Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
San Ramon, California 94583
Phone: (925) 275-3801
Fax: (925) 275-3815

7 July 2009

Re: Second Quarter 2009 Ground-Water Monitoring Report
Former BP Service Station # 11102
100 MacArthur Boulevard
Oakland, California
ACEH Case #RO0000456

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Submitted by:

Paul Supple
Environmental Business Manager

Second Quarter 2009 Ground-Water Monitoring Report
Former BP Service Station #11102
100 MacArthur Boulevard
Oakland, California

Prepared for

Mr. Paul Supple
Environmental Business Manager
Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583

Prepared by

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

1324 Mangrove Avenue, Suite 212
Chico, California 95926
(530) 566-1400
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7 July 2009

Project No. 06-88-643

Broadbent & Associates, Inc.
1324 Mangrove Ave., Suite 212
Chico, CA 95926
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BROADBENT & ASSOCIATES, INC
ENVIRONMENTAL, WATER RESOURCES & ENGINEERING

7 June 2009

Project No. 06-88-643

Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583
Submitted via ENFOS

Attn.: Mr. Paul Supple

Re: Second Quarter 2009 Ground-Water Monitoring Report, Former BP Service Station #11102, 100 MacArthur Boulevard, Alameda County, Oakland, California; ACEH Case #RO0000456

Dear Mr. Supple:

Attached is the *Second Quarter 2009 Ground-Water Monitoring Report* for Former BP Service Station #11102 located at 100 MacArthur Boulevard, Oakland, Alameda County, California. This report presents a summary of results from ground-water monitoring conducted at Station #11102 during the Second Quarter of 2009.

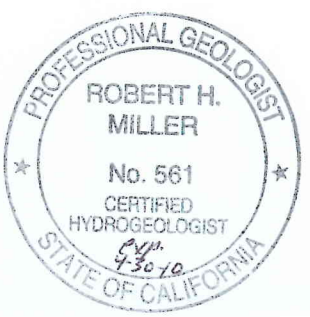
Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

BROADBENT & ASSOCIATES, INC.

Thomas A. Venus, P.E.
Senior Engineer

Robert H. Miller, P.G., C.HG.
Principal Hydrogeologist



Enclosures

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp site)
Ms. Shelby Lathrop, ConocoPhillips, 76 Broadway, Sacramento, California 95818
Mr. Chris Jimmerson, Reimbursement Processor, Delta Environmental Consulting Inc., (Submitted via ENFOS)
Electronic copy uploaded to GeoTracker

STATION #11102 QUARTERLY GROUND-WATER MONITORING REPORT

Facility: #11102 Address:	100 MacArthur Boulevard, Oakland, California
Environmental Business Manager:	Mr. Paul Supple
Consulting Co./Contact Persons:	Broadbent & Associates, Inc.(BAI)/Rob Miller & Tom Venus, (530) 566-1400
Consultant Project No.:	06-88-643
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case #RO0000456

WORK PERFORMED THIS QUARTER (Second Quarter 2009):

1. Prepared and submitted *First Quarter 2009 Ground-Water Monitoring Report* (BAI, 04/30/2009).
2. Conducted ground-water monitoring/sampling for Second Quarter 2009. Work performed by Stratus Environmental, Inc (Stratus) on 7 May 2009.
3. Prepared and submitted *Initial Site Conceptual Model with Soil and Ground-Water Investigation Work Plan* (BAI, 04/30/2009) in response to ACEH directive letter dated 8 January 2009.
4. Prepared and submitted *Addendum to Soil & Ground-Water Investigation Work Plan* (BAI, 6/1/2009) in response to ACEH directive letter dated 24 April 2009.
5. Prepared and submitted *Second Quarter 2009 Ground-Water Monitoring Report* (contained herein).

WORK PROPOSED FOR NEXT QUARTER (Third Quarter 2009):

1. Negotiate semi-annual ground-water monitoring consistent with the State Water Resources Control Board's Resolution No.2009-0042, adopted 19 May 2009.
2. Conduct quarterly ground-water monitoring/sampling for Third Quarter 2009, if appropriate.
3. Prepare and submit Third Quarter 2009 Ground-Water Monitoring Report or Third Quarter Status Report, as appropriate.
4. Conduct soil and ground-water investigation following work plan approval by ACEH.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	**Ground-Water Monitoring/Sampling**
Frequency of ground-water monitoring:	**Quarterly: Wells MW-1 through MW-3**
Frequency of ground-water sampling:	**Quarterly: Wells MW-1 through MW-3**
Is free product (FP) present on-site:	**No**
Current remediation techniques:	**NA**
Depth to ground water (below TOC):	**10.90 (MW-1) to 12.00 (MW-2)**
General ground-water flow direction:	**West**
Approximate hydraulic gradient:	**0.05 ft/ft**

DISCUSSION:

Second Quarter 2009 ground-water monitoring and sampling was conducted at Station #11102 on 7 May 2009 by Stratus. Water levels were gauged in the three wells at the Site. No irregularities were noted during water level gauging. Depths to water measurements ranged from 10.90 ft at well MW-1 to 12.00 ft at well MW-2. Resulting ground-water surface elevations ranged from 79.30 ft above datum in well MW-1 to 75.27 ft at well MW-3. Water level elevations were between historic minimum and

maximum ranges for each well, as summarized in Table 1. Water level elevations yielded a potentiometric ground-water flow direction and gradient of 0.05 ft/ft to the west, generally consistent with historical data (see Table 3). Ground-water monitoring field data sheets are provided within Appendix A. Measured depths to ground-water and respective ground-water elevations are summarized in Table 1. Current and historic ground-water flow directions and gradients are provided in Table 3. Potentiometric ground-water elevation contours are presented in Drawing 1.

Consistent with the current ground-water sampling schedule, water samples were collected from each of the three wells on the Site. No irregularities were encountered during sampling. Samples were submitted under chain-of-custody protocol to Calscience Environmental Laboratories, Inc. (Garden Grove, California), for analysis of Gasoline Range Organics (GRO, C6-C12) by the EPA Method 8015B; for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and Tert-Amyl Methyl Ether (TAME), Tert-Butyl Alcohol (TBA), Di-Isopropyl Ether (DIPE), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), Ethanol, Ethyl Tert-Butyl Ether (ETBE), and Methyl Tert-Butyl Ether (MTBE) by EPA Method 8260B. Bio-degradation parameters including Dissolved Oxygen, pH, Temperature, Conductivity, Oxidation-Reduction Potential (ORP), Ferrous Iron, Nitrate, Sulfate, and Hydrogen Sulfide were also monitored during the sampling event this quarter. No irregularities were encountered during laboratory analysis of the samples. Ground-water sampling field data sheets and the laboratory analytical report, including chain-of-custody documentation, are provided in Appendix A.

Gasoline range organics (GRO) were detected above the laboratory reporting limits in two of the three wells sampled at concentrations of 140 micrograms per liter (µg/L) in well MW-3 and 350 µg/L in well MW-2. Benzene was detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 1.6 µg/L in well MW-1. TAME was detected above the laboratory reporting limits in two of the three wells sampled at concentrations of 11 µg/L in well MW-3 and 30 µg/L in well MW-2. TBA was detected above the laboratory reporting limit in two of the three wells sampled at concentrations of 17 µg/L in well MW-1 and 3,900 µg/L in well MW-2. MTBE was detected above the laboratory reporting limit in each of the wells sampled at concentrations up to 1,900 µg/L in well MW-2. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the three wells sampled this quarter. A summary of bio-degradation parameters is provided in Table 4.

Detected concentrations of petroleum hydrocarbons were within the historic minimum and maximum ranges recorded for each well sampled this quarter with the exception of TBA (17 µg/L), which reached a historic minimum concentration in well MW-1. Historic laboratory analytical results are summarized in Table 1, and Table 2. The most recent GRO, Benzene, MTBE, and TBA concentrations are also presented in Drawing 1. A copy of the Laboratory Analytical Report, including chain-of-custody documentation and biodegradation parameter results is provided in Appendix A. Ground-water monitoring data (GEO_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation pages are provided in Appendix B.

CLOSURE:

The findings presented in this report are based upon: observations of Stratus field personnel (see Appendix A), the points investigated, and results of laboratory tests performed by Calscience Environmental Laboratories, Inc. (Garden Grove, California). Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty, expressed or implied was made. This report has been prepared for the exclusive use of Atlantic Richfield Company. It is possible that variations in soil or ground-water conditions could exist beyond points explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

ATTACHMENTS:

Drawing 1. Ground-Water Elevation Contour and Analytical Summary Map, 7 May 2009, Former Station #11102, 100 MacArthur Boulevard, Oakland, California

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #11102, 100 MacArthur Blvd., Oakland, CA

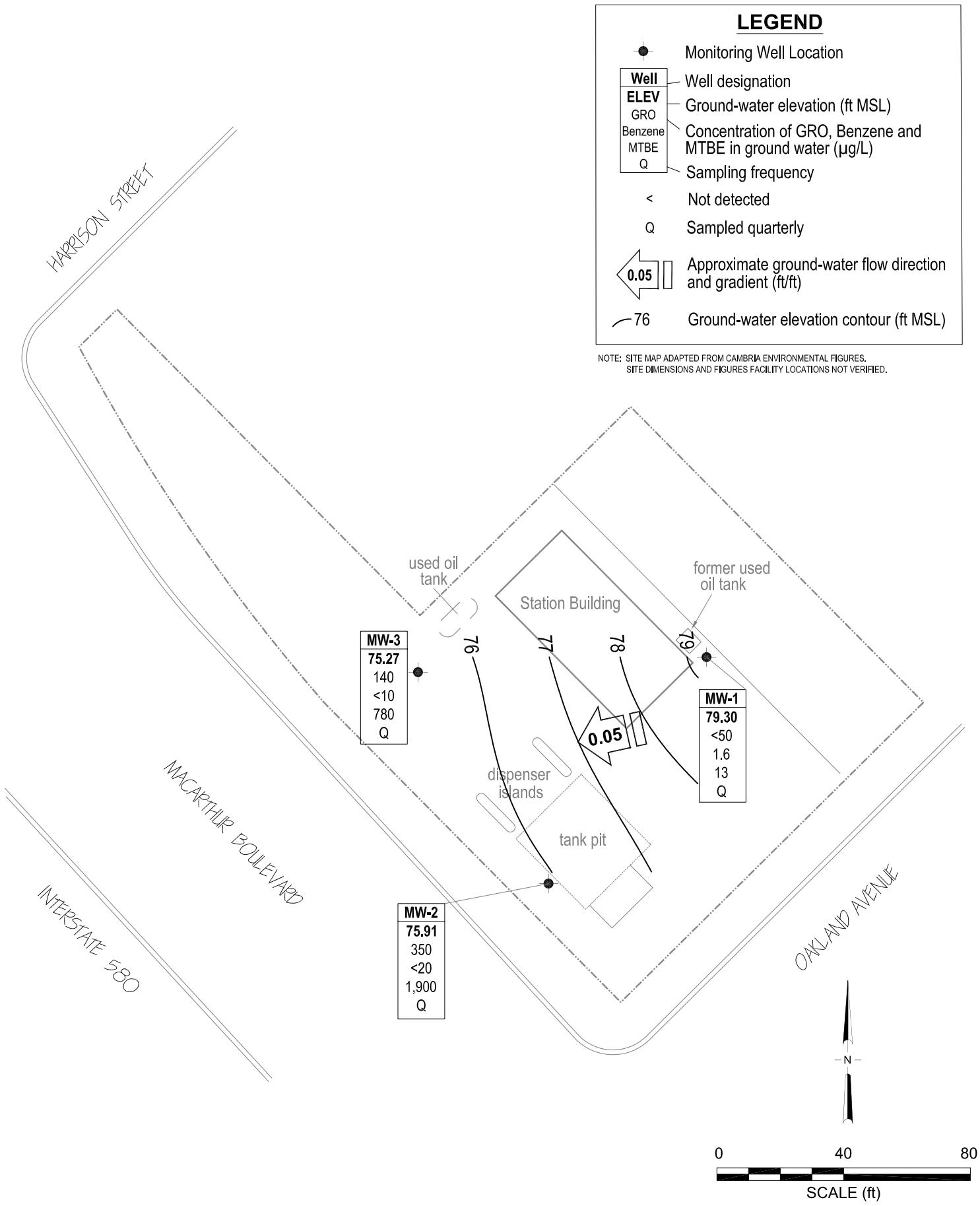
Table 2. Summary of Fuel Additives Analytical Data, Station #11102, 100 MacArthur Blvd., Oakland, CA

