



Atlantic Richfield Company
(a BP affiliated company)

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

20 April 2007

Re: First Quarter 2007 Ground-Water Monitoring Report
Former BP Service Station # 11102
100 MacArthur Boulevard
Oakland, California
ACEH Case #RO0000456

RECEIVED

1:21 pm, May 01, 2007

Alameda County
Environmental Health



"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

First Quarter 2007 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



1324 Mangrove Avenue, Suite 212
Chico, California 95926
(530) 566-1400
www.broadbentinc.com

20 April 2007

Project No. 06-08-643

20 April 2007

Project No. 06-08-643

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

Attn.: Mr. Paul Supple

Re: First Quarter 2007 Ground-Water Monitoring Report, Former BP Service Station #11102,
100 MacArthur Boulevard, Alameda County, Oakland, California;
ACEH Case #RO0000456

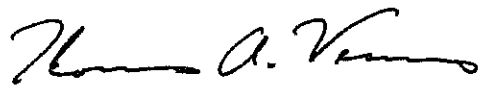
Dear Mr. Supple:

Attached is the *First Quarter 2007 Ground-Water Monitoring Report* for Former BP Service Station #11102 (herein referred to as Station #11102) located at 100 MacArthur Boulevard, Oakland, Alameda County, California (Site). This report presents a summary of results from ground-water monitoring conducted during the First Quarter of 2007.

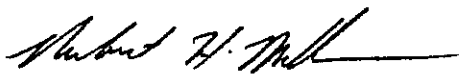
Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

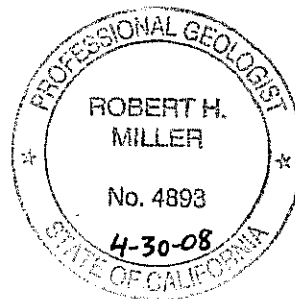
BROADBENT & ASSOCIATES, INC.



Thomas A. Venus
Senior Engineer, P.E.



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



Enclosures

cc: Mr. Steven Plunkett, Alameda County Environmental Health (Submitted via ACEH ftp site)
Ms. Shelby Lathrop, ConocoPhillips (Submitted via WebXtender)
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.:		06-08-643
Primary Agency/Regulatory ID No.:		Alameda County Environmental Health (ACEH) ACEH Case #RO0000456

WORK PERFORMED THIS QUARTER (First Quarter 2007):

1. Prepared and submitted Fourth Quarter 2006 Ground-Water Monitoring Report.
2. Conducted ground-water monitoring/sampling for First Quarter 2007. Work performed by Stratus Environmental, Inc (Stratus).

WORK PROPOSED FOR NEXT QUARTER (Second Quarter 2007):

1. Prepared and submitted this First Quarter 2007 Ground-Water Monitoring Report (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for Second Quarter 2007. Work to be completed by Stratus.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	<u>Ground-Water Monitoring/Sampling</u>
Frequency of ground-water monitoring:	<u>Quarterly: Wells MW-1 through MW-3</u>
Frequency of ground-water sampling:	<u>Quarterly: Wells MW-1 through MW-3</u>
Is free product (FP) present on-site:	<u>No</u>
Current remediation techniques:	<u>NA</u>
Depth to ground water (below TOC):	<u>10.36 (MW-1) to 12.73 (MW-3)</u>
General ground-water flow direction:	<u>West</u>
Approximate hydraulic gradient:	<u>0.06 ft/ft</u>

DISCUSSION:

First Quarter 2007 ground-water monitoring and sampling was conducted at Station #11102 on 8 January 2007 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 10.36 ft at well MW-1 to 12.73 ft at well MW-3. Resulting ground-water surface elevations ranged from 79.84 ft above mean sea level in well MW-1 to 74.29 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 0.06 ft/ft to the west, which varies slightly from 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 other irregularities were encountered during sampling. Samples were submitted under chain-of-custody protocol to Test America Analytical Testing Corporation (Morgan

Hill, California), for analysis of Gasoline Range Organics (GRO, C4-C12) by the LUFT GCMS Method; 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. No irregularities were encountered during laboratory analysis of the samples, with the exception that the reported GRO concentrations for samples MW-2 and MW-3 were partly due to individual peak(s) in the quantitation range. These notes are called out in the laboratory analytical reports. Ground-water sampling field data sheets and the laboratory analytical report, including chain of custody documentation, are provided in Appendix A.

Gasoline Range Organics were detected above the laboratory reporting limit in two of the three wells sampled at concentrations up to 1,500 micrograms per liter ($\mu\text{g/L}$) in well MW-2. Benzene was detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 2.2 $\mu\text{g/L}$ in well MW-1. TAME was detected above the laboratory reporting limit in two of the three wells sampled at concentrations up to 38 $\mu\text{g/L}$ in well MW-2. TBA was detected above the laboratory reporting limit in two of the three wells sampled at concentrations up to 7,700 $\mu\text{g/L}$ in well MW-2. MTBE was detected above the laboratory reporting limit in each of the wells sampled at concentrations up to 1,700 $\mu\text{g/L}$ 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. Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well. Historic laboratory analytical results are summarized in Table 1 and Table 2. The most recent GRO, Benzene, and MTBE concentrations are also presented in Drawing 1. A copy of the Laboratory Analytical Report, including chain-of-custody documentation 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 Test America (Morgan Hill, 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, 8 January 2007, 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

