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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

27 October 2006

Re: Third Quarter 2006 Ground-Water Monitoring Report Atlantic Richfield Company Station #374 6407 Telegraph Avenue Oakland, California ACEH Case # RO0000078

"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 #374 6407 Telegraph Avenue 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

27 October 2006

Project No. 06-08-602



27 October 2006

Project No. 06-08-602

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

Attn.: Mr. Paul Supple

Re:

Third Quarter 2006 Ground-Water Monitoring Report, Atlantic Richfield Station #374, 6407 Telegraph Avenue, Oakland, Alameda County, California. ACEH Case # RO78

Dear Mr. Supple:

Attached is the *Third Quarter 2006 Ground-Water Monitoring Report* for Atlantic Richfield Company (a BP affiliated company) Station #374 (herein referred to as Station #374) located at 6407 Telegraph Avenue, Oakland, California (Property). This report presents results of ground-water monitoring 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

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

ARIZONA CALIFORNIA

NEVADA

TEXAS

ROBERT H. MILLER

No. 4893

STATION #374 QUARTERLY GROUND-WATER MONITORING REPORT

Facility: <u>#374</u> Address: 6407 Telegraph Avenue, 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.: 06-08-602

Primary Agency/Regulatory ID No.: Alameda County Environmental Health (ACEH)

ACEH Case #RO0000078

Facility Permits/Permitting Agency: NA

WORK PERFORMED THIS QUARTER (Third Quarter 2006):

 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 24 August 2006 by Blaine Tech Services for URS.

WORK PROPOSED FOR NEXT QUARTER (Fourth Quarter 2006):

- 1. Prepared and submitted this Third Quarter 2006 Ground-Water Monitoring Report (contained herein).
- 2. Conduct quarterly ground-water monitoring/sampling for Fourth Quarter 2006.
- 3. Prepare and submit Fourth Quarter 2006 Ground-Water Monitoring Report.

QUARTERLY RESULTS SUMMARY:

Current phase of project: Ground-water monitoring/sampling
Frequency of ground-water monitoring: Quarterly: MW-1, MW-2, MW-3, MW-4, MW-5, MW-6

Frequency of ground-water sampling: Quarterly: MW-1

Semi-Annually (1Q and 3Q): MW-2 and MW-4 Annually (3Q): MW-3, MW-5, and MW-6

Is free product (FP) present on-site:

Current remediation techniques:

Depth to ground water (below TOC):

General ground-water flow direction:

Approximate hydraulic gradient:

No

NA

5.18

6.03

5.18 ft (MW-6) to 8.26 ft (MW-4)

Southwest 0.03 ft/ft

DISCUSSION:

Third quarter 2006 ground-water monitoring and sampling was conducted at Station #374 on 24 August 2006 by Blaine Tech Services personnel for URS. Water levels were gauged in the six wells at the Site. No irregularities were noted in the field during this quarter's water level gauging. Depth to water measurements ranged from 5.18 ft at MW-6 to 8.26 ft at MW-4. Resulting ground-water surface elevations ranged from 156.82 ft above mean sea level in well MW-1 to 152.21 ft at well MW-3. Water level elevations were between historic minimum and maximum ranges for each well, as summarized in Table 1. However, BAI noted several discrepancies with historic water level elevations reported within the Table 1 (see discussion below). Water level elevations yielded a potentiometric ground-water flow direction and gradient to the southwest at approximately 0.03 ft/ft, consistent with historical data reported in Table 3 (see discussion below). 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.

During this quarter's review of the historic water level elevations, BAI noted several discrepancies. The six wells at Station #374 were resurveyed on 27 January 2004, as reported in the First Quarter 2004 Groundwater Monitoring Report (URS, 15 March 2004). However the historic Table 1 data BAI inherited from URS did not include a reference to this surveying event. The resurveyed Top of Casing (TOC) measuring points referenced in Table 1 agree with the 27 January 2004 survey data for wells MW-1, MW-2, MW-3, and MW-6. However, the TOC measuring point elevation in Table 1 for MW-4 should actually be 162.47 ft (not 163.25 ft as reported quarterly since First Quarter 2004). Furthermore, according to the survey notes provided in the URS report of 15 March 2004, the surveyor was unable to access the casing for well MW-5 (although a top of lid/ground surface elevation of 157.39 ft was uploaded to GeoTracker). Therefore the water level elevations reported in Table 1 since the resurvey in early 2004 have been incorrect. BAI has noted this error with footnotes in Table 1. Measurements from this quarter forward should use the corrected TOC elevation of 162.47 ft for well MW-4. However, until its TOC elevation is resurveyed, the TOC Elevation and Water Level Elevations for well MW-5 will be left unreported in Table 1 from this quarter forward. It should be noted that potentiometric ground-water flow directions and gradients from First Quarter 2004 through Second Quarter 2006 may be suspect.

Consistent with the current ground-water sampling schedule, water samples were collected from the six wells at the Site. 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, tert-Butyl alcohol, Di-isopropyl ether, 1,2-Dibromomethane, 1,2-Dichloroethane, Ethanol, Ethyl tert-butyl ether, and Methyl tert-butyl ether (MTBE) by EPA Method 8260B. No 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 three of the six wells sampled at concentrations up to 3,600 micrograms per liter (μ g/L) in well MW-4. Benzene was detected above the laboratory reporting limit in one of the six wells sampled at a concentration of 1,400 μ g/L in well MW-4. Toluene was detected above the laboratory reporting limit in one of the six wells sampled at a concentration of 21 μ g/L in well MW-4. Ethylbenzene was detected above the laboratory reporting limit in one of the six wells sampled at a concentrations of 110 μ g/L in well MW-4. Total Xylenes were detected above the laboratory reporting limit in one of the six wells sampled at a concentration of 70 μ g/L in well MW-4. MTBE was detected above the laboratory reporting limit in five of the six wells sampled at concentrations up to 180 μ g/L in well MW-1. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the six 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 Contours and Analytical Summary Map, 24 August 2006,
	Station #374, 6407 Telegraph Avenue, Oakland, California

- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #374, 6407 Telegraph Ave., Oakland, CA
- Table 2. Summary of Fuel Additives Analytical Data, Station #374, 6407 Telegraph Ave., Oakland, CA
- Table 3. Historical Ground-Water Flow Direction and Gradient, Station #374, 6407 Telegraph Ave., 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

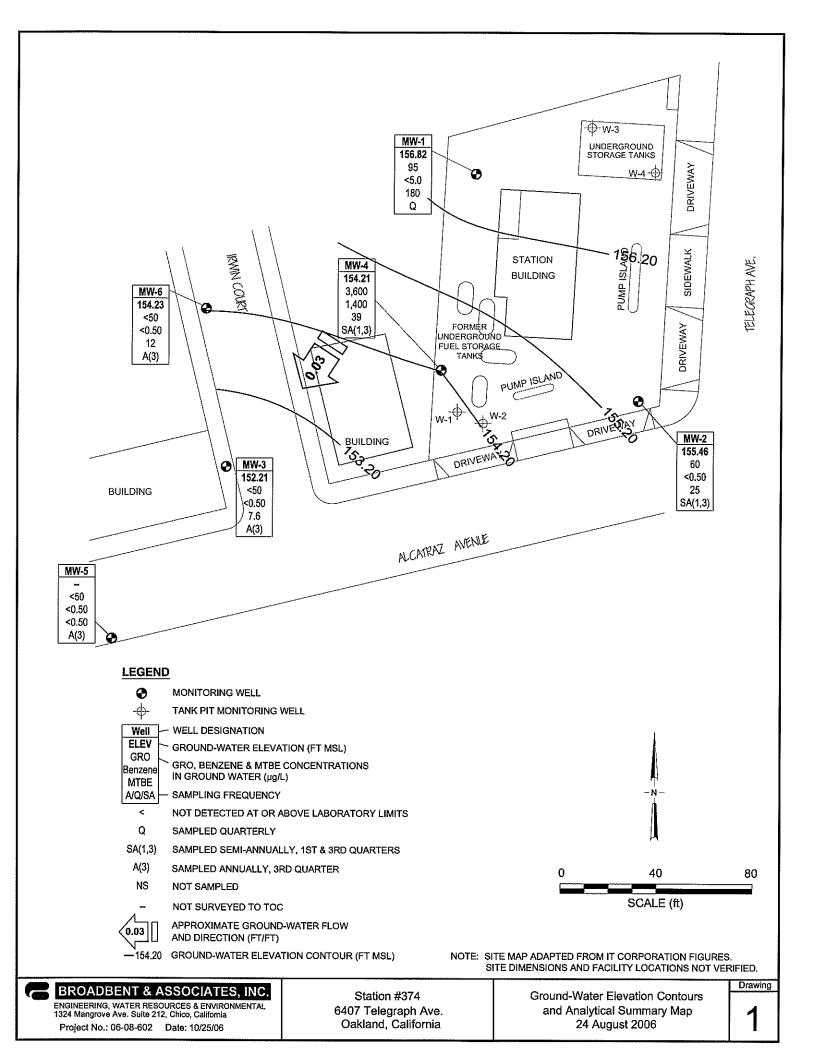


Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses
Station #374, 6407 Telegraph Ave., Oakland, CA

	1			Top of	Bettom of		Water Level			Concentra	tions in (με	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)	ТРНд	Benzene	Toluene	Вепzепе	Xylenes	MTBE	(mg/L)	pi
MW-1															Т
6/20/2000			158.91	7.00	27.0	6.86	152.05								-
9/28/2000			158.91	7.00	27.0	7.5	151.41				<u></u>				-
12/17/2000			158.91	7.00	27.0	7.49	151.42								-
3/23/2001			158.91	7.00	27.0	5.9	153.01	<50	<0.5	<0.5	<0.5	<0.5	2,710		
6/21/2001			158.91	7.00	27.0	7.45	151.46								-
9/23/2001			158.91	7.00	27.0	8.46	150.45								.
12/31/2001			158.91	7.00	27.0	5.5	153.41								
3/21/2002			158.91	7.00	27.0	4.71	154.2	<5,000	<50	<50	<50	<50	2,000		.
4/17/2002			158.91	7.00	27.0	5.54	153.37								
8/12/2002			158.91	7.00	27.0	7.77	151.14								
12/6/2002			158.91	7.00	27.0	7.65	151.26								
1/29/2003		ь	158.91	7.00	27.0	5.88	153.03								
5/23/2003			158.91	7.00	27.0	5.62	153.29	<10,000	<100	<100	<100	<100	1,600	1.3	7
9/4/2003			158.91	7.00	27.0	7.85	151.06								
11/20/2003	P		158.91	7.00	27.0	8.17	150.74	1,600	<10	<10	<10	<10	1,500	1.7	6
02/02/2004	P	f	164.57	7.00	27.0	6.71	157.86							1.0	
05/14/2004	P		164.57	7.00	27.0	7.08	157.49	<2,500	<25	<25	··· <25	<25	1,200	1.4	6
09/02/2004	P		164.57	7.00	27.0	8.12	156.45	580	<5.0	<5.0	<5.0	<5.0	660	3.8	6
11/04/2004	P		164.57	7.00	27.0	7.38	157.19	1,700	<10	<10	<10	<10	580	6.0	6
02/08/2005	P		164.57	7.00	27.0	6.60	157.97	<1,000	<10	<10	<10	<10	610	0.71	6
05/09/2005	P	e + 1, 11+1	164.57	7.00	27.0	6.84	157.73	540	<5.0	<5.0	<5.0	5.5	620	3.12	6
08/11/2005	P		164.57	7.00	27.0	7.36	157.21	540	<2.5	<2.5	<2.5	4.0	390	0.8	6
11/18/2005	P	e	164.57	7.00	27.0	8.02	156.55	350	<2.5	<2.5	<2.5	<2.5	340	2.6	6
02/16/2006	P	e	164.57	7.00	27.0	6.44	158.13	350	<2.5	<2.5	<2.5	<2.5	340	1.6	6
5/30/2006	P		164.57	7.00	27.0	6.87	157.70	270	<2.5	<2.5	<2.5	<2.5	420	4.73	6
8/24/2006	P		164.57	7.00	27.0	7 . 75	156.82	95	<5.0	<5.0	<5.0	<5.0	180	0.65	6
MW-2						: :									\vdash
6/20/2000			157.92	7.00	27.0	7.67	150.25								
9/28/2000			157.92	7.00	27.0	8.51	149.41								١.
12/17/2000			157.92	7.00	27.0	8.14	149.78								١.

