



Atlantic Richfield Company  
(a BP affiliated company)

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

30 April 2009

Re: First Quarter 2009 Ground-Water Monitoring Report  
Atlantic Richfield Company (a BP affiliated company) Station #276  
10600 MacArthur Boulevard  
Oakland, California  
ACEH Case #RO0002565

**RECEIVED**

10:16 am, Apr 30, 2009

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 2009 Ground-Water Monitoring Report**  
Atlantic Richfield Company Station #276  
10600 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*

30 April 2009

Project No. 06-88-601

30 April 2009

Project No. 06-88-601

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

Attn.: Mr. Paul Supple

Re: First Quarter 2009 Report, Atlantic Richfield Company (a BP affiliated company)  
Station #276, 10600 MacArthur Boulevard, Oakland, Alameda County, California  
ACEH Case #RO0002565

Dear Mr. Supple:

Provided herein is the *First Quarter 2009 Ground-Water Monitoring Report* for Atlantic Richfield Company Station #276 located at 10600 MacArthur Boulevard, Oakland, Alameda County, California (Site). This report presents results of ground-water monitoring conducted at the Site during the First 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,

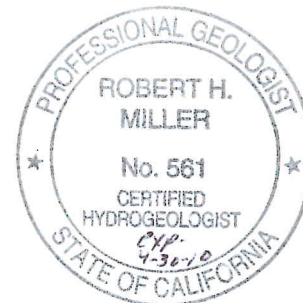
BROADBENT & ASSOCIATES, INC.



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)  
Electronic copy uploaded to GeoTracker

## STATION #276 QUARTERLY GROUND-WATER MONITORING REPORT

Facility: #276	Address:	10600 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.:		06-88-601
Primary Agency/Regulatory ID No.:		Alameda County Environmental Health (ACEH) ACEH Case #RO0002565
Facility Permits/Permitting Agency:		NA

### WORK PERFORMED THIS QUARTER (First Quarter 2009):

1. Prepared and submitted Fourth Quarter 2008 Ground-Water Monitoring Report.
2. Conducted ground-water monitoring/sampling for First Quarter 2009. Work performed on 20 January 2009 by Stratus Environmental, Inc. (Stratus).

### WORK PROPOSED FOR NEXT QUARTER (Second Quarter 2009):

1. Prepared and submitted First Quarter 2009 Ground-Water Monitoring Report (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for Second Quarter 2009.

### QUARTERLY RESULTS SUMMARY:

Current phase of project:	<b>Ground-water monitoring/sampling</b>
Frequency of ground-water monitoring:	<b>Quarterly = MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, RW-1, WGR-3</b>
Frequency of ground-water sampling:	<b>Quarterly = MW-2, MW-5, and MW-8 Semi-Annually (1Q and 3Q) = MW-6 and MW-7 Annually (1Q) = MW-1, MW-3, MW-4, WGR-3, and RW-1</b>
Is free product (FP) present on-site:	<b>No</b>
Current remediation techniques:	<b>NA</b>
Depth to ground water (below TOC):	<b>15.75 ft (MW-2) to 37.02 ft (MW-6)</b>
General ground-water flow direction:	<b>Southwest</b>
Approximate hydraulic gradient:	<b>0.002 ft/ft</b>

### DISCUSSION:

First Quarter 2009 ground-water monitoring and sampling was conducted at Station #276 on 20 January 2009 by Stratus. Water levels were gauged in each of the ten wells at the Site. No irregularities were noted during water level gauging. Depth-to-water measurements ranged from 15.75 ft at MW-2 to 37.02 ft at MW-6. Resulting ground-water surface elevations ranged from 44.46 ft above mean sea level (msl) in well MW-2 to 29.34 ft above msl in well MW-5. 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 to the southwest at approximately 0.002 ft/ft, 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. Potentiometric ground-water elevation contours are presented in Drawing 1.

Water samples were collected from wells MW-1 through MW-8, RW-1, and WGR-3 on 20 January 2009. No irregularities were reported 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 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), Tetrachloroethene (PCE), and Methyl tert-butyl ether (MTBE) by EPA Method 8260B. During the GRO analysis, the laboratory reported the quantitation of an unknown hydrocarbon in the sample collected from well MW-6. No other significant 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 limit in four of the ten wells sampled at concentrations up to 4,700 micrograms per liter ( $\mu\text{g/L}$ ) in well MW-7. Benzene was detected above the laboratory reporting limit in one of the ten wells sampled at a concentration of 3.5  $\mu\text{g/L}$  in well MW-7. Ethylbenzene and total xylenes were detected above the laboratory reporting limit in well MW-7 at concentrations of 11  $\mu\text{g/L}$  and 3.2  $\mu\text{g/L}$ , respectively. TAME was detected above the laboratory reporting limit in three of the ten wells sampled at concentrations up to 19  $\mu\text{g/L}$  in well MW-5. TBA was detected above the laboratory reporting limit in one of the ten wells sampled at a concentration of 14  $\mu\text{g/L}$  in well MW-2. 1,2-DCA was detected above the laboratory reporting limit in one of the ten wells sampled at a concentration of 0.73  $\mu\text{g/L}$  in well MW-8. MTBE was detected above the laboratory reporting limit in four of the ten wells sampled at concentrations up to 130  $\mu\text{g/L}$  in well MW-5. PCE was detected above the laboratory reporting limit in six of the ten wells sampled at concentrations up to 600  $\mu\text{g/L}$  in well MW-6. The remaining analytes were not detected above their laboratory reporting limits in the ten wells sampled this quarter.

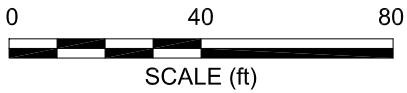
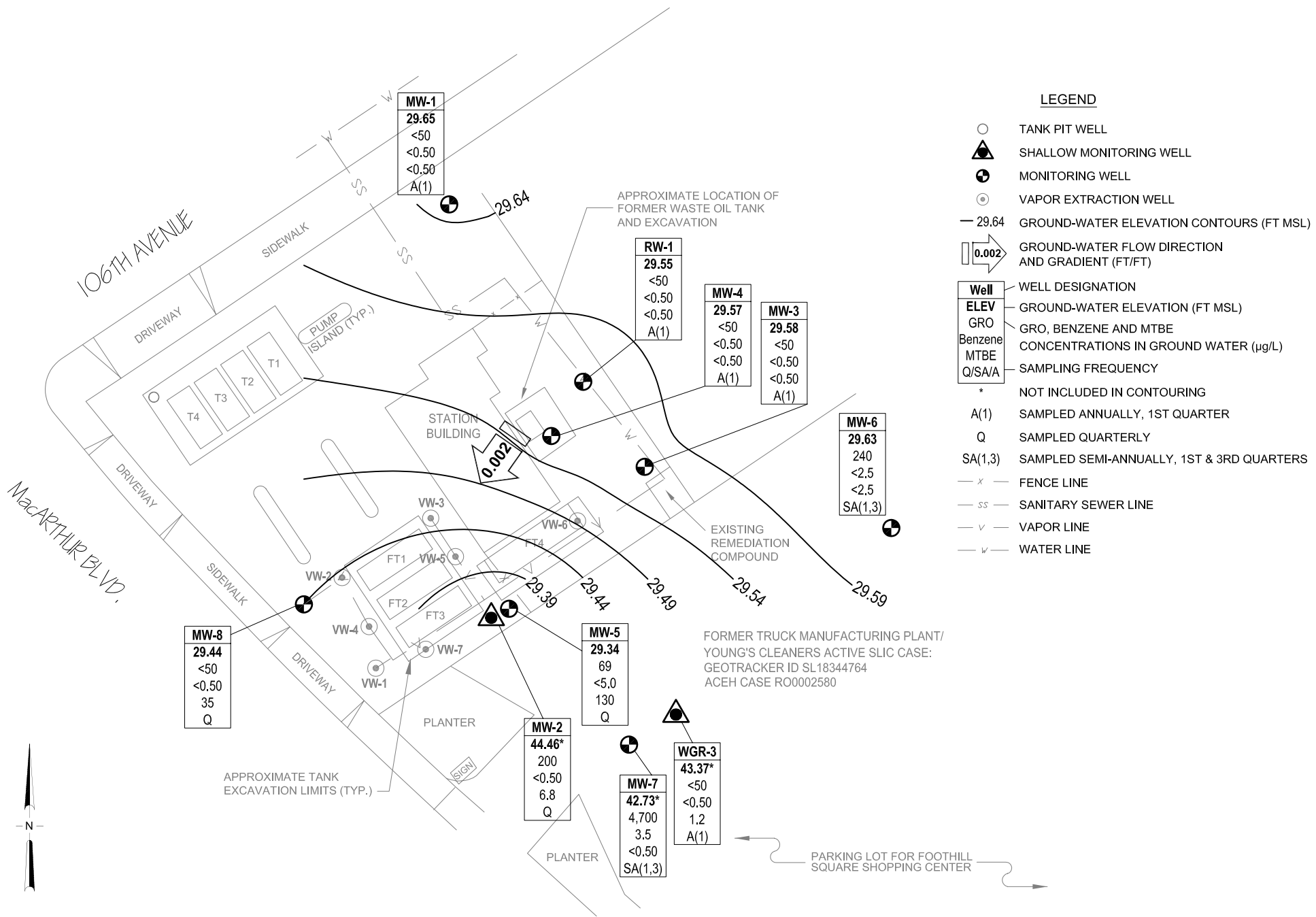
Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well with the following exceptions: GRO reached a historic maximum value in well MW-7 (4,700  $\mu\text{g/L}$ ) and MTBE reached historic minimum values in wells MW-7 and MW-8 (<0.50  $\mu\text{g/L}$  and 35  $\mu\text{g/L}$ , respectively). 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 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, 20 January 2009, Station #276, 10600 MacArthur Boulevard, Oakland, California
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #276, 10600 MacArthur Blvd., Oakland, California
- Table 2. Summary of Fuel Additives Analytical Data, Station #276, 10600 MacArthur Blvd., Oakland, California
- Table 3. Historical Ground-Water Flow Direction and Gradient, Station #276, 10600 MacArthur Blvd., Oakland, California
- 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 Confirmation



**BROADBENT & ASSOCIATES, INC.**  
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL  
 1324 Mangrove Ave. Suite 212, Chico, California  
 Project No.: 06-08-601 Date: 2/13/09

Station #276  
 10600 MacArthur Boulevard  
 Oakland, California

Ground-Water Elevation Contour  
 and Analytical Summary Map  
 20 January 2009

**Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-1</b>															
12/17/2000	--		55.92	23.50	28.50	29.16	26.76	5.09	--	--	--	--	--	--	--
12/28/2001	--		55.92	23.50	28.50	27.38	28.54	8.8	--	--	--	--	--	--	--
11/27/2002	NP		55.92	23.50	28.50	29.45	26.47	4.2	--	--	--	--	--	2.3	6.7
7/22/2003	NP		55.92	23.50	28.50	27.58	28.34	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	6.7
11/07/2003	NP		55.92	23.50	28.50	30.42	25.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	6.6
02/03/2004	NP		55.92	23.50	28.50	38.80	17.12	--	--	--	--	--	--	1.5	--
05/04/2004	NP	g	61.26	23.50	28.50	26.67	34.59	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	6.6
08/12/2004	NP		61.26	23.50	28.50	29.49	31.77	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	6.6
11/10/2004	NP		61.26	23.50	28.50	30.29	30.97	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	6.6
02/03/2005	NP		61.26	23.50	28.50	26.23	35.03	--	--	--	--	--	--	0.89	--
05/09/2005	--		61.26	23.50	28.50	22.93	38.33	--	--	--	--	--	--	--	--
08/11/2005	--		61.26	23.50	28.50	26.11	35.15	--	--	--	--	--	--	--	--
11/18/2005	--		61.26	23.50	28.50	29.14	32.12	--	--	--	--	--	--	--	--
02/01/2006	NP	i	61.26	23.50	28.50	24.15	37.11	53	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	6.7
5/30/2006	--		61.26	23.50	28.50	21.25	40.01	--	--	--	--	--	--	--	--
8/10/2006	--		61.26	23.50	28.50	24.70	36.56	--	--	--	--	--	--	--	--
11/2/2006	--		61.26	23.50	28.50	27.71	33.55	--	--	--	--	--	--	--	--
2/6/2007	NP		61.26	23.50	28.50	28.12	33.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.15	7.57
5/8/2007	--		61.26	23.50	28.50	27.27	33.99	--	--	--	--	--	--	--	--
8/14/2007	--		61.26	23.50	28.50	29.70	31.56	--	--	--	--	--	--	--	--
11/13/2007	--		61.26	23.50	28.50	30.92	30.34	--	--	--	--	--	--	--	--
2/29/2008	NP		61.26	23.50	28.50	26.21	35.05	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.31	7.63
5/17/2008	--		61.26	23.50	28.50	28.50	32.76	--	--	--	--	--	--	--	--
8/12/2008	--		61.26	23.50	28.50	30.50	30.76	--	--	--	--	--	--	--	--
10/21/2008	--		61.26	23.50	28.50	31.85	29.41	--	--	--	--	--	--	--	--
<b>1/20/2009</b>	<b>NP</b>		<b>61.26</b>	<b>23.50</b>	<b>28.50</b>	<b>31.61</b>	<b>29.65</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>2.29</b>	<b>6.83</b>
<b>MW-2</b>															
12/17/2000	--		55.10	15.00	25.00	15.72	39.38	--	--	--	--	--	--	--	--
12/28/2001	--		55.10	15.00	25.00	27.38	27.72	--	--	--	--	--	--	--	--
11/27/2002	--		55.10	15.00	25.00	16.35	38.75	--	--	--	--	--	--	--	--



