

70 - 78

Alameda County

JUN 25 2004

Environmental Health



Atlantic Richfield Company  
(a BP affiliated company)



P.O. Box 6549  
Moraga, California 94570  
Phone: (925) 299-8891  
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June 18, 2004

Mr. Don Hwang  
Alameda County Health Care Services  
1131 Harbor Bay Parkway, 2nd Floor  
Alameda, CA 94502

Re: Second Quarter 2004 Groundwater Monitoring Report  
Atlantic Richfield Company Service Station #374  
6407 Telegraph Avenue  
Oakland, California  
URS Project #38486703

I declare that, to the best of my knowledge at the present time, the information and/or recommendations contained in the attached document are true and correct.

Submitted by:

Paul Supple  
Environmental Business Manager



Alameda County

JUN 25 2004

June 18, 2004

Environmental Services

Mr. Don Hwang  
Alameda County Health Care Services  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, CA 94502

**Re: Second Quarter 2004 Groundwater Monitoring Report  
Atlantic Richfield Company Service Station #0374  
6407 Telegraph Avenue  
Oakland, California  
URS Project #38486703**

Dear Mr. Hwang:

On behalf of Atlantic Richfield Company (RM), a BP affiliated company, URS Corporation (URS) is submitting the *Second Quarter 2004 Groundwater Monitoring Report* for Atlantic Richfield Company Service Station #0374, located at 6407 Telegraph Avenue, Oakland, California.

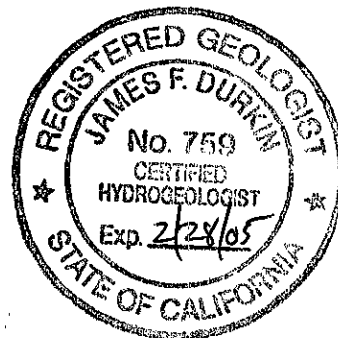
If you have any questions regarding this submission, please call (510) 874-3280.

Sincerely,

**URS CORPORATION**

Scott Robinson  
Project Manager

James F. Durkin, C.Hg.  
Senior Geologist



Enclosure: Second Quarter 2004 Groundwater Monitoring Report

cc: Mr. Chuck Headlee, California Regional Water Quality Control Board 1515 Clay Street,  
Suite 1400 Oakland, CA 94612  
Mr. Paul Supple, RM, (electronic copy uploaded to ENFOS)

**R E P O R T**

**SECOND QUARTER 2004  
GROUNDWATER MONITORING**

ATLANTIC RICHFIELD COMPANY  
SERVICE STATION #0374  
6407 TELEGRAPH AVENUE  
OAKLAND, CALIFORNIA

*Prepared for*  
Atlantic Richfield Company

June 18, 2004

**URS**

URS Corporation  
1333 Broadway, Suite 800  
Oakland, California 94612

38486703

Date: June 18, 2004  
Quarter: 2Q 04

## ATLANTIC RICHFIELD COMPANY QUARTERLY GROUNDWATER MONITORING REPORT

Facility No.: 0374 Address: 6407 Telegraph Avenue, Oakland CA  
RM Environmental Business Manager: Paul Supple  
Consulting Co./Contact Person: URS Corporation / Scott Robinson  
Consultant Project No.: 38486703  
Primary Agency Alameda County Health Care Services Agency (ACHCSA)

### WORK PERFORMED THIS QUARTER (Second – 2004):

1. Performed second quarter groundwater monitoring event on May 14, 2004.
2. Prepared and submitted second quarter 2004 groundwater monitoring report.
3. Oxygen Releasing Compound (ORC) socks replaced in wells MW-3 and MW-4 on May 14, 2004.

### WORK PROPOSED FOR NEXT QUARTER (Third– 2004):

1. Perform third quarter 2004 groundwater monitoring event.
2. Prepare and submit third quarter 2004 groundwater monitoring report.
3. Permanently remove ORC socks from MW-3 and MW-4.

Current Phase of Project: GW monitoring/sampling  
Frequency of Groundwater Sampling: Quarterly: MW-1  
Semi-Annually (1<sup>st</sup> & 3<sup>rd</sup> quarters): MW-2, MW-4  
Annually (3<sup>rd</sup> quarter): MW-3, MW-5, MW-6  
Frequency of Groundwater Monitoring: Quarterly  
Is Free Product (FP) Present On-Site: No  
Current Remediation Techniques: ORC Socks (MW-3 and MW-4)  
Approximate Depth to Groundwater: 6.29 (MW-6) to 8.56 (MW-5) feet  
Groundwater Gradient (direction): Southwest  
Groundwater Gradient (magnitude): 0.037 feet per foot

