



Atlantic Richfield Company  
(a BP affiliated company)

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**Alameda County  
JUL 15 2005  
Environmental Health**

June 22, 2005

Re: Second Quarter 2005 Groundwater Monitoring Report  
ARCO Service Station #276  
10600 MacArthur Boulevard  
Oakland, California  
ACEH Case #3756

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



June 22, 2005

Ms. Donna Drogas  
Alameda County Environmental Health (ACEH)  
1131 Harbor Bay Parkway, Second Floor, Suite 250  
Alameda, CA 94502

**Re: Second Quarter 2005 Groundwater Monitoring Report  
ARCO Service Station #0276  
10600 MacArthur Boulevard  
Oakland, California  
ACEH Case #3756**


Dear Ms. Drogas:

On behalf of Atlantic Richfield Company, a BP-affiliated company, URS Corporation (URS) is submitting the *Second Quarter 2005 Groundwater Monitoring Report* for ARCO Service Station #0276, located at 10600 MacArthur Boulevard, Oakland, California.

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

Sincerely,

**URS CORPORATION**



Scott Robinson, P.G.  
Project Manager



Enclosure: Second Quarter 2005 Groundwater Monitoring Report

cc: Mr. Paul Supple, Atlantic Richfield Company (RM), electronic copy uploaded to ENFOS

**R E P O R T**

**SECOND QUARTER 2005  
GROUNDWATER MONITORING  
REPORT**

ARCO SERVICE STATION #0276  
10600 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

*Prepared for*  
RM

**Alameda County  
JUL 15 2005  
Environmental Health**

June 22, 2005

**URS**

URS Corporation  
1333 Broadway, Suite 800  
Oakland, California 94612

Date: June 22, 2005

Quarter: 2Q 05

### RM QUARTERLY GROUNDWATER MONITORING REPORT

Facility No.: 0276 Address: 10600 MacArthur Boulevard, Oakland, California  
RM Environmental Business Manager: Paul Supple  
Consulting Co./Contact Person: URS Corporation / Scott Robinson  
Primary Agency: Alameda County Environmental Health (ACEH)  
ACEH Case #: 3756

#### WORK PERFORMED THIS QUARTER (Second – 2005):

1. Performed second quarter 2005 groundwater monitoring event on May 9, 2005.
2. Prepared and submitted this Second Quarter 2005 Groundwater Monitoring Report.
3. Repaired wells MW-1 and MW-3.

#### WORK PROPOSED FOR NEXT QUARTER (Third – 2005):

1. Perform third quarter 2005 groundwater monitoring event.
2. Prepare and submit Third Quarter 2005 Groundwater Monitoring Report.

#### SITE SUMMARY:

Current Phase of Project: Groundwater monitoring/sampling  
Frequency of Groundwater Sampling: Quarterly: Wells MW-2, MW-5 and MW-8  
Semi-annually: Wells MW-6 and MW-7  
Annually: Wells MW-1, MW-3, MW-4, WGR-3 and RW-1  
Frequency of Groundwater Monitoring: Quarterly  
Is Free Product (FP) Present On-Site: No  
Current Remediation Techniques: None  
Approximate Depth to Groundwater: 14.38 (MW-2) to 28.37 (MW-6) feet  
Groundwater Gradient (direction): South-Southwest  
Groundwater Gradient (magnitude): 0.004 feet per foot

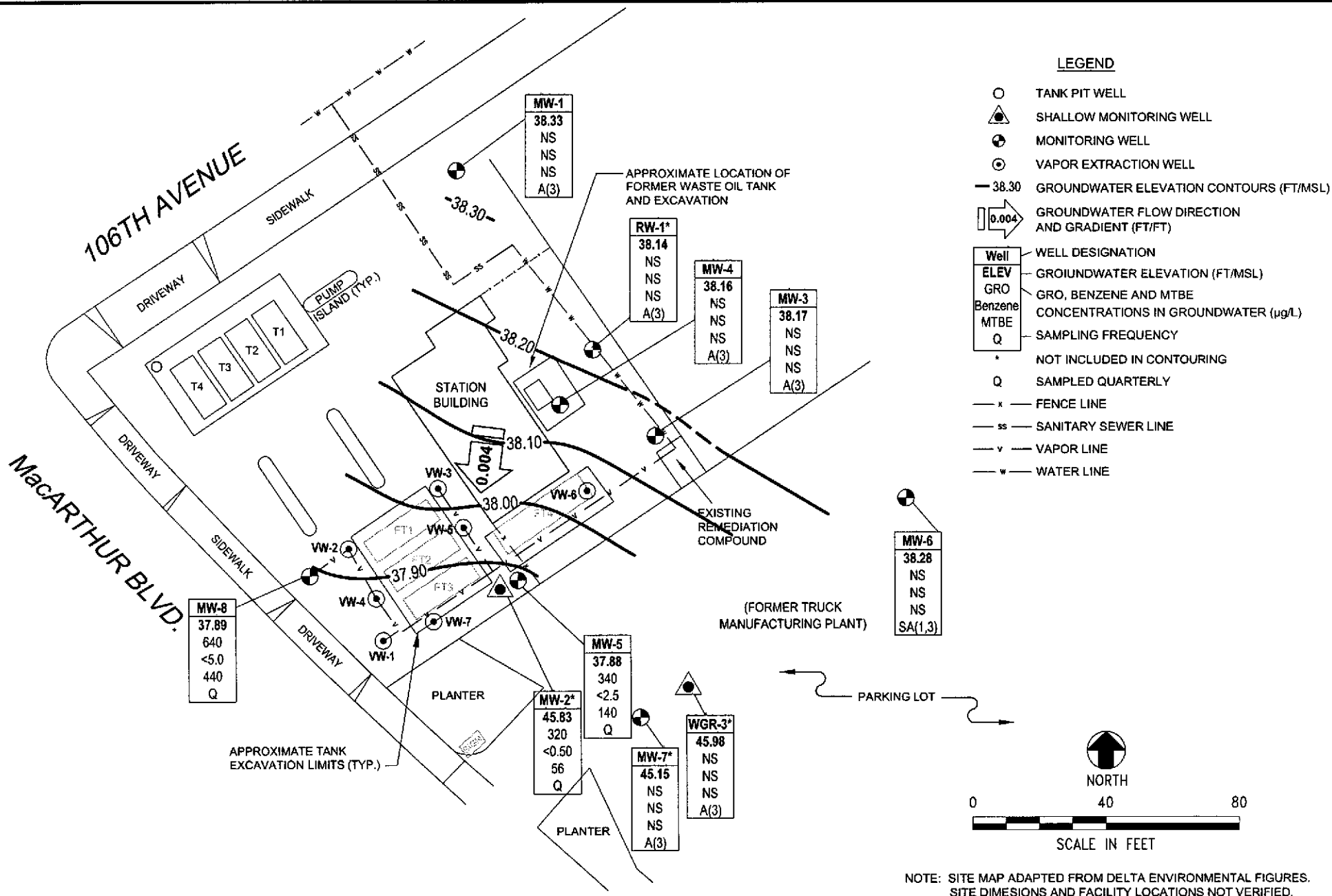
#### DISCUSSION:

Gasoline range organics were detected at or above the laboratory reporting limit in all three of the three wells sampled this quarter at concentrations ranging from 320 µg/L (MW-2) to 640 µg/L (MW-8). Methyl tert-butyl ether was detected at or above the laboratory reporting limit in all three wells at concentrations ranging from 56 µg/L (MW-2) to 440 µg/L (MW-8). Tert-amyl methyl ether was detected at or above the laboratory reporting limit in all three wells at concentrations ranging from 9.2 µg/L (MW-5) to 21 µg/L (MW-8). 1,2 Dichloroethane was detected at or above the laboratory reporting limit in one well at a concentration of 10 µg/L (MW-5). Total xylenes were detected at or above the laboratory reporting limit in one well at a concentration of 0.64 µg/L (MW-2). No other fuel components were detected at or above their respective laboratory reporting limits in any wells sampled this quarter.

A new global ID has been assigned for uploading to Geotracker. Last quarter's Geotracker submittal confirmations and error checks have been included in this quarter's report.

**ATTACHMENTS:**

- Figure 1 - Groundwater Elevation Contour and Analytical Summary Map -- May 9, 2005
- Table 1 - Groundwater Elevation and Analytical Data
- Table 2 - Fuel Additives Analytical Data
- Table 3 - Groundwater Flow Direction and Gradient
- Attachment A - Field Procedures and Field Data Sheets
- Attachment B - Laboratory Procedures, Certified Analytical Reports, Chain-of-Custody Records
- Attachment C - Historical Groundwater Data
- Attachment D - Error Check Reports and EDF/Geowell Submittal Confirmations : 1Q05 and 2Q05



<b>URS</b>	Project No. 38487162	<b>GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP</b>	FIGURE <b>1</b>
	ARCO Service Station #0276 10600 MacArthur Boulevard Oakland, California		

