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*By dehloptoxic at 10:37 am, Feb 01, 2007*



Atlantic Richfield Company  
(a BP affiliated company)

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

26 January 2007

Re: Fourth Quarter 2006 Ground-Water Monitoring Report  
Atlantic Richfield Company (a BP affiliated company) Station #276  
10600 MacArthur Boulevard  
Oakland, California  
ACEH Case #RO0002565

"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 2006 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](http://www.broadbentinc.com)

26 January 2007

Project No. 06-08-601

26 January 2007

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 2006 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 2006 Ground-Water Monitoring Report* for Atlantic Richfield Company Station #276 (herein referred to as Station #276) located at 10600 MacArthur Boulevard, Oakland, Alameda County, California (Property). This report presents results of ground-water monitoring conducted during the Fourth Quarter of 2006.

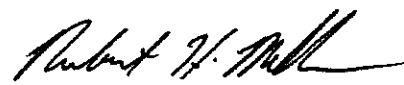
Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

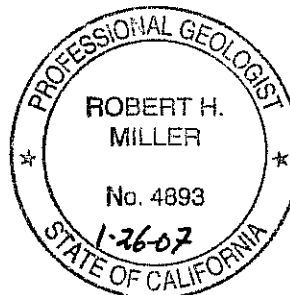
BROADBENT & ASSOCIATES, INC.



Thomas A. Venus, P.E.  
Senior Engineer



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



Enclosures

cc: Mr. Steven Plunkett, 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 2006):

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

### WORK PROPOSED FOR NEXT QUARTER (First Quarter 2007):

1. Submitted Fourth Quarter 2006 Ground-Water Monitoring Report (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for First Quarter 2007.

### QUARTERLY RESULTS SUMMARY:

Current phase of project:	<b>Ground-water monitoring/sampling</b>
Frequency of ground-water monitoring:	<b>Quarterly = MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, RW-1, WDR-3</b>
Frequency of ground-water sampling:	<b>Quarterly = MW-2, MW-5, and MW-8 Semi-Annually (1Q and 3Q) = MW-6 and MW-7 Annually (1Q) = MW-1, MW-3, MW-4, WGR-3, and RW-1</b>
Is free product (FP) present on-site:	<b>No</b>
Current remediation techniques:	<b>NA</b>
Depth to ground water (below TOC):	<b>17.38 ft (MW-2) to 33.12 ft (MW-6)</b>
General ground-water flow direction:	<b>South-southwest</b>
Approximate hydraulic gradient:	<b>0.004 ft/ft</b>

### DISCUSSION:

Fourth quarter 2006 ground-water monitoring and sampling was conducted at Station #276 on 2 November 2006 by Stratus. Water levels were gauged in the 10 wells at the Site on 2 November 2006. No irregularities were noted during water level gauging. Depth to water measurements ranged from 17.38 ft at MW-2 to 33.12 ft at MW-6. Resulting ground-water surface elevations ranged from 42.83 ft above mean sea level in well MW-2 to 32.98 ft at well MW-8. Water level elevations were between historic minimum and maximum ranges for each well except for well WGR3, which reached a historic minimum this quarter of 40.95 ft above mean sea level (see Table 1). Water level elevations yielded a potentiometric ground-water flow direction and gradient to the south-southwest at approximately 0.004 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.

Consistent with the current ground-water sampling schedule, water samples were collected from wells MW-2, MW-5, and MW-8 on 2 November 2006. No irregularities were reported during sampling. Samples were submitted under chain of custody protocol to Test America Analytical Testing Corporation (Morgan Hill, California), for analysis of Gasoline Range Organics (GRO, C4-12) by the LUFT GCMS Method; for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and tert-Amyl methyl ether (TAME), tert-Butyl alcohol (TBA), Di-isopropyl ether (DIPE), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), Ethanol, Ethyl tert-butyl ether (ETBE), and Methyl tert-butyl ether (MTBE) by EPA Method 8260B. The laboratory reported that the GRO concentration for well MW-8 was partly due to an individual peak in the quantitation range. No other significant irregularities were encountered during laboratory analysis of the samples. Ground-water sampling field data sheets and the laboratory analytical report, including chain-of-custody documentation, are provided in Appendix A.

Gasoline range organics (GRO) were detected above the laboratory reporting limits in each of the three wells sampled at concentrations up to 370 micrograms per liter ( $\mu\text{g/L}$ ) in well MW-8. Benzene was detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 0.64  $\mu\text{g/L}$  in well MW-2. TAME was detected above the laboratory reporting limit in each of the wells sampled at concentrations up to 43  $\mu\text{g/L}$  in well MW-8. 1,2-DCA was detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 7.8  $\mu\text{g/L}$  in well MW-5. MTBE was detected above the laboratory reporting limit in each of the wells sampled at concentrations up to 660  $\mu\text{g/L}$  in well MW-8. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the three wells sampled this quarter. Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well with the exception of well MW-8, which reached a historical maximum concentration for TAME at 43  $\mu\text{g/L}$ . 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.

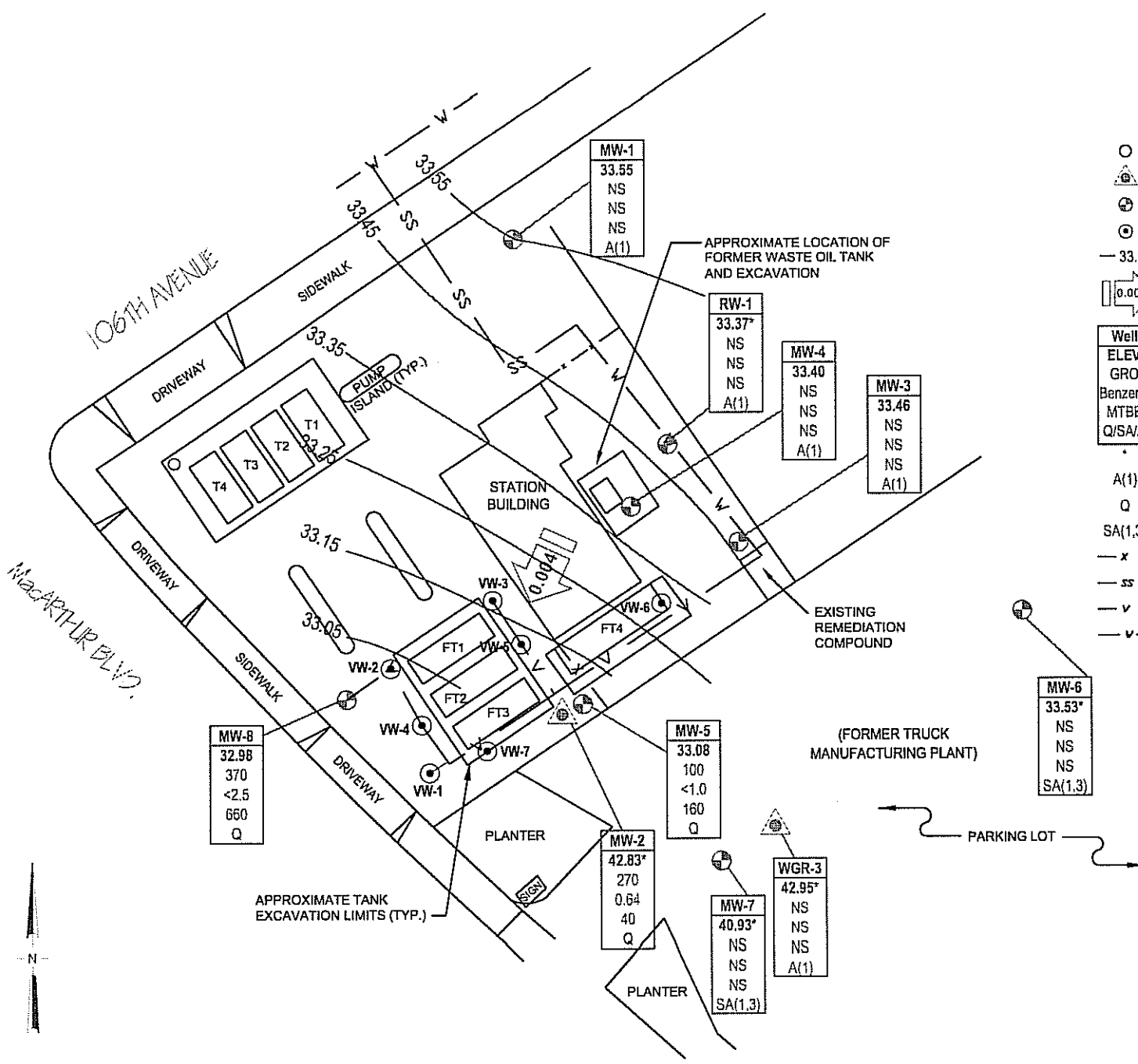
## **CLOSURE:**

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 Test America (Morgan Hill, California). Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty, expressed or implied was made. This report has been prepared for the exclusive use of Atlantic Richfield Company. It is possible that variations in soil or ground-water conditions could exist beyond points explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