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses
Station #374, 6407 Telegraph Ave., Oakland, CA

				Top of	Bottom of		Water Level			Concentra	tions in (µg	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)	pH
MW-2 Cont.					 										
3/23/2001			157.92	7.00	27.0	7.21	150.71	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
6/21/2001	:		157.92	7.00	27.0	7.99	149.93								
9/23/2001			157.92	7.00	27.0	8.52	149.4								
12/31/2001			157.92	7.00	27.0	6.01	151.91								
3/21/2002			157.92	7.00	27.0	5.95	151.97	<50	<0.5	<0.5	<0.5	<0.5	45		
4/17/2002			157.92	7.00	27.0	6.45	151.47			m=					
8/12/2002			157.92	7.00	27.0	8.08	149.84								
12/6/2002			157.92	7.00	27.0	8.29	149.63								
1/29/2003		b	157.92	7.00	27.0	7.22	150.7								
5/23/2003			157.92	7.00	27.0	6.85	151.07	<50	<0.50	<0.50	<0.50	<0.50	55	1.4	7.2
9/4/2003			157.92	7.00	27.0	7.94	149.98								
11/20/2003			157.92	7.00	27.0	8.05	149.87								
02/02/2004	P	f	163.46	7.00	27.0	7.00	156.46	74	<0.50	< 0.50	<0.50	<0.50	37	1.1	8.9
05/14/2004			163.46	7.00	27.0	7.97	155.49								
09/02/2004	P		163.46	7.00	27.0	8.19	155.27	<250	<2.5	<2.5	<2.5	<2.5	67	2.7	6.9
11/04/2004			163.46	7.00	27.0	7.54	155.92								
02/08/2005	P		163.46	7.00	27.0	6.72	156.74	<50	<0.50	<0.50	< 0.50	<0.50	30	0.86	6.7
05/09/2005			163.46	7.00	27.0	7.16	156.30								
08/11/2005	Р		163.46	7.00	27.0	7.85	155.61	<50	<0.50	<0.50	<0.50	<0.50	35	1.0	6.6
11/18/2005			163.46	7.00	27.0	8.23	155.23								
02/16/2006	P		163.46	7.00	27.0	6.82	156.64	<50	<0.50	<0.50	<0.50	<0.50	39	1.3	7.0
5/30/2006	!		163.46	7.00	27.0	7.23	156.23				:				
8/24/2006	P		163.46	7.00	27.0	8.00	155.46	60	<0.50	<0.50	<0.50	<0.50	25	0.90	6.8
MW-3		•													
6/20/2000			153.64	7.00	27.0	6.42	147.22	<50	<0.5	<0.5	<0.5	<1.0	<10		
9/28/2000			153.64	7.00	27.0	7.31	146.33								
12/17/2000			153.64	7.00	27.0	6.45	147.19	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
3/23/2001			153.64	7.00	27.0	6.01	147.63								
6/21/2001			153.64	7.00	27.0	6.8	146.84	110	5.5	<0.5	5.4	4.1	2.5		
9/23/2001			153.64	7.00	27.0	7.32	146.32								

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses
Station #374, 6407 Telegraph Ave., Oakland, CA

				Top of	Bottom of		Water Level			Concentra	tions in (µ	g/L)			
Well and	!		тос	Screen	Screen	DTW	Elevation	GRO/			Ethyl-	Total		ро	
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-3 Cont.															
12/31/2001	ļ <u>-</u> -		153.64	7.00	27.0	4.48	149.16	<50	<0.5	<0.5	<0.5	<0.5	4.9		
3/21/2002			153.64	7.00	27.0	4.36	149.28						••		
4/17/2002			153.64	7.00	27.0	5.31	148.33	<50	<0.5	<0.5	<0.5	<0.5	8.7		
8/12/2002			153.64	7.00	27.0	7	146.64								
12/6/2002			153.64	7.00	27.0	7.32	146.32	<50	<0.5	<0.5	<0.5	<0.5	6.2	1.4	6.7
1/29/2003		ь	153.64	7.00	27.0	6.07	147.57								
5/23/2003		* .	153.64	7.00	27.0	6.45	147.19	<50	<0.50	<0.50	<0.50	<0.50	1.6	0.9	7.7
9/4/2003	Ì	c	153.64	7.00	27.0	6.93	146.71								
11/20/2003		c	153.64	7.00	27.0	7.04	146.60								
02/02/2004		f	159.21	7.00	27.0	5.92	153.29								
05/14/2004		100	159.21	7.00	27.0	7.52	151.69	-							
09/02/2004	P		159.21	7.00	27.0	7.19	152.02	<50	<0.50	<0.50	<0.50	<0.50	6.5	9.3	8.9
11/04/2004		2.5	159.21	7.00	27.0	6.40	152.81								
02/08/2005			159.21	7.00	27.0	6.01	153.20								
05/09/2005			159.21	7.00	27.0	6.74	152.47								
08/11/2005	Р		159.21	7.00	27.0	6.77	152.44	<50	<0.50	<0.50	<0.50	<0.50	11	1.9	6.5
11/18/2005		Automobile Comment	159.21	7.00	27.0	7.83	151.38								
02/16/2006	!		159.21	7.00	27.0	7.26	151.95								
5/30/2006			159.21	7.00	27.0	5.82	153.39								
8/24/2006	P		159.21	7.00	27.0	7.00	152.21	<50	<0.50	<0.50	<0.50	<0.50	7.6	1.15	6.4
MW-4						<u> </u>									
6/20/2000		c	156.53	7.00	27.0	7.5	149.03	20,000	5,100	440	1,000	1,700	<250		
9/28/2000			156.53	7.00	27.0	8.2	148.33								
12/17/2000			156.53	7.00	27.0	8.11	148.42	4,320	1,240	<20	27.2	249	<100		
3/23/2001			156.53	7.00	27.0	6.69	149.84								
6/21/2001			156,53	7.00	27.0	8.01	148.52	2,800	470	16	19	160	130		
9/23/2001	! ! !		156.53	7.00	27.0	8.91	147.62								
12/31/2001			156.53	7.00	27.0	4.42	152.11	4,600	1,500	100	160	210	160		
3/21/2002	! 		156.53	7.00	27.0	4.98	151.55								
4/17/2002			156.53	7.00	27.0	6.23	150.3	7,100	2,200	110	290	450	<250		

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses
Station #374, 6407 Telegraph Ave., Oakland, CA

				Top of	Bottom of		Water Level		i	Concentra	tions in (μ _i	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)	pН
MW-4 Cont.	:	:				<u> </u>					:				
8/12/2002			156.53	7.00	27.0	8.24	148,29								
12/6/2002		a	156.53	7.00	27.0	8.42	148.11	1,500	410	6.8	20	29	43	1.1	6.7
1/29/2003		ь	156.53	7.00	27.0	7.2	149.33						m-m		
5/23/2003			156.53	7.00	27.0	7.18	149.35	<5,000	1,300	89	210	260	<50	1.4	6.9
9/4/2003		c	156.53	7.00	27.0	8.15	148.38								
11/20/2003		c	156.53	7.00	27.0	8.73	147.80								
02/02/2004	P	c, f, g	163.25	7.00	27.0	6.25	157.00	980	280	21	29	38	29	1.4	10.6
05/14/2004		g	163.25	7.00	27.0	8.38	154.87								
09/02/2004	P	g	163.25	7.00	27.0	8.36	154.89	260	11	<1.0	5.5	14	28	2.4	7.4
11/04/2004		c, g	163.25	7.00	27.0	7.71	155.54				***				
02/08/2005	P	g	163.25	7.00	27.0	6.27	156.98	7,500	1,700	320	480	920	45	0.65	6.5
05/09/2005		g	163.25	7.00	27.0	5.90	157.35								
08/11/2005	P	g	163.25	7.00	27.0	7.96	155.29	3,100	1,100	41	160	110	32	0.6	6.5
11/18/2005		g	163.25	7.00	27.0	8.57	154.68								
02/16/2006	P	g	163.25	7.00	27.0	6.28	156.97	9,400	1,800	130	600	420	35	0.5	6.8
5/30/2006		g	163.25	7.00	27.0	7.02	156.23								
8/24/2006	P	g	162.47	7.00	27.0	8.26	154.21	3,600	1,400	21	110	70	39	1.00	6.8
MW-5				ATTITITION NO. A.										1	
6/20/2000	<u> </u>		151.33	10.00	23.0	7.84	143.49	<50	<0.5	<0.5	<0.5	<1,0	<10		
9/28/2000		1.2	151.33	10.00	23.0	8.37	142.96	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
12/17/2000			151.33	10.00	23.0	8.36	142.97	<50	< 0.5	< 0.5	< 0.5	< 0.5	<2.5		
3/23/2001		* *.	151.33	10.00	23.0	7.55	143.78	<50	< 0.5	< 0.5	< 0.5	< 0.5	<2.5		
6/21/2001			151.33	10.00	23.0	8.2	143.13	<50	< 0.5	< 0.5	< 0.5	< 0.5	<2.5		
9/23/2001			151.33	10.00	23.0	8.68	142.65	<50	<0.5	< 0.5	< 0.5	< 0.5	<2.5		
12/31/2001			151.33	10.00	23.0	7.57	143.76	<50	<0.5	< 0.5	< 0.5	< 0.5	<2.5		
3/21/2002			151.33	10.00	23.0	6.12	145.21	<50	<0.5	<0.5	<0.5	<0.5	3.2		
4/17/2002			151.33	10.00	23.0	6.61	144.72	<50	<0.5	< 0.5	< 0.5	< 0.5	<2.5		
8/12/2002			151.33	10.00	23.0	8.14	143.19	<50	<0.5	<0.5	<0.5	<0.5	<2,5	4.1	7.6
12/6/2002			151.33	10.00	23.0	8.65	142.68	<50	<0.5	<0.5	<0.5	<0.5	<2.5	1.1	6.8
1/29/2003		ь	151.33	10.00	23.0	7.22	144.11	<50	<0.5	<0.5	<0.5	<0.5	<0.5	1 1	6.6