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

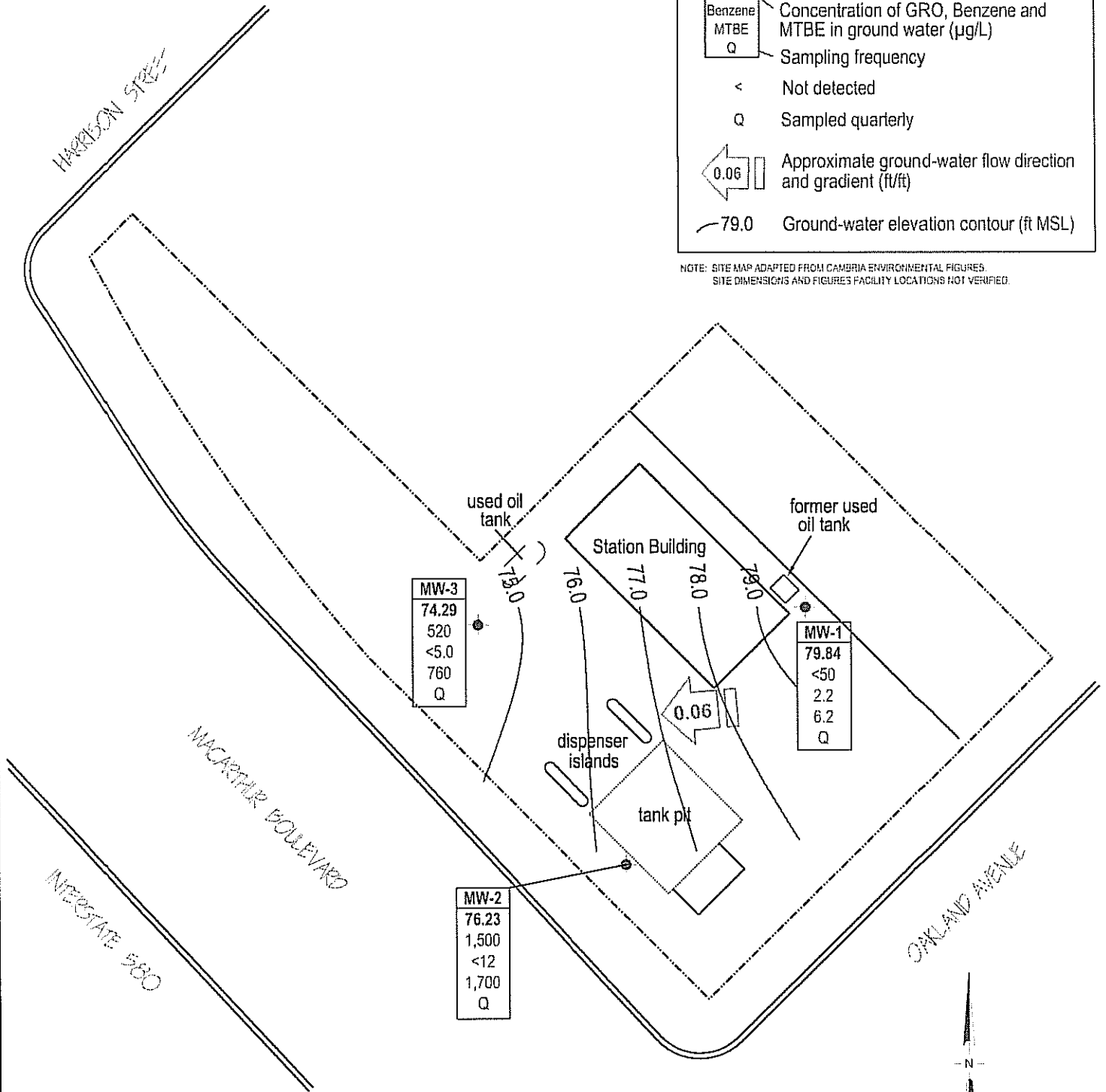
Appendix B. GeoTracker Upload Confirmation

LEGEND

-  Monitoring Well Location
- | Well |
|---------|
| ELEV |
| GRO |
| Benzene |
| MTBE |
| Q |

 Well designation
- Ground-water elevation (ft MSL)
- Concentration of GRO, Benzene and MTBE in ground water ($\mu\text{g/L}$)
- Sampling frequency
- < Not detected
- Q Sampled quarterly
-  0.06 Approximate ground-water flow direction and gradient (ft/ft)
-  79.0 Ground-water elevation contour (ft MSL)