## **ATTACHMENTS:**

- Drawing 1. Ground-Water Elevation Contour and Analytical Summary Map, 2 November 2006, 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, CA

- Table 2. Summary of Fuel Additives Analytical Data, Station #276, 10600 MacArthur Blvd., Oakland, CA
- Table 3. Historical Ground-Water Flow Direction and Gradient, Station #276, 10600 MacArthur Blvd., Oakland, CA
- Appendix A. Stratus Ground-Water Sampling Data Package (Includes Field Data Sheets and Laboratory Analytical Report with Chain-of-Custody Documentation)
- Appendix B. GeoTracker Upload Confirmation



**LEGEND**

- TANK PIT WELL
- ⊙ SHALLOW MONITORING WELL
- ⊕ MONITORING WELL
- ⊙ VAPOR EXTRACTION WELL
- 33.55 GROUND-WATER ELEVATION CONTOURS (FT MSL)
- 0.004 GROUND-WATER FLOW DIRECTION AND GRADIENT (FT/FT)
- Well WELL DESIGNATION
- ELEV GROUND-WATER ELEVATION (FT MSL)
- GRO GRO, BENZENE AND MTBE
- MTBE CONCENTRATIONS IN GROUND WATER (µg/L)
- Q/Q/SAVA SAMPLING FREQUENCY
- NOT INCLUDED IN CONTOURING
- A(1) SAMPLED ANNUALLY, 1ST QUARTER
- Q SAMPLED QUARTERLY
- SA(1,3) SAMPLED SEMI-ANNUALLY, 1ST & 3RD QUARTERS
- x — FENCE LINE
- ss — SANITARY SEWER LINE
- v — VAPOR LINE
- v — WATER LINE

MW-8
32.98
370
<2.5
660
Q

MW-1
33.55
NS
NS
NS
A(1)

RW-1
33.37*
NS
NS
A(1)

MW-4
33.40
NS
NS
A(1)

MW-3
33.46
NS
NS
A(1)

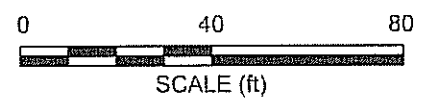
MW-5
33.08
100
<1.0
160
Q

MW-2
42.83*
270
0.64
40
Q

MW-7
40.93*
NS
NS
NS
SA(1,3)

WGR-3
42.95*
NS
NS
A(1)

MW-6
33.53*
NS
NS
NS
SA(1,3)



**BROADBENT & ASSOCIATES, INC.**  
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL  
 1324 Mangrove Ave, Suite 212, Chico, California  
 Project No.: 06-08-601 Date: 12/20/06

Station #276  
 10600 MacArthur Boulevard  
 Oakland, California

Ground-Water Elevation Contour  
 and Analytical Summary Map  
 2 November 2006

Drawing  
**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
<b>MW-1</b>															
12/17/2000	—		55.92	23.50	28.50	29.16	26.76	5.09	—	—	—	—	—	—	—
12/28/2001	—		55.92	23.50	28.50	27.38	28.54	8.8	—	—	—	—	—	—	—
11/27/2002	NP		55.92	23.50	28.50	29.45	26.47	4.2	—	—	—	—	—	2.3	6.7
7/22/2003	NP		55.92	23.50	28.50	27.58	28.34	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	6.7
11/07/2003	NP		55.92	23.50	28.50	30.42	25.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	6.6
02/03/2004	NP		55.92	23.50	28.50	38.80	17.12	—	—	—	—	—	—	1.5	—
05/04/2004	NP	g	61.26	23.50	28.50	26.67	34.59	<50	<0.50	<0.50	<0.50	<0.50	<0.50	—	6.6
08/12/2004	NP		61.26	23.50	28.50	29.49	31.77	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	6.6
11/10/2004	NP		61.26	23.50	28.50	30.29	30.97	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	6.6
02/03/2005	NP		61.26	23.50	28.50	26.23	35.03	—	—	—	—	—	—	0.89	—
05/09/2005	—		61.26	23.50	28.50	22.93	38.33	—	—	—	—	—	—	—	—
08/11/2005	—		61.26	23.50	28.50	26.11	35.15	—	—	—	—	—	—	—	—
11/18/2005	—		61.26	23.50	28.50	29.14	32.12	—	—	—	—	—	—	—	—
02/01/2006	NP	i	61.26	23.50	28.50	24.15	37.11	53	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	6.7
5/30/2006	—		61.26	23.50	28.50	21.25	40.01	—	—	—	—	—	—	—	—
8/10/2006	—		61.26	23.50	28.50	24.70	36.56	—	—	—	—	—	—	—	—
11/2/2006	—		61.26	23.50	28.50	27.71	33.55	—	—	—	—	—	—	—	—
<b>MW-2</b>															
12/17/2000	—		55.1	15.00	25.00	15.72	39.38	—	—	—	—	—	—	—	—
12/28/2001	—		55.1	15.00	25.00	27.38	27.72	—	—	—	—	—	—	—	—
11/27/2002	—		55.1	15.00	25.00	16.35	38.75	—	—	—	—	—	—	—	—
7/22/2003	—		55.1	15.00	25.00	16.20	38.9	—	—	—	—	—	—	—	—
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



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

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

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-2 Cont.</b>															
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		<b>60.21</b>	<b>15.00</b>	<b>25.00</b>	<b>17.38</b>	<b>42.83</b>	<b>270</b>	<b>0.64</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>40</b>	<b>1.41</b>	<b>6.82</b>
<b>MW-3</b>															
12/17/2000	--		56.55	22.00	27.00	29.78	26.77	158	--	--	--	--	--	--	--
12/28/2001	--		56.55	22.00	27.00	27.95	28.6	310	20	1.5	13	--	--	--	--
11/27/2002	NP		56.55	22.00	27.00	30.1	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
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	--		<b>61.89</b>	<b>22.00</b>	<b>27.00</b>	<b>28.43</b>	<b>33.46</b>	--	--	--	--	--	--	--	--
<b>MW-4</b>															
12/17/2000	--		55.98	25.00	45.00	29.22	26.76	225	--	--	--	--	--	--	--
12/28/2001	--		55.98	25.00	45.00	27.37	28.61	160	1.2	--	--	--	--	--	--
11/27/2002	NP		55.98	25.00	45.00	29.55	26.43	95	--	--	--	--	--	3.7	6.7
7/22/2003	NP		55.98	25.00	45.00	27.73	28.25	130	<0.50	<0.50	<0.50	<0.50	<0.50	2.9	6.6
11/07/2003	NP		55.98	25.00	45.00	30.41	25.57	59	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	6.5

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

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

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)					DO (mg/L)	pH	
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes			MTBE
<b>MW-4 Cont.</b>															
02/03/2004	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	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--
<b>MW-5</b>															
12/17/2000	--		55.43	23.50	31.50	28.82	26.61	1,040	--	--	--	--	--	--	--
12/28/2001	--		55.43	23.50	31.50	26.91	28.52	3,200	190	2/4/1900	140	1.9/3.2/2.0	--	--	--
11/27/2002	P		55.43	23.50	31.50	29.15	26.28	110	--	--	--	--	--	1.4	6.4
7/22/2003	P		55.43	23.50	31.50	27.43	28	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
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