Table 3. Historical Ground-Water Flow Direction and Gradient, Station #11102, 100 MacArthur Blvd., Oakland, CA

Table 4. Bio-Degradation Parameters, Station #11102, 100 MacArthur Blvd., Oakland, CA

Appendix A. Stratus Ground-Water Sampling Data Package (Includes Field Data Sheets, Laboratory Analytical Report with Chain-of-Custody Documentation, and Field Procedures)

Appendix B. GeoTracker Upload Confirmations



BROADBENT & ASSOCIATES, INC. ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, California Project No.: 06-88-643 Date: 5/28/09	Former Station #11102 100 MacArthur Boulevard Oakland, California	Ground-Water Elevation Contour and Analytical Summary Map 7 May 2009	Drawing 1

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	P/NP	Footnote	TOC Elevation (feet)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	DRO/ TPHd (µg/L)	TOG (µg/L)	HVOC (µg/L)
							GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MtBE						
MW-1																		
11/4/1989	--		90.20	13.21	--	76.99	<500	3.4	0.6	<0.3	<0.3	--	--	SAL	--	<50	<5000	--
11/11/1989	--		90.20	13.32	--	76.88	--	--	--	--	--	--	--	--	--	--	--	--
4/3/1990	--		90.20	12.46	--	77.74	820	64	1.9	23	34	--	--	ANA	--	--	--	--
7/30/1990	--		90.20	12.92	--	77.28	190	11	<5.0	<5.0	<5.0	--	--	ANA	--	<50	<5000	--
11/20/1990	--		90.20	14.08	--	76.12	50	2.4	<0.3	<0.3	<0.3	--	--	SAL	--	79	<5000	--
3/1/1991	--		90.20	13.61	--	76.59	<100	0.9	<0.3	<0.3	0.3	--	--	SAL	--	<1000	14,000	--
8/19/1991	--		90.20	15.74	--	74.46	370	35	0.73	6.4	5.6	--	--	SEQ	--	<50	<5000	--
11/13/1991	--		90.20	14.08	--	76.12	60	0.68	<0.3	<0.3	<0.3	--	--	SEQ	--	<50	<5000	--
2/24/1992	--		90.20	12.52	--	77.68	140	3.9	0.66	1.2	3.8	--	--	SEQ	--	100	<5000	--
5/19/1992	--		90.20	11.80	--	78.40	4,200	440	21	250	37	--	--	SEQ	--	910	<5000	--
6/17/1992	--		90.20	12.01	--	78.19	4,000	350	14	150	17	--	--	SEQ	--	560	<5000	--
7/22/1992	--		90.20	12.42	--	77.78	4,000	<5.0	19	210	61	--	--	ANA	--	--	--	--
8/14/1992	--		90.20	12.75	--	77.45	2,400	330	20	150	47	--	--	SEQ	--	1,700	<5000	--
11/11/1992	--		90.20	13.69	--	76.51	260	30	3.4	7.6	6.8	--	--	ANA	--	92	<5000	--
6/7/1993	--		90.20	10.93	--	79.27	3,400	98	11	21	7.6	--	--	PACE	--	440	--	--
6/7/1993	--	c	90.20	--	--	--	3,700	120	12	26	9.5	--	--	PACE	--	--	--	--
12/2/1993	--		90.20	12.72	--	77.48	1,100	8.3	3.6	0.6	1.5	--	--	PACE	--	120	<5000	--
6/22/1994	--	c, d	90.20	--	--	--	2,100	30	3.2	2	15	2,000	--	PACE	--	--	--	--
6/22/1994	--	d	90.20	11.81	--	78.39	2,100	32	3.8	2.2	17	4,000	3.2	PACE	--	<50	<5000	--
1/10/1995	--	c	90.20	--	--	--	<500	120	<5	5	<10	--	--	ATI	--	--	--	--
1/10/1995	--		90.20	10.97	--	79.23	<500	120	<5	<5	<10	--	3.9	ATI	--	420	--	--
6/21/1995	--		90.20	9.38	--	80.82	4,700	16	<5.0	<5.0	<10	--	6.7	ATI	--	1,300	2,900	0.6
6/21/1995	--	c, e	90.20	--	--	--	3,600	<13	<5.0	<5.0	<10	--	--	ATI	--	--	--	--
12/27/1995	--		90.20	11.55	--	78.65	430	<2.5	<2.5	<2.5	<5.0	1,200	6.3	ATI	--	2,100	640	--
6/13/1996	--		90.20	9.28	--	80.92	3,200	51	<12	<12	<12	4,000	6.3	SPL	--	920	2,000	--
12/4/1996	--	f	90.20	11.91	--	78.29	1,400	6.2	<5	<5	<5	2,600	6.7	SPL	--	280	2,000	6
6/10/1997	--	c	90.20	--	--	--	7,700	14	<25	<25	<25	13,000	--	SPL	--	--	--	--
6/10/1997	--		90.20	8.97	--	81.23	7,900	12	<10	<10	<10	15,000	6	SPL	--	1,700	<5	--
12/12/1997	--		90.20	11.37	--	78.83	440	8.8	<1.0	2.6	9.4	6,700	5.5	SPL	--	760	1,200	--
6/18/1998	--		90.20	8.02	--	82.18	7,500	<2.5	<5.0	<5.0	<5.0	5,600	4.9	SPL	--	2,900	<5	--
3/9/1999	--		90.20	9.80	--	80.40	32,000	100	16	72	110	49,000	--	SPL	--	--	--	--

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	P/NP	Footnote	TOC Elevation (feet)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	DRO/ TPHd (µg/L)	TOG (µg/L)	HVOC (µg/L)
							GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE						
MW-1 Cont.																		
9/28/1999	--		90.20	10.78	--	79.42	1,000	<5.0	<5.0	<5.0	<5.0	730	--	SPL	--	--	--	<1.0
10/14/1999	--		90.20	10.84	--	79.36	--	--	--	--	--	--	--	SPL	--	660	--	--
3/27/2000	--		90.20	9.83	--	80.37	4,300	160	19	37	43	28,000	--	PACE	--	--	--	--
9/28/2000	--		90.20	11.33	--	78.87	2,700	10	2.6	1.1	2.7	28,000	--	PACE	--	--	--	--
3/8/2001	--		90.20	10.96	--	79.24	8,200	23.5	6.09	5.23	8.97	11,600	--	PACE	--	--	--	--
9/21/2001	--		90.20	12.07	--	78.13	6,000	37.9	<0.5	<0.5	<1.5	7,370	--	PACE	--	--	--	--
2/28/2002	--		90.20	10.48	--	79.72	6,400	60.8	<5.0	6.43	<10	7,750	--	PACE	--	--	--	--
9/6/2002	--		90.20	11.20	--	79.00	1,400	<5.0	<5.0	<5.0	<5.0	6,000	--	SEQ	--	--	--	--
2/19/2003	--	h	90.20	11.29	--	78.91	<10000	<100	110	<100	<100	4,500	--	SEQ	--	--	--	--
7/14/2003	--		90.20	11.18	--	79.02	710	11	<10	<10	<10	940	--	SEQ	--	--	--	--
01/14/2004	--		90.20	11.74	--	78.46	<500	<5.0	<5.0	<5.0	<5.0	220	--	SEQM	6.6	--	--	--
04/23/2004	P	l	90.20	11.95	--	78.25	470	3.4	<2.5	<2.5	<2.5	150	--	SEQM	6.7	--	--	--
07/01/2004	P		90.20	11.52	--	78.68	360	<2.5	<2.5	<2.5	<2.5	96	--	SEQM	6.0	--	--	--
10/28/2004	P		90.20	12.56	--	77.64	390	0.94	<0.50	<0.50	<0.50	43	--	SEQM	6.2	--	--	--
01/10/2005	P		90.20	11.85	--	78.35	490	17	<2.5	5.8	5.4	85	--	SEQM	7.6	--	--	--
04/13/2005	P		90.20	10.00	--	80.20	1,000	27	<2.5	<2.5	25	48	--	SEQM	6.6	--	--	--
07/11/2005	P		90.20	9.27	--	80.93	180	<0.50	<0.50	<0.50	<0.50	36	--	SEQM	7.7	--	--	--
10/17/2005	P		90.20	10.96	--	79.24	140	<0.50	<0.50	<0.50	<0.50	20	--	SEQM	8.0	--	--	--
01/17/2006	P		90.20	10.81	--	79.39	120	0.64	<0.50	<0.50	0.56	38	--	SEQM	6.5	--	--	--
04/21/2006	P	m	90.20	9.28	--	80.92	410	1.4	1.0	<0.50	<0.50	17	--	SEQM	6.5	--	--	--
7/17/2006	--		90.20	9.25	--	80.95	<50	<0.50	<0.50	<0.50	<0.50	5.5	--	TAMC	7.7	--	--	--
7/26/2006	--		90.20	8.57	--	81.63	<50	<0.50	<0.50	<0.50	<0.50	4.4	--	TAMC	6.6	--	--	--
10/31/2006	P		90.20	9.80	--	80.40	<50	<0.50	<0.50	<0.50	<0.50	2.8	2.81	TAMC	6.99	--	--	--
1/8/2007	P		90.20	10.36	--	79.84	<50	2.2	<0.50	<0.50	<0.50	6.2	2.51	TAMC	6.97	--	--	--
4/10/2007	P		90.20	10.65	--	79.55	160	1.4	<0.50	<0.50	<0.50	9.0	1.75	TAMC	7.00	--	--	--
7/10/2007	P	p	90.20	10.52	--	79.68	120	<0.50	<0.50	<0.50	<0.50	4.9	2.01	TAMC	6.60	160	--	--
10/24/2007	P		90.20	11.23	--	78.97	100	<0.50	<0.50	<0.50	<0.50	4.9	1.89	TAMC	6.57	--	--	--
1/22/2008	P		90.20	11.22	--	78.98	240	<0.50	<0.50	0.83	1.7	7.2	3.18	TAMC	6.49	--	--	--
4/15/2008	P		90.20	10.26	--	79.94	240	<0.50	<0.50	<0.50	0.73	5.5	3.32	CEL	6.45	--	--	--
7/8/2008	P		90.20	11.10	--	79.10	78	<0.50	<0.50	<0.50	<0.50	5.8	1.65	CEL	6.78	--	--	--
11/19/2008	P		90.20	12.51	--	77.69	150	<0.50	<0.50	<0.50	<0.50	3.4	1.59	CEL	6.84	--	--	--