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

Station #374, 6407 Telegraph Ave., Oakland, CA

NW-5 Cont.		·			Top of	Bottom of		Water Level			Concentra	tions in (µ;	g/L)			
NW-5 Cont.	Well and			тос	Screen	Screen	DTW	Elevation	GRO/						DO	
\$\(\frac{3}{2}\)2003 -	Sample Date	P/NP	Comments	(feet msl)	(ft bgs)	(ft bgs)	(feet bgs)	(feet msl)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	pН
9/4/2003 151.33 10.00 23.0 9.5 141.83 <50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.	MW-5 Cont.		:			:						i				
11/20/2003 -	5/23/2003			151.33	10.00	23.0	7.31	144.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	6.6
02/02/2004 -	9/4/2003			151.33	10.00	23.0	9.5	141.83	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.2	6.7
05/14/2004 h 151,33 10,00 23,0 8,56 142,77	11/20/2003			151.33	10.00	23.0	8.31	143.02		-			_			
09/02/2004 P h 151.33 10.00 23.0 8.79 142.54 <50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50	02/02/2004		c, f, h	151.33	10.00	23.0	6.92	144.41								
11/04/2004	05/14/2004		h	151.33	10.00	23.0	8.56	142.77		<u> </u>	17 1 <u>-</u> 17 15	75 <u>=</u> 55				
02/08/2005 h 151.33 10.00 23.0 7.28 144.05 -	09/02/2004	P	h	151.33	10.00	23.0	8.79	142.54	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.5	6.8
05/09/2005 h 151.33 10.00 23.0 8.19 143.14 -	11/04/2004		c, h	151.33	10.00	23.0	8.33	143.00								
08/11/2005 P h 151.33 10.00 23.0 8.39 142.94 <50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.5	02/08/2005		h	151.33	10.00	23.0	7.28	144.05								
11/18/2005	05/09/2005		h	151.33	10.00	23.0	8.19	143.14	_							
11/18/2006 h 151.33 10.00 23.0 11.25 140.08	08/11/2005	P	h	151.33	10.00	23.0	8.39	142.94	<50	ł.	<0.50	<0.50	<0.50	<0.50	1.2	6.6
5/30/2006 h 151.33 10.00 23.0 7.52 143.81	11/18/2005		h	151.33	10.00	23.0	11.25	140.08	····							
8/24/2006 P h - 10.00 23.0 7.95 - <50 <0.50 <0.50 <0.50 <0.50 2.60 MW-6 WW-6 BWW-6 WW-6	02/16/2006		h	151.33	10.00	23.0	9.22	142.11								
MW-6 6/20/2000 153.84 5.00 15.0 4.79 149.05	5/30/2006		h	151.33	10.00	23.0	7.52	143.81	-							
6/20/2000 153.84 5.00 15.0 4.79 149.05	8/24/2006	P	h		10.00	23.0	7.95	<u>-</u>	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.60	6.6
9/28/2000 153.84 5.00 15.0 5.39 148.45	MW-6						:									
12/17/2000 153.84 5.00 15.0 4.71 149.13	6/20/2000			153.84	5.00	15.0	4.79	149.05		ша						
3/23/2001 153.84 5.00 15.0 4.69 149.15 <50	9/28/2000		ĺ	153.84	5.00	15.0	5.39	148.45								
6/21/2001 153.84 5.00 15.0 5.22 148.62	12/17/2000			153.84	5.00	15.0	4.71	149.13		11 <u>-</u>	1717	884 S				
9/23/2001 153.84 5.00 15.0 5.4 148.44 <	3/23/2001			153.84	5.00	15.0	4.69	149.15	<50	< 0.5	< 0.5	< 0.5	< 0.5	<2.5		
9/23/2001 153.84 5.00 15.0 5.4 148.44 <	6/21/2001			153.84	5.00	15.0	5.22	148.62								
3/21/2002 153.84 5.00 15.0 2.94 150.9 <50	9/23/2001			153.84	5.00	15.0	5.4	148.44	l	'						
3/21/2002 153.84 5.00 15.0 2.94 150.9 <50	12/31/2001			153.84	5.00	15.0	3.95	149.89		4		_		_		
8/12/2002 153.84 5.00 15.0 5.23 148.61	3/21/2002			153.84	5.00	15.0	2.94	150.9	<50	1	<0.5	<0.5	<0.5	5.2		
8/12/2002 153.84 5.00 15.0 5.23 148.61	4/17/2002	-		153.84	5.00	15.0	5.11	148.73								
1/29/2003 b 153.84 5.00 15.0 4.79 149.05 5/23/2003 153.84 5.00 15.0 4.31 149.53 <50 <0.50 <0.50 <0.50 <0.50 9.4 1	8/12/2002			153.84	5.00	15.0	5.23	148.61								
1/29/2003 b 153.84 5.00 15.0 4.79 149.05 5/23/2003 153.84 5.00 15.0 4.31 149.53 <50 <0.50 <0.50 <0.50 <0.50 9.4 1	12/6/2002			153.84	5.00	15.0	5.29	148.55	44. - 4.1			888 <u></u> 888				
	1/29/2003		ь	153.84	5.00	15.0	4.79	149.05								
	5/23/2003			153.84	5.00	15.0	4.31	149.53	<50	<0.50	<0.50	<0.50	<0.50	9.4	1	6.7
09/04/03 d 153.84 5.00 15.0	09/04/03		d	153.84	5.00	15.0										
11/20/2003 - 153.84 5.00 15.0 6.31 147.53	11/20/2003			153.84	5.00	15.0	6.31	147.53			'					

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses
Station #374, 6407 Telegraph Ave., Oakland, CA

				Top of	Bottom of		Water Level			Concentra	tions in (µ;	g/L)			
Well and Sample Date	P/NP	Comments	TOC (feet msl)	Screen (ft bgs)	Sereen (It bgs)	DTW (feet bgs)	Elevation (feet msl)	GRO/ TPHg	Benzene	Tolucne	Ethyl- Benzene	Total Xylenes	мтве	DO (mg/L)	pН
MW-6 Cont.						:									
02/02/2004			159.41	5.00	15.0	4.78	154.63								
05/14/2004	· 		159.41	5.00	15.0	6.29	153.12								
09/02/2004		d	159.41	5.00	15.0	5.79	153.62								
11/04/2004		d	159.41	5.00	15.0										
02/08/2005			159.41	5.00	15.0	5.13	154.28								
05/09/2005		} ;	159.41	5.00	15.0	4.52	154.89								
08/11/2005	P		159.41	5.00	15.0	5.02	154,39	<50	<0.50	<0.50	<0.50	<0.50	7.9	2.1	6.6
11/18/2005		<i>!</i>	159.41	5.00	15.0	6.31	153.10								
02/16/2006			159.41	5.00	15.0	4.24	155.17								
5/30/2006			159.41	5.00	15.0	4.45	154.96								
8/24/2006	P		159.41	5.00	15.0	5.18	154.23	<50	<0.50	<0.50	<0.50	<0.50	12	3.4	6.8

SYMBOLS AND ABBREVIATIONS:

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

DO = Dissolved oxygen

DTW = Depth to water in ft bgs

ft bgs = Fect 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 = Well was not purged prior to sampling

P = Well was purged prior to sampling

TOC = Top of casing measured in ft MSL

TPH-g = Total petroleum hydrocarbons as gasoline

μg/L = Micrograms per liter

BTEX = Benzene, toluene, ethylbenzene and xylenes

FOOTNOTES:

- a = Chromatogram pattern: Gasoline C6-C10 for GRO/TPH-g.
- b = Beginning this quarter, groundwater samples were analyzed by EPA method 8260B for TPH-g, BTEX, and fuel oxygenates.
- c = Wells gauged with ORC sock in well.
- d = Well inaccessible
- e = The hydrocarbon result for GRO was partly due to individual peaks in the quantitative range.
- f = Well resurveyed on 1/27/2004
- g = Upon review of survey data (1/27/2004), TOC elevation for MW-4 is actually 162.47 ft.
- h = Upon review of survey data (1/27/2004), MW-5 was not surveyed from the TOC. MW-5 was surveyed from the pavement due to inaccessibility to the TOC. Therefore, survey data for MW-5 from the TOC is unavailable.

NOTES:

Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPH-g was changed to GRO. The resulting data may be impacted by the potential of non-TPH-g analytes within the requested fuel range resulting in a higher concentration being reported.

Beginning in the second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12.

Values for DO and pH were obtained through field measurements.

The DTW's and TOC's for wells MW-5 and MW-6 were taken from Delta Environmental sampling sheets because the well logs were not available.

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 #374, 6407 Telegraph Ave., Oakland, CA

Well and					ons in (µg/L)		pii Arc., Oa		
Sample Date	Ethanol	TBA	мтве	DIPE	ETBE	TAME	1,2-DCA	EDB	Comments
MW-1									
5/23/2003	<20,000	<4,000	1,600	<100	<100	<100			
11/20/2003	<2,000	<400	1,500	<10	<10	<10			a
05/14/2004	<5,000	<1,000	1,200	<25	<25	<25	<25	<25	•
09/02/2004	<1,000	<200	660	<5.0	<5.0	<5.0	<5.0	<5.0	
11/04/2004	<2,000	<400	580	<10	<10	<10	<10	<10	
02/08/2005	<2,000	<400	610	<10	<10	<10	<10	<10	
05/09/2005	<1,000	<200	620	<5.0	<5.0	<5.0	<5.0	<5.0	a
08/11/2005	<500	250	390	<2.5	<2.5	2.6	<2.5	<2.5	a
11/18/2005	<500	<100	340	<2.5	<2.5	<2.5	<2.5	<2.5	a
02/16/2006	<1,500	<100	340	<2.5	<2.5	<2.5	<2.5	<2.5	
5/30/2006	<1,500	<100	420	<2.5	<2.5	<2.5	<2.5	<2.5	a
8/24/2006	<3,000	<200	180	<5.0	<5.0	<5.0	<5.0	<5.0	
MW-2									
5/23/2003	<100	<20	55	<0.50	<0.50	0.53			
02/02/2004	<100	<20	37	<0.50	<0.50	<0.50	<0.50	<0.50	
09/02/2004	<500	<100	67	<2.5	<2.5	<2.5	<2.5	<2.5	
02/08/2005	<100	<20	30	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	35	<0.50	<0.50	<0.50	<0.50	<0.50	a
02/16/2006	<300	<20	39	<0.50	<0.50	<0.50	<0.50	<0.50	_
8/24/2006	<300	<20	25	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-3									
5/23/2003	<100	<20	1,6	<0.50	<0.50	<0.50			
09/02/2004	<100	<20	6.5	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	11	<0.50	<0.50	<0.50	<0.50	<0.50	a
8/24/2006	<300	<20	7.6	<0.50	<0.50	<0.50	<0.50	<0.50	•
MW-4									
5/23/2003	<10,000	<2,000	<50	<50	<50	<50			
02/02/2004	<500	<100	29	<2.5	<2.5	2.6	<2.5	<2.5	
09/02/2004	<200	<40	28	<1.0	<1.0	<1.0	<1.0	<1.0	
02/08/2005	<5,000	<1,000	45	<25	<25	<25	<25	<25	

Table 2. Summary of Fuel Additives Analytical Data Station #374, 6407 Telegraph Ave., Oakland, CA

Well and				Concentrati	ons in (µg/L)				
Sample Date	Ethanol	ТВА	MTBE	DIPE	ЕТВЕ	TAME	1,2-DCA	EDB	Comments
MW-4 Cont.									
08/11/2005	<2,000	<400	32	<10	<10	<10	<10	<10	
02/16/2006	<6,000	<400	35	<10	<10	<10	<10	<10	
8/24/2006	<1,500	<100	39	<2.5	<2.5	<2.5	<2.5	<2.5	
MW-5									
1/29/2003	<40	<20	<0.50	<0.50	<0.50	<0.50			
5/23/2003	<100	<20	<0.50	<0.50	<0.50	<0.50			
9/4/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
09/02/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	<0.50	<0,50	<0.50	<0.50	<0.50	<0.50	
8/24/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-6									
5/23/2003	<100	<20	9.4	<0.50	<0.50	<0.50			
08/11/2005	<100	<20	7.9	<0.50	<0.50	<0.50	<0.50	<0.50	a
8/24/2006	<300	<20	12	<0.50	<0.50	<0.50	<0.50	<0.50	

SYMBOLS AND ABBREVIATIONS:

-- = Not analyzed/applicable/measured/available

< = Not detected at or above the laboratory reporting limi

1,2-DCA = 1,2-Dichloroethane

DIPE = Di-isopropyl ether

EDB = 1,2-Dibromoethane

ETBE = Ethyl tert-butyl ether

MTBE = Methyl tert-butyl ether

TAME = tert-Amyl methyl ether

TBA = tert-Butyl alcohol

μg/L = Micrograms per Liter

FOOTNOTES:

a = The continuing calibration verification for ethanol was outside of client contractual limits, however, it was within method acceptance limits. The data should still be useful for its intended purpose.