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

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)					DO (mg/L)	pH	
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes			MTBE
<b>MW-6</b>															
12/17/2000	--		61.21	37.50	56.00	34.61	26.6	--	--	--	--	--	--	--	--
12/28/2001	--		61.21	37.50	56.00	32.8	28.41	--	--	--	--	--	--	--	--
11/27/2002	--		61.21	37.50	56.00	35	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	--	--	--	--	--	--	--	--
<b>MW-7</b>															
12/17/2000	--		58.22	17.50	37.5	19.94	38.28	--	--	--	--	--	--	--	--
12/28/2001	--		58.22	17.50	37.5	17.29	40.93	--	--	--	--	--	--	--	--
11/27/2002	--		58.22	17.50	37.5	21.30	36.92	--	--	--	--	--	--	--	--
7/22/2003	--		58.22	17.50	37.5	21.36	36.86	--	--	--	--	--	--	--	--
11/07/2003	P	d	58.22	17.50	37.5	23.76	34.46	3,200	15	<2.5	130	11	53	2.2	6.8
02/03/2004	P		58.22	17.50	37.5	17.74	40.48	53	<0.50	<0.50	<0.50	0.54	32	1.9	6.4
02/03/2005	P		63.54	17.50	37.5	18.13	45.41	61	<0.50	<0.50	<0.50	<0.50	14	3.39	6.5
05/09/2005	--		63.54	17.50	37.5	18.39	45.15	--	--	--	--	--	--	--	--
08/11/2005	P		63.54	17.50	37.5	21.47	42.07	1,500	1.8	<1.0	4.2	1.2	21	2.0	6.3
11/18/2005	--		63.54	17.50	37.5	22.41	41.13	--	--	--	--	--	--	--	--
02/01/2006	P		63.54	17.50	37.5	16.65	46.89	<50	<0.50	<0.50	<0.50	<0.50	1.8	1.3	6.3
5/30/2006	--		63.54	17.50	37.50	19.22	44.32	--	--	--	--	--	--	--	--

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

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)					DO (mg/L)	pH	
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes			MTBE
<b>MW-7 Cont.</b>															
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	-	-	-	-	-	-	-	-
<b>MW-8</b>															
12/17/2000	-		53.65	29.00	49.00	27.02	26.63	-	-	-	-	-	-	-	-
12/28/2001	-		53.65	29.00	49.00	24.99	28.66	-	-	-	-	-	-	-	-
11/27/2002	-		53.65	29.00	49.00	27.45	26.20	-	-	-	-	-	-	-	-
7/22/2003	-		53.65	29.00	49.00	25.74	27.91	-	-	-	-	-	-	-	-
11/07/2003	P		53.65	29.00	49.00	28.27	25.38	<500	<5.0	<5.0	<5.0	<5.0	440	2.6	6.5
02/03/2004	P	f	53.65	29.00	49.00	24.80	28.85	170	<12	<12	<12	<12	470	3.0	6.7
05/04/2004	P	g	58.96	29.00	49.00	24.81	34.15	<1,000	<10	<10	<10	<10	700	3.8	6.4
08/12/2004	P		58.96	29.00	49.00	27.72	31.24	<2,500	<25	<25	<25	<25	400	3.4	6.5
11/10/2004	P		58.96	29.00	49.00	28.41	30.55	<500	<5.0	<5.0	<5.0	<5.0	480	3.4	6.3
02/03/2005	P		58.96	29.00	49.00	24.01	34.95	<50	<0.50	<0.50	<0.50	<0.50	45	1.43	6.4
05/09/2005	P	i	58.96	29.00	49.00	21.07	37.89	640	<5.0	<5.0	<5.0	<5.0	440	1.06	6.4
08/11/2005	P		58.96	29.00	49.00	24.32	34.64	<500	<5.0	<5.0	<5.0	<5.0	420	5.0	6.1
11/18/2005	P		58.96	29.00	49.00	27.35	31.61	<500	<5.0	<5.0	<5.0	<5.0	390	3.51	6.4
02/01/2006	P	i	58.96	29.00	49.00	22.00	36.96	520	<5.0	<5.0	<5.0	<5.0	600	0.5	6.3
5/30/2006	P		58.96	29.00	49.00	19.25	39.71	310	<5.0	<5.0	<5.0	<5.0	480	1.35	6.3
8/11/2006	P	Water Levels 8/10	58.96	29.00	49.00	22.95	36.01	320	<0.50	<0.50	<0.50	<0.50	630	0.65	6.2
11/2/2006	P		58.96	29.00	49.00	25.98	32.98	370	<2.5	<2.5	<2.5	<2.5	660	1.46	6.61
<b>RW-1</b>															
12/17/2000	-		56.32	36.00	51.00	29.57	26.75	-	-	-	-	-	-	-	-
12/28/2001	-		56.32	36.00	51.00	27.64	28.68	-	-	-	-	-	-	-	-
11/27/2002	-		56.32	36.00	51.00	29.93	26.39	-	-	-	-	-	-	-	-
7/22/2003	-		56.32	36.00	51.00	28.09	28.23	-	-	-	-	-	-	-	-
11/07/2003	P		56.32	36.00	51.00	30.64	25.68	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	7.0
02/03/2004	P		56.32	36.00	51.00	27.28	29.04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.7	7.1
05/04/2004	P	g	61.65	36.00	51.00	27.16	34.49	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.4	6.8
08/12/2004	P		61.65	36.00	51.00	30.10	31.55	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	7.1

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

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

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)					DO (mg/L)	pH	
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes			MTBE
<b>RW-1 Cont.</b>															
11/10/2004	P		61.65	36.00	51.00	30.79	30.86	<100	<0.50	<0.50	<0.50	<0.50	<0.50	5.7	6.9
02/03/2005	P		61.65	36.00	51.00	26.61	35.04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.57	7.1
05/09/2005	--		61.65	36.00	51.00	23.51	38.14	--	--	--	--	--	--	--	--
08/11/2005	--		61.65	36.00	51.00	26.60	35.05	--	--	--	--	--	--	--	--
11/18/2005	--		61.65	36.00	51.00	29.65	32.00	--	--	--	--	--	--	--	--
02/01/2006	P		61.65	36.00	51.00	24.65	37.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	7.0
5/30/2006	--		61.65	36.00	51.00	21.69	39.96	--	--	--	--	--	--	--	--
8/10/2006	--		61.65	36.00	51.00	25.31	36.34	--	--	--	--	--	--	--	--
11/2/2006	--		61.65	36.00	51.00	28.28	33.37	--	--	--	--	--	--	--	--
<b>WGR-3</b>															
12/17/2000	--		--	--	--	19.21	--	--	--	--	--	--	--	--	--
12/28/2001	--	h	--	--	--	--	--	--	--	--	--	--	--	--	--
11/27/2002	--		--	--	--	20.6	--	--	--	--	--	--	--	--	--
7/22/2003	--		--	--	--	20.77	--	--	--	--	--	--	--	--	--
05/04/2004	P	g	63.27	--	--	19.53	43.74	<50	<0.50	<0.50	<0.50	<0.50	11	1.8	6.5
08/12/2004	P		63.27	--	--	22.20	41.07	<50	<0.50	<0.50	<0.50	<0.50	35	2.0	--
11/10/2004	P		63.27	--	--	19.98	43.29	<50	<0.50	<0.50	<0.50	<0.50	5.6	0.3	6.3
02/03/2005	P		63.27	--	--	16.91	46.36	<50	<0.50	<0.50	<0.50	<0.50	1.1	2.04	6.5
05/09/2005	--		63.27	--	--	17.29	45.98	--	--	--	--	--	--	--	--
08/11/2005	--		63.27	--	--	20.88	42.39	--	--	--	--	--	--	--	--
11/18/2005	--		63.27	--	--	22.15	41.12	--	--	--	--	--	--	--	--
02/01/2006	P		63.27	--	--	14.90	48.37	<50	<0.50	<0.50	<0.50	<0.50	2.3	2.0	6.5
5/30/2006	--		63.27	--	--	18.39	44.88	--	--	--	--	--	--	--	--
8/10/2006	--		63.27	--	--	20.63	42.64	--	--	--	--	--	--	--	--
11/2/2006	--		63.27	--	--	20.32	42.95	--	--	--	--	--	--	--	--

**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.

**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.

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	MIBE	DIPE	EIBE	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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	
5/30/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
8/11/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
11/2/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	
05/09/2005	<100	<20	56	<0.50	<0.50	17	<0.50	<0.50	--	--	--	--	<0.50	--	
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	--	
02/01/2006	<300	<20	3.1	<0.50	<0.50	0.52	<0.50	<0.50	--	--	--	--	<0.50	--	
5/30/2006	<300	<20	64	<0.50	<0.50	12	<0.50	<0.50	--	--	--	--	<0.50	--	
8/11/2006	<300	<20	28	<0.50	<0.50	5.9	<0.50	<0.50	--	--	--	--	<0.50	--	
11/2/2006	<300	<20	40	<0.50	<0.50	7.9	<0.50	<0.50	--	--	--	--	<0.50	--	