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



MW-3
74.29
520
<5.0
760
Q

MW-1
79.84
<50
2.2
6.2
Q

MW-2
76.23
1,500
<12
1,700
Q

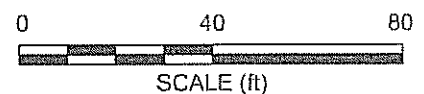


Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

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

Well and Sample Date	P/NP	Footnote	TOC Elevation (feet msl)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	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	5.9	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	--	c	90.20	--	--	--	3,700	120	12	26	9.5	--	--	PACE	--	--	--	--
6/7/1993	--		90.20	10.93	--	79.27	3,400	98	11	21	7.6	--	--	PACE	--	440	--	--
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	--	c, e	90.20	--	--	--	3,600	<13	<5.0	<5.0	<10	--	--	ATI	--	--	--	--
6/21/1995	--		90.20	9.38	--	80.82	4,700	16	<5.0	<5.0	<10	--	6.7	ATI	--	1,500	2,900	0.6
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	--		90.20	8.97	--	81.23	7,900	12	<10	<10	<10	15,000	6	SPL	--	1,700	<5	--
6/10/1997	--	c	90.20	--	--	--	7,700	14	<25	<25	<25	13,000	--	SPL	--	--	--	--
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 msl)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	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	--	PAGE	--	--	--	--
9/28/2000	--		90.20	11.33	--	78.87	2,700	10	2.6	1.1	2.7	28,000	--	PAGE	--	--	--	--
3/8/2001	--		90.20	10.96	--	79.24	8,200	23.5	6.09	5.23	8.97	11,600	--	PAGE	--	--	--	--
9/21/2001	--		90.20	12.07	--	78.13	6,000	37.9	<0.5	<0.5	<1.5	7,370	--	PAGE	--	--	--	--
2/28/2002	--		90.20	10.48	--	79.72	6,400	60.8	<5.0	6.43	<10	7,750	--	PAGE	--	--	--	--
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	1.0	<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	--	--	--
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	--	--	--	--

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 msl)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	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.																		
3/17/1991	--		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	<0.5	<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	--	c, d	87.91	--	--	--	2,100	32	3.8	2.2	17	3,700	--	PACE	--	--	--	--
12/2/1993	--	d	87.91	14.94	--	72.97	790	3.4	0.5	10	<0.5	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	PAGE	--	--	--	--
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	--	--	--	--
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	--	c	87.91	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	SPL	--	--	--	--
6/18/1998	--		87.91	8.89	--	79.02	50	<0.5	<1.0	<1.0	<1.0	<10	5.3	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	--	--	--	<50
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	--	--	--	--

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 msl)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	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.																		
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	i	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	--	--	--
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	--

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 msl)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	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.																		
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	12.15	--	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	--	c	87.02	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	SPL	--	--	--	--
12/12/1997	--		87.02	12.61	--	74.41	<50	<0.5	<1.0	<1.0	<1.0	<10	5.6	SPL	--	--	--	--
6/18/1998	--		87.02	12.80	--	74.22	--	--	--	--	--	--	--	--	--	--	--	--
6/18/1998	--		87.02	9.07	--	77.95	50	<0.5	<1.0	<1.0	<1.0	<10	5.5	SPL	--	--	--	--
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	i	87.02	13.17	--	73.85	<200	<25	<25	<25	<25	560	--	SEQM	6.8	--	--	--
07/01/2004	P		87.02	15.19	--	71.85	<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	--	--	--

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 msl)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	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.																		
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	—	—	—
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	—	—	PAGE	—	—	—	—
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

ft MSL = feet above mean sea level

GRO = Gasoline range organics, range C4-C12

GWE = Groundwater elevation measured in ft MSL

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 MSL

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)

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.

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.

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	
MW-2									
7/14/2003	<100,000	<20,000	24,000	<1,000	<1,000	<1,000	—	—	
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	
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	

**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									
7/14/2003	<100	<20	28	<1.0	<1.0	<1.0	<5.0	<5.0	
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	1,400	<10	<10	18	<10	<10	
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	

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.

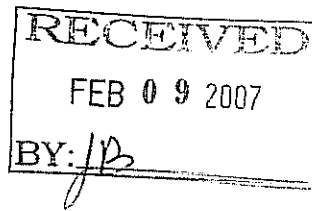
Table 3. Historical Ground-Water Flow Direction and Gradient
Station #11102, 100 MacArthur Blvd., Oakland, CA

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

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.

APPENDIX A

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



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

February 1, 2007

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 Blvd., Oakland, California (Quarterly Monitoring performed on January 8, 2007)

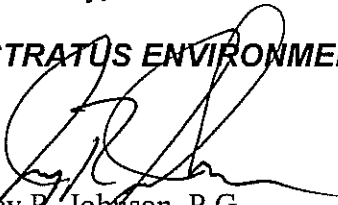
General Information

Data Submittal Prepared / Reviewed by: Sandy Hayes / Jay Johnson
Phone Number: (530) 676-6000
On-Site Supplier Representative: Jerry Gonzales
Date: January 8, 2007
Arrival: 13:55 *Departure:* 16:20
Weather Conditions: Clear
Unusual Field Conditions: None
Scope of Work Performed: Quarterly monitoring and sampling
Variations from Work Scope: None noted

This submittal presents the tabulation of data collected in association with routine groundwater monitoring. The attachments include bill of lading, field data sheets, chain of custody documentation, and certified analytical results. 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:

- Bill of Lading
- Field Data Sheets
- Chain of Custody Documentation
- Certified Analytical Results

CC: Mr. Paul Supple, BP/ARCO

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 PURGEWATER WHICH HAS BEEN
RECOVERED FROM GROUNDWATER WELLS IS
COLLECTED BY THE CONTRACTOR, MADE UP INTO
LOADS OF APPROPRIATE SIZE AND HAULED BY
BELSHIRE ENVIRONMENTAL TO SEAPORT
ENVIRONMENTAL IN REDWOOD CITY, CALIFORNIA.