NOTES:

All volatile organic compounds analyzed using EPA Method 8260B.

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

Table 3. Historical Ground-Water Flow Direction and Gradient Station #374, 6407 Telegraph Ave., Oakland, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
1/31/1996	Southwest	0.04
4/10/1996	Southwest	0.04
7/16/1996	Southwest	0.03
10/14/1996	Southwest	0.03
3/27/1997	Southwest	0.04
5/27/1997	Southwest	0.03
8/12/1997	Southwest	0.04
11/17/1997	Southwest	0.03
3/16/1998	Southwest	0.03
5/12/1998	Southwest	0.04
7/27/1998	Southwest	0.04
10/15/1998	Southwest	0.02
2/18/1999	Southwest	0.05
5/24/1999	Southwest	0.03
8/27/1999	Southwest	0.03
10/26/1999	Southwest	0.03
2/3/2000	Southwest	0.047
6/20/2000	Southwest	0.035
9/28/2000	Southwest	0.034
12/17/2000	Southwest	0.032
3/23/2001	Southwest	0.034
6/21/2001	Southwest	0.032
9/23/2001	Southwest	0.029
12/31/2001	Southwest	0.043
3/21/2002	Southwest	0.038
4/17/2002	Southwest	0.031
8/12/2002	Southwest	0.032
12/6/2002	Southwest	0.020
1/29/2003	Southwest	0.027
5/23/2003	Southwest	0.039
9/4/2003	Southwest	0.033
11/20/2003	Southwest	0.029
2/2/2004	Southwest	0.043 (a)
5/14/2004	Southwest	0.037 (a)
9/2/2004	Southwest	0.027 (a)
11/4/2004	Southwest	0.034 (a)
2/8/2005	Southwest	0.061 (a)
5/9/2005	Southwest	0.08 (a)
8/11/2005	Southwest	0.06 (a)
11/18/2005	Southwest	0.07 (a)
2/16/2006	Southwest	0.09 (a)
5/30/2006	Southwest	0.06 (a)

Table 3. Historical Ground-Water Flow Direction and Gradient Station #374, 6407 Telegraph Ave., Oakland, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
8/24/2006	Southwest	0.03

a = Gradients protentially suspect due to error in MW-4 and MW-5 TOC measuring point elevations discovered third quarter 2006.

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 27, 2006

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

Groundwater Sampling Data Package

ARCO Service Station #374 6407 Telegraph Avenue Oakland, CA Field Work Performed: 08/24/06

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.

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.

21 September, 2006

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

RE: ARCO #0374, Oakland, CA Work Order: MPH0890

Enclosed are the results of analyses for samples received by the laboratory on 08/24/06 18:25. 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 #0374, Oakland, CA MPH0890
1333 Broadway, Suite 800 Project Number: G0C21-0010 Reported:
Oakland CA, 94612 Project Manager: Lynelle Onishi 09/21/06 15:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	МРН0890-01	Water	08/24/06 11:35	08/24/06 18:25
MW-2	MPH0890-02	Water	08/24/06 10:35	08/24/06 18:25
MW-3	МРН0890-03	Water	08/24/06 10:12	08/24/06 18:25
MW-4	МРН0890-04	Water	08/24/06 11:00	08/24/06 18:25
MW-5	MPH0890-05	Water	08/24/06 09:20	08/24/06 18:25
MW-6	МРН0890-06	Water	08/24/06 09:50	08/24/06 18:25
TB-374-08242006	МРН0890-07	Water	08/24/06 00:00	08/24/06 18:25

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 custody seals.





Project: ARCO #0374, Oakland, CA

Project Number: G0C21-0010 Project Manager: Lynelle Onishi MPH0890 Reported: 09/21/06 15:21

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-1 (MPH0890-01) Water Sa	ampled: 08/24/06 11:35	Received:	08/24/06 1	8:25					
Gasoline Range Organics (C4-C1	2) 95	50	ug/l	1	6102002	09/02/06	09/02/06	LUFT GCMS	•••
Surrogate: 1,2-Dichloroethane-d4		117 %	60-14	45	n	"	n	"	
MW-2 (MPH0890-02) Water Sa	ampled: 08/24/06 10:35	Received:	08/24/06 1	8:25					
Gasoline Range Organics (C4-C1	2) 60	50	ug/l	1	6102002	09/02/06	09/02/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		129 %	60-14	15	"	Ħ	а	n	
MW-3 (MPH0890-03) Water Sa	mpled: 08/24/06 10:12	Received:	08/24/06 1	8:25					
Gasoline Range Organics (C4-C12)) ND	50	ug/l	1	6102002	09/02/06	09/02/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		131 %	60-14	15	n	п	"	"	
MW-4 (MPH0890-04) Water Sa	mpled: 08/24/06 11:00	Received:	08/24/06 1	8:25					
Gasoline Range Organics (C4-C1	2) 3600	1000	ug/l	20	6102002	09/02/06	09/02/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		142 %	60-14	1 5	"	n	"	D	
MW-5 (MPH0890-05) Water Sa	mpled: 08/24/06 09:20	Received:	08/24/06 1	8:25					
Gasoline Range Organics (C4-C12)	ND	50	ug/l	ı	6102008	09/02/06	09/03/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		117%	60-14	15	"	n	"	"	
MW-6 (MPH0890-06) Water Sa	mpled: 08/24/06 09:50	Received:	08/24/06 1	8:25					
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6102008	09/02/06	09/03/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		119 %	60-14	15	"	"	tt	n	





Project: ARCO #0374, Oakland, CA

Project Number: G0C21-0010 Project Manager: Lynelle Onishi MPH0890 Reported: 09/21/06 15:21

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MPH0890-01) Water	Sampled: 08/24/06 11:35	Received:	08/24/06 1	8:25					
tert-Amyl methyl ether	ND	5.0	ug/l	10	6102003	09/02/06	09/03/06	EPA 8260B	
Benzene	ND	5.0	н	**	u	п	17	h	
tert-Butyl alcohol	ND	200	u	**	11	ij	17	u	
Di-isopropyl ether	ND	5.0	11	tt	11	11	ч	•	
1,2-Dibromoethane (EDB)	ND	5.0	11	11	11	**	11	**	
1,2-Dichloroethane	ND	5.0	Ħ	D	n	'n	1)	n	
Ethanol	ND	3000	tr	μ	U	n	11	u u	
Ethyl tert-butyl ether	ND	5.0	U	11	ii .	n	11	н	
Ethylbenzene	ND	5.0	11	17	"	11	"	11	
Methyl tert-butyl ether	180	5.0	u	ij	U	11	It	**	
Toluene	ND	5.0	U	**	n	**	lt .	**	
Xylenes (total)	ND	5.0	1)		17	17	"	D.	
Surrogate: Dibromofluoromethan	пе	94 %	75-13	0	"	н	v	<i>B</i>	
Surrogate: 1,2-Dichloroethane-de	4	87%	60-14	5	"	n	"	n	
Surrogate: Toluene-d8		90 %	70-13	0	tt.	n	"	"	
Surrogate: 4-Bromofluorobenzen	e	82 %	60-12	0	n	"	"	"	
MW-2 (MPH0890-02) Water	Sampled: 08/24/06 10:35	Received:	08/24/06 13	3:25					
tert-Amyl methyl ether	ND	0.50	ug/l	1	6102003	09/02/06	09/03/06	EPA 8260B	
Benzene	ND	0.50	11	п	#	It	μ	n	
tert-Butyl alcohol	ND	20	*11	u	ıı	tr	11	n	
Di-isopropyl ether	ND	0.50	**	"	11	п	**	11	
1,2-Dibromoethane (EDB)	ND	0.50	tt	u	11	II .	**	11	
1,2-Dichloroethane	ND	0.50	U	U	1)	1)	11	**	
Ethanol	ND	300	11	11	11	17	u	tt	
Ethyl tert-butyl ether	ND	0.50	U	**	11	**	n .	U	
Ethylbenzene	ND	0.50	IJ	**	**	rt	ŋ	п	
Methyl tert-butyl ether	25	0.50	11	l)	11	ii.	11	u	
Toluene	ND	0.50	11	U	hr	D	11	11	
Xylenes (total)	ND	0.50	11		n	II .	**	11	
Surrogate: Dibromofluoromethan	e	95 %	75-13	0	"	"	и	17	
Surrogate: 1,2-Dichloroethane-de	4	89 %	60-14.	5	"	"	TI .	11	
Surrogate: Toluene-d8		88 %	70-13	0	tr	"	n	н	
Surrogate: 4-Bromofluorobenzene	е	84 %	60-12	0	n	"	"	"	





Project: ARCO #0374, Oakland, CA

Project Number: G0C21-0010 Project Manager: Lynelle Onishi MPH0890 Reported: 09/21/06 15:21