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	MIBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
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	--	
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	--	
5/30/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
8/11/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
11/2/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	
05/09/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
08/11/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
11/18/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	



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

Well and Sample Date	Concentrations in (µg/L)														Footnotes
	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
<b>MW-4 Cont.</b>															
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
<b>MW-5</b>															
12/17/2000	--	--	--	--	--	--	--	--	--	--	--	--	1,040	--	
12/28/2001	--	--	--	--	--	--	--	--	36	140	1.9, 3.2, 2.0	--	3,200	190	a,b,c
11/27/2002	--	--	--	--	--	--	--	--	--	--	--	--	110	--	
7/22/2003	<200	<40	110	1.4	<1.0	3.2	12	<1.0	--	--	--	--	55	--	
11/07/2003	<500	<100	120	<2.5	<2.5	6.6	--	--	--	--	--	--	42	--	
02/03/2004	<500	<100	71	<5.0	<5.0	<5.0	12	<2.5	--	--	--	--	130	--	
05/04/2004	<500	<100	150	<2.5	<2.5	5.9	8.8	<2.5	--	--	--	--	36	--	
08/12/2004	<500	<100	140	<2.5	<2.5	10	10	<2.5	--	--	--	--	37	--	
11/10/2004	<200	<40	150	1.1	<1.0	9.5	9.8	<1.0	--	--	--	--	50	--	
02/03/2005	<100	<20	16	<0.50	<0.50	0.54	2.7	<0.50	--	--	--	--	480	--	e
05/09/2005	<500	<100	140	<2.5	<2.5	9.2	10	<2.5	--	--	--	--	78	--	e
08/11/2005	<500	<100	160	<2.5	<2.5	10	9.6	<2.5	--	--	--	--	27	--	
11/18/2005	<500	<100	120	<2.5	<2.5	9.2	10	<2.5	--	--	--	--	19	--	f
02/01/2006	<750	<50	100	<1.2	<1.2	5.1	7.4	<1.2	--	--	--	--	470	--	e
5/30/2006	<1,500	<100	230	<2.5	<2.5	11	11	<2.5	--	--	--	--	48	--	
8/11/2006	<1,500	<100	170	<2.5	<2.5	14	9.2	<2.5	--	--	--	--	24	--	
11/2/2006	<600	<40	160	<1.0	<1.0	12	7.8	<1.0	--	--	--	--	9.8	--	
<b>MW-6</b>															
11/07/2003	<1,000	<200	<5.0	<5.0	<5.0	<5.0	--	--	--	--	--	--	560	--	
02/03/2004	<500	<100	<2.5	<5.0	<5.0	<5.0	<2.5	<2.5	--	--	--	--	220	--	
05/04/2004	<500	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--	--	--	--	210	--	
08/12/2004	<100	<20	0.81	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	750	--	
11/10/2004	<100	<20	0.89	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	530	--	
02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	85	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

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

Well and Sample Date	Concentrations in (µg/L)														Footnotes
	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
<b>MW-6 Cont.</b>															
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
5/30/2006	--	--	--	--	--	--	--	--	--	--			--	--	
8/11/2006	<3,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--			880	--	
11/2/2006	--	--	--	--	--	--	--	--	--	--			--	--	
<b>MW-7</b>															
11/07/2003	<500	<100	53	<2.5	<2.5	13	--	--	--	--			<2.5	--	
02/03/2004	<100	<20	32	<1.0	<1.0	7.4	<0.50	<0.50	--	--			0.74	--	
02/03/2005	<100	<20	14	<0.50	<0.50	3.9	<0.50	<0.50	--	--			1.6	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--			--	--	
08/11/2005	<200	<40	21	<1.0	<1.0	4.7	<1.0	<1.0	--	--			1.0	--	e
11/18/2005	--	--	--	--	--	--	--	--	--	--			--	--	
02/01/2006	<300	<20	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			0.71	--	e
5/30/2006	--	--	--	--	--	--	--	--	--	--			--	--	
8/11/2006	<300	<20	41	<0.50	<0.50	9.0	<0.50	<0.50	--	--			<0.50	--	
11/2/2006	--	--	--	--	--	--	--	--	--	--			--	--	
<b>MW-8</b>															
11/07/2003	<1,000	<200	440	<5.0	<5.0	18	--	--	--	--			<5.0	--	
02/03/2004	<2,500	<500	470	<25	<25	<25	<12	<12	--	--			<12	--	
05/04/2004	<2,000	<400	700	<10	<10	21	<10	<10	--	--			12	--	
08/12/2004	<5,000	<1,000	400	<25	<25	<25	<25	<25	--	--			1.1	--	
11/10/2004	<1,000	<200	480	<5.0	<5.0	21	<5.0	<5.0	--	--			8.9	--	
02/03/2005	<100	<20	45	<0.50	<0.50	1.9	<0.50	<0.50	--	--			0.59	--	e
05/09/2005	<1,000	<200	440	<5.0	<5.0	21	<5.0	<5.0	--	--			<5.0	--	e
08/11/2005	<1,000	<200	420	<5.0	<5.0	24	<5.0	<5.0	--	--			<0.50	--	e
11/18/2005	<1,000	<200	390	<5.0	<5.0	23	<5.0	<5.0	--	--			4.2	--	f
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	--	

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

Well and Sample Date	Concentrations in (µg/L)														Footnotes
	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	
<b>MW-8 Cont.</b>															
11/2/2006	<1,500	<100	660	<2.5	<2.5	43	<2.5	<2.5	--	--	--	--	<2.5	--	
<b>RW-1</b>															
11/07/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	--	--			3.1	--	
02/03/2004	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	--	--			0.76	--	
05/04/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			1.8	--	
08/12/2004	330/<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			2.9	--	d
11/10/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			5.2	--	
02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			1.7	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--			--	--	
08/11/2005	--	--	--	--	--	--	--	--	--	--			--	--	
11/18/2005	--	--	--	--	--	--	--	--	--	--			--	--	
02/01/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			1.7	--	e
5/30/2006	--	--	--	--	--	--	--	--	--	--			--	--	g
8/11/2006	--	--	--	--	--	--	--	--	--	--			--	--	g
11/2/2006	--	--	--	--	--	--	--	--	--	--			--	--	g
<b>WGR-3</b>															
05/04/2004	<100	<20	11	<0.50	<0.50	2.4	<0.50	<0.50	--	--			<0.50	--	
08/12/2004	<100	<20	35	<0.50	<0.50	7.5	<0.50	<0.50	--	--			<0.50	--	
11/10/2004	<100	<20	5.6	<0.50	<0.50	1.3	<0.50	<0.50	--	--			<0.50	--	
02/03/2005	<100	<20	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			<0.50	--	e
05/09/2005	--	--	--	--	--	--	--	--	--	--			--	--	
08/11/2005	--	--	--	--	--	--	--	--	--	--			--	--	
11/18/2005	--	--	--	--	--	--	--	--	--	--			--	--	
02/01/2006	<300	<20	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	--	--			<0.50	--	e
5/30/2006	--	--	--	--	--	--	--	--	--	--			--	--	g
8/11/2006	--	--	--	--	--	--	--	--	--	--			--	--	g
11/2/2006	--	--	--	--	--	--	--	--	--	--			--	--	g

**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 µg/L.  
b = VOC 1,2 DCA detected at a concentration of 3.2 µg/L.  
c = VOC Chlorobenzene detected at a concentration of 2.0 µg/L.  
d = Ethanol was re-analyzed two days out of holding time and was not detected above a laboratory reporting limit of 100 µg/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.