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #0276  
10600 Macarthur Blvd., Oakland, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-1	12/17/2000	--		55.92	23.50	28.50	29.16	26.76	5.09	--	--	--	--	--	--	--
	12/28/2001	--		55.92	23.50	28.50	27.38	28.54	8.8	--	--	--	--	--	--	--
	11/27/2002	NP		55.92	23.50	28.50	29.45	26.47	4.2	--	--	--	--	--	2.3	6.7
	7/22/2003	NP		55.92	23.50	28.50	27.58	28.34	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	6.7
	11/07/2003	NP		55.92	23.50	28.50	30.42	25.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	6.6
	02/03/2004	NP		55.92	23.50	28.50	38.80	17.12	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	6.8
	05/04/2004	NP	g	61.26	23.50	28.50	26.67	34.59	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	6.6
	08/12/2004	NP		61.26	23.50	28.50	29.49	31.77	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	6.6
	11/10/2004	NP		61.26	23.50	28.50	30.29	30.97	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	6.6
	02/03/2005	NP		61.26	23.50	28.50	26.23	35.03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.89	6.5
05/09/2005	--		<b>61.26</b>	<b>23.50</b>	<b>28.50</b>	<b>22.93</b>	<b>38.33</b>	--	--	--	--	--	--	--	--	
MW-2	12/17/2000	--		55.1	15.00	25.00	15.72	39.38	--	--	--	--	--	--	--	--
	12/28/2001	--		55.1	15.00	25.00	27.38	27.72	--	--	--	--	--	--	--	--
	11/27/2002	--		55.1	15.00	25.00	16.35	38.75	--	--	--	--	--	--	--	--
	7/22/2003	--		55.1	15.00	25.00	16.20	38.90	--	--	--	--	--	--	--	--
	11/07/2003	P		55.10	15.00	25.00	18.22	36.88	990	<5.0	<5.0	<5.0	<5.0	110	1.8	6.7
	02/03/2004	P		55.10	15.00	25.00	13.63	41.47	180	<2.5	<2.5	2.6	4.1	55	1.8	6.5
	05/04/2004	P	g	60.21	15.00	25.00	15.76	44.45	290	<2.5	<2.5	<2.5	<2.5	70	0.6	6.3
	08/12/2004	P		60.21	15.00	25.00	17.21	43.00	<250	<2.5	<2.5	3.2	<2.5	49	1.6	6.6
	11/10/2004	P		60.21	15.00	25.00	15.90	44.31	270	<1.0	<1.0	1.6	<1.0	90	0.9	6.2
	02/03/2005	P		60.21	15.00	25.00	14.29	45.92	480	1.7	<0.50	2.0	1.4	37	1.53	6.5
05/09/2005	P		<b>60.21</b>	<b>15.00</b>	<b>25.00</b>	<b>14.38</b>	<b>45.83</b>	<b>320</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>0.64</b>	<b>56</b>	<b>0.57</b>	<b>6.5</b>	
MW-3	12/17/2000	--		56.55	22.00	27.00	29.78	26.77	158	--	--	--	--	--	--	--
	12/28/2001	--		56.55	22.00	27.00	27.95	28.60	310	20	1.5	13	--	--	--	--
	11/27/2002	NP		56.55	22.00	27.00	30.10	26.45	110	--	--	--	--	--	2.0	7.2
	7/22/2003	NP		56.55	22.00	27.00	28.32	28.23	120	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	5.9
	11/07/2003	NP		56.55	22.00	27.00	30.86	25.69	70	<0.50	<0.50	<0.50	<0.50	<0.50	2.8	6.5
	02/03/2004	NP		56.55	22.00	27.00	27.65	28.90	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	6.7
	05/04/2004	NP	g	61.89	22.00	27.00	27.57	34.32	<100	<1.0	<1.0	<1.0	<1.0	<1.0	1.6	6.4
	08/12/2004	NP		61.89	22.00	27.00	30.31	31.58	52	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	6.3
	11/10/2004	NP		61.89	22.00	27.00	31.00	30.89	91	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	6.7
	02/03/2005	NP	i	61.89	22.00	27.00	26.85	35.04	180	<0.50	<0.50	<0.50	<0.50	<0.50	2.25	6.5
05/09/2005	--		<b>61.89</b>	<b>22.00</b>	<b>27.00</b>	<b>23.72</b>	<b>38.17</b>	--	--	--	--	--	--	--	--	

**Table 1**  
**Groundwater Elevation and Analytical Data**  
 ARCO Service Station #0276  
 10600 Macarthur Blvd., Oakland, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	GRO/TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-4	12/17/2000	--		55.98	25.00	45.00	29.22	26.76	225	--	--	--	--	--	--	--
	12/28/2001	--		55.98	25.00	45.00	27.37	28.61	160	1.2	--	--	--	--	--	--
	11/27/2002	NP		55.98	25.00	45.00	29.55	26.43	95	--	--	--	--	--	3.7	6.7
	7/22/2003	NP		55.98	25.00	45.00	27.73	28.25	130	<0.50	<0.50	<0.50	<0.50	<0.50	2.9	6.6
	11/07/2003	NP		55.98	25.00	45.00	30.41	25.57	59	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	6.5
	02/03/2004	NP		55.98	25.00	45.00	27.01	28.97	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.2	7.1
	05/04/2004	NP	g	61.30	25.00	45.00	26.91	34.39	<100	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	6.5
	08/12/2004	NP		61.30	25.00	45.00	29.76	31.54	58	<0.50	<0.50	<0.50	<0.50	<0.50	2.3	6.4
	11/10/2004	NP		61.30	25.00	45.00	30.40	30.90	69	<0.50	<0.50	<0.50	<0.50	<0.50	2.4	6.6
	02/03/2005	NP	i	61.30	25.00	45.00	26.28	35.02	51	<0.50	<0.50	<0.50	<0.50	<0.50	3.77	6.8
05/09/2005	--		<b>61.30</b>	<b>25.00</b>	<b>45.00</b>	<b>23.14</b>	<b>38.16</b>	--	--	--	--	--	--	--	--	--
MW-5	12/17/2000	--		55.43	23.50	31.50	28.82	26.61	1,040	--	--	--	--	--	--	--
	12/28/2001	--		55.43	23.50	31.50	26.91	28.52	3,200	190	2/4/1900	140	1.9/3.2/2.0	--	--	--
	11/27/2002	P		55.43	23.50	31.50	29.15	26.28	110	--	--	--	--	--	1.4	6.4
	7/22/2003	P		55.43	23.50	31.50	27.43	28.00	160	<1.0	<1.0	<1.0	<1.0	110	1.5	6.6
	11/07/2003	P		55.43	23.50	31.50	29.99	25.44	<250	<2.5	<2.5	<2.5	<2.5	120	0.6	6.2
	02/03/2004	P		55.43	23.50	31.50	26.55	28.88	85	<2.5	<2.5	<2.5	<2.5	71	1.7	6.7
	05/04/2004	P	g	60.73	23.50	31.50	26.47	34.26	<250	<2.5	<2.5	<2.5	<2.5	150	0.9	6.2
	08/12/2004	P		60.73	23.50	31.50	29.49	31.24	<250	<2.5	<2.5	<2.5	<2.5	140	1.8	6.3
	11/10/2004	P		60.73	23.50	31.50	30.15	30.58	170	<1.0	<1.0	<1.0	<1.0	150	1.0	6.3
	02/03/2005	P		60.73	23.50	31.50	25.85	34.88	100	<0.50	<0.50	<0.50	<0.50	16	1.65	6.5
05/09/2005	P		<b>60.73</b>	<b>23.50</b>	<b>31.50</b>	<b>22.85</b>	<b>37.88</b>	<b>340</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>140</b>	<b>0.87</b>	<b>6.3</b>	
MW-6	12/17/2000	--		61.21	37.50	56.00	34.61	26.60	--	--	--	--	--	--	--	--
	12/28/2001	--		61.21	37.50	56.00	32.80	28.41	--	--	--	--	--	--	--	--
	11/27/2002	--		61.21	37.50	56.00	35.00	26.21	--	--	--	--	--	--	--	--
	7/22/2003	--		61.21	37.50	56.00	33.17	28.04	--	--	--	--	--	--	--	--
	11/07/2003	P	d, e	61.21	37.50	56.00	35.70	25.51	<500	<5.0	<5.0	<5.0	<5.0	<5.0	2.7	6.9
	02/03/2004	P		61.21	37.50	56.00	32.17	29.04	84	<2.5	<2.5	<2.5	<2.5	<2.5	1.9	7.0
	05/04/2004	P	g	66.65	37.50	56.00	32.07	34.58	<250	<2.5	<2.5	<2.5	<2.5	<2.5	2.0	6.7
	08/12/2004	P		66.65	37.50	56.00	34.90	31.75	660	<0.50	<0.50	<0.50	<0.50	0.81	1.4	6.9
11/10/2004	P		66.65	37.50	56.00	35.70	30.95	640	<0.50	<0.50	<0.50	<0.50	0.89	2.6	6.8	
02/03/2005	P	i	66.65	37.50	56.00	31.48	35.17	77	<0.50	<0.50	<0.50	<0.50	<0.50	1.73	7.0	



Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #0276  
10600 Macarthur Blvd., Oakland, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-6	05/09/2005	--		66.65	37.50	56.00	28.37	38.28	--	--	--	--	--	--	--	--
MW-7	12/17/2000	--		58.22	17.50	37.50	19.94	38.28	---	---	---	---	---	--	---	---
	12/28/2001	--		58.22	17.50	37.50	17.29	40.93	---	---	---	---	---	--	---	---
	11/27/2002	--		58.22	17.50	37.50	21.30	36.92	---	---	---	---	---	--	---	---
	7/22/2003	--		58.22	17.50	37.50	21.36	36.86	---	---	---	---	---	--	---	---
	11/07/2003	P	d	58.22	17.50	37.50	23.76	34.46	3,200	15	<2.5	130	11	53	2.2	6.8
	02/03/2004	P		58.22	17.50	37.50	17.74	40.48	53	<0.50	<0.50	<0.50	0.54	32	1.9	6.4
	02/03/2005	P		63.54	17.50	37.50	18.13	45.41	61	<0.50	<0.50	<0.50	<0.50	14	3.39	6.5
	05/09/2005	--		63.54	17.50	37.50	18.39	45.15	--	--	--	--	--	--	--	--
MW-8	12/17/2000	--		53.65	29.00	49.00	27.02	26.63	---	---	---	---	---	--	---	---
	12/28/2001	--		53.65	29.00	49.00	24.99	28.66	---	---	---	---	---	--	---	---
	11/27/2002	--		53.65	29.00	49.00	27.45	26.20	---	---	---	---	---	--	---	---
	7/22/2003	--		53.65	29.00	49.00	25.74	27.91	---	---	---	---	---	--	---	---
	11/07/2003	P		53.65	29.00	49.00	28.27	25.38	<500	<5.0	<5.0	<5.0	<5.0	440	2.6	6.5
	02/03/2004	P	f	53.65	29.00	49.00	24.80	28.85	170	<12	<12	<12	<12	470	3.0	6.7
	05/04/2004	P	g	58.96	29.00	49.00	24.81	34.15	<1,000	<10	<10	<10	<10	700	3.8	6.4
	08/12/2004	P		58.96	29.00	49.00	27.72	31.24	<2,500	<25	<25	<25	<25	400	3.4	6.5
	11/10/2004	P		58.96	29.00	49.00	28.41	30.55	<500	<5.0	<5.0	<5.0	<5.0	480	3.4	6.3
	02/03/2005	P		58.96	29.00	49.00	24.01	34.95	<50	<0.50	<0.50	<0.50	<0.50	45	1.43	6.4
	05/09/2005	P	i	58.96	29.00	49.00	21.07	37.89	640	<5.0	<5.0	<5.0	<5.0	440	1.06	6.4
RW-1	12/17/2000	--		56.32	36.00	51.00	29.57	26.75	---	---	---	---	---	--	---	---
	12/28/2001	--		56.32	36.00	51.00	27.64	28.68	---	---	---	---	---	--	---	---
	11/27/2002	--		56.32	36.00	51.00	29.93	26.39	---	---	---	---	---	--	---	---
	7/22/2003	--		56.32	36.00	51.00	28.09	28.23	---	---	---	---	---	--	---	---
	11/07/2003	P		56.32	36.00	51.00	30.64	25.68	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	7.0
	02/03/2004	P		56.32	36.00	51.00	27.28	29.04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.7	7.1
	05/04/2004	P	g	61.65	36.00	51.00	27.16	34.49	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.4	6.8
	08/12/2004	P		61.65	36.00	51.00	30.10	31.55	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	7.1
	11/10/2004	P		61.65	36.00	51.00	30.79	30.86	<100	<0.50	<0.50	<0.50	<0.50	<0.50	5.7	6.9
	02/03/2005	P		61.65	36.00	51.00	26.61	35.04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.57	7.1
	05/09/2005	--		61.65	36.00	51.00	23.51	38.14	--	--	--	--	--	--	--	--
WGR-3	12/17/2000	--		---	--	--	19.21	---	---	---	---	---	---	--	---	---

