



Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
San Ramon, California 94583
Phone: (925) 275-3801
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23 January 2009

Re: Fourth Quarter 2008 Ground-Water Monitoring Report
Atlantic Richfield Company (a BP affiliated company) Station #276
10600 MacArthur Boulevard
Oakland, California
ACEH Case #RO0002565

RECEIVED

11:25 am, Jan 29, 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

Fourth Quarter 2008 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

23 January 2009

Project No. 06-08-601

23 January 2009

Project No. 06-08-601

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

Attn.: Mr. Paul Supple

Re: Fourth Quarter 2008 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 *Fourth Quarter 2008 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 Fourth Quarter of 2008.

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

Sincerely,

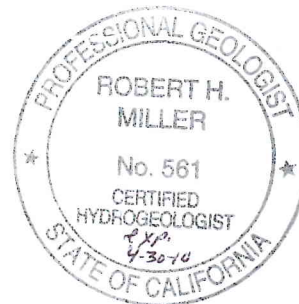
BROADBENT & ASSOCIATES, INC.



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.:		06-08-601
Primary Agency/Regulatory ID No.:		Alameda County Environmental Health (ACEH) ACEH Case #RO0002565
Facility Permits/Permitting Agency:		NA

WORK PERFORMED THIS QUARTER (Fourth Quarter 2008):

1. Prepared and submitted Third Quarter 2008 Ground-Water Monitoring Report.
2. Conducted ground-water monitoring/sampling for Fourth Quarter 2008. Work performed on 21 October 2008 by Stratus Environmental, Inc. (Stratus).

WORK PROPOSED FOR NEXT QUARTER (First Quarter 2009):

1. Prepared and submitted Fourth Quarter 2008 Ground-Water Monitoring Report (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for First Quarter 2009.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	Ground-water monitoring/sampling
Frequency of ground-water monitoring:	Quarterly = MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, RW-1, WGR-3
Frequency of ground-water sampling:	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
Is free product (FP) present on-site:	No
Current remediation techniques:	NA
Depth to ground water (below TOC):	18.05 ft (MW-2) to 37.22 ft (MW-6)
General ground-water flow direction:	Southwest
Approximate hydraulic gradient:	0.003 ft/ft

DISCUSSION:

Fourth quarter 2008 ground-water monitoring and sampling was conducted at Station #276 on 21 October 2008 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 18.05 ft at MW-2 to 37.22 ft at MW-6. Resulting ground-water surface elevations ranged from 42.16 ft above mean sea level (msl) in well MW-2 to 29.00 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, with the following exception: the water level elevation in well WGR-3 reached a historic minimum value of 39.55 ft above msl. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the southwest at approximately 0.003 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-2, MW-5, and MW-8 on 21 October 2008. 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. No 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 two of the three wells sampled at concentrations of 460 micrograms per liter ($\mu\text{g/L}$) in well MW-2 and 150 $\mu\text{g/L}$ in well MW-8. Benzene was detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 0.81 $\mu\text{g/L}$ in well MW-2. Toluene was detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 5.3 $\mu\text{g/L}$ in well MW-8. Total Xylenes were detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 22 $\mu\text{g/L}$ in well MW-8. TAME was detected above the laboratory reporting limit in each of the three wells sampled at concentrations up to 21 $\mu\text{g/L}$ in wells MW-5 and MW-8. TBA was detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 11 $\mu\text{g/L}$ in well MW-2. 1,2-DCA was detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 4.0 $\mu\text{g/L}$ in well MW-5. MTBE was detected above the laboratory reporting limit in each of the three wells sampled at concentrations up to 260 $\mu\text{g/L}$ in well MW-8. PCE was detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 6.6 $\mu\text{g/L}$ in well MW-5. The remaining analytes were not detected above their laboratory reporting limits in the three wells sampled this quarter.