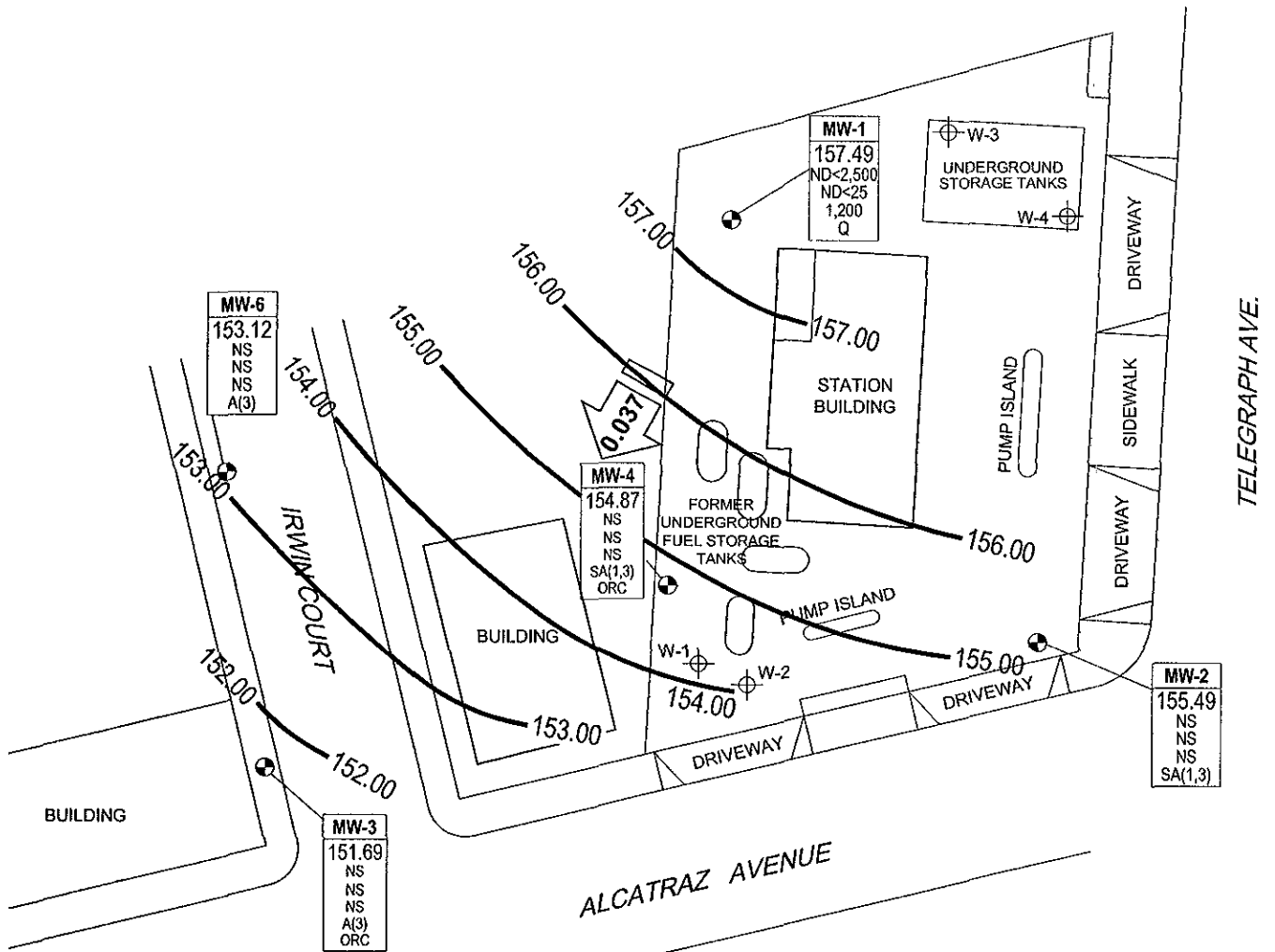
### DISCUSSION:

Gasoline Range Organics (GRO) and benzene were not detected above laboratory reporting limits in the well sampled this quarter (MW-1). Methyl tert-butyl ether (MTBE) was detected above laboratory reporting limits in MW-1 at a concentration of 1,200 µg/L. No other constituents were detected at or above laboratory reporting limits in MW-1.

Due to low concentrations of the constituents of concern, the ORC socks in wells MW-3 and MW-4 will be permanently during the 3<sup>rd</sup> quarter sampling event.

**ATTACHMENTS:**

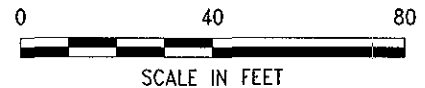
- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – May 14, 2004
- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Groundwater Flow Direction and Gradient
- Table 3 – Fuel Oxygenate Analytical Data
- Attachment A – Field Procedures and Field Data Sheets
- Attachment B – Laboratory Procedures, Certified Analytical Reports, and Chain-of-Custody Records
- Attachment C – EDCC Report and EDF/Geowell Submittal Confirmation



MW-5*
NA
NS
NS
NS
A(3)

**LEGEND**

- MONITORING WELL
- TANK PIT MONITORING WELL
- Well** WELL DESIGNATION
- ELEV** GROUNDWATER ELEVATION
- GRO** GRO, BENZENE & MTBE CONCENTRATIONS IN GROUNDWATER (µg/L)
- Benzene**
- MTBE**
- Q/ASA** SAMPLING FREQUENCY
- A(3)** SAMPLED ANNUALLY, 3RD QUARTER
- NA** NOT ANALYZED
- ND<** NOT DETECTED AT OR ABOVE LABORATORY LIMITS
- NS** NOT SAMPLED
- Q** SAMPLED QUARTERLY
- SA(1,3)** SAMPLED ANNUALLY, 1ST & 3RD QUARTERS
- APPROXIMATE GROUNDWATER FLOW AND DIRECTION (FT/FT)
- 155.00** GROUNDWATER ELEVATION CONTOUR (FT/MSL)
- ORC** OXYGEN RELEASING COMPOUND SOCK



NOTE: SITE MAP ADAPTED FROM IT CORPORATION FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

Jun 21, 2004 - 1:32pm X:\envi\waste\BP\_GEM\Srces\Scot\_Robinson\Paul\_Supp\0374\Monitoring\Qtr\_2\_2004\Drawings\GWEC-AS\_5-14.dwg



**Project No. 38486703**  
 Atlantic Richfield Company Service Station #0374  
 6407 Telegraph Avenue  
 Oakland, California

**GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP**  
 Second Quarter 2004 (May 14, 2004)

FIGURE  
**1**

**Table 1  
Groundwater Elevation and Analytical Data**

Atlantic Richfield Company Service Station #0374  
6407 Telegraph Avenue  
Oakland, California