**Table 1**

**Groundwater Elevation and Analytical Data**

ARCO Service Station #0276  
10600 Macarthur Blvd., Oakland, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
WGR-3	12/28/2001	--	h	---	--	--	--	--	--	--	--	--	--	--	--	--
	11/27/2002	--		---	--	--	20.60	---	---	---	---	---	---	---	---	---
	7/22/2003	--		---	--	--	20.77	---	---	---	---	---	---	---	---	---
	05/04/2004	P	g	63.27	--	--	19.53	43.74	<50	<0.50	<0.50	<0.50	<0.50	11	1.8	6.5
	08/12/2004	P		63.27	--	--	22.20	41.07	<50	<0.50	<0.50	<0.50	<0.50	35	2.0	--
	11/10/2004	P		63.27	--	--	19.98	43.29	<50	<0.50	<0.50	<0.50	<0.50	5.6	0.3	6.3
	02/03/2005	P		63.27	--	--	16.91	46.36	<50	<0.50	<0.50	<0.50	<0.50	1.1	2.04	6.5
	05/09/2005	--		63.27	--	--	17.29	45.98	--	--	--	--	--	--	--	--

Table 1

Groundwater Elevation and Analytical Data

ARCO Service Station #0276  
10600 Macarthur Blvd., Oakland, CA

SYMBOLS & ABBREVIATIONS:

-- = Not analyzed/applicable/measured/available  
< = Not detected at or above laboratory reporting limit  
DO = Dissolved oxygen  
DTW = Depth to water in feet below ground surface  
ft bgs = feet below ground surface  
ft MSL = feet above mean sea level  
GRO = Gasoline Range Organics, range C4-C12  
GWE = Groundwater elevation measured in feet above mean sea level  
mg/L = Milligrams per liter  
MTBE = Methyl tert butyl ether  
NP = Not Purged  
P = Purge  
TOC = Top of casing measured in feet above mean sea level  
TPH-g = Total petroleum hydrocarbons as gasoline  
ug/L = Micrograms per liter

FOOTNOTES:

a = 1,1 DCE; this footnote is no longer applicable  
b = 1,2 DCA; this footnote is no longer applicable  
c = Chlorobenzene; this footnote is no longer applicable  
d = sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time. Results may still be used for intended purpose.  
e = The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits  
f = Discrete peak @ C5 for GRO/TPH-g.  
g = Site was re-surveyed to NAVD' 88 on January 26, 2004.  
h = Well is dry.  
i = Hydrocarbon result for GRO partly due to individual peak(s) in quantification range.

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

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

Groundwater samples were analyzed by EPA method 8015B for GRO and EPA method 8260B for BTEX, fuel oxygenates, ethanol, and PCE.

pH and DO levels are field measurements.

Table 2

Fuel Additives Analytical Data  
 ARCO Service Station #0276  
 10600 Macarthur Blvd., Oakland, CA

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)	trans-1,2 DCE (µg/L)	cis-1,2 DCE (µg/L)	VOC (µg/L)	Oxygen (µg/L)	PCE (µg/L)	TCE (µg/L)	Footnotes/ Comments
MW-1	12/17/2000	---	---	--	---	---	---	---	---	--	--	--	--	5.09	--	
	12/28/2001	---	---	--	---	---	---	---	---	--	--	--	--	8.8	--	
	11/27/2002	---	---	--	---	---	---	---	---	--	--	--	--	4.2	--	
	7/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	6.0	--	
	11/07/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	3.0	--	
	02/03/2004	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	--	--	--	--	21	--	
	05/04/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	34	--	
	08/12/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	4.5	--	
	11/10/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	4.9	--	
02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	58	--	e	
MW-2	11/07/2003	<1,000	<200	110	<5.0	<5.0	28	--	--	--	--	--	--	<5.0	--	
	02/03/2004	<500	<100	55	<5.0	<5.0	16	<2.5	<2.5	--	--	--	--	<2.5	--	
	05/04/2004	<500	<100	70	<2.5	<2.5	15	<2.5	<2.5	--	--	--	--	<2.5	--	
	08/12/2004	<500	<100	49	<2.5	<2.5	14	<2.5	<2.5	--	--	--	--	<0.50	--	
	11/10/2004	<200	<40	90	<1.0	<1.0	19	<1.0	<1.0	--	--	--	--	<1.0	--	
	02/03/2005	<100	<20	37	<0.50	<0.50	13	<0.50	<0.50	--	--	--	--	<0.50	--	e
	05/09/2005	<100	<20	56	<0.50	<0.50	17	<0.50	<0.50	--	--	--	--	<0.50	--	e
MW-3	12/17/2000	---	---	--	---	---	---	---	---	--	--	--	--	158	--	
	12/28/2001	---	---	--	---	---	---	---	---	1.5	13	--	--	310	20	
	11/27/2002	---	---	--	---	---	---	---	---	--	--	--	--	110	--	
	7/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	80	--	
	11/07/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	80	--	
	02/03/2004	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	--	--	--	--	110	--	
	05/04/2004	<200	<40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	110	--	
	08/12/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	61	--	
	11/10/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	99	--	
02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	160	--	e	
MW-4	12/17/2000	---	---	--	---	---	---	---	---	--	--	--	--	225	--	
	12/28/2001	---	---	--	---	---	---	---	---	--	--	--	--	160	1.2	
	11/27/2002	---	---	--	---	---	---	---	---	--	--	--	--	95	--	
	7/22/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	94	--	
	11/07/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	68	--	
	02/03/2004	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	--	--	--	--	83	--	

Table 2

**Fuel Additives Analytical Data**  
**ARCO Service Station #0276**  
**10600 Macarthur Blvd., Oakland, CA**

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)	trans-1,2 DCE (µg/L)	cis-1,2 DCE (µg/L)	VOC (µg/L)	Oxygen (µg/L)	PCE (µg/L)	TCE (µg/L)	Footnotes/ Comments
MW-4	05/04/2004	<200	<40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	81	--	
	08/12/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	59	--	
	11/10/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	78	--	
	02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	61	--	e
MW-5	12/17/2000	---	---	--	---	---	---	---	---	--	--	--	--	1,040	--	
	12/28/2001	---	---	--	---	---	---	---	---	36	140	1.9, 3.2, 2.0	--	3,200	190	a,b,c
	11/27/2002	---	---	--	---	---	---	---	---	--	--	--	--	110	--	
	7/22/2003	<200	<40	110	1.4	<1.0	3.2	12	<1.0	--	--	--	--	55	--	
	11/07/2003	<500	<100	120	<2.5	<2.5	6.6	--	--	--	--	--	--	42	--	
	02/03/2004	<500	<100	71	<5.0	<5.0	<5.0	12	<2.5	--	--	--	--	130	--	
	05/04/2004	<500	<100	150	<2.5	<2.5	5.9	8.8	<2.5	--	--	--	--	36	--	
	08/12/2004	<500	<100	140	<2.5	<2.5	10	10	<2.5	--	--	--	--	37	--	
	11/10/2004	<200	<40	150	1.1	<1.0	9.5	9.8	<1.0	--	--	--	--	50	--	
	02/03/2005	<100	<20	16	<0.50	<0.50	0.54	2.7	<0.50	--	--	--	--	480	--	e
05/09/2005	<500	<100	140	<2.5	<2.5	9.2	10	<2.5	--	--	--	--	78	--	e	
MW-6	11/07/2003	<1,000	<200	<5.0	<5.0	<5.0	<5.0	--	--	--	--	--	--	560	--	
	02/03/2004	<500	<100	<2.5	<5.0	<5.0	<5.0	<2.5	<2.5	--	--	--	--	220	--	
	05/04/2004	<500	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--	--	--	--	210	--	
	08/12/2004	<100	<20	0.81	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	750	--	
	11/10/2004	<100	<20	0.89	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	530	--	
	02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	85	--	e
MW-7	11/07/2003	<500	<100	53	<2.5	<2.5	13	--	--	--	--	--	--	<2.5	--	
	02/03/2004	<100	<20	32	<1.0	<1.0	7.4	<0.50	<0.50	--	--	--	--	0.74	--	
	02/03/2005	<100	<20	14	<0.50	<0.50	3.9	<0.50	<0.50	--	--	--	--	1.6	--	e
MW-8	11/07/2003	<1,000	<200	440	<5.0	<5.0	18	--	--	--	--	--	--	<5.0	--	
	02/03/2004	<2,500	<500	470	<25	<25	<25	<12	<12	--	--	--	--	<12	--	
	05/04/2004	<2,000	<400	700	<10	<10	21	<10	<10	--	--	--	--	12	--	
	08/12/2004	<5,000	<1,000	400	<25	<25	<25	<25	<25	--	--	--	--	1.1	--	
	11/10/2004	<1,000	<200	480	<5.0	<5.0	21	<5.0	<5.0	--	--	--	--	8.9	--	
	02/03/2005	<100	<20	45	<0.50	<0.50	1.9	<0.50	<0.50	--	--	--	--	0.59	--	e
	05/09/2005	<1,000	<200	440	<5.0	<5.0	21	<5.0	<5.0	--	--	--	--	<5.0	--	e