The contractors performing this work are Stratus
Environmental, Inc. [Stratus, 3330 Cameron Park Drive, Suite 550,
Cameron Park, CA 95682, (530) 676-6004], and Doulos
Environmental, Inc. [Doulos, PO Box 2559, Orangevale, CA
95662, (916) 990-0333]. Stratus is authorized by BP GEM OIL
COMPANY to recover, collect, and apportion into loads the non-
hazardous well purgewater that is drawn from wells at BP GEM
Oil Company facilities and deliver that purgewater to BP GEM Oil
Company facility 5786 located in West Sacramento, California.
Doulos also performs these services under subcontract to Stratus.
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:

11102

Station #

Oakland - 100 MacArthur Blvd.

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

125

Added Equipment

Rinse Water 5

Any Other

Adjustments 0

TOTAL GALS.

RECOVERED 130

loaded onto

Stratus vehicle # _____

Stratus Project # _____

time

date

1730 1/18/07

Signature

Jerry G.

RECEIVED AT

time

date

5786

1730 1/18/07

Unloaded by

Signature JG

Received 1-19-07

BP ALAMEDA PORTFOLIO

HYDROLOGIC DATA SHEET

 Gauge Date: 1-8-07

 Project Name: Oakland - 100 MacArthur Blvd.

 Field Technician: Jerry

 Project Number: 11102

 TOC = Top of Well Casing Elevation
 DTP = Depth to Free Product (FP or NAP) Below TOC
 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	DTP	DTW	DTB	DIA	ELEV			
MW-1	14:15			10.36	31.96			Yes	Yes MR	
MW-2	14:10			11.68	32.20			Yes		
MW-3	14:08			12.73	32.30			Yes	V	

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11102 PURGED BY: Jc WELL I.D.: MW-1
 CLIENT NAME: _____ SAMPLED BY: Jc SAMPLE I.D.: MW-1
 LOCATION: Oakland - 100 MacArthur Blvd. QA SAMPLES: _____

DATE PURGED 1-8-07 START (2400hr) 14:16 END (2400hr) 14:23
 DATE SAMPLED 1-8-07 SAMPLE TIME (2400hr) 14:35
 SAMPLE TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" _____ 3" _____ 4" 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) = 14.4
 DEPTH TO WATER (feet) = 10.26 CALCULATED PURGE (gal) = 43.2
 WATER COLUMN HEIGHT (feet) = 21.5 ACTUAL PURGE (gal) = 43.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1-8-07</u>	<u>14:18</u>	<u>14.5</u>	<u>23.2</u>	<u>551</u>	<u>7.20</u>	<u>clear</u>	_____
<u>1</u>	<u>14:20</u>	<u>29.0</u>	<u>21.8</u>	<u>667</u>	<u>7.15</u>	<u>1</u>	_____
<u>1</u>	<u>14:23</u>	_____	<u>21.6</u>	<u>732</u>	<u>6.97</u>	<u>1</u>	_____

SAMPLE DEPTH TO WATER: 10.26 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: ALL GEN
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: Var-HCL

PURGING EQUIPMENT

Bladder Pump
 Centrifugal Pump
 Submersible Pump
 Peristaltic Pump
 Other: _____
 Pump Depth: 25

SAMPLING EQUIPMENT

Bladder Pump
 Centrifugal Pump
 Submersible Pump
 Peristaltic Pump
 Other: _____

WELL INTEGRITY: GOOD LOCK#: Master

REMARKS: D.O 2.51

SIGNATURE: [Signature] Page _____ of _____

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11102 PURGED BY: JG WELL I.D.: MW-2
 CLIENT NAME: _____ SAMPLED BY: JG SAMPLE I.D.: MW2
 LOCATION: Oakland - 100 MacArthur Blvd. QA SAMPLES: _____

DATE PURGED 1-8-07 START (2400hr) 14:40 END (2400hr) 14:49
 DATE SAMPLED 1-8-07 SAMPLE TIME (2400hr) 15:30
 SAMPLE TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" _____ 3" _____ 4" 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) = 32.20 CASING VOLUME (gal) = 13.7
 DEPTH TO WATER (feet) = 11.68 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 F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1-8-07</u>	<u>14:42</u>	<u>13.7</u>	<u>22.6</u>	<u>638</u>	<u>6.87</u>	<u>clear</u>	
<u>1</u>	<u>14:45</u>	<u>27.6</u>	<u>23.0</u>	<u>633</u>	<u>6.73</u>	<u> </u>	
<u>1</u>	<u>14:47</u>	<u>42</u>	<u>23.5</u>	<u>2247</u>	<u>6.54</u>	<u> </u>	

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 13.51 SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: Belegen
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: Voa-HCC

PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____
 Pump Depth: 30

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____

WELL INTEGRITY: _____ LOCK#: Mast

REMARKS: D.O 1.37

SIGNATURE: [Signature] Page _____ of _____

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

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

DATE PURGED 1-8-07 START (2400hr) 15:00 END (2400hr) 15:07
 DATE SAMPLED 1-8-07 SAMPLE TIME (2400hr) 16:00
 SAMPLE TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" _____ 3" _____ 4" 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) = 32.00 CASING VOLUME (gal) = 13.1
 DEPTH TO WATER (feet) = 12.73 CALCULATED PURGE (gal) = 39.3
 WATER COLUMN HEIGHT (feet) = 19.5 ACTUAL PURGE (gal) = 34.3