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

**Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-2 Cont.</b>															
7/22/2003	--		55.10	15.00	25.00	16.20	38.90	--	--	--	--	--	--	--	--
11/07/2003	P		55.10	15.00	25.00	18.22	36.88	990	<5.0	<5.0	<5.0	<5.0	110	1.8	6.7
02/03/2004	P		55.10	15.00	25.00	13.63	41.47	180	<2.5	<2.5	2.6	4.1	55	1.8	6.5
05/04/2004	P	g	60.21	15.00	25.00	15.76	44.45	290	<2.5	<2.5	<2.5	<2.5	70	0.6	6.3
08/12/2004	P		60.21	15.00	25.00	17.21	43.00	<250	<2.5	<2.5	3.2	<2.5	49	1.6	6.6
11/10/2004	P		60.21	15.00	25.00	15.90	44.31	270	<1.0	<1.0	1.6	<1.0	90	0.9	6.2
02/03/2005	P		60.21	15.00	25.00	14.29	45.92	480	1.7	<0.50	2.0	1.4	37	1.53	6.5
05/09/2005	P		60.21	15.00	25.00	14.38	45.83	320	<0.50	<0.50	<0.50	0.64	56	0.57	6.5
08/11/2005	P		60.21	15.00	25.00	15.97	44.24	320	<0.50	<0.50	<0.50	<0.50	50	1.0	6.3
11/18/2005	P		60.21	15.00	25.00	17.66	42.55	990	3.2	0.64	3.8	1.6	49	3.23	6.5
02/01/2006	P		60.21	15.00	25.00	12.50	47.71	<50	<0.50	<0.50	<0.50	<0.50	3.1	1.0	6.4
5/30/2006	P		60.21	15.00	25.00	13.25	46.96	280	<0.50	<0.50	<0.50	<0.50	64	1.76	6.5
8/11/2006	P	Water Levels 8/10	60.21	15.00	25.00	15.90	44.31	210	<0.50	<0.50	<0.50	<0.50	28	0.63	6.4
11/2/2006	P		60.21	15.00	25.00	17.38	42.83	270	0.64	<0.50	<0.50	<0.50	40	1.41	6.82
2/6/2007	NP	i	60.21	15.00	25.00	15.48	44.73	110	<0.50	<0.50	<0.50	<0.50	39	0.67	6.95
5/8/2007	NP		60.21	15.00	25.00	15.40	44.81	140	<0.50	<0.50	<0.50	<0.50	25	0.84	6.85
8/14/2007	NP		60.21	15.00	25.00	17.40	42.81	190	<0.50	<0.50	<0.50	<0.50	19	0.71	6.75
11/13/2007	P		60.21	15.00	25.00	16.11	44.10	170	<0.50	<0.50	<0.50	<0.50	27	1.99	6.32
2/29/2008	P		60.21	15.00	25.00	13.37	46.84	<50	<0.50	<0.50	<0.50	<0.50	6.1	1.80	7.26
5/17/2008	--	m	60.21	15.00	25.00	--	--	--	--	--	--	--	--	--	--
8/12/2008	NP		60.21	15.00	25.00	16.75	43.46	56	<0.50	<0.50	<0.50	<0.50	14	0.84	8.97
10/21/2008	NP		60.21	15.00	25.00	18.05	42.16	460	0.81	<0.50	<0.50	<0.50	16	2.98	7.01
<b>1/20/2009</b>	<b>NP</b>		<b>60.21</b>	<b>15.00</b>	<b>25.00</b>	<b>15.75</b>	<b>44.46</b>	<b>200</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>6.8</b>	<b>0.91</b>	<b>6.73</b>
<b>MW-3</b>															
12/17/2000	--		56.55	22.00	27.00	29.78	26.77	158	--	--	--	--	--	--	--
12/28/2001	--		56.55	22.00	27.00	27.95	28.60	310	20	1.5	13	--	--	--	--
11/27/2002	NP		56.55	22.00	27.00	30.10	26.45	110	--	--	--	--	--	2.0	7.2
7/22/2003	NP		56.55	22.00	27.00	28.32	28.23	120	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	5.9
11/07/2003	NP		56.55	22.00	27.00	30.86	25.69	70	<0.50	<0.50	<0.50	<0.50	<0.50	2.8	6.5
02/03/2004	NP		56.55	22.00	27.00	27.65	28.90	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	6.7

**Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-3 Cont.</b>															
05/04/2004	NP	g	61.89	22.00	27.00	27.57	34.32	<100	<1.0	<1.0	<1.0	<1.0	<1.0	1.6	6.4
08/12/2004	NP		61.89	22.00	27.00	30.31	31.58	52	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	6.3
11/10/2004	NP		61.89	22.00	27.00	31.00	30.89	91	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	6.7
02/03/2005	NP	i	61.89	22.00	27.00	26.85	35.04	180	<0.50	<0.50	<0.50	<0.50	<0.50	2.25	6.5
05/09/2005	--		61.89	22.00	27.00	23.72	38.17	--	--	--	--	--	--	--	--
08/11/2005	--		61.89	22.00	27.00	26.84	35.05	--	--	--	--	--	--	--	--
11/18/2005	--		61.89	22.00	27.00	29.82	32.07	--	--	--	--	--	--	--	--
02/01/2006	NP		61.89	22.00	27.00	24.80	37.09	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.4	6.4
5/30/2006	--		61.89	22.00	27.00	21.77	40.12	--	--	--	--	--	--	--	--
8/10/2006	--		61.89	22.00	27.00	25.37	36.52	--	--	--	--	--	--	--	--
11/2/2006	--		61.89	22.00	27.00	28.43	33.46	--	--	--	--	--	--	--	--
2/6/2007	NP	i, k	61.86	22.00	27.00	28.85	33.01	50	<0.50	<0.50	<0.50	<0.50	<0.50	1.27	8.63
5/8/2007	--	k	61.86	22.00	27.00	27.98	33.88	--	--	--	--	--	--	--	--
8/14/2007	--	k	61.86	22.00	27.00	30.41	31.45	--	--	--	--	--	--	--	--
11/13/2007	--		61.86	22.00	27.00	31.63	30.23	--	--	--	--	--	--	--	--
2/29/2008	NP	l	61.86	22.00	27.00	26.86	35.00	79	<0.50	<0.50	<0.50	<0.50	0.54	1.13	7.04
5/17/2008	--		61.86	22.00	27.00	29.22	32.64	--	--	--	--	--	--	--	--
8/12/2008	--		61.86	22.00	27.00	31.22	30.64	--	--	--	--	--	--	--	--
10/21/2008	--		61.86	22.00	27.00	32.53	29.33	--	--	--	--	--	--	--	--
<b>1/20/2009</b>	<b>NP</b>		<b>61.86</b>	<b>22.00</b>	<b>27.00</b>	<b>32.31</b>	<b>29.55</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.11</b>	<b>6.72</b>
<b>MW-4</b>															
12/17/2000	--		55.98	25.00	45.00	29.22	26.76	225	--	--	--	--	--	--	--
12/28/2001	--		55.98	25.00	45.00	27.37	28.61	160	1.2	--	--	--	--	--	--
11/27/2002	NP		55.98	25.00	45.00	29.55	26.43	95	--	--	--	--	--	3.7	6.7
7/22/2003	NP		55.98	25.00	45.00	27.73	28.25	130	<0.50	<0.50	<0.50	<0.50	<0.50	2.9	6.6
11/07/2003	NP		55.98	25.00	45.00	30.41	25.57	59	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	6.5
02/03/2004	NP		55.98	25.00	45.00	27.01	28.97	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.2	7.1
05/04/2004	NP	g	61.30	25.00	45.00	26.91	34.39	<100	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	6.5
08/12/2004	NP		61.30	25.00	45.00	29.76	31.54	58	<0.50	<0.50	<0.50	<0.50	<0.50	2.3	6.4
11/10/2004	NP		61.30	25.00	45.00	30.40	30.90	69	<0.50	<0.50	<0.50	<0.50	<0.50	2.4	6.6

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

**Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-4 Cont.</b>															
02/03/2005	NP	i	61.30	25.00	45.00	26.28	35.02	51	<0.50	<0.50	<0.50	<0.50	<0.50	3.77	6.8
05/09/2005	--		61.30	25.00	45.00	23.14	38.16	--	--	--	--	--	--	--	--
08/11/2005	--		61.30	25.00	45.00	26.23	35.07	--	--	--	--	--	--	--	--
11/18/2005	--		61.30	25.00	45.00	29.24	32.06	--	--	--	--	--	--	--	--
02/01/2006	P	i	61.30	25.00	45.00	24.20	37.10	330	<0.50	<0.50	<0.50	<0.50	<0.50	1.7	7.0
5/30/2006	--		61.30	25.00	45.00	21.26	40.04	--	--	--	--	--	--	--	--
8/10/2006	--		61.30	25.00	45.00	24.62	36.68	--	--	--	--	--	--	--	--
11/2/2006	--		61.30	25.00	45.00	27.90	33.40	--	--	--	--	--	--	--	--
2/6/2007	NP	i	61.30	25.00	45.00	28.28	33.02	55	<0.50	<0.50	<0.50	<0.50	<0.50	1.21	8.28
5/8/2007	--		61.30	25.00	45.00	27.40	33.90	--	--	--	--	--	--	--	--
8/14/2007	--		61.30	25.00	45.00	29.88	31.42	--	--	--	--	--	--	--	--
11/13/2007	--		61.30	25.00	45.00	31.05	30.25	--	--	--	--	--	--	--	--
2/29/2008	NP	l	61.30	25.00	45.00	26.30	35.00	81	<0.50	<0.50	<0.50	<0.50	<0.50	3.57	7.44
5/17/2008	--		61.30	25.00	45.00	28.65	32.65	--	--	--	--	--	--	--	--
8/12/2008	--		61.30	25.00	45.00	30.68	30.62	--	--	--	--	--	--	--	--
10/21/2008	--		61.30	25.00	45.00	32.00	29.30	--	--	--	--	--	--	--	--
<b>1/20/2009</b>	<b>NP</b>		<b>61.30</b>	<b>25.00</b>	<b>45.00</b>	<b>31.73</b>	<b>29.57</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.18</b>	<b>6.76</b>
<b>MW-5</b>															
12/17/2000	--		55.43	23.50	31.50	28.82	26.61	1,040	--	--	--	--	--	--	--
12/28/2001	--		55.43	23.50	31.50	26.91	28.52	3,200	190	2/4/1900	140	1.9/3.2/2.0	--	--	--
11/27/2002	P		55.43	23.50	31.50	29.15	26.28	110	--	--	--	--	--	1.4	6.4
7/22/2003	P		55.43	23.50	31.50	27.43	28.00	160	<1.0	<1.0	<1.0	<1.0	110	1.5	6.6
11/07/2003	P		55.43	23.50	31.50	29.99	25.44	<250	<2.5	<2.5	<2.5	<2.5	120	0.6	6.2
02/03/2004	P		55.43	23.50	31.50	26.55	28.88	85	<2.5	<2.5	<2.5	<2.5	71	1.7	6.7
05/04/2004	P	g	60.73	23.50	31.50	26.47	34.26	<250	<2.5	<2.5	<2.5	<2.5	150	0.9	6.2
08/12/2004	P		60.73	23.50	31.50	29.49	31.24	<250	<2.5	<2.5	<2.5	<2.5	140	1.8	6.3
11/10/2004	P		60.73	23.50	31.50	30.15	30.58	170	<1.0	<1.0	<1.0	<1.0	150	1.0	6.3
02/03/2005	P		60.73	23.50	31.50	25.85	34.88	100	<0.50	<0.50	<0.50	<0.50	16	1.65	6.5
05/09/2005	P		60.73	23.50	31.50	22.85	37.88	340	<2.5	<2.5	<2.5	<2.5	140	0.87	6.3
08/11/2005	P		60.73	23.50	31.50	26.05	34.68	<250	<2.5	<2.5	<2.5	<2.5	160	1.6	6.3

**Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)					DO (mg/L)	pH	
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes			MTBE
<b>MW-5 Cont.</b>															
11/18/2005	P		60.73	23.50	31.50	29.07	31.66	<250	<2.5	<2.5	<2.5	<2.5	120	1.98	6.3
02/01/2006	P	i	60.73	23.50	31.50	23.70	37.03	520	<1.2	<1.2	<1.2	<1.2	100	0.4	6.4
5/30/2006	P		60.73	23.50	31.50	21.03	39.70	220	<2.5	<2.5	<2.5	<2.5	230	1.32	6.3
8/11/2006	P	Water Levels 8/10	60.73	23.50	31.50	24.77	35.96	150	<2.5	<2.5	<2.5	<2.5	170	0.68	6.1
11/2/2006	P		60.73	23.50	31.50	27.65	33.08	100	<1.0	<1.0	<1.0	<1.0	160	1.43	6.52
2/6/2007	NP	i	60.73	23.50	31.50	28.00	32.73	150	<1.0	<1.0	<1.0	<1.0	120	1.19	7.33
5/8/2007	NP	i	60.73	23.50	31.50	27.12	33.61	130	<1.0	<1.0	<1.0	<1.0	180	0.82	6.42
8/14/2007	NP	i	60.73	23.50	31.50	29.62	31.11	110	<0.50	<0.50	<0.50	<0.50	150	1.32	6.97
11/13/2007	NP		60.73	23.50	31.50	30.77	29.96	950	<0.50	<0.50	<0.50	<0.50	110	1.83	6.50
2/29/2008	NP	l	60.73	23.50	31.50	25.86	34.87	110	<0.50	<0.50	<0.50	<0.50	120	1.04	7.21
5/17/2008	NP		60.73	23.50	31.50	28.40	32.33	<50	<1.0	<1.0	<1.0	<1.0	190	0.85	6.07
8/12/2008	NP		60.73	23.50	31.50	30.44	30.29	<50	<2.5	<2.5	<2.5	<2.5	140	1.04	9.42
10/21/2008	NP		60.73	23.50	31.50	31.73	29.00	<50	<2.5	<2.5	<2.5	<2.5	170	2.90	6.99
<b>1/20/2009</b>	<b>NP</b>		<b>60.73</b>	<b>23.50</b>	<b>31.50</b>	<b>31.39</b>	<b>29.34</b>	<b>69</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>130</b>	<b>1.08</b>	<b>6.57</b>
<b>MW-6</b>															
12/17/2000	--		61.21	37.50	56.00	34.61	26.60	--	--	--	--	--	--	--	--
12/28/2001	--		61.21	37.50	56.00	32.80	28.41	--	--	--	--	--	--	--	--
11/27/2002	--		61.21	37.50	56.00	35.00	26.21	--	--	--	--	--	--	--	--
7/22/2003	--		61.21	37.50	56.00	33.17	28.04	--	--	--	--	--	--	--	--
11/07/2003	P	d, e	61.21	37.50	56.00	35.70	25.51	<500	<5.0	<5.0	<5.0	<5.0	<5.0	2.7	6.9
02/03/2004	P		61.21	37.50	56.00	32.17	29.04	84	<2.5	<2.5	<2.5	<2.5	<2.5	1.9	7.0
05/04/2004	P	g	66.65	37.50	56.00	32.07	34.58	<250	<2.5	<2.5	<2.5	<2.5	<2.5	2.0	6.7
08/12/2004	P		66.65	37.50	56.00	34.90	31.75	660	<0.50	<0.50	<0.50	<0.50	0.81	1.4	6.9
11/10/2004	P		66.65	37.50	56.00	35.70	30.95	640	<0.50	<0.50	<0.50	<0.50	0.89	2.6	6.8
02/03/2005	P	i	66.65	37.50	56.00	31.48	35.17	77	<0.50	<0.50	<0.50	<0.50	<0.50	1.73	7.0
05/09/2005	--		66.65	37.50	56.00	28.37	38.28	--	--	--	--	--	--	--	--
08/11/2005	P		66.65	37.50	56.00	31.40	35.25	630	<0.50	<0.50	<0.50	<0.50	0.77	1.9	6.3
11/18/2005	--		66.65	37.50	56.00	34.50	32.15	--	--	--	--	--	--	--	--
02/01/2006	P	i	66.65	37.50	56.00	29.40	37.25	760	<5.0	<5.0	<5.0	<5.0	<5.0	2.1	6.9
5/30/2006	--		66.65	37.50	56.00	26.51	40.14	--	--	--	--	--	--	--	--