Well Number	Date Sampled	TOC (ft msl)	Well Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	GRO/TPH as			Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen <sup>c</sup> (mg/L)	pH Level <sup>c</sup>
								Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)					
MW-1	06/20/00	158.91	26.30	7.00	NA	6.86	152.05	NS	NS	NS	NS	NS	NS	NS	NS
	09/28/00					7.50	151.41	NS	NS	NS	NS	NS	NS	NS	NS
	12/17/00					7.49	151.42	NS	NS	NS	NS	NS	NS	NS	NS
	03/23/01					5.90	153.01	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2,710	NA	NA
	06/21/01					7.45	151.46	NS	NS	NS	NS	NS	NS	NS	NS
	09/23/01					8.46	150.45	NS	NS	NS	NS	NS	NS	NS	NS
	12/31/01					5.50	153.41	NS	NS	NS	NS	NS	NS	NS	NS
	03/21/02					4.71	154.20	ND<5,000	ND<50	ND<50	ND<50	ND<50	2,000	NA	NA
	04/17/02					5.54	153.37	NS	NS	NS	NS	NS	NS	NS	NS
	08/12/02					7.77	151.14	NS	NS	NS	NS	NS	NS	NS	NS
	12/06/02					7.65	151.26	NS	NS	NS	NS	NS	NS	NS	NS
	01/29/03 <sup>b</sup>					5.88	153.03	NS	NS	NS	NS	NS	NS	NS	NS
	05/23/03					5.62	153.29	ND<10,000	ND<100	ND<100	ND<100	ND<100	1,600	1.3	7.1
	09/04/03					7.85	151.06	NS	NS	NS	NS	NS	NS	NS	NS
	11/20/03					8.17	150.74	1,600	ND<10	ND<10	ND<10	ND<10	1,500	1.7	6.7
	02/02/04	164.57				6.71	157.86	2,700	ND<25	ND<25	ND<25	ND<25	1,200	1.0	9.0
	05/14/04					7.08	157.49	ND<2,500	ND<25	ND<25	ND<25	ND<25	1,200	1.4	6.6

**Table 1  
Groundwater Elevation and Analytical Data**

Atlantic Richfield Company Service Station #0374  
6407 Telegraph Avenue  
Oakland, California

Well Number	Date Sampled	TOC (ft msl)	Well Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	GRO/TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen <sup>c</sup> (mg/L)	pH Level <sup>c</sup>	
MW-2	06/20/00	157.92	25.90	7.00	NA	7.67	150.25	NS	NS	NS	NS	NS	NS	NS	NS	
	09/28/00					8.51	149.41	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/17/00					8.14	149.78	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/23/01					7.21	150.71	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	06/21/01					7.99	149.93	NS	NS	NS	NS	NS	NS	NS	NS	
	09/23/01					8.52	149.4	NS	NS	NS	NS	NS	NS	NS	NS	
	12/31/01					6.01	151.91	NS	NS	NS	NS	NS	NS	NS	NS	
	03/21/02					5.95	151.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	45	NA	NA	
	04/17/02					6.45	151.47	NS	NS	NS	NS	NS	NS	NS	NS	
	08/12/02					8.08	149.84	NS	NS	NS	NS	NS	NS	NS	NS	
	12/06/02					8.29	149.63	NS	NS	NS	NS	NS	NS	NS	NS	
	01/29/03 <sup>b</sup>					7.22	150.70	NS	NS	NS	NS	NS	NS	NS	NS	
	05/23/03					6.85	151.07	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	55	1.4	7.2	
	09/04/03					7.94	149.98	NS	NS	NS	NS	NS	NS	NS	NS	
	11/20/03					8.05	149.87	NS	NS	NS	NS	NS	NS	NS	NS	
	02/02/04	163.46	7.00	156.46	74	ND<0.50	ND<0.50	ND<0.50	ND<0.50	37	1.1	8.9				
	05/14/04		7.97	155.49	-----Sampled semi-annually during the 1st and 3rd quarters-----											



**Table 1  
Groundwater Elevation and Analytical Data**

Atlantic Richfield Company Service Station #0374  
6407 Telegraph Avenue  
Oakland, California

Well Number	Date Sampled	TOC (ft msl)	Well Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	GRO/TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen <sup>c</sup> (mg/L)	pH Level <sup>c</sup>	
MW-3	06/20/00	153.64	26.50	7.00	NA	6.42	147.22	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	NA	NA	
	09/28/00					7.31	146.33	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/17/00					6.45	147.19	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/23/01					6.01	147.63	NS	NS	NS	NS	NS	NS	NS	NS	NS
	06/21/01					6.80	146.84	110	5.5	ND<0.5	5.4	4.1	2.5	NA	NA	
	09/23/01					7.32	146.32	NS	NS	NS	NS	NS	NS	NS	NS	
	12/31/01					4.48	149.16	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4.9	NA	NA	
	03/21/02					4.36	149.28	NS	NS	NS	NS	NS	NS	NS	NS	
	04/17/02					5.31	148.33	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.7	NA	NA	
	08/12/02					7.00	146.64	NS	NS	NS	NS	NS	NS	NS	NS	
	12/06/02					7.32	146.32	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	6.2	1.4	6.7	
	01/29/03 <sup>b</sup>					6.07	147.57	NS	NS	NS	NS	NS	NS	NS	NS	
	05/23/03					6.45	147.19	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.6	0.9	7.7	
	09/04/03 <sup>d</sup>					6.93	146.71	NS	NS	NS	NS	NS	NS	NS	NS	
	11/20/03 <sup>d</sup>					7.04	146.60	NS	NS	NS	NS	NS	NS	NS	NS	
	02/02/04					159.21	5.92	153.29	NS	NS	NS	NS	NS	NS	NS	
	05/14/04		7.52	151.69	-----Sampled annually during the 3rd quarter-----											

**Table 1  
Groundwater Elevation and Analytical Data**

Atlantic Richfield Company Service Station #0374  
6407 Telegraph Avenue  
Oakland, California

Well Number	Date Sampled	TOC (ft msl)	Well Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	GRO/TPH as			Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen <sup>c</sup> (mg/L)	pH Level <sup>c</sup>		
								Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)							
MW-4	06/20/00	156.53	26.50	7.00	NA	7.50	149.03	20,000	5,100	440	1,000	1,700	ND<250	NA	NA		
	09/28/00					8.20	148.33	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/17/00					8.11	148.42	4,320	1,240	ND<20	27.2	249	ND<100	NA	NA		
	03/23/01					6.69	149.84	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	06/21/01					8.01	148.52	2,800	470	16	19	160	130	NA	NA		
	09/23/01					8.91	147.62	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/31/01					4.42	152.11	4,600	1,500	100	160	210	160	NA	NA		
	03/21/02					4.98	151.55	NS	NS	NS	NS	NS	NS	NS	NS		
	04/17/02					6.23	150.30	7,100	2,200	110	290	450	ND<250	NA	NA		
	08/12/02					8.24	148.29	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/06/02					8.42	148.11	1,500 <sup>a</sup>	410	6.8	20	29	43	1.1	6.7		
	01/29/03 <sup>b</sup>					7.20	149.33	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	05/23/03					7.18	149.35	ND<5,000	1,300	89	210	260	ND<50	1.4	6.9		
	09/04/2003 <sup>d</sup>					8.15	148.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	11/20/2003 <sup>d</sup>					8.73	147.80	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	02/02/2004 <sup>d</sup>					163.25	6.25	157.00	980	280	21	29	38	29	1.4	10.6	
	05/14/04	8.38	154.87	-----Sampled semi-annually during the 1st and 3rd quarters-----													

