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Atlantic Richfield Company (a BP affiliated company)

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

30 October 2006

Re: Third 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

Third 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

30 October 2006

Project No. 06-08-601



30 October 2006

Project No. 06-08-601

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

Attn.: Mr. Paul Supple

Re:

Third 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 Third Ouarter 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 results conducted during the Third 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

Mr. Steven Plunkett, Alameda County Environmental Health (Submitted via ACEH ftp site) cc:

> **ARIZONA CALIFORNIA**

NEVADA

TEXAS

ROBERT H. MILLER

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 (Third Quarter 2006):

1. Prepared and submitted Second Quarter 2006 Ground-Water Monitoring Report. Work performed by BAI.

2. Conducted ground-water monitoring/sampling for Third Quarter 2006. Work performed on 10 and 11 August 2006 by Blaine Tech Services for URS.

WORK PROPOSED FOR NEXT QUARTER (Fourth Quarter 2006):

1. Submitted Third Quarter 2006 Ground-Water Monitoring Report (contained herein).

2. Conduct quarterly ground-water monitoring/sampling for Fourth Quarter 2006.

QUARTERLY RESULTS SUMMARY:

Current phase of project: Ground-water monitoring/sampling

Frequency of ground-water Quarterly = MW-1, MW-2, MW-3, MW-4, MW-5, MW-6,

monitoring: MW-7, MW-8, RW-1, WDR-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:

Depth to ground water (below TOC): General ground-water flow direction:

Approximate hydraulic gradient:

NA 15.90 ft (MW-2) to 30.10 ft (MW-6)

South-southwest

0.004 ft/ft

DISCUSSION:

Third quarter 2006 ground-water monitoring and sampling was conducted at Station #276 on 10 and 11 August 2006 by Blaine Tech Services personnel for URS. Water levels were gauged in the 10 wells at the Site on 10 August 2006. No irregularities were noted during water level gauging. Depth to water measurements ranged from 15.90 ft at MW-2 to 30.10 ft at MW-6. Resulting ground-water surface elevations ranged from 44.31 ft above mean sea level in well MW-2 to 35.96 ft at well MW-5. Water level elevations were between historic minimum and maximum ranges for each well, as summarized in Table 1. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the 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, MW-6, MW-7, and MW-8 on 11 August 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. 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 limits in each of the five wells sampled at concentrations up to 1,800 micrograms per liter (µg/L) in well MW-7. Benzene was detected above the laboratory reporting limit in one of the five wells sampled at a concentration of 1.3 μg/L in well MW-7. Toluene was detected above the laboratory reporting limit in one of the five wells sampled at a concentration of 0.55 µg/L in well MW-7. Ethylbenzene was detected above the laboratory reporting limit one of the five wells sampled at a concentration of 5.0 µg/L in well MW-7. Total Xylenes were detected above the laboratory reporting limit one of the five wells sampled at a concentration of 1.4 μg/L in well MW-7. TAME was detected above the laboratory reporting limit in four of the five wells sampled at concentrations up to 9.0 µg/L in well MW-7. 1,2-DCA was detected above the laboratory reporting limit in two of the five wells sampled at concentrations up to 9.2 µg/L in well MW-5. MTBE was detected above the laboratory reporting limit in four of the five wells sampled at concentrations up to 630 µg/L in well MW-8. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the five wells sampled this quarter. Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well. Historic laboratory analytical results are summarized in Table 1 and Table 2. A copy of the Laboratory Analytical Report, including chain of custody documentation is provided in Appendix A.

CLOSURE:

The findings presented in this report are based upon: observations of URS and Blaine Tech Services 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, 10 and 11 August 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. URS Ground-Water Sampling Data Package (Includes Laboratory Report and Chain of Custody Documentation, Field and Laboratory Procedures, and Field Data Sheets)

Appendix B. GeoTracker Upload Confirmation

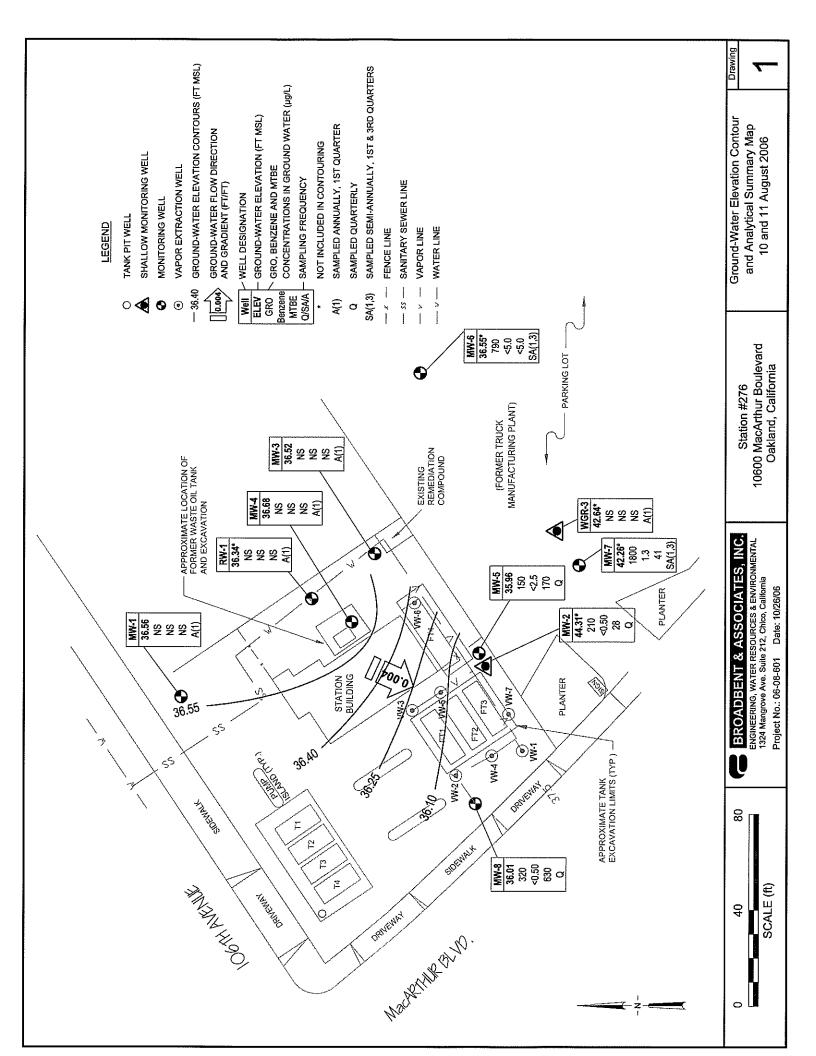


Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses
Station #276, 10600 MacArthur Blvd., Oakland, CA

				Top of	Bottom of		Water Level			Concentra	tions in (µg	g/L)			
Well and			TOC	Screen	Screen	DTW	Elevation	GRO/			Ethyl-	Total		DO	
Sample Date	P/NP	Comments	(feet msl)	(ft bgs)	(ft bgs)	(feet bgs)	(feet msl)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	pН
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	e Taet	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 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	_	-			-			-
MW-2				i		i i						NOTE AND ADDRESS OF THE PARTY O			
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		## <u>_</u> FL						
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		: . <u>-</u>						
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	142	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

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

	ı			Top of	Bottom of		Water Level			Concentra	tions in (µı	g/L)			
Well and			тос	Screen	Screen	DTW	Elevation	GRO/			Ethyl-	Total		DO	
Sample Date	P/NP	Comments	(feet msl)	(ft bgs)	(ft bgs)	(feet bgs)	(feet msl)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	pН
MW-2 Cont.															
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	Tangara and a	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
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	28.6	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	· collection and coll	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	ì	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			-					-
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

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

		•		Top of	Bottom of		Water Level			Concentra		· ·			
Well and			TOC	Screen	Screen	DTW	Elevation	GRO/			Ethyl-	Total		DO	
Sample Date	P/NP	Comments	(feet msl)	(ft bgs)	(ft bgs)	(feet bgs)	(feet msl)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	pH
MW-4 Cont.		•													
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		1	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			_	_				
MW-5	•														
12/17/2000	<u> </u>	1	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	Р		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
MW-6	1					·									
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				- - -		••		

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

				Top of	Bottom of	: :	Water Level		1	Concentra	tions in (µș	g/L)			
Well and			тос	Screen	Screen	DTW	Elevation	GRO/			Ethyl-	Total		DO	
Sample Date	P/NP	Comments	(feet msl)	(ft bgs)	(ft bgs)	(feet bgs)	(feet msl)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	pН
MW-6 Cont.															
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
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	* Transmittend*	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
MW-8															
12/17/2000			53.65	29.00	49.00	27.02	26.63				:				

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

				Top of	Bottom of		Water Level			Concentra	tions in (µ;	g/L)			-
Well and	1		тос	Screen	Screen	DTW	Elevation	GRO/			Ethyl-	Total		DO	
Sample Date	P/NP	Comments	(feet msl)	(ft bgs)	(ft bgs)	(feet bgs)	(feet msl)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	p]
MW-8 Cont.															T
12/28/2001	<u></u>		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
02/03/2004	P	f	53.65	29.00	49.00	24.80	28.85	170	<12	<12	<12	<12	470	3.0	6
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
08/12/2004	P	:	58.96	29.00	49.00	27.72	31.24	<2,500	<25	<25	<25	<25	400	3.4	1
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	(
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	(
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	
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	
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	١,
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	
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	
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	
RW-1	!														T
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	,
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	
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	
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	,
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	١,
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	
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		<u> </u>	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	1