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-3 (MPH0890-03) Water	Sampled: 08/24/06 10:12	Received:	08/24/06	18:25					
tert-Amyl methyl ether	ND	0.50	ug/l	1	6102003	09/02/06	09/03/06	EPA 8260B	
Benzene	ND	0.50	II	н	If	**	n	v	
tert-Butyl alcohol	ND	20	11	ŋ	0	8 7	11	u	
Di-isopropyl ether	ND	0.50	**)1	"	**	**	n	
1,2-Dibromoethane (EDB)	ND	0.50	**	11	11	II .	"	**	
1,2-Dichloroethane	ND	0.50	ш	**	"	n	Ħ	97	
Ethanol	ND	300	u	**	**	и	11	н	
Ethyl tert-butyl ether	ND	0.50	и	11	H	11	IJ	II.	
Ethylbenzene	ND	0.50	n	"	"	97	11	п	
Methyl tert-butyl ether	7.6	0.50	71	17	tt	**	**	11	
Toluene	ND	0.50	**	II .	ŋ	fr	tt	71	
Xylenes (total)	ND	0.50	tr	17	11	U	U	•	
Surrogate: Dibromofluoromethan	ne	94 %	75-1.	30	n	n	n	ıt	
Surrogate: 1,2-Dichloroethane-d	14	86 %	60-1	45	"	"	n	n	
Surrogate: Toluene-d8		88 %	70-1.	30	"	"	"	n	
Surrogate: 4-Bromofluorobenzen	ne	87 %	60-1.	20	n	n	"	n	
MW-4 (MPH0890-04) Water	Sampled: 08/24/06 11:00	Received:	08/24/06 1	18:25					
tert-Amyl methyl ether	ND	2.5	ug/l	5	6102003	09/02/06	09/03/06	EPA 8260B	
tert-Butyl alcohol	ND	100	u	ŧŧ	**	31	n	II .	
Di-isopropyl ether	ND	2.5	U	tr	11	11	11	II	
1,2-Dibromoethane (EDB)	ND	2.5	11	U	U	**	**	11	
1,2-Dichloroethane	ND	2.5	U	D	11	**	tr	11	
Ethanol	ND	1500	11	n) j	п	U	11	
Ethyl tert-butyl ether	ND	2.5	**)1	11	п	II	It	
Ethylbenzene	110	2.5	**	**	"	11	0	п	
Methyl tert-butyl ether	39	2.5	U	lt .	11	11	*11	II.	
Toluene	21	2.5	n	O	11	**	**	11	
Xylenes (total)	70	2.5	П	11	**	n	ff	11	
Surrogate: Dibromofluoromethan	пе	94 %	75-1.	30	"	"	и	"	
Surrogate: 1,2-Dichloroethane-d	4	84 %	60-14	45	,,	"	n	tr.	
Surrogate: Toluene-d8		94 %	70-13	<i>30</i>	"	n	"	ıı.	
Surrogate: 4-Bromofluorobenzen	e	96 %	60-12	20	υ	u	er .	n	





Project: ARCO #0374, Oakland, CA

Project Number: G0C21-0010 Project Manager: Lynelle Onishi MPH0890 Reported: 09/21/06 15:21

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

Benzene	1400	5.0	ug/l	10	6105028	09/05/06	09/06/06	EPA 8260B
Surrogate: Dibromofluorometh	ane	98 %	75-1	30	n	11	"	"
Surrogate: 1,2-Dichloroethane-	d4	96 %	60-1	45	"	n	"	"
Surrogate: Toluene-d8		104 %	70-1	30	"	n	"	u
Surrogate: 4-Bromofluorobenze	ene	96 %	60-1	20	"	"	n	"
MW-5 (MPH0890-05) Water	Sampled: 08/24/06 09:20	Received:	08/24/06	18:25				
tert-Amyl methyl ether	ND	0.50	ug/l	1	6102003	09/02/06	09/03/06	EPA 8260B
Benzene	ND	0.50	11	11	11	и	"	11
tert-Butyl alcohol	ND	20	"	***	*1	n	rt	11
Di-isopropyl ether	ND	0.50	11	ri	tr	17	U	"
1,2-Dibromoethane (EDB)	ND	0.50	11	II.	II	"	U	fr
1,2-Dichloroethane	ND	0.50	11	n	n	rf	II .	н
Ethanol	ND	300	17	п	II .	n	11	u

1,2-Dibromoethane (EDB)	ND	0.50	11	n.	Ir	**	U	fr	
1,2-Dichloroethane	ND	0.50	51	n	li .	rt	11	n	
Ethanol	ND	300	17	II .	II .	0	11	u	
Ethyl tert-butyl ether	ND	0.50	11	1)	11	н	11	n	
Ethylbenzene	ND	0.50	D	11	11	п	ts .	11	
Methyl tert-butyl ether	ND	0.50	II.	*1	***	11	U	Ħ	
Toluene	ND	0.50	IJ	er	**	**	11	tr .	
Xylenes (total)	ND	0.50	11	IF	D	tt	n	п	
Surrogate: Dibromofluoromethane		93 %	75-13	0	"	n	"	"	
Surrogate: 1,2-Dichloroethane-d4		83 %	60-14	5	n	"	"	"	
Surrogate: Toluene-d8		89 %	70-13	0	tt.	n	rt	"	
Surrogate: 4-Bromofluorobenzene		84 %	60-12	0	"	"	n	"	

MANU COMPTIONO OC Mater	Committee - 00/24/07 00:50	D
MW-6 (MPH0890-06) Water	Sampled: 08/24/06 09:50	Received: 08/24/06 18:25

tert-Amyl methyl ether	ND	0.50	ug/l	1	6105028	09/05/06	09/06/06	EPA 8260B	
Benzene	ND	0.50	11	19	11	u	11	U	
tert-Butyl alcohol	ND	20	**	u	II	и	**	11	
Di-isopropyl ether	ND	0.50	tr	11	11	ij	"	**	
1,2-Dibromoethane (EDB)	ND	0.50	U	11	11	17	ly .	ŧŧ	
1,2-Dichloroethane	ND	0.50	п	11	**	17	II .	It	
Ethanol	ND	300	п	**	*	t•	"	п	
Ethyl tert-butyl ether	ND	0.50	11	**	u	н	11	II .	
Ethylbenzene	ND	0.50	'n	п	1F	н	**	11	
Methyl tert-butyl ether	12	0.50	**	n	tr	U	**	11	
Toluene	ND	0.50	f#	"	и	u	Ir	**	
Xylenes (total)	ND	0.50	lt .	U	11	n	п	H	
Surrogate: Dibromofluoromethan	e	97 %	75-1	30	"	rt	n	n	





Project: ARCO #0374, Oakland, CA

Project Number: G0C21-0010 Project Manager: Lynelle Onishi MPH0890 Reported: 09/21/06 15:21

Volatile Organic Compounds by EPA Method 8260B

TestAmerica - Morgan Hill, CA

Analyte MW-6 (MPH0890-06) Water	Result Sampled: 08/24/06 09:50	Reporting Limit Received:	Units 08/24/06	Dilution 18:25	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d-	4	93 %	60-	145	6105028	09/05/06	09/06/06	EPA 8260B	
Surrogate: Toluene-d8		89 %	70-	130	"	n	n	"	
Surrogate: 4-Bromofluorobenzen	e	80 %	60-	120	н	"	"	"	





Project: ARCO #0374, Oakland, CA

Project Number: G0C21-0010 Project Manager: Lynelle Onishi MPH0890 Reported: 09/21/06 15:21

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 6I02002 - EPA 5030B P/T / L	UFT GCMS								,	
Blank (6I02002-BLK1)				Prepared	& Analyze	ed: 09/02/	06			
Gasoline Range Organics (C4-C12)	ND	50	ug/l						· · · · · · · · · · · · · · · · · · ·	
Surrogate: 1,2-Dichloroethane-d4	2.98		"	2.50		119	60-145			
Laboratory Control Sample (6102002-B	SS1)			Prepared	& Analyze	ed: 09/02/	06			
Gasoline Range Organics (C4-C12)	465	50	ug/l	440		106	75-140			
Surrogate: 1,2-Dichloroethane-d4	3.09		п	2.50		124	60-145			
Matrix Spike (6I02002-MS1)	Source: M	PH0890-01F	RE1	Prepared	& Analyze	ed: 09/02/	06			
Gasoline Range Organics (C4-C12)	2670	250	ug/l	2200	57	119	75-140			
Surrogate: 1,2-Dichloroethane-d4	3.12		"	2.50		125	60-145			
Matrix Spike Dup (6I02002-MSD1)	Source: MI	PH0890-01F	RE1	Prepared	& Analyze	ed: 09/02/	06			
Gasoline Range Organics (C4-C12)	2520	250	ug/l	2200	57	112	75-140	6	20	
Surrogate: 1,2-Dichloroethane-d4	2.94		rr	2.50		118	60-145		, , , , , , , , , , , , , , , , , , , ,	
Batch 6102008 - EPA 5030B P/T / L	UFT GCMS									
Blank (6I02008-BLK1)				Prepared	& Analyze	d: 09/02/	06			
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.88		H	2.50	***************************************	115	60-145			
Laboratory Control Sample (6102008-B	S1)			Prepared	& Analyze	d: 09/02/	06			
Gasoline Range Organics (C4-C12)	485	50	ug/l	440		110	75-140		• • • • • • • • • • • • • • • • • • • •	
Surrogate: 1,2-Dichloroethane-d4	3.16		n	2.50		126	60-145			
Matrix Spike (6I02008-MS1)	Source: MI	PH0906-01		Prepared .	& Analyze	d: 09/02/0	06			
Gasoline Range Organics (C4-C12)	16900	1000	ug/l	8800	12000	56	75-140			LN
Surrogate: 1,2-Dichloroethane-d4	3.52		"	2.50		141	60-145	· · · · · · · · · · · · · · · · · · ·		





Project: ARCO #0374, Oakland, CA

Project Number: G0C21-0010 Project Manager: Lynelle Onishi MPH0890 Reported: 09/21/06 15:21

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 6I02008 - EPA 5030B P/T / LUFT GCMS

Matrix Spike Dup (6I02008-MSD1)	Source: MP	H0906-01		Prepared	& Analyze	d: 09/02	/06			
Gasoline Range Organics (C4-C12)	15000	1000	ug/l	8800	12000	34	75-140	12	20	LN
Surrogate: 1,2-Dichloroethane-d4	3.38		"	2.50		135	60-145			



Project: ARCO #0374, Oakland, CA

Spike

Source

Project Number: G0C21-0010 Project Manager: Lynelle Onishi MPH0890 Reported: 09/21/06 15:21

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 6102003 - EPA 5030B P/T /	EPA 8260B									
Blank (6I02003-BLK1)				Prepared	& Analyze	ed: 09/02/0	06			
tert-Amyl methyl ether	ND	0.50	ug/l					•		
Benzene	ND	0.50	п							
tert-Butyl alcohol	ND	20	1)							
Di-isopropyl ether	ND	0.50	11							
1,2-Dibromoethane (EDB)	ND	0.50	1)							
1,2-Dichloroethane	ND	0.50	**							
Ethanol	ND	300	Ħ							
Ethyl tert-butyl ether	ND	0.50	U							
Ethylbenzene	ND	0.50	11							
Methyl tert-butyl ether	ND	0.50	п							
Toluene	ND	0.50	II .							
Xylenes (total)	ND	0.50								
Surrogate: Dibromofluoromethane	2.42		n	2.50		97	75-130			~~~
Surrogate: 1,2-Dichloroethane-d4	2.16		#	2.50		86	60-145			
Surrogate: Toluene-d8	2.21		п	2.50		88	70-130			
Surrogate: 4-Bromofluorobenzene	2.13		n	2.50		85	60-120			
Laboratory Control Sample (6102003-	·BS1)			Prepared a	& Analyze	d: 09/02/0)6			
tert-Amyl methyl ether	8.47	0.50	ug/l	10.0		85	65-135			
Benzene	10.8	0.50	u	10.0		108	70-125			
tert-Butyl alcohol	213	20	u	200		106	60-135			
Di-isopropyl ether	10.2	0.50	п	10.0		102	70-130			
1,2-Dibromoethane (EDB)	9.02	0.50	u	10.0		90	80-125			
1,2-Dichloroethane	9.26	0.50	11	10.0		93	75-125			
Ethanol	271	300	11	200		136	15-150			
Ethyl tert-butyl ether	8.91	0.50	**	10.0		89	65-130			
Ethylbenzene	10.6	0.50	**	10.0		106	70-130			
Methyl tert-butyl ether	8.91	0.50	"	10.0		89	50-140			
Toluene	10.9	0.50	U	10.0		109	70-120			
Xylenes (total)	31.9	0.50	U	30.0		106	80-125			
Surrogate: Dibromofluoromethane	2.34		"	2.50		94	75-130			
Surrogate: 1,2-Dichloroethane-d4	1.98		**	2.50		79	60-145			
Surrogate: Toluene-d8	2.33		"	2.50		93	70-130			
Surrogate: 4-Bromofluorobenzene	2.25		n	2.50		90	60-120			