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	P/NP	Footnote	TOC Elevation (feet)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	DRO/ TPHd (µg/L)	TOG (µg/L)	HVOC (µg/L)
							GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE						
MW-1 Cont.																		
2/10/2009	P		90.20	12.71	--	77.49	<50	<0.50	<0.50	<0.50	<0.50	5.3	1.63	CEL	7.00	--	--	--
5/7/2009	**P**		**90.20**	**10.90**	**--**	**79.30**	**<50**	**1.6**	**<0.50**	**<0.50**	**<0.50**	**13**	**1.41**	**CEL**	**6.82**	**--**	**--**	**--**
MW-2																		
11/4/1989	--		87.91	15.84	--	72.07	<500	6.5	<0.3	<0.3	<0.3	--	--	SAL	--	--	--	--
11/11/1989	--		87.91	14.75	--	73.16	--	--	--	--	--	--	--	--	--	--	--	--
4/3/1990	--		87.91	15.25	--	72.66	<500	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	--	--
7/30/1990	--		87.91	15.59	--	72.32	61	6.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	--	--
11/20/1990	--		87.91	17.81	--	70.10	<50	0.3	<0.3	<0.3	<0.3	--	--	SAL	--	--	--	--
3/1/1991	--		87.91	17.11	--	70.80	<100	0.4	<0.3	<0.3	<0.3	--	--	SAL	--	--	--	--
8/19/1991	--		87.91	17.97	--	69.94	<30	<0.3	<0.3	<0.3	<0.3	--	--	SEQ	--	--	--	--
11/13/1991	--		87.91	16.76	--	71.15	38	0.32	<0.3	<0.3	<0.3	--	--	SEQ	--	--	--	--
2/24/1992	--		87.91	15.07	--	72.84	<50	<0.5	<0.5	<0.5	0.58	--	--	SEQ	--	--	--	--
5/19/1992	--		87.91	14.70	--	73.21	<50	0.55	<0.5	<0.5	<0.5	--	--	SEQ	--	--	--	--
7/22/1992	--		87.91	15.60	--	72.31	90	1.3	0.6	0.9	1.9	--	--	ANA	--	--	--	--
8/14/1992	--		87.91	15.88	--	72.03	--	--	--	--	--	--	--	--	--	--	--	--
11/11/1992	--	c	87.91	--	--	--	65	3.2	<0.5	<0.5	1	--	--	ANA	--	--	--	--
11/11/1992	--		87.91	16.19	--	71.72	52	2.8	<0.5	<0.5	0.9	--	--	ANA	--	--	--	--
6/7/1993	--		87.91	14.42	--	73.49	1,200	14	2.8	1.9	1.71	--	--	PACE	--	--	--	--
12/2/1993	--	d	87.91	14.94	--	72.97	790	3.4	0.5	10	<0.5	3,700	--	PACE	--	--	--	--
12/2/1993	--	c, d	87.91	--	--	--	2,100	32	3.8	2.2	17	3,700	--	PACE	--	--	--	--
6/22/1994	--	d	87.91	14.25	--	73.66	110	<0.5	<0.5	<0.5	<0.5	120	3.9	PACE	--	--	--	--
1/10/1995	--		87.91	13.64	--	74.27	<50	<0.5	<0.5	0.6	1	--	4.3	ATI	--	--	--	--
6/21/1995	--		87.91	11.66	--	76.25	4,700	<10	<10	<10	<20	--	7.8	ATI	--	--	--	--
12/27/1995	--		87.91	13.11	--	74.80	6,100	<25	<25	<25	<50	20,000	6.7	ATI	--	--	--	--
12/27/1995	--	c	87.91	--	--	--	6,300	<25	<25	<25	<50	19,000	--	ATI	--	--	--	--
6/13/1996	--		87.91	10.86	--	77.05	8,300	<2.5	<2.5	<2.5	<2.5	13,000	6.5	SPL	--	--	--	--
6/13/1996	--	c	87.91	--	--	--	8,700	<5	<5	<5	<5	13,000	--	SPL	--	--	--	--
12/4/1996	--		87.91	13.03	--	74.88	5,900	<2.5	<5	<5	<5	11,000	6.3	SPL	--	--	--	--
12/4/1996	--	c	87.91	--	--	--	5,900	<2.5	<5	<5	<5	11,000	--	SPL	--	--	--	--
6/10/1997	--		87.91	10.04	--	77.87	<50	<0.5	<1.0	<1.0	<1.0	<10	5.8	SPL	--	--	--	--

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	P/NP	Footnote	TOC Elevation (feet)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	DRO/ TPHd (µg/L)	TOG (µg/L)	HVOC (µg/L)
							GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MtBE						
MW-2 Cont.																		
12/12/1997	--		87.91	12.44	--	75.47	<50	<0.5	<1.0	<1.0	<1.0	<10	5.7	SPL	--	--	--	--
6/18/1998	--		87.91	8.89	--	79.02	50	<0.5	<1.0	<1.0	<1.0	<10	5.3	SPL	--	--	--	--
6/18/1998	--	c	87.91	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	SPL	--	--	--	--
3/9/1999	--		87.91	10.20	--	77.71	15,000	<5.0	<5.0	<5.0	<5.0	23,000	--	SPL	--	--	--	--
9/28/1999	--		87.91	11.81	--	76.10	36,000	<5.0	12	7	26	35,000	--	SPL	--	--	--	<5.0
10/14/1999	--		87.91	10.27	--	77.64	--	--	--	--	--	--	--	SPL	--	100	--	--
3/27/2000	--		87.91	9.98	--	77.93	1,300	<0.5	<0.5	0.51	<0.5	5,800	--	PACE	--	--	--	--
9/28/2000	--		87.91	11.40	--	76.51	1,600	1.8	1.7	0.54	2.2	15,000	--	PACE	--	--	--	--
3/8/2001	--		87.91	11.16	--	76.75	20,000	<0.5	<0.5	<0.5	<0.5	29,100	--	PACE	--	--	--	--
9/21/2001	--		87.91	11.65	--	76.26	5,000	<0.5	<0.5	<0.5	<1.5	6,110	--	PACE	--	--	--	--
2/28/2002	--		87.91	9.86	--	78.05	3,200	35.1	<0.5	<0.5	<1.0	4,620	--	PACE	--	--	--	--
9/6/2002	--		87.91	12.32	--	75.59	1,900	<10	<10	<10	<10	15,000	--	SEQ	--	--	--	--
2/19/2003	--	h	87.91	11.63	--	76.28	45,000	<250	<250	<250	<250	32,000	--	SEQ	--	--	--	--
7/14/2003	--		87.91	12.07	--	75.84	9,300	<500	<500	<500	<500	24,000	--	SEQ	--	--	--	--
01/14/2004	P		87.91	11.45	--	76.46	<50,000	<500	<500	<500	<500	21,000	--	SEQM	6.9	--	--	--
04/23/2004	P	l	87.91	11.45	--	76.46	5,100	<250	<250	<250	<250	22,000	--	SEQM	6.8	--	--	--
07/01/2004	P		87.91	12.32	--	75.59	<5,000	<50	<50	<50	<50	5,200	--	SEQM	5.6	--	--	--
10/28/2004	P		87.91	13.02	--	74.89	8,500	<50	<50	<50	<50	6,800	--	SEQM	6.2	--	--	--
01/10/2005	P		87.91	14.38	--	73.53	<25,000	<250	<250	<250	<250	7,100	--	SEQM	7.6	--	--	--
04/13/2005	P		87.91	14.03	--	73.88	<5,000	<50	<50	<50	<50	5,300	--	SEQM	6.6	--	--	--
07/11/2005	P		87.91	11.25	--	76.66	<5,000	<50	<50	<50	<50	5,300	--	SEQM	7.5	--	--	--
10/17/2005	P		87.91	12.48	--	75.43	<5,000	<50	<50	<50	<50	2,500	--	SEQM	8.2	--	--	--
01/17/2006	P		87.91	10.70	--	77.21	<5,000	<50	<50	<50	<50	2,200	--	SEQM	7.0	--	--	--
04/21/2006	--	n	87.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7/26/2006	--	k	87.91	10.47	--	77.44	2,700	<50	<50	<50	<50	2,900	--	TAMC	6.69	--	--	--
10/31/2006	P		87.91	12.02	--	75.89	2,300	<25	<25	<25	<25	2,300	2.02	TAMC	6.71	--	--	--
1/8/2007	P		87.91	11.68	--	76.23	1500	<12	<12	<12	<12	1700	1.37	TAMC	6.54	--	--	--
4/10/2007	P	k	87.91	11.45	--	76.46	1,300	<50	<50	<50	<50	1,500	1.60	TAMC	6.89	--	--	--
7/10/2007	P	k, p	87.91	11.97	--	75.94	2,300	<25	<25	<25	<25	2,600	1.82	TAMC	6.69	120	--	--
10/24/2007	P	k	87.91	12.91	--	75.00	2,800	<25	<25	<25	<25	2,800	1.55	TAMC	6.77	--	--	--
1/22/2008	P		87.91	12.00	--	75.91	<2,500	<25	<25	<25	<25	1,400	2.08	TAMC	6.55	--	--	--