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

				Top of	Bottom of	:	Water Level			Concentra	tions in (µg	g/L)			
Well and	P/NP	Comments	TOC (feet msl)	Screen	Screen	DTW (Seet here)	Elevation (feet msl)	GRO/	Benzene	Toluene	Ethyl-	Total	мтве	DO	_ ,,,
Sample Date	P/NP	Comments	(teet msi)	(ft bgs)	(ft bgs)	(feet bgs)	(feet mst)	TPHg	Benzene	1 oruene	Benzene	Xylenes	MIIBE	(mg/L)	pН
RW-I Cont.)									
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	·		_	-			-	
WGR-3					-										
12/17/2000	- ;					19.21									
12/28/2001		h					1.11-								
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		<u></u>	18.39	44.88								
8/10/2006	-		63.27		<u> </u>	20.63	42.64		_		-		-		

SYMBOLS & ABBREVIATIONS:

- -- = Not analyzed/applicable/measured/available
- < = Not detected at or above laboratory reporting limit

BTEX = Benzenc, 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	:					C	oncentrations	in (μg/L)							
Sample Date	Ethanol	ТВА	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	Footnotes
MW-I	i												:		
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			. Shirteen		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
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		
8/11/2006	<300	<20	28	<0.50	<0.50	5.9	<0.50	<0.50	_				<0.50		
MW-3					A								÷		
12/17/2000													158		
12/28/2001									1.5	13			310	20	

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

Well and						C	oncentrations	in (μg/L)							
Sample Date	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	voc	Oxygen	PCE	TCE	Footnotes
MW-3 Cont.													:		
11/27/2002	! !												110		
7/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			1 1		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			1		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
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			1000		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	- :: <u></u> :::		1.5		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		Tar 1 22	100000000000000000000000000000000000000		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	7. ** <u></u> 1.				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			- care of the control		320		e
MW-5	;							American 14 American 140 (10 7) 144 (10 10 10 10 10 10 10 10 10 10 10 10 10 1							
12/17/2000	! 										:		1,040		
12/28/2001									36	140	1.9, 3.2, 2.0		3,200	190	a,b,c

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

Well and	:					С	oncentrations	in (μg/L)							
Sample Date	Ethanol	ТВА	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	Footnotes
MW-5 Cont.															
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		
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			<u>}</u>		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		
MW-7	!						Japan Andrews				:		<u>.</u>		-
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			4		1.6		e

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

Well and						C	oncentrations	in (μg/L)							
Sample Date	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	Footnotes
MW-7 Cont.	:										:				
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			<u>-</u>	-	<0.50	-	
MW-8															
11/07/2003	<1,000	<200	440	<5.0	<5.0	18					ŀ		<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			L		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			#/ palamente		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	_	
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											į				
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
WGR-3	-										1				

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

Well and						C	oncentrations	in (μg/L)							
Sample Date	Ethanol	TBA	MtBE	DIPE	EtBE	TAME	1,2-DCA	EDB	trans-1,2	cis-1,2	VOC	Oxygen	PCE	TCE	Footnotes
WGR-3 Cent.															
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

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.

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	<u>0.002</u>
5/30/2006	South-Southwest	0.007
8/10/2006	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

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



September 11, 2006

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

Groundwater Sampling Data Package

ARCO Service Station #276 10600 MacArthur Boulevard Oakland, CA

Field Work Performed: 08/10/06 & 08/11/06

General Information

Data Submittal Prepared/Reviewed by: Scott Rice

Phone Number: 916-679-2095

On-Site Supplier Representative: Blaine Tech

Scope of Work Performed: Groundwater Monitoring in accordance with 3rd Quarter 2006 protocols as identified in the Quarterly Monitoring Program Table in the Field and Laboratory Procedures

Attachment. Site wells were purged on 08/10/06 and sampled on 08/11/06.

Variations from Work Scope: None

This submittal presents the tabulation of data collected in association with routine groundwater monitoring. The attachments include, at a minimum, sampling procedures, field data collected, laboratory results, chain of custody documentation, and waste management activities. 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.

Scott Rice, P.G. Portfolio Manager

cc:

Paul Supple, Atlantic Richfield Company (RM), electronic copy uploaded to ENFOS

URS

Attachments

Field and Laboratory Procedures
Laboratory Report
Chain of Custody Documentation
Field Data Sheets
Well Gauging Data
Well Monitoring Data Sheets

FIELD & LABORATORY PROCEDURES

Sampling Procedures

The sampling procedure for each well consists first of measuring the water level and depth to bottom, and checking for the presence of free phase petroleum product (free product), using either an electronic indicator and a clear TeflonTM bailer or an oil-water interface probe. Wells not containing free product are purged approximately three casing volumes of water (or until dewatered) using a centrifugal pump, gas displacement pump, or bailer. Equipment and purging method used for the current sampling event is noted on the attached field data sheets. During purging, temperature, pH, and electrical conductivity are monitored to document that these parameters are stable prior to collecting samples. After purging, water levels are allowed to partially (approximately 80%) recover. Groundwater samples (both purge and no purge) are collected using a Teflon bailer, placed into appropriate Environmental Protection Agency- (EPA) approved containers, labeled, logged onto chain-of-custody records, and transported on ice to a California State-certified laboratory. Wells with free product are not sampled and free product is removed according to California Code of Regulation, Title 23, Div. 3, Chap. 16, Section 2655, UST Regulations.

Laboratory Procedures

The groundwater samples were analyzed for the presence of the chemicals mentioned in the chain of custody using standard EPA methods. The methods of analysis for the groundwater samples are documented in the certified analytical report. The certified analytical reports and chain-of-custody record are presented in this attachment. The analytical data provided by the laboratory approved by RM have been reviewed and verified by that laboratory.



5 September, 2006

Lynelle Onishi URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland, CA 94612

RE: ARCO #0276, Oakland, CA Work Order: MPH0552

Enclosed are the results of analyses for samples received by the laboratory on 08/14/06 16:55. 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.





URS Corporation [Arco]Project:ARCO #0276, Oakland, CAMPH05521333 Broadway, Suite 800Project Number:G0C02-0010Reported:Oakland CA, 94612Project Manager:Lynelle Onishi09/05/06 13:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	MPH0552-01	Water	08/11/06 09:10	08/14/06 16:55
MW-5	MPH0552-02	Water	08/11/06 08:40	08/14/06 16:55
MW-6	MPH0552-03	Water	08/11/06 10:55	08/14/06 16:55
MW-7	MPH0552-04	Water	08/11/06 10:20	08/14/06 16:55
MW-8	MPH0552-05	Water	08/11/06 09:35	08/14/06 16:55
TB-276-08112006	MPH0552-06	Water	08/11/06 00:00	08/14/06 16:55

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.

There is no MSD available for QC batch 6H23028 due to analyst error.





Project: ARCO #0276, Oakland, CA

Project Number: G0C02-0010 Project Manager: Lynelle Onishi MPH0552 Reported: 09/05/06 13:26

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

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (MPH0552-01) Water Sampled	d: 08/11/06 09:10	Received:	08/14/06	6 16:55					
Gasoline Range Organics (C4-C12)	210	50	ug/l	1	6H23028	08/23/06	08/23/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		100 %	60-	145	"	n	n	"	
MW-5 (MPH0552-02) Water Sampled	1: 08/11/06 08:40	Received:	08/14/06	6 16:55					
Gasoline Range Organics (C4-C12)	150	50	ug/l	1	6H24001	08/24/06	08/24/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		101 %	60-	145	"	"	"	n	
MW-6 (MPH0552-03) Water Sampled	i: 08/11/06 10:55	Received:	08/14/06	16:55					
Gasoline Range Organics (C4-C12)	790	500	ug/l	10	6H23028	08/23/06	08/23/06	LUFT GCMS	PV
Surrogate: 1,2-Dichloroethane-d4		104 %	60-	145	"	"	n	r	•
MW-7 (MPH0552-04) Water Sampled	d: 08/11/06 10:20	Received:	08/14/06	16:55					
Gasoline Range Organics (C4-C12)	1800	50	ug/l	1	6H23028	08/23/06	08/24/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		110 %	60-	145	n	"	"	"	
MW-8 (MPH0552-05) Water Sampled	d: 08/11/06 09:35	Received:	08/14/06	16:55					
Gasoline Range Organics (C4-C12)	320	50	ug/l	1	6H23028	08/23/06	08/24/06	LUFT GCMS	PV
Surrogate: 1,2-Dichloroethane-d4		99 %	60-	145	"	"	n	п	





Project: ARCO #0276, Oakland, CA

Project Number: G0C02-0010 Project Manager: Lynelle Onishi MPH0552 Reported: 09/05/06 13:26

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-2 (MPH0552-01) Water S	Sampled: 08/11/06 09:10	Received:	08/14/06 16	ó:55					
tert-Amyl methyl ether	5.9	0.50	ug/l	1	6H23028	08/23/06	08/23/06	EPA 8260B	
Benzene	ND	0.50	II	**	11	n	lf	31	
tert-Butyl alcohol	ND	20	**	n-	tr	11	11	**	
Di-isopropyl ether	ND	0.50	H	U	11	п	U	#	
1,2-Dibromoethane (EDB)	ND	0.50	H	и	u	11	*1	U	
1,2-Dichloroethane	ND	0.50	п	11	11	11	Ħ	ш	
Ethanol	ND	300	11	11	11	11	IP	11	
Ethyl tert-butyl ether	ND	0.50	11	**	"	tr	II .	"	
Ethylbenzene	ND	0.50	**	tr.	ff	U	u	tr	
Methyl tert-butyl ether	28	0.50	**	11	17	н	11	ti.	
Toluene	ND	0.50	tt		11	U	e;	п	
Xylenes (total)	ND	0.50		11	11	11	17		
Surrogate: 1,2-Dichloroethane-d4	t .	100 %	60-14:	5	п	"	#	H	
Surrogate: 4-Bromofluorobenzene	?	95 %	60-120)	"	,,,	n	"	
Surrogate: Dibromofluoromethan	e	99 %	75-130)	"	n	"	н	
Surrogate: Toluene-d8		98 %	70-130)	"	"	"	tt.	
MW-5 (MPH0552-02) Water 8	Sampled: 08/11/06 08:40	Received:	08/14/06 16	:55					
tert-Amyl methyl ether	14	2.5	ug/l	5	6H23028	08/23/06	08/23/06	EPA 8260B	
Benzene	ND	2.5	n .	11	п	Ħ	n	**	
tert-Butyl alcohol	ND	100	11	97	"	u	11	rr	
Di-isopropyl ether	ND	2.5	11	**	n	н	**	· ·	
1,2-Dibromoethane (EDB)	ND	2.5	FF	11	п	ш	ts	II.	
1,2-Dichloroethane	9.2	2.5	n	11	17	11	lt.	U	
Ethanol	ND	1500	11	11	IJ	"	ч	1)	
Ethyl tert-butyl ether	ND	2.5	"	11	11	**	"	11	
Ethylbenzene	ND	2.5	11	n	**	u	11	**	
Methyl tert-butyl ether	170	2.5	n	lf	11	n	9 1	n .	
Foluene	ND	2.5	*1	H	II	11	**	II.	
Xylenes (total)	ND	2.5				11	11*	н	
Surrogate: 1,2-Dichloroethane-d4	!	108 %	60-145	i	"	"	n	"	
Surrogate: 4-Bromofluorobenzene	•	84 %	60-120)	"	rr r	n	"	
Surrogate: Dibromofluoromethane	?	98 %	75-130)	v	n	"	n	