Project: ARCO #0374, Oakland, CA

Spike

Source

%REC

Project Number: G0C21-0010
Project Manager: Lynelle Onishi

MPH0890 Reported: 09/21/06 15:21

RPD

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 6102003 - EPA 5030B P/T / E	PA 8260B									
Matrix Spike (6I02003-MS1)	Source: MP	H0892-01		Prepared .	& Analyze	ed: 09/02/	06			
tert-Amyl methyl ether	8.41	0.50	ug/l	0.01	ND	84	65-135			
Benzene	10.6	0.50	11	10.0	ND	106	70-125			
tert-Butyl alcohol	210	20	rr	200	ND	105	60-135			
Di-isopropyl ether	10.2	0.50	H	10.0	ND	102	70-130			
1,2-Dibromoethane (EDB)	9.00	0.50	"	10.0	ND	90	80-125			
1,2-Dichloroethane	9.07	0.50	11	10.0	ND	91	75-125			
Ethanol	259	300	n	200	ND	130	15-150			
Ethyl tert-butyl ether	8.94	0.50	*1	10.0	ND	89	65-130			
Ethylbenzene	10.3	0.50	**	10.0	ND	103	70-130			
Methyl tert-butyl ether	9.07	0.50	U	10.0	ND	91	50-140			
Toluene	10.6	0.50	It	10.0	0.30	103	70-120			
Xylenes (total)	31.6	0.50	II	30.0	ND	105	80-125			
Surrogate: Dibromofluoromethane	2.38		"	2.50		95	75-130			***************************************
Surrogate: 1,2-Dichloroethane-d4	2.11		"	2.50		84	60-145			
Surrogate: Toluene-d8	2.34		n	2.50		94	70-130			
Surrogate: 4-Bromofluorobenzene	2.17		,,	2.50		87	60-120			
Matrix Spike Dup (6I02003-MSD1)	Source: MP	H0892-01		Prepared a	& Analyze	d: 09/02/	06			
ert-Amyl methyl ether	8.57	0.50	ug/l	10.0	ND	86	65-135	2	25	
Benzene	10.6	0.50	u	10.0	ND	106	70-125	0	15	
ert-Butyl alcohol	212	20	ij	200	ND	106	60-135	0.9	35	
Di-isopropyl ether	10.3	0.50	11	10.0	ND	103	70-130	1	35	
1,2-Dibromoethane (EDB)	9.15	0.50	u	10.0	ND	92	80-125	2	15	
1,2-Dichloroethane	9.34	0.50	"	10.0	ND	93	75-125	3	10	
Ethanol	257	300	"	200	ND	128	15-150	0.8	35	
Ethyl tert-butyl ether	9.17	0.50	H	10.0	ND	92	65-130	3	35	
Ethylbenzene	10.4	0.50	п	10.0	ND	104	70-130	1	15	
Methyl tert-butyl ether	9.26	0.50	Iţ	10.0	ND	93	50-140	2	25	
Foluene	10.5	0.50	*1	10.0	0.30	102	70-120	0.9	15	
Xylenes (total)	31.4	0.50	II .	30.0	ND	105	80-125	0.6	15	
Surrogate: Dibromofluoromethane	2.43		"	2.50		97	75-130			***************************************
Surrogate: 1,2-Dichloroethane-d4	2.12		#	2.50		85	60-145			
Surrogate: Toluene-d8	2.31		"	2.50		92	70-130			
Surrogate: 4-Bromofluorobenzene	2.18		a	2.50		87	60-120			





Project: ARCO #0374, Oakland, CA

Project Number: G0C21-0010
Project Manager: Lynelle Onishi

MPH0890 Reported: 09/21/06 15:21

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

											1
		Reporting		Spike	Source		%REC		RPD		ı
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

Blank (6I05028-BLK1)	Prepared & Analyzed: 09/05/06								
tert-Amyl methyl ether	ND	0.50	ug/l		-				
Benzene	ND	0.50	n						
tert-Butyl alcohol	ND	5.0	n						
Di-isopropyl ether	ND	0.50	IJ						
1,2-Dibromoethane (EDB)	ND	0.50	11						
1,2-Dichloroethane	ND	0.50	**						
Ethanol	ND	300	**						
Ethyl tert-butyl ether	ND	0.50	n						
Ethylbenzene	ND	0.50	U						
Methyl tert-butyl ether	ND	0.50	п						
Toluene	ND	0.50	0						
Xylenes (total)	ND	0.50	0						
Surrogate: Dibromofluoromethane	2.32		r	2.50	93	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.12		· n	2.50	85	60-145			
Surrogate: Toluene-d8	2.33		n	2.50	93	70-130			
Surrogate: 4-Bromofluorobenzene	2.13		"	2.50	85	60-120			
Laboratory Control Sample (6105028-BS1)				Prepared & An	alyzed: 09/05/	06			
tert-Amyl methyl ether	10.4	0.50	ug/l	10.0	104	65-135			
Benzene	11.6	0.50	tr .	10.0	116	70-125			
tert-Butyl alcohol	214	5.0	U	200	107	60-135			
Di-isopropyl ether	11.6	0.50		10.0	116	70-130			
1,2-Dibromoethane (EDB)	11.5	0.50	ш	0.01	115	80-125			
1,2-Dichloroethane	10.0	0.50	п	10.0	100	75-125			
Ethanol	210	300	11	200	105	15-150			
Ethyl tert-butyl ether	12.0	0.50	17	10.0	120	65-130			
Ethylbenzene	11.9	0.50	11	10.0	119	70-130			
Methyl tert-butyl ether	11.8	0.50	**	10.0	118	50-140			
Toluene	11.2	0.50	FF	10.0	112	70-120			
Xylenes (total)	36.6	0.50	H	30.0	122	80-125			
Surrogate: Dibromofluoromethane	2,41		"	2.50	96	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.21		"	2.50	88	60-145			
Surrogate: Toluene-d8	2.49		"	2.50	100	70-130			
Surrogate: 4-Bromofluorobenzene	2.47		"	2.50	99	60-120			





Project: ARCO #0374, Oakland, CA

Spike

Source

Project Number: G0C21-0010 Project Manager: Lynelle Onishi MPH0890 Reported: 09/21/06 15:21

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 6I05028 - EPA 5030B P/T / E	PA 8260B									
Matrix Spike (6I05028-MS1)	Source: MF	H0904-03		Prepared	ed: 09/05/					
tert-Amyl methyl ether	22.7	1.0	ug/l	20.0	ND	114	65-135			
Benzene	427	1.0	H	20.0	380	235	70-125			BB,LM, EY
tert-Butyl alcohol	446	10	10	400	ND	112	60-135			
Di-isopropyl ether	28.2	1.0	· ·	20.0	ND	141	70-130			LM
1,2-Dibromoethane (EDB)	24.3	1.0	n n	20.0	ND	122	80-125			
1,2-Dichloroethane	23.3	1.0	11	20.0	0.46	114	75-125			
Ethanol	476	600	11	400	ND	119	15-150			
Ethyl tert-butyl ether	27.2	1.0	11	20.0	ND	136	65-130			LM
Ethylbenzene	49.7	1.0	11	20.0	23	134	70-130			LM
Methyl tert-butyl ether	52.5	1.0	11	20.0	26	132	50-140			
Toluene	25.6	1.0	ŧŧ	20.0	1.9	118	70-120			
Xylenes (total)	88.1	1.0	tf	60.0	12	127	80-125			LM
Surrogate: Dibromofluoromethane	2.41		"	2.50		96	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.44		"	2.50		98	60-145			
Surrogate: Toluene-d8	2.68		"	2.50		107	70-130			
Surrogate: 4-Bromofluorobenzene	2.62		"	2.50		105	60-120			
Matrix Spike Dup (6I05028-MSD1)	Source: MP	H0904-03		Prepared	& Analyze	d: 09/05/	06			
tert-Amyl methyl ether	19.7	1.0	ug/l	20.0	ND	98	65-135	14	25	
Benzene	373	1.0	17	20.0	380	0	70-125	14	15	BB,LN
tert-Butyl alcohol	415	10	11	400	ND	104	60-135	7	35	
Di-isopropyl ether	22.2	1.0	**	20.0	ND	111	70-130	24	35	
1,2-Dibromoethane (EDB)	21.6	1.0	**	20.0	ND	108	80-125	12	15	
1,2-Dichloroethane	18.9	1.0	tt	20.0	0.46	92	75-125	21	10	BA,BB
Ethanol	403	600	n	400	ND	101	15-150	17	35	
Ethyl tert-butyl ether	22.4	1.0	11	20.0	ND	112	65-130	19	35	
Ethylbenzene	45.4	1.0	U	20.0	23	112	70-130	9	15	
Methyl tert-butyl ether	44.9	1.0	11	20.0	26	95	50-140	16	25	
Toluene	24.1	1.0	11	20.0	1.9	111	70-120	6	15	
Xylenes (total)	83.5	1.0	li	60.0	12	119	80-125	5	15	
Surrogate: Dibromofluoromethane	2.38		"	2.50		95	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.17		"	2.50		87	60-145			
Surrogate: Toluene-d8	2.65		,,	2.50		106	70-130			
Surrogate: 4-Bromofluorobenzene	2.46		"	2.50		98	60-120			





URS Corporation [Arco]	Project:	ARCO #0374, Oakland, CA	MPH0890
1333 Broadway, Suite 800	Project Number: (G0C21-0010	Reported:
Oakland CA, 94612	Project Manager:]	Lynelle Onishi	09/21/06 15:21

Notes and Definitions

LN MS and/or MSD below acceptance limits. See Blank Spike(LCS).

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

EY Result exceeds normal dynamic range; reported as a min. est.

BB,LN Sample > 4x spike concentration.

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

BA,BB Relative percent difference out of control. Sample > 4x spike concentration.