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	P/NP	Footnote	TOC Elevation (feet)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	DRO/ TPHd (µg/L)	TOG (µg/L)	HVOC (µg/L)
							GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE						
MW-2 Cont.																		
4/15/2008	P		87.91	11.77	--	76.14	73	<2.5	<2.5	<2.5	<2.5	2,400	3.12	CEL	6.72	--	--	--
7/8/2008	P		87.91	12.65	--	75.26	93	<50	<50	<50	<50	2,800	1.78	CEL	7.05	--	--	--
11/19/2008	P		87.91	13.98	--	73.93	130	<50	<50	<50	<50	1,900	1.75	CEL	6.72	--	--	--
2/10/2009	P		87.91	13.64	--	74.27	<50	<50	<50	<50	<50	940	1.71	CEL	7.04	--	--	--
5/7/2009	**P**		**87.91**	**12.00**	**--**	**75.91**	**350**	**<20**	**<20**	**<20**	**<20**	**1,900**	**1.62**	**CEL**	**6.94**	**--**	**--**	**--**
MW-3																		
11/4/1989	--		87.02	15.40	--	71.62	<500	<0.3	<0.3	<0.3	<0.3	--	--	SAL	--	--	--	--
11/11/1989	--		87.02	14.10	--	72.92	--	--	--	--	--	--	--	--	--	--	--	--
4/3/1990	--		87.02	13.90	--	73.12	<100	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	--	--
7/30/1990	--		87.02	13.77	--	73.25	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	<5000	--
11/20/1990	--		87.02	14.67	--	72.35	<50	0.3	0.8	0.4	1.5	--	--	SAL	--	--	--	--
3/1/1991	--		87.02	15.22	--	71.80	<100	0.4	<0.3	<0.3	<0.3	--	--	SAL	--	--	--	--
8/19/1991	--		87.02	13.15	--	73.87	<30	<0.3	<0.3	<0.3	<0.3	--	--	SEQ	--	--	--	--
11/13/1991	--		87.02	15.66	--	71.36	<30	<0.3	<0.3	<0.3	<0.3	--	--	SEQ	--	--	--	--
2/24/1992	--		87.02	15.01	--	72.01	<50	0.65	1.4	0.66	4.4	--	--	SEQ	--	--	--	--
5/19/1992	--		87.02	15.52	--	71.50	<50	<0.5	<0.5	<0.5	<0.5	--	--	SEQ	--	--	--	--
7/22/1992	--		87.02	15.63	--	71.39	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	<50	<5000	--
8/14/1992	--		87.02	13.57	--	73.45	--	--	--	--	--	--	--	--	--	--	--	--
11/11/1992	--		87.02	14.13	--	72.89	<50	<0.5	0.7	<0.5	1.3	--	--	ANA	--	--	--	--
6/7/1993	--		87.02	12.13	--	74.89	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
12/2/1993	--		87.02	13.29	--	73.73	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
6/22/1994	--		87.02	12.78	--	74.24	<50	<0.5	<0.5	<0.5	<0.5	--	2.9	PACE	--	--	--	--
1/10/1995	--		87.02	12.01	--	75.01	<50	<0.5	<0.5	<0.5	<1	--	3.8	ATI	--	--	--	--
6/21/1995	--		87.02	11.57	--	75.45	<50	<0.50	<0.50	<0.50	<1.0	--	7.4	ATI	--	--	--	--
12/27/1995	--		87.02	13.47	--	73.55	<50	<0.50	<0.50	<0.50	<1.0	5.7	7.3	ATI	--	--	--	--
6/13/1996	--		87.02	11.22	--	75.80	60	<0.5	<0.5	<0.5	<0.5	<10	6.8	SPL	--	--	--	--
12/4/1996	--		87.02	13.28	--	73.74	<50	<0.5	<1	<1	<1	<10	6.7	SPL	--	--	--	--
6/10/1997	--		87.02	10.22	--	76.80	<50	<0.5	<1.0	<1.0	<1.0	<10	6.1	SPL	--	--	--	--
12/12/1997	--		87.02	12.61	--	74.41	<50	<0.5	<1.0	<1.0	<1.0	<10	5.6	SPL	--	--	--	--
12/12/1997	--	c	87.02	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	SPL	--	--	--	--

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	P/NP	Footnote	TOC Elevation (feet)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	DRO/ TPHd (µg/L)	TOG (µg/L)	HVOC (µg/L)
							GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE						
MW-3 Cont.																		
6/18/1998	--		87.02	9.07	--	77.95	50	<0.5	<1.0	<1.0	<1.0	<10	5.3	SPL	--	--	--	--
6/18/1998	--		87.02	12.80	--	74.22	--	--	--	--	--	--	--	--	--	--	--	--
9/28/1999	--		87.02	13.76	--	73.26	--	--	--	--	--	--	--	--	--	--	--	--
3/27/2000	--		87.02	13.77	--	73.25	<50	<0.5	<0.5	<0.5	<0.5	1.6	--	PACE	--	--	--	--
9/28/2000	--		87.02	11.28	--	75.74	<50	<0.5	7.4	<0.5	1.3	2	--	PACE	--	--	--	--
3/8/2001	--		87.02	11.75	--	75.27	<50	<0.5	<0.5	<0.5	<0.5	60.4	--	PACE	--	--	--	--
9/21/2001	--		87.02	11.33	--	75.69	<50	<0.5	<0.5	<0.5	<1.5	8.18	--	PACE	--	--	--	--
2/28/2002	--		87.02	10.86	--	76.16	<50	<0.5	<0.5	<0.5	<1.0	25.5	--	PACE	--	--	--	--
9/6/2002	--		87.02	12.73	--	74.29	<50	1.2	<0.5	<0.5	1	16	--	SEQ	--	--	--	--
2/19/2003	--	h	87.02	11.72	--	75.30	<500	<5.0	<5.0	<5.0	<5.0	110	--	SEQ	--	--	--	--
7/14/2003	--		87.02	13.76	--	73.26	<50	<0.50	<0.50	<0.50	0.67	28	--	SEQ	--	--	--	--
01/14/2004	P		87.02	14.83	--	72.19	550	<5.0	<5.0	<5.0	<5.0	380	--	SEQM	8.1	--	--	--
04/23/2004	P	l	87.02	13.17	--	73.85	<200	<25	<25	<25	<25	560	--	SEQM	6.8	--	--	--
07/01/2004	P		87.02	15.19	--	71.83	<50	<0.50	<0.50	<0.50	0.50	48	--	SEQM	6.4	--	--	--
10/28/2004	P		87.02	15.50	--	71.52	<500	<5.0	<5.0	<5.0	<5.0	290	--	SEQM	6.3	--	--	--
01/10/2005	P		87.02	15.00	--	72.02	<50	<0.50	<0.50	<0.50	<0.50	18	--	SEQM	7.6	--	--	--
04/13/2005	P		87.02	14.34	--	72.68	<50	<0.50	<0.50	<0.50	<0.50	9.0	--	SEQM	7.1	--	--	--
07/11/2005	P	k	87.02	10.82	--	76.20	130	<1.0	<1.0	<1.0	<1.0	120	--	SEQM	7.8	--	--	--
10/17/2005	P		87.02	11.84	--	75.18	<250	<2.5	<2.5	<2.5	<2.5	260	--	SEQM	8.5	--	--	--
01/17/2006	P		87.02	11.59	--	75.43	800	<5.0	<5.0	<5.0	<5.0	980	--	SEQM	7.2	--	--	--
04/21/2006	P		87.02	10.00	--	77.02	<500	<5.0	<5.0	<5.0	<5.0	48	--	SEQM	6.7	--	--	--
7/17/2006	P	k	87.02	10.80	--	76.22	910	<5.0	<5.0	<5.0	<5.0	1,400	--	TAMC	7.7	--	--	--
7/26/2006	P		87.02	9.67	--	77.35	810	<10	<10	<10	<10	1,300	--	TAMC	6.56	--	--	--
10/31/2006	P		87.02	10.85	--	76.17	1,600	<10	<10	<10	<10	2,300	2.50	TAMC	6.84	--	--	--
1/8/2007	P		87.02	12.73	--	74.29	520	<5.0	<5.0	<5.0	<5.0	760	3.61	TAMC	7.12	--	--	--
4/10/2007	P	k	87.02	11.93	--	75.09	630	<5.0	<5.0	<5.0	<5.0	750	2.31	TAMC	7.15	--	--	--
7/10/2007	P	k, p	87.02	11.30	--	75.72	1,800	<5.0	<5.0	<5.0	<5.0	2,400	1.56	TAMC	6.72	66	--	--
10/24/2007	P	k	87.02	13.77	--	73.25	2,000	<25	<25	<25	<25	3,500	1.62	TAMC	6.41	--	--	--
1/22/2008	P	k	87.02	12.92	--	74.10	1,600	<12	<12	<12	<12	2,800	2.17	TAMC	6.32	--	--	--
4/15/2008	P		87.02	15.25	--	71.77	<50	<2.5	<2.5	<2.5	<2.5	960	3.44	CEL	6.71	--	--	--
7/8/2008	P		87.02	12.27	--	74.75	<50	<50	<50	<50	<50	2,200	1.52	CEL	7.01	--	--	--

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Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	P/NP	Footnote	TOC Elevation (feet)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	DRO/ TPHd (µg/L)	TOG (µg/L)	HVOC (µg/L)
							GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE						
MW-3 Cont.																		
11/19/2008	P		87.02	15.27	--	71.75	<50	<50	<50	<50	<50	2,700	1.60	CEL	6.83	--	--	--
2/10/2009	P		87.02	13.61	--	73.41	<50	<50	<50	<50	<50	1,800	1.66	CEL	6.98	--	--	--
5/7/2009	**P**		**87.02**	**11.75**	**--**	**75.27**	**140**	**<10**	**<10**	**<10**	**<10**	**780**	**1.28**	**CEL**	**6.86**	**--**	**--**	**--**
QC-2																		
11/11/1992	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	--	--
6/7/1993	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
12/2/1993	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
6/22/1994	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
1/10/1995	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<1	--	--	ATI	--	--	--	--
6/21/1995	--	g	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	ATI	--	--	--	--
12/27/1995	--	g	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	ATI	--	--	--	--
6/13/1996	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<10	--	SPL	--	--	--	--

ABBREVIATIONS & SYMBOLS:
--/--- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
DO = Dissolved oxygen
DRO = Diesel range organics
DTW = Depth to water in ft bgs
ft bgs = feet below ground surface
GRO = Gasoline range organics, range C4-C12
GWE = Groundwater elevation measured in ft
HVOC = Halogenated volatile organic compounds
mg/L = Milligrams per liter
MTBE = Methyl tert-butyl ether
NP = Well not purged prior to sampling
P = Well purged prior to sampling
TOC = Top of casing measured in ft
TOG = Total oil and grease
TPH-d = Total petroleum hydrocarbons as diesel
TPH-g = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter
ANA = Anametrix, Inc.
PACE = Pace, Inc.
ATI = Analytical Technologies, Inc.
SAL = Superior Analytical Laboratory
SPL = Southern Petroleum Laboratories
SEQ/SEQM = Sequoia Analytical/Sequoia Analytical - Morgan Hill (Laboratories)
CEL = CalScience Environmental Laboratories, Inc.

FOOTNOTES:
c = Blind duplicate.
d = A copy of the documentation for this data is included in Appendix C of Alisto report 10-076-06-002.
e = Tetrachloroethene
f = trans-1,2-Dichloroethene
g = Travel blank.
h = TPH-g, benzene, toluene, ethylbenzene, and total xylenes (BTEX), and MTBE analyzed by EPA Method 8260B beginning on 1st quarter sampling event (2/19/03).
k = The hydrocarbon result was partly due to individual peaks in the quantification range (GRO).
l = GRO analyzed by EPA Method 8015B.
m = Confirmatory analysis for total xylenes was past holding time.
n = Well inaccessible.
p = Hydrocarbon in req. fuel range, but doesn't resemble req. fuel (DRO).

NOTES:
Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPH-g was changed to GRO. The resulting data may be impacted by the potential of non-TPH-g analytes within the requested fuel range resulting in a higher concentration being reported.

Beginning in the second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12.

Values for pH and DO were obtained through field measurements.

GRO analysis was completed by EPA method 8260B (C4-C12) for samples collected from the time period April 2006 through February 4, 2008. The analysis for GRO was changed to EPA method 8015B (C6-C12) for samples collected from the time period February 5, 2008 through the present.