**Table 2**

**Fuel Additives Analytical Data**  
**ARCO Service Station #0276**  
**10600 Macarthur Blvd., Oakland, CA**

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)	trans-1,2 DCE (µg/L)	cis-1,2 DCE (µg/L)	VOC (µg/L)	Oxygen (µg/L)	PCE (µg/L)	TCE (µg/L)	Footnotes/ Comments
RW-1	11/07/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	3.1	--	
	02/03/2004	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	--	--	--	--	0.76	--	
	05/04/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	1.8	--	
	08/12/2004	330/<100 d	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	2.9	--	d
	11/10/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	5.2	--	
	02/03/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	1.7	--	e
WGR-3	05/04/2004	<100	<20	11	<0.50	<0.50	2.4	<0.50	<0.50	--	--	--	--	<0.50	--	
	08/12/2004	<100	<20	35	<0.50	<0.50	7.5	<0.50	<0.50	--	--	--	--	<0.50	--	
	11/10/2004	<100	<20	5.6	<0.50	<0.50	1.3	<0.50	<0.50	--	--	--	--	<0.50	--	
	02/03/2005	<100	<20	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<0.50	--	e

## Table 2

### Fuel Additives Analytical Data ARCO Service Station #0276 10600 Macarthur Blvd., Oakland, CA

#### SYMBOLS & ABBREVIATIONS:

– = Not analyzed/applicable/measured/available  
< = Not detected at or above the laboratory reporting limit.  
1,2-DCA = 1,2-Dichloroethane  
cis-1,2-DCE = cis-1,2-Dichloroethene  
DIPE = Di-isopropyl ether  
EDB = 1,2-Dibromoethane  
ETBE = Ethyl tert-butyl ether  
MTBE = Methyl tert-butyl ether  
PCE = Tetrachloroethane  
TAME = tert-Amyl methyl ether  
TBA = tert-Butyl alcohol  
TCE = Trichloroethane  
trans-1,2-DCE = trans 1,2-Dichloroethene  
VOC = Volatile Organic Compounds  
ug/L = Micrograms per Liter

#### FOOTNOTES:

a = VOC 1,1 DCE detected at a concentration of 1.9 ug/L.  
b = VOC 1,2 DCA detected at a concentration of 3.2 ug/L.  
c = VOC Chlorobenzene detected at a concentration of 2.0 ug/L.  
d = Ethanol was re-analyzed two days out of holding time and was not detected above a laboratory reporting limit of 100 ug/L.  
e = Calibration verification for ethanol is within method limits but outside contract limits.

#### NOTES:

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

**Table 3**

**Groundwater Gradient Data**  
ARCO Service Station #0276  
10600 Macarthur Blvd., Oakland, CA

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

Source : The data within this table collected prior to November 2002 was provided to URS by RM and their previous consultants. URS has not verified the accuracy of this information.



**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 # 050509-WC-1 Date 5/19/05 Client Arco ~~Arco~~ Arco 276

Site 10600 MacArthur Blvd, 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	2					22.93	38.77	↓
MW-2	4					14.38	25.20	
MW-3	2					23.72	38.50	
MW-4	2					23.14	47.58	
MW-5	4					22.85	46.91	
MW-6	2					28.37	48.40	
MW-7	2					18.39	36.43	
MW-8	4					21.07	42.74	
RW-1	6	gauged w/ tubing in well				23.51	48.75	
WG-3	4					17.29	26.97	

**ARCO / BP WELL MONITORING DATA SHEET**

BTS #: <u>050509-WC-1</u>	Station # <u>276</u>
Sampler: <u>WC</u>	Date: <u>5/9/05</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u>    </u>
Total Well Depth: <u>25.20</u>	Depth to Water: <u>14.38</u>
Depth to Free Product: <u>    </u>	Thickness of Free Product (feet): <u>    </u>
Referenced to: <u>(PVE)</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: <u>Bailer</u> Disposable Bailer Positive Air Displacement Electric <u>Submersible</u> Extraction Pump Other: <u>    </u>	Sampling Method: <u>Bailer</u> Disposable <u>Bailer</u> Extraction Port Other: <u>    </u>
---	---

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>7.0</u>	x	<u>3</u>	=	<u>21.0</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
1203	66.2	6.6	401	7	odor/clear
1205	65.9	6.5	407	14	↓
1207	65.9	6.5	437	21	↓

Did well dewater? Yes <u>(No)</u>	Gallons actually evacuated: <u>21</u>	
Sampling Time: <u>1213</u>	Sampling Date: <u>5/9/05</u>	
Sample I.D.: <u>MW-2</u>	Laboratory: Pace <u>Santa</u> Other <u>    </u>	
Analyzed for: <u>CO</u> <u>BO</u> X MTBE DRO Other: <u>see coc</u>		
D.O. (if req'd):	Pre-purge: <u>    </u> mg/L	Post-purge: <u>0.57</u> mg/L
O.R.P. (if req'd):	Pre-purge: <u>    </u> mV	Post-purge: <u>    </u> mV

**ARCO / BP WELL MONITORING DATA SHEET**

BTS #: <u>050509-WC-1</u>	Station # <u>276</u>
Sampler: <u>WC</u>	Date: <u>5/9/05</u>
Well I.D.: <u>MW-5</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u>   </u>
Total Well Depth: <u>46.91</u>	Depth to Water: <u>22.85</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: <u>Bailer</u> Disposible Bailer Positive Air Displacement Electric <u>Submersible</u> Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposible <u>Bailer</u> Extraction Port 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>15.6</u>	x	<u>3</u>	=	<u>46.8</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
<u>1126</u>	<u>66.9</u>	<u>6.7</u>	<u>803</u>	<u>47/16</u>	<u>clear</u>
<u>1131</u>	<u>67.4</u>	<u>6.4</u>	<u>844</u>	<u>32</u>	<u>↓</u>
<u>1134</u>	<u>67.4</u>	<u>6.3</u>	<u>906</u>	<u>47</u>	<u>↓</u>

Did well dewater? Yes <u>NO</u>	Gallons actually evacuated: <u>47</u>	
Sampling Time: <u>1140</u>	Sampling Date: <u>5/9/05</u>	
Sample I.D.: <u>MW-5</u>	Laboratory: Pace <u>Squoia</u> Other _____	
Analyzed for: <u>CR6</u> <u>TEX</u> MTBE DRO Other: <u>See Coe</u>		
D.O. (if req'd):	Pre-purge: _____ <sup>mg/L</sup>	Post-purge: <u>0.87</u> <sup>mg/L</sup>
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050509-WC-1</u>	Station # <u>276</u>
Sampler: <u>WC</u>	Date: <u>5/9/05</u>
Well I.D.: <u>MW-8</u>	Well Diameter: 2 3 <input checked="" type="radio"/> 6 8 <input type="checkbox"/>
Total Well Depth: <u>42.74</u>	Depth to Water: <u>21.07</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> <u>VE</u> Grade	D.O. Meter (if req'd): <input checked="" type="radio"/> <u>SI</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: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Positive Air Displacement <input checked="" type="checkbox"/> Electric Submersible <input type="checkbox"/> Extraction Pump Other: _____	Sampling Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port 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>14.1</u>	x	<u>3</u>	=	<u>42.3</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <del>µS</del> )	Gals. Removed	Observations
1235	70.9	6.5	651	15	odor/clear
1238	70.3	6.4	639	30	↓
1241	70.2	6.4	649	45	↓

Did well dewater? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>45</u>
Sampling Time: <u>1247</u>	Sampling Date: <u>5/9/05</u>
Sample I.D.: <u>MW-8</u>	Laboratory: Pace <input checked="" type="checkbox"/> Sequoia <input type="checkbox"/> Other _____
Analyzed for: <input checked="" type="checkbox"/> GRO <input checked="" type="checkbox"/> BTEX MTBE DRO	Other: <u>see COC</u>
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>1.06</u> 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 BLAINE 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:

276

Station # \_\_\_\_\_

Station Address 10600 MacArthur Blvd, Oakland

Total Gallons Collected From Groundwater Monitoring Wells:  
113 Gallons

added equip. 2 gal any other adjustments —  
 rinse water \_\_\_\_\_

TOTAL GALS. RECOVERED 115 loaded onto BTS vehicle # 22

BTS event # \_\_\_\_\_ time \_\_\_\_\_ date 5/9/05  
050509 1315

signature WMA Crow

\*\*\*\*\*

REC'D AT \_\_\_\_\_ time \_\_\_\_\_ date \_\_\_\_\_  
Blaine Tech 1700 5/9/05

unloaded by signature WMA Crow

# Repair Data Sheet

Client Bp / Arco 27b # \_\_\_\_\_ Date 6-8-05  
 Site Address 10600 MacArthur, Oakland, CA  
 Job Number 050608AA1 Technician Andrew Adirolfi

Inspection Point (Well ID or description of location)	Well Inspected, Cleared, Labeled - No Further Corrective Action Required	Replaced Cap	Replaced Lock	Replaced Lid Seal	Check Indicates deficiency								Lid Not Securable By Design (List Type)	Well Not Inspected (explain in notes)	Deficiency Logged on Repair Order	Deficiency Remains Uncorrected/Logged on Site Inspection Checklist	Partial Repair Completed/Outstanding Deficiency Logged on Repair Order	All Repairs Completed
					Casing	Annular Seal	Tabs / Bolts	Box Structure	Apron	Trip Hazard	Below Grade	Other Deficiency						
MW-1							X											X
Notes: 1 of 2 tabs w/ broken bolt in tab - drilled out bolt and retaped																		
MW-3							X											X
Notes: 1 of 2 missing tabs - New wellbox																		
Notes:																		
Notes:																		
Notes:																		



**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 RM have been reviewed and verified by that laboratory.



**Sequoia  
Analytical**

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

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25 May, 2005

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

RE: ARCO #0276, Oakland, CA  
Work Order: MOE0425

Enclosed are the results of analyses for samples received by the laboratory on 05/10/05 15:13. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race  
Senior Project Manager

CA ELAP Certificate #1210

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-0004  
Project Manager: Scott Robinson

MOE0425  
Reported:  
05/25/05 16:33

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	MOE0425-01	Water	05/09/05 12:13	05/10/05 15:13
MW-5	MOE0425-02	Water	05/09/05 11:40	05/10/05 15:13
MW-8	MOE0425-03	Water	05/09/05 12:47	05/10/05 15:13
TB-276-050905	MOE0425-04	Water	05/09/05 00:00	05/10/05 15:13

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies. These samples were received with no custody seals.