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**Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-6 Cont.</b>															
8/11/2006	P	Water Levels 8/10	66.65	37.50	56.00	30.10	36.55	790	<5.0	<5.0	<5.0	<5.0	<5.0	1.32	6.7
11/2/2006	--		66.65	37.50	56.00	33.12	33.53	--	--	--	--	--	--	--	--
2/6/2007	P	i	66.65	37.50	56.00	33.53	33.12	510	<0.50	<0.50	<0.50	<0.50	0.80	0.68	6.84
5/8/2007	--		66.65	37.50	56.00	32.65	34.00	--	--	--	--	--	--	--	--
8/14/2007	P	i	66.65	37.50	56.00	35.10	31.55	510	<0.50	<0.50	<0.50	<0.50	0.91	1.60	7.10
11/13/2007	--		66.65	37.50	56.00	36.31	30.34	--	--	--	--	--	--	--	--
2/29/2008	P	l	66.65	37.50	56.00	31.50	35.15	72	<0.50	<0.50	<0.50	<0.50	<0.50	4.41	7.77
5/17/2008	--		66.65	37.50	56.00	33.88	32.77	--	--	--	--	--	--	--	--
8/12/2008	P		66.65	37.50	56.00	35.91	30.74	250	<2.5	<2.5	<2.5	<2.5	<2.5	0.79	9.17
10/21/2008	--		66.65	37.50	56.00	37.22	29.43	--	--	--	--	--	--	--	--
<b>1/20/2009</b>	<b>P</b>	<b>n</b>	<b>66.65</b>	<b>37.50</b>	<b>56.00</b>	<b>37.02</b>	<b>29.63</b>	<b>240</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>0.75</b>	<b>6.99</b>
<b>MW-7</b>															
12/17/2000	--		58.22	17.50	37.5	19.94	38.28	--	--	--	--	--	--	--	--
12/28/2001	--		58.22	17.50	37.5	17.29	40.93	--	--	--	--	--	--	--	--
11/27/2002	--		58.22	17.50	37.5	21.30	36.92	--	--	--	--	--	--	--	--
7/22/2003	--		58.22	17.50	37.5	21.36	36.86	--	--	--	--	--	--	--	--
11/07/2003	P	d	58.22	17.50	37.5	23.76	34.46	3,200	15	<2.5	130	11	53	2.2	6.8
02/03/2004	P		58.22	17.50	37.5	17.74	40.48	53	<0.50	<0.50	<0.50	0.54	32	1.9	6.4
02/03/2005	P		63.54	17.50	37.5	18.13	45.41	61	<0.50	<0.50	<0.50	<0.50	14	3.39	6.5
05/09/2005	--		63.54	17.50	37.5	18.39	45.15	--	--	--	--	--	--	--	--
08/11/2005	P		63.54	17.50	37.5	21.47	42.07	1,500	1.8	<1.0	4.2	1.2	21	2.0	6.3
11/18/2005	--		63.54	17.50	37.5	22.41	41.13	--	--	--	--	--	--	--	--
02/01/2006	P		63.54	17.50	37.5	16.65	46.89	<50	<0.50	<0.50	<0.50	<0.50	1.8	1.3	6.3
5/30/2006	--		63.54	17.50	37.50	19.22	44.32	--	--	--	--	--	--	--	--
8/11/2006	P	Water Levels 8/10	63.54	17.50	37.50	21.28	42.26	1,800	1.3	0.55	5.0	1.4	41	1.22	6.4
11/2/2006	--		63.54	17.50	37.50	22.61	40.93	--	--	--	--	--	--	--	--
2/6/2007	NP		63.54	17.50	37.50	19.79	43.75	530	<0.50	<0.50	<0.50	<0.50	8.4	0.93	7.23
5/8/2007	--		63.54	17.50	37.50	19.62	43.92	--	--	--	--	--	--	--	--
8/14/2007	NP		63.54	17.50	37.50	22.72	40.82	1,900	1.2	<0.50	2.7	1.3	9.8	0.94	7.5
11/13/2007	--		63.54	17.50	37.50	20.92	42.62	--	--	--	--	--	--	--	--

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

**Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)					DO (mg/L)	pH	
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes			MTBE
<b>MW-7 Cont.</b>															
2/29/2008	P	l	63.54	17.50	37.50	17.40	46.14	64	<0.50	<0.50	<0.50	<0.50	1.5	1.23	7.35
5/17/2008	--		63.54	17.50	37.50	21.10	42.44	--	--	--	--	--	--	--	--
8/12/2008	NP		63.54	17.50	37.50	21.67	41.87	2,300	3.3	0.82	13	2.2	7.0	0.63	9.60
10/21/2008	--		63.54	17.50	37.50	24.14	39.40	--	--	--	--	--	--	--	--
<b>1/20/2009</b>	<b>NP</b>		<b>63.54</b>	<b>17.50</b>	<b>37.50</b>	<b>20.81</b>	<b>42.73</b>	<b>4,700</b>	<b>3.5</b>	<b>0.81</b>	<b>11</b>	<b>3.2</b>	<b>&lt;0.50</b>	<b>0.69</b>	<b>6.67</b>
<b>MW-8</b>															
12/17/2000	--		53.65	29.00	49.00	27.02	26.63	--	--	--	--	--	--	--	--
12/28/2001	--		53.65	29.00	49.00	24.99	28.66	--	--	--	--	--	--	--	--
11/27/2002	--		53.65	29.00	49.00	27.45	26.20	--	--	--	--	--	--	--	--
7/22/2003	--		53.65	29.00	49.00	25.74	27.91	--	--	--	--	--	--	--	--
11/07/2003	P		53.65	29.00	49.00	28.27	25.38	<500	<5.0	<5.0	<5.0	<5.0	440	2.6	6.5
02/03/2004	P	f	53.65	29.00	49.00	24.80	28.85	170	<12	<12	<12	<12	470	3.0	6.7
05/04/2004	P	g	58.96	29.00	49.00	24.81	34.15	<1,000	<10	<10	<10	<10	700	3.8	6.4
08/12/2004	P		58.96	29.00	49.00	27.72	31.24	<2,500	<25	<25	<25	<25	400	3.4	6.5
11/10/2004	P		58.96	29.00	49.00	28.41	30.55	<500	<5.0	<5.0	<5.0	<5.0	480	3.4	6.3
02/03/2005	P		58.96	29.00	49.00	24.01	34.95	<50	<0.50	<0.50	<0.50	<0.50	45	1.43	6.4
05/09/2005	P	i	58.96	29.00	49.00	21.07	37.89	640	<5.0	<5.0	<5.0	<5.0	440	1.06	6.4
08/11/2005	P		58.96	29.00	49.00	24.32	34.64	<500	<5.0	<5.0	<5.0	<5.0	420	5.0	6.1
11/18/2005	P		58.96	29.00	49.00	27.35	31.61	<500	<5.0	<5.0	<5.0	<5.0	390	3.51	6.4
02/01/2006	P	i	58.96	29.00	49.00	22.00	36.96	520	<5.0	<5.0	<5.0	<5.0	600	0.5	6.3
5/30/2006	P		58.96	29.00	49.00	19.25	39.71	310	<5.0	<5.0	<5.0	<5.0	480	1.35	6.3
8/11/2006	P	Water Levels 8/10	58.96	29.00	49.00	22.95	36.01	320	<0.50	<0.50	<0.50	<0.50	630	0.65	6.2
11/2/2006	P		58.96	29.00	49.00	25.98	32.98	370	<2.5	<2.5	<2.5	<2.5	660	1.46	6.61
2/6/2007	P	i	58.96	29.00	49.00	26.27	32.69	66	<0.50	<0.50	<0.50	<0.50	60	0.65	6.64
5/8/2007	P	i, j (MTBE)	58.96	29.00	49.00	25.35	33.61	440	<0.50	<0.50	<0.50	<0.50	490	1.35	6.60
8/14/2007	P		58.96	29.00	49.00	27.92	31.04	250	<0.50	<0.50	<0.50	<0.50	510	2.80	6.88
11/13/2007	P		58.96	29.00	49.00	29.05	29.91	290	<2.5	<2.5	<2.5	<2.5	400	3.14	6.38
2/29/2008	P		58.96	29.00	49.00	24.03	34.93	<50	<0.50	<0.50	<0.50	<0.50	300	1.54	7.21
5/17/2008	--	m	58.96	29.00	49.00	--	--	--	--	--	--	--	--	--	--
8/12/2008	P		58.96	29.00	49.00	28.70	30.26	55	<2.5	<2.5	<2.5	<2.5	310	1.37	8.92

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

**Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-8 Cont.</b>															
10/21/2008	P		58.96	29.00	49.00	29.95	29.01	150	<5.0	5.3	<5.0	22	260	1.26	7.05
<b>1/20/2009</b>	<b>NP</b>		<b>58.96</b>	<b>29.00</b>	<b>49.00</b>	<b>29.52</b>	<b>29.44</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>35</b>	<b>1.27</b>	<b>6.84</b>
<b>RW-1</b>															
12/17/2000	--		56.32	36.00	51.00	29.57	26.75	--	--	--	--	--	--	--	--
12/28/2001	--		56.32	36.00	51.00	27.64	28.68	--	--	--	--	--	--	--	--
11/27/2002	--		56.32	36.00	51.00	29.93	26.39	--	--	--	--	--	--	--	--
7/22/2003	--		56.32	36.00	51.00	28.09	28.23	--	--	--	--	--	--	--	--
11/07/2003	P		56.32	36.00	51.00	30.64	25.68	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	7.0
02/03/2004	P		56.32	36.00	51.00	27.28	29.04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.7	7.1
05/04/2004	P	g	61.65	36.00	51.00	27.16	34.49	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.4	6.8
08/12/2004	P		61.65	36.00	51.00	30.10	31.55	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	7.1
11/10/2004	P		61.65	36.00	51.00	30.79	30.86	<100	<0.50	<0.50	<0.50	<0.50	<0.50	5.7	6.9
02/03/2005	P		61.65	36.00	51.00	26.61	35.04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.57	7.1
05/09/2005	--		61.65	36.00	51.00	23.51	38.14	--	--	--	--	--	--	--	--
08/11/2005	--		61.65	36.00	51.00	26.60	35.05	--	--	--	--	--	--	--	--
11/18/2005	--		61.65	36.00	51.00	29.65	32.00	--	--	--	--	--	--	--	--
02/01/2006	P		61.65	36.00	51.00	24.65	37.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	7.0
5/30/2006	--		61.65	36.00	51.00	21.69	39.96	--	--	--	--	--	--	--	--
8/10/2006	--		61.65	36.00	51.00	25.31	36.34	--	--	--	--	--	--	--	--
11/2/2006	--		61.65	36.00	51.00	28.28	33.37	--	--	--	--	--	--	--	--
2/6/2007	NP		61.65	36.00	51.00	28.63	33.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.21	6.92
5/8/2007	--		61.65	36.00	51.00	27.77	33.88	--	--	--	--	--	--	--	--
8/14/2007	--		61.65	36.00	51.00	30.23	31.42	--	--	--	--	--	--	--	--
11/13/2007	--		61.65	36.00	51.00	31.41	30.24	--	--	--	--	--	--	--	--
2/29/2008	NP		61.65	36.00	51.00	26.65	35.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.16	9.94
5/17/2008	--	m	61.65	36.00	51.00	--	--	--	--	--	--	--	--	--	--
8/12/2008	--		61.65	36.00	51.00	31.05	30.60	--	--	--	--	--	--	--	--
10/21/2008	--		61.65	36.00	51.00	32.35	29.30	--	--	--	--	--	--	--	--
<b>1/20/2009</b>	<b>NP</b>		<b>61.65</b>	<b>36.00</b>	<b>51.00</b>	<b>32.10</b>	<b>29.55</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.16</b>	<b>7.02</b>

**Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)					DO (mg/L)	pH	
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes			MTBE
<b>WGR-3</b>															
12/17/2000	--		--	--	--	19.21	--	--	--	--	--	--	--	--	--
12/28/2001	--	h	--	--	--	--	--	--	--	--	--	--	--	--	--
11/27/2002	--		--	--	--	20.60	--	--	--	--	--	--	--	--	--
7/22/2003	--		--	--	--	20.77	--	--	--	--	--	--	--	--	--
05/04/2004	P	g	63.27	--	--	19.53	43.74	<50	<0.50	<0.50	<0.50	<0.50	11	1.8	6.5
08/12/2004	P		63.27	--	--	22.20	41.07	<50	<0.50	<0.50	<0.50	<0.50	35	2.0	--
11/10/2004	P		63.27	--	--	19.98	43.29	<50	<0.50	<0.50	<0.50	<0.50	5.6	0.3	6.3
02/03/2005	P		63.27	--	--	16.91	46.36	<50	<0.50	<0.50	<0.50	<0.50	1.1	2.04	6.5
05/09/2005	--		63.27	--	--	17.29	45.98	--	--	--	--	--	--	--	--
08/11/2005	--		63.27	--	--	20.88	42.39	--	--	--	--	--	--	--	--
11/18/2005	--		63.27	--	--	22.15	41.12	--	--	--	--	--	--	--	--
02/01/2006	P		63.27	--	--	14.90	48.37	<50	<0.50	<0.50	<0.50	<0.50	2.3	2.0	6.5
5/30/2006	--		63.27	--	--	18.39	44.88	--	--	--	--	--	--	--	--
8/10/2006	--		63.27	--	--	20.63	42.64	--	--	--	--	--	--	--	--
11/2/2006	--		63.27	--	--	20.32	42.95	--	--	--	--	--	--	--	--
2/6/2007	P		63.27	--	--	18.52	44.75	<50	<0.50	<0.50	<0.50	<0.50	4.4	0.89	6.87
5/8/2007	--		63.27	--	--	18.41	44.86	--	--	--	--	--	--	--	--
8/14/2007	--		63.27	--	--	22.38	40.89	--	--	--	--	--	--	--	--
11/13/2007	--		63.27	--	--	19.95	43.32	--	--	--	--	--	--	--	--
2/29/2008	P		63.27	--	--	15.91	47.36	<50	<0.50	<0.50	<0.50	<0.50	1.4	1.03	7.35
5/17/2008	--		63.27	--	--	20.22	43.05	--	--	--	--	--	--	--	--
8/12/2008	--		63.27	--	--	21.05	42.22	--	--	--	--	--	--	--	--
10/21/2008	--		63.27	--	--	23.72	39.55	--	--	--	--	--	--	--	--
<b>1/20/2009</b>	<b>P</b>		<b>63.27</b>	<b>--</b>	<b>--</b>	<b>19.90</b>	<b>43.37</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.2</b>	<b>1.09</b>	<b>6.79</b>