Project: ARCO #0276, Oakland, CA

Project Number: G0C02-0010 Project Manager: Lynelle Onishi MPH0552 Reported: 09/05/06 13:26

Volatile Organic Compounds by EPA Method 8260B

Ent-Amyl methyl ether ND S.0 ug/l 10 6H23028 08/23/06 08/23/06 EPA \$260B	Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Benzene	MW-6 (MPH0552-03) Water	Sampled: 08/11/06 10:55	Received:	08/14/06 1	6:55					BI
Eart-Butyl alcohol ND 200 " " " " " " " " " " " " " " "	tert-Amyl methyl ether			ug/l	10	6H23028	08/23/06	08/23/06	EPA 8260B	
Di-isopropyl ether ND 5.0					rt .	**	11	ш	ij	
,2-Dibromechane (EDB) ND 5.0 " " " " " " " "	•		200	11	ti	U	II .	II	11	
1,2-Dichloroethane				•	u	u	п	11	**	
Ethanol ND 3000 " <th< td=""><td></td><td></td><td></td><td>n</td><td>11</td><td>11</td><td>11</td><td>**</td><td>ч</td><td></td></th<>				n	11	11	11	**	ч	
Ethyl tert-butyl ether ND 5.0 " " " " " " " " " " " " " " " " " " "	1,2-Dichloroethane	ND	5.0	II	11	11	11	n	II.	
Ethylbenzene ND 5.0 "	Ethanol	ND	3000	D			**	tr	II.	
Methyl tert-butyl ether ND 5.0 " " " " " " " " " " " " " " " " " " "	Ethyl tert-butyl ether	ND	5.0	II	**	**	**	п	п	
Toluene	Ethylbenzene	ND	5.0	11		11	II.	11	11	
ND S.0 " " " " " " " " "	Methyl tert-butyl ether	ND	5.0	บ	11	II .	11	n	n	
Surrogate: 1,2-Dichloroethane-d4 104 % 60-145 " " " " " " " " " " " "	Toluene	ND	5.0	**	n	11	п	11	tt	
Surrogate: 4-Bromofluorobenzere 81 % 60-120 " " " " " " " " Surrogate: Dibromofluoromethane 100 % 75-130 " " " " " " " " " " "	Xylenes (total)	ND	5.0	"	11	Ħ	11	11	tr.	
Surrogate: Dibromofluoromethane 100 % 75-130 " " " " " " " " " " " "	Surrogate: 1,2-Dichloroethane-d-	4	104 %	60-14	5	u	н	<i>31</i>	p	
Surrogate: Toluene-d8 MW-7 (MPH0552-04) Water Sampled: 08/11/06 10:20 Received: 08/14/06 16:55 tert-Amyl methyl ether 9.0 0.50 ug/l 1 6H23028 08/23/06 08/24/06 EPA \$260B Benzene 1.3 0.50 " " " " " " " " " " " " " " " " " " "	Surrogate: 4-Bromofluorobenzen	e	81 %	60-12	0	"	"	"	u u	
MW-7 (MPH0552-04) Water Sampled: 08/11/06 10:20 Received: 08/14/06 16:55 tert-Amyl methyl ether 9.0 0.50 ug/l 1 6H23028 08/23/06 08/24/06 EPA 8260B Benzene 1.3 0.50 " " " " " " " " " " tert-Butyl alcohol ND 20 " " " " " " " " " 1,2-Dibromoethane (EDB) ND 0.50 " " " " " " " " " " 1,2-Dibromoethane ND 0.50 " " " " " " " " " " Ethanol ND 300 " " " " " " " " " Ethyl tert-butyl ether ND 0.50 " " " " " " " " " Ethyl tert-butyl ether ND 0.50 " " " " " " " " " Ethyl tert-butyl ether 41 0.50 " " " " " " " " " " Toluene 0.55 0.50 " " " " " " " " " Surrogate: 1,2-Dichloroethane-d4 110 % 60-120 " " " " " " " " " " " Surrogate: Dibromofluoromethane 100 % 75-130 " " " " " " " " " " " " " " " " Surrogate: Dibromofluoromethane 100 % 75-130 " " " " " " " " " " " " " " " " " "	Surrogate: Dibromofluoromethan	ie	100 %	75-13	0	"	n	u	n	
tert-Amyl methyl ether 9.0 0.50 ug/l 1 6H23028 08/23/06 08/24/06 EPA 8260B Benzene 1.3 0.50 " " " " " " " " " " " " " " " " " " "	Surrogate: Toluene-d8		91%	70-13	0	"	ø	"	n	
Benzene	MW-7 (MPH0552-04) Water	Sampled: 08/11/06 10:20	Received:	08/14/06 10	6:55					
tert-Butyl alcohol ND 20 " " " " " " " " " " " " " " " " " "	tert-Amyl methyl ether	9.0	0.50	ug/l	1	6H23028	08/23/06	08/24/06	EPA 8260B	*
Di-isopropyl ether ND 0.50 " " " " " " " " " " " " "	Benzene	1.3	0.50	n	n	11	tt.	ii.	11	
1,2-Dibromoethane (EDB) ND 0.50 """"""""""""""""""""""""""""""""""""	tert-Butyl alcohol	ND	20	0	17	**	ur.	II	11	
1,2-Dichloroethane ND 0.50 """"""""""""""""""""""""""""""""""""	Di-isopropyl ether	ND	0.50	п	**	Ir	11	1)	n	
Ethanol ND 300 " " " " " " " " " " " " " " " " " "	1,2-Dibromoethane (EDB)	ND	0.50	ш	lr .	n	11	*1	If	
Ethyl tert-butyl ether ND 0.50 " " " " " " " " " " " " " " " " " " "	1,2-Dichloroethane	ND	0.50	11	ii.	11	1)	11	u	
Ethylbenzene 5.0 0.50 "	Ethanol	ND	300	**	п	11	11	II.	11	
Methyl tert-butyl ether 41 0.50 "<	Ethyl tert-butyl ether	ND	0.50	**	II	11	† 2	U	11	
Toluene 0.55 0.50 " " " " " " " " " " " " " " " " " " "	Ethylbenzene	5.0	0.50	**	**	11	t*	п	11	
Xylenes (total) 1.4 0.50 " " " " " " " " " Surrogate: 1,2-Dichloroethane-d4 110 % 60-145 " " " " " Surrogate: 4-Bromofluorobenzene 109 % 60-120 " " " " " " Surrogate: Dibromofluoromethane 100 % 75-130 " " " " "	Methyl tert-butyl ether	41	0.50	tt	u	11	п	11	**	
Surrogate: 1,2-Dichloroethane-d4 110 % 60-145 " " " " " " " " " Surrogate: 4-Bromofluorobenzene 109 % 60-120 " " " " " " " " " " " " " " " " " " "	Toluene	0.55	0.50	U	u	"	n	**	tt	
Surrogate: 4-Bromofluorobenzene 109 % 60-120 " " " " " " Surrogate: Dibromofluoromethane 100 % 75-130 " " " " "	Xylenes (total)	1.4	0.50	U	"	**	1)	t*	ti .	
Surrogate: Dibromofluoromethane 100 % 75-130 " " " " "	Surrogate: 1,2-Dichloroethane-d-	4	110%	60-14.	5	Ħ	11	tr	n	
	Surrogate: 4-Bromofluorobenzen	e	109 %	60-126	0	n	"	"	v	
	Surrogate: Dibromofluoromethan	e	100 %	75-136	9	u	,,	"	"	
	Surrogate: Toluene-d8		100 %		_	"	#	"	"	