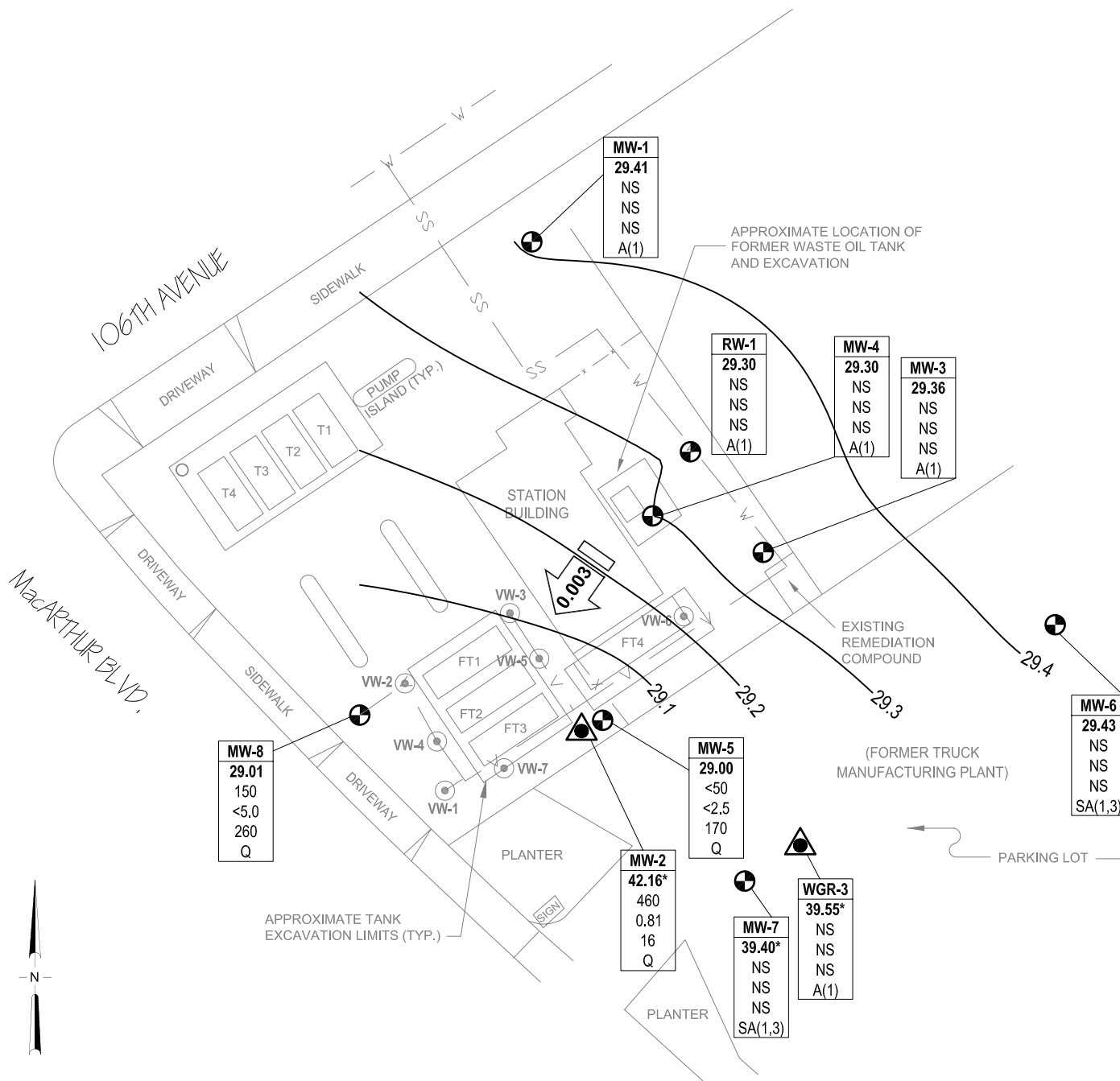
Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well with the following exceptions: Toluene reached a historic maximum value in well MW-8 (5.3 $\mu\text{g/L}$), Total Xylenes reached a historic maximum value in well MW-8 (22 $\mu\text{g/L}$), TAME reached a historic maximum value in well MW-5 (21 $\mu\text{g/L}$), and TBA reached a historic maximum value in well MW-2 (11 $\mu\text{g/L}$). 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:

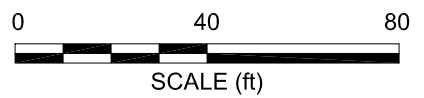
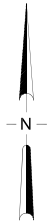
The findings presented in this report are based upon: observations of Stratus field personnel (see Appendix A), the points investigated, and results of laboratory tests performed by Calscience Environmental Laboratories, Inc. (Garden Grove, California). Our services were performed in accordance with 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, 21 October 2008, 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



- LEGEND**
- TANK PIT WELL
 - ▲ SHALLOW MONITORING WELL
 - ⊕ MONITORING WELL
 - ⊙ VAPOR EXTRACTION WELL
 - 29.4 GROUND-WATER ELEVATION CONTOURS (FT MSL)
 - 0.003 GROUND-WATER FLOW DIRECTION AND GRADIENT (FT/FT)
- | Well | ELEV | GRO | Benzene | MTBE | Q/SA/A |
|------|------|-----|---------|------|---------|
| | | | | | * |
| | | | | | A(1) |
| | | | | | Q |
| | | | | | SA(1,3) |
- x — FENCE LINE
 - ss — SANITARY SEWER LINE
 - v — VAPOR LINE
 - w — WATER LINE



BROADBENT & ASSOCIATES, INC.
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
 1324 Mangrove Ave. Suite 212, Chico, California
 Project No.: 06-08-601 Date: 12/2/08

Station #276
 10600 MacArthur Boulevard
 Oakland, California

Ground-Water Elevation Contour
 and Analytical Summary Map
 21 October 2008

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		
MW-1															
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	--	--	--	--	--	--	--	--
MW-2															
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	--	--	--	--	--	--	--	--
7/22/2003	--		55.10	15.00	25.00	16.20	38.90	--	--	--	--	--	--	--	--

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
MW-2 Cont.															
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
MW-3															
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
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

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		
MW-3 Cont.															
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	--	--	--	--	--	--	--	--
MW-4															
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
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	--	--	--	--	--	--	--	--

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		
MW-4 Cont.															
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	--	--	--	--	--	--	--	--
MW-5															
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
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

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
MW-5 Cont.															
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
MW-6															
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	--	--	--	--	--	--	--	--
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

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		
MW-6 Cont.															
11/13/2007	--		66.65	37.50	56.00	36.31	30.34	--	--	--	--	--	--	--	--
2/29/2008	P	1	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	--	--	--	--	--	--	--	--
MW-7															
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	--	--	--	--	--	--	--	--
2/29/2008	P	1	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	--	--	--	--	--	--	--	--
MW-8															

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		
MW-8 Cont.															
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
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
RW-1															
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	--	--	--	--	--	--	--	--

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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			
RW-1 Cont.																
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	<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	<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	<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	<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	<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	<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	<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	<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	<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	--	--	--	--	--	--	--	--	--
WGR-3																
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	<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	<0.50	35	2.0	--
11/10/2004	P		63.27	--	--	19.98	43.29	<50	<0.50	<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	<0.50	1.1	2.04	6.5

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
WGR-3 Cont.															
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	--	--	--	--	--	--	--	--

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.

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	
MW-1															
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	--	
MW-2															
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
5/30/2006	<300	<20	64	<0.50	<0.50	12	<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	
MW-2 Cont.															
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	--	
MW-3															
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	--	--	--	--	--	--	
2/29/2008	<300	<10	0.54	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	160	--	

**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	
MW-4															
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	--	
MW-5															
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	--	
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	

**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	
MW-5 Cont.															
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	--	
MW-6															
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
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	--	

**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	
MW-7															
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	--	
MW-8															
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
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	--	

**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	
MW-8 Cont.															
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	--	
RW-1															
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	--	
WGR-3															
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	

**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	
WGR-3 Cont.															
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	--	

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**

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
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

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

November 7, 2008

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: October 21, 2008

Arrival: 12:00 *Departure:* 13:55

Weather Conditions: Clear

Unusual Field Conditions: None noted.