#### SYMBOLS & ABBREVIATIONS:

-- = Not analyzed/applicable/measured/available  
< = Not detected at or above laboratory reporting limit  
BTEX = Benzene, toluene, ethylbenzene and xylenes  
DO = Dissolved oxygen  
DTW = Depth to water in ft bgs  
ft bgs = Feet below ground surface  
ft MSL = Feet above mean sea level  
GRO = Gasoline range organics  
GWE = Groundwater elevation measured in ft MSL  
mg/L = Milligrams per liter  
MTBE = Methyl tert butyl ether  
NP = Not purged prior to sampling  
P = Purged prior to sampling  
TOC = Top of casing measured in ft MSL  
TPH-g = Total petroleum hydrocarbons as gasoline  
µg/L = Micrograms per liter

#### FOOTNOTES:

a = 1,1 DCE; this footnote is no longer applicable.  
b = 1,2 DCA; this footnote is no longer applicable.  
c = Chlorobenzene; this footnote is no longer applicable.  
d = Sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time. Results may still be used for intended purpose.  
e = The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.  
f = Discrete peak @ C5 for GRO/TPH-g.  
g = Site was re-surveyed to NAVD' 88 on January 26, 2004.  
h = Well was dry.  
i = Hydrocarbon result for GRO partly due to individual peak(s) in quantitative range.  
j = Initial analysis within holding time but required dilution.  
k = TOC recorded incorrectly (61.86 instead of 61.89).  
l = The hydrocarbon pattern for GRO in the sample does not match that of the gasoline standard used to calculate results. The values reported for these samples are in part due to the PCE peak that falls within the GRO (C6-C12) window.  
m = Well inaccessible.  
n = Quantitation of unknown hydrocarbon(s) in sample based on gasoline.

#### 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.

Groundwater samples were analyzed by EPA method 8015B for GRO and EPA method 8260B for BTEX, fuel oxygenates, ethanol, and PCE.

Values for pH and DO levels are 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 #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)														Footnotes
	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
<b>MW-1</b>															
12/17/2000	--	--	--	--	--	--	--	--	--	--	--	--	5.09	--	
12/28/2001	--	--	--	--	--	--	--	--	--	--	--	--	8.8	--	
11/27/2002	--	--	--	--	--	--	--	--	--	--	--	--	4.2	--	
7/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	6.0	--	
11/07/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	3.0	--	
02/03/2004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
05/04/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	34	--	
08/12/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	4.5	--	
11/10/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	4.9	--	
02/03/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
08/11/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
11/18/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
02/01/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	38	--	e
5/30/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
8/11/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
11/2/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
2/6/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	
2/29/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	39	--	
<b>1/20/2009</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	--	--	--	--	<b>4.8</b>	--	
<b>MW-2</b>															
11/07/2003	<1,000	<200	110	<5.0	<5.0	28	--	--	--	--	--	--	<5.0	--	
02/03/2004	<500	<100	55	<5.0	<5.0	16	<2.5	<2.5	--	--	--	--	<2.5	--	
05/04/2004	<500	<100	70	<2.5	<2.5	15	<2.5	<2.5	--	--	--	--	<2.5	--	
08/12/2004	<500	<100	49	<2.5	<2.5	14	<2.5	<2.5	--	--	--	--	<0.50	--	
11/10/2004	<200	<40	90	<1.0	<1.0	19	<1.0	<1.0	--	--	--	--	<1.0	--	
02/03/2005	<100	<20	37	<0.50	<0.50	13	<0.50	<0.50	--	--	--	--	<0.50	--	e
05/09/2005	<100	<20	56	<0.50	<0.50	17	<0.50	<0.50	--	--	--	--	<0.50	--	e
08/11/2005	<100	<20	50	<0.50	<0.50	8.5	<0.50	<0.50	--	--	--	--	<0.50	--	
11/18/2005	<100	<20	49	<0.50	<0.50	11	<0.50	<0.50	--	--	--	--	<0.50	--	f
02/01/2006	<300	<20	3.1	<0.50	<0.50	0.52	<0.50	<0.50	--	--	--	--	<0.50	--	e

**Table 2. Summary of Fuel Additives Analytical Data  
Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)														Footnotes
	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
<b>MW-2 Cont.</b>															
5/30/2006	<300	<20	64	<0.50	<0.50	12	<0.50	<0.50	--	--	--	--	<0.50	--	
8/11/2006	<300	<20	28	<0.50	<0.50	5.9	<0.50	<0.50	--	--	--	--	<0.50	--	
11/2/2006	<300	<20	40	<0.50	<0.50	7.9	<0.50	<0.50	--	--	--	--	<0.50	--	
2/6/2007	<300	<20	39	<0.50	<0.50	9.2	<0.50	<0.50	--	--	--	--	--	--	
5/8/2007	<300	<20	25	<0.50	<0.50	5.4	<0.50	<0.50	--	--	--	--	<0.50	--	
8/14/2007	<300	<20	19	<0.50	<0.50	3.4	<0.50	<0.50	--	--	--	--	<0.50	--	
11/13/2007	<300	<20	27	<0.50	<0.50	5.1	<0.50	<0.50	--	--	--	--	<0.50	--	
2/29/2008	<300	<10	6.1	<0.50	<0.50	1.2	<0.50	<0.50	--	--	--	--	<0.50	--	
5/17/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	i
8/12/2008	<300	<10	14	<0.50	<0.50	2.6	<0.50	<0.50	--	--	--	--	<0.50	--	
10/21/2008	<300	11	16	<0.50	<0.50	3.8	<0.50	<0.50	--	--	--	--	<0.50	--	
<b>1/20/2009</b>	<b>&lt;300</b>	<b>14</b>	<b>6.8</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.6</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>&lt;0.50</b>	<b>--</b>	
<b>MW-3</b>															
12/17/2000	--	--	--	--	--	--	--	--	--	--	--	--	158	--	
12/28/2001	--	--	--	--	--	--	--	--	1.5	13	--	--	310	20	
11/27/2002	--	--	--	--	--	--	--	--	--	--	--	--	110	--	
7/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	80	--	
11/07/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	80	--	
02/03/2004	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	--	--	--	--	110	--	
05/04/2004	<200	<40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	110	--	
08/12/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	61	--	
11/10/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	99	--	
02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	160	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
08/11/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
11/18/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
02/01/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	110	--	e
5/30/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
8/11/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
11/2/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
2/6/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data  
Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)														Footnotes
	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
<b>MW-3 Cont.</b>															
2/29/2008	<300	<10	0.54	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	160	--	
<b>1/20/2009</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	--	--	--	--	<b>39</b>	--	
<b>MW-4</b>															
12/17/2000	--	--	--	--	--	--	--	--	--	--	--	--	225	--	
12/28/2001	--	--	--	--	--	--	--	--	--	--	--	--	160	1.2	
11/27/2002	--	--	--	--	--	--	--	--	--	--	--	--	95	--	
7/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	94	--	
11/07/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	68	--	
02/03/2004	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	--	--	--	--	83	--	
05/04/2004	<200	<40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	81	--	
08/12/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	59	--	
11/10/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	78	--	
02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	61	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
08/11/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
11/18/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
02/01/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	320	--	e
5/30/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
8/11/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
11/2/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
2/6/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	
2/29/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	170	--	
<b>1/20/2009</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	--	--	--	--	<b>22</b>	--	
<b>MW-5</b>															
12/17/2000	--	--	--	--	--	--	--	--	--	--	--	--	1,040	--	
12/28/2001	--	--	--	--	--	--	--	--	36	140	1.9, 3.2, 2.0	--	3,200	190	a,b,c
11/27/2002	--	--	--	--	--	--	--	--	--	--	--	--	110	--	
7/22/2003	<200	<40	110	1.4	<1.0	3.2	12	<1.0	--	--	--	--	55	--	
11/07/2003	<500	<100	120	<2.5	<2.5	6.6	--	--	--	--	--	--	42	--	
02/03/2004	<500	<100	71	<5.0	<5.0	<5.0	12	<2.5	--	--	--	--	130	--	

**Table 2. Summary of Fuel Additives Analytical Data  
Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)														Footnotes
	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
<b>MW-5 Cont.</b>															
05/04/2004	<500	<100	150	<2.5	<2.5	5.9	8.8	<2.5	--	--			36	--	
08/12/2004	<500	<100	140	<2.5	<2.5	10	10	<2.5	--	--			37	--	
11/10/2004	<200	<40	150	1.1	<1.0	9.5	9.8	<1.0	--	--			50	--	
02/03/2005	<100	<20	16	<0.50	<0.50	0.54	2.7	<0.50	--	--			480	--	e
05/09/2005	<500	<100	140	<2.5	<2.5	9.2	10	<2.5	--	--			78	--	e
08/11/2005	<500	<100	160	<2.5	<2.5	10	9.6	<2.5	--	--			27	--	
11/18/2005	<500	<100	120	<2.5	<2.5	9.2	10	<2.5	--	--			19	--	f
02/01/2006	<750	<50	100	<1.2	<1.2	5.1	7.4	<1.2	--	--			470	--	e
5/30/2006	<1,500	<100	230	<2.5	<2.5	11	11	<2.5	--	--	--	--	48	--	
8/11/2006	<1,500	<100	170	<2.5	<2.5	14	9.2	<2.5	--	--	--	--	24	--	
11/2/2006	<600	<40	160	<1.0	<1.0	12	7.8	<1.0	--	--	--	--	9.8	--	
2/6/2007	<600	<40	120	<1.0	<1.0	13	4.6	<1.0	--	--	--	--	--	--	
5/8/2007	<600	<40	180	<1.0	<1.0	16	8.6	<1.0	--	--	--	--	9.0	--	
8/14/2007	<300	<20	150	0.73	<0.50	14	5.4	<0.50	--	--	--	--	5.6	--	
11/13/2007	<300	<20	110	0.60	<0.50	12	5.2	<0.50	--	--	--	--	1,500	--	
2/29/2008	<300	<10	120	0.59	<0.50	10	5.0	<0.50	--	--	--	--	180	--	
5/17/2008	<600	<20	190	<1.0	<1.0	15	7.0	<1.0	--	--	--	--	23	--	
8/12/2008	<1,500	<50	140	<2.5	<2.5	13	5.0	<2.5	--	--	--	--	9.0	--	
10/21/2008	<1,500	<50	170	<2.5	<2.5	21	4.0	<2.5	--	--	--	--	6.6	--	
<b>1/20/2009</b>	<b>&lt;3,000</b>	<b>&lt;100</b>	<b>130</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>19</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>6.8</b>	<b>--</b>	
<b>MW-6</b>															
11/07/2003	<1,000	<200	<5.0	<5.0	<5.0	<5.0	--	--	--	--			560	--	
02/03/2004	<500	<100	<2.5	<5.0	<5.0	<5.0	<2.5	<2.5	--	--			220	--	
05/04/2004	<500	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--	--			210	--	
08/12/2004	<100	<20	0.81	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			750	--	
11/10/2004	<100	<20	0.89	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			530	--	
02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			85	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--			--	--	
08/11/2005	<100	<20	0.77	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			610	--	
11/18/2005	--	--	--	--	--	--	--	--	--	--			--	--	
02/01/2006	<3,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--			690	--	e

**Table 2. Summary of Fuel Additives Analytical Data  
Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)														Footnotes
	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
<b>MW-6 Cont.</b>															
8/11/2006	<3,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--	--	880	--	
2/6/2007	<300	<20	0.80	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	
8/14/2007	<300	<20	0.91	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	640	--	
2/29/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	120	--	
8/12/2008	<1,500	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--	--	--	--	520	--	
<b>1/20/2009</b>	<b>&lt;1,500</b>	<b>&lt;50</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	--	--	--	--	<b>600</b>	--	
<b>MW-7</b>															
11/07/2003	<500	<100	53	<2.5	<2.5	13	--	--	--	--			<2.5	--	
02/03/2004	<100	<20	32	<1.0	<1.0	7.4	<0.50	<0.50	--	--			0.74	--	
02/03/2005	<100	<20	14	<0.50	<0.50	3.9	<0.50	<0.50	--	--			1.6	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--			--	--	
08/11/2005	<200	<40	21	<1.0	<1.0	4.7	<1.0	<1.0	--	--			1.0	--	e
11/18/2005	--	--	--	--	--	--	--	--	--	--			--	--	
02/01/2006	<300	<20	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			0.71	--	e
8/11/2006	<300	<20	41	<0.50	<0.50	9.0	<0.50	<0.50	--	--	--	--	<0.50	--	
2/6/2007	<300	<20	8.4	<0.50	<0.50	2.2	<0.50	<0.50	--	--	--	--	<0.50	--	
8/14/2007	<300	<20	9.8	<0.50	<0.50	1.8	<0.50	<0.50	--	--	--	--	<0.50	--	
2/29/2008	<300	<10	1.5	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<0.50	--	
8/12/2008	<300	<10	7.0	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<0.50	--	
<b>1/20/2009</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	--	--	--	--	<b>&lt;0.50</b>	--	
<b>MW-8</b>															
11/07/2003	<1,000	<200	440	<5.0	<5.0	18	--	--	--	--			<5.0	--	
02/03/2004	<2,500	<500	470	<25	<25	<25	<12	<12	--	--			<12	--	
05/04/2004	<2,000	<400	700	<10	<10	21	<10	<10	--	--			12	--	
08/12/2004	<5,000	<1,000	400	<25	<25	<25	<25	<25	--	--			1.1	--	
11/10/2004	<1,000	<200	480	<5.0	<5.0	21	<5.0	<5.0	--	--			8.9	--	
02/03/2005	<100	<20	45	<0.50	<0.50	1.9	<0.50	<0.50	--	--			0.59	--	e
05/09/2005	<1,000	<200	440	<5.0	<5.0	21	<5.0	<5.0	--	--			<5.0	--	e
08/11/2005	<1,000	<200	420	<5.0	<5.0	24	<5.0	<5.0	--	--			<0.50	--	e
11/18/2005	<1,000	<200	390	<5.0	<5.0	23	<5.0	<5.0	--	--			4.2	--	f