Project: ARCO #0276, Oakland, CA

Project Number: G0C02-0010 Project Manager: Lynelle Onishi

MPH0552 Reported: 09/05/06 13:26

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-8 (MPH0552-05) Water	Sampled: 08/11/06 09:35	Received:	08/14/06	16:55					
tert-Amyl methyl ether	37	0.50	ug/i	1	6H23028	08/23/06	08/24/06	EPA 8260B	
Benzene	ND	0.50	U	ш	11	11	ŧı	11	
tert-Butyl alcohol	ND	20	tt	n	U	#	tř	tr	
Di-isopropyl ether	ND	0.50	tt	"	н	u	It	(r	
1,2-Dibromoethane (EDB)	ND	0.50	17	**	ш	11-	II .	п	
1,2-Dichloroethane	1.2	0.50	11	ĪĪ	U	n	li	и	
Ethanol	ND	300	11	if	19	11	11	11	
Ethyl tert-butyl ether	ND	0.50	11	11	**	n	**	**	
Ethylbenzene	ND	0.50	17	0	n	**	17	**	
Toluene	ND	0.50	**	ü	ij	Bf	Ħ	n	
Xylenes (total)	ND	0.50	tt .	Ħ	11	H	U	II .	
Surrogate: 1,2-Dichloroethane-d-	1	99 %	60	145	Ħ	11	n	"	
Surrogate: 4-Bromofluorobenzen	2	82 %	60	120	u	n	ø	n .	
Surrogate: Dibromofluoromethan	e	97 %	75-	130	"	"	"	"	
Surrogate: Toluene-d8		90 %	70-	130	"	"	n	n	
MW-8 (MPH0552-05RE1) Wate	er Sampled: 08/11/06 09	35 Recei	ved: 08/1	4/06 16:55	5				
Methyl tert-butyl ether	630	5.0	ug/l	10	6H24001	08/24/06	08/24/06	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d-	1	100 %	60	145	n	#	#	n	
Surrogate: 4-Bromofluorobenzen	2	80 %	60-	120	,,	"	"	"	
Surrogata: Dibromofluoromathar	a	08 %	75	120	,,	"	**	"	

Methyl tert-butyl ether	630	5.0	ug/l	10	6H24001	08/24/06	08/24/06	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		100 %	60-145		t	"	#	n	
Surrogate: 4-Bromofluorobenzene		80 %	60-120		n	"	"	"	
Surrogate: Dibromofluoromethane		98 %	75-130		"	"	rr	"	
Surrogate: Toluene-d8		88 %	70-130		"	"	n	n	





Project: ARCO #0276, Oakland, CA

Project Number: G0C02-0010
Project Manager: Lynelle Onishi

MPH0552 Reported: 09/05/06 13:26

EPA 8010 list Volatile Organic Compounds by EPA 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (MPH0552-01) Water	Sampled: 08/11/06 09:10	Received:	08/14/06	16:55					
Tetrachloroethene	ND	0.50	ug/l	1	6H23028	08/23/06	08/23/06	EPA 8260B	
Surrogate: Dibromofluorometha	ne	99 %	65-1	30	11	rr	**	"	
Surrogate: 1,2-Dichloroethane-a	14	100 %	60-1	35	"	,,	"	"	
Surrogate: Toluene-d8		98 %	70-1	20	"	n	п	t t	
Surrogate: 4-Bromofluorobenzen	e	95 %	70-1	20	"	n	n	n	
MW-5 (MPH0552-02) Water	Sampled: 08/11/06 08:40	Received:	08/14/06	16:55					
Tetrachloroethene	24	0.50	ug/l	1	6H24001	08/24/06	08/24/06	EPA 8260B	
Surrogate: Dibromofluoromethal	пе	98 %	65-1.	30	"	n	"	"	
Surrogate: 1,2-Dichloroethane-d	4	101 %	60-1.	35	#	п	n	"	
Surrogate: Toluene-d8		88 %	70-1.	20	"	"	n	"	
Surrogate: 4-Bromofluorobenzen	e	83 %	70-1.	20	rt	"	tt	u	
MW-6 (MPH0552-03) Water	Sampled: 08/11/06 10:55	Received:	08/14/06 1	16:55					
Tetrachloroethene	880	5.0	ug/l	10	6H23028	08/23/06	08/23/06	EPA 8260B	
Surrogate: Dibromofluoromethal	пе	100 %	65-1.	30	n	"	"	**	
Surrogate: 1,2-Dichloroethane-d	4	104 %	60-1.	35	p	"	n	n	
Surrogate: Toluene-d8		91 %	70-1.	20	"	n	n	#	
Surrogate: 4-Bromofluorobenzen	e	81 %	70-1.	20	n	n	"	n	
MW-7 (MPH0552-04) Water	Sampled: 08/11/06 10:20	Received:	08/14/06 1	16:55					
Tetrachloroethene	ND	0.50	ug/l	1	6H23028	08/23/06	08/24/06	EPA 8260B	
Surrogate: Dibromofluorometha	<i>1</i> е	100 %	65-1.	30	п	п	п	ff.	
Surrogate: 1,2-Dichloroethane-d	4	110 %	60-1.	35	"	**	#	"	
Surrogate: Toluene-d8		100 %	70-1.	20	"	n	n	n	
Surrogate: 4-Bromofluorobenzen	e	109 %	70-1	20	"	v	"	n	





Project: ARCO #0276, Oakland, CA

Project Number: G0C02-0010 Project Manager: Lynelle Onishi MPH0552 Reported: 09/05/06 13:26

EPA 8010 list Volatile Organic Compounds by EPA 8260B

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-8 (MPH0552-05) Water	Sampled: 08/11/06 09:35	Received:	08/14/06 1	6:55					
Tetrachloroethene	ND	0.50	ug/l	1	6H23028	08/23/06	08/24/06	EPA 8260B	
Surrogate: Dibromofluoromethal	пе	97 %	65-13	0	"	п	r:	Ħ	
Surrogate: 1,2-Dichloroethane-d	4	99 %	60-13	5	"	#	"	n	
Surrogate: Toluene-d8		90 %	70-12	0	n	"	n	u	
Surrogate: 4-Bromofluorobenzen	re	82 %	70-12	20	"	"	"	"	





Project: ARCO #0276, Oakland, CA

Project Number: G0C02-0010 Project Manager: Lynelle Onishi MPH0552 Reported: 09/05/06 13:26

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
Batch 6H23028 - EPA 5030B P/T / L	UFT GCMS		•••					'		
Blank (6H23028-BLK1)				Prepared	& Analyze	ed: 08/23/	06			
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.58		"	2.50	***************************************	103	60-145			
Laboratory Control Sample (6H23028-B	S2)			Prepared	& Analyze	ed: 08/23/	06			
Gasoline Range Organics (C4-C12)	518	50	ug/l	440		118	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.77		"	2.50		111	60-145			
Matrix Spike (6H23028-MS1)	Source: M	PH0552-01		Prepared:	08/23/06	Analyzed	: 08/24/06			
Gasoline Range Organics (C4-C12)	1000	50	ug/l	700	210	113	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.72		"	2.50		109	60-145			
Batch 6H24001 - EPA 5030B P/T / LI	UFT GCMS									
Blank (6H24001-BLK1)				Prepared a	& Analyze	d: 08/24/	06			
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.37		n	2.50		95	60-145			
Laboratory Control Sample (6H24001-BS	S2)			Prepared a	& Analyze	d: 08/24/	06			
Gasoline Range Organics (C4-C12)	468	50	ug/l	440		106	75-140			•
Surrogate: 1,2-Dichloroethane-d4	2.43		n	2.50		97	60-145		THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS O	
Matrix Spike (6H24001-MS1)	Source: M	PH0552-02		Prepared a	& Analyze	d: 08/24/0	06			
Gasoline Range Organics (C4-C12)	800	50	ug/l	700	150	93	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.51		"	2.50		100	60-145		****	
Matrix Spike Dup (6H24001-MSD1)	Source: M	PH0552-02		Prepared a	& Analyze	:d: 08/24/0	06			
Gasoline Range Organics (C4-C12)	921	50	ug/l	700	150	110	75-140	14	20	
Surrogate: 1,2-Dichloroethane-d4	2.51		n	2.50		100	60-145	· · · · · · · · · · · · · · · · · · ·		···





Project: ARCO #0276, Oakland, CA

Spike

Source

Project Number: G0C02-0010 Project Manager: Lynelle Onishi MPH0552 Reported: 09/05/06 13:26

RPD

%REC

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

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6H23028 - EPA 5030B P/T	/ EPA 8260B									
Blank (6H23028-BLK1)				Prepared .	& Analyze	ed: 08/23/0	06			
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	11							
tert-Butyl alcohol	ND	20	11							
Di-isopropyl ether	ND	0.50	tt							
1,2-Dibromoethane (EDB)	ND	0.50	U							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	300	п							
Ethyl tert-butyl ether	ND	0.50	1)							
Ethylbenzene	ND	0.50	11							
Methyl tert-butyl ether	ND	0.50	92							
Toluene	ND	0.50	F							
Xylenes (total)	ND	0.50	**							
Surrogate: 1,2-Dichloroethane-d4	2.58		0	2.50		103	60-145			
Surrogate: 4-Bromofluorobenzene	2.05		"	2.50		82	60-120			
Surrogate: Dibromofluoromethane	2.49		"	2.50		100	75-130			
Surrogate: Toluene-d8	2.31		"	2.50		92	70-130			
Laboratory Control Sample (6H23028	3-BS1)			Prepared of	& Analyze	ed: 08/23/0)6			
tert-Amyl methyl ether	10.7	0.50	ug/l	10.0		107	65-135			
Benzene	9.89	0.50	n	10.0		99	70-125			
ert-Butyl alcohol	213	20	19	200		106	60-135			
Di-isopropyl ether	11.4	0.50	11	10.0		114	70-130			
1,2-Dibromoethane (EDB)	10.9	0.50	11	10.0		109	80-125			
1,2-Dichloroethane	10,3	0.50	11	10.0		103	75-125			
Ethanol	251	300	"	200		126	15-150			
Ethyl tert-butyl ether	11.0	0.50	н	10.0		110	65-130			
Ethylbenzene	10.8	0.50	H	10.0		108	70-130			
Methyl tert-butyl ether	10.8	0.50	u	10.0		108	50-140			
Foluene Foluene	10.2	0.50	н	10.0		102	70-120			
Xylenes (total)	32.7	0.50	и	30.0		109	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.56	· · ·	"	2.50		102	60-145			
Surrogate: 4-Bromofluorobenzene	2.45		"	2.50		98	60-120			
Surrogate: Dibromofluoromethane	2.58		**	2.50		103	75-130			
Surrogate: Toluene-d8	2.46		"	2.50		98	70-130			