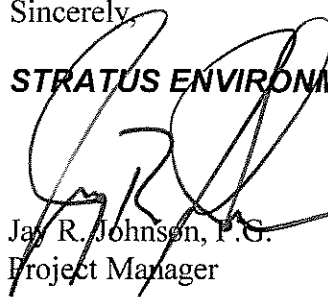
Scope of Work Performed: Quarterly monitoring and sampling.

Variations from Work Scope: None noted.

This submittal presents the tabulation of 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. 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
- Chain of Custody Documentation
- Non-Hazardous Waste Data Form
- 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 I.D.: MW-2
 CLIENT NAME: _____ SAMPLED BY: RH SAMPLE I.D.: MW-2
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: _____

DATE PURGED 10/21/08 START (2400hr) 13:35 END (2400hr) 13:43
 DATE SAMPLED 10/21/08 SAMPLE TIME (2400hr) 13:41
 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) = 25.11 CASING VOLUME (gal) = 4.7
 DEPTH TO WATER (feet) = 18.05 CALCULATED PURGE (gal) = _____
 WATER COLUMN HEIGHT (feet) = 7.06 ACTUAL PURGE (gal) = NP

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>10/21/08</u>	<u>13:38</u>	<u>NP</u>	<u>20.57</u>	<u>516</u>	<u>7.01</u>	<u>clear</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

NO PURGE

SAMPLE DEPTH TO WATER: 18.05 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

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

PURGING EQUIPMENT

SAMPLING EQUIPMENT

_____ Bladder Pump _____ Bailer (Teflon)
 _____ Centrifugal Pump NP _____ Bailer (PVC)
 _____ Submersible Pump _____ Bailer (Stainless Steel)
 _____ Peristaltic Pump _____ Dedicated _____

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

Other: _____
 Pump Depth: NA

Other: _____

WELL INTEGRITY: GOOD LOCK#: NA

REMARKS: DO 2.98

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 10/21/08 NP START (2400hr) 13:22 END (2400hr) 13:30
 DATE SAMPLED 10/21/08 SAMPLE TIME (2400hr) 13:28
 SAMPLE TYPE: Groundwater x Surface Water _____ Treatment Effluent _____ Other _____

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

DEPTH TO BOTTOM (feet) = 46.68 CASING VOLUME (gal) = 10.0
 DEPTH TO WATER (feet) = 31.73 CALCULATED PURGE (gal) = NP
 WATER COLUMN HEIGHT (feet) = 14.9 ACTUAL PURGE (gal) = NP

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>10/21/08</u>	<u>13:25</u>	<u>NP</u>	<u>19.59</u>	<u>510</u>	<u>6.99</u>	<u>clear</u>	_____
<u>✓</u>	_____	_____	_____	_____	_____	<u>↓</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

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

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

PURGING EQUIPMENT

_____ Bladder Pump _____ Bailer (Teflon)
 _____ Centrifugal Pump NP _____ 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 2.90

SIGNATURE: [Signature] Page _____ of _____

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 276 PURGED BY: RH WELL I.D.: mw-8
 CLIENT NAME: _____ SAMPLED BY: RH SAMPLE I.D.: mw-8
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: _____

DATE PURGED 10/21/08 START (2400hr) 13:01 END (2400hr) 13:17
 DATE SAMPLED 10/21/08 SAMPLE TIME (2400hr) 13:19
 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) = 47.78 CASING VOLUME (gal) = 11.9
 DEPTH TO WATER (feet) = 29.95 CALCULATED PURGE (gal) = 35.7
 WATER COLUMN HEIGHT (feet) = 17.8 ACTUAL PURGE (gal) = 36

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>10/21/08</u>	<u>13:04</u>	<u>12</u>	<u>23.86</u>	<u>650</u>	<u>7.32</u>	<u>clear</u>	_____
<u>✓</u>	<u>13:08</u>	<u>24</u>	<u>24.02</u>	<u>646</u>	<u>7.14</u>	<u>✓</u>	_____
	<u>13:17</u>	<u>36</u>	<u>24.28</u>	<u>670</u>	<u>7.05</u>	<u>✓</u>	_____

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 19.2 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 _____ Bailer (PVC)
 Submersible Pump _____ Bailer (Stainless Steel)
 Peristaltic Pump _____ Dedicated _____