**Table 2. Summary of Fuel Additives Analytical Data  
Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)														Footnotes
	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
<b>MW-8 Cont.</b>															
02/01/2006	<3,000	<200	600	<5.0	<5.0	21	<5.0	<5.0	--	--			<0.50	--	e
5/30/2006	<3,000	<200	480	<5.0	<5.0	25	<5.0	<5.0	--	--	--	--	<5.0	--	
8/11/2006	<300	<20	630	<0.50	<0.50	37	1.2	<0.50	--	--	--	--	<0.50	--	
11/2/2006	<1,500	<100	660	<2.5	<2.5	43	<2.5	<2.5	--	--	--	--	<2.5	--	
2/6/2007	<300	<20	60	<0.50	<0.50	4.8	<0.50	<0.50	--	--	--	--	0.72	--	
5/8/2007	<300	<20	490	<0.50	<0.50	35	1.9	<0.50	--	--	--	--	9.0	--	h (MTBE)
8/14/2007	<300	<20	510	<0.50	<0.50	39	1.5	<0.50	--	--	--	--	12	--	
11/13/2007	<1,500	<100	400	<2.5	<2.5	18	<2.5	<2.5	--	--	--	--	17	--	
2/29/2008	<300	10	300	<0.50	<0.50	15	1.1	<0.50	--	--	--	--	3.5	--	
5/17/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	i
8/12/2008	<1,500	<50	310	<2.5	<2.5	39	<2.5	<2.5	--	--	--	--	6.4	--	
10/21/2008	<3,000	<100	260	<5.0	<5.0	21	<5.0	<5.0	--	--	--	--	<5.0	--	
<b>1/20/2009</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>35</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>2.9</b>	<b>0.73</b>	<b>&lt;0.50</b>	--	--	--	--	<b>&lt;0.50</b>	--	
<b>RW-1</b>															
11/07/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	--	--			3.1	--	
02/03/2004	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	--	--			0.76	--	
05/04/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			1.8	--	
08/12/2004	330/<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			2.9	--	d
11/10/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			5.2	--	
02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			1.7	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--			--	--	
08/11/2005	--	--	--	--	--	--	--	--	--	--			--	--	
11/18/2005	--	--	--	--	--	--	--	--	--	--			--	--	
02/01/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			1.7	--	e
5/30/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
8/11/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
11/2/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
2/6/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	15	--	
2/29/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	1.4	--	
<b>1/20/2009</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	--	--	--	--	<b>6.6</b>	--	

**Table 2. Summary of Fuel Additives Analytical Data  
Station #276, 10600 MacArthur Blvd., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)														Footnotes
	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
<b>WGR-3</b>															
05/04/2004	<100	<20	11	<0.50	<0.50	2.4	<0.50	<0.50	--	--			<0.50	--	
08/12/2004	<100	<20	35	<0.50	<0.50	7.5	<0.50	<0.50	--	--			<0.50	--	
11/10/2004	<100	<20	5.6	<0.50	<0.50	1.3	<0.50	<0.50	--	--			<0.50	--	
02/03/2005	<100	<20	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			<0.50	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--			--	--	
08/11/2005	--	--	--	--	--	--	--	--	--	--			--	--	
11/18/2005	--	--	--	--	--	--	--	--	--	--			--	--	
02/01/2006	<300	<20	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			<0.50	--	e
5/30/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
8/11/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
11/2/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
2/6/2007	<300	<20	4.4	<0.50	<0.50	0.58	<0.50	<0.50	--	--	--	--	<0.50	--	
2/29/2008	<300	<10	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<0.50	--	
<b>1/20/2009</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>1.2</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	--	--	--	--	<b>&lt;0.50</b>	--	



SYMBOLS & ABBREVIATIONS:

-- = Not analyzed/applicable/measured/available  
< = Not detected at or above the laboratory reporting limit  
1,2-DCA = 1,2-Dichloroethane  
cis-1,2-DCE = cis-1,2-Dichloroethene  
DIPE = Di-isopropyl ether  
EDB = 1,2-Dibromoethane  
ETBE = Ethyl tert-butyl ether  
MTBE = Methyl tert-butyl ether  
PCE = Tetrachloroethene  
TAME = tert-Amyl methyl ether  
TBA = tert-Butyl alcohol  
TCE = Trichloroethene  
trans-1,2-DCE = trans 1,2-Dichloroethene  
VOC = Volatile organic compounds  
µg/L = Micrograms per Liter  
BTEX = Benzene, toluene, ethylbenzene and xylenes

FOOTNOTES:

a = VOC 1,1 DCE detected at a concentration of 1.9 ug/L.  
b = VOC 1,2 DCA detected at a concentration of 3.2 ug/L.  
c = VOC Chlorobenzene detected at a concentration of 2.0 ug/L.  
d = Ethanol was re-analyzed two days out of holding time and was not detected above a laboratory reporting limit of 100 ug/L.  
e = Calibration verification for ethanol was within method limits but outside contract limits.  
f = Sample for PCE analyzed after holding time expired.  
g = Well sampled annually.  
h = Initial analysis within holding time but required dilution.  
i = Well inaccessible.

NOTES:

PCE was analyzed using EPA Method 8260B. Samples were analyzed by EPA method 8015B for GRO and EPA method 8260B for BTEX, fuel oxygenates, ethanol, and PCE.

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 #276, 10600 MacArthur Blvd., Oakland, CA**

<b>Date Sampled</b>	<b>Approximate Flow Direction</b>	<b>Approximate Hydraulic Gradient</b>
12/17/2000	South-Southeast	0.003
12/28/2001	Southeast	0.002
11/27/2002	South-Southeast	0.003
7/22/2003	South	0.007
11/7/2003	Southwest	0.002
2/3/2004	South-Southwest	0.002
5/4/2004	South-Southwest	0.003
8/12/2004	South	0.004
11/10/2004	Southwest	0.004
2/3/2005	Southwest	0.003
5/9/2005	South-Southwest	0.004
8/11/2005	South-Southwest	0.007
11/18/2005	Southwest	0.005
2/1/2006	Southwest	0.002
5/30/2006	South-Southwest	0.007
8/10/2006	South-Southwest	0.004
11/2/2006	South-Southwest	0.004
2/6/2007	South-Southwest	0.005
5/8/2007	South-Southwest	0.005
8/14/2007	South-Southwest	0.004
11/13/2007	South-Southwest	0.003
2/29/2008	South-Southwest	0.001
5/17/2008	Southwest	0.005
8/12/2008	Southwest	0.004
10/21/2008	Southwest	0.003
<b>1/20/2009</b>	<b>Southwest</b>	<b>0.002</b>

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, LABORATORY ANALYTICAL REPORT WITH  
CHAIN-OF-CUSTODY DOCUMENTATION, AND FIELD PROCEDURES)**



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

February 4, 2009

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

Re: Groundwater Sampling Data Package, BP Service Station No. 276, located at  
10600 MacArthur Boulevard, Oakland, California.

**General Information**

*Data Submittal Prepared / Reviewed by:* Becky Carroll / Jay Johnson

*Phone Number:* (530) 676-6000

*On-Site Supplier Representative:* Roberto Heimlich

*Sampling Date:* January 20, 2009

*Arrival:* 07:20 *Departure:* 11:10

*Weather Conditions:* Clear

*Unusual Field Conditions:* None noted.

*Scope of Work Performed:* Quarterly monitoring and sampling.

*Variations from Work Scope:* None noted.

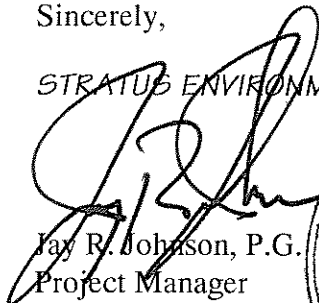
This submittal presents the data collected in association with routine groundwater monitoring. The attachments include field data sheets, non-hazardous waste data form, chain of custody documentation, certified analytical results, and field procedures for groundwater sampling documentation. The information 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.

February 4, 2009

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**  
**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 276 PURGED BY: RH WELL ID.: MW-1  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: RH SAMPLE ID.: MW-1  
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: \_\_\_\_\_

DATE PURGED 1/20/09 NP START (2400hr) 10:31 END (2400hr) 10:40  
 DATE SAMPLED 1/20/09 SAMPLE TIME (2400hr) 10:38  
 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) = 38.66 CASING VOLUME (gal) = \_\_\_\_\_  
 DEPTH TO WATER (feet) = 31.61 CALCULATED PURGE (gal) = NP  
 WATER COLUMN HEIGHT (feet) = 7.0 ACTUAL PURGE (gal) = \_\_\_\_\_

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/09</u>	<u>10:34</u>	<u>NP</u>	<u>18.8</u>	<u>1678</u>	<u>6.83</u>	<u>clear</u>	_____
<u>↓</u>	_____	_____	_____	_____	_____	<u>↓</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	<u>NO</u>	_____	<u>PURGE</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 31.61 SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWD  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 12 VOAS / HCL

PURGING EQUIPMENT

\_\_\_\_ Bladder Pump \_\_\_\_\_ Bailer (Teflon)  
 \_\_\_\_ Centrifugal Pump NA \_\_\_\_\_ Bailer (PVC)  
 \_\_\_\_ Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel)  
 \_\_\_\_ Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: NA

SAMPLING EQUIPMENT

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

WELL INTEGRITY: 6000 LOCK#: MASTER

REMARKS: DO 2.29

SIGNATURE: [Signature] Page \_\_\_\_\_ of \_\_\_\_\_

# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 276 PURGED BY: RH WELL I.D.: MW-2  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: RH SAMPLE I.D.: MW-2  
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: \_\_\_\_\_

DATE PURGED 1/20/09 NP START (2400hr) 9:35 END (2400hr) 9:44  
 DATE SAMPLED 1/20/09 SAMPLE TIME (2400hr) 9:41  
 SAMPLE TYPE: Groundwater  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) = 25.20 CASING VOLUME (gal) = \_\_\_\_\_  
 DEPTH TO WATER (feet) = 15.75 CALCULATED PURGE (gal) = NP  
 WATER COLUMN HEIGHT (feet) = 9.4 ACTUAL PURGE (gal) = \_\_\_\_\_

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/09</u>	<u>9:38</u>	<u>NP</u>	<u>18.8</u>	<u>594</u>	<u>6.73</u>	<u>clear</u>	_____
<u>✓</u>	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

SAMPLE DEPTH TO WATER: 15.75 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWO  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOAS / HCL

**PURGING EQUIPMENT**  
 Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump NA  Bailer (PVC)  
 Submersible Pump  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: NA

**SAMPLING EQUIPMENT**  
 Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump  Bailer (  PVC or  disposable)  
 Submersible Pump  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_

WELL INTEGRITY: 6000 LOCK#: NA

REMARKS: DO 0.91

SIGNATURE: [Signature] Page \_\_\_\_\_ of \_\_\_\_\_



**BP ALAMEDA PORTFOLIO**  
**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 276 PURGED BY: RH WELL I.D.: MW-3  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: RH SAMPLE I.D.: MW-3  
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: \_\_\_\_\_

DATE PURGED 1/20/09 NP START (2400hr) 9:51 END (2400hr) 10:00  
 DATE SAMPLED 1/20/09 SAMPLE TIME (2400hr) 9:58  
 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) = 38.40 CASING VOLUME (gal) = \_\_\_\_\_  
 DEPTH TO WATER (feet) = 32.31 CALCULATED PURGE (gal) = NP  
 WATER COLUMN HEIGHT (feet) = 6.0 ACTUAL PURGE (gal) = \_\_\_\_\_

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)	
<u>1/20/09</u>	<u>9:54</u>	<u>NP</u>	<u>17.6</u>	<u>678</u>	<u>6.72</u>	<u>clear</u>		
<u>↓</u>						<u>↓</u>		
		<u>NO PURGE</u>						

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 32.31 SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWO  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOAS/HCL

PURGING EQUIPMENT

\_\_\_\_ Bladder Pump \_\_\_\_\_ Bailer (Teflon)  
 \_\_\_\_ Centrifugal Pump NA \_\_\_\_\_ Bailer (PVC)  
 \_\_\_\_ Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel)  
 \_\_\_\_ Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: NA

SAMPLING EQUIPMENT

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

WELL INTEGRITY: GOOD LOCK#: MASTER

REMARKS: DO I. II

SIGNATURE: [Signature]

# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 276 PURGED BY: RH WELL I.D.: MW-4  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: RH SAMPLE I.D.: MW-4  
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: \_\_\_\_\_

DATE PURGED 1/20/09 NP START (2400hr) 10:05 END (2400hr) 10:13  
 DATE SAMPLED 1/20/09 SAMPLE TIME (2400hr) 10:11  
 SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2" X 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) = 47.52 CASING VOLUME (gal) = \_\_\_\_\_  
 DEPTH TO WATER (feet) = 31.73 CALCULATED PURGE (gal) = NP  
 WATER COLUMN HEIGHT (feet) = 15.7 ACTUAL PURGE (gal) = \_\_\_\_\_

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/09</u>	<u>10:08</u>	<u>NP</u>	<u>17.4</u>	<u>477.4</u>	<u>6.76</u>	<u>clear</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

NO PURGE

SAMPLE DEPTH TO WATER: 31.73 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWO  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOAS / HCL

#### PURGING EQUIPMENT

- Bladder Pump
- Centrifugal Pump
- Submersible Pump NA
- Peristaltic Pump
- Bailer (Teflon)
- Bailer (PVC)
- Bailer (Stainless Steel)
- Dedicated \_\_\_\_\_

Other: \_\_\_\_\_  
 Pump Depth: NA

#### SAMPLING EQUIPMENT

- Bladder Pump
- Centrifugal Pump
- Submersible Pump
- Peristaltic Pump
- Bailer (Teflon)
- Bailer (  PVC or  disposable)
- Bailer (Stainless Steel)
- Dedicated \_\_\_\_\_