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

Table 2. Summary of Fuel Additives Analytical Data

Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
7/14/2003	<2000	2,700	940	<20	<20	<20	--	--	
01/14/2004	<1,000	2,500	220	<5.0	<5.0	<5.0	<5.0	<5.0	
04/23/2004	<500	2,500	150	<2.5	<2.5	<2.5	<2.5	<2.5	
07/01/2004	<500	2,000	96	<2.5	<2.5	<2.5	<2.5	<2.5	
10/28/2004	<5.0	1,500	43	<0.50	<0.50	0.58	<0.50	<0.50	
01/10/2005	<500	1,900	85	<2.5	<2.5	<2.5	<2.5	<2.5	
04/13/2005	<500	1,400	48	<2.5	<2.5	<2.5	<2.5	<2.5	
07/11/2005	<100	550	36	<0.50	<0.50	<0.50	<0.50	<0.50	
10/17/2005	<100	450	20	<0.50	<0.50	<0.50	<0.50	<0.50	a
01/17/2006	<300	260	38	<0.50	<0.50	0.54	<0.50	<0.50	
04/21/2006	<300	320	17	<0.50	<0.50	<0.50	<0.50	<0.50	
7/17/2006	<300	32	5.5	<0.50	<0.50	<0.50	<0.50	<0.50	
7/26/2006	<300	22	4.4	<0.50	<0.50	<0.50	<0.50	<0.50	
10/31/2006	<300	<20	2.8	<0.50	<0.50	<0.50	<0.50	<0.50	a
1/8/2007	<300	110	6.2	<0.50	<0.50	<0.50	<0.50	<0.50	
4/10/2007	<300	210	9.0	<0.50	<0.50	<0.50	<0.50	<0.50	
7/10/2007	<300	110	4.9	<0.50	<0.50	<0.50	<0.50	<0.50	
10/24/2007	<300	94	4.9	<0.50	<0.50	<0.50	<0.50	<0.50	
1/22/2008	<300	110	7.2	<0.50	<0.50	<0.50	<0.50	<0.50	
4/15/2008	<300	84	5.5	<0.50	<0.50	<0.50	<0.50	<0.50	
7/8/2008	<300	64	5.8	<0.50	<0.50	<0.50	<0.50	<0.50	
11/19/2008	<300	110	3.4	<0.50	<0.50	<0.50	<0.50	<0.50	
2/10/2009	<300	110	5.3	<0.50	<0.50	<0.50	<0.50	<0.50	
5/7/2009	**<300**	**17**	**13**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-2									
7/14/2003	<100000	<20000	24,000	<1000	<1000	<1000	--	--	
01/14/2004	<100,000	<20,000	21,000	<500	<500	<500	<500	<500	
04/23/2004	<50,000	11,000	22,000	<250	<250	420	<250	<250	
07/01/2004	<10,000	2,900	5,200	<50	<50	110	<50	<50	
10/28/2004	<5.0	6,700	6,800	<50	<50	120	<50	<50	
01/10/2005	<50,000	<10,000	7,100	<250	<250	<250	<250	<250	

Table 2. Summary of Fuel Additives Analytical Data

Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-2 Cont.									
04/13/2005	<10,000	5,300	5,300	<50	<50	95	<50	<50	
07/11/2005	<10,000	9,000	5,300	<50	<50	99	<50	<50	
10/17/2005	<10,000	5,200	2,500	<50	<50	<50	<50	<50	a
01/17/2006	<30,000	8,400	2,200	<50	<50	<50	<50	<50	
04/21/2006	--	--	--	--	--	--	--	--	Well inaccessible
7/26/2006	<30,000	4,500	2,900	<50	<50	<50	<50	<50	
10/31/2006	<15,000	9,300	2,300	<25	<25	41	<25	<25	a
1/8/2007	<7,500	7700	1700	<12	<12	38	<12	<12	
4/10/2007	<30,000	6,400	1,500	<50	<50	<50	<50	<50	
7/10/2007	<15,000	8,700	2,600	<25	<25	42	<25	<25	
10/24/2007	<15,000	9,500	2,800	<25	<25	52	<25	<25	
1/22/2008	<15,000	6,000	1,400	<25	<25	<25	<25	<25	
4/15/2008	<1,500	6,800	2,400	<2.5	<2.5	30	2.8	<2.5	
7/8/2008	<30,000	7,600	2,800	<50	<50	<50	<50	<50	
11/19/2008	<30,000	7,100	1,900	<50	<50	<50	<50	<50	
2/10/2009	<30,000	2,700	940	<50	<50	<50	<50	<50	
5/7/2009	**<12,000**	**3,900**	**1,900**	**<20**	**<20**	**30**	**<20**	**<20**	
MW-3									
7/14/2003	<100	<20	28	<1.0	<1.0	<1.0	--	--	
01/14/2004	<1,000	<200	380	<5.0	<5.0	<5.0	<5.0	<5.0	
04/23/2004	<5,000	<1,000	560	<25	<25	<25	<25	<25	
07/01/2004	<100	<20	48	<0.50	<0.50	0.52	<0.50	<0.50	
10/28/2004	<5.0	<200	290	<5.0	<5.0	<5.0	<5.0	<5.0	
01/10/2005	<100	<20	18	<0.50	<0.50	<0.50	<0.50	<0.50	
04/13/2005	<100	<20	9.0	<0.50	<0.50	<0.50	<0.50	<0.50	
07/11/2005	<200	<40	120	<1.0	<1.0	1.4	<1.0	<1.0	a
10/17/2005	<500	<100	260	<2.5	<2.5	4.2	<2.5	<2.5	a
01/17/2006	<3,000	200	980	<5.0	<5.0	13	<5.0	<5.0	
04/21/2006	<3,000	<200	48	<5.0	<5.0	<5.0	<5.0	<5.0	
7/17/2006	<3,000	<200	1,400	<5.0	<5.0	15	<5.0	<5.0	
7/26/2006	<6,000	<400	1,300	<10	<10	18	<10	<10	

Table 2. Summary of Fuel Additives Analytical Data

Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-3 Cont.									
10/31/2006	<6,000	<400	2,300	<10	<10	39	<10	<10	a
1/8/2007	<3000	<200	760	<5.0	<5.0	9.7	<5.0	<5.0	
4/10/2007	<3,000	<200	750	<5.0	<5.0	<5.0	<5.0	<5.0	
7/10/2007	<3,000	<200	2,400	<5.0	<5.0	39	<5.0	--	
10/24/2007	<15,000	<1,000	3,500	<25	<25	58	<25	<25	
1/22/2008	<7,500	<500	2,800	<12	<12	34	<12	<12	
4/15/2008	<1,500	<50	960	<2.5	<2.5	9.2	<2.5	<2.5	
7/8/2008	<30,000	<1,000	2,200	<50	<50	<50	<50	<50	
11/19/2008	<30,000	<1,000	2,700	<50	<50	<50	<50	<50	
2/10/2009	<30,000	<1,000	1,800	<50	<50	<50	<50	<50	
5/7/2009	**<6,000**	**<200**	**780**	**<10**	**<10**	**11**	**<10**	**<10**	

SYMBOLS & ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
1,2-DCA = 1,2-Dichloroethane
DIPE = Di-isopropyl ether
EDB = 1,2-Dibromoethane
ETBE = Ethyl tert-butyl ether
MTBE = Methyl tert-butyl ether
TAME = tert-Amyl methyl ether
TBA = tert-Butyl alcohol
µg/L = Micrograms per Liter

FOOTNOTES:
a = The calibration verification for ethanol was within the method limits but outside the contract limits.

NOTES:
All volatile organic compounds were analyzed using EPA Method 8260B.

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

Table 3. Historical Ground-Water Flow Direction and Gradient

Station #11102, 100 MacArthur Blvd., Oakland, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
4/21/2006	--	--
7/17/2006	Southwest	0.05
10/31/2006	Southwest	0.04
1/8/2007	West	0.06
4/10/2007	West	0.05
7/10/2007	Southwest	0.04
10/24/2007	West-Southwest	0.06
1/22/2008	West	0.05
4/15/2008	West-Southwest	0.09
7/8/2008	West-Southwest	0.05
11/19/2008	West	0.06
2/10/2009	West	0.04
5/7/2009	**West**	**0.05**

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

Table 4. Bio-Degradation Parameters

Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)			Ferrous Iron (mg/L)	ORP (mV)	DO (mg/L)	Conductivity (µS/cm)	Hydrogen Sulfide (mg/L)	Methane (µg/L)	pH	Comments
	Total Alkalinity	Nitrate NO3	Sulfate SO4								
MW-1											
7/10/2007	--	1,500	21,000	0.11	71.1	2.01	--	<1.0	--	6.60	
10/24/2007	--	--	--	--	--	1.89	639	--	--	6.57	
1/22/2008	--	760	11,000	0.42	108	3.18	811	<1.0	--	6.49	
4/15/2008	--	240	9,900	0.26	--	3.32	758	<0.100	--	6.45	
7/8/2008	--	860	19,000	0.23	--	1.65	628	--	--	6.78	
11/19/2008	--	540	16,000	0.5	--	1.59	853	--	--	6.84	
2/10/2009	--	830	35,000	0.0	63	1.63	899	<100	--	7.00	
5/7/2009	--	**9,300**	**40,000**	**0.5**	**59**	**1.41**	**851**	**<100**	--	**6.82**	
MW-2											
7/10/2007	--	<500	26,000	0.16	9.7	1.82	--	<1.0	--	6.69	
10/24/2007	--	--	--	--	--	1.55	863	--	--	6.77	
1/22/2008	--	8,500	26,000	0.15	167	2.08	672	<1.0	--	6.55	
4/15/2008	--	<100	28,000	<0.100	--	3.12	799	<0.100	--	6.72	
7/8/2008	--	<440	25,000	0.15	--	1.78	753	--	--	7.05	
11/19/2008	--	3,300	20,000	0.0	--	1.75	581	--	--	6.72	
2/10/2009	--	22,000	42,000	0.0	87	1.71	591	100	--	7.04	CL (NO3)
5/7/2009	--	**<440**	**33,000**	**0.03**	**90**	**1.62**	**1,108**	**<100**	--	**6.94**	
MW-3											
7/10/2007	--	8,500	19,000	<0.100	182.9	1.56	--	<1.0	--	6.72	
10/24/2007	--	--	--	--	--	1.62	639	--	--	6.41	
1/22/2008	--	5,600	17,000	<0.100	144	2.17	636	<1.0	--	6.32	
4/15/2008	--	1,600	21,000	<0.100	--	3.44	638	<0.100	--	6.71	
7/8/2008	--	6,700	18,000	<0.100	--	1.52	651	--	--	7.01	
11/19/2008	--	6,100	15,000	0.5	--	1.60	651	--	--	6.83	
2/10/2009	--	5,400	22,000	0.0	91	1.66	659	<100	--	6.98	
5/7/2009	--	**11,300**	**19,000**	**0.0**	**87**	**1.28**	**643**	**<100**	--	**6.86**	

ABBREVIATIONS AND SYMBOLS:

< = Not detected at or above specified laboratory reporting limit
ORP = Oxygen reduction potential
DO = Dissolved oxygen
CO2 = Carbon dioxide
mV = Millivolts
µg/L = Micrograms per liter
mg/L = Milligrams per liter

CL = Initial analysis within holding time but required dilution

APPENDIX A

STRATUS GROUND-WATER SAMPLING DATA PACKAGE
(INCLUDES FIELD DATA SHEETS, LABORATORY ANALYTICAL REPORT WITH CHAIN-OF-CUSTODY DOCUMENTATION, AND FIELD PROCEDURES)

STRATUS
ENVIRONMENTAL, INC.