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

 Project: ARCO #0276, Oakland, CA  
 Project Number: G0C20-0004  
 Project Manager: Scott Robinson

 MOE0425  
 Reported:  
 05/25/05 16:33

### Volatile Organic Compounds by EPA Method 8260B

#### Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (MOE0425-01) Water    Sampled: 05/09/05 12:13    Received: 05/10/05 15:13</b>									
tert-Amyl methyl ether	17	0.50	ug/l	1	5E19013	05/19/05	05/19/05	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	56	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	0.64	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	320	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		91 %	60-135	"	"	"	"	"	
<b>MW-5 (MOE0425-02) Water    Sampled: 05/09/05 11:40    Received: 05/10/05 15:13</b>									
tert-Amyl methyl ether	9.2	2.5	ug/l	5	5E19013	05/19/05	05/19/05	EPA 8260B	
Benzene	ND	2.5	"	"	"	"	"	"	
tert-Butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"	
1,2-Dichloroethane	10	2.5	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	140	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Xylenes (total)	ND	2.5	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	340	250	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		94 %	60-135	"	"	"	"	"	

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-0004  
Project Manager: Scott Robinson

MOE0425  
Reported:  
05/25/05 16:33

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-8 (MOE0425-03) Water    Sampled: 05/09/05 12:47    Received: 05/10/05 15:13</b>									
tert-Amyl methyl ether	21	5.0	ug/l	10	5E19013	05/19/05	05/19/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	200	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	440	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
<b>Gasoline Range Organics (C4-C12)</b>	<b>640</b>	<b>500</b>	"	"	"	"	"	"	<b>PV</b>
<i>Surrogate: 1,2-Dichloroethane-d4</i>		88 %		60-135	"	"	"	"	

URS Corporation [Arco]  
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MOE0425  
Reported:  
05/25/05 16:33

**EPA 8010 list Volatile Organic Compounds by EPA 8260B  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (MOE0425-01) Water</b> <b>Sampled: 05/09/05 12:13</b> <b>Received: 05/10/05 15:13</b>									
Tetrachloroethene	ND	0.50	ug/l	1	5E19013	05/19/05	05/19/05	EPA 8260B	
Surrogate: Dibromofluoromethane		100 %	65-130		"	"	"	"	
Surrogate: Toluene-d8		90 %	70-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	70-120		"	"	"	"	
<b>MW-5 (MOE0425-02) Water</b> <b>Sampled: 05/09/05 11:40</b> <b>Received: 05/10/05 15:13</b>									
Tetrachloroethene	78	2.5	ug/l	5	5E19013	05/19/05	05/19/05	EPA 8260B	
Surrogate: Dibromofluoromethane		99 %	65-130		"	"	"	"	
Surrogate: Toluene-d8		85 %	70-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96 %	70-120		"	"	"	"	
<b>MW-8 (MOE0425-03) Water</b> <b>Sampled: 05/09/05 12:47</b> <b>Received: 05/10/05 15:13</b>									
Tetrachloroethene	ND	5.0	ug/l	10	5E19013	05/19/05	05/19/05	EPA 8260B	
Surrogate: Dibromofluoromethane		94 %	65-130		"	"	"	"	
Surrogate: Toluene-d8		84 %	70-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97 %	70-120		"	"	"	"	

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 Oakland CA, 94612

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 MOE0425  
 Reported:  
 05/25/05 16:33

**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 5E19013 - EPA 5030B P/T / EPA 8260B**

<b>Blank (5E19013-BLK1)</b>										Prepared & Analyzed: 05/19/05
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							IC
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.42</i>		<i>"</i>	<i>5.00</i>		<i>88</i>	<i>60-135</i>			

<b>Laboratory Control Sample (5E19013-BS1)</b>										Prepared & Analyzed: 05/19/05
tert-Amyl methyl ether	21.6	0.50	ug/l	20.0		108	80-115			
Benzene	20.3	0.50	"	20.0		102	65-115			
tert-Butyl alcohol	116	20	"	100		116	75-150			
Di-isopropyl ether	20.7	0.50	"	20.0		104	75-125			
1,2-Dibromoethane (EDB)	21.7	0.50	"	20.0		108	85-120			
1,2-Dichloroethane	19.9	0.50	"	20.0		100	85-130			
Ethanol	660	100	"	400		165	70-135			IC, HL
Ethyl tert-butyl ether	20.4	0.50	"	20.0		102	75-130			
Ethylbenzene	22.0	0.50	"	20.0		110	75-135			
Methyl tert-butyl ether	18.8	0.50	"	20.0		94	65-125			
Toluene	19.6	0.50	"	20.0		98	85-120			
Xylenes (total)	65.0	0.50	"	60.0		108	85-125			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.48</i>		<i>"</i>	<i>5.00</i>		<i>90</i>	<i>60-135</i>			



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

 Project: ARCO #0276, Oakland, CA  
 Project Number: G0C20-0004  
 Project Manager: Scott Robinson

 MOE0425  
 Reported:  
 05/25/05 16:33

### 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
<b>Batch 5E19013 - EPA 5030B P/T / EPA 8260B</b>										
<b>Laboratory Control Sample (5E19013-BS2)</b>				<b>Prepared &amp; Analyzed: 05/19/05</b>						
Benzene	5.59	0.50	ug/l	6.08		92	65-115			
Ethylbenzene	8.74	0.50	"	7.84		111	75-135			
Methyl tert-butyl ether	8.21	0.50	"	9.60		86	65-125			
Toluene	32.1	0.50	"	32.9		98	85-120			
Xylenes (total)	42.2	0.50	"	38.5		110	85-125			
Gasoline Range Organics (C4-C12)	395	50	"	440		90	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.46</i>		"	<i>5.00</i>		<i>89</i>	<i>60-135</i>			
<b>Laboratory Control Sample Dup (5E19013-BSD1)</b>				<b>Prepared &amp; Analyzed: 05/19/05</b>						
tert-Amyl methyl ether	21.0	0.50	ug/l	20.0		105	80-115	3	15	
Benzene	19.3	0.50	"	20.0		96	65-115	5	20	
tert-Butyl alcohol	124	20	"	100		124	75-150	7	25	
Di-isopropyl ether	19.8	0.50	"	20.0		99	75-125	4	15	
1,2-Dibromoethane (EDB)	20.9	0.50	"	20.0		104	85-120	4	15	
1,2-Dichloroethane	18.9	0.50	"	20.0		94	85-130	5	20	
Ethanol	714	100	"	400		178	70-135	8	35	IC, HL
Ethyl tert-butyl ether	19.6	0.50	"	20.0		98	75-130	4	25	
Ethylbenzene	21.6	0.50	"	20.0		108	75-135	2	15	
Methyl tert-butyl ether	18.2	0.50	"	20.0		91	65-125	3	20	
Toluene	18.6	0.50	"	20.0		93	85-120	5	20	
Xylenes (total)	63.5	0.50	"	60.0		106	85-125	2	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.41</i>		"	<i>5.00</i>		<i>88</i>	<i>60-135</i>			
<b>Matrix Spike (5E19013-MS1)</b>				<b>Source: MOE0425-03</b>		<b>Prepared: 05/19/05 Analyzed: 05/20/05</b>				
Benzene	53.5	5.0	ug/l	60.8	ND	88	65-115			
Ethylbenzene	83.7	5.0	"	78.4	ND	107	75-135			
Toluene	310	5.0	"	329	ND	94	85-120			
Xylenes (total)	407	5.0	"	385	2.5	105	85-125			
Gasoline Range Organics (C4-C12)	4140	500	"	4400	640	80	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.65</i>		"	<i>5.00</i>		<i>93</i>	<i>60-135</i>			

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

Project: ARCO #0276, Oakland, CA  
Project Number: G0C20-0004  
Project Manager: Scott Robinson

MOE0425  
Reported:  
05/25/05 16:33

**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 5E19013 - EPA 5030B P/T / EPA 8260B**

<b>Matrix Spike Dup (5E19013-MSD1)</b>	<b>Source: MOE0425-03</b>			<b>Prepared: 05/19/05 Analyzed: 05/20/05</b>						
Benzene	55.6	5.0	ug/l	60.8	ND	91	65-115	4	20	
Ethylbenzene	85.9	5.0	"	78.4	ND	110	75-135	3	15	
Toluene	311	5.0	"	329	ND	95	85-120	0.3	20	
Xylenes (total)	415	5.0	"	385	2.5	107	85-125	2	20	
Gasoline Range Organics (C4-C12)	4300	500	"	4400	640	83	70-124	4	20	
Surrogate: 1,2-Dichloroethane-d4	4.57		"	5.00		91	60-135			

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

 Project: ARCO #0276, Oakland, CA  
 Project Number: G0C20-0004  
 Project Manager: Scott Robinson

 MOE0425  
 Reported:  
 05/25/05 16:33

**EPA 8010 list Volatile Organic Compounds by EPA 8260B - Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5E19013 - EPA 5030B P/T / EPA 8260B**
**Blank (5E19013-BLK1)**

Prepared &amp; Analyzed: 05/19/05

Tetrachloroethene	ND	0.50	ug/l							
<i>Surrogate: Dibromofluoromethane</i>	5.00		"	5.00		100	65-130			
<i>Surrogate: Toluene-d8</i>	4.40		"	5.00		88	70-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.85		"	5.00		97	70-120			

**Laboratory Control Sample (5E19013-BS1)**

Prepared &amp; Analyzed: 05/19/05

Tetrachloroethene	21.6	0.50	ug/l	20.0		108	85-125			
<i>Surrogate: Dibromofluoromethane</i>	4.88		"	5.00		98	65-130			
<i>Surrogate: Toluene-d8</i>	4.32		"	5.00		86	70-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	5.04		"	5.00		101	70-120			

**Laboratory Control Sample Dup (5E19013-BSD1)**

Prepared &amp; Analyzed: 05/19/05

Tetrachloroethene	20.5	0.50	ug/l	20.0		102	85-125	5	15	
<i>Surrogate: Dibromofluoromethane</i>	4.89		"	5.00		98	65-130			
<i>Surrogate: Toluene-d8</i>	4.35		"	5.00		87	70-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.94		"	5.00		99	70-120			



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

Project:ARCO #0276, Oakland, CA  
Project Number:G0C20-0004  
Project Manager:Scott Robinson