**Table 1**  
**Groundwater Elevation and Analytical Data**

Atlantic Richfield Company Service Station #0374  
6407 Telegraph Avenue  
Oakland, California

Well Number	Date Sampled	TOC (ft msl)	Well Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	GRO/TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen <sup>c</sup> (mg/L)	pH Level <sup>c</sup>	
MW-5	06/20/00	151.33	22.70	10.00	NA	7.84	143.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	NA	NA	
	09/28/00					8.37	142.96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	12/17/00					8.36	142.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	03/23/01					7.55	143.78	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	06/21/01					8.20	143.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	09/23/01					8.68	142.65	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	12/31/01					7.57	143.76	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	03/21/02					6.12	145.21	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.2	NA	NA	
	04/17/02					6.61	144.72	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA	
	08/12/02					8.14	143.19	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	4.1	7.6	
	12/06/02					8.65	142.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	1.1	6.8	
	01/29/03 <sup>b</sup>					7.22	144.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.0	6.6	
	05/23/03					7.31	144.02	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.1	6.6	
	09/04/03					9.50	141.83	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3.2	6.7	
	11/20/03					8.31	143.02	-----Sampled annually during the 3rd quarter-----								
	02/02/04 <sup>d</sup>	NA				6.92	NA	-----Sampled annually during the 3rd quarter-----								
	05/14/04					8.56	NA	-----Sampled annually during the 3rd quarter-----								

**Table 1  
Groundwater Elevation and Analytical Data**

Atlantic Richfield Company Service Station #0374  
6407 Telegraph Avenue  
Oakland, California

Well Number	Date Sampled	TOC (ft msl)	Well Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	GRO/TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen ° (mg/L)	pH Level °
MW-6	06/20/00	153.84	14.50	5.00	NA	4.79	149.05	NS	NS	NS	NS	NS	NS	NS	NS
	09/28/00					5.39	148.45	NS	NS	NS	NS	NS	NS	NS	NS
	12/17/00					4.71	149.13	NS	NS	NS	NS	NS	NS	NS	NS
	03/23/01					4.69	149.15	ND<50	ND< 0.5	ND< 0.5	ND< 0.5	ND< 0.5	ND<2.5	NA	NA
	06/21/01					5.22	148.62	NS	NS	NS	NS	NS	NS	NS	NS
	09/23/01					5.40	148.44	NS	NS	NS	NS	NS	NS	NS	NS
	12/31/01					3.95	149.89	NS	NS	NS	NS	NS	NS	NS	NS
	03/21/02					2.94	150.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.2	NA	NA
	04/17/02					5.11	148.73	NS	NS	NS	NS	NS	NS	NS	NS
	08/12/02					5.23	148.61	NS	NS	NS	NS	NS	NS	NS	NS
	12/06/02					5.29	148.55	NS	NS	NS	NS	NS	NS	NS	NS
	01/29/03 <sup>b</sup>					4.79	149.05	NS	NS	NS	NS	NS	NS	NS	NS
	05/23/03					4.31	149.53	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	9.4	1.0	6.7
	09/04/03 <sup>c</sup>					NM	NM	NS	NS	NS	NS	NS	NS	NS	NS
	11/20/03					6.31	147.53	NS	NS	NS	NS	NS	NS	NS	NS
	02/02/04	159.41				4.78	154.63	NS	NS	NS	NS	NS	NS	NS	NS
	05/14/04					6.29	153.12	-----Sampled annually during the 3rd quarter-----							

**Table 1**  
**Groundwater Elevation and Analytical Data**

Atlantic Richfield Company Service Station #0374  
6407 Telegraph Avenue  
Oakland, California

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Note: Beginning in the Fourth Quarter 2003, the laboratory modified the reported analyte list. Total Petroleum Hydrocarbons as Gasoline (TPH-g) has been changed to Gasoline Range Organics (GRO). The resulting data may be impacted by the potential inclusion 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.

ft = Feet  
mg/L = Milligram per liter  
µg/L = Micrograms per liter  
MSA = Mean Sea Level  
MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted (prior to 01/29/03)  
NA = Not Available  
ND< = Not detected at or above the laboratory reporting limit.  
NM = Not measured  
NS = Not sampled  
TOC = Top of Casing  
TPH = Total Petroleum Hydrocarbons

a = Chromatogram Pattern: Gasoline C6-C10  
b = Beginning this quarter, groundwater samples were analyzed by EPA method 8260B for TPH-g, BTEX, and fuel oxygenates.  
c = Dissolved oxygen and pH level are field measurements.  
d = Wells gauged with ORC sock in well.  
e = Well inaccessible

Source: The data within this table collected prior to August 2002 was provided to URS by Atlantic Richfield Company and its previous consultants. URS has not verified the accuracy of this information.