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

WELL INTEGRITY: GOOD LOCK#: MASTER  
 REMARKS: DO 1.18

SIGNATURE: [Signature]

**BP ALAMEDA PORTFOLIO**  
**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 276 PURGED BY: RH WELL I.D.: MW-5  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: RH SAMPLE I.D.: MW-5  
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: \_\_\_\_\_

DATE PURGED 1/20/09 START (2400hr) 9:21 END (2400hr) 9:30  
 DATE SAMPLED 1/20/09 SAMPLE TIME (2400hr) 9:27  
 SAMPLE TYPE: Groundwater  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) = 46.70 CASING VOLUME (gal) = \_\_\_\_\_  
 DEPTH TO WATER (feet) = 31.39 CALCULATED PURGE (gal) = NP  
 WATER COLUMN HEIGHT (feet) = 15.3 ACTUAL PURGE (gal) = \_\_\_\_\_

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/09</u>	<u>9:24</u>	<u>NP</u>	<u>17.8</u>	<u>609</u>	<u>6.57</u>	<u>clear</u>	_____
<u>✓</u>	_____	_____	_____	_____	_____	<u>✓</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**NO PURGE**

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: \_\_\_\_\_ SAMPLE TURBIDITY: clear  
 80% RECHARGE:  YES  NO ANALYSES: SWD  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOAS / HCL

PURGING EQUIPMENT

\_\_\_\_ Bladder Pump \_\_\_\_\_ Bailer (Teflon)  
 \_\_\_\_ Centrifugal Pump NA \_\_\_\_\_ Bailer (PVC)  
 \_\_\_\_ Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel)  
 \_\_\_\_ Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: NA

SAMPLING EQUIPMENT

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

WELL INTEGRITY: GOOD LOCK#: MASTER  
 REMARKS: DO 1.08

SIGNATURE: [Signature] Page \_\_\_\_\_ of \_\_\_\_\_

# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 276 PURGED BY: 1/20/09 WELL I.D.: MW-6  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: 1/20/09 SAMPLE I.D.: MW-6  
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: \_\_\_\_\_

DATE PURGED 1/20/09 START (2400hr) 8:30 END (2400hr) 8:38  
 DATE SAMPLED 1/20/09 SAMPLE TIME (2400hr) 8:41  
 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) = 48.28 CASING VOLUME (gal) = 1.9  
 DEPTH TO WATER (feet) = 37.02 CALCULATED PURGE (gal) = 5.7  
 WATER COLUMN HEIGHT (feet) = 11.2 ACTUAL PURGE (gal) = 6

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/09</u>	<u>8:32</u>	<u>2</u>	<u>17.7</u>	<u>1498</u>	<u>6.80</u>	<u>clear</u>	
<u>✓</u>	<u>8:33</u>	<u>4</u>	<u>18.2</u>	<u>1505</u>	<u>6.82</u>	<u>✓</u>	
	<u>8:34</u>	<u>6</u>	<u>18.0</u>	<u>1510</u>	<u>6.99</u>	<u>✓</u>	

SAMPLE DEPTH TO WATER: 39.06 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWD  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOAS / HCL

**PURGING EQUIPMENT**

Bladder Pump  
 Centrifugal Pump  
 Submersible Pump  
 Peristaltic Pump  
 Other: \_\_\_\_\_  
 Pump Depth: 47

Bailer (Teflon)  
 Bailer (PVC)  
 Bailer (Stainless Steel)  
 Dedicated \_\_\_\_\_

**SAMPLING EQUIPMENT**

Bladder Pump  
 Centrifugal Pump  
 Submersible Pump  
 Peristaltic Pump  
 Other: \_\_\_\_\_

Bailer (Teflon)  
 Bailer (  PVC or  disposable)  
 Bailer (Stainless Steel)  
 Dedicated \_\_\_\_\_

WELL INTEGRITY: GOOD LOCK#: MASTER

REMARKS: DO 0.75

SIGNATURE: [Signature] Page \_\_\_ of \_\_\_

**BP ALAMEDA PORTFOLIO**  
**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 276 PURGED BY: RH WELL I.D.: MW-7  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: RH SAMPLE I.D.: MW-7  
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: \_\_\_\_\_

DATE PURGED 1/20/19 NP START (2400hr) 9:06 END (2400hr) 9:15  
 DATE SAMPLED 1/20/19 SAMPLE TIME (2400hr) 9:13  
 SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2" X 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) = 36.62 CASING VOLUME (gal) = \_\_\_\_\_  
 DEPTH TO WATER (feet) = 20.81 CALCULATED PURGE (gal) = NP  
 WATER COLUMN HEIGHT (feet) = 15.8 ACTUAL PURGE (gal) = \_\_\_\_\_

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/19</u>	<u>9:09</u>	<u>NP</u>	<u>18.5</u>	<u>554</u>	<u>6.67</u>	<u>clear</u>	_____
<u>✓</u>	_____	_____	_____	_____	_____	<u>↓</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	<u>NO</u>	_____	<u>PURGE</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

SAMPLE DEPTH TO WATER: 20.81 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWD  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6VOA9/HCL

PURGING EQUIPMENT

\_\_\_\_ Bladder Pump \_\_\_\_\_ Bailer (Teflon)  
 \_\_\_\_ Centrifugal Pump NA \_\_\_\_\_ Bailer (PVC)  
 \_\_\_\_ Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel)  
 \_\_\_\_ Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: NA

SAMPLING EQUIPMENT

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

WELL INTEGRITY: GOOD LOCK#: MASTER

REMARKS: DO 0.69

SIGNATURE: [Signature] Page \_\_\_\_ of \_\_\_\_



# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 276 PURGED BY: RH WELL I.D.: RW-1  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: RH SAMPLE I.D.: RW-1  
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: \_\_\_\_\_

DATE PURGED 1/20/09 NP START (2400hr) 10:18 END (2400hr) 10:26  
 DATE SAMPLED 1/20/09 SAMPLE TIME (2400hr) 10:24  
 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) = 48.75 CASING VOLUME (gal) = \_\_\_\_\_  
 DEPTH TO WATER (feet) = 32.10 CALCULATED PURGE (gal) = NP  
 WATER COLUMN HEIGHT (feet) = 16.6 ACTUAL PURGE (gal) = \_\_\_\_\_

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/09</u>	<u>10:21</u>	<u>NP</u>	<u>18.3</u>	<u>357.7</u>	<u>7.02</u>	<u>clear</u>	_____
<u>✓</u>	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	<u>NO PURGE</u>		_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

SAMPLE DEPTH TO WATER: 32.10 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWD  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOAS / HCL

#### PURGING EQUIPMENT

Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump  Bailer (PVC)  
 Submersible Pump NA  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: NA

#### SAMPLING EQUIPMENT

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

WELL INTEGRITY: GOOD LOCK#: NA  
 REMARKS: DO 1.16

SIGNATURE: [Signature] Page \_\_\_ of \_\_\_

# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 276 PURGED BY: RH WELL I.D.: WGR-3  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: RH SAMPLE I.D.: WGR-3  
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: \_\_\_\_\_

DATE PURGED 1/20/09 START (2400hr) 8:46 END (2400hr) 8:59  
 DATE SAMPLED 1/20/09 SAMPLE TIME (2400hr) 9:01  
 SAMPLE TYPE: Groundwater  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) = 26.85 CASING VOLUME (gal) = 4.6  
 DEPTH TO WATER (feet) = 19.90 CALCULATED PURGE (gal) = 13.9  
 WATER COLUMN HEIGHT (feet) = 6.9 ACTUAL PURGE (gal) = 14

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/09</u>	<u>8:48</u>	<u>5</u>	<u>18.2</u>	<u>550</u>	<u>7.47</u>	<u>clear</u>	_____
<u>✓</u>	<u>8:50</u>	<u>10</u>	<u>19.4</u>	<u>507</u>	<u>7.16</u>	_____	_____
<u>✓</u>	<u>8:52</u>	<u>14</u>	<u>19.6</u>	<u>521</u>	<u>6.79</u>	<u>✓</u>	_____

### SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 21.07 SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWO  
 ODOR: no SAMPLE VESSEL / PRESERVATIVE: 6VOAS/HCL

#### PURGING EQUIPMENT

Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump  Bailer (PVC)  
 Submersible Pump  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: 26

#### SAMPLING EQUIPMENT

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

WELL INTEGRITY: GOOD LOCK#: MASTER

REMARKS: DO 1.09

SIGNATURE: [Signature] Page    of



# WELLHEAD OBSERVATION FORM



Site Name/Number: 276 Oakland

Date: 1/20/09 Technician: ROBERTO

Well I.D.	Box in Good Condition? <small>X = Yes Blank = No</small>	Lock Missing? <small>X = Yes (replaced) Blank = No</small>	Water in Wellbox? <small>X = Yes Blank = No</small>	Water Level Relative to Cap? <small>A = Above cap B = Below cap L = Level w/cap</small>	Well Cap? <small>I = Intact M = Missing or Compromised (replaced)</small>	Bolts Missing? <small>X = Yes Blank = No</small>	Bolts Stripped? <small>X = Yes Blank = No</small>	Bolt Holes Stripped? <small>X = Yes Blank = No</small>	Cracked or Broken Lid? <small>X = Yes Blank = No</small>	Cracked or Broken Box? <small>X = Yes Blank = No</small>	Grout Level more than 1ft below TOC? <small>X = Yes Blank = No</small>	Additional Comments <small>(such as missing lid, concrete needs replacement, or other - explain)</small>
MW-1	X	—	—	—	I	X	—	—	—	—	—	
MW-2	X	X	—	—	I	—	—	—	—	—	—	LARGE LID
MW-3	X	—	—	—	I	—	—	—	—	—	—	
MW-4	X	—	—	—	I	—	—	—	—	—	—	
MW-5	X	—	—	—	I	X	—	—	—	—	—	
MW-6	X	—	—	—	I	—	—	—	—	—	—	
MW-7	X	—	—	—	I	—	—	—	—	—	—	
MW-8	X	X	—	—	I	—	—	—	—	—	—	LARGE LID
RW-1	X	X	—	—	I	—	—	—	—	—	—	LARGE LID
WGR-3	X	—	—	—	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, graffiti on compound, etc.)

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

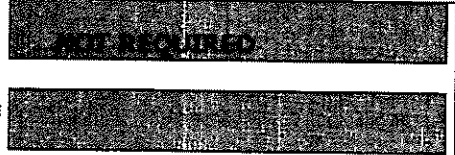
NO. 672255

# NON-HAZARDOUS WASTE DATA FORM

**SITE:**

EPA I.D. NO.

NAME **BP WEST COAST PRODUCTS LLC ARCO # 276**  
ADDRESS **P.O. BOX 80249**  
**RANCHO SANTA MARGARITA OAKLAND**  
CITY, STATE, ZIP **CA 92688**



PHONE NO. ( )

CONTAINERS: No. \_\_\_\_\_ VOLUME **20 GAL** WEIGHT \_\_\_\_\_

TYPE:  TANK TRUCK  DUMP TRUCK  DRUMS  CARTONS  OTHER \_\_\_\_\_

WASTE DESCRIPTION **NON-HAZARDOUS WATER** GENERATING PROCESS **WELL PURGING/DECON WATER**

COMPONENTS OF WASTE		PPM	%	COMPONENTS OF WASTE		PPM	%
1.	<b>WATER</b>	<b>99-100%</b>		5.			
2.	<b>TPH</b>	<b>&lt;1%</b>		6.			
3.				7.	<b>BESI#</b>		
4.				8.			

PROPERTIES: **7-10**  SOLID  LIQUID  SLUDGE  SLURRY  OTHER \_\_\_\_\_

HANDLING INSTRUCTIONS: **WEAR ALL APPROPRIATE PROTECTIVE CLOTHING**

THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS.

**Larry Moothart BESI for BP**  
TYPED OR PRINTED FULL NAME & SIGNATURE

**1/20/09**  
DATE

TO BE COMPLETED BY GENERATOR

TRANSPORTER

NAME **Transporter #1 STRATUS ENVIRONMENTAL** **Transporter #2**

EPA I.D. NO.

ADDRESS **3330 CAMERON PARK DR**

SERVICE ORDER NO. \_\_\_\_\_

CITY, STATE, ZIP **CAMERON PARK, CA 95682**

PICK UP DATE \_\_\_\_\_

PHONE NO. **530-676-2031**

TRUCK, UNIT, I.D. NO. \_\_\_\_\_

**ROBERTO HEINLICH**  
TYPED OR PRINTED FULL NAME & SIGNATURE

**1/20/09**  
DATE

NAME **INSTRAT, INC**

EPA I.D. NO.

ADDRESS **1105 AIRPORT RD #C**

DISPOSAL METHOD

CITY, STATE, ZIP **RIO VISTA, CA 94571**

LANDFILL  OTHER \_\_\_\_\_

PHONE NO. **530-753-1829**

TYPED OR PRINTED FULL NAME & SIGNATURE

DATE

GEN	OLD/NEW	L	A	TONS
TRANS		S	B	
C/Q		RT/CD	HWDF	NONE

DISCREPANCY

TSD FACILITY





### Chain of Custody Record

Project Name: BP 276  
 BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > CA > Alameda > 276  
 State or Lead Regulatory Agency: \_\_\_\_\_  
 Requested Due Date (mm/dd/yy): \_\_\_\_\_

On-site Time:	<u>7:20</u>	Temp:	<u>60</u>
Off-site Time:	<u>11:10</u>	Temp:	<u>68</u>
Sky Conditions:	<u>clear</u>		
Meteorological Events:	<u>NA</u>		
Wind Speed:	<u>0</u>	Direction:	<u>NA</u>

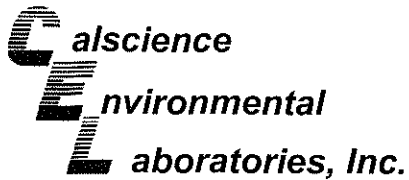
Lab Name: <u>Calscience</u>	BP/AR Facility No.: <u>276</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>7440 Lincoln Way</u> <u>Garden Grove, CA 92841</u>	BP/AR Facility Address: <u>10600 MacArthur Blvd., Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u> <u>Cameron Park, CA 95682</u>
Lab PM: <u>Richard Villafania</u>	Site Lat/Long:	Consultant/Contractor Project No.: <u>E276-04</u>
Tele/Fax: <u>714-895-5494 x205</u>	California Global ID #: <u>T0600108312</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Enfos Project No.:	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u> <u>San Ramon, CA</u>	Provision or RCOP (circle one) <u>Provision</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
Tele/Fax: <u>925-275-3506</u>	Phase/WBS: <u>04-Monitoring</u>	E-mail EDD To: <u>bcarroll@stratusinc.net</u>
	Sub Phase/Task: <u>03-Analytical</u>	Invoice to: <u>Atlantic Richfield Co.</u>
	Cost Element: <u>01-Contractor labor</u>	

Lab Bottle Order No:				Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments *Oxy = MTBE, TAME, ETBE, DIPE, TBA		
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	GRO by 8015M	BTEX/Oxy*	EDB	1,2 DCA	Ethanol by 8260		PCE by 8260	
1	TB-276 1/20/09 - 5:00	5:00	1/20/09	X			2			X		X	X	X	X	X	X			HOLD	
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Sampler's Name: <u>ROBERTO HEIMLICH</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>DOULOS ENV.</u>						
Shipment Date:						
Shipment Method:						
Shipment 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



January 30, 2009

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

Subject: **Calscience Work Order No.: 09-01-1637**  
**Client Reference: BP 276**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 1/21/2009 and analyzed in accordance with the attached chain-of-custody.