Project: ARCO #0276, Oakland, CA

Spike

Source

%REC

Project Number: G0C02-0010 Project Manager: Lynelle Onishi MPH0552 Reported: 09/05/06 13:26

RPD

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

Reporting

		Reporting		Spike	Source		MICE		KrD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6H23028 - EPA 5030B P/T	/ EPA 8260B									
Laboratory Control Sample (6H2302	8-BS2)			Prepared	& Analyze	d: 08/23/	06			
tert-Amyl methyl ether	17.2	0.50	ug/l	15.0		J15	65-135			
Benzene	5.18	0.50	n	5.16		100	70-125			
tert-Butyl alcohol	160	20	11	143		112	60-135			
Di-isopropyl ether	19.2	0.50	11	15.1		127	70-130			
1,2-Dibromoethane (EDB)	16.6	0.50	71	14.9		111	80-125			
1,2-Dichloroethane	17.5	0.50	*1	14.7		119	75-125			
Ethanol	196	300	\$1	142		138	15-150			
Ethyl tert-butyl ether	18.1	0.50	r	15.0		121	65-130			
Ethylbenzene	7.60	0.50	17	7.54		101	70-130			
Methyl tert-butyl ether	8.52	0.50	H	7.02		121	50-140			
Toluene	34.3	0.50	tr	37.2		92	70-120			
Xylenes (total)	40.7	0.50	lŧ	41.2		99	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.77		"	2.50		111	60-145			
Surrogate: 4-Bromofluorobenzene	2.50		"	2.50		100	60-120			
Surrogate: Dibromofluoromethane	2.52		"	2.50		101	75-130			
Surrogate: Toluene-d8	2.51		"	2.50		100	70-130			
Matrix Spike (6H23028-MS1)	Source: M	PH0552-01		Prepared:	08/23/06	Analyzed	: 08/24/06			
tert-Amyl methyl ether	18.8	0.50	ug/l	10.0	5.9	129	65-135			
Benzene	10.8	0.50	**	10.0	ND	108	70-125			
tert-Butyl alcohol	226	20	Ħ	200	4.2	111	60-135			
Di-isopropyl ether	12.7	0.50	**	10.0	ND	127	70-130			
1,2-Dibromoethane (EDB)	13.1	0.50	IF	10.0	ND	131	80-125			
1,2-Dichloroethane	11.9	0.50	IF	10.0	ND	119	75-125			
Ethanol	267	300	D	200	ND	134	15-150			
Ethyl tert-butyl ether	12.4	0.50	п	10.0	ND	124	65-130			
Ethylbenzene	11.5	0.50	п	10.0	ND	115	70-130			
Methyl tert-butyl ether	47.0	0.50	n	10.0	28	190	50-140			
Toluene	11.0	0.50	U	10.0	ND	110	70-120			
Xylenes (total)	34.6	0.50	11	30.0	ND	115	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.72		"	2.50		109	60-145			
Surrogate: 4-Bromofluorobenzene	2.57		rr r	2.50		103	60-120			
Surrogate: Dibromofluoromethane	2.71		**	2.50		108	75-130			
Surrogate: Toluene-d8	2.48		n	2.50		99	70-130			





Project: ARCO #0276, Oakland, CA

Spike

Source

Project Number: G0C02-0010 Project Manager: Lynelle Onishi MPH0552 Reported: 09/05/06 13:26

RPD

%REC

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

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6H24001 - EPA 5030B P/T	/ EPA 8260B									
Blank (6H24001-BLK1)				Prepared -	& Analyze	ed: 08/24/	06			
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	14							
tert-Butyl alcohol	ND	20	tr							
Di-isopropyl ether	ND	0.50	II .							
1,2-Dibromoethane (EDB)	ND	0.50	ц							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	300	IJ							
Ethyl tert-butyl ether	ND	0.50	11							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	**							
Toluene	ND	0.50	,,							
Xylenes (total)	ND	0.50	tt							
Surrogate: 1,2-Dichloroethane-d4	2.37		"	2.50		95	60-145			
Surrogate: 4-Bromofluorobenzene	2.04		"	2.50		<i>82</i>	60-120			
Surrogate: Dibromofluoromethane	2.46		"	2.50		98	75-130			
Surrogate: Toluene-d8	2.29		#	2.50		92	70-130			
Laboratory Control Sample (6H2400)	1-BS1)			Prepared 6	& Analyze	ed: 08/24/0)6			
tert-Amyl methyl ether	9.06	0.50	ug/l	10.0		91	65-135			
Benzene	8.70	0.50	11	10.0		87	70-125			
tert-Butyl alcohol	185	20	**	200		92	60-135			
Di-isopropyl ether	9.64	0.50	**	10.0		96	70-130			
1,2-Dibromoethane (EDB)	9.20	0.50	tt	10.0		92	80-125			
1,2-Dichloroethane	8.74	0.50	lr .	10.0		87	75-125			
Ethanol	214	300	u	200		107	15-150			
Ethyl tert-butyl ether	9.19	0.50	rt	10.0		92	65-130			
Ethylbenzene	9.70	0.50	tr	10.0		97	70-130			
Methyl tert-butyl ether	8.94	0.50	II.	10.0		89	50-140			
Toluene	8.98	0.50	u	10.0		90	70-120			
Xylenes (total)	29.2	0.50	п	30.0		97	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.39		#	2.50		96	60-145			
Surrogate: 4-Bromofluorobenzene	2.41		**	2.50		96	60-120			
Surrogate: Dibromofluoromethane	2.57		"	2.50		103	75-130			
Surrogate: Toluene-d8	2.42		"	2.50		97	70-130			





Project: ARCO #0276, Oakland, CA

Spike

Source

%REC

Project Number: G0C02-0010 Project Manager: Lynelle Onishi MPH0552 Reported: 09/05/06 13:26

RPD

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

Batch 6H24001 - EPA 5030B P/T / Matrix Spike (6H24001-MS2) tert-Amyl methyl ether Benzene tert-Butyl alcohol Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane Ethanol		0.50		Prepared											
tert-Amyl methyl ether Benzene tert-Butyl alcohol Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane	23.8 10.2	0.50		Prepared											
Benzene tert-Butyl alcohol Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane	10.2														
tert-Butyl alcohol Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane			ug/l	10.0	14	98	65-135								
Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane	206	0.50	11	10.0	ND	102	70-125								
1,2-Dibromoethane (EDB) 1,2-Dichloroethane	200	20	"	200	ND	103	60-135								
1,2-Dichloroethane	13.5	0.50	11	10.0	ND	135	70-130			LM					
	10.6	0.50	**	10.0	ND	106	80-125								
Ethanol	19.0	0.50	**	10.0	9.8	92	75-125								
	247	300	tt	200	ND	124	15-150								
Ethyl tert-butyl ether	11.4	0.50	н	10.0	ND	114	65-130								
Ethylbenzene	11.2	0.50	"	10.0	ND	112	70-130								
Methyl tert-butyl ether	173	0.50	IJ	10.0	180	0	50-140			BB,LN					
Toluene	10.3	0.50	71	0.01	ND	103	70-120								
Xylenes (total)	32.5	0.50	**	30.0	ND	108	80-125								
Surrogate: 1,2-Dichloroethane-d4	2.51		#	2.50		100	60-145								
Surrogate: 4-Bromofluorobenzene	2.58		n	2.50		103	60-120								
Surrogate: Dibromofluoromethane	2.48		n	2.50		99	75-130								
Surrogate: Toluene-d8	2.51		"	2.50		100	70-130								
Matrix Spike Dup (6H24001-MSD2)	Source: MP	H0552-02R	E1	Prepared 6	& Analyze	d: 08/24/0	06								
tert-Amyl methyl ether	27.6	0.50	ug/l	10.0	14	136	65-135	15	25	LM					
Benzene	12.3	0.50	11	10.0	ND	123	70-125	19	15	RB					
tert-Butyl alcohol	247	20	n	200	ND	124	60-135	18	35						
Di-isopropyl ether	16.3	0.50	**	10.0	ND	163	70-130	19	35	LM					
1,2-Dibromoethane (EDB)	12.6	0.50	Ir	10.0	ND	126	80-125	17	15	LM, IL					
I,2-Dichloroethane	22.0	0.50	u	10.0	9.8	122	75-125	15	10	RB					
Ethanol	289	300	п	200	ND	144	15-150	16	35						
Ethyl tert-butyl ether	13.8	0.50	11	10.0	ND	138	65-130	19	35	LM					
Ethylbenzene	13.5	0.50	11	10.0	ND	135	70-130	19	15	LM, IL					
Methyl tert-butyl ether	197	0.50	**	10.0	180	170	50-140	13	25	BB,LM					
Toluene	12.2	0.50	**	10.0	ND	122	70-120	17	15	LM, IL					
Xylenes (total)	39.4	0.50	u	30.0	ND	131	80-125	19	15	LM, IL					
Surrogate: 1,2-Dichloroethane-d4	2.51		ff .	2.50		100	60-145		***************************************						
Surrogate: 4-Bromofluorobenzene	2.54		"	2.50		102	60-120								
Surrogate: Dibromofluoromethane	2.49		"	2.50		100	75-130								
Surrogate: Toluene-d8	2.39		H	2.50		96	70-130								