MOE0425  
Reported:  
05/25/05 16:33

**Notes and Definitions**

PV Hydrocarbon result partly due to individ. peak(s) in quant. range  
IC Calib. verif. is within method limits but outside contract limits  
HL Analyte recovery above established limit  
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 > 276 > HistoricalBL  
 State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Fra  
 Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: 1015 Temp: 58°F  
 Off-site Time: 1315 Temp: 59°F  
 Sky Conditions: Patchy Dark clouds  
 Meteorological Events: Showers  
 Wind Speed: 5-15mph Direction: W

Lab Name: Sequoia	BP/AR Facility No.: 276	Consultant/Contractor: URS
Address: 885 Jarvis Drive Morgan Hill, CA 95037	BP/AR Facility Address: 10600 Macarthur Blvd., Oakland, CA 94605	Address: 1333 Broadway, Suite 800 Oakland, CA 94612
Lab PM: Lisa Race	Site Lat/Long: 37.74255 / -122.1513	Consultant/Contractor Project No.: 38487009
Tele/Fax: 408.782.8156 / 408.782.6308	California Global ID No.: T0600100082	Consultant/Contractor PM: Scott Robinson
BP/AR PM Contact: Paul Supple	Enfos Project No.: G0C20-0004	Tele/Fax: 510.874.3280 / 510.874.3268
Address: P.O. Box 6549	Provision or RCOP: Provision	Report Type & QC Level: Level I with EDP
Moraga, CA 94570	Phase/WBS: 04 - Mon/Remed by Natural Attenuation	E-mail EDD To: Rachel.Lindvall@urscorp.com
Tele/Fax: 925.299.8891 / 925.299.8872	Sub Phase/Task: 03 - Analytical	Invoice to: Atlantic Richfield Company
	Cost Element: 05 - Subcontracted Costs	

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments	
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	GRX / BTEX (8260)	MTBE, TAME, ETBE (8260)	DPE, TBA (8260)	EDB, 1,2-DCA (8260)	Ethanol (8260)		PCE (8010)
1	MW-2	1213	5/19/05		X		01	0						X	X	X	X	X	X	MUC 6425 Sample Point Lat/Long and Comments  on hold
2	MW-5	1140	↓				02	1						X	X	X	X	X	X	
3	MW-8	1247	↓				03	1						X	X	X	X	X	X	
4	TB-276-050905	-	↓				04	2						X	X	X	X	X	X	
5																				
6																				
7																				
8																				
9																				
10																				

Sampler's Name: <u>Will Crow</u>	Relinquished By / Affiliation: <u>Will Crow</u>	Date: <u>5/19/05</u>	Time: <u>1705</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>5/19/05</u>	Time: <u>1705</u>
Sampler's Company: <u>Blaine Tech</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

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

## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Area #276  
 REC. BY (PRINT) JAY  
 WORKORDER: M06 0425

DATE REC'D AT LAB: 5/10/05  
 TIME REC'D AT LAB: 1513  
 DATE LOGGED IN: 5-11-05

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

(For clients requiring preservation checks at receipt, document here ↓)

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / <input checked="" type="checkbox"/> Absent Intact / Broken*	01		MW-2	(6) UGA	HCL	—	W	5/9/05	
2. Chain-of-Custody Present / Absent*	02		L-5	same ↓	↓	↓	↓	↓	
3. Traffic Reports or Packing List: Present / Absent	03		L-8	↓	↓	↓	↓	↓	
4. Airbill: Airbill / Sticker Present / Absent	04		TS-276-0509205	(2) UGA	↓	↓	↓	↓	
5. Airbill #:									
6. Sample Labels: Present / Absent									
7. Sample IDs: <input checked="" type="checkbox"/> Listed / Not Listed on Chain-of-Custody									
8. Sample Condition: <input checked="" type="checkbox"/> Intact / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? <input checked="" type="checkbox"/> Yes / No*									
10. Sample received within hold time? <input checked="" type="checkbox"/> Yes / No*									
11. Adequate sample volume received? <input checked="" type="checkbox"/> Yes / No*									
12. Proper Preservatives used? <input checked="" type="checkbox"/> Yes / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) <input checked="" type="checkbox"/> Yes / No*									
14. Temp Rec. at Lab: <u>6.0</u> Is temp 4 +/-2°C? <input checked="" type="checkbox"/> Yes / No**									

5/10/05 JUA

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

**ATTACHMENT C**

**HISTORICAL GROUNDWATER DATA**

**Table 1**  
**Historical Groundwater Elevation and Analytical Data**  
**Halogenated Volatile Organic Compounds (EPA method 8010 or 8240)**  
**1995-Present\*\***

**ARCO Service Station 276**  
**10600 MacArthur Boulevard, Oakland, California**

Well	Date	TOC Elevation	Depth to Water	FP Thickness	Groundwater Elevation	Date	Tetra- chloro- ethene (PCE)	Tetra- chloro- ethene (TCE)	trans- 1,2- Dichloro- ethene	cis-1,2- Dichloro- ethene	Freon 12	Dissolved Oxygen	Purged Not Purged
Number	Gauged	(ft-MSL)	(feet)	(ft-MSL)	(ft-MSL)	Sampled	µg/L	µg/L	µg/L	µg/L	µg/L	(mg/l)	(P/NP)
MW-1	03-10-95	55.92	26.26	ND	29.66	03-10-95	170	<1	--	<1	--	--	--
MW-1	06-05-95	55.92	25.71	ND	30.21	06-05-95	210	<1	--	<1	--	--	--
MW-1	08-29-95	55.92	28.44	ND	27.48	08-29-95	130	<1	--	<1	--	--	--
MW-1	11-16-95	55.92	30.85	ND	25.07	11-16-95	45	<1	--	<1	--	--	--
MW-1	02-28-96	55.92	24.99	ND	30.93	02-28-96	97	<1	--	<1	<1	--	--
MW-1	05-28-96	55.92	24.92	ND	31.00	05-28-96	160	<1	<1	<1	--	--	--
MW-1	08-19-96	55.92	28.04	ND	27.88	08-19-96	77	<1	<1	<1	--	--	--
MW-1	11-21-96	55.92	30.19	ND	25.73	11-21-96	30	<1	<1	<1	--	--	--
MW-1	03-26-97	55.92	24.90	ND	31.02	03-26-97	66	<1	<1	<1	--	--	--
MW-1	05-20-97	55.92	26.99	ND	28.93	05-20-97	36	<0.5	<0.5	<0.5	--	--	--
MW-1	08-18-97	55.92	29.98	ND	25.94	08-18-97	11	<0.5	<0.5	<0.5	--	--	--
MW-1	11-17-97	55.92	31.72	ND	24.20	11-17-97	Not analyzed for Halogenated Volatile Organic Compounds						--
MW-1	12-02-99	55.92	Not surveyed			12-02-99	Not surveyed: well was inaccessible						--
MW-2	03-10-95	55.10	13.98	ND	41.12	03-11-95	<1	<1	--	<1	--	--	--
MW-2	06-05-95	55.10	15.65	ND	39.45	06-05-95	<1	<1	--	<1	--	--	--
MW-2	08-29-95	55.10	17.14	ND	37.96	08-29-95	<5	<1	--	<1	--	--	--
MW-2	11-16-95	55.10	Not surveyed			11-16-95	Not surveyed: well was inaccessible						--
MW-2	02-28-96	55.10	12.46	ND	42.64	02-28-96	<1	<1	<1	<1	--	--	--
MW-2	05-28-96	55.10	15.23	ND	39.87	05-28-96	<1	<1	<1	<1	--	--	--
MW-2	08-19-96	55.10	16.84	ND	38.26	08-21-96	<1	<1	<1	<1	--	--	--
MW-2	11-21-96	55.10	15.44	ND	39.66	11-21-96	<1	<1	<1	<1	--	--	--
MW-2	03-26-97	55.10	15.73	ND	39.37	03-26-97	<10 <sup>^</sup>	<10 <sup>^</sup>	<10 <sup>^</sup>	<10 <sup>^</sup>	--	--	--
MW-2	05-20-97	55.10	16.07	ND	39.03	05-20-97	<1 <sup>^</sup>	<1 <sup>^</sup>	<1 <sup>^</sup>	<1 <sup>^</sup>	--	--	--
MW-2	08-18-97	55.10	17.28	ND	37.82	08-18-97	<5 <sup>^</sup>	<5 <sup>^</sup>	<5 <sup>^</sup>	<5 <sup>^</sup>	--	--	--
MW-2	11-17-97	55.10	16.75	ND	38.35	11-17-97	Not analyzed for Halogenated Volatile Organic Compounds						--
MW-2	12-02-99	55.10	Not surveyed			12-02-99	Not sampled: not on sampling schedule						--

OAKS:ARCO0276QTRLY0276q499.xls:1  
 Recreated from electronic data provided by Pinnacle

Pinnacle



**Table 1**  
**Historical Groundwater Elevation and Analytical Data**  
**Halogenated Volatile Organic Compounds (EPA method 8010 or 8240)**  
**1995-Present\*\***