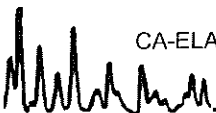
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows 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.

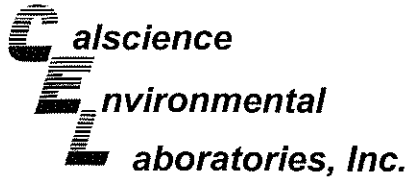
If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, which appears to read "Richard Villafania".

Calscience Environmental  
Laboratories, Inc.  
Richard Villafania  
Project Manager





## Analytical Report

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

Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: BP 276

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	09-01-1637-1-H	01/20/09 10:38	Aqueous	GC 4	01/26/09	01/26/09 17:15	090126B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	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-2	09-01-1637-2-D	01/20/09 09:41	Aqueous	GC 4	01/26/09	01/26/09 19:27	090126B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	200	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	105	38-134			

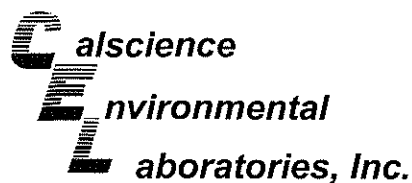
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	09-01-1637-3-D	01/20/09 09:56	Aqueous	GC 4	01/26/09	01/26/09 20:00	090126B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	105	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	09-01-1637-4-D	01/20/09 10:11	Aqueous	GC 4	01/26/09	01/26/09 20:33	090126B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	102	38-134			

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



## Analytical Report

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

Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: BP 276

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	09-01-1637-5-D	01/20/09 09:27	Aqueous	GC 4	01/26/09	01/26/09 21:06	090126B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	69	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	98	38-134			

MW-6	09-01-1637-6-D	01/20/09 08:41	Aqueous	GC 4	01/26/09	01/26/09 21:39	090126B01
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Comment(s): -LW = Quantitation of unknown hydrocarbon(s) in sample based on gasoline.

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	240	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	93	38-134			

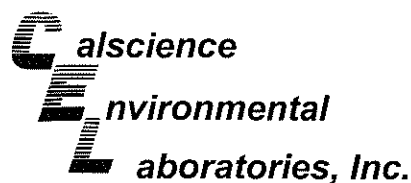
MW-7	09-01-1637-7-D	01/20/09 09:13	Aqueous	GC 4	01/26/09	01/26/09 22:12	090126B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	4700	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	126	38-134			

MW-8	09-01-1637-8-D	01/20/09 10:54	Aqueous	GC 4	01/26/09	01/26/09 22:45	090126B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	102	38-134			

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



## Analytical Report

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

Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: BP 276

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW-1	09-01-1637-9-D	01/20/09 10:24	Aqueous	GC 4	01/26/09	01/26/09 23:18	090126B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	92	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WGR-3	09-01-1637-10-D	01/20/09 09:01	Aqueous	GC 4	01/26/09	01/26/09 23:51	090126B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	103	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-695-411	N/A	Aqueous	GC 4	01/26/09	01/26/09 15:35	090126B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	75	38-134			

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



## Analytical Report

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

Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: BP 276

Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>MW-1</b>	<b>09-01-1637-1-A</b>	<b>01/20/09 10:38</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>01/27/09</b>	<b>01/28/09 03:57</b>	<b>090127L02</b>

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	
Tetrachloroethene	4.8	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Toluene	ND	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	ND	0.50	1						
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>	<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>
1,2-Dichloroethane-d4	108	73-157			Dibromofluoromethane	105	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	90	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>MW-2</b>	<b>09-01-1637-2-A</b>	<b>01/20/09 09:41</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>01/27/09</b>	<b>01/28/09 07:26</b>	<b>090127L02</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	6.8	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	14	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	
Tetrachloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	1.6	0.50	1	
Toluene	ND	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	ND	0.50	1						
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>	<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>
1,2-Dichloroethane-d4	90	73-157			Dibromofluoromethane	96	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	94	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>MW-3</b>	<b>09-01-1637-3-B</b>	<b>01/20/09 09:58</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>01/28/09</b>	<b>01/28/09 18:43</b>	<b>090128L01</b>

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	
Tetrachloroethene	39	5.0	10		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Toluene	ND	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	ND	0.50	1						
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>	<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>
1,2-Dichloroethane-d4	77	73-157			Dibromofluoromethane	84	82-142		
Toluene-d8	106	82-112			1,4-Bromofluorobenzene	87	75-105		

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

## Analytical Report

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

Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: BP 276

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	09-01-1637-4-B	01/20/09 10:11	Aqueous	GC/MS BB	01/28/09	01/28/09 16:12	090128L01

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	
Tetrachloroethene	22	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Toluene	ND	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	ND	0.50	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	90	73-157			Dibromofluoromethane	93	82-142		
Toluene-d8	99	82-112			1,4-Bromofluorobenzene	85	75-105		

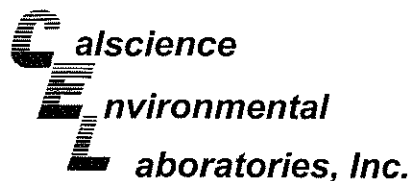
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	09-01-1637-5-A	01/20/09 09:27	Aqueous	GC/MS BB	01/27/09	01/28/09 08:56	090127L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	5.0	10		Methyl-t-Butyl Ether (MTBE)	130	5.0	10	
1,2-Dibromoethane	ND	5.0	10		Tert-Butyl Alcohol (TBA)	ND	100	10	
1,2-Dichloroethane	ND	5.0	10		Diisopropyl Ether (DIPE)	ND	5.0	10	
Ethylbenzene	ND	5.0	10		Ethyl-t-Butyl Ether (ETBE)	ND	5.0	10	
Tetrachloroethene	6.8	5.0	10		Tert-Amyl-Methyl Ether (TAME)	19	5.0	10	
Toluene	ND	5.0	10		Ethanol	ND	3000	10	
Xylenes (total)	ND	5.0	10						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	105	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	87	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	09-01-1637-6-A	01/20/09 08:41	Aqueous	GC/MS BB	01/27/09	01/28/09 09:26	090127L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.5	5		Methyl-t-Butyl Ether (MTBE)	ND	2.5	5	
1,2-Dibromoethane	ND	2.5	5		Tert-Butyl Alcohol (TBA)	ND	50	5	
1,2-Dichloroethane	ND	2.5	5		Diisopropyl Ether (DIPE)	ND	2.5	5	
Ethylbenzene	ND	2.5	5		Ethyl-t-Butyl Ether (ETBE)	ND	2.5	5	
Tetrachloroethene	600	20	40		Tert-Amyl-Methyl Ether (TAME)	ND	2.5	5	
Toluene	ND	2.5	5		Ethanol	ND	1500	5	
Xylenes (total)	ND	2.5	5						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	113	73-157			Dibromofluoromethane	108	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	89	75-105		

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



## Analytical Report

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

Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: BP 276

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	09-01-1637-7-B	01/20/09 09:13	Aqueous	GC/MS BB	01/29/09	01/29/09 15:49	090129L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	3.5	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	11	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Tetrachloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Toluene	0.81	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	3.2	0.50	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	91	73-157			Dibromofluoromethane	102	82-142		
Toluene-d8	105	82-112			1,4-Bromofluorobenzene	104	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	09-01-1637-8-B	01/20/09 10:54	Aqueous	GC/MS BB	01/28/09	01/28/09 19:43	090128L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	35	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	0.73	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Tetrachloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	2.9	0.50	1	
Toluene	ND	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	ND	0.50	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	76	73-157			Dibromofluoromethane	85	82-142		
Toluene-d8	103	82-112			1,4-Bromofluorobenzene	90	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW-1	09-01-1637-9-A	01/20/09 10:24	Aqueous	GC/MS BB	01/27/09	01/28/09 11:25	090127L02

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	
Tetrachloroethene	6.6	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Toluene	ND	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	ND	0.50	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	105	73-157			Dibromofluoromethane	103	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	87	75-105		

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

## Analytical Report

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

Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: BP 276

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WGR-3	09-01-1637-10-A	01/20/09 09:01	Aqueous	GC/MS BB	01/27/09	01/28/09 11:55	090127L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	1.2	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	
Tetrachloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Toluene	ND	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	ND	0.50	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	105	73-157			Dibromofluoromethane	103	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	86	75-105		

Method Blank	099-12-703-667	N/A	Aqueous	GC/MS BB	01/27/09	01/28/09 03:27	090127L02
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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	
Tetrachloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Toluene	ND	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	ND	0.50	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	101	73-157			Dibromofluoromethane	99	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	90	75-105		

Method Blank	099-12-703-668	N/A	Aqueous	GC/MS BB	01/28/09	01/28/09 15:11	090128L01
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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	
Tetrachloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Toluene	ND	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	ND	0.50	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	108	73-157			Dibromofluoromethane	100	82-142		
Toluene-d8	99	82-112			1,4-Bromofluorobenzene	90	75-105		

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

**Analytical Report**



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

Date Received: 01/21/09  
 Work Order No: 09-01-1637  
 Preparation: EPA 5030B  
 Method: EPA 8260B  
 Units: ug/L

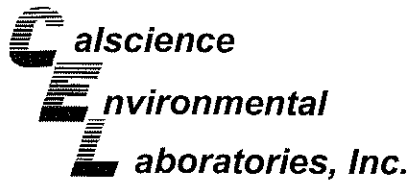
Project: BP 276

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-703-669	N/A	Aqueous	GC/MS BB	01/29/09	01/29/09 11:47	090129L01

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	
Tetrachloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Toluene	ND	0.50	1		Ethanol	ND	300	1	
Xylenes (total)	ND	0.50	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	99	73-157			Dibromofluoromethane	97	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	89	75-105		

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



## Quality Control - Spike/Spike Duplicate



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

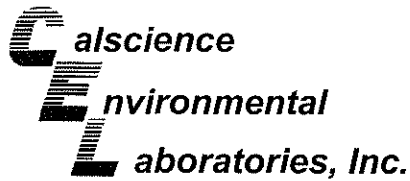
Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	Aqueous	GC 4	01/26/09	01/26/09	090126S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	105	103	38-134	2	0-25	

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - Spike/Spike Duplicate



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

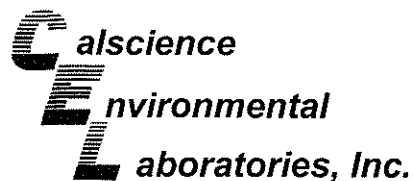
Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8260B

Project BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	Aqueous	GC/MS BB	01/27/09	01/28/09	090127S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	103	98	86-122	5	0-8	
Carbon Tetrachloride	118	112	78-138	5	0-9	
Chlorobenzene	107	105	90-120	2	0-9	
1,2-Dibromoethane	101	95	70-130	6	0-30	
1,2-Dichlorobenzene	108	102	89-119	6	0-10	
1,1-Dichloroethene	96	82	52-142	16	0-23	
Ethylbenzene	106	106	70-130	0	0-30	
Toluene	104	99	85-127	6	0-12	
Trichloroethene	108	104	78-126	4	0-10	
Vinyl Chloride	91	90	56-140	1	0-21	
Methyl-t-Butyl Ether (MTBE)	110	92	64-136	18	0-28	
Tert-Butyl Alcohol (TBA)	87	79	27-183	10	0-60	
Diisopropyl Ether (DIPE)	105	94	78-126	11	0-16	
Ethyl-t-Butyl Ether (ETBE)	110	96	67-133	13	0-21	
Tert-Amyl-Methyl Ether (TAME)	111	95	63-141	16	0-21	
Ethanol	90	83	11-167	8	0-64	

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - Spike/Spike Duplicate



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

Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8260B

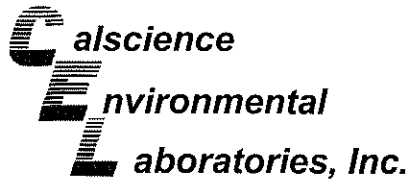
Project BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-4	Aqueous	GC/MS BB	01/28/09	01/28/09	090128S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	95	86-122	1	0-8	
Carbon Tetrachloride	107	110	78-138	2	0-9	
Chlorobenzene	104	105	90-120	0	0-9	
1,2-Dibromoethane	96	99	70-130	3	0-30	
1,2-Dichlorobenzene	100	99	89-119	0	0-10	
1,1-Dichloroethene	86	71	52-142	18	0-23	
Ethylbenzene	106	103	70-130	3	0-30	
Toluene	96	96	85-127	0	0-12	
Trichloroethene	101	101	78-126	1	0-10	
Vinyl Chloride	86	87	56-140	1	0-21	
Methyl-t-Butyl Ether (MTBE)	88	95	64-136	7	0-28	
Tert-Butyl Alcohol (TBA)	83	91	27-183	9	0-60	
Diisopropyl Ether (DIPE)	89	90	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	93	97	67-133	4	0-21	
Tert-Amyl-Methyl Ether (TAME)	95	98	63-141	3	0-21	
Ethanol	109	96	11-167	13	0-64	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate



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

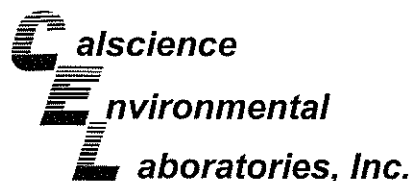
Date Received: 01/21/09  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8260B

