OX	SW5030B	//	06/18/03	06/18/03	3F18013	1	
		3F19010BSD1	WQ	BD1	8260+OX	SW5030B	//	06/19/03	06/19/03	3F19010	1	
		3F19010BSD2	WQ	BD2	8260+OX	SW5030B	//	06/19/03	06/20/03	3F19010	1	
		3F19010BS1	WQ	BS1	8260+OX	SW5030B	//	06/19/03	06/19/03	3F19010	1	
		3F19010BS2	WQ	BS2	8260+OX	SW5030B	//	06/19/03	06/19/03	3F19010	1	
		3F19010BLK1	WQ	LB1	8260+OX	SW5030B	//	06/19/03	06/19/03	3F19010	1	

## Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
		3F19010BLK2	WQ	LB2	8260+OX	SW5030B	//	06/19/03	06/20/03	3F19010	1
		3F19010MS1	W	MS1	8260+OX	SW5030B	//	06/19/03	06/19/03	3F19010	1
		3F19010MSD1	W	SD1	8260+OX	SW5030B	//	06/19/03	06/19/03	3F19010	1

# EDFSAMP: Error Summary Log

06/24/03

Error type	Logcode	Projname	Npdlwo	Sampid	Matrix
There are no errors in this data file					

# EDFTEST: Error Summary Log

06/24/03

Error type	Labsampid	Qccode	Anmcode	Exmcode	Anadate	Run number
There are no errors in this data file					//	0

# EDFRES: Error Summary Log

06/24/03

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	3F18013MS1	MS1	W	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	3F18013MSD1	SD1	W	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	3F19010MS1	MS1	W	8260+OX	PR	06/19/03	1	GROC6C10
Warning: extra parameter	3F19010MSD1	SD1	W	8260+OX	PR	06/19/03	1	GROC6C10
Warning: extra parameter	MMF025001	CS	W	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	MMF025001	CS	W	8260+OX	PR	06/18/03	1	XYLENES
Warning: extra parameter	MMF025002	CS	W	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	MMF025002	CS	W	8260+OX	PR	06/18/03	1	XYLENES
Warning: extra parameter	MMF025003	CS	W	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	MMF025003	CS	W	8260+OX	PR	06/18/03	1	XYLENES
Warning: extra parameter	MMF025003	CS	W	E1664A	PR	06/19/03	1	OILGREASE
Warning: extra parameter	MMF025004	CS	W	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	MMF025004	CS	W	8260+OX	PR	06/18/03	1	XYLENES
Warning: extra parameter	MMF025005	CS	W	8260+OX	PR	06/19/03	1	GROC6C10
Warning: extra parameter	MMF025005	CS	W	8260+OX	PR	06/19/03	1	XYLENES
Warning: extra parameter	MMF025006	CS	W	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	MMF025006	CS	W	8260+OX	PR	06/18/03	1	XYLENES
Warning: extra parameter	MMF025007	CS	W	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	MMF025007	CS	W	8260+OX	PR	06/18/03	1	XYLENES
Warning: extra parameter	MMF025008	CS	W	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	MMF025008	CS	W	8260+OX	PR	06/18/03	1	XYLENES
Warning: extra parameter	MMF025009	CS	W	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	MMF025009	CS	W	8260+OX	PR	06/18/03	1	XYLENES
Warning: extra parameter	MMF026203	NC	W	8260+OX	PR	06/19/03	1	GROC6C10
Warning: extra parameter	3F12033BLK1	LB1	WQ	E1664A	PR	06/16/03	1	OILGREASE
Warning: extra parameter	3F12033BS1	BS1	WQ	E1664A	PR	06/16/03	1	OILGREASE

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	3F12033BSD1	BD1	WQ	E1664A	PR	06/16/03	1	OILGREASE
Warning: extra parameter	3F18013BLK1	LB1	WQ	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	3F18013BLK1	LB1	WQ	8260+OX	PR	06/18/03	1	XYLENES
Warning: extra parameter	3F18013BS2	BS2	WQ	8260+OX	PR	06/18/03	1	GROC6C10
Warning: extra parameter	3F19010BLK1	LB1	WQ	8260+OX	PR	06/19/03	1	GROC6C10
Warning: extra parameter	3F19010BLK1	LB1	WQ	8260+OX	PR	06/19/03	1	XYLENES
Warning: extra parameter	3F19010BLK2	LB2	WQ	8260+OX	PR	06/20/03	1	GROC6C10
Warning: extra parameter	3F19010BLK2	LB2	WQ	8260+OX	PR	06/20/03	1	XYLENES
Warning: extra parameter	3F19010BS2	BS2	WQ	8260+OX	PR	06/19/03	1	GROC6C10
Warning: extra parameter	3F19010BSD2	BD2	WQ	8260+OX	PR	06/20/03	1	GROC6C10

# EDFQC: Error Summary Log

06/24/03

Error type	Labiocfl	Anmcode	Parlabel	Qccode	Labqid
There are no errors in this data files					

# EDFCL: Error Summary Log

06/24/03

Error type	Clredate	Anmcode	Exmcode	Parlabel	Clcode
There are no errors in this data file	/ /				



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Your EDF file has been successfully uploaded!

**Confirmation Number:** 8032553553

**Date/Time of Submittal:** 6/24/2003 9:00:11 AM

**Facility Global ID:** T0600100208

**Facility Name:** BP MOBIL

**Submittal Title:** Second Quarter 03 Groundwater Monitoring Report for site # 11126

**Submittal Type:** GW Monitoring Report

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### UPLOADING A GEO\_WELL FILE

**Processing is complete. No errors were found!  
Your file has been successfully submitted!**

**Submittal Title: Second Quarter 03 Geowell for site #  
11126**

**Submittal Date/Time: 6/24/2003 9:03:14 AM**

**Confirmation  
Number: 2579075455**

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