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**Table 2  
Groundwater Flow Direction and Gradient**

Atlantic Richfield Company Service Station #0374  
6407 Telegraph Avenue  
Oakland, California

Date Measured	Average Flow Direction	Average 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
07/27/98	Southwest	0.04
10/15/98	Southwest	0.02
02/18/99	Southwest	0.05
05/24/99	Southwest	0.03
08/27/99	Southwest	0.03
10/26/99	Southwest	0.03
02/03/00	Southwest	0.047
06/20/00	Southwest	0.035
09/28/00	Southwest	0.034
12/17/00	Southwest	0.032
03/23/01	Southwest	0.034
06/21/01	Southwest	0.032
09/23/01	Southwest	0.029
12/31/01	Southwest	0.043
03/21/02	Southwest	0.038
04/17/02	Southwest	0.031
08/12/02	Southwest	0.032
12/06/02	Southwest	0.020
01/29/03	Southwest	0.027
05/23/03	Southwest	0.039
09/04/03	Southwest	0.033
11/20/03	Southwest	0.029
02/02/04	Southwest	0.043
<b>05/14/04</b>	<b>Southwest</b>	<b>0.037</b>

Note:

The data within this table collected prior to August 2002 was provided to URS by Atlantic Richfield Company and its previous consultants. URS has not verified the accuracy of this information.

**Table 3**  
**Fuel Oxygenate Analytical Data**

Atlantic Richfield Company Service Station #0374  
6407 Telegraph Avenue  
Oakland, California

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-1	05/23/03	ND<20,000	ND<4,000	1,600	ND<100	ND<100	ND<100	NA	NA
	11/20/03	ND<2,000 (a)	ND<400	1,500	ND<10	ND<10	ND<10	NA	NA
	02/02/04	ND<5,000	ND<1,000	1,200	ND<25	ND<25	ND<25	ND<25	ND<25
	05/14/04	ND<5,000	ND<1,000	1,200	ND<25	ND<25	ND<25	ND<25	ND<25
MW-2	05/23/03	ND<100	ND<20	55	ND<0.50	ND<0.50	0.53	NA	NA
	02/02/04	ND<100	ND<20	37	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-3	05/23/03	ND<100	ND<20	1.6	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-4	05/23/03	ND<10,000	ND<2,000	ND<50	ND<50	ND<50	ND<50	NA	NA
	02/02/04	ND<500	ND<100	29	ND<2.5	ND<2.5	2.6	ND<2.5	ND<2.5
MW-5	01/29/03	ND<40	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
	05/23/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
	09/04/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-6	05/23/03	ND<100	ND<20	9.4	ND<0.50	ND<0.50	ND<0.50	NA	NA

Note: All fuel oxygenate compounds analyzed using EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane

DIPE = Di-isopropyl ether

EDB = 1,2-Dibromoethane

ETBE = Ethyl tert butyl ether

MTBE = Methyl tert-butyl ether

NA = Not analyzed

ND< = Not detected at or above the laboratory reporting limit

TAME = tert-Amyl methyl ether

TBA = tert-Butyl alcohol

µg/L = micrograms per liter

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

**ATTACHMENT A**  
**FIELD PROCEDURES AND FIELD DATA SHEETS**



## **FIELD PROCEDURES**

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### **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 Teflon™ 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.

WELL GAUGING DATA

Project # 040514-Acl Date 5/14/04 Client Arco 374

Site 6407 Telegraph Ave Oakland

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC		
MW-1	4					7.08	26.70	TOC		
MW-2	4					7.97	26.32			
MW-3	4					7.52	26.70		*	
MW-4	4					8.38	26.81		*	
MW-5	4					8.56	23.06			
MW-6	4					6.29	14.55		↓	
			* Replaced caps at wells							

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>DA051A-Ac1</u>	Station # <u>374</u>
Sampler: <u>AC</u>	Date: <u>5/14/04</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>26.70</u>	Depth to Water: <u>7.08</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method: Bailer      Sampling Method: Bailer

Disposable Bailer       Disposable Bailer  
 Positive Air Displacement       Extraction Port  
 Electric Submersible      Other: \_\_\_\_\_  
 Extraction Pump  
 Other: \_\_\_\_\_

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>13</u>	X	<u>3</u>	=	<u>39</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
<u>0901</u>	<u>64.6</u>	<u>7.0</u>	<u>1002</u>	<u>13</u>	<u>clear, odor</u>
<u>0904</u>	<u>64.0</u>	<u>6.6</u>	<u>1017</u>	<u>26</u>	<u>cloudy, odor</u>
<u>0907</u>	<u>63.6</u>	<u>6.6</u>	<u>984</u>	<u>39</u>	<u>"</u>

Did well dewater? Yes   No      Gallons actually evacuated: 39

Sampling Time: 0910      Sampling Date: 5/14/04

Sample I.D.: MW-1      Laboratory: Pace (Sequoia) Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Refer to coc

D.O. (if req'd):	Pre-purge:	$\text{mg/L}$	Post-purge:	<u>1.4</u>	$\text{mg/L}$
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

**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 to the designated destination point via another BP GEM facility; from a BP GEM facility to the designated destination point via the contractor's 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:

374

Station #

6407 Telegraph Ave Oakland

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

40

added equip.

any other

rinse water 5

adjustments \_\_\_\_\_

TOTAL GALS.

loaded onto

RECOVERED 45

BTS vehicle # 52

BTS event #

time

date

040514 - AC1

1015

5/14/04

signature

*Carl Bosta*

\*\*\*\*\*

REC'D AT

time

date

unloaded by

signature \_\_\_\_\_

**ATTACHMENT B**

**LABORATORY PROCEDURES,  
CERTIFIED ANALYTICAL REPORTS,  
AND CHAIN-OF-CUSTODY RECORDS**

## **LABORATORY PROCEDURES**

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### **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 Atlantic Richfield Company have been reviewed and verified by that laboratory.



1 June, 2004

Scott Robinson  
URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland, CA 94612

RE: ARCO #0374, Oakland, CA  
Work Order: MNE0496

Enclosed are the results of analyses for samples received by the laboratory on 05/18/04 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Lisa Race".

Lisa Race  
Senior Project Manager

CA ELAP Certificate #1210



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

Project: ARCO #0374, Oakland, CA  
Project Number: INTRIM-50419  
Project Manager: Scott Robinson

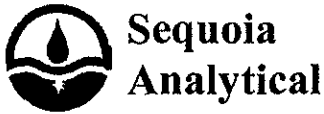
MNE0496  
Reported:  
06/01/04 16:16

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MNE0496-01	Water	05/14/04 09:10	05/18/04 15:00
TB-374-05142004	MNE0496-02	Water	05/14/04 00:00	05/18/04 15:00

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 intact custody seals.