Project: ARCO #0276, Oakland, CA

Project Number: G0C02-0010 Project Manager: Lynelle Onishi

MPH0552 Reported: 09/05/06 13:26

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
Batch 6H23028 - EPA 5030B P/T					resur	70,000	Sittio	10.2		110103
Blank (6H23028-BLK1)	7 1111 02001			Prepared 4	& Analyze	ed: 08/23/	06			
Tetrachloroethene	ND	0.50	ug/l	1 repared	x maryzo	Ju. 00/25/	<u> </u>			
Surrogate: Dibromofluoromethane	2.49	-	"	2.50		100	65-130			
Surrogate: 1,2-Dichloroethane-d4	2.58		"	2.50		103	60-135			
Surrogate: Toluene-d8	2.31		,,	2.50		92	70-120			
Surrogate: 4-Bromofluorobenzene	2.05		n	2.50		82	70-120			
Laboratory Control Sample (6H2302	28-BS1)			Prepared of	& Analyze	ed: 08/23/	06			
Tetrachloroethene	11.0	0.50	ug/l	10.0		110	85-125			
Surrogate: Dibromofluoromethane	2.58		п	2.50		103	65-130			
Surrogate: 1,2-Dichloroethane-d4	2.56		"	2.50		102	60-135			
Surrogate: Toluene-d8	2.46		**	2.50		98	70-120			
Surrogate: 4-Bromofluorobenzene	2.45		**	2.50		98	70-120			
Matrix Spike (6H23028-MS1)	Source: M	PH0552-01		Prepared:	08/23/06	Analyzed	: 08/24/06			
Tetrachloroethene	11.7	0.50	ug/l	10.0	ND	117	85-125			
Surrogate: Dibromofluoromethane	2.71		"	2.50		108	65-130			
Surrogate: 1,2-Dichloroethane-d4	2,72		"	2.50		109	60-135			
Surrogate: Toluene-d8	2.48		"	2.50		99	70-120			
Surrogate: 4-Bromofluorobenzene	2.57		"	2.50		103	70-120			
Batch 6H24001 - EPA 5030B P/T	/ EPA 8260B									
Blank (6H24001-BLK1)				Prepared &	& Analyze	d: 08/24/0	06	-		
Tetrachloroethene	ND	0.50	ug/l							
Surrogate: Dibromofluoromethane	2.46		#	2.50		98	65-130			**************************************
Surrogate: 1,2-Dichloroethane-d4	2.37		"	2.50		95	60-135			
Surrogate: Toluene-d8	2.29		"	2.50		92	70-120			
Surrogate: 4-Bromofluorobenzene	2.04		**	2.50		<i>82</i>	70-120			





Project: ARCO #0276, Oakland, CA

Spike

Source

%REC

Project Number: G0C02-0010 Project Manager: Lynelle Onishi MPH0552 Reported: 09/05/06 13:26

RPD

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

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6H24001 - EPA 5030B P/T / E	PA 8260B									
Laboratory Control Sample (6H24001-B	S1)			Prepared	& Analyz	ed: 08/24/	06			
Tetrachloroethene	9.74	0.50	ug/l	10.0		97	85-125			
Surrogate: Dibromofluoromethane	2.57		"	2.50		103	65-130			
Surrogate: 1,2-Dichloroethane-d4	2.39		ŧ	2.50		96	60-135			
Surrogate: Toluene-d8	2.42		n	2.50		97	70-120			
Surrogate: 4-Bromofluorobenzene	2.41		"	2.50		96	70-120			
Matrix Spike (6H24001-MS1)	Source: MF	H0552-02		Prepared of	& Analyze	ed: 08/24/	06			
Tetrachloroethene	28.2	0.50	ug/l	10.0	24	42	85-125			LN
Surrogate: Dibromofluoromethane	2.48		"	2.50		99	65-130			
Surrogate: 1,2-Dichloroethane-d4	2.51		"	2.50		100	60-135			
Surrogate: Toluene-d8	2.51		n	2.50		100	70-120			
Surrogate: 4-Bromofluorobenzene	2.58		"	2.50		103	70-120			
Matrix Spike Dup (6H24001-MSD1)	Source: MP	H0552-02		Prepared a	& Analyze	ed: 08/24/	06			
Tetrachloroethene	32.6	0.50	ug/i	10.0	24	86	85-125	14	15	**** * *
Surrogate: Dibromofluoromethane	2.49		"	2.50		100	65-130			
Surrogate: 1,2-Dichloroethane-d4	2.51		"	2.50		100	60-135			
Surrogate: Toluene-d8	2.39		n	2.50		96	70-120			
Surrogate: 4-Bromofluorobenzene	2.54		n	2.50		102	70-120			





URS Corporation [Arco]	Project: ARCO #0276, Oakland, C	A MPH0552
1333 Broadway, Suite 800	Project Number: G0C02-0010	Reported:
Oakland CA, 94612	Project Manager: Lynelle Onishi	09/05/06 13:26

Notes and Definitions

RB	RPD exceeded method control limit; % recoveries within limits.
PV	Hydrocarbon result partly due to individ. peak(s) in quant. range
LN	MS and/or MSD below acceptance limits. See Blank Spike(LCS).
LM	MS and/or MSD above acceptance limits. See Blank Spike(LCS).
IL	RPD exceeds laboratory control limit
BH	Reporting limits raised due to high level of non-target analytes
BB,LN	Sample $> 4x$ spike concentration.
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
dгу	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



Chain of Custody Record

Project Name: Analytical for QMR sampling

BP BU/AR Region/Enfos Segment:

BP > Americas > West Coast > Retail > WCBU > CA > Central > 276 > HistoricalBt.

State or Lead Regulatory Agency:

California Regional Water Quality Control Board - San Fre

Requested Due Date (mm/dd/yy):

10 Day TAT

	Page of	
Ол-site Time:	Temp:	
Off-site Time:	Temp:	
Sky Conditions:		
Meteorological Events:		
Wind Speed;	Direction:	

Lab Name: Sequoia					BP/AR Facility N		276	-								7/~										
Address: 885 Jarvis Drive					BP/AR Facility A				acerth	ır Plan	rd C)aleTa	- d (74.0	460		nsulte			~		URS				
Morgan Hill, CA 95037					Site Lat/Long:		37.7	4255/	122	1512	/u., c	Jakia	na, c	JA 9	400	Αd	dress.					way, Sui	te 800			
Lab PM: Lisa Race / Katt Min					California Global	IDN		T0600								 -						A 94612				
Tele/Fax: 408.782.8156 / 408.782,6308	3				Enfos Project No.			02-00														ect No.:		7518		******
BP/AR PM Contact: Paul Supple					Provision or RCO			ision								11	nsulta —							Jakub		
Address: P.O. Box 6549					Phase/WBS:			/Reme	4 h x		1 4 4			_		11	e/Fax					6/510.8				
Moraga, CA 94570			· · ·		Sub Phase/Task:			ytical	u oy r	vatutai	I Au	enua	ion			Rej	ort T	ype &	હ QC	Lev	vel:	Level 1	vith EI	F		
Tele/Fax: 925.299.8891/925.299.8872					Cost Element:			ontrac	ed Co	ete						E-mail EDD To: <u>Jane Field@urscorp.com</u> Invoice to: Atlantic Richfield Company										
Lab Bottle Order No: 276			Mate	rix		T	1		ervati		-				_	_	d An	0;	Atla	ntic	Ric	nfield Co	mpany			
Item No. Sample Description	Time	08/1/90 Date		Air	Laboratory No.		Unpreserved	H,SO,	7 -	Methanoi		GRO/BIEX (8260)	OPE, TBA (8260)		Ethanol (8260)	PCB (8010)						Sar	nple Po C	oint La omme		g and
2 · MW-5	0840		1 		0	6			X		_	$\mathbf{X} \mid \lambda$	X [X	X_{\perp}	X										
	ا	31 6 :			02	6			X			XI.	< $ $	XI	X	X	l							·····		
3 · MW-6	१७५५				<i>,</i> 03	6		- 1	X		1	XI.	ΧĪ,	7	X	$\langle \cdot $			\top	┪	┪					
14 . MW-7	1020		入		by	6								`	[7]	Θ					-					
5 . MW-8	চণ্' শু		X	┰╟					X					Σļ.	식		-	_		_	4					
	" (13			╌╢	01	6		_	×	_ _	_ `	X/2	$\langle \cdot \rangle$	<u> </u>	X	X										
		<u> </u>	×	_	04	2]	X				Ţ								\exists	ONH	21 11			***************************************
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8							1		 	-	╁			+	+	┪	-+	+	+	-	-∦-					
9		-	-	┰╟		╌╟	-		╁┼			+	+	_	4	4	_		_		_					
10	'	 		-						_	_ _		\perp		_[ı					
I				_									1		- [T							
	,42			_ _	Relinqu	ished	By / A	ffiliatio	n			Date	7	Tim	e		<u> </u>	Ac	cente	d Bv		filiation		_	Date	Time
ampler's Company: Blain Tea hipment Date:	يد ي	UI car	•	_ _	MACH PAR		150	5			þ	8/14	26 1	Sq	5	M	D,	. /		repl		lishdo) -		3/1/01	
hipment Method:				4	10	ne	6-6	JAN	m		8	full	6	15 S	<u>~</u>	لان <i>ال</i> بر							<u></u>			1540
hipment Tracking No:			·	<u> </u>	wally	<u>Z</u>			7		8	1/4/1	7	65	1	7			<u> </u>					7	1/06	2500
				<u> 1</u> L											┪									╌╫╌		
pecial Instructions: CC to should be be be because of the company of the beautiful and the company of the compa	roadber	tinc.cor	n					· ·																		
																				***************************************				/		
ustody Seals In Place Yes No V			Cemp Bl	ank	Yes No				Coole	r Ten	npei	ratur	on	Rec	eipt	5	89	Ć)	Tr	in F	Blank Ye		No		****
- Distribution: White Copy - Labo	ratory /	Yellow	Сору -	BP/	Atlantic Richfield	Co.	/Pii	ık Cor	у - С	onsul	ltant	/Con	trac	for				<u>ئى</u>				D.GOGN	<u> </u>	1 10		