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1-8-07</u>	<u>15:03</u>	<u>13.1</u>	<u>24.3</u>	<u>709</u>	<u>7.29</u>	<u>clear</u>	_____
<u>1</u>	<u>15:05</u>	<u>26.2</u>	<u>24.2</u>	<u>706</u>	<u>7.18</u>	<u>1</u>	_____
<u>1</u>	<u>15:07</u>	<u>34.3</u>	<u>24.0</u>	<u>710</u>	<u>7.12</u>	<u>1</u>	_____

SAMPLE DEPTH TO WATER: 16.80 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: all gen
 ODOR: no SAMPLE VESSEL / PRESERVATIVE: VOU-HCL

PURGING EQUIPMENT

SAMPLING EQUIPMENT

Bladder Pump _____ Bailer (Teflon) _____
 Centrifugal Pump _____ Bailer (PVC) _____
 Submersible Pump _____ Bailer (Stainless Steel) _____
 Peristaltic Pump _____ Dedicated _____
 Other: _____
 Pump Depth: 25

Bladder Pump _____ Bailer (Teflon) _____
 Centrifugal Pump _____ Bailer (PVC or disposable) _____
 Submersible Pump _____ Bailer (Stainless Steel) _____
 Peristaltic Pump _____ Dedicated _____
 Other: _____

WELL INTEGRITY: _____ LOCK#: MASTER

REMARKS: D0-3.61

SIGNATURE: [Signature] Page _____ of _____

0
213



bp A BP affiliated company

Chain of Custody Record

Project Name: ARCO 11102
 BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > Alameda > 11102
 State or Lead Regulatory Agency: _____
 Requested Due Date (mm/dd/yy): _____

Page ____ of ____

On-site Time: <u>13:55</u>	Temp: <u>65</u>
Off-site Time: <u>16:20</u>	Temp: <u>65</u>
Sky Conditions: <u>Clear</u>	
Meteorological Events: <u>None</u>	
Wind Speed: <u>0</u>	Direction: <u>NA</u>

Lab Name: <u>TestAmerica</u>	BP/AR Facility No.: <u>11102</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>100 MacArthur Blvd.</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u>
City: <u>Orange Hill, CA 95937</u>	Site Lat/Long: _____	City: <u>Cameron Park, CA 95682</u>
Lab PM: <u>Lisa Race</u>	California Global ID No.: <u>T0600100908</u>	Consultant/Contractor Project No.: _____
Phone/Fax: <u>408-782-8156 408-782-6308 (fax)</u>	Enfos Project No.: <u>G07T9-0032</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or OOC (circle one) <u>Provision</u>	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u>	Phase/WBS: <u>04-Monitoring</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
City: <u>San Ramon, CA</u>	Sub Phase/Task: <u>03-Analytical</u>	E-mail EDD To: <u>cjewitt@stratusinc.net</u>
Phone/Fax: <u>925-275-3506</u>	Cost Element: <u>01-Contractor labor</u>	Invoice to: <u>Atlantic Richfield Co.</u>

Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments				
			Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	GROBTEX/Oxy*	1,2-DCA	Ethanol	EDB	DRO					
MW-1	1435	1-8-07	X			6				X				X	X	X	X					
MW-2	1530		X			3				X				X	X	X	X					*Oxy = MTBE,TAME,ETBE,DIPE,TBA
MW-3	1600		X			3				X				X	X	X	X					
TB-11102	500		X			2				X				X	X	X	X					Hold

4.8"

Sampler's Name: <u>Jerry Gonzalez</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>Doulos Env</u>	<u>[Signature]</u>			<u>[Signature]</u>	<u>1/10</u>	<u>1435</u>
Instrument Date:						
Instrument Method:						
Instrument Tracking No:						

Special Instructions: Please cc results to rmiller@broadbentinc.com

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

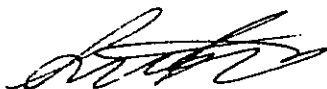
25 January, 2007

Jay Johnson
Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park, CA 95682

RE: BP Heritage #11102, Oakland, CA
Work Order: MQA0416

Enclosed are the results of analyses for samples received by the laboratory on 01/11/07 08:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa Race
Senior Project Manager

CA ELAP Certificate # 1210

The results in this laboratory report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPGCLN Technical Specifications, applicable Federal, State, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPGCLN. This entire report was reviewed and approved for release.

Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park CA, 95682

Project: BP Heritage #11102, Oakland, CA
Project Number: G07T9-0032
Project Manager: Jay Johnson

MQA0416
Reported:
01/25/07 14:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MQA0416-01	Water	01/08/07 14:35	01/11/07 08:00
MW-2	MQA0416-02	Water	01/08/07 15:30	01/11/07 08:00
MW-3	MQA0416-03	Water	01/08/07 16:00	01/11/07 08:00
TB-11102	MQA0416-04	Water	01/08/07 05:00	01/11/07 08:00

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies.

These samples were received with intact custody seals.

Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park CA, 95682

Project: BP Heritage #11102, Oakland, CA
Project Number: G07T9-0032
Project Manager: Jay Johnson

MQA0416
Reported:
01/25/07 14:23

Total Purgeable Hydrocarbons by GC/MS (CA LUFT)
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MQA0416-01) Water Sampled: 01/08/07 14:35 Received: 01/11/07 08:00									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	7A19003	01/19/07	01/19/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		98 %	60-145		"	"	"	"	
MW-2 (MQA0416-02) Water Sampled: 01/08/07 15:30 Received: 01/11/07 08:00									
Gasoline Range Organics (C4-C12)	1500	1200	ug/l	25	7A19003	01/19/07	01/19/07	LUFT GCMS	PV
Surrogate: 1,2-Dichloroethane-d4		96 %	60-145		"	"	"	"	
MW-3 (MQA0416-03) Water Sampled: 01/08/07 16:00 Received: 01/11/07 08:00									
Gasoline Range Organics (C4-C12)	520	500	ug/l	10	7A19003	01/19/07	01/19/07	LUFT GCMS	PV
Surrogate: 1,2-Dichloroethane-d4		98 %	60-145		"	"	"	"	
TB-11102 (MQA0416-04) Water Sampled: 01/08/07 05:00 Received: 01/11/07 08:00									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	7A19003	01/19/07	01/19/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		89 %	60-145		"	"	"	"	

Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park CA, 95682

Project: BP Heritage #11102, Oakland, CA
Project Number: G07T9-0032
Project Manager: Jay Johnson

MQA0416
Reported:
01/25/07 14:23

Volatile Organic Compounds by EPA Method 8260B
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

MW-1 (MQA0416-01) Water Sampled: 01/08/07 14:35 Received: 01/11/07 08:00

tert-Amyl methyl ether	ND	0.50	ug/l	1	7A19003	01/19/07	01/19/07	EPA 8260B	
Benzene	2.2	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	110	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	6.2	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		93 %	75-130	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98 %	60-145	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		95 %	70-130	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		99 %	60-120	"	"	"	"	"	

MW-2 (MQA0416-02) Water Sampled: 01/08/07 15:30 Received: 01/11/07 08:00

tert-Amyl methyl ether	38	12	ug/l	25	7A19003	01/19/07	01/19/07	EPA 8260B	
Benzene	ND	12	"	"	"	"	"	"	
tert-Butyl alcohol	7700	500	"	"	"	"	"	"	
Di-isopropyl ether	ND	12	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	12	"	"	"	"	"	"	
1,2-Dichloroethane	ND	12	"	"	"	"	"	"	
Ethanol	ND	7500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	12	"	"	"	"	"	"	
Ethylbenzene	ND	12	"	"	"	"	"	"	
Methyl tert-butyl ether	1700	12	"	"	"	"	"	"	
Toluene	ND	12	"	"	"	"	"	"	
Xylenes (total)	ND	12	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		92 %	75-130	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96 %	60-145	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94 %	70-130	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97 %	60-120	"	"	"	"	"	

Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park CA, 95682

Project: BP Heritage #11102, Oakland, CA
Project Number: G07T9-0032
Project Manager: Jay Johnson

MQA0416
Reported:
01/25/07 14:23

Volatile Organic Compounds by EPA Method 8260B
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MIW-3 (MQA0416-03) Water Sampled: 01/08/07 16:00 Received: 01/11/07 08:00									
tert-Amyl methyl ether	9.7	5.0	ug/l	10	7A19003	01/19/07	01/19/07	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	200	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	3000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	760	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		93 %		75-130	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98 %		60-145	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94 %		70-130	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97 %		60-120	"	"	"	"	
TB-11102 (MQA0416-04) Water Sampled: 01/08/07 05:00 Received: 01/11/07 08:00									
tert-Amyl methyl ether	ND	0.50	ug/l	1	7A19003	01/19/07	01/19/07	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		91 %		75-130	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		89 %		60-145	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94 %		70-130	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97 %		60-120	"	"	"	"	

Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park CA, 95682

Project: BP Heritage #11102, Oakland, CA
Project Number: G07T9-0032
Project Manager: Jay Johnson

MQA0416
Reported:
01/25/07 14:23

Total Purgeable Hydrocarbons by GC/MS (CA LUFT) - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7A19003 - EPA 5030B P/T / LUFT GCMS

Blank (7A19003-BLK1)

Prepared & Analyzed: 01/19/07

Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.34		"	2.50		94	60-145			

Laboratory Control Sample (7A19003-BS2)

Prepared & Analyzed: 01/19/07

Gasoline Range Organics (C4-C12)	509	50	ug/l	500		102	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.44		"	2.50		98	60-145			

Laboratory Control Sample Dup (7A19003-BSD2)

Prepared & Analyzed: 01/19/07

Gasoline Range Organics (C4-C12)	552	50	ug/l	500		110	75-140	8	20	
Surrogate: 1,2-Dichloroethane-d4	2.41		"	2.50		96	60-145			

Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park CA, 95682

Project: BP Heritage #11102, Oakland, CA
Project Number: G07T9-0032
Project Manager: Jay Johnson

MQA0416
Reported:
01/25/07 14:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7A19003 - EPA 5030B P/T / EPA 8260B

Blank (7A19003-BLK1)

Prepared & Analyzed: 01/19/07

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	300	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
<i>Surrogate: Dibromofluoromethane</i>	2.30		"	2.50		92	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.34		"	2.50		94	60-145			
<i>Surrogate: Toluene-d8</i>	2.37		"	2.50		95	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.41		"	2.50		96	60-120			

Laboratory Control Sample (7A19003-BS1)