885 Jarvis Drive  
 Morgan Hill, CA 95037  
 (408) 776-9600  
 FAX (408) 782-6308  
 www.sequoialabs.com

URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland CA, 94612	Project: ARCO #0374, Oakland, CA Project Number: INTRIM-50419 Project Manager: Scott Robinson	MNE0496 Reported: 06/01/04 16:16
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**Volatile Organic Compounds by EPA Method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MNE0496-01) Water    Sampled: 05/14/04 09:10    Received: 05/18/04 15:00</b>									
Ethanol	ND	5000	ug/l	50	4E27002	05/27/04	05/27/04	EPA 8260B	
tert-Butyl alcohol	ND	1000	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>1200</b>	25	"	"	"	"	"	"	
Di-isopropyl ether	ND	25	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	25	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	25	"	"	"	"	"	"	
1,2-Dichloroethane	ND	25	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	25	"	"	"	"	"	"	
Benzene	ND	25	"	"	"	"	"	"	
Toluene	ND	25	"	"	"	"	"	"	
Ethylbenzene	ND	25	"	"	"	"	"	"	
Xylenes (total)	ND	25	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	2500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.8 %		78-129	"	"	"	"	



URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland CA, 94612	Project: ARCO #0374, Oakland, CA Project Number: INTRIM-50419 Project Manager: Scott Robinson	MNE0496 Reported: 06/01/04 16:16
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**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4E27002 - EPA 5030B P/T**

**Blank (4E27002-BLK1)**

Prepared & Analyzed: 05/27/04

Ethanol	ND	100	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.06		"	5.00		101	78-129			

**Laboratory Control Sample (4E27002-BS1)**

Prepared & Analyzed: 05/27/04

Ethanol	195	100	ug/l	200		97.5	31-186			
tert-Butyl alcohol	45.9	20	"	50.0		91.8	0-206			
Methyl tert-butyl ether	10.2	0.50	"	10.0		102	63-137			
Di-isopropyl ether	10.4	0.50	"	10.0		104	76-130			
Ethyl tert-butyl ether	10.7	0.50	"	10.0		107	61-141			
tert-Amyl methyl ether	9.59	0.50	"	10.0		95.9	56-140			
1,2-Dichloroethane	10.3	0.50	"	10.0		103	77-136			
1,2-Dibromoethane (EDB)	8.90	0.50	"	10.0		89.0	77-132			
Benzene	9.89	0.50	"	10.0		98.9	78-124			
Toluene	9.29	0.50	"	10.0		92.9	78-129			
Ethylbenzene	9.67	0.50	"	10.0		96.7	84-117			
Xylenes (total)	28.4	0.50	"	30.0		94.7	83-125			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.04		"	5.00		101	78-129			

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

Project: ARCO #0374, Oakland, CA  
Project Number: INTRIM-50419  
Project Manager: Scott Robinson

MNE0496  
Reported:  
06/01/04 16:16

**Volatile Organic Compounds by EPA Method 8260B - Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4E27002 - EPA 5030B P/T**

**Laboratory Control Sample (4E27002-BS2)**

Prepared & Analyzed: 05/27/04

Methyl tert-butyl ether	9.39	0.50	ug/l	9.92		94.7	63-137		
Benzene	5.46	0.50	"	6.40		85.3	78-124		
Toluene	31.0	0.50	"	29.7		104	78-129		
Ethylbenzene	7.54	0.50	"	6.96		108	84-117		
Xylenes (total)	35.3	0.50	"	33.7		105	83-125		
Gasoline Range Organics (C4-C12)	432	50	"	440		98.2	70-124		
Surrogate: 1,2-Dichloroethane-d4	5.05		"	5.00		101	78-129		

**Laboratory Control Sample Dup (4E27002-BSD1)**

Prepared & Analyzed: 05/27/04

Ethanol	222	100	ug/l	200		111	31-186	12.9	37	CC04
tert-Butyl alcohol	48.4	20	"	50.0		96.8	0-206	5.30	22	
Methyl tert-butyl ether	10.6	0.50	"	10.0		106	63-137	3.85	13	
Di-isopropyl ether	11.0	0.50	"	10.0		110	76-130	5.61	9	
Ethyl tert-butyl ether	11.6	0.50	"	10.0		116	61-141	8.07	9	
tert-Amyl methyl ether	9.94	0.50	"	10.0		99.4	56-140	3.58	12	
1,2-Dichloroethane	11.3	0.50	"	10.0		113	77-136	9.26	13	
1,2-Dibromoethane (EDB)	9.91	0.50	"	10.0		99.1	77-132	10.7	9	QC21
Benzene	10.2	0.50	"	10.0		102	78-124	3.09	12	
Toluene	9.42	0.50	"	10.0		94.2	78-129	1.39	10	
Ethylbenzene	10.1	0.50	"	10.0		101	84-117	4.35	10	
Xylenes (total)	29.5	0.50	"	30.0		98.3	83-125	3.80	11	
Surrogate: 1,2-Dichloroethane-d4	5.29		"	5.00		106	78-129			

**Laboratory Control Sample Dup (4E27002-BSD2)**

Prepared & Analyzed: 05/27/04

Methyl tert-butyl ether	10.0	0.50	ug/l	9.92		101	63-137	6.29	13	
Benzene	5.73	0.50	"	6.40		89.5	78-124	4.83	12	
Toluene	32.6	0.50	"	29.7		110	78-129	5.03	10	
Ethylbenzene	8.07	0.50	"	6.96		116	84-117	6.79	10	
Xylenes (total)	37.2	0.50	"	33.7		110	83-125	5.24	11	
Gasoline Range Organics (C4-C12)	429	50	"	440		97.5	70-124	0.697	20	
Surrogate: 1,2-Dichloroethane-d4	4.99		"	5.00		99.8	78-129			

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

Project: ARCO #0374, Oakland, CA  
Project Number: INTRIM-50419  
Project Manager: Scott Robinson