**ARCO Service Station 276**  
**10600 MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (ft-MSL)	Groundwater Elevation (ft-MSL)	Date Sampled	Tetra-chloro-ethene (PCB) µg/L	Tetra-chloro-ethene (TCE) µg/L	trans-1,2-Dichloro-ethene µg/L	cis-1,2-Dichloro-ethene µg/L	Freon 12 µg/L	Dissolved Oxygen (mg/l)	Purged Not Purged (P/NP)
MW-3	03-10-95	56.55	26.74	ND	29.81	03-11-95	1700	<10	--	<10	--		
MW-3	06-05-95	56.55	26.34	ND	30.21	06-05-95	2500	<20	--	<20	--		
MW-3	08-29-95	56.55	29.15	ND	27.40	08-29-95	1600	<20	--	<20	--		
MW-3	11-16-95	56.55	31.50	ND	25.05	11-16-95	1100	<20	--	<20	--		
MW-3	02-28-96	56.55	25.32	ND	31.23	02-28-96	1100	<10	--	<10	<20		
MW-3	05-28-96	56.55	25.46	ND	31.09	05-28-96	1700	<20	<10	<10	--		
MW-3	08-19-96	56.55	28.71	ND	27.84	08-19-96	1200	<20	<20	<20	--		
MW-3	11-21-96	56.55	30.85	ND	25.70	11-21-96	710	<20 <sup>^</sup>	<20 <sup>^</sup>	<20 <sup>^</sup>	--		
MW-3	03-26-97	56.55	25.36	ND	31.19	03-26-97	710	<40 <sup>^</sup>	<40 <sup>^</sup>	<40 <sup>^</sup>	--		
MW-3	05-20-97	56.55	27.61	ND	28.94	05-20-97	800	<25 <sup>^</sup>	<25 <sup>^</sup>	<25 <sup>^</sup>	--		
MW-3	08-18-97	56.55	30.62	ND	25.93	08-18-97	420	<5 <sup>^</sup>	<5 <sup>^</sup>	<5 <sup>^</sup>	--		
MW-3	11-17-97	56.55	32.40	ND	24.15	11-17-97	Not analyzed for Halogenated Volatile Organic Compounds						
MW-3	12-02-99	56.55	30.75	ND	25.80	12-02-99	210 <sup>*</sup>	<0.5 <sup>*</sup>	<0.5 <sup>*</sup>	<0.5 <sup>*</sup>	--	0.47	NP
MW-4	03-10-95	55.98	26.22	ND	29.76	03-11-95	2600	<20	--	<20	--		
MW-4	06-05-95	55.98	25.79	ND	30.19	06-05-95	3100	<20	--	<20	--		
MW-4	08-29-95	55.98	28.56	ND	27.42	08-29-95	2900	<20	--	<20	--		
MW-4	11-16-95	55.98	31.00	ND	24.98	11-16-95	2100	<20	--	<20	--		
MW-4	02-28-96	55.98	24.77	ND	31.21	02-28-96	2400	<20	--	<20	<20		
MW-4	05-28-96	55.98	24.91	ND	31.07	05-28-96	2700	<20	<20	<20	--		
MW-4	08-19-96	55.98	28.17	ND	27.81	08-19-96	2600	<20	<20	<20	--		
MW-4	11-21-96	55.98	30.30	ND	25.68	11-21-96	1100	<20	<20	<20	--		
MW-4	03-26-97	55.98	24.80	ND	31.18	03-26-97	1900	<40 <sup>^</sup>	<40 <sup>^</sup>	<40 <sup>^</sup>	--		
MW-4	05-20-97	55.98	27.03	ND	28.95	05-20-97	1600	<50 <sup>^</sup>	<50 <sup>^</sup>	<50 <sup>^</sup>	--		
MW-4	08-18-97	55.98	30.10	ND	25.88	08-18-97	600	<125 <sup>^</sup>	<125 <sup>^</sup>	--	--		
MW-4	11-17-97	55.98	31.84	ND	24.14	11-17-97	Not analyzed for Halogenated Volatile Organic Compounds						
MW-4	12-02-99	55.98	30.20	ND	25.78	12-02-99	320 <sup>*</sup>	<0.5 <sup>*</sup>	<0.5 <sup>*</sup>	<0.5 <sup>*</sup>	--	1.03	NP

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 Recreated from electronic data provided by Pinnacle

Pinnacle

**Table 1**  
**Historical Groundwater Elevation and Analytical Data**  
**Halogenated Volatile Organic Compounds (EPA method 8010 or 8240)**  
**1995-Present\*\***

**ARCO Service Station 276**  
**10600 MacArthur Boulevard, Oakland, California**

Well	Date	TOC Elevation	Depth to Water	FP Thickness	Groundwater Elevation	Date	Tetra- chloro- ethene (PCE) µg/L	Tetra- chloro- ethene (TCE) µg/L	trans- 1,2- Dichloro- ethene µg/L	cis-1,2- Dichloro- ethene µg/L	Freon 12 µg/L	Dissolved Oxygen (mg/l)	Purged/ Not Purged (P/NP)
Number	Gauged	(ft-MSL)	(feet)	(ft-MSL)	(ft-MSL)	Sampled							(P/NP)
MW-5	03-10-95	55.43	25.62	ND	29.81	03-10-95	270	<5	--	<5	--		
MW-5	06-05-95	55.43	25.30	ND	30.13	06-05-95	310	<5	--	<5	--		
MW-5	08-29-95	55.43	28.21	ND	27.22	08-29-95	240	<5	--	<5	--		
MW-5	11-16-95	55.43	30.63	ND	24.80	11-16-95	940	<5	--	<5	<5		
MW-5	02-28-96	55.43	24.07	ND	31.36	02-28-96	1100	<10	<10	<10	--		
MW-5	05-28-96	55.43	24.42	ND	31.91	05-28-96	360	<5	<5	<5	--		
MW-5	08-19-96	55.43	27.82	ND	27.61	08-21-96	150	<1	<1	<5	--		
MW-5	11-21-96	55.43	29.92	ND	25.51	11-21-96	1900	<20 <sup>^</sup>	<20 <sup>^</sup>	<20 <sup>^</sup>	2		
MW-5	03-26-97	55.43	24.22	ND	31.21	03-26-97	270	<10 <sup>^</sup>	<10 <sup>^</sup>	<10 <sup>^</sup>	--		
MW-5	05-20-97	55.43	26.60	ND	28.83	05-20-97	290	<5 <sup>^</sup>	<5 <sup>^</sup>	<5 <sup>^</sup>	--		
MW-5	08-18-97	55.43	NR	ND	NR	08-18-97	--	--	--	--	--		
MW-5	11-17-97	55.43	Not surveyed			11-17-97	Not analyzed for Halogenated Volatile Organic Compounds						
MW-5	12-02-99	55.43	29.84	ND	25.59	12-02-99	46 <sup>*</sup>	<0.5 <sup>*</sup>	<0.5 <sup>*</sup>	<0.5 <sup>*</sup>	--	0.53	P
MW-6	03-10-95	61.21	31.54	ND	29.67	03-11-95	1300	<20	--	<20	--		
MW-6	06-05-95	61.21	31.15	ND	30.06	06-05-95	2000	<20	--	<20	--		
MW-6	08-29-95	61.21	34.03	ND	27.18	08-29-95	1300	<20	--	<20	--		
MW-6	11-16-95	61.21	36.40	ND	24.81	11-16-95	1300	<20	--	<20	--		
MW-6	02-28-96	61.21	30.18	ND	31.03	02-28-96	960	<20	--	<20	<20		
MW-6	05-28-96	61.21	30.29	ND	30.92	05-28-96	970	<20	<20	<20	--		
MW-6	08-19-96	61.21	33.54	ND	27.67	08-19-96	820	<20	<20	<20	--		
MW-6	11-21-96	61.21	35.70	ND	25.51	11-21-96	680	<20	<20	<20	--		
MW-6	03-26-97	61.21	30.15	ND	31.96	03-26-97	830	<40 <sup>^</sup>	<40 <sup>^</sup>	<40 <sup>^</sup>	--		
MW-6	05-20-97	61.21	32.40	ND	28.81	05-20-97	270	<5 <sup>^</sup>	<5 <sup>^</sup>	<5 <sup>^</sup>	--		
MW-6	08-18-97	61.21	35.47	ND	25.74	08-18-97	420	<62.5 <sup>^</sup>	<62.5 <sup>^</sup>	--	--		
MW-6	11-17-97	61.21	37.25	ND	23.96	11-17-97	Not analyzed for Halogenated Volatile Organic Compounds						
MW-6	12-02-99	61.21	35.55	ND	25.66	12-02-99	Not sampled: not on sampling schedule						

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 Recreated from electronic data provided by Pinnacle

Pinnacle

**Table 1**  
**Historical Groundwater Elevation and Analytical Data**  
**Halogenated Volatile Organic Compounds (EPA method 8010 or 8240)**  
**1995-Present\*\***

**ARCO Service Station 276**  
**10600 MacArthur Boulevard, Oakland, California**

Well	Date	TOC Elevation	Depth to Water	FP Thickness	Groundwater Elevation	Date	Tetra-chloro-ethene (PCE)	Tetra-chloro-ethene (TCE)	trans-1,2-Dichloro-ethene	cis-1,2-Dichloro-ethene	Freon 12	Dissolved Oxygen	Purged/Not Purge
Number	Gauged	(ft-MSL)	(feet)	(ft-MSL)	(ft-MSL)	Sampled	µg/L	µg/L	µg/L	µg/L	µg/L	(mg/l)	(P/NP)
MW-7	03-10-95	58.22	17.69	ND^^	40.53	03-11-95	Not sampled: floating product entered the well during purging						
MW-7	06-05-95	58.22	19.68	ND	38.54	06-05-95	<10	<10	--	<10	--	--	--
MW-7	08-29-95	58.22	21.70	ND	36.52	08-29-95	<10	<10	--	<10	--	--	--
MW-7	11-16-95	58.22	23.02	ND	35.20	11-16-95	<20	<20	--	<20	<20	--	--
MW-7	02-28-96	58.22	16.54	ND	41.68	02-28-96	<10	<10	<10	<10	--	--	--
MW-7	05-28-96	58.22	19.29	ND	38.93	05-28-96	<10	<10	<10	<10	--	--	--
MW-7	08-19-96	58.22	21.84	ND	36.38	08-21-96	<1	<1	<1	<1	--	--	--
MW-7	11-21-96	58.22	19.58	ND	38.64	11-21-96	<10^	<10^	<10^	<10^	--	--	--
MW-7	03-26-97	58.22	19.67	ND	38.55	03-26-97	<20^	<20^	<20^	<20^	--	--	--
MW-7	05-20-97	58.22	20.18	ND	38.04	05-20-97	<10^	<10^	<10^	<10^	--	--	--
MW-7	08-18-97	58.22	22.21	ND	36.01	08-18-97	<10^	<10^	<10^	<10^	--	--	--
MW-7	11-17-97	58.22	20.85	ND	37.37	11-17-97	Not analyzed for Halogenated Volatile Organic Compounds						
MW-7	12-02-99	58.22	20.92	ND	37.30	12-02-99	Not sampled: not on sampling schedule						
MW-8	03-10-95	53.65	23.60	ND	30.05	03-10-95	<1	<1	--	<1	--	--	--
MW-8	06-05-95	53.65	23.48	ND	30.17	06-05-95	<1	<1	--	<1	--	--	--
MW-8	08-29-95	53.65	26.44	ND	27.21	08-29-95	<1	<1	--	<1	--	--	--
MW-8	11-16-95	53.65	28.90	ND	24.75	11-16-95	<1	<1	--	<1	--	--	--
MW-8	02-28-96	53.65	22.16	ND	31.49	02-28-96	3	<1	<1	<1	<1	--	--
MW-8	05-28-96	53.65	22.62	ND	31.03	05-28-96	<1	<1	<1	<1	--	--	--
MW-8	08-19-96	53.65	26.70	ND	26.95	08-21-96	<1	<1	<1	<1	--	--	--
MW-8	11-21-96	53.65	28.16	ND	25.49	11-21-96	7	<1	<1	<1	--	--	--
MW-8	03-26-97	53.65	22.42	ND	31.23	03-26-97	<1	<1	<1	<1	--	--	--
MW-8	05-20-97	53.65	24.84	ND	28.81	05-20-97	<0.5	<0.5	<0.5	<0.5	--	--	--
MW-8	08-18-97	53.65	28.03	ND	25.62	08-18-97	<5	<5	<5	<5	--	--	--
MW-8	11-17-97	53.65	29.16	ND	24.49	11-17-97	Not analyzed for Halogenated Volatile Organic Compounds						
MW-8	12-02-99	53.65	28.07	ND	25.58	12-02-99	Not sampled: not on sampling schedule						