Prepared & Analyzed: 01/19/07

tert-Amyl methyl ether	10.5	0.50	ug/l	10.0		105	65-135			
Benzene	10.6	0.50	"	10.0		106	70-125			
tert-Butyl alcohol	192	20	"	200		96	60-135			
Di-isopropyl ether	11.1	0.50	"	10.0		111	70-130			
1,2-Dibromoethane (EDB)	11.0	0.50	"	10.0		110	80-125			
1,2-Dichloroethane	10.5	0.50	"	10.0		105	75-125			
Ethanol	192	300	"	200		96	15-150			
Ethyl tert-butyl ether	11.2	0.50	"	10.0		112	65-130			
Ethylbenzene	10.9	0.50	"	10.0		109	70-130			
Methyl tert-butyl ether	11.8	0.50	"	10.0		118	50-140			
Toluene	10.4	0.50	"	10.0		104	70-120			
Xylenes (total)	32.6	0.50	"	30.0		109	80-125			
<i>Surrogate: Dibromofluoromethane</i>	2.45		"	2.50		98	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.46		"	2.50		98	60-145			
<i>Surrogate: Toluene-d8</i>	2.41		"	2.50		96	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.58		"	2.50		103	60-120			

Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park CA, 95682

Project: BP Heritage #11102, Oakland, CA
Project Number: G07T9-0032
Project Manager: Jay Johnson

MQA0416
Reported:
01/25/07 14:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7A19003 - EPA 5030B P/T / EPA 8260B

Matrix Spike (7A19003-MS1)		Source: MQA0416-01			Prepared & Analyzed: 01/19/07					
tert-Amyl methyl ether	9.40	0.50	ug/l	10.0	ND	94	65-135			
Benzene	11.6	0.50	"	10.0	2.2	94	70-125			
tert-Butyl alcohol	296	20	"	200	110	93	60-135			
Di-isopropyl ether	8.76	0.50	"	10.0	ND	88	70-130			
1,2-Dibromoethane (EDB)	11.1	0.50	"	10.0	ND	111	80-125			
1,2-Dichloroethane	9.17	0.50	"	10.0	ND	92	75-125			
Ethanol	174	300	"	200	ND	87	15-150			
Ethyl tert-butyl ether	9.29	0.50	"	10.0	ND	93	65-130			
Ethylbenzene	9.58	0.50	"	10.0	ND	96	70-130			
Methyl tert-butyl ether	15.6	0.50	"	10.0	6.2	94	50-140			
Toluene	10.0	0.50	"	10.0	ND	100	70-120			
Xylenes (total)	29.8	0.50	"	30.0	ND	99	80-125			
<i>Surrogate: Dibromofluoromethane</i>	2.45		"	2.50		98	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.21		"	2.50		88	60-145			
<i>Surrogate: Toluene-d8</i>	2.45		"	2.50		98	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.42		"	2.50		97	60-120			

Matrix Spike Dup (7A19003-MSD1)		Source: MQA0416-01			Prepared & Analyzed: 01/19/07					
tert-Amyl methyl ether	10.6	0.50	ug/l	10.0	ND	106	65-135	12	25	
Benzene	12.6	0.50	"	10.0	2.2	104	70-125	8	15	
tert-Butyl alcohol	310	20	"	200	110	100	60-135	5	35	
Di-isopropyl ether	11.0	0.50	"	10.0	ND	110	70-130	23	35	
1,2-Dibromoethane (EDB)	11.2	0.50	"	10.0	ND	112	80-125	0.9	15	
1,2-Dichloroethane	10.5	0.50	"	10.0	ND	105	75-125	14	10	RA
Ethanol	188	300	"	200	ND	94	15-150	8	35	
Ethyl tert-butyl ether	10.9	0.50	"	10.0	ND	109	65-130	16	35	
Ethylbenzene	10.5	0.50	"	10.0	ND	105	70-130	9	15	
Methyl tert-butyl ether	17.5	0.50	"	10.0	6.2	113	50-140	11	25	
Toluene	10.4	0.50	"	10.0	ND	104	70-120	4	15	
Xylenes (total)	30.8	0.50	"	30.0	ND	103	80-125	3	15	
<i>Surrogate: Dibromofluoromethane</i>	2.40		"	2.50		96	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.52		"	2.50		101	60-145			
<i>Surrogate: Toluene-d8</i>	2.44		"	2.50		98	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.60		"	2.50		104	60-120			

Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park CA, 95682

Project: BP Heritage #11102, Oakland, CA
Project Number: G07T9-0032
Project Manager: Jay Johnson

MQA0416
Reported:
01/25/07 14:23

Notes and Definitions

RA RPD exceeds limit due to matrix interf.; % recovs. within limits
PV Hydrocarbon result partly due to individ. peak(s) in quant. range
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference



Chain of Custody Record

Project Name: ARCO 11102
 BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > Alameda > 11102
 State or Lead Regulatory Agency: _____
 Requested Due Date (mm/dd/yy): _____

On-site Time: <u>13:55</u>	Temp: <u>65</u>
Off-site Time: <u>16:20</u>	Temp: <u>65</u>
Sky Conditions: <u>Clear</u>	
Meteorological Events: <u>None</u>	
Wind Speed: <u>0</u>	Direction: <u>NA</u>