3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

May 20, 2009

Mr. Rob Miller
Broadbent & Associates, Inc.
2000 Kirman Avenue
Reno, NV 89502

Re: Groundwater Sampling Data Package, BP Service Station No. 11102, located at 100 MacArthur Boulevard, Oakland, California.

General Information

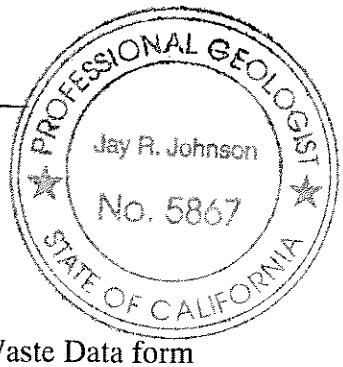
Data Submittal Prepared / Reviewed by: Carol Huff / Jay Johnson
Phone Number: (530) 676-6000
On-Site Supplier Representative: Jerry Gonzales and Arturo Heimlich
Sampling Date: May 7, 2009
Unusual Field Conditions: None noted.
Scope of Work Performed: Quarterly monitoring and sampling.
Variations from Work Scope: None noted.

This submittal presents the data collected in association with routine groundwater monitoring. The attachments included field data sheets, non-hazardous waste data form, chain of custody documentation, certified analytical results, and field procedures for groundwater sampling documentation. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations.

Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

STRATUS ENVIRONMENTAL, INC.



Jay R. Johnson, P.G.
Project Manager

Attachments:

- Field Data Sheets
- Non-Hazardous Waste Data form
- Chain of Custody Documentation
- Certified Analytical Results
- Field Procedures for Groundwater Sampling

CC: Mr. Paul Supple, BP/ARCO

BP Alameda Portfolio

HYDROLOGIC DATA SHEET

AK9 50

Gauge Date: 5/7/09

Project Name: 100 MacArthur Blvd. Oakland

Field Technician: Jerry

Project Number: 11102

TOC = Top of Well Casing Elevation
TOS = Depth to Top of Screen
DTW = Depth to Groundwater Below TOC
DTB = Depth to Bottom of Well Casing Below TOC

DIA = Well Casing Diameter
ELEV = Groundwater Elevation
DUP = Duplicate

WELL OR LOCATION	TIME	MEASUREMENT						PURGE & SAMPLE	SHEEN CONFIRMATION (w/bailer)	COMMENTS
		TOC	TOS	DTW	DTB	DIA	ELEV			
MW-1	10:05			10.90	31.70	4"		yes		FW
MW-2	10:40			12.00	32.20	4"		yes		FW
MW-3	10:00			11.75	32.50	4"		yes		FW

FW = Arturo Heimlich

pH/Conductivity/temperature Meter - YSI Model 63

DO Meter - YSI 55 Series (DO is always measured before purge)

Please refer to groundwater sampling field procedures

Calibration Date

pH 5/7/09

Conductivity 5/7/09

DO 5/7/09

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11102 PURGED BY: JS WELL I.D.: MW-1

CLIENT NAME: ______ SAMPLED BY: JS SAMPLE I.D.: MW01

LOCATION: Oakland - 100 MacArthur Blvd. QA SAMPLES: ______

DATE PURGED 5/7/09 START (2400hr) 11:15 END (2400hr) 11:21

DATE SAMPLED 5/7/09 SAMPLE TIME (2400hr) 11:25

SAMPLE TYPE: Groundwater x Surface Water ___ Treatment Effluent ___ Other ___

CASING DIAMETER: 2" ___ 3" ___ 4" X 5" ___ 6" ___ 8" ___ Other ___

Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 31.90 CASING VOLUME (gal) = 14.0

DEPTH TO WATER (feet) = 10.90 CALCULATED PURGE (gal) = 42.2

WATER COLUMN HEIGHT (feet) = 21.0 ACTUAL PURGE (gal) = 42.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
5/7/09	1117	14.1	25.2	858	6.71	clear	
|	1119	28.3	22.9	854	6.79	|	
|	1121	42.5	22.8	851	6.82	|	

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 12.79 SAMPLE TURBIDITY: Clear

80% RECHARGE: X YES ___ NO ANALYSES: SWO

ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 Voa HCL - 1 P/g

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ Bladder Pump	___ Bailer (Teflon)	___ Bladder Pump	___ Bailer (Teflon)
X Centrifugal Pump	___ Bailer (PVC)	___ Centrifugal Pump	X Bailer (___ PVC or X disposable)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Submersible Pump	___ Bailer (Stainless Steel)
___ Peristalic Pump	___ Dedicated ___	___ Peristalic Pump	___ Dedicated ___
Other: ___		Other: ___	
Pump Depth: 25			

WELL INTEGRITY: good LOCK#: Master

REMARKS: DO. 1.41 - ORP / 59 - Ferrous Iron, 5

SIGNATURE: [signature] Page ___ of ___

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11102 | PURGED BY: [illegible] | WELL I.D.: MW-2

CLIENT NAME: | SAMPLED BY: [illegible] | SAMPLE I.D.: MW-2

LOCATION: Oakland - 100 MacArthur Blvd. | QA SAMPLES:

DATE PURGED 5/7/09 | START (2400hr) 1050 | END (2400hr) 1056

DATE SAMPLED 5/7/09 | SAMPLE TIME (2400hr) 11:05

SAMPLE TYPE: Groundwater x | Surface Water ___ | Treatment Effluent ___ | Other ___

CASING DIAMETER: 2" ___ (0.17) | 3" ___ (0.38) | 4" x (0.67) | 5" ___ (1.02) | 6" ___ (1.50) | 8" ___ (2.60) | Other ___ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 32.20 | CASING VOLUME (gal) = 13.5

DEPTH TO WATER (feet) = 12.60 | CALCULATED PURGE (gal) = 40.6

WATER COLUMN HEIGHT (feet) = 20.2 | ACTUAL PURGE (gal) = 41.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
5/7/09	1052	13.6	24.5	2841	7.00	clear	
"	1054	27.3	22.5	1115	6.90	"	
"	1056	41.0	22.4	1108	6.94	"	

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 14.88 | SAMPLE TURBIDITY: Clear

80% RECHARGE: x YES ___ NO | ANALYSES: SVOC

ODOR: No | SAMPLE VESSEL / PRESERVATIVE: 6 Voa-HCl - 1 Ply

PURGING EQUIPMENT

___ Bladder Pump
x Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ___

Other: ___

Pump Depth: 25

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
x Bailer (Teflon)
___ Bailer (___ PVC or x disposable)
___ Bailer (Stainless Steel)
___ Dedicated ___

Other: ___

WELL INTEGRITY: good | LOCK#: Master

REMARKS: DO 7.62 - Ferrous Iron 0.03 ORP 90

SIGNATURE: [signature]

Page ___ of ___

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11102 | PURGED BY: JS | WELL I.D.: MW-3
CLIENT NAME: | SAMPLED BY: JS | SAMPLE I.D.: MW-3
LOCATION: Oakland - 100 MacArthur Blvd. | QA SAMPLES:

DATE PURGED 5/7/09 | START (2400hr) 10:30 | END (2400hr) 10:36
DATE SAMPLED 5/7/09 | SAMPLE TIME (2400hr) 10:45
SAMPLE TYPE: Groundwater x | Surface Water ___ | Treatment Effluent ___ | Other ___

CASING DIAMETER: 2" ___ (0.17) | 3" ___ (0.38) | 4" X (0.67) | 5" ___ (1.02) | 6" ___ (1.50) | 8" ___ (2.60) | Other ___ ( )
Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 32.30 | CASING VOLUME (gal) = 13.7
DEPTH TO WATER (feet) = 11.75 | CALCULATED PURGE (gal) = 41.2
WATER COLUMN HEIGHT (feet) = 20.5 | ACTUAL PURGE (gal) = 42.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
1	1032	14	24.3	589	6.88	Clear	
1	1034	28	23.4	506	6.93		
	1036	42	22.1	643	6.86		

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 13.80 | SAMPLE TURBIDITY: Clear

80% RECHARGE: Y YES ___ NO | ANALYSES: 5 WO
ODOR: NO | SAMPLE VESSEL / PRESERVATIVE: 6 VOA HCl - 1 Ply

PURGING EQUIPMENT

___ Bladder Pump | ___ Bailer (Teflon)
Y Centrifugal Pump | ___ Bailer (PVC)
___ Submersible Pump | ___ Bailer (Stainless Steel)
___ Peristalic Pump | ___ Dedicated ___
Other: ___
Pump Depth: 25

SAMPLING EQUIPMENT

___ Bladder Pump | ___ Bailer (Teflon)
___ Centrifugal Pump | Y Bailer (___ PVC or Y disposable)
___ Submersible Pump | ___ Bailer (Stainless Steel)
___ Peristalic Pump | ___ Dedicated ___
Other: ___

WELL INTEGRITY: good | LOCK#: Master
REMARKS: DO 1.28 ORP 89 - Ferrous Iron 0.0

SIGNATURE: [signature] | Page ___ of ___

WELLHEAD OBSERVATION FORM

STRATUS ENVIRONMENTAL INC.

Site Name/Number: BP 11102 *Date:* 5/5/07 *Technician:* JSK

Well I.D.	Box in Good Condition? X = Yes Blank = No	Lock Missing? X = Yes (replaced) Blank = No	Water in Wellbox? X = Yes Blank = No	Water Level Relative to Cap? A = Above cap B = Below cap L = Level w/cap	Well Cap? I = Intact M = Missing or Compromised (replaced)	Bolts Missing? X = Yes Blank = No	Bolts Stripped? X = Yes Blank = No	Bolt Holes Stripped? X = Yes Blank = No	Cracked or Broken Lid? X = Yes Blank = No	Cracked or Broken Box? X = Yes Blank = No	Grout Level more than 1ft below TOC? X = Yes Blank = No	Additional Comments (such as missing lid, compromised, needs replacement, or other - explain)
MW-1	X				I							
MW-2	X				I							
MW-3	X		X	A	I							

DRUM INVENTORY

Drums on site? Yes (No) (circle)

Type and # Steel: _____ Plastic: _____

Note whether drums are full or empty, solids or liquids:

_____

_____

Drum label info (description, date, contact info):

_____

_____

GENERAL SITE CONDITIONS

Make notes on housekeeping conditions (such as trash around remediation system enclosure/compound, bent or missing bollards, signs missing from compound fences, grafitti on compound, etc.)

_____

_____

_____

_____

_____

_____

(updated 3-28-08, SS)

NO. 853779

NON-HAZARDOUS WASTE DATA FORM

1. BEST #

GENERATOR

2. Generator's Name and Mailing Address

Generator's Site Address (if different than mailing address)

11102

Generator's Phone:

3. Transporter 1 Company Name

Phone #

4. Transporter 2 Company Name

Phone #

5. Designated Facility Name and Site Address

Phone #

6. Waste Shipping Name and Description	7. Containers No.	7. Containers Type	8. Total Quantity	9. Unit Wt/Vol	10. Profile No.
A. NON-HAZARDOUS WATER	1	TF	125-S	G	
B.					
C.					
D.					