**NOTES:**

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

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

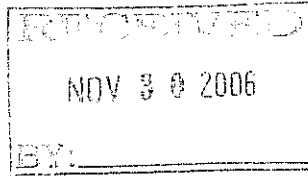
**Table 3. Historical Ground-Water Flow Direction and Gradient  
Station #276, 10600 MacArthur Blvd., Oakland, CA**

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

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

**APPENDIX A**

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



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

November 20, 2006

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

Re: Groundwater Sampling Data Package, BP Service Station No. 276, located at 10600 MacArthur Boulevard, California (Quarterly Monitoring performed on November 1, 2006)

**General Information**

*Data Submittal Prepared / Reviewed by:* Sandy Hayes / Jay Johnson

*Phone Number:* (530) 676-6000

*On-Site Supplier Representative:* Jerry Gonzales

*Date:* November 1, 2006

*Arrival:* 12:45                      *Departure:* 14:40

*Weather Conditions:* Cloudy

*Unusual Field Conditions:* None

*Scope of Work Performed:* Quarterly monitoring and sampling

*Variations from Work Scope:* None noted

This submittal presents the tabulation of data collected in association with routine groundwater monitoring. The attachments include field data sheets, chain of custody documentation, and analytical results. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations. Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

**STRATUS ENVIRONMENTAL, INC.**

Jay R. Johnson, P.G.  
Project Manager



**Attachments:**

- Field Data Sheets
- Chain of Custody Documentation
- Analytical Results

CC: Mr. Paul Supple, BP/ARCO





# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

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

DATE PURGED 11-2008 START (2400hr) 13:00 END (2400hr) 13:00  
 DATE SAMPLED 11-2-08 SAMPLE TIME (2400hr) 13:15  
 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) = 25.11 CASING VOLUME (gal) = 5.1  
 DEPTH TO WATER (feet) = 17.38 CALCULATED PURGE (gal) = 15.5  
 WATER COLUMN HEIGHT (feet) = 7.7 ACTUAL PURGE (gal) = 15.5

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>11-2-08</u>	<u>13:01</u>	<u>5.1</u>	<u>20.0</u>	<u>505</u>	<u>6.99</u>	<u>clear</u>	<u>—</u>
<u>↓</u>	<u>13:02</u>	<u>7.0</u>	<u>20.5</u>	<u>511</u>	<u>6.96</u>	<u>clear</u>	<u>—</u>
<u>↓</u>	<u>13:03</u>	<u>15.5</u>	<u>20.0</u>	<u>520</u>	<u>6.93</u>	<u>1</u>	<u>—</u>

### SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 19.40 SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: Rel Gen  
 ODOR: yes SAMPLE VESSEL / PRESERVATIVE: Voa-HCL

**PURGING EQUIPMENT**

Bladder Pump       Bailer (Teflon)  
 Centrifugal Pump       Bailer (PVC)  
 Submersible Pump       Bailer (Stainless Steel)  
 Peristaltic Pump       Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: 23

**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: D.O 1.41

SIGNATURE: [Signature] Page    of

# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

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

DATE PURGED 11-2-06 START (2400hr) 13:26 END (2400hr) 1136  
 DATE SAMPLED 11-2-06 SAMPLE TIME (2400hr) 13:40  
 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) = 36.63 CASING VOLUME (gal) = 6.0  
 DEPTH TO WATER (feet) = 27.65 CALCULATED PURGE (gal) = 18.0  
 WATER COLUMN HEIGHT (feet) = 8.9 ACTUAL PURGE (gal) = 18

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>11-2-06</u>	<u>1329</u>	<u>6</u>	<u>20.9</u>	<u>686</u>	<u>6.61</u>	<u>clear</u>	<u>—</u>
<u>✓</u>	<u>1337</u>	<u>12</u>	<u>21.7</u>	<u>802</u>	<u>6.38</u>	<u>✓</u>	<u>—</u>
<u>✓</u>	<u>1336</u>	<u>18</u>	<u>20.8</u>	<u>968</u>	<u>6.52</u>	<u>✓</u>	<u>—</u>

### SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 27.90 SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: 200 Gen  
 ODOR: yes SAMPLE VESSEL / PRESERVATIVE: VOOR's HCL

#### PURGING EQUIPMENT

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

#### 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#: M-570

REMARKS: DO 1.43

SIGNATURE: JG Page    of

# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 276 PURGED BY: J WELL I.D.: MW 8  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: J SAMPLE I.D.: MW 8  
 LOCATION: Oakland - 10600 MacArthur Blvd. QA SAMPLES: \_\_\_\_\_

DATE PURGED 11.2.09 START (2400hr) 14:02 END (2400hr) 14:11  
 DATE SAMPLED 11.2.09 SAMPLE TIME (2400hr) 14:20  
 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) = 14.6  
 DEPTH TO WATER (feet) = 25.98 CALCULATED PURGE (gal) = 43.8  
 WATER COLUMN HEIGHT (feet) = 21.8 ACTUAL PURGE (gal) = 44.0

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>11.2.09</u>	<u>14:05</u>	<u>14.6</u>	<u>21.7</u>	<u>701</u>	<u>6.70</u>	<u>cloudy</u>	<u>—</u>
<u>1</u>	<u>14:09</u>	<u>21.0</u>	<u>22.6</u>	<u>674</u>	<u>6.65</u>	<u>clear</u>	<u>—</u>
<u>1</u>	<u>14:11</u>	<u>44.0</u>	<u>22.3</u>	<u>657</u>	<u>6.61</u>	<u>1</u>	<u>—</u>

SAMPLE DEPTH TO WATER: 26.38 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: All Gen  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: VOA HCL

#### PURGING EQUIPMENT

Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump  Bailer (PVC)  
 Submersible Pump  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: 47

#### 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: NO 1.46

SIGNATURE: JG Page \_\_\_\_\_ of \_\_\_\_\_



# Chain of Custody Record

Project Name: Arco 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: 1245 Temp: cool  
 Off-site Time: 1140 Temp: cool  
 Sky Conditions: cloudy  
 Meteorological Events: none  
 Wind Speed: 0 Direction: NA

Lab Name: <u>TestAmerica</u>	BP/AR Facility No.: <u>276</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>10600 MacArthur Blvd., Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u>
<u>Morgan Hill, CA 95937</u>	Site Lat/Long:	<u>Cameron Park, CA 95682</u>
Lab PM: <u>Lisa Race</u>	California Global ID #: <u>T0600108312</u>	Consultant/Contractor Project No.:
Tele/Fax: <u>408-782-8156 408-782-6308 (fax)</u>	Enfos Project No.:	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or RCOP (circle one) <u>Provision</u>	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u>	Phase/WBS: <u>04-Monitoring</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
<u>San Ramon, CA</u>	Sub Phase/Task: <u>03-Analytical</u>	E-mail EDD To: <u>cjewitt@stratusinc.net</u>
Tele/Fax: <u>925-275-3506</u>	Cost Element: <u>01-Contractor labor</u>	Invoice to: <u>Atlantic Richfield Co.</u>

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis						Sample Point Lat/Long and Comments: <u>Oxygenates include MtBE, TAME, DIPE, EtBE, TBA, ethanol, 1,2-DCA &amp; EDB</u>				
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	BTEX 8021	BTEX/TPH	BTEX/Oxy*/TPHlg	1,2-DCA	EDB	Ethanol by 8260		PCE by 8010			
	MW-2	1315	11-2-06		X		5																	
	MW-5	1340	11-2-06		X		12								X	X	X	X						
	MW-8	1420	11-2-06		X		6								X	X	X	X						
	TB-276 11206	600	11-2-06				2								X	X	X	X						<u>hold</u>

3.4<sup>cc</sup>

Sampler's Name: <u>Jerry Garcia</u>	Relinquished By / Affiliation: _____	Date: <u>11/7/08</u>	Time: <u>1230</u>	Accepted By / Affiliation: _____	Date: <u>11/3/06</u>	Time: <u>1270</u>
Sampler's Company: <u>D. Pulso</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						
Special Instructions: <u>Please cc results to bpvalley@secor.com</u>						

Custody Seals In Place Yes  No  Temp Blank Yes  No  Cooler Temperature on Receipt      °F/C Trip Blank Yes  No

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

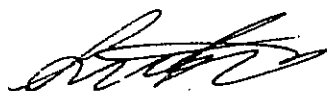
20 November, 2006

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

RE: ARCO #0276, Oakland, CA  
Work Order: MPK0166

Enclosed are the results of analyses for samples received by the laboratory on 11/04/06 15:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa Race  
Senior Project Manager

CA ELAP Certificate # 1210

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

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-  
Project Manager: Jay Johnson

MPK0166  
Reported:  
11/20/06 10:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	MPK0166-01	Water	11/02/06 13:15	11/04/06 15:30
MW-5	MPK0166-02	Water	11/02/06 13:40	11/04/06 15:30
MW-8	MPK0166-03	Water	11/02/06 14:20	11/04/06 15:30
TB-27611206	MPK0166-04	Water	11/02/06 06:00	11/04/06 15:30

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

These samples were received with no custody seals.