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: BO		<u>-</u>	DATE REC'D AT LAB TIME REC'D AT LAB: DATE LOGGED IN:		104	-			atory Purposes? WATER YES (NO ATER YES (NO
CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE#	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERV . ATIVE	рН	SAMPLE	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / Algebrat Intact / Broken*		===						Cratti Inhan	
2. Chain-of-Custody Present / Absent*					:				
3. Traffic Reports or					<u> </u>			·	
Packing List: Present / Absent							 		<u> </u>
4. Airbill: Airbill / Sticker				·			· .		<u> </u>
Present / Alasent			•				 		•
5. Airbill #:								-,	· ·
6. Sample Labels: Present / Absent									
7. Sample IDs: Listed / Not Listed	·				-10	P/		····	
on Chain-of-Custody	,		•		1 Em	<u>/</u>		· ·	-
8. Sample Condition: Intact / Broken* /				4	7\/\				
Leaking*									
9. Does information on chain-of-custody,		,			.00/				
traffic reports and sample labels				- (3) (1)	2 · +		-		
agree? Ves / No*									
10. Sample received within						-			<u> </u>
hold time?			*				 		
11. Adequate sample volume					,				
received? Yes / No*	•					 			
12. Proper preservatives used? Yes / No*									
13. Trip Blank / Temp(B)ank Received?									
(circle which, if yes) Yes / No*									<u> </u>
14. Read Temp: 5.8°C	·		/						· · · · · · · · · · · · · · · · · · ·
Corrected Temp: 5.5°C		/	· .						·
Is corrected temp 4 +/-2°C? Yes / No**		7				╌┈┼			
(Acceptance range for samples requiring thermal pres.)		/		<u> </u> -	.				
**Exception (if any): METALS / DFF ON ICE	/				·			—— <u> </u>	·
or Problem COC	1								
	*IE CIDCI	ED OC	NTACT PROJECT MAI		***********	- 42 J	2-00 ³² -7000		

SRL Revision 7 Replaces Rev 5 (07/13/04) Effective 07/19/05

WELL GAUGING DATA

Project # _	018000	- Sc 7 Date _	08	110/06	Client _	ARCO	276	-V-I
Site	10600	MacArthur Bl	J.	Onkland, C	4			

		Well		Depth to	Thickness of	Volume of Immiscibles	1		Surv Poin		
Well ID (Time	Size (in.)	Sheen / Odor	Immiscible Liquid (ft.)	Immiscible	Removed	Depth to water (ft.)	Depth to well bottom (ft.)	TOB	or	Notes
Wm - j	1310	7					24.70	38.93	1		C. 0
MBZ	1420	4					15.90	25.47			5
MMS	1245	ð				.t	25.37	38.58			6.0
	1561	7					24.62	47.77			6.8
m	1457	4					1500	46.93			5
mm-6	147	S					30.10	\$3. 48.40			5
WA-3	1407	7					21.28	37.78			5
NB-8	1345	4					2295	47.85			5
647	1257	6					25.31	48.72			6-0
MCRZ	1358	4					20.63	27.04	V		6-0
			····								

BTS #: (960810-5	200	roddyn erronn arna erra	Station # ARC	0 276	
Sampler:	SC			Date: 08/4	6/06	
<u> </u>	: MW -			Well Diameter	2 3 4 6 8	
Total We	ll Depth:	25.47		Depth to Wate	r: 15.90	
Depth to	Free Prod	uct:		Thickness of F	ree Product (feet):	
Reference	ed to:	(PVC)	Grade	D.O. Meter (if	req'd): (YSI)	НАСН
Purge Metho	Well Diame 1" 2" 3"	Bailer	Multiplier y 0.04 0.16 0.37	Vell Diameter 0 4" 6"	<u>Multiplier</u> 0.65 1 47 us ^{2 *} 0.163	
i dige mem		isposable Bai	lar			
		visposable Bail ve Air Displac		,	X Disposable Bailer	
		ve Air Dispiac ectric Submers		Osh are	Extraction Port	
	- (ectric Submers		Otner:		
	Other:		ıp .			
			6 Vc=1			
Top of Scree	en:		If well is listed as a	no-purge, confirm	that water level is below the to	ор
			of screen. Otherwi	se, the well must be	purged.	
	,	6.3	7	1 (79	
		ume (Gals.)	X Specified Vo	= [0	Gals.	
	1 Case voi	unic (Gaia.)		tutties Carr	culated Volume	
Time	Temp (°F)	pН	Conductivity (mS or (µS))	Gals. Removed	Observations	
0854	66.0	6.5	481	6.3	clear judo-	
0855	66.0	6.4	459	12.6	(1)	
0856	66.0	6-4	456	18:9	16 (6	
D. I II	1				16.5	
Did well	dewater?	Yes ((No)		y evacuated: 18.9	
Sampling		7910		Sampling Date	: 08/106	·
Sample I.	D.: MW	- L		Laboratory:	Pace Sequoia Other	TA
Analyzed	for: o	RO BTEX MT	TBE DRO Oxy's	A EDB Ethanol	Other: PCE	
D.O. (if r	eq'd):		Pre-purge:	mg/L	Post-purge: > 0.6	"3 ^{mg} /L
O.R.P. (if	•		Pre-purge:	mV	Post-purge:	mV
Blaine T	ech Serv	ices, Inc	. 1680 Rogers	Ave., San Jo	se, CA 95112 (408)	573-0555

1						
BTS#:	060810-	512		Station # APC	0 276	
Sampler:	50			Date: 08		
Well I.D.	: MW -	5		Well Diamete		
Total We	ll Depth:	46.4	î3	Depth to Wate	er: 24.77	
Depth to	Free Prod	uct:		Thickness of F	Free Product (feet):	
Reference	ed to:	PVC	Grade	D.O. Meter (if	req'd): YSI HACH	T
Purge Metho		Bailer	0.04 0.16 0.37	Well Diameter 4" 6"	Multiplier 0.65 1 47 us² * 0.163	1
	Ε	Disposable Bai	iler		≯Disposable Bailer	
	Positi	ive Air Displa	cement		Extraction Port	
	Y Ek	ectric Submer	sible	Other:	·	r
	, E	Extraction Pur	np			
	Other:		•			
Top of Scree	en:		If well is listed as a of screen. Otherwi	no-purge, confirm se, the well must be	that water level is below the top	
[7 U	<u> </u>	7	110	2 (
		`)	x	=	Gals.	
	I Case Vol	ume (Gals.)	Specified Vo	lumes Cale	culated Volume	
		1	Conductivity			
Time	Temp (°F)	pН	(mS or μ S)	Gals. Removed	Observations	
0877	66.2	6.0	821	14.5	clear ; faintedon	
0830	66.0	6.0	894	29.0	10 10 10	
1873	66.0	6.1	900	43.5	11 very 11 11	
Did well d	lewater?	Yes	(Ño)	Gallons actuall	y evacuated: 43.5	
Sampling '	Time:	0840		Sampling Date	-80).	
Sample I.I		N12-5				
Analyzed	<u> </u>		BE DRO (Dxy's) 1,2-DC	Laboratory:	Pace Sequoia Other 74 Other: PCC	
D.O. (if re			BE DRO (0xy's)(1.2-DC) Pre-purge:	A(EDB(Edianol) mg/L		mg/,
O.R.P. (if i			Pre-purge:		0.0)	
	•		1 to-purge:	mV	Post-purge:	mV
oiaine le	cu serv	ices, Inc	. 1680 Rogers	Ave., San Jo	se, CA 95112 (408) 573-05	55

					. ~		
BTS #:	060810-5	scl		Station # A.P.	(0 20)7	b	
Sampler	5C				8/10/06		
Well I.D	: MW -	6		Well Diameter	r: (2) 3 4	6 8	
Total We	ell Depth:	48.	40	Depth to Water	er: 30,10		
Depth to	Free Produ	ıct:		Thickness of F	Free Product (fee	et):	
Referenc	ed to:	(PVC)	Grade	D.O. Meter (if	req'd):	YSN	HACH
	Well Diame	ter	_	Well Diameter	Multiplier		
	l" 2"		0.04 0.16		0.65 1.47		
	3"		0.37	=	us² * 0.163		
Purge Meth	od:	Bailer		Sampling Method	: Bailer		
	₹ D	isposable Bai	ler		Nisposable Bailer		
	Positi	ve Air Displac	cement	,	Extraction Port		
	Ele	ctric Submers	ible	Other:			
		xtraction Pun	np				
	Other:						
Top of Scre	en:		If well is listed as a	no-purge, confirm	that water level is b	elow the to	7
		-		ise, the well must be		-10 1110 101	
	2.2	}	7				
		ume (Gals.)	X		Gals.		
	1 Case Voli	ume (Gais.)	Specified Vo	iumes Cal	culated Volume		
	T(0m)		Conductivity				
Time	Temp (°F)	pH	(mS or (LS))	Gals. Removed	Observations		
1075	65.6	6.7	1480	3.0	stoghtly cloud	1 10 0c	lo-
1040	658	6.7	1479	6-0	16 66		در
1045	65.9	6.7	14.77	9.0	ور دد	(((
							······································

Did well	dewater?	Yes (No	Gallons actual	ly evacuated: 9	1.0	
Sampling	Time:	1088		Sampling Date	: 08/10/06		
Sample I.	D.:	MW-6		Laboratory:	Pace Sequoia	Other_7	A
Analyzed	for: G	RO STEX MT	BE DRO Oxy's 1.2-DO	X /\ /	Other: PCC		
D.O. (if r	eq'd):		Pre-purge:	mg/ _L		1.32	mg/ ₍
O.R.P. (if	•		Pre-purge:				m√
Blaine T	ech Servi	ices. Inc	. 1680 Rogers	Ava San le	se, CA 95112	IADON E	73 0555