Lab Name: <u>TestAmerica</u>	BP/AR Facility No.: <u>11102</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>100 MacArthur Blvd.</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u>
<u>Morgan Hill, CA 95937</u>	Site Lat/Long:	<u>Cameron Park, CA 95682</u>
Lab PM: <u>Lisa Race</u>	California Global ID No.: <u>T0600100908</u>	Consultant/Contractor Project No.:
Tele/Fax: <u>408-782-8156 408-782-6308 (fax)</u>	Enfos Project No.: <u>G07T9-0032</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or OOC (circle one) <u>Provision</u>	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u>	Phase/WBS: <u>04-Monitoring</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
<u>San Ramon, CA</u>	Sub Phase/Task: <u>03-Analytical</u>	E-mail EDD To: <u>clewitt@stratusinc.net</u>
Tele/Fax: <u>925-275-3506</u>	Cost Element: <u>01-Contractor labor</u>	Invoice to: <u>Atlantic Richfield Co.</u>

Lab Bottle Order No:				Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments -		
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	GROBTEX/Oxy*	1,2-DCA	Ethanol	EDB	DRO			
1	MW-1	1435	1-3-07	X			MQA0416	6			X				X	X	X	X			
2	MW-2	1530		X			02	3			X				X	X	X	X			*Oxy = MTBE, TAME, ETBE, DIPE, TBA
3	MW-3	1600		X			03	3			X				X	X	X	X			
4	TB-11102	500		X			04	2			X				X	X	X	X			Hold
5																					
6																					
7																					
8																					
9																					
10																					4.8"

Sampler's Name: <u>Jerry Gonzalez</u>	Relinquished By / Affiliation: _____	Date: <u>1/10</u>	Time: <u>1515</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>1/10</u>	Time: <u>1435</u>
Sampler's Company: <u>Doulos ENV</u>	_____	_____	_____	_____	Date: <u>1/11</u>	Time: <u>0800</u>
Shipment Date: _____	_____	_____	_____	_____	_____	_____
Shipment Method: _____	_____	_____	_____	_____	_____	_____
Shipment Tracking No: _____	_____	_____	_____	_____	_____	_____

Instructions: Please cc results to rmiller@broadbentinc.com

Body Seals In Place: Yes/No | Temp Blank: Yes/(No) | Cooler Temp on Receipt: 2 (L°F/C) | Trip Blank: Yes/No | MS/MSD Sample Submitted: Yes/No

TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: ARCO
 REC. BY (PRINT): JWJENG.
 WORKORDER: MOA-0416

DATE REC'D AT LAB: 1/11/07
 TIME REC'D AT LAB: 0800
 DATE LOGGED IN: 11/11/07

For Regulatory Purposes?
 DRINKING WATER: YES/NO
 WASTE WATER: YES/NO

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / Absent* Intact / Broken*								<div style="transform: rotate(-45deg); font-size: 2em; font-weight: bold;"> Deleted 1/11/07 See LSC </div>
2. Chain-of-Custody Present / Absent*								
3. Traffic Reports or Packing List Present / Absent								
4. Airbill: Airbill / Sticker Present / Absent								
5. Airbill #: <u>See attached</u>								
6. Sample Labels: Present / Absent								
7. Sample IDs: Listed / Not Listed on Chain-of-Custody								
8. Sample Condition: Intact / Broken* / Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree? Yes / No*								
10. Sample received within hold time? Yes / No*								
11. Adequate sample volume received? Yes / No*								
12. Proper preservatives used? Yes / No*								
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / No*								
14. Read Temp: <u>2.4</u> °C Corrected Temp: <u>↓</u> Is corrected temp 4 +/-2°C? Yes / No** <small>(Acceptance range for samples requiring thermal pres.)</small>								

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

APPENDIX B

GEOTRACKER UPLOAD CONFIRMATION

Electronic Submittal Information

[Main Menu](#) | [View/Add Facilities](#) | [Upload EDD](#) | [Check EDD](#)

UPLOADING A GEO_WELL FILE

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

Submittal Title: 1Q07 GEO_WELL 11102

Submittal Date/Time: 3/9/2007 12:31:36 PM

Confirmation Number: 5455693125

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Logged in as BROADBENT-C
(CONTRACTOR)

[CONTACT SITE ADMINISTRATOR.](#)

Electronic Submittal Information

[Main Menu](#) | [View/Add Facilities](#) | [Upload EDD](#) | [Check EDD](#)

Your EDF file has been successfully uploaded!

Confirmation Number: 8342879235

Date/Time of Submittal: 3/20/2007 1:38:46 PM

Facility Global ID: T0600100908

Facility Name: BP #11102

Submittal Title: 1Q07 GW Monitoring

Submittal Type: GW Monitoring Report

Click [here](#) to view the detections report for this upload.

BP #11102 100 MACARTHUR OAKLAND, CA 94610	Regional Board - Case #: 01-0985 SAN FRANCISCO BAY RWQCB (REGION 2) - (CM) Local Agency (lead agency) - Case #: RO0000456 ALAMEDA COUNTY LOP - (SP)
--	--

<u>CONF #</u>	<u>TITLE</u>	<u>QUARTER</u>
8342879235	1Q07 GW Monitoring	Q1 2007
<u>SUBMITTED BY</u>	<u>SUBMIT DATE</u>	<u>STATUS</u>
Broadbent & Associates, Inc.	3/20/2007	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	3
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	8260FA,8260TPH
TESTED FOR REQUIRED ANALYTES?	Y
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	N
- MATRIX SPIKE DUPLICATE	N
- BLANK SPIKE	Y
- SURROGATE SPIKE	Y

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS > REPD.</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

Logged in as BROADBENT-C (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.