11. Special Handling Instructions and Additional Information

WEAR ALL APPROPRIATE PROTECTIVE CLOTHING

WELL PURGING / DECON WATER

12. GENERATOR'S CERTIFICATION: I certify the materials described above on this data form are non-hazardous.

Generator's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

TRANSPORTER

13. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

FACILITY

14. Designated Facility Owner or Operator: Certification of receipt of materials covered by this data form.

Printed/Typed Name | Signature | Month | Day | Year

GENERATOR

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP 11102 | Req Due Date (mm/dd/yy): 14 Day TAT | Rush TAT: Yes ____ No X

BP/ARC Facility No: 11102 | Lab Work Order Number:

Lab Name: CalScience	BP/ARC Facility Address: 100 MacArthur Blvd	Consultant/Contractor: Stratus Environmental Inc.
Lab Address: 7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code: Oakland, CA	Consultant/Contractor Project No.:
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda	Address: 3330 Cameron Park Drive, #550, Cameron Park, CA 95682
Lab Phone: 714-895-5494 Fax: 714-895-7501	California Global ID No.: T0600100908	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt:	Enfos Proposal No: 000G6-0003	Phone: 530-676-6000 Fax: 530-676-6005
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ____ OOC-RM ____	Email EDD To: chuff@stratusinc.net
Other Info:	Stage: BP/ARC WBS Stage Activity: BP/ARC WBS Activity	Invoice To: BP/ARC X Contractor ____
BP/ARC EBM: Paul Supple		
EBM Phone: (925) 275-3801		
EBM Email: paul.supple@bp.com		

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: GRO by 8015M	BTEX/5 FO* by 8260B	Ethanol by 8260B	EDB by 8260B	1,2-DCA by 8260B	H2S	NO3	SO4			Report Type & QC Level
	MW-1	5/7/2009	1125		X							X			X	X	X	X	X	X	X	X			
	MW-2	5/7/2009	1105		X							X			X	X	X	X	X	X	X	X			
	MW-3	5/7/2009	1045		X							X			X	X	X	X	X	X	X	X			
	TB-11102-050720009	5/7/2009	500		X			2				X													ON HOLD

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description

Comments

*Oxy = MTBE, TAME, ETBE, DIPE, TBA

Sampler's Name: Jerry Gonzalez	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stratus Environmental Inc.						
Shipment Method: Ship Date:						
Shipment Tracking No:						

Special Instructions: TB Sample ON HOLD! Cc results to bpalameda@secor.com

THIS LINE - LAB USE ONLY. Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt ____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Calscience
Environmental
Laboratories, Inc.

May 22, 2009

Jay Johnson
Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Subject: **Calscience Work Order No.:** **09-05-0721**
Client Reference: **BP 11102**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/8/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	05/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-0721
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	HACH Model HS-C

Project: BP 11102

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-05-0721-1-G**	**05/07/09 11:25**	**Aqueous**	**N/A**	**N/A**	**05/08/09 10:45**	**90508HSB1**

Parameter	Result	RL	DF	Qual	Units
Hydrogen Sulfide	ND	100	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**09-05-0721-2-G**	**05/07/09 11:05**	**Aqueous**	**N/A**	**N/A**	**05/08/09 10:45**	**90508HSB1**

Parameter	Result	RL	DF	Qual	Units
Hydrogen Sulfide	ND	100	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-05-0721-3-G**	**05/07/09 10:45**	**Aqueous**	**N/A**	**N/A**	**05/08/09 10:45**	**90508HSB1**

Parameter	Result	RL	DF	Qual	Units
Hydrogen Sulfide	ND	100	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-03-001-366**	**N/A**	**Aqueous**	**N/A**	**N/A**	**05/08/09 10:45**	**90508HSB1**

Parameter	Result	RL	DF	Qual	Units
Hydrogen Sulfide	ND	100	1		ug/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	05/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-0721
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA 300.0
	Units:	ug/L
Project: BP 11102		Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-05-0721-1-G**	**05/07/09 11:25**	**Aqueous**	**IC 7**	**N/A**	**05/08/09 17:24**	**090508L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Nitrate (as NO3)	9300	440	1		Sulfate	40000	1000	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**09-05-0721-2-G**	**05/07/09 11:05**	**Aqueous**	**IC 7**	**N/A**	**05/08/09 18:16**	**090508L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Nitrate (as NO3)	ND	440	1		Sulfate	33000	1000	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-05-0721-3-G**	**05/07/09 10:45**	**Aqueous**	**IC 7**	**N/A**	**05/08/09 18:34**	**090508L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Nitrate (as NO3)	11300	440	1		Sulfate	19000	1000	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-906-190**	**N/A**	**Aqueous**	**IC 7**	**N/A**	**05/08/09 09:34**	**090508L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Nitrate (as N)	ND	100	1		Sulfate	ND	1000	1	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	05/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-0721
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: BP 11102

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-05-0721-1-D**	**05/07/09 11:25**	**Aqueous**	**GC 4**	**05/16/09**	**05/17/09 11:36**	**090516B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	107	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**09-05-0721-2-E**	**05/07/09 11:05**	**Aqueous**	**GC 4**	**05/19/09**	**05/20/09 13:41**	**090519B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	350	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	89	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-05-0721-3-E**	**05/07/09 10:45**	**Aqueous**	**GC 4**	**05/19/09**	**05/20/09 14:14**	**090519B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	140	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	88	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-539**	**N/A**	**Aqueous**	**GC 4**	**05/16/09**	**05/17/09 09:25**	**090516B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	101	38-134			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	05/08/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0721
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: BP 11102

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-543**	**N/A**	**Aqueous**	**GC 4**	**05/19/09**	**05/20/09 09:52**	**090519B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	77	38-134			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 05/08/09
Work Order No: 09-05-0721
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP 11102

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-05-0721-1-A**	**05/07/09 11:25**	**Aqueous**	**GC/MS BB**	**05/18/09**	**05/18/09 13:44**	**090518L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.6	0.50	1		Methyl-t-Butyl Ether (MTBE)	13	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	17	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	96	73-145			Dibromofluoromethane	96	81-135		
Toluene-d8	99	83-119			1,4-Bromofluorobenzene	98	74-110		

MW-2	**09-05-0721-2-A**	**05/07/09 11:05**	**Aqueous**	**GC/MS BB**	**05/18/09**	**05/18/09 14:16**	**090518L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	20	40		Methyl-t-Butyl Ether (MTBE)	1900	50	100	
1,2-Dibromoethane	ND	20	40		Tert-Butyl Alcohol (TBA)	3900	400	40	
1,2-Dichloroethane	ND	20	40		Diisopropyl Ether (DIPE)	ND	20	40	
Ethylbenzene	ND	20	40		Ethyl-t-Butyl Ether (ETBE)	ND	20	40	
Toluene	ND	20	40		Tert-Amyl-Methyl Ether (TAME)	30	20	40	
Xylenes (total)	ND	20	40		Ethanol	ND	12000	40	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	101	73-145			Dibromofluoromethane	100	81-135		
Toluene-d8	98	83-119			1,4-Bromofluorobenzene	80	74-110		

MW-3	**09-05-0721-3-A**	**05/07/09 10:45**	**Aqueous**	**GC/MS BB**	**05/18/09**	**05/19/09 08:52**	**090518L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	10	20		Methyl-t-Butyl Ether (MTBE)	780	10	20	
1,2-Dibromoethane	ND	10	20		Tert-Butyl Alcohol (TBA)	ND	200	20	
1,2-Dichloroethane	ND	10	20		Diisopropyl Ether (DIPE)	ND	10	20	
Ethylbenzene	ND	10	20		Ethyl-t-Butyl Ether (ETBE)	ND	10	20	
Toluene	ND	10	20		Tert-Amyl-Methyl Ether (TAME)	11	10	20	
Xylenes (total)	ND	10	20		Ethanol	ND	6000	20	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	107	73-145			Dibromofluoromethane	112	81-135		
Toluene-d8	97	83-119			1,4-Bromofluorobenzene	97	74-110		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	05/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-0721
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: BP 11102		Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-882**	**N/A**	**Aqueous**	**GC/MS BB**	**05/18/09**	**05/18/09 13:12**	**090518L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	99	73-145			Dibromofluoromethane	99	81-135		
Toluene-d8	98	83-119			1,4-Bromofluorobenzene	98	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-885**	**N/A**	**Aqueous**	**GC/MS BB**	**05/18/09**	**05/19/09 01:59**	**090518L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	73-145			Dibromofluoromethane	94	81-135		
Toluene-d8	97	83-119			1,4-Bromofluorobenzene	79	74-110		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.	Date Received:	05/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-0721
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	HACH Model HS-C

Project: BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
MW-1	**Aqueous**	**N/A**	**N/A**	**05/08/09**	**90508HSD1**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Hydrogen Sulfide	ND	ND	NA	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	05/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-0721
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA 300.0

Project BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	**Aqueous**	**IC 7**	**N/A**	**05/08/09**	**090508S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Nitrate (as N)	104	105	80-120	0	0-20	
Sulfate	101	101	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	05/08/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0721
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	**Aqueous**	**GC 4**	**05/16/09**	**05/17/09**	**090516S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	91	88	38-134	4	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 05/08/09
3330 Cameron Park Drive, Suite 550	Work Order No: 09-05-0721
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8015B (M)

Project BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-1015-13	**Aqueous**	**GC 4**	**05/19/09**	**05/20/09**	**090519S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	98	95	38-134	2	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	05/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-0721
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	**Aqueous**	**GC/MS BB**	**05/18/09**	**05/18/09**	**090518S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	94	93	86-122	1	0-8	
Carbon Tetrachloride	102	99	78-138	3	0-9	
Chlorobenzene	97	98	90-120	0	0-9	
1,2-Dibromoethane	100	99	70-130	1	0-30	
1,2-Dichlorobenzene	97	98	89-119	1	0-10	
1,1-Dichloroethene	92	90	52-142	2	0-23	
Ethylbenzene	94	93	70-130	1	0-30	
Toluene	95	94	85-127	1	0-12	
Trichloroethene	97	96	78-126	1	0-10	
Vinyl Chloride	87	88	56-140	2	0-21	
Methyl-t-Butyl Ether (MTBE)	94	94	64-136	0	0-28	
Tert-Butyl Alcohol (TBA)	94	94	27-183	0	0-60	
Diisopropyl Ether (DIPE)	87	87	78-126	0	0-16	
Ethyl-t-Butyl Ether (ETBE)	94	94	67-133	0	0-21	
Tert-Amyl-Methyl Ether (TAME)	96	97	63-141	1	0-21	
Ethanol	80	90	11-167	12	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	05/08/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0721
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-1007-1	**Aqueous**	**GC/MS BB**	**05/18/09**	**05/19/09**	**090518S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	98	86-122	1	0-8	
Carbon Tetrachloride	103	102	78-138	1	0-9	
Chlorobenzene	99	98	90-120	1	0-9	
1,2-Dibromoethane	101	99	70-130	2	0-30	
1,2-Dichlorobenzene	99	99	89-119	1	0-10	
1,1-Dichloroethene	97	95	52-142	2	0-23	
Ethylbenzene	95	94	70-130	0	0-30	
Toluene	98	97	85-127	1	0-12	
Trichloroethene	98	99	78-126	1	0-10	
Vinyl Chloride	90	88	56-140	2	0-21	
Methyl-t-Butyl Ether (MTBE)	93	98	64-136	4	0-28	
Tert-Butyl Alcohol (TBA)	593	124	27-183	4	0-60	LM,AY
Diisopropyl Ether (DIPE)	93	95	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	96	99	67-133	3	0-21	
Tert-Amyl-Methyl Ether (TAME)	95	99	63-141	4	0-21	
Ethanol	95	105	11-167	10	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0721
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA 300.0