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-  
Project Manager: Jay Johnson

MPK0166  
Reported:  
11/20/06 10:59

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (MPK0166-01) Water</b> Sampled: 11/02/06 13:15 Received: 11/04/06 15:30									
Gasoline Range Organics (C4-C12)	270	50	ug/l	1	6K10004	11/10/06	11/10/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		104 %	60-145		"	"	"	"	
<b>MW-5 (MPK0166-02RE1) Water</b> Sampled: 11/02/06 13:40 Received: 11/04/06 15:30									
Gasoline Range Organics (C4-C12)	100	50	ug/l	1	6K13002	11/13/06	11/13/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		104 %	60-145		"	"	"	"	
<b>MW-8 (MPK0166-03) Water</b> Sampled: 11/02/06 14:20 Received: 11/04/06 15:30									
Gasoline Range Organics (C4-C12)	370	250	ug/l	5	6K10004	11/10/06	11/10/06	LUFT GCMS	PV
Surrogate: 1,2-Dichloroethane-d4		106 %	60-145		"	"	"	"	



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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-  
Project Manager: Jay Johnson

MPK0166  
Reported:  
11/20/06 10:59

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW-2 (MPK0166-01) Water** Sampled: 11/02/06 13:15 Received: 11/04/06 15:30

tert-Amyl methyl ether	7.9	0.50	ug/l	1	6K10004	11/10/06	11/10/06	EPA 8260B	
Benzene	0.64	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	40	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane	97 %	75-130	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	104 %	60-145	"	"	"	"	"	"	
Surrogate: Toluene-d8	100 %	70-130	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	106 %	60-120	"	"	"	"	"	"	

**MW-5 (MPK0166-02) Water** Sampled: 11/02/06 13:40 Received: 11/04/06 15:30

tert-Amyl methyl ether	12	1.0	ug/l	2	6K10004	11/10/06	11/10/06	EPA 8260B	
Benzene	ND	1.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	40	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	7.8	1.0	"	"	"	"	"	"	
Ethanol	ND	600	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	160	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane	96 %	75-130	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	106 %	60-145	"	"	"	"	"	"	
Surrogate: Toluene-d8	94 %	70-130	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	95 %	60-120	"	"	"	"	"	"	

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-  
Project Manager: Jay Johnson

MPK0166  
Reported:  
11/20/06 10:59

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-8 (MPK0166-03) Water Sampled: 11/02/06 14:20 Received: 11/04/06 15:30</b>									
tert-Amyl methyl ether	43	2.5	ug/l	5	6K10004	11/10/06	11/10/06	EPA 8260B	
Benzene	ND	2.5	"	"	"	"	"	"	
tert-Butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"	
Ethanol	ND	1500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	660	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Xylenes (total)	ND	2.5	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		96 %	75-130		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		106 %	60-145		"	"	"	"	
Surrogate: Toluene-d8		95 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95 %	60-120		"	"	"	"	

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-  
Project Manager: Jay Johnson

MPK0166  
Reported:  
11/20/06 10:59

**EPA 8010 list Volatile Organic Compounds by EPA 8260B**

**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (MPK0166-01) Water</b> Sampled: 11/02/06 13:15 Received: 11/04/06 15:30									
Tetrachloroethene	ND	0.50	ug/l	1	6K10004	11/10/06	11/10/06	EPA 8260B	
Surrogate: Dibromofluoromethane		97 %	65-130		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		104 %	60-135		"	"	"	"	
Surrogate: Toluene-d8		100 %	70-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	70-120		"	"	"	"	
<b>MW-5 (MPK0166-02) Water</b> Sampled: 11/02/06 13:40 Received: 11/04/06 15:30									
Tetrachloroethene	9.8	1.0	ug/l	2	6K10004	11/10/06	11/10/06	EPA 8260B	
Surrogate: Dibromofluoromethane		96 %	65-130		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		106 %	60-135		"	"	"	"	
Surrogate: Toluene-d8		94 %	70-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95 %	70-120		"	"	"	"	
<b>MW-8 (MPK0166-03) Water</b> Sampled: 11/02/06 14:20 Received: 11/04/06 15:30									
Tetrachloroethene	ND	2.5	ug/l	5	6K10004	11/10/06	11/10/06	EPA 8260B	
Surrogate: Dibromofluoromethane		96 %	65-130		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		106 %	60-135		"	"	"	"	
Surrogate: Toluene-d8		95 %	70-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95 %	70-120		"	"	"	"	

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-  
Project Manager: Jay Johnson

MPK0166  
Reported:  
11/20/06 10:59

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6K10004 - EPA 5030B P/T / LUFT GCMS**

<b>Blank (6K10004-BLK1)</b>										
										Prepared & Analyzed: 11/10/06
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.60		"	2.50		104	60-145			
<b>Laboratory Control Sample (6K10004-BS2)</b>										
										Prepared & Analyzed: 11/10/06
Gasoline Range Organics (C4-C12)	440	50	ug/l	440		100	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.73		"	2.50		109	60-145			
<b>Laboratory Control Sample Dup (6K10004-BSD2)</b>										
										Prepared & Analyzed: 11/10/06
Gasoline Range Organics (C4-C12)	440	50	ug/l	440		100	75-140	0	20	
Surrogate: 1,2-Dichloroethane-d4	2.80		"	2.50		112	60-145			

**Batch 6K13002 - EPA 5030B P/T / LUFT GCMS**

<b>Blank (6K13002-BLK1)</b>										
										Prepared & Analyzed: 11/13/06
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.60		"	2.50		104	60-145			
<b>Laboratory Control Sample (6K13002-BS2)</b>										
										Prepared & Analyzed: 11/13/06
Gasoline Range Organics (C4-C12)	357	50	ug/l	440		81	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.72		"	2.50		109	60-145			
<b>Laboratory Control Sample Dup (6K13002-BSD2)</b>										
										Prepared & Analyzed: 11/13/06
Gasoline Range Organics (C4-C12)	357	50	ug/l	440		81	75-140	0	20	
Surrogate: 1,2-Dichloroethane-d4	2.79		"	2.50		112	60-145			

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-  
Project Manager: Jay Johnson

MPK0166  
Reported:  
11/20/06 10:59

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6K10004 - EPA 5030B P/T / EPA 8260B**

**Blank (6K10004-BLK1)**

Prepared & Analyzed: 11/10/06

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	300	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
<i>Surrogate: Dibromofluoromethane</i>	<i>2.41</i>		<i>"</i>	<i>2.50</i>		<i>96</i>	<i>75-130</i>			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.60</i>		<i>"</i>	<i>2.50</i>		<i>104</i>	<i>60-145</i>			
<i>Surrogate: Toluene-d8</i>	<i>2.41</i>		<i>"</i>	<i>2.50</i>		<i>96</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>2.45</i>		<i>"</i>	<i>2.50</i>		<i>98</i>	<i>60-120</i>			

**Laboratory Control Sample (6K10004-BS1)**

Prepared & Analyzed: 11/10/06

tert-Amyl methyl ether	11.6	0.50	ug/l	10.0		116	65-135			
Benzene	10.7	0.50	"	10.0		107	70-125			
tert-Butyl alcohol	190	20	"	200		95	60-135			
Di-isopropyl ether	11.2	0.50	"	10.0		112	70-130			
1,2-Dibromoethane (EDB)	10.3	0.50	"	10.0		103	80-125			
1,2-Dichloroethane	11.5	0.50	"	10.0		115	75-125			
Ethanol	196	300	"	200		98	15-150			
Ethyl tert-butyl ether	11.8	0.50	"	10.0		118	65-130			
Ethylbenzene	10.3	0.50	"	10.0		103	70-130			
Methyl tert-butyl ether	11.6	0.50	"	10.0		116	50-140			
Toluene	10.3	0.50	"	10.0		103	70-120			
Xylenes (total)	30.7	0.50	"	30.0		102	80-125			
<i>Surrogate: Dibromofluoromethane</i>	<i>2.55</i>		<i>"</i>	<i>2.50</i>		<i>102</i>	<i>75-130</i>			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.84</i>		<i>"</i>	<i>2.50</i>		<i>114</i>	<i>60-145</i>			
<i>Surrogate: Toluene-d8</i>	<i>2.46</i>		<i>"</i>	<i>2.50</i>		<i>98</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>2.47</i>		<i>"</i>	<i>2.50</i>		<i>99</i>	<i>60-120</i>			

TestAmerica - Morgan Hill, CA

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

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-  
Project Manager: Jay Johnson

MPK0166  
Reported:  
11/20/06 10:59

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6K10004 - EPA 5030B P/T / EPA 8260B**