MNE0496  
**Reported:**  
06/01/04 16:16

### Notes and Definitions

- QC21 The RPD result exceeded the control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- CC04 The continuing calibration verification was outside of client contractual acceptance limits by 7.5% high. However, it was within method acceptance limits. The data should still be useful for its intended purpose.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference



### Chain of Custody Record

Project Name 374 GWM  
 BP BU/GEM CO Portfolio Retail  
 BP Laboratory Contract Number: Atlantic Richfield Company  
 Requested Due Date (mm/dd/yy) 14 day TAT

MNE 0496

Date: 5/14/04

On-site Time: <u>0830</u>	Temp: <u>65°</u>
Off-site Time: <u>1015</u>	Temp: <u>70°</u>
Sky Conditions: <u>Sunny</u>	
Meteorological Events:	
Wind Speed: <u>5 mph</u>	Direction: <u>SW</u>

Send To: Lab Name: <u>SEQUOIA</u> Lab Address: <u>885 Jarvis Dr.</u> <u>Morgan Hill, CA 95037</u>	BP/GEM Facility No.: <u>ARCO 374</u> BP/GEM Facility Address: <u>6407 TELEGRAPH AVE, OAKLAND, CA</u> Site ID No. <u>ARCO 374</u> Site Lat/Long: California Global ID #: <u>T0600100106</u>	Consultant/Contractor: <u>URS</u> Address: <u>1333 Broadway, Suite 800</u> <u>Oakland, CA 94612</u> e-mail EDD: <u>donna.casper@URSCorp.com</u> Consultant/Contractor Project No.: <u>15-0000374.01 00427</u> Consultant Tele/Fax: <u>510-893-3600/510-874-3268</u> Consultant/Contractor PM: <u>Scott Robinson</u> Invoice to: <u>Consultant/Contractor or BP/GEM (Circle one)</u> BP/GEM Work Release No: <u>INTRIM-50419</u>
Lab PM <u>Lisa Race</u> Tele/Fax: <u>408-776-9600 / 408-782-6308</u> Report Type & QC Level: <u>1 Send EDF Reports</u> BP/GEM Account No.:	BP/GEM PM Contact: <u>PAUL SUPPLE</u> Address: <u>P.O. Box 6549</u> <u>Moraga, CA 94570</u> Tele/Fax: <u>925-299-8891/925-299-8872</u>	

Item No.	Sample Description	Time	Matrix				Laboratory No.	No. of containers	Preservatives				Requested Analysis						Sample Point Lat/Long and Comments
			Soil/Solid	Water/Liquid	Sediments	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	GRO / BTEX (8015/8021/8250)	DRO w/SGC (8015)	MTBE (8021)	MTBE (8260)	MTBE, TAME, ETBE, DPE, TEA (8260)	1,2-DCA & EDB (8260)	
1	<u>MW-1</u>	<u>0410</u>		X			<u>01</u>	<u>3</u>					X			X	X	X	
2	<u>TB/374/15A/2004</u>			X			<u>02</u>	<u>2</u>											<u>On Hold</u>
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Sampler's Name: <u>Aaron Costa</u>	Relinquished By / Affiliation: <u>Aaron Costa / Blaine Tech</u>	Date: <u>5/18/04</u>	Time: <u>11:20</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>5/18/04</u>	Time: <u>11:20</u>
Sampler's Company: <u>Blaine Tech</u>		<u>5/17/04</u>	<u>14:50</u>	<u>[Signature]</u>	<u>5/18/04</u>	<u>15:00</u>
Shipment Date:						
Shipment Method:						
Shipment Tracking No.:						

Instructions: Address Invoice to BP/GEM but send to URS for approval

In Place Yes  No  Temperature Blank Yes  No  Cooler Temperature on Receipt Y.L. MC Trip Blank Yes  No

White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

# SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: BP  
 REC. BY (PRINT): Cinda Pawlak  
 WORKORDER: MNE 0496

DATE REC'D AT LAB: 5-18-04  
 TIME REC'D AT LAB: 1500  
 DATE LOGGED IN: 5-19-04

DRINKING WATER for  
 regulatory purposes: YES  NO   
 WASTE WATER for  
 regulatory purposes: YES  NO

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	<input checked="" type="radio"/> Present / <input type="radio"/> Absent <input checked="" type="radio"/> Intact / <input type="radio"/> Broken*	<u>01</u>		<u>MW-1</u>	<u>U0a-3</u>	<u>HCL</u>	<u>L</u>	<u>5-18-04</u>	<div style="font-size: 2em; transform: rotate(-45deg); display: inline-block;">                     5-18-04                 </div>
2. Chain-of-Custody	<input checked="" type="radio"/> Present / <input type="radio"/> Absent*	<u>02</u>		<u>TR/374/OSR2004</u>	<u>U0a-2</u>	<u>✓</u>	<u>✓</u>		
3. Traffic Reports or Packing List:	Present / <input checked="" type="radio"/> Absent								
4. Airbill:	Airbill / Sticker Present / <input checked="" type="radio"/> Absent								
5. Airbill #:									
6. Sample Labels:	<input checked="" type="radio"/> Present / <input type="radio"/> Absent								
7. Sample IDs:	<input checked="" type="radio"/> Listed / <input type="radio"/> Not Listed on Chain-of-Custody								
8. Sample Condition:	<input checked="" type="radio"/> Intact / <input type="radio"/> Broken* / <input type="radio"/> Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree?	<input checked="" type="radio"/> Yes / <input type="radio"/> No*								
10. Sample received within hold time:	<input checked="" type="radio"/> Yes / <input type="radio"/> No*								
11. Adequate sample volume received?	<input checked="" type="radio"/> Yes / <input type="radio"/> No*								
12. Proper Preservatives used:	<input checked="" type="radio"/> Yes / <input type="radio"/> No*								
13. Temp Rec. at Lab: Is temp 4 +/- 2°C?	<u>Y</u> Yes / No**								

(Acceptance range for samples requiring thermal pres.)

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

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

**ATTACHMENT C**

**EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION**

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## Error Summary Log

06/02/04

EDF 1.2i All files present in deliverable.