Other: _____

Pump Depth: 45

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: DD 1.26

SIGNATURE: [Signature]

WELLHEAD OBSERVATION FORM



Site Name/Number: 276 Oakland

Date: 10/21/08 Technician: ROBERTO

Well I.D.	Box in Good Condition?	Lock Missing?	Water in Wellbox?	Water Level Relative to Cap?	Well Cap?	Bolts Missing?	Bolts Stripped?	Bolt Holes Stripped?	Cracked or Broken Lid?	Cracked or Broken Box?	Grout Level more than 1ft below TOC?	Additional Comments <small>(such as missing lid, corrosion, rebar placement, or other - explain.)</small>
	X = Yes Blank = No	X = Yes (implied) Blank = No	X = Yes Blank = No	A = Above cap B = Below cap L = Level w/ cap	J = Intact M = Missing or Compromised Implied?	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	
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: 2 Plastic: _____

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

1 HAL FULL WITH GAS MIX

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

9/12/08

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. 672303

NON-HAZARDOUS WASTE DATA FORM

SITE:

EPA I.D. NO.

NOT REQUIRED

NAME BP WEST COAST PRODUCTS LLC ARCO # 276
10609 MCARTHUR BLVD.
 ADDRESS P.O. BOX 80249
RANCHO SANTA MARGARITA
 CITY, STATE, ZIP CA 92688

PROFILE NO.

PHONE NO. ()

CONTAINERS: No. _____ VOLUME 36 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. WATER 99-100% 5. _____
 2. TPH <1% 6. _____
 3. _____ 7. BESI#
 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 DATE 1/24/92

TO BE COMPLETED BY GENERATOR

TRANSPORTER

NAME Transporter #1 Transporter #2
STRATUS ENVIRONMENTAL
 ADDRESS 3330 CAMERON PARK DR
 CITY, STATE, ZIP CAMERON PARK, CA 95682
 PHONE NO. 530-676-2031
 TRUCK, UNIT, I.D. NO. _____

EPA I.D. NO.

SERVICE ORDER NO. _____

PICK UP DATE _____

ROBERTO HEINRICH
 TYPED OR PRINTED FULL NAME & SIGNATURE DATE 1/24/92

TSD FACILITY

NAME INSTRAT, INC
 ADDRESS 1105 AIRPORT RD #C
 CITY, STATE, ZIP RIO VISTA, CA 94571
 PHONE NO. 530-753-1829

EPA I.D. NO.

DISPOSAL METHOD

LANDFILL OTHER _____

TYPED OR PRINTED FULL NAME & SIGNATURE DATE _____

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

DISCREPANCY



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): _____

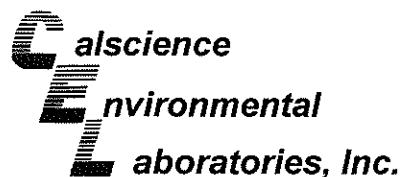
On-site Time	<u>12:00</u>	Temp	<u>70</u>
Off-site Time	<u>13:55</u>	Temp	<u>73</u>
Sky Conditions	<u>clear</u>		
Meteorological Events	<u>NA</u>		
Wind Speed	<u>0</u>	Direction	<u>NA</u>

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>Linda Scharpenberg</u>	Site Lat/Long:	Consultant/Contractor Project No.: <u>E276-04</u>
Tele/Fax: <u>714-895-5494</u> <u>714-895-7501(fax)</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.: <u>G0C20-0020</u>	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 I 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 ₂ SO ₄	HNO ₃	HCl	Methanol	BTEX/Oxy* by 8260	DOB by 8260	1,2 DCA by 8260	Ethanol by 8260	PCE by 8010	STRO by 8015m 8260		
1	MW-2	<u>13:41</u>	<u>10/2/03</u>		X			<u>6</u>						X	X	X	X	X	X		
2	MW-5	<u>13:28</u>	<u>10/2/03</u>		X			<u>6</u>						X	X	X	X	X	X		
3	MW-8	<u>13:19</u>	<u>10/2/03</u>		X			<u>6</u>						X	X	X	X	X	X		
4	TB 276 - <u>10/2/03</u>	<u>5:00</u>	<u>10/2/03</u>		X			<u>2</u>						X	X	X	X	X	X		HOLD
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>DOUGLAS ENV.</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						
Special Instructions: <u>Please cc results to: rmillar@broadbentinc.com</u>						

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
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November 05, 2008

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

Subject: **Calscience Work Order No.: 08-10-2048**
Client Reference: BP 276

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 10/23/2008 and analyzed in accordance with the attached chain-of-custody.