Matrix Spike (6K10004-MS1)	Source: MPK0166-02			Prepared & Analyzed: 11/10/06						
tert-Amyl methyl ether	39.4	1.0	ug/l	20.0	12	137	65-135			LM
Benzene	21.9	1.0	"	20.0	ND	110	70-125			
tert-Butyl alcohol	417	40	"	400	ND	104	60-135			
Di-isopropyl ether	23.6	1.0	"	20.0	0.84	114	70-130			
1,2-Dibromoethane (EDB)	21.5	1.0	"	20.0	ND	108	80-125			
1,2-Dichloroethane	31.8	1.0	"	20.0	7.8	120	75-125			
Ethanol	466	600	"	400	ND	116	15-150			
Ethyl tert-butyl ether	23.1	1.0	"	20.0	ND	116	65-130			
Ethylbenzene	21.1	1.0	"	20.0	ND	106	70-130			
Methyl tert-butyl ether	199	1.0	"	20.0	160	195	50-140			BB,LM
Toluene	21.1	1.0	"	20.0	ND	106	70-120			
Xylenes (total)	63.6	1.0	"	60.0	ND	106	80-125			
<i>Surrogate: Dibromofluoromethane</i>	<i>2.57</i>	<i>"</i>	<i>"</i>	<i>2.50</i>	<i>"</i>	<i>103</i>	<i>75-130</i>			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.66</i>	<i>"</i>	<i>"</i>	<i>2.50</i>	<i>"</i>	<i>106</i>	<i>60-145</i>			
<i>Surrogate: Toluene-d8</i>	<i>2.48</i>	<i>"</i>	<i>"</i>	<i>2.50</i>	<i>"</i>	<i>99</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>2.45</i>	<i>"</i>	<i>"</i>	<i>2.50</i>	<i>"</i>	<i>98</i>	<i>60-120</i>			

Matrix Spike Dup (6K10004-MSD1)	Source: MPK0166-02			Prepared & Analyzed: 11/10/06						
tert-Amyl methyl ether	37.7	1.0	ug/l	20.0	12	128	65-135	4	25	
Benzene	21.2	1.0	"	20.0	ND	106	70-125	3	15	
tert-Butyl alcohol	412	40	"	400	ND	103	60-135	1	35	
Di-isopropyl ether	23.1	1.0	"	20.0	0.84	111	70-130	2	35	
1,2-Dibromoethane (EDB)	20.9	1.0	"	20.0	ND	104	80-125	3	15	
1,2-Dichloroethane	30.1	1.0	"	20.0	7.8	112	75-125	5	10	
Ethanol	527	600	"	400	ND	132	15-150	12	35	
Ethyl tert-butyl ether	22.5	1.0	"	20.0	ND	112	65-130	3	35	
Ethylbenzene	20.4	1.0	"	20.0	ND	102	70-130	3	15	
Methyl tert-butyl ether	187	1.0	"	20.0	160	135	50-140	6	25	
Toluene	20.6	1.0	"	20.0	ND	103	70-120	2	15	
Xylenes (total)	61.4	1.0	"	60.0	ND	102	80-125	4	15	
<i>Surrogate: Dibromofluoromethane</i>	<i>2.52</i>	<i>"</i>	<i>"</i>	<i>2.50</i>	<i>"</i>	<i>101</i>	<i>75-130</i>			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.65</i>	<i>"</i>	<i>"</i>	<i>2.50</i>	<i>"</i>	<i>106</i>	<i>60-145</i>			
<i>Surrogate: Toluene-d8</i>	<i>2.44</i>	<i>"</i>	<i>"</i>	<i>2.50</i>	<i>"</i>	<i>98</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>2.35</i>	<i>"</i>	<i>"</i>	<i>2.50</i>	<i>"</i>	<i>94</i>	<i>60-120</i>			

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-  
Project Manager: Jay Johnson

MPK0166  
Reported:  
11/20/06 10:59

**EPA 8010 list Volatile Organic Compounds by EPA 8260B - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6K10004 - EPA 5030B P/T / EPA 8260B**

**Blank (6K10004-BLK1)**

Prepared & Analyzed: 11/10/06

Tetrachloroethene	ND	0.50	ug/l							
Surrogate: Dibromofluoromethane	2.41		"	2.50		96	65-130			
Surrogate: 1,2-Dichloroethane-d4	2.60		"	2.50		104	60-135			
Surrogate: Toluene-d8	2.41		"	2.50		96	70-120			
Surrogate: 4-Bromofluorobenzene	2.45		"	2.50		98	70-120			

**Laboratory Control Sample (6K10004-BS1)**

Prepared & Analyzed: 11/10/06

Tetrachloroethene	9.70	0.50	ug/l	10.0		97	75-130			
Surrogate: Dibromofluoromethane	2.55		"	2.50		102	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.84		"	2.50		114	60-145			
Surrogate: Toluene-d8	2.46		"	2.50		98	70-130			
Surrogate: 4-Bromofluorobenzene	2.47		"	2.50		99	60-120			

**Matrix Spike (6K10004-MS1)**

Source: MPK0166-02

Prepared & Analyzed: 11/10/06

Tetrachloroethene	30.7	1.0	ug/l	20.0	9.8	104	85-125			
Surrogate: Dibromofluoromethane	2.57		"	2.50		103	65-130			
Surrogate: 1,2-Dichloroethane-d4	2.66		"	2.50		106	60-135			
Surrogate: Toluene-d8	2.48		"	2.50		99	70-120			
Surrogate: 4-Bromofluorobenzene	2.45		"	2.50		98	70-120			

**Matrix Spike Dup (6K10004-MSD1)**

Source: MPK0166-02

Prepared & Analyzed: 11/10/06

Tetrachloroethene	29.7	1.0	ug/l	20.0	9.8	100	85-125	3	15	
Surrogate: Dibromofluoromethane	2.52		"	2.50		101	65-130			
Surrogate: 1,2-Dichloroethane-d4	2.65		"	2.50		106	60-135			
Surrogate: Toluene-d8	2.44		"	2.50		98	70-120			
Surrogate: 4-Bromofluorobenzene	2.35		"	2.50		94	70-120			

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-  
Project Manager: Jay Johnson

MPK0166  
Reported:  
11/20/06 10:59

**Notes and Definitions**

PV Hydrocarbon result partly due to individ. peak(s) in quant. range

LM MS and/or MSD above acceptance limits. See Blank Spike(LCS).

BB,LM Sample > 4x spike concentration. MS and/or MSD above acceptance limits. See Blank Spike(LCS).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference



**Lisa Race**

---

**From:** Sandy Hayes [shayes@stratusinc.net]  
**Sent:** Tuesday, November 07, 2006 1:44 PM  
**To:** Lisa Race  
**Subject:** RE: Please verify global ID change for ARCO#0276

Hi Lisa,

Sorry about that...Please use the existing number T0600108312....it appears a few numbers were left off of the previous COC.

Thanks!  
Sandy

-----Original Message-----

**From:** Lisa Race [mailto:lrace@testamericainc.com]  
**Sent:** Tuesday, November 07, 2006 1:31 PM  
**To:** shayes@stratusinc.net  
**Subject:** RE: Please verify global ID change for ARCO#0276

Sandy,

The ID you listed it the new one on the COC. Is that the correct one?

Lisa Race  
Senior Project Manager, Morgan Hill, CA  
TestAmerica Analytical Testing Corporation  
Tel.: 408-776-9600  
Direct.: 408-782-8156  
Fax: 408-782-6308  
e-mail: [lrace@testamericainc.com](mailto:lrace@testamericainc.com)  
NOTE NEW E-MAIL ADDRESS

\*\*\*This transmission contains information that may be legally confidential. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution, or use of the contents of this information is prohibited and may be unlawful. If you have received this transmission in error, please reply immediately to the sender that you have received the message in error. Because access to receiving equipment is not under our control, we cannot be responsible for the confidentiality of electronically transmitted data.\*\*\*

---

**From:** Sandy Hayes [mailto:shayes@stratusinc.net]  
**Sent:** Tuesday, November 07, 2006 11:54 AM  
**To:** Lisa Race  
**Cc:** Steve Carter  
**Subject:** RE: Please verify global ID change for ARCO#0276

Hi Lisa,

The previous ID of T0600108312 is the correct ID number. I will correct on our COC.