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**Table 1**  
**Historical Groundwater Elevation and Analytical Data**  
**Halogenated Volatile Organic Compounds (EPA method 8010 or 8240)**  
**1995-Present\*\***

**ARCO Service Station 276**  
**10600 MacArthur Boulevard, Oakland, California**

Well	Date	TOC Elevation	Depth to Water	FP Thickness	Groundwater Elevation	Date	Tetra- chloro- ethene (PCE)	Tetra- chloro- ethene (TCE)	trans- 1,2- Dichloro- ethene	cis-1,2- Dichloro- ethene	Freon 12	Dissolved Oxygen	Purged/ Not Purged
Number	Gauged	(ft-MSL)	(feet)	(ft-MSL)	(ft-MSL)	Sampled	µg/L	µg/L	µg/L	µg/L	µg/L	(mg/l)	(P/NP)
RW-1	03-10-95	56.32	26.48	Sheen	29.84	03-10-95	260	<1	--	<5	--	--	
RW-1	06-05-95	56.32	26.20	ND	30.12	06-05-95	59	<1	--	<1	--	--	
RW-1	08-29-95	56.32	28.98	ND	27.34	08-29-95	570	<1	--	<5	--	--	
RW-1	11-16-95	56.32	31.34	ND	24.98	11-16-95	140	<1	--	<1	--	<1	
RW-1	02-28-96	56.32	25.12	ND	31.20	02-28-96	6	<1	<1	<1	--	--	
RW-1	05-28-96	56.32	25.26	ND	31.06	05-28-96	12	<1	<1	<1	--	--	
RW-1	08-19-96	56.32	28.51	ND	27.81	08-21-96	100	<1	<1	<1	--	--	
RW-1	11-21-96	56.32	30.65	ND	25.67	11-21-96	190	<1	<1	<1	--	--	
RW-1	03-26-97	56.32	25.15	ND	31.17	03-26-97	6	<1	<1	<1	--	--	
RW-1	05-20-97	56.32	27.44	ND	28.88	05-20-97	5.3	<0.5	<0.5	<0.5	--	--	
RW-1	08-18-97	56.32	30.46	ND	25.86	08-18-97	46	<5	<5	--	--	--	
RW-1	11-17-97	56.32	32.16	ND	24.16	11-17-97	Not analyzed for Halogenated Volatile Organic Compounds						
RW-1	12-02-99	56.32	30.54	ND	25.78	12-02-99	Not sampled: not on sampling schedule						
WGR-3	03-10-95	NR	15.20	ND	NR	03-11-95	<1	<1	--	<1	--	--	
WGR-3	06-05-95	NR	19.25	ND	NR	06-05-95	<1	<1	--	<1	--	--	
WGR-3	08-29-95	NR	21.41	ND	NR	08-29-95	<1	<1	--	<1	--	--	
WGR-3	11-16-95	NR	22.50	ND	NR	11-16-95	<1	<1	--	<1	<1	--	
WGR-3	02-28-96	NR	14.90	ND	NR	02-28-96	<1	<1	<1	<1	--	--	
WGR-3	05-28-96	NR	18.33	ND	NR	05-28-96	<1	<1	<1	<1	--	--	
WGR-3	08-19-96	NR	21.38	ND	NR	08-19-96	<1	<1	<1	<1	--	--	
WGR-3	11-21-96	NR	18.70	ND	NR	11-21-96	<1	<1	<1	<1	--	--	
WGR-3	03-26-97	NR	18.98	ND	NR	03-26-97	<1	<1	<1	<1	--	--	
WGR-3	05-20-97	NR	19.70	ND	NR	05-20-97	<0.5	<0.5	<0.5	<0.5	--	--	

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**Table 1**  
**Historical Groundwater Elevation and Analytical Data**  
**Halogenated Volatile Organic Compounds (EPA method 8010 or 8240)**  
**1995-Present\*\***

**ARCO Service Station 276**  
**10600 MacArthur Boulevard, Oakland, California**

Well	Date	TOC Elevation	Depth to Water	FP Thickness	Groundwater Elevation	Date	Tetra- chloro- ethene (PCE)	Tetra- chloro- ethene (TCE)	trans- 1,2- Dichloro- ethene	cis-1,2- Dichloro- ethene	Freon 12	Dissolved Oxygen	Purged/ Not Purged
Number	Gauged	(ft-MSL)	(feet)	(ft-MSL)	(ft-MSL)	Sampled	µg/L	µg/L	µg/L	µg/L	µg/L	(mg/l)	(P/NP)
WGR-3	08-18-97	NR	21.81	ND	NR	08-18-97	<5	<5	<5	--	--		
WGR-3	11-17-97	NR	20.42	ND	NR	11-17-97	Not analyzed for Halogenated Volatile Organic Compounds						
WGR-3	12-02-99	NR	20.58	ND	NR	12-02-99	Not sampled: not on sampling schedule						

TOC: Top of Casing

ft-MSL: elevation in feet, relative to mean sea level

µg/L: micrograms per liter

ND: none detected

NR: not reported; data not available or not measurable

--: not analyzed or not applicable

\*: analyzed by EPA method 8021B

†: method reporting limit was raised due to: (1) high analyte concentration requiring sample dilution, or (2) matrix interference

‡: floating product entered the well during purging

\*\* For previous historical groundwater elevation and analytical data please refer to *Fourth Quarter 1995 Groundwater Monitoring Results and Remediation System Performance Evaluation Report, Retail Service Station 10600 and 10700 MacArthur Boulevard, Oakland, California, (EMCON, March 22, 1996).*

**ATTACHMENT D**

**ERROR CHECK REPORTS AND EDF/GEOWELL SUBMITTAL  
CONFIRMATIONS**

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**Facility Global ID:** T0600100082  
**Facility Name:** ARCO  
**Submittal Title:** 1Q 2005 QMR EDF Site 276  
**Submittal Type:** GW Monitoring Report

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<b>ARCO</b> 10600 MACARTHUR BLVD OAKLAND, CA 94605	<b>Regional Board - Case #: 01-0089</b> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <b>Local Agency (lead agency) - Case #: 3756</b> ALAMEDA COUNTY LOP - (RWS)
--	--

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<b>CONF #</b> 6160798132	<b>TITLE</b> 1Q 2005 QMR EDF Site 276	<b>QUARTER</b> Q1 2005
<b>SUBMITTED BY</b> Srijesh Thapa	<b>SUBMIT DATE</b> 5/26/2005	<b>STATUS</b> PENDING REVIEW

**SAMPLE DETECTIONS REPORT**

# FIELD POINTS SAMPLED	10
# FIELD POINTS WITH DETECTIONS	10
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

**METHOD QA/QC REPORT**

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

**QA/QC FOR 8021/8260 SERIES SAMPLES**

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

**WATER SAMPLES FOR 8021/8260 SERIES**

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

BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%			N
<b>SOIL SAMPLES FOR 8021/8260 SERIES</b>			
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%			n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%			n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%			n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%			n/a
<hr/>			
<b>FIELD QC SAMPLES</b>			
<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPD</u>	
QCTB SAMPLES	N	0	
QCEB SAMPLES	N	0	
QCAB SAMPLES	N	0	

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<b>ARCO</b> 10600 MACARTHUR BLVD OAKLAND, CA 94605	<b><u>Regional Board - Case #: 01-0089</u></b> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <b><u>Local Agency (lead agency) - Case #: 3756</u></b> ALAMEDA COUNTY LOP - (RWS)
--	--

#### **SAMPLE DETECTIONS REPORT**

# FIELD POINTS SAMPLED	10
# FIELD POINTS WITH DETECTIONS	10
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

#### **METHOD QA/QC REPORT**

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

#### **QA/QC FOR 8021/8260 SERIES SAMPLES**

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

#### **WATER SAMPLES FOR 8021/8260 SERIES**

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

**SOIL SAMPLES FOR 8021/8260 SERIES**

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

**FIELD QC SAMPLES**

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

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--	--

#### SAMPLE DETECTIONS REPORT

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

#### METHOD QA/QC REPORT

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

#### QA/QC FOR 8021/8260 SERIES SAMPLES

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

#### WATER SAMPLES FOR 8021/8260 SERIES

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

**SOIL SAMPLES FOR 8021/8260 SERIES**

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

**FIELD QC SAMPLES**

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

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**Facility Global ID:** T0600100082  
**Facility Name:** ARCO  
**Submittal Title:** 2Q 2005 QMR EDF Site 276  
**Submittal Type:** GW Monitoring Report

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<b>ARCO</b> 10600 MACARTHUR BLVD OAKLAND, CA 94605	<b>Regional Board - Case #: 01-0089</b> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <b>Local Agency (lead agency) - Case #: 3756</b> ALAMEDA COUNTY LOP - (RWS)
--	--

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

<b>CONF #</b> 6976763129	<b>TITLE</b> 2Q 2005 QMR EDF Site 276	<b>QUARTER</b> Q2 2005
<b>SUBMITTED BY</b> Srijesh Thapa	<b>SUBMIT DATE</b> 5/26/2005	<b>STATUS</b> PENDING REVIEW

**SAMPLE DETECTIONS REPORT**

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

**METHOD QA/QC REPORT**

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

**QA/QC FOR 8021/8260 SERIES SAMPLES**

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

**WATER SAMPLES FOR 8021/8260 SERIES**

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

BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	N	
<b><u>SOIL SAMPLES FOR 8021/8260 SERIES</u></b>		
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a	
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a	
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a	
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a	
<b><u>FIELD QC SAMPLES</u></b>		
<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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