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Laboratory:	Sequoia Analytical Laboratories, Inc., Morgan Hill, CA
Project Name:	ARCO #0374, Oakland, CA
Work Order Number:	MNE0496
Global ID:	T0600100106
Lab Report Number:	MNE0496060120041616



## Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctf	Run Sub
MNE04960601200	MW-1	MNE049601	W	CS	8260FA	SW5030B	05/14/04	05/27/04	05/27/04	4E27002	1
41616											
		4E27002BSD1	WQ	BD1	8260FA	SW5030B	//	05/27/04	05/27/04	4E27002	1
		4E27002BSD2	WQ	BD2	8260FA	SW5030B	//	05/27/04	05/27/04	4E27002	1
		4E27002BS1	WQ	BS1	8260FA	SW5030B	//	05/27/04	05/27/04	4E27002	1
		4E27002BS2	WQ	BS2	8260FA	SW5030B	//	05/27/04	05/27/04	4E27002	1
		4E27002BLK1	WQ	LB1	8260FA	SW5030B	//	05/27/04	05/27/04	4E27002	1

# EDFSAMP: Error Summary Log

06/02/04

Error type	Logcode	Projname	Npdlwo	Sampid	Matrix
There are no errors in this data file					

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## EDFTEST: Error Summary Log

06/02/04

Error type	Labsampid	Qccode	Anmcode	Exmcode	Anadate	Run number
There are no errors in this data file					//	0

# EDFRES: Error Summary Log

06/02/04

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	MNE049601	CS	W	8260FA	PR	05/27/04	1	BZ
Warning: extra parameter	MNE049601	CS	W	8260FA	PR	05/27/04	1	BZME
Warning: extra parameter	MNE049601	CS	W	8260FA	PR	05/27/04	1	DCA12D4
Warning: extra parameter	MNE049601	CS	W	8260FA	PR	05/27/04	1	EBZ
Warning: extra parameter	MNE049601	CS	W	8260FA	PR	05/27/04	1	GROC4C12
Warning: extra parameter	MNE049601	CS	W	8260FA	PR	05/27/04	1	XYLENES
Warning: extra parameter	4E27002BLK1	LB1	WQ	8260FA	PR	05/27/04	1	BZ
Warning: extra parameter	4E27002BLK1	LB1	WQ	8260FA	PR	05/27/04	1	BZME
Warning: extra parameter	4E27002BLK1	LB1	WQ	8260FA	PR	05/27/04	1	DCA12D4
Warning: extra parameter	4E27002BLK1	LB1	WQ	8260FA	PR	05/27/04	1	EBZ
Warning: extra parameter	4E27002BLK1	LB1	WQ	8260FA	PR	05/27/04	1	GROC4C12
Warning: extra parameter	4E27002BLK1	LB1	WQ	8260FA	PR	05/27/04	1	XYLENES
Warning: extra parameter	4E27002BS1	BS1	WQ	8260FA	PR	05/27/04	1	BZ
Warning: extra parameter	4E27002BS1	BS1	WQ	8260FA	PR	05/27/04	1	BZME
Warning: extra parameter	4E27002BS1	BS1	WQ	8260FA	PR	05/27/04	1	DCA12D4
Warning: extra parameter	4E27002BS1	BS1	WQ	8260FA	PR	05/27/04	1	EBZ
Warning: extra parameter	4E27002BS1	BS1	WQ	8260FA	PR	05/27/04	1	XYLENES
Warning: extra parameter	4E27002BS2	BS2	WQ	8260FA	PR	05/27/04	1	BZ
Warning: extra parameter	4E27002BS2	BS2	WQ	8260FA	PR	05/27/04	1	BZME
Warning: extra parameter	4E27002BS2	BS2	WQ	8260FA	PR	05/27/04	1	DCA12D4
Warning: extra parameter	4E27002BS2	BS2	WQ	8260FA	PR	05/27/04	1	EBZ
Warning: extra parameter	4E27002BS2	BS2	WQ	8260FA	PR	05/27/04	1	GROC4C12
Warning: extra parameter	4E27002BS2	BS2	WQ	8260FA	PR	05/27/04	1	XYLENES
Warning: extra parameter	4E27002BSD1	BD1	WQ	8260FA	PR	05/27/04	1	BZ
Warning: extra parameter	4E27002BSD1	BD1	WQ	8260FA	PR	05/27/04	1	BZME

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	4E27002BSD1	BD1	WQ	8260FA	PR	05/27/04	1	DCA12D4
Warning: extra parameter	4E27002BSD1	BD1	WQ	8260FA	PR	05/27/04	1	EBZ
Warning: extra parameter	4E27002BSD1	BD1	WQ	8260FA	PR	05/27/04	1	XYLENES
Warning: extra parameter	4E27002BSD2	BD2	WQ	8260FA	PR	05/27/04	1	BZ
Warning: extra parameter	4E27002BSD2	BD2	WQ	8260FA	PR	05/27/04	1	BZME
Warning: extra parameter	4E27002BSD2	BD2	WQ	8260FA	PR	05/27/04	1	DCA12D4
Warning: extra parameter	4E27002BSD2	BD2	WQ	8260FA	PR	05/27/04	1	EBZ
Warning: extra parameter	4E27002BSD2	BD2	WQ	8260FA	PR	05/27/04	1	GROC4C12
Warning: extra parameter	4E27002BSD2	BD2	WQ	8260FA	PR	05/27/04	1	XYLENES
Error: LNOTE has an invalid note	4E27002BSD1	BD1	WQ	8260FA	PR	05/27/04	1	ETHANOL

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## EDFQC: Error Summary Log

06/02/04

Error type	Labiocfl	Anmcode	Parlabel	Qccode	Labqid
There are no errors in this data files					

# EDFCL: Error Summary Log

06/02/04

Error type	Crevdate	Anmcode	Exmcode	Parlabel	Cicode
There are no errors in this data file	//				

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**Date/Time of Submittal:** 6/2/2004 9:51:06 AM

**Facility Global ID:** T0600100106

**Facility Name:** ARCO

**Submittal Title:** 2nd Qtr 2004 Monitoring Report #0374

**Submittal Type:** GW Monitoring Report

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