DET Analyte DETECTED

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

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference



Chain of Custody Record

Project Name: Analytical for QMR sampling

BP BU/AR Region/Enfos Segment:

BP > Americas > West Coast > Retail > WCBU > CA > Central > 374 > HistoricalBL

State or Lead Regulatory Agency:

California Regional Water Quality Control Board - San Fra

Requested Due Date (mm/dd/yy):

10 Day TAT

rageor
Тетр:
Тетр:
Direction:

Lab Name: Sequoia	BP/AR Facility No.: 374		
Address: 885 Jarvis Drive		Consultant/Contractor: URS	
Morgan Hill, CA 95037	BP/AR Facility Address: 6407 Telegraph Ave., Oakland, CA 94609 Site Lat/Long: 37,850526/-122,260	Address: 1333 Broadway, Suite 800	
Lab PM: Lisa Race / Katt Min	Colifornia Cil i IZPazz	Oakland, CA 94612	
Tele/Fax: 408.782.8156 / 408.782.6308	Profess Project N. Goden Co.	Consultant/Contractor Project No.: 38487519	
BP/AR PM Contact: Paul Supple		Consultant/Contractor PM: Barb Jakub	
Address: P.O. Box 6549	Phase/WBS: 04 - Mon/Remed by Natural Attenuation .: Report Type & QC Level: Level 1 with BDF		
Moraga, CA 94570			
Tele/Fax: 925.299.8891 / 925.299.8872	Sao Flask: U3 - Analytical	E-mail EDD To: jane field@urscorp.com	
Lab Bottle Order No: 374 Matrix	Cost Element. 03 - Succontracted Costs	nvoice to: Atlantic Richfield Company	
Matrix	Preservative Reque	ested Analysis	
Item Samble Description Time Date Water/Liquid	A.A. A.A. A.A. A.A. A.A. A.A. A.A. A.A	Sample Point Lat/Long and Comments	
1 MW-1 . 1135 8/24/06 X	61 3 X X X X X X X		
2 MW-2, 1035			
	or III XXXXX		
3 MW-3 - 1012	9 XXXVV		
4 MW-V - 1100	by XXX		
5 MW-8 - 310			
	05 XXXX		
6 MW-6 . 0980	V4 V X X X		
7 TB-374-08242006 XV	or 2 V X V X		
8		30 DN HOLD	
9			
10			
Sampler's Name: Will Crow pan long	Relinquished By / Affiliation Date Time		
Sampler's Company: Blaine Teil	Time I time	Accepted By / Affiliation Date Time	
Shipment Date:	Sample Cistadon 8/14/06/672 1	(Jante (13ts dan) 3k//0b/ 1632	
Shipment Method:	1 () () () () () () () () () (124 500	
Shipment Tracking No:	8/24/825	TUTE DE (MH) 212 1925	
Special Instructions: CC to real and approachement and approacheme		1303	
REDE			
Custody Seals In Place Yes No Temp Blank	Yes No Cooler Temperature on Receipt		
Distribution: White Copy - Laboratory / Yellow Copy - BP	Yes No Cooler Temperature on Receipt	L& F(C) Trip Blank Yes No	
1. — Tollow Copy "Br	Amando Additional Co. / Pink Copy - Consultant/Contractor	BP COC Rev. 4 10/1/04	

SECUCIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: REC. BY (PRINT) WORKORDER:	BP DUE NOTE NOTE 10 89	0	•	DATE REC'D AT LAB: TIME REC'D AT LAB: DATE LOGGED IN:	1825		•		DRINKING WASTE WA	
CIRCLE THE APPRO	PRIATE RESPONSE	LAB· SAMPLE#	DASH #	CĻIENT ID	CONTAINER DESCRIPTION	PRESERV , ATIVE	pH.	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
Custody Seal(s)	Present / Absent									
i, Odstody Comitor	Intact / Broken*	•							•	
2. Chain-of-Custody	Present / Absent*			:				· · ·	·	/
3. Traffic Reports or :		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·		<u> </u>			
Packing List:	Present / Absent	· ·	<u> </u>		<u> </u>				./.	
4. Airbill:	Airbill / Sticker		 			-	•	./		
·	Present / Absent	<u> </u>	 				-2h	11		
5. Airbill #:			ļ		•	1,,	:(V)	- 00		
6. Sample Labels:	Present / Absent		 		- 1/4	74	170	7.		
7. Sample IDs:	Listed / Not Listed			· · · · · · · · · · · · · · · · · · ·		100	5		•	
	on Chain-of-Custody Intact / Broken* /-					30/	•		•	
8. Sample Condition:	Intact / Broken* /: Leaking*	<u> </u>	 		V)	/				
9. Does information on					/			<u> </u>		
9. Does information of traffic reports and s	amnle lahels:		· ·		/	<u>i.' </u>				
agree?	Yes / No*				/		<u> </u>			·
10. Sample received with			::		·			 ' 		
hold time?	Y9s / No*		<u> </u>	7 3		 	···········	 	 	
11. Adequate sample vol	ume	<u> </u>	 	- /		 		 		
received?	Yes /. No*	<u> </u>	<i>i.</i>			1 3		 		
12. Proper preservatives	used? Yes / No*	<u> </u>				1: 1		 	·	
13. Trip Blank / Temp Bla	ank Received?		 ``	/		1		 		
(circle which, if yes)	Yes/No*	<u> </u>		/			 -	1		
14. Read Temp:	2.0°C		-/	 						
Corrected Temp:	220		//-	-		+				•
ls corrected temp 4	+/-2°C? (es)/ No**		4		<u> </u>				·	
(Acceptance range for sample	s requiring thermal pres.)			 		† ·				
**Exception (if any): ME	TALS / DFF ON ICE									
or Problem COC		tit or		CONTACT PROJECT I	ANAGER AN	D-ATTACH I	RECO	RD OF RE	SOLUTION.	A STATE OF THE PARTY OF THE PAR

Page of

WELL GAUGING DATA

Project # 060824-WC-1 Date 8-24-06 Client URS@374

Site ARCO # 374, Oakland (6407 Telegraph Are.)

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or	Notes
MW-1	0840	4	0901			7.75	26.80	1	
MW-2 MW-3 MW-4 MW-5 MW-6	0827	4				8.00	26.31		
MW-3	0820	Ч				7,00	26.75		
MW-4	0633	Ц	odor			8,26	26.98		
MW-S	0904	4				7.95	23.02		
MW-60	0936	4				5.18	14.63		
·								4	
			_						
							,		
									•

BTS#: 🖒	160854	-WK-1		Station# 37	4		
Sampler:	WL/51	l		Date: 8-24-	06		
Well I.D.:	MW	_{		Well Diameter		(⁴) 6	8
Total Wel	l Depth:	26.80		Depth to Water	1: 7.75		the first state of the state of
Depth to I	ree Produ	ct:		Thickness of F	ree Product	(feet):	
Reference	d to:	€V0	Grade.	D.O. Meter (if	rea'd):	X S),	НАСН
Purge Metho	Well Diamete 1" 2" 3"	Bailer	Autiplier V 0.04 0.16 0.37	Vell Diameter N 4" 6"	<u>Aultiplier</u> 0.65 1.47 1.8 ² * 0.163		
		sposable Bail	er	cambing menou:	Bailer	منامد	
,		e Air Displac			Extraction P	→	
	Elec	tric Submer	ible	Other:			
		ktraction Pum	p				
		· :	······································				
Top of Scree	en:		If well is listed as a	no-purge, confirm	that water leve	el is below	the top
			of screen. Otherwi	se, the well must be	purged.	······	
	1 Case Volu	me (Gals.)	X Specified Vo		36.9 Ga		
			Conductivity		1		
Time	Temp (°F)	pH	(mS or µS)	Gals. Removed	Observation	ons	
1125	67.0	7.2	[013	12.3	odos		
1127	67.2	6.9	get (24.6			
1130	65.7	6.9	951	36.9			· · · · · · · · · · · · · · · · · · ·
Did well	dewater?	Yes	No	Gallons actual	ly evacuate	d: 365	}
Sampling	Time:	1135		Sampling Date	· · · · · · · · · · · · · · · · · · ·		-
Sample I	.D.: Mh) (Laboratory:	Pace Segi		Other TA
Analyzed	l for:	RO POER M	TBE DRO ONYB 12-D	CA (ED) Effemol	Other:		
D.O. (if r	req'd): 🕽 🤨			227	L Post-p	urge:	.65 mg
O.R.P. (i	f req'd):		Pre-purge	: m\	/ Post-n	urge:	m\
Blaine 7	Tech Serv	ices, Inc	:. 1680 Roger	's Ave., San J	ose, CA 9	5112 (4	08) 573-0555

BTS #: (Station# 37	4 ,	•
Sampler:	WC/3	L		Date: 8/2	24/06	
Well I.D.:	MW-	2		Well Diameter:	-	6 8
Total Wel	l Depth:	767)	Depth to Water	: 8.00	
Depth to I	Free Produ	ct:		Thickness of Fr		t):
Reference	d to:	PVC	Grade.	D.O. Meter (if a	req'd):	YEL HACH
Purge Metho	Well Diamete 1" 2" 3"	Bailer	<u>Aultiplier W</u> 0.04 0.16 0.37	Vell Diameter M 4" 0 6" 1 Other radius	ultiplier .65 .47 .2 * 0.163	
		sposable Baile	er	Sampling Method:	Bailer Bisposable Bailer	
		e Air Displac			Extraction Port	
	•	tric Submers		Other:		
		xtraction Pum	p			
T			7.65 A.A.A.			
Top of Scree	en:		If well is listed as a	no-purge, confirm	that water level is b	elow the top
		Λ	of screen. Otherwi	se, the well must be	purged.	
	1 Case Volu	ume (Gals.)	X Specified Vo		S 77 Gals.	-
			Conductivity			
Time	Temp (°F)	pН	(mS or (1S)	Gals. Removed	Observations	
1027	70,5	7.	599	11.9	Chear	
1029	72.7	69	604	23.8		
1031	70.9	6.8	598	38.7		
		·				
Did well		Yes	<u>(6)</u>	Gallons actuall	y evacuated:	35.7
]	Time:			Sampling Date	: 8-24-0	6
	.D.: Mh			Laboratory:	Pace Sequoia	Other 7 A
Analyzed	-	RO (TEX) M	TBE DRO 😿 1,20	CA EDB Ethenol	Other:	
D.O. (if r	eq'd): `i ^	up	Pre-purge	: mg/L	Post-purge:	1.15 0.908/
O.R.P. (i:			Pre-purge			mV
Blaine 7	ech Serv	ices. Inc	. 1680 Roger	S Ave. San Jo	SO CA DE445	(A08) 572 0555

BTS#: 6	158095	-wc-1		Station # 37	4	
Sampler:	w c/ =	R		Date: 8-24		
Well I.D.:	MW-	3		Well Diameter:		6 8
Total Wel	l Depth:	26.75		Depth to Water	: 7.00	
Depth to I	Free Produ	ct:		Thickness of Fr	ee Product (feet)	
Reference	d to:	evç	Grade	D.O. Meter (if 1	eq'd): (Ys	SI HACH
Purge Metho	Well Diamet 1" 2" 3"		<u>1ultiplier</u> <u>V</u> 0.04 0.16 0.37	Vell Diameter M 4" 0 6" 1	ultiplier .65 .47 .2* 0.163	
	Di Positiv Elec	sposable Baile e Air Displac etric Submersi straction Pum	ement ble		Disposable Bailer Extraction Port	
Top of Scree			If well is listed as a of screen. Otherwi	no-purge, confirm	that water level is belopurged.	ow the top
	l Case Vol	ume (Gals.)	X Specified Vo		Gals.	
Time	Temp (°F)	pН	Conductivity (mS or (18)	Gals. Removed	Observations	
1002	8.33	(4)	684	178	cleas	
1005	67.2	6.5	6.88	25.6		
1068	67.0	6.4	802	38.4		
	·					
Did well	dewater?	Yes (No)	Gallons actuall	y evacuated: 3	38.4
Sampling	Time:	1012		Sampling Date	_	
Sample I.	D.:	w-3		Laboratory:	Pace Sequoia	Other_TA
Analyzed			TBE DRO GG 12-2		Other:	
D.O. (if r	eq'd): In	nchp	Pre-purge	: mg/L	Kost-purge	1. (5 mg/L
O.R.P. (i			Pre-purge		Post-purge:	mV
piaine !	ecu gel/	rices. Inc	:. 76XO Rogei	's Ave San Jo	CA CA DEAAS	(400) 572 DEEE