Project: BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-906-190	Aqueous	IC 7	N/A	05/08/09	090508L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Nitrate (as N)	103	103	90-110	0	0-15	
Sulfate	100	100	90-110	0	0-15	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received:	N/A
Work Order No:	09-05-0721
Preparation:	EPA 5030B
Method:	EPA 8015B (M)

Project: BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-539	Aqueous	GC 4	05/16/09	05/17/09	090516B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	102	99	78-120	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received:	N/A
Work Order No:	09-05-0721
Preparation:	EPA 5030B
Method:	EPA 8015B (M)

Project: BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-543	Aqueous	GC 4	05/19/09	05/20/09	090519B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	102	101	78-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.	Date Received: N/A
3330 Cameron Park Drive, Suite 550	Work Order No: 09-05-0721
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8260B

Project: BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-882	Aqueous	GC/MS BB	05/18/09	05/18/09	090518L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	95	94	87-117	82-122	1	0-7	
Carbon Tetrachloride	103	100	78-132	69-141	3	0-8	
Chlorobenzene	98	98	88-118	83-123	1	0-8	
1,2-Dibromoethane	104	101	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	98	96	88-118	83-123	2	0-8	
1,1-Dichloroethene	93	91	71-131	61-141	2	0-14	
Ethylbenzene	96	95	80-120	73-127	2	0-20	
Toluene	95	94	85-127	78-134	1	0-7	
Trichloroethene	99	98	85-121	79-127	1	0-11	
Vinyl Chloride	91	93	64-136	52-148	2	0-10	
Methyl-t-Butyl Ether (MTBE)	93	94	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	93	90	34-154	14-174	4	0-19	
Diisopropyl Ether (DIPE)	81	84	80-122	73-129	3	0-8	
Ethyl-t-Butyl Ether (ETBE)	89	91	73-127	64-136	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	93	98	69-135	58-146	4	0-12	
Ethanol	84	78	34-124	19-139	8	0-44	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.	Date Received: N/A
3330 Cameron Park Drive, Suite 550	Work Order No: 09-05-0721
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8260B

Project: BP 11102

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-885	Aqueous	GC/MS BB	05/18/09	05/18/09	090518L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	101	101	87-117	82-122	0	0-7	
Carbon Tetrachloride	108	106	78-132	69-141	2	0-8	
Chlorobenzene	101	100	88-118	83-123	2	0-8	
1,2-Dibromoethane	103	106	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	103	103	88-118	83-123	0	0-8	
1,1-Dichloroethene	102	100	71-131	61-141	2	0-14	
Ethylbenzene	97	96	80-120	73-127	1	0-20	
Toluene	101	99	85-127	78-134	2	0-7	
Trichloroethene	118	122	85-121	79-127	3	0-11	
Vinyl Chloride	102	100	64-136	52-148	2	0-10	
Methyl-t-Butyl Ether (MTBE)	103	104	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	94	98	34-154	14-174	5	0-19	
Diisopropyl Ether (DIPE)	100	97	80-122	73-129	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	105	103	73-127	64-136	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	102	103	69-135	58-146	1	0-12	
Ethanol	96	96	34-124	19-139	0	0-44	

Total number of LCS compounds : 16
Total number of ME compounds : 1
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-05-0721

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
AZ	Surrogate recovery outside of acceptance limits due to matrix interference.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.

Work Order Number: 09-05-0721

Qualifier	Definition
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

6721

BP/ARC Project Name: BP 11102
BP/ARC Facility No: 11102
Req Due Date (mm/dd/yy): 14 Day TAT
Rush TAT: Yes ___ No X
Lab Work Order Number:

Lab Name: CalScience	BP/ARC Facility Address: 100 MacArthur Blvd	Consultant/Contractor: Stratus Environmental Inc.
Lab Address: 7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code: Oakland, CA	Consultant/Contractor Project No:
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda	Address: 3330 Cameron Park Drive, #550, Cameron Park, CA 95682
Lab Phone: 714-895-5494 Fax: 714-895-7501	California Global ID No.: T0600100908	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt:	Enfos Proposal No: 000G6-0003	Phone: 530-676-6000 Fax: 530-676-6005
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: chuff@stratusinc.net
Other Info:	Stage: BP/ARC WBS Stage Activity: BP/ARC WBS Activity	Invoice To: BP/ARC X Contractor ___

BP/ARC EBM: Paul Supple
EBM Phone: (925) 275-3801
EBM Email: paul.supple@bp.com

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: GRO by 8015M	BTEX/5 FO* by 8260B	Ethanol by 8260B	EDB by 8260B	1,2-DCA by 8260B	H2S	NO3	SO4			Report Type & QC Level
1	MW-1	5/7/2009	1125		X							X			X	X	X	X	X	X	X	X			
2	MW-2	5/7/2009	1105		X							X			X	X	X	X	X	X	X	X			
3	MW-3	5/7/2009	1045		X							X			X	X	X	X	X	X	X	X			
4	TB-11102-05072009	5/7/2009	500		X			2				X													ON HOLD

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Report Type & QC Level: Standard X; Full Data Package ___

Comments: *Oxy = MTBE, TAME, ETBE, DIPE, TBA

Sampler's Name: Jerry Gonzalez
Sampler's Company: Stratus Environmental Inc.
Shipment Method: Ship Date:
Shipment Tracking No: 106280027

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
				5/8/09	1030

Special Instructions: Tb Sample ON HOLD! CC results to bpalameda@secor.com

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-05-0721

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 5/8/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 3.6 °C - 0.2 °C (CF) = 3.4 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only Initial: JP

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: JP

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: SO

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☑ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☑ No date relinquished. ☑ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	SO 5/8/09 ☑	☑	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☑6 VOAh ☐VOA**na₂** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na₂** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☑250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PB ☐100PB**na₂** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Other:** ☐_____ Checked/Labeled by: SO

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) Reviewed by: W.SC

Preservative: h: HCL n: HNO3 na_2:$Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered Scanned by: SO

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-05-0721

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS:

- ☐ **Samples NOT RECEIVED but listed on COC**
- ☐ **Samples received but NOT LISTED on COC**
- ☐ **Holding time expired** – list sample ID(s) and test
- ☐ **Insufficient quantities for analysis** – list test
- ☐ **Improper container(s)/preservative used** – list test
- ☐ **No preservative noted on COC or label** – list test & notify lab
- ☐ **Sample labels illegible** – note test/container type
- ☐ **Sample labels do not match COC** – Note in comments
  - ☐ **Sample ID**
  - ☐ **Date and/or Time Collected**
  - ☐ **Project Information**
  - ☐ **# of containers**
- ☐ **Sample containers compromised** – Note in comments
  - ☐ **Leaking**
  - ☐ **Broken**
  - ☐ **Without Labels**
- ☐ **Air sample containers compromised** – Note in comments
  - ☐ **Flat**
  - ☐ **Very low in volume**
  - ☐ **Leaking (transferred into Calscience Tedlar® Bag*)**
  - ☐ **Leaking (transferred into Client's Tedlar® Bag*)**
- ☐ **Other:** _____

Comments:

HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of RSK or CO_2 or DO Received
						1,2,3	G	1 (H2S)

Comments: _____

*Transferred at Client's request.

Initial / Date SO 5/08/09

ATTACHMENT

FIELD PROCEDURES FOR GROUNDWATER SAMPLING

The sampling procedures for groundwater monitoring events are contained in this appendix.

Groundwater and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

Prior to measuring the depth to liquid in the well, the well caps are removed and the liquid level allowed to stabilize. A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present, and a water level indicator is used to measure the groundwater depth in monitoring wells that do not contain LPH. Depth to groundwater or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typically a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for hydrocarbon sheen.

Subjective Analysis of Groundwater

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

Monitoring Well Sampling

In many cases, determining whether to purge or not to purge wells prior to sample collection is made in the field and is often based on depth to water relative to the screen interval of the well. Site-specific field data sheets present details associated with the purge method and equipment used.

Monitoring wells, when purged, use a pump or bailer until pH, temperature, and conductivity of the purge water has stabilized and a minimum of three well volumes of water has been removed. Field measuring equipment is calibrated and maintained according to the manufacturer's instructions. If three well volumes cannot be removed in one half hour's time the well is allowed to recharge to 80% of original level. After recharging, a groundwater sample is then collected from each of the wells using disposable bailers.

A Teflon bailer, electric submersible or bladder pump will be the only equipment used for well sampling. When samples for volatile organic analysis are being collected, the pump flow will be regulated at approximately 100 milliliters per minute to minimize pump effluent turbulence and aeration. Glass bottles of at least 40-milliliters volume and fitted with Teflon-lined septa will be used in sampling for volatile organics. These

bottles will be filled completely to prevent air accumulation in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum will be placed over the positive meniscus to eliminate air. After the bottle is capped, it is inverted and tapped to verify that it contains no air bubbles. The sample containers for other parameters will be filled, filtered as required, and capped. Glass and plastic bottles used by Stratus to collect groundwater samples are supplied by the laboratory.

Groundwater Sample Labeling and Preservation

Samples are collected in appropriate containers supplied by the laboratory. All required chemical preservation is added to the bottles prior to delivery to Stratus. Sample label information includes a unique sample identification number, job identification number, date, and time. After labeling, all groundwater samples are placed in a Ziploc® type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Stratus' office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form. Trip and temperature blanks supplied by the laboratory accompany the groundwater sample containers and groundwater samples.

Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, is recorded in the field records. The samples are analyzed by a California-certified laboratory.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and contain adequate volumes for analysis. These conditions are noted on a Laboratory Sample Receipt Checklist that becomes part of the laboratory report upon request.

If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory. The sample description, date received, client's name, and other relevant information is also recorded.

Equipment Cleaning

All reusable sampling equipments are cleaned using phosphate-free detergents and rinsed with de-ionized water.

APPENDIX B

GEOTRACKER UPLOAD CONFIRMATIONS

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_WELL FILE

SUCCESS

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

Submittal Type:	**GEO_WELL**
Submittal Title:	**2Q09 GEO_WELL 11102**
Facility Global ID:	**T0600100908**
Facility Name:	**BP #11102**
File Name:	**GEO_WELL.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**5/27/2009 1:31:10 PM**
Confirmation Number:	**3720849454**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

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

Submittal Type:	**EDF - Monitoring Report - Quarterly**
Submittal Title:	**2Q09 GW Monitoring**
Facility Global ID:	**T0600100908**
Facility Name:	**BP #11102**
File Name:	**09050721.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**5/27/2009 1:33:39 PM**
Confirmation Number:	**6059786140**

VIEW QC REPORT

VIEW DETECTIONS REPORT