BTS#:	06081	0.502		Station # AR	co 276	
Sampler	: 50				8/68/06	
Well I.D	: MH	-7		Well Diamete	<u> </u>	8
Total We	ell Depth:	37	78	Depth to Wate	er: 21.28	
Depth to	Free Prod	uct:		Thickness of I	Free Product (feet):	
Referenc	ed to:	PVC	Grade	D.O. Meter (if		HACH
	Well Diam I" 2" 3"	eter	Multiplier 0.04 0.16 0.37	We <u>ll Diameter</u> 4" 6"	Multiplier 0.65 47 us² * 0.163	nach .
Purge Meth		Bailer		Sampling Method		 ;
		Disposable Ba			Disposable Bailer	
		ive Air Displa ectric Submer			Extraction Port	
		Extraction Pur		Other:		
	Other:		πħ			:
Top of Scree	en:		If well is listed as a	no-purge, confirm	that water level is below t	the top
	<u></u> Λ -	<u></u>		iso, the well must be	purgeu.	
	1 Case Vol	ume (Gals.)	x Specified Vo	lumes Cale	Gals.	
			Conductivity		l value	
Time	Temp (°F)	pН	(mS or (LS))	Gals. Removed	Observations	
1007	65.2	6.5	518	2.7	Clear jodo -	
1008	65.3	6,4	513	5.4	11 (1	
1013	65.0	6.4	509	8.1	16 (1	
Did well d	lewater?	Yes (No	Gallons actuall	y evacuated: 8-	1
Sampling	Time:	1020		Sampling Date	08/1906	
Sample I.I	D.:	MW-7				her TA
Analyzed	for: G	O BTEX MT	BE DRO Oxy's	A EDB Ethanol	Other: PCE	
).O. (if re	q'd):		Pre-purge:	mg/L	Post-purge:	22 mg/L
D.R.P. (if	• •		Pre-purge:	mV	Post-nurge:	m V
llaine Te	ech Servi	ces, Inc	. 1680 Rogers	Ave., San Jo	se, CA 95112 (408	3) 573-0555

		· — · · · · · · · · · · · · · · · · · ·						
BTS #:	060810-	-Sc2		Station # ARC	Co 276			
Sampler	: 5	<i>C</i>		Date: つを/	(4 06			<u></u>
Well I.D	MW	1-8		Well Diameter	r: 2 3 <i>(</i>	4) 6	8	
Total We	ell Depth:	47.8	5	Depth to Wate	r: 3295		•	
Depth to	Free Prod	uct:		Thickness of F	ree Product ((fee <u>t):</u>		
Referenc	ed to:	PVC) Grade	D.O. Meter (if	rea'd)·	YSI)	HACH	
	Well Diame			Well Diameter § 4" 6" Other radio	<u>Multiplier</u> 0.65 1.47 us ² * 0.163		HACH	
Purge Meth		Bailer		Sampling Method:	Bailer			
		isposable Bai		Ź	X Disposable Bail	er		
	Positi	ve Air Displa	cement		Extraction Por	t		
	Х Еlа	ectric Submer	sible	Other:				
	` E	Extraction Pur	np					
	Other:							
Top of Scree	en·		If wall is timed as	n.				
tob or actor	CII		it well is listed as	no-purge, confirm	that water level	is below the	top	
			of screen. Otherw	ise, the well must be	purged.			
	1 16	·. 2	2	48	·. 6 Gals			
		ume (Gals.)	x			•		•
	1 Case Voi	unie (Gais.)	Specified Vo	olumes Cale	culated Volume		· ·	
			Conductivity					
Time	Temp (°F)	pН	$(mS \text{ or } (\mu S))$	Gals. Removed	Observations	3		
0916	in e	/ 1	/				3/547	
	68,5	6.2	675	16.2	Cloudy by	Dwrish;	odon	
0920	69.1	6.1	646	32.4	cloudy by	fair to	do -	
0923	69-2	6.2	667	48.6	clear	10 10		
					,			
Did well	dewater?	Yes	No	Gallons actuall	y evacuated:	48.6	Maria 4,4	
Sampling	Time:	093	5	Sampling Date	: 08/11/00	ò		
Sample I.	D.: //	m-8		Laboratory:	Pace Sequoia	o Othe	TA	
Analyzed	for: (G	RO TEX MT	BE DRO (Day's /1.2-DO	EDB Ethanol	Other: PCE	`\		
D.O. (if re	eq'd):	\	Pre-purge:	mg/L	Post-pure	ge: 0 1/	4	mg/(
O.R.P. (if		·	Pre-purge:		Post-pure	ze:	<i>) </i>	m V
Blaine T	ech Serv	ices, Inc	. 1680 Roger	S Ave., San Jo	Se CA 951	12 (409)	572 NE	EE
		-	-	,	,,	(J. J. J. J.	J

BP GEM OIL COMPANY TYPE A BILL OF LADING

SOURCE RECORD BILL OF LADING FOR NON-**HAZARDOUS PURGEWATER RECOVERED** FROM GROUNDWATER WELLS AT BP GEM OIL COMPANY FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED BY DILLARD ENVIRONMENTAL TO THE ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY IN LIVERMORE, CALIFORNIA.

The contractor performing this work is PLAINE TECH SERVICES, INC. (BTS), 1680 Rogers Avenue, San Jose, CA 95112 (phone [408] 573-0555). Blaine Tech Services, Inc. is authorized by BP GEM OIL COMPANY to recover, collect, apportion into loads the Non-Hazardous Well Purgewater that is drawn from wells at the BP GEM Oil Company facility indicated below and deliver that purgewater to BTS. Transport routing of the Non-Hazardous Well Purgewater may be direct from one BP GEM facility to the designated destination point; from one BP GEM facility; from a BP GEM facility to the designated destination point via another BP GEM facility; from a BP GEM facility, or any combination thereof. The Non-Hazardous Well Purgewater is and remains the property of BP GEM Oil Company.

This **Source Record BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the BP GEM Oil Company facility described below:

ARCO 276	v
Station #	
10600 Mac Arthur	Blud.
Station Address	
Total Gallons Collected From (Groundwater Monitoring Wells:
added equip.	any other adjustments
Inisc water	aujustinėnis
TOTAL GALS. 133.	loaded onto BTS vehicle #
BTS event#	time date
060810-502	time date // 20 08/58/06
signature A	
U	

REC'D AT	time date
unloaded by	
signature	



WELLHEAD INSPECTION CHECKLIST BP / GEM

	4	7	
Page		_of <u>/</u>	

Date 08 19	06	_		_ (1				
Site Address	10600 Mac	Arthur (Blos.	Dakland	1CA			
Job Number	060810-	scl		Tec	hnician	<u> </u>	armack	
Well ID	Well Inspected - No Corrective Action Required	Water Balled From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From	Lock Replaced	Other Action Taken (explain	Well Not Inspected (explain
WM-1					Wellbox		below)	below)
Mr-2						<u> </u>		
mw-3	1 X							
mw-d								
MW-5	X							
d WM	X							
MW -7	X			Ĭ,	المرادة			
NW-8						Ť.		
RW-1	X				3 3(2)	*		
MC8-3	X							
······								
				***		andreas a constant and a state of the late		
			-					
				·····	***************************************			
NOTES: _/	NU-1-) N	2 screw	s missing	7				
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APPENDIX B

GEOTRACKER UPLOAD CONFIRMATION

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

Your EDF file has been successfully uploaded!

Confirmation Number: 3664285421

Date/Time of Submittal: 10/20/2006 11:12:55 AM

Facility Global ID: T0600100082

Facility Name: ARCO #276

Submittal Title: 3Q 06 GW Monitoring Submittal Type: GW Monitoring Report

Click here to view the detections report for this upload.

ARCO

Regional Board - Case #: 01-0089

10600 MACARTHUR BLVD OAKLAND, CA 94605

SAN FRANCISCO BAY RWQCB (REGION 2) Local Agency (lead agency) - Case #: 3756

ALAMEDA COUNTY LOP - (SP)

NOTE: THIS DATA WAS SUBMITTED AFTER THE SITE WAS CLOSED

CONF# QUARTER 3664285421 3Q 06 GW Monitoring Q3 2006

SUBMITTED BY **SUBMIT DATE STATUS**

Broadbent & Associates, Inc. 10/20/2006 PENDING REVIEW

SAMPLE DETECTIONS REPORT

FIELD POINTS SAMPLED # FIELD POINTS WITH DETECTIONS 5 # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL 5 SAMPLE MATRIX TYPES WATER

METHOD QA/QC REPORT

TECHNICAL HOLDING TIME VIOLATIONS

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

QA/QC FOR 8021/8260 SERIES SAMPLES

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

WATER SAMPLES FOR 8021/8260 SERIES

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

0

0

BLANK SPIKE / BLANK SPI	KE DUPLICATES % RECOVERY	BETWEEN 70-130%	Υ
SOIL SAMPLES FOR	8021/8260 SERIES		
MATRIX SPIKE / MATRIX S	PIKE DUPLICATE(S) % RECOV	ERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX S	PIKE DUPLICATE(S) RPD LESS	THAN 30%	n/a
	. 		
SURROGATE SPIKES % RE	COVERY BETWEEN 70-125%		n/a
	COVERY BETWEEN 70-125% KE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a n/a
BLANK SPIKE / BLANK SPI FIELD QC SAMPLES	KE DUPLICATES % RECOVERY	en e	n/a
BLANK SPIKE / BLANK SPI FIELD QC SAMPLES SAMPLE	KE DUPLICATES % RECOVERY COLLECTED	BETWEEN 70-130% DETECTIONS >	n/a
BLANK SPIKE / BLANK SPI FIELD QC SAMPLES	KE DUPLICATES % RECOVERY	en e	n/a
BLANK SPIKE / BLANK SPI FIELD QC SAMPLES SAMPLE	KE DUPLICATES % RECOVERY COLLECTED	en e	n/a

Logged in as BROADBENT-C (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.

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: 3Q 06 GEO_WELL

Submittal Date/Time: 10/20/2006 10:16:41 AM

Confirmation Number: 9630635142

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