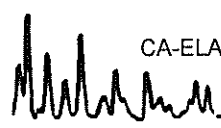
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows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

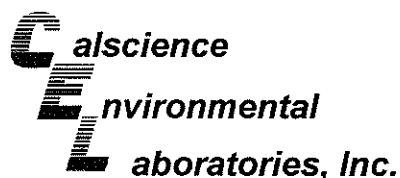
If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in cursive script that reads "Philip Samelle for".

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: 10/23/08
Work Order No: 08-10-2048
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 276

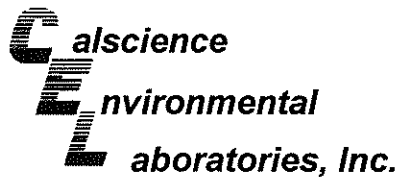
Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-695-309	N/A	Aqueous	GC 4	10/24/08	10/24/08 16:19	081024B01

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	95	38-134			

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

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX: (714) 894-7501



Analytical Report

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

Date Received: 10/23/08
Work Order No: 08-10-2048
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP 276

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	08-10-2048-1-A	10/21/08 13:41	Aqueous	GC/MS BB	10/24/08	10/25/08 09:31	081024L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.81	0.50	1		Methyl-t-Butyl Ether (MTBE)	16	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	11	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)	3.8	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	96	73-157			Dibromofluoromethane	104	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	101	75-105		

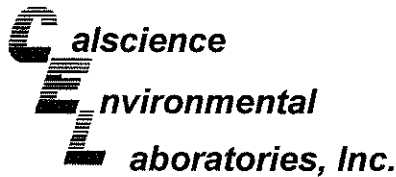
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	08-10-2048-2-A	10/21/08 13:28	Aqueous	GC/MS BB	10/24/08	10/25/08 10:05	081024L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.5	5		Methyl-t-Butyl Ether (MTBE)	170	2.5	5	
1,2-Dibromoethane	ND	2.5	5		Tert-Butyl Alcohol (TBA)	ND	50	5	
1,2-Dichloroethane	4.0	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	6.6	2.5	5		Tert-Amyl-Methyl Ether (TAME)	21	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	108	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	96	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	08-10-2048-3-A	10/21/08 13:19	Aqueous	GC/MS BB	10/24/08	10/25/08 10:38	081024L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	5.0	10		Methyl-t-Butyl Ether (MTBE)	260	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	ND	5.0	10		Tert-Amyl-Methyl Ether (TAME)	21	5.0	10	
Toluene	5.3	5.0	10		Ethanol	ND	3000	10	
Xylenes (total)	22	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	108	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	86	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: 10/23/08
Work Order No: 08-10-2048
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP 276

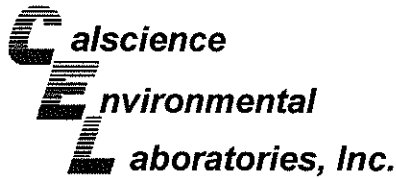
Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-703-523	N/A	Aqueous	GC/MS BB	10/24/08	10/25/08 02:11	081024L02

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	92	73-157			Dibromofluoromethane	94	82-142		
Toluene-d8	92	82-112			1,4-Bromofluorobenzene	87	75-105		

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





Quality Control - Spike/Spike Duplicate

08-10-2034-2
 08-10-2048
 EPA 5030B
 EPA 8015B (M)

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

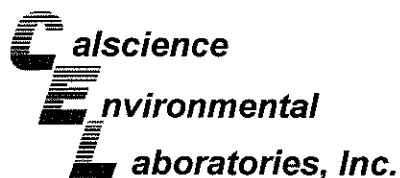
Date Received: 10/23/08
 Work Order No: 08-10-2048
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-10-2034-2	Aqueous	GC 4	10/23/08	10/23/08	081023S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	100	103	38-134	3	0-25	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate

Handwritten signature

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

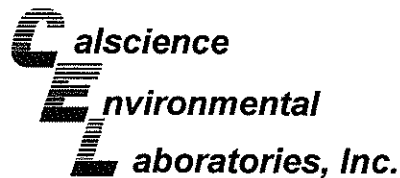
Date Received: 10/23/08
Work Order No: 08-10-2048
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-10-2065-3	Aqueous	GC 4	10/24/08	10/24/08	081024S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	101	103	38-134	2	0-25	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate

08-10-2043-7
 08-10-2048
 08-10-2048
 EPA 5030B
 EPA 8260B

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

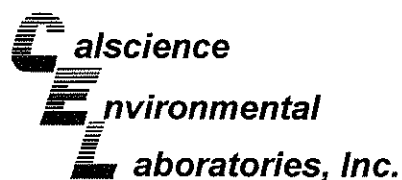
Date Received: 10/23/08
 Work Order No: 08-10-2048
 Preparation: EPA 5030B
 Method: EPA 8260B

Project BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-10-2043-7	Aqueous	GC/MS BB	10/24/08	10/25/08	081024S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	101	86-122	1	0-8	
Carbon Tetrachloride	107	107	78-138	1	0-9	
Chlorobenzene	97	97	90-120	1	0-9	
1,2-Dibromoethane	96	93	70-130	3	0-30	
1,2-Dichlorobenzene	105	106	89-119	1	0-10	
1,1-Dichloroethene	96	96	52-142	0	0-23	
Ethylbenzene	94	91	70-130	3	0-30	
Toluene	98	94	85-127	3	0-12	
Trichloroethene	99	100	78-126	0	0-10	
Vinyl Chloride	113	117	56-140	3	0-21	
Methyl-t-Butyl Ether (MTBE)	109	106	64-136	3	0-28	
Tert-Butyl Alcohol (TBA)	101	99	27-183	2	0-60	
Diisopropyl Ether (DIPE)	107	105	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	109	106	67-133	3	0-21	
Tert-Amyl-Methyl Ether (TAME)	105	102	63-141	2	0-21	
Ethanol	114	114	11-167	1	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

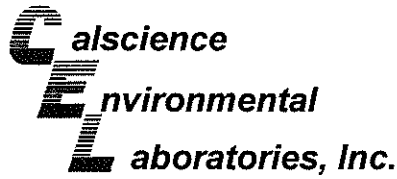
Date Received: N/A
Work Order No: 08-10-2048
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-307	Aqueous	GC 4	10/23/08	10/23/08	081023B01

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Gasoline Range Organics (C6-C12)	101	103	78-120	3	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

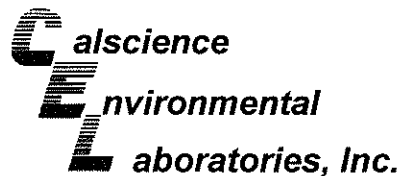
Date Received: N/A
 Work Order No: 08-10-2048
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project: BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-309	Aqueous	GC 4	10/24/08	10/24/08	081024B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	102	103	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: 08-10-2048
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 276

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-703-523	Aqueous	GC/MS BB	10/24/08	10/24/08	081024L02		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	106	107	87-117	82-122	1	0-7	
Carbon Tetrachloride	111	114	78-132	69-141	3	0-8	
Chlorobenzene	102	104	88-118	83-123	2	0-8	
1,2-Dibromoethane	100	101	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	108	110	88-118	83-123	2	0-8	
1,1-Dichloroethene	106	109	71-131	61-141	3	0-14	
Ethylbenzene	103	104	80-120	73-127	1	0-20	
Toluene	105	106	85-127	78-134	0	0-7	
Trichloroethene	116	116	85-121	79-127	1	0-11	
Vinyl Chloride	121	124	64-136	52-148	3	0-10	
Methyl-t-Butyl Ether (MTBE)	113	112	67-133	56-144	0	0-16	
Tert-Butyl Alcohol (TBA)	97	93	34-154	14-174	4	0-19	
Diisopropyl Ether (DIPE)	111	114	80-122	73-129	3	0-8	
Ethyl-t-Butyl Ether (ETBE)	113	117	73-127	64-136	4	0-11	
Tert-Amyl-Methyl Ether (TAME)	110	111	69-135	58-146	1	0-12	
Ethanol	100	92	34-124	19-139	8	0-44	