Thank you,  
Sandy

-----Original Message-----

**From:** Steve Carter [mailto:scarter@stratusinc.net]  
**Sent:** Tuesday, November 07, 2006 11:38 AM  
**To:** Sandy Hayes  
**Subject:** FW: Please verify global ID change for ARCO#0276

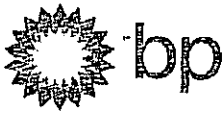
-----Original Message-----

**From:** Lisa Race [mailto:lrace@testamericainc.com]  
**Sent:** Tuesday, November 07, 2006 11:26 AM  
**To:** cjewitt@stratusinc.net; gkowtha@stratusinc.net; jjohnson@stratusinc.net;  
knagaraju@stratusinc.net; scarter@stratusinc.net; Scott Bittinger; tarkus@stratusinc.net  
**Subject:** Please verify global ID change for ARCO#0276

The attached COC has a different global ID than previously used for this site. Please verify the change. The previous ID # was T0600100082. Thanks you for the help.

Lisa Race  
Senior Project Manager, Morgan Hill, CA  
TestAmerica Analytical Testing Corporation  
Tel.: 408-776-9600  
Direct.: 408-782-8156  
Fax: 408-782-6308  
e-mail: [lrace@testamericainc.com](mailto:lrace@testamericainc.com)  
NOTE NEW E-MAIL ADDRESS

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### Chain of Custody Record

Project Name: Arco 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: 12:45 Temp: cool  
 Off-site Time: 11:40 Temp: cool  
 Sky Conditions: cloudy  
 Meteorological Events: none  
 Wind Speed: 0 Direction: N/A

Lab Name: <u>TestAmerica</u>	BP/AR Facility No.: <u>276</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>10600 MacArthur Blvd., Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u>
<u>Morgan Hill, CA 95937</u>	Site Lat/Long: _____	<u>Cameron Park, CA 95682</u>
Lab PM: <u>Lisa Race</u>	California Global ID #: <u>T0600108312</u>	Consultant/Contractor Project No.: _____
Tele/Fax: <u>408-782-8156 408-782-6308 (fax)</u>	Enfos Project No.: _____	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or RCOP (circle one) <u>Provision</u>	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u>	Phase/WBS: <u>04-Monitoring</u>	Report Type & QC Level: <u>Level 1 with BDF</u>
<u>San Ramon, CA</u>	Sub Phase/Task: <u>03-Analytical</u>	E-mail BDD To: <u>clewitt@stratusinc.net</u>
Tele/Fax: <u>925-275-3506</u>	Cost Element: <u>01-Contractor labor</u>	Invoice to: <u>Atlantic Richfield Co.</u>

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis							Sample Point Lat/Long and Comments: <u>Oxygenates include MIBE, TAME, DIPE, EIBE, TBA, ethanol, 1,2-DCA &amp; EDB</u>
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	BTEX 8021	BTEX/TPH	BTEX/Oxy*/TPHg	PAHs	EPA 8270	1,2-DCA	EDB	
	MW-2	13 15	11-2-06	X			01	6				X			X	X	X	X			
	MW-5	13 40	11-2-06	X			02	12				X			X	X	X	X			
	MW-8	14 20	11-2-06	X			03	6				X			X	X	X	X			
	TB-276 112 06	600	11-2-06				04	2				X			X	X	X	X		<u>hold</u>	

3.4<sup>00</sup>

Sampler's Name: <u>Jerry Gonzalez</u>	Relinquished By / Affiliation: _____	Date: <u>11/1/05</u>	Time: <u>12:00</u>	Accepted By / Affiliation: _____	Date: <u>11/2/06</u>	Time: <u>12:30</u>
Sampler's Company: <u>Douglas</u>	_____	<u>11/3</u>	<u>15:30</u>	_____	<u>11/4</u>	<u>15:30</u>
Shipment Date: _____						
Shipment Method: _____						
Shipment Tracking No: _____						

Special Instructions: Please cc results to bpvalley@secor.com

Study Seals In Place Yes  No  Temp Blank Yes  No  Cooler Temperature on Receipt 35 °F/C Trip Blank Yes  No

# TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: Bp / Arco  
 REC. BY (PRINT): EH  
 WORKORDER: MPK0166

DATE REC'D AT LAB: 11/14/06  
 TIME REC'D AT LAB: 1530  
 DATE LOGGED IN: 11/16/06

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

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / <u>Absent</u> Intact / Broken*								<div style="font-size: 2em; font-weight: bold;">SEE COC</div>
2. Chain-of-Custody	<u>Present</u> / Absent*								
3. Traffic Reports or Packing List:	<u>Present</u> / Absent								
4. Airbill:	<u>Airbill</u> / Sticker <u>Present</u> / Absent								
5. Airbill #:	<u>SEE AIR.</u>								
6. Sample Labels:	<u>Present</u> / Absent								
7. Sample IDs:	<u>Listed</u> / Not Listed on Chain-of-Custody								
8. Sample Condition:	<u>Intact</u> / Broken* / Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree?	<u>Yes</u> / No*								
10. Sample received within hold time?	<u>Yes</u> / No*								
11. Adequate sample volume received?	<u>Yes</u> / No*								
12. Proper preservatives used?	<u>Yes</u> / No*								
13. Trip Blank / Temp Blank Received? (circle which, if yes)	<u>Yes</u> / No*								
14. Read Temp: Corrected Temp: <u>4.5 C</u> Is corrected temp 4 +/-2°C? <u>Yes</u> / No** <small>(Acceptance range for samples requiring thermal pres.)</small>									

\*\*Exception (if any): METALS / DFF ON ICE or Problem COC

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

California Overnight Shipping Label



D10010110045427

Date Printed 11/3/2006

Tracking#D10010110045427

*Shipped From:*  
 TEST AMERICA - SACRAMENTO  
 819 STRIKER AVENUE 8  
 SACRAMENTO, CA 95834

*Sent By:* TIM ALBRIGHT  
*Phone#:* (916)921-9600  
*wgt(lbs):* 38  
*Reference:*  
*Decl. Value:* \$0.00

<p><i>Ship To Company:</i>          TESTAMERICA - MORGAN HILL          885 JARVIS DR          MORGAN HILL, CA 95037          SAMPLE CONTROL (408)776-9600</p>	<p><i>Service:</i> <b>S</b>  <i>Sort Code:</i> <b>SJC</b>  <i>Special Services:</i>  <b>Saturday Delivery</b></p>
---	---

**APPENDIX B**

**GEOTRACKER UPLOAD CONFIRMATION**

# Electronic Submittal Information

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

## UPLOADING A GEO\_WELL FILE

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

**Submittal Title:                   4Q06 GEO\_WELL**  
**Submittal Date/Time:       1/24/2007 3:05:28 PM**  
**Confirmation Number:       6514101922**

**[Back to Main Menu](#)**

Logged in as BROADBENT-C  
(CONTRACTOR)

[CONTACT SITE ADMINISTRATOR.](#)

# Electronic Submittal Information

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

Your EDF file has been successfully uploaded!

**Confirmation Number:** 9145778119

**Date/Time of Submittal:** 1/26/2007 3:46:25 PM

**Facility Global ID:** T0600100082

**Facility Name:** ARCO #0276

**Submittal Title:** 4Q06 GW Monitoring

**Submittal Type:** GW Monitoring Report

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

**ARCO #0276**                      **Regional Board - Case #: 01-0089**  
10600 MACARTHUR              SAN FRANCISCO BAY RWQCB (REGION 2)  
OAKLAND, CA 94605            **Local Agency (lead agency) - Case #: RO0000831**  
ALAMEDA COUNTY LOP - (BC)

**NOTE: THIS DATA WAS SUBMITTED AFTER THE SITE WAS CLOSED**

<u>CONF.#</u>	<u>TITLE</u>	<u>QUARTER</u>
9145778119	4Q06 GW Monitoring	Q4 2006
<u>SUBMITTED BY</u>	<u>SUBMIT DATE</u>	<u>STATUS</u>
Broadbent & Associates, Inc.	1/26/2007	PENDING REVIEW

## SAMPLE DETECTIONS REPORT

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

## METHOD QA/QC REPORT

METHODS USED	8260FA,8260TPH,SW8260B
TESTED FOR REQUIRED ANALYTES?	Y
LAB NOTE DATA QUALIFIERS	Y

## QA/QC FOR 8021/8260 SERIES SAMPLES

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

## WATER SAMPLES FOR 8021/8260 SERIES

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



BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130% Y

**SOIL SAMPLES FOR 8021/8260 SERIES**

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

**FIELD QC SAMPLES**

<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

Logged in as BROADBENT-C (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.