BTS#: C	0608 V	1-WC	_	Station #	74		
Sampler:	WL15A	·		Date: 8-2년	-06		
Well I.D.:	MW-	4		Well Diameter:	2 3 (4)	6 8	
Total Wel	l Depth:	9.35	8	Depth to Water	: 8.76		
Depth to I	Free Produ	ct:		Thickness of Fr	ree Product (fee	et):	
Reference	d to:	(EVQ	Grade.	D.O. Meter (if a	req'd):	XSI	HACH
	Well Diamete		Vultiplier V. 0.04 0.16 0.37	/ell Diameter M 4" 0 6" 1	ultiplier .65 .47 .8 ² * 0.163		
Purge Metho		Bailer		Sampling Method:	Bailer		
		sposable Bail			Disposable Bailer		
		e Air Displac			Extraction Port		
		eric Submers etraction Pun	=-	Other:			
		cuaction Fun	ħ				
m 60	74.	•					
Top of Scree	en:		If well is listed as a	no-purge, confirm	that water level is t	elow the top	
	f 	····	of screen. Otherwi	se, the well must be	purged.		_
,	1.7	1	x 3	_ 3	6.3 Gals.		
	1 Case Vol	ıme (Gals.)	Specified Vo		Gals. Culated Volume		
			Conductivity		Janaica Volume		
Time	Temp (°F)	pН	(mS or (IS)	Gals. Removed	Observations		
1053	67,	6.8	10(4	12.1	odol		
1055	66.9	6.8	695	24.2		, , , , , , , , , , , , , , , , , , ,	
1657	66.4	6.8	1024	76.3			
Did well	dewater?	Yes (N ₀	Gallons actuall	ly evacuated:	36.3	• • •
Sampling	g Time:	1200	·	Sampling Date	: 8-24-0	6	
Sample I	.D.: MV	V-Y		Laboratory:	Pace Scquoja	Other_	A
Analyzed		HOO BYEN M	THE DRO EXT 12-D	y ØB min	Other:		
D.O. (if r		ncu	Pre-purge	· mg/L	Post-purge	(00)	^{mg} / _[
O.R.P. (i			Pre-purge		Post-purge		mV
plaine 1	ecu gen	rices, Inc	c. 1680 Roger	s Ave., San Jo	ose, CA <u>9511</u>	2 (408) 5	73-0555

	·						
	60824-			Station# 37	:4	,	
Sampler:	wc/3	5R		Date: ダースリ	-06	·	
Well I.D.:	Mu	u-5		Well Diameter:		6 8	
Total Wel	l Depth:	23.0	2	Depth to Water	: 7.95	**************************************	
Depth to I	Free Produ	ct:		Thickness of Fr		t);	
Reference	ed to:	r√c,	Grade.	D.O. Meter (if 1		YSI HACI	——— Н
	Well Diameter 1" 2" 3"	er V		Vell Diameter M 4" 0 6" 1	ultiplier .65 .47 .2* 0.163	,	
Purge Metho	od:	Bailer		Sampling Method:			
		sposable Bail	er	~~bimb intention.	Disposable Bailer		
		e Air Displac		·	Extraction Port		
	Elec	tric Submers	ible	Other:			
		xtraction Pum	p				
	Other:					•	
Top of Scree	en:		If well is listed as a	no-purge, confirm	that water level is b	elow the ton	
			of screen. Otherwi	se, the well must be	purged.		
Mac	8.8		x		Gals.		
partition	1 Case Vol	ume (Gals.)	Specified Vo	lumes Cale	ulated Volume		
			Conductivity				
Time	Temp (°F)	pН	(mS or (as))	Gals. Removed	Observations		
0912	68.2	5.9	607	8.8	Slight wenderwate	odar, non.	fue
10914	67.7	6.3	590	20.6	wen de-wate	red of 2131	4
10916				34438			
0914	we		lewater		- 21 a	allons	
09419	66.7	6-6	600	-	D76J = 17.	3	
Did well	dewater?	(Yes)	No	Gallons actual	ly evacuated:	21	·········
Sampling	g Time:	0920	<u>)</u>	Sampling Date	: 8-24-() 6	
Sample I	i.D.: <i>V</i>	MW-	5	Laboratory:	Pace Sequoia	Other	
Analyze	d for:	(6) e(6) M	TBE DRO OXYS 1.40		Other:	/	
D.O. (if	req'd):	1 acc	Pre-purge	: mg/1	. Post-purge:	2.60	mg
O.R.P. (i			Pre-purge		F 0		m'
Blaine '	Tech Sen	rices In	1680 Roger	S Ave San I	DO CA OF446	1/400)	

3TS#: (758090	- wc-1		Station# 77	4		-	
Sampler:	wc (50	٢		Date: אכן	106			
Well I.D.:	MW -	6		Well Diameter: 2 3 (4) 6 8				
Total Well	Depth:	4.63		Depth to Water	: 5-18			
Depth to F	ree Produ	ct:		Thickness of Fr	ee Produ	ct (feet):		
Reference	d to:	r €√C	Grade.	D.O. Meter (if a		(YSI)	HACH	
	Well Diamete	-	<u>Aultiplier</u> <u>V</u> 0,04		ultiplier 65			
•	2"		0.16	6" I.	47			
n .	3"		0.37		² * 0.163			
Purge Method		Bailer	•	Sampling Method:	Bailer			
		sposable Baile e Air Displac	•	-	Disposable			
		tric Submersi		Other	Extraction			
	_	ktraction Pum) Ontol.				
			-					
Top of Scree		•	If well is listed as:	a no-purge, confirm	that water le	vel is below	the ton	
.			of screen. Otherw	ise, the well must be	nurged.	vei is delow i	me top	
^/	<i>C</i> 3	**************************************	7	T. W.				
raffic	- 6: \		x			Gals.		
	I Case Volt	ıme (Gals.)	Specified V	olumes Calc	ulated Volun	ne ————————		
Tr:	Т (0т)	~~	Conductivity					
Time	Temp (°F)	pH	(mS of µS)	Gals. Removed	Observa	tions		
0938	69.0	6.8	694.	61	Clea	J		
0940	69.6	6,6	718	12.2 -				
040	nell	Dew	entereil	@~1	3,9	allone	10,000	
	<i>ሲ</i> ህ ን	6-8	761		スジ	W = -		
0949	683	0.7	[0]		1800) (I			
0949	6 8.3		10					
O949 Did well		Ae ₃	No	Gallons actual			· · ·	
Did well of Sampling	dewater?	B 39 5		Gallons actual Sampling Date	y evacua	ted:	.	
	dewater?	As,			y evacua	ted: 1 3	<u> </u>	
Sampling	dewater? Time:	Peg 09 5 W-6		Sampling Date Laboratory:	y evacua	ted: 13	Other_TA	
Sampling Sample I. Analyzed	dewater? Time: 6 D.: /\(\)	Pes OG 5 W-6	No The dro oxys 12-	Sampling Date Laboratory:	y evacua Pace Se Other:	ted: 1 3	<u> </u>	
Sampling Sample I. Analyzed	dewater? Time: 6 D.: /// for: 6 eq'd): 6	Pes OG 5 W-6	No The dro oxys 12-	Sampling Date Laboratory: DCA (B)B (Min)b) mg/1	y evacua Pace Se Other:	ted: 13	Other_TA	

BP GEM OIL COMPANY TYPE A BILL OF LADING

SOURCE RECORD BILL OF LADING FOR NON-**PURGEWATER HAZARDOUS** 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:

Station # 374	
Station Address 6407 7	elegraph Ave
Total Gallons Collected From G	roundwater Monitoring Wells:
195	
added equip.	any other adjustments
TOTAL GALS. RECOVERED ZOC	loaded onto BTS vehicle #
BTS event#	time date
060824-WC-1	1230 8,24,06
signature	
*********	*******
REC'D AT	time date
Blaine Tech	1600 812410
unloaded by signature	



WELLHEAD INSPECTION CHECKLIST BP / GEM

Page _____ of ______

Date S	4-06	_						
Date	6407	Telegi	aph	Auc				
Job Number	060874-1	NC-1		Tec	hnician	Will	<u> </u>	
Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-43	X	(M	5,1	le w	alk))		
MW-2 MW-3 MW-4 MW-5 MW-6	7							
Mw-3	200	2	hex	bolte	, unis	3/19		
MW-4	X							
MW -5	√							
MW-6	7							
					-			
		****			•			
				·				
		-						
		L			<u> </u>			
NOTES:								
	***************************************						·	
·			 		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
<u> </u>			···	——————————————————————————————————————				

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: 1118752121

Date/Time of Submittal: 10/20/2006 11:20:46 AM

Facility Global ID: T0600100106 Facility Name: ARCO # 00374 **Submittal Title: 3Q GW Monitoring Submittal Type:** GW Monitoring Report

Click here to view the detections report for this upload.

ARCO # 00374 6407 TELEGRAPH AVE OAKLAND, CA 94609

Regional Board - Case #: 01-0114

SAN FRANCISCO BAY RWQCB (REGION 2) Local Agency (lead agency) - Case #: 3884

ALAMEDA COUNTY LOP - (SP)

CONF# 1118752121

3Q GW Monitoring

QUARTER Q3 2006

SUBMITTED BY Broadbent & Associates, Inc.

SUBMIT DATE 10/20/2006

STATUS PENDING REVIEW

SAMPLE DETECTIONS REPORT

FIELD POINTS SAMPLED

FIELD POINTS WITH DETECTIONS

FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL

SAMPLE MATRIX TYPES

WATER

5

2

Υ

n

METHOD QA/QC REPORT

METHODS USED TESTED FOR REQUIRED ANALYTES? LAB NOTE DATA QUALIFIERS

8260FA,8260TPH

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS METHOD HOLDING TIME VIOLATIONS LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT LAB BLANK DETECTIONS

0 O 0

DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?

- LAB METHOD BLANK - MATRIX SPIKE - MATRIX SPIKE DUPLICATE
- BLANK SPIKE - SURROGATE SPIKE

Υ Y Υ

WATER SAMPLES FOR 8021/8260 SERIES

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

MATRIX CRIVE / MATRIX C	DIVE DUDITOATE(C) 0/ DECOV	JEDY DETWEEN OF 12EW	1
	SPIKE DUPLICATE(S) % RECOV		n/a
	SPIKE DUPLICATE(S) RPD LESS	5 THAN 30%	n/a
	COVERY BETWEEN 70-125%		n/a
BLANK SPIKE / BLANK SPI	KE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a
	Стом в стором менений в стиментво и потором в пененито од и истом сторут у водите дъедетника у подотор у сторите		
FIELD QC SAMPLES			
FIELD QC SAMPLES SAMPLE	COLLECTED	DETECTIONS > I	REPDL
	<u>COLLECTED</u> N	DETECTIONS > 1	REPDL
SAMPLE		DETECTIONS > 1 0 0	REPDL

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 11:17:10 AM

Confirmation Number: 8966840982

Back to Main Menu

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