Total number of LCS compounds : 16

Total number of ME compounds : 0


Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Work Order Number: 08-10-2048

<u>Qualifier</u>	<u>Definition</u>
AX	Sample too dilute to quantify surrogate.
DU	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 abovelimit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG	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: 08-10-2048

<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.





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): _____

5048

On-site Time: <u>12:00</u>	Temp: <u>70</u>
Off-site Time: <u>13:55</u>	Temp: <u>73</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>Linda Scharpenberg</u>	Site Lat/Long:	Consultant/Contractor Project No.: <u>E276-04</u>
Tele/Fax: <u>714-895-5494</u> <u>714-895-7501(fax)</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.: <u>G0C20-0020</u>	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>	

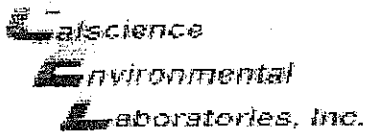
Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments *Oxy = MTBE, TAME, ETBE, DIPE, TBA	
				Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	BTEX/Oxy* by 8260	EDB by 8260	1,2 DCA by 8260	Ethanol by 8260	PCE by 8010		GRO by 8015m
1	MW-2	<u>13:41</u>	<u>10/2/08</u>	X				<u>6</u>					X	X	X	X	X	X		
2	MW-5	<u>13:28</u>		X				<u>6</u>					X	X	X	X	X	X		
3	MW-8	<u>13:19</u>		X				<u>6</u>					X	X	X	X	X	X		
4	TB 276 - 10/2/08	<u>5:00</u>	<u>10/2/08</u>	X				<u>2</u>					X	X	X	X	X	X		<u>HOLD</u>
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>DOUGLAS ENV.</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No: <u>106087825</u>						

Special Instructions: Please cc results to: miller@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 14 of 15



WORK ORDER #: 08-10-2048

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: Stratus

DATE: 10/23/08

TEMPERATURE:

Temperature 3.1 °C + 1.8°C (CF) = 4.9 °C Blank Sample

Samples outside temperature criteria but received on ice/chilled on same day of sampling

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

Ambient Temperature (For Air & Filter Only)

Initial: JP

CUSTODY SEALS INTACT:

Sample Cooler No (Not Intact) Not Present

Initial: JP

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct containers and volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper preservation noted on sample label(s).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If you marked "NO" for any of the items complete a Sample Receipt Anomaly form.

CONTAINER TYPE:

Soil: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve EnCores® TerraCores® _____

Water: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBpo₄ 1AGB 1AGBna₂

1AGBs 500AGB 500AGBs 250CGB 250CGBs 1PB 500PB 500PBna 250PB

250PBn 125PB 125PBznn 100PBsterile 100PBna₂ _____ _____

Air: Tedlar® Summa® _____

Checked/Labeled by: JP
 Reviewed by: WJC
 Scanned by: JP

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

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

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 μs daily and 1413 μs and 447 μs 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® 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!

<u>Submittal Type:</u>	GEO_WELL
<u>Submittal Title:</u>	4Q08 GEO_WELL 276
<u>Facility Global ID:</u>	T0600100082
<u>Facility Name:</u>	ARCO #0276
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	12/19/2008 11:30:49 AM
<u>Confirmation Number:</u>	8136651158

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!

<u>Submittal Type:</u>	EDF - Monitoring Report - Quarterly
<u>Submittal Title:</u>	4Q08 GW Monitoring
<u>Facility Global ID:</u>	T0600108312
<u>Facility Name:</u>	ARCO #0276
<u>File Name:</u>	08102048.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	12/19/2008 11:32:17 AM
<u>Confirmation Number:</u>	1475359857

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)