Project BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-01-1949-5	Aqueous	GC/MS BB	01/29/09	01/29/09	090129S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	96	86-122	1	0-8	
Carbon Tetrachloride	107	105	78-138	2	0-9	
Chlorobenzene	105	102	90-120	3	0-9	
1,2-Dibromoethane	80	100	70-130	22	0-30	
1,2-Dichlorobenzene	93	98	89-119	6	0-10	
1,1-Dichloroethene	95	88	52-142	7	0-23	
Ethylbenzene	113	96	70-130	16	0-30	
Toluene	104	92	85-127	13	0-12	BA,AY
Trichloroethene	103	101	78-126	2	0-10	
Vinyl Chloride	87	87	56-140	0	0-21	
Methyl-t-Butyl Ether (MTBE)	65	94	64-136	37	0-28	BA,AY
Tert-Butyl Alcohol (TBA)	91	84	27-183	8	0-60	
Diisopropyl Ether (DIPE)	77	93	78-126	19	0-16	LN,BA,AY
Ethyl-t-Butyl Ether (ETBE)	73	96	67-133	27	0-21	BA,AY
Tert-Amyl-Methyl Ether (TAME)	73	97	63-141	29	0-21	BA,AY
Ethanol	107	99	11-167	8	0-64	

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - LCS/LCS Duplicate



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

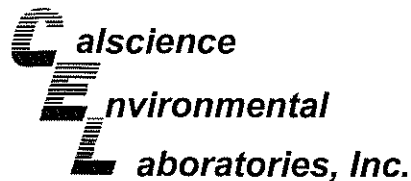
Date Received: N/A  
Work Order No: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-411	Aqueous	GC 4	01/26/09	01/26/09	090126B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	105	104	78-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit



## 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: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8260B

Project: BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-703-668	Aqueous	GC/MS BB	01/28/09	01/28/09	090128L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	98	94	87-117	82-122	4	0-7	
Carbon Tetrachloride	110	108	78-132	69-141	1	0-8	
Chlorobenzene	106	103	88-118	83-123	2	0-8	
1,2-Dibromoethane	98	103	80-120	73-127	5	0-20	
1,2-Dichlorobenzene	102	98	88-118	83-123	3	0-8	
1,1-Dichloroethene	95	94	71-131	61-141	1	0-14	
Ethylbenzene	107	105	80-120	73-127	2	0-20	
Toluene	98	96	85-127	78-134	3	0-7	
Trichloroethene	103	102	85-121	79-127	1	0-11	
Vinyl Chloride	93	90	64-136	52-148	4	0-10	
Methyl-t-Butyl Ether (MTBE)	92	96	67-133	56-144	4	0-16	
Tert-Butyl Alcohol (TBA)	82	81	34-154	14-174	1	0-19	
Diisopropyl Ether (DIPE)	92	90	80-122	73-129	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	95	95	73-127	64-136	1	0-11	
Tert-Amyl-Methyl Ether (TAME)	98	101	69-135	58-146	3	0-12	
Ethanol	99	84	34-124	19-139	16	0-44	

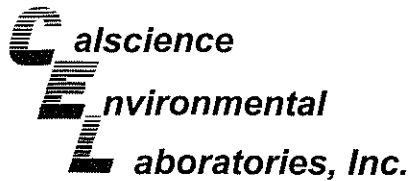
Total number of LCS compounds : 16

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



## 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: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8260B

Project: BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-703-667	Aqueous	GC/MS BB	01/27/09	01/28/09	090127L02		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	95	94	87-117	82-122	0	0-7	
Carbon Tetrachloride	105	105	78-132	69-141	1	0-8	
Chlorobenzene	103	100	88-118	83-123	2	0-8	
1,2-Dibromoethane	95	89	80-120	73-127	6	0-20	
1,2-Dichlorobenzene	98	99	88-118	83-123	1	0-8	
1,1-Dichloroethene	94	95	71-131	61-141	0	0-14	
Ethylbenzene	104	103	80-120	73-127	1	0-20	
Toluene	96	96	85-127	78-134	0	0-7	
Trichloroethene	107	104	85-121	79-127	3	0-11	
Vinyl Chloride	89	91	64-136	52-148	2	0-10	
Methyl-t-Butyl Ether (MTBE)	92	91	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	81	89	34-154	14-174	9	0-19	
Diisopropyl Ether (DIPE)	93	90	80-122	73-129	4	0-8	
Ethyl-t-Butyl Ether (ETBE)	96	94	73-127	64-136	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	96	97	69-135	58-146	0	0-12	
Ethanol	83	97	34-124	19-139	16	0-44	

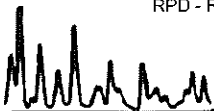
Total number of LCS compounds : 16

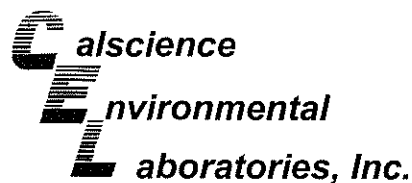
Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference, CL - Control Limit





## 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: 09-01-1637  
Preparation: EPA 5030B  
Method: EPA 8260B

Project: BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-703-669	Aqueous	GC/MS BB	01/29/09	01/29/09	090129L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	95	96	87-117	82-122	1	0-7	
Carbon Tetrachloride	105	103	78-132	69-141	1	0-8	
Chlorobenzene	101	102	88-118	83-123	1	0-8	
1,2-Dibromoethane	104	100	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	99	100	88-118	83-123	1	0-8	
1,1-Dichloroethene	94	97	71-131	61-141	3	0-14	
Ethylbenzene	100	103	80-120	73-127	2	0-20	
Toluene	95	96	85-127	78-134	2	0-7	
Trichloroethene	97	100	85-121	79-127	3	0-11	
Vinyl Chloride	88	87	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	99	97	67-133	56-144	2	0-16	
Tert-Butyl Alcohol (TBA)	81	80	34-154	14-174	1	0-19	
Diisopropyl Ether (DIPE)	92	93	80-122	73-129	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	98	97	73-127	64-136	1	0-11	
Tert-Amyl-Methyl Ether (TAME)	101	101	69-135	58-146	0	0-12	
Ethanol	88	87	34-124	19-139	1	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


 Work Order Number: 09-01-1637
 

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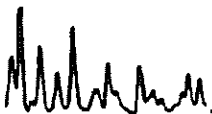
<u>Qualifier</u>	<u>Definition</u>
AX	Sample too dilute to quantify surrogate.
BA	There was no MS/MSD analyzed with this batch due to insufficient sample volume (NR = not reported). See Blank Spike/Blank Spike Duplicate.
BA,AY	Relative percent difference out of control, matrix interference suspected.
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.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GS	Internal standard recovery is outside method recovery limit.
IB	CCV recovery above limit; 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	Surrogate recovery below the acceptance limit.
LH	Surrogate recovery above the acceptance limit.
LM,AY	MS and/or MSD above acceptance limits. See Blank Spike (LCS). Matrix interference suspected.
LN,AY	MS and/or MSD below acceptance limits. See Blank Spike (LCS). Matrix interference suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.



Work Order Number: 09-01-1637

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<u>Qualifier</u>	<u>Definition</u>
MB	Analyte present in the method blank.
MG	Analyte is a suspected lab contaminate.
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.





bp  
A BP affiliated company

### Chain of Custody Record

Project Name: BP 276  
 BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > CA > Alameda > 276  
 State or Lead Regulatory Agency: \_\_\_\_\_  
 Requested Due Date (mm/dd/yy): \_\_\_\_\_

1637

On-site Time: <u>7:20</u>	Temp: <u>60</u>
Off-site Time: <u>11:10</u>	Temp: <u>68</u>
Sky Conditions: <u>Clear</u>	
Meteorological Events: <u>NA</u>	
Wind Speed: <u>0</u>	Direction: <u>NA</u>

Lab Name: <u>Calscience</u>	BP/AR Facility No.: <u>276</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>7440 Lincoln Way</u> <u>Garden Grove, CA 92841</u>	BP/AR Facility Address: <u>10600 MacArthur Blvd., Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u> <u>Cameron Park, CA 95682</u>
Lab PM: <u>Richard Villafania</u>	Site Lat/Long:	Consultant/Contractor Project No.: <u>E276-04</u>
Tele/Fax: <u>714-895-5494 x205</u>	California Global ID #: <u>T0600108312</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Enfos Project No.:	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u> <u>San Ramon, CA</u>	Provision or RCOP (circle one) <u>Provision</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
Tele/Fax: <u>925-275-3506</u>	Phase/WBS: <u>04-Monitoring</u>	E-mail EDD To: <u>bcarroll@stratusinc.net</u>
	Sub Phase/Task: <u>03-Analytical</u>	Invoice to: <u>Atlantic Richfield Co.</u>
	Cost Element: <u>01-Contractor labor</u>	

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments *Oxy = MTBE, TAME, ETBE, DIPE, TBA		
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	CRO by 8015M	BTEX/Oxy*	EDB	1,2 DCA	Ethanol by 8260		PCE by 8260	
1	X1 MW-1	10:38	1/20/09	X				12						X	X	X	X	X	X		
2	X2 MW-2	9:41		X				6						X	X	X	X	X	X		
3	X3 MW-3	9:58		X				6						X	X	X	X	X	X		
4	X4 MW-4	10:11		X				6						X	X	X	X	X	X		
5	X5 MW-5	9:27		X				6						X	X	X	X	X	X		
6	X6 MW-6	8:41		X				6						X	X	X	X	X	X		
7	X7 MW-7	9:13		X				6						X	X	X	X	X	X		
8	X8 MW-8	10:54		X				6						X	X	X	X	X	X		
9	X9 RW-1	10:24		X				6						X	X	X	X	X	X		
20	X10 WGR-3	9:01		X				6						X	X	X	X	X	X		

Sampler's Name: <u>ROBERTO HEIMLICH</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>DOULOS ENV.</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No: <u>106193502</u>						

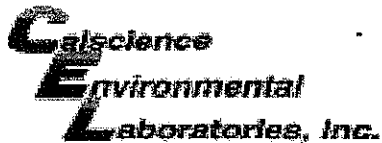
Special Instructions: Please cc results to: rmiller@broadbentinc.com

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

Page 2 of 2







WORK ORDER #: 09-01-1637

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 01/21/09

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

Temperature 2.8 °C - 0.2 °C (CF) = 2.6 °C [X] 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.

[X] 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) [X] Not Present [ ] N/A
[ ] Sample [ ] \_\_\_\_\_ [ ] No (Not Intact) [X] Not Present

Initial: JP

Initial: PS

SAMPLE CONDITION:

Table with 4 columns: Item, Yes, No, N/A. Rows include Chain-Of-Custody (COC) document(s) received with samples, COC document(s) received complete, 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, Volatile analysis container(s) free of headspace, Tedlar bag(s) free of condensation.

CONTAINER TYPE:

- Solid: [ ] 4ozCGJ [ ] 8ozCGJ [ ] 16ozCGJ [ ] Sleeve [ ] EnCores® [ ] TerraCores® [ ] \_\_\_\_\_
Water: [ ] VOA [X] VOAh [ ] VOAna2 [ ] 125AGB [ ] 125AGBh [ ] 125AGBpo4 [ ] 1AGB [ ] 1AGBna2
[ ] 1AGBs [ ] 500AGB [ ] 500AGBs [ ] 250CGB [ ] 250CGBs [ ] 1PB [ ] 500PB [ ] 500PBna [ ] 250PB
[ ] 250PBn [ ] 125PB [ ] 125PBzanna [ ] 100PBsterile [ ] 100PBna2 [ ] \_\_\_\_\_ [ ] \_\_\_\_\_ [ ] \_\_\_\_\_

Air: [ ] Tedlar® [ ] Summa® [ ] \_\_\_\_\_

Checked/Labeled by: PS

Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle

Reviewed by: YK

Preservative: h:HCL n:HNO3 na2:Na2S2O3 na:NaOH po4:H3PO4 s:H2SO4 zanna:ZnAc2+NaOH

Scanned by: PS

## ATTACHMENT

### FIELD PROCEDURES FOR GROUNDWATER SAMPLING

---

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

#### Equipment Calibration

Standard groundwater sampling equipment – pH/Conductivity/Temperature meter, and dissolved oxygen (DO) meters are calibrated prior to all field work. All calibration is conducted in accordance with equipment manufacturer's recommended procedure and buffer solutions. MSDS for all buffer solutions are maintained in Stratus vehicles. Calibration is completed everyday prior to field work and also once a week. The pH probe is calibrated for a pH of 7.0 daily and for 4.0, 7.0 and 10.0 weekly. The conductivity probe is calibrated for 1413  $\mu$ S daily and 1413  $\mu$ S and 447  $\mu$ S weekly. The temperature probe is calibrated weekly with a NIST-traceable thermometer. The DO probe is calibrated for 100% oxygen daily and 0% and 100% oxygen weekly. All calibration logs are maintained in the Stratus office.

#### 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<sup>®</sup> 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 CONFIRMATION**

---

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!

<b><u>Submittal Type:</u></b>	<b>GEO_WELL</b>
<b><u>Submittal Title:</u></b>	<b>1Q09 GEO_WELL 276</b>
<b><u>Facility Global ID:</u></b>	<b>T0600108312</b>
<b><u>Facility Name:</u></b>	<b>ARCO #0276</b>
<b><u>File Name:</u></b>	<b>GEO_WELL.zip</b>
<b><u>Organization Name:</u></b>	<b>Broadbent &amp; Associates, Inc.</b>
<b><u>Username:</u></b>	<b>BROADBENT-C</b>
<b><u>IP Address:</u></b>	<b>67.118.40.90</b>
<b><u>Submittal Date/Time:</u></b>	<b>3/17/2009 2:59:48 PM</b>
<b><u>Confirmation Number:</u></b>	<b>9916399300</b>

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!

<b><u>Submittal Type:</u></b>	EDF - Monitoring Report - Quarterly
<b><u>Submittal Title:</u></b>	1Q09 GW Monitoring
<b><u>Facility Global ID:</u></b>	T0600108312
<b><u>Facility Name:</u></b>	ARCO #0276
<b><u>File Name:</u></b>	09011637.zip
<b><u>Organization Name:</u></b>	Broadbent & Associates, Inc.
<b><u>Username:</u></b>	BROADBENT-C
<b><u>IP Address:</u></b>	67.118.40.90
<b><u>Submittal Date/Time:</u></b>	3/17/2009 3:00:47 PM
<b><u>Confirmation Number:</u></b>	<b>3775839567</b>

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