

September 29, 2005

Ms. Donna Drogos  
Alameda County Environmental Health (ACEH)  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Re: Third Quarter 2005 Groundwater Monitoring Report  
ARCO Service Station #4931  
731 West MacArthur Boulevard  
Oakland, California  
ACEH Case #3874**

Dear Ms. Drogos:

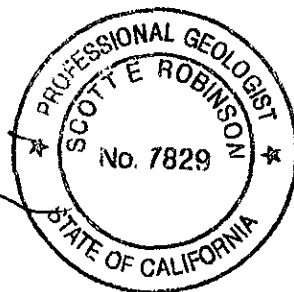
On behalf of Atlantic Richfield Company, a BP affiliated company, URS Corporation (URS) is submitting the *Third Quarter 2005 Groundwater Monitoring Report* for ARCO Service Station #4931, located at 731 West MacArthur Boulevard, Oakland, California.

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

Sincerely,  
**URS CORPORATION**



Scott Robinson, P.G.  
Project Manager



**Alameda County**  
**Environmental Health**  
OCT 10 2005

Enclosure: Third Quarter 2005 Groundwater Monitoring Report

cc: Mr. Paul Supple, Atlantic Richfield Company (RM), electronic copy uploaded to ENFO  
Mr. Nick Goyal, Owner, electronic copy e-mailed (nick@vintersdist.com)

# REPORT

## THIRD QUARTER 2005 GROUNDWATER MONITORING REPORT

ARCO SERVICE STATION #4931  
731 WEST MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

*Prepared for*  
RM

September 29, 2005

**URS**

URS Corporation  
1333 Broadway, Suite 800  
Oakland, California 94612

Alameda County  
OCT 10 2005  
Environmental Health

Date: September 29, 2005  
Quarter: 3Q 05

### THIRD QUARTER 2005 GROUNDWATER MONITORING REPORT

Facility No.: 4931 Address: 731 West 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 #: 3874

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

1. Performed the third quarter 2005 groundwater monitoring event on August 11, 2005.
2. Prepared and submitted this Third Quarter 2005 Groundwater Monitoring Report.

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

1. Perform the fourth quarter 2005 groundwater monitoring event.
2. Prepare and submit the Fourth Quarter 2005 Groundwater Monitoring Report.
3. Well repairs scheduled for end of 3<sup>rd</sup> quarter will be reported in 4<sup>th</sup> quarter.

#### SITE SUMMARY:

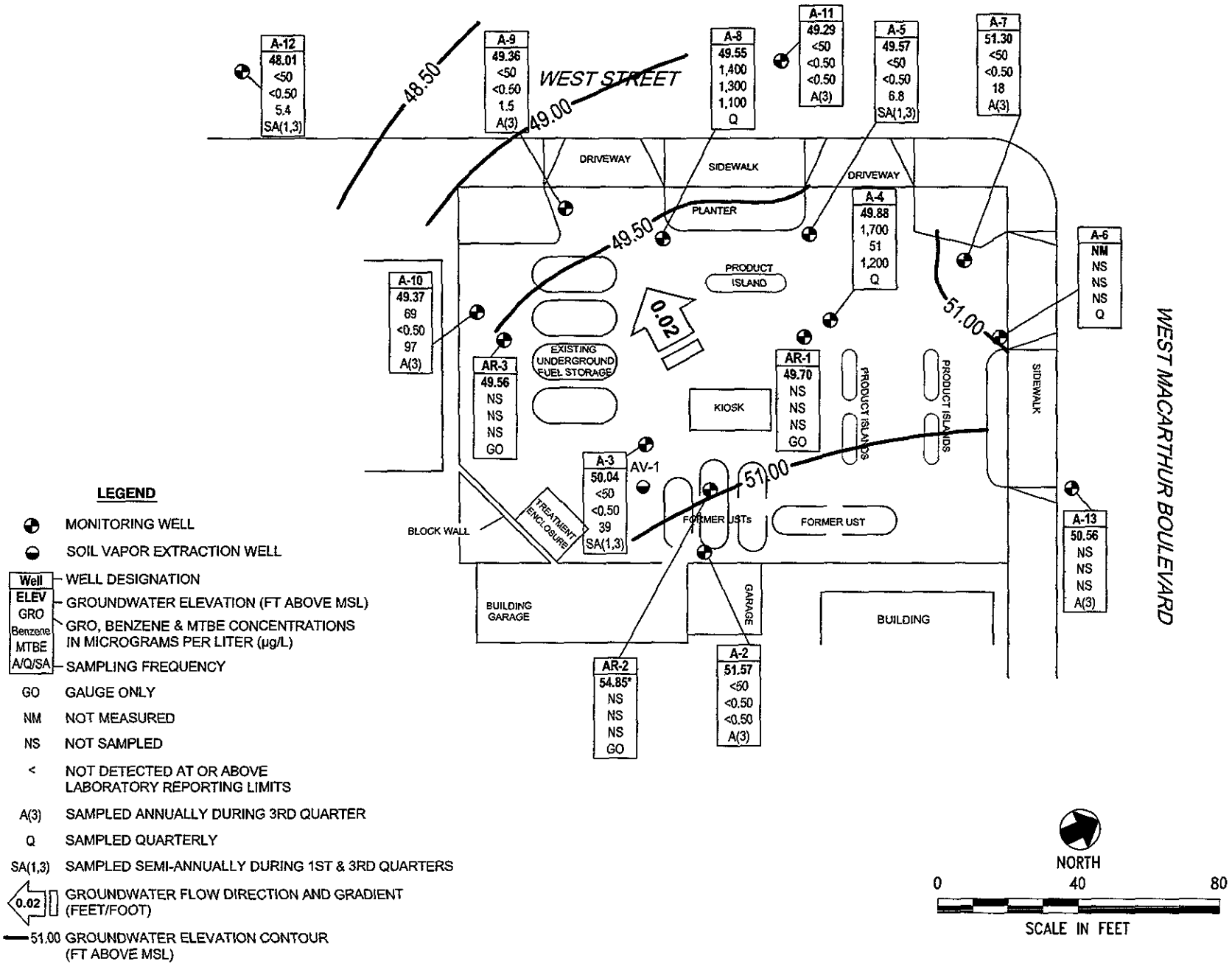
Current Phase of Project:	<u>Remediation/Groundwater monitoring/sampling</u>
Frequency of Groundwater Sampling:	<u>Quarterly: A-4, A-6, A-8</u> <u>Semi-Annual (1<sup>st</sup>/3<sup>rd</sup> Quarter): A-3, A-5</u> <u>Annual (3<sup>rd</sup> Quarter): A-2, A-7, A-9, A-10, A-11, A-12</u>
Frequency of Groundwater Monitoring:	<u>Quarterly: All wells including AR-1, AR-2, AR-3, A-13</u>
Free Product (FP) Present On-Site:	<u>Sheen A-4</u>
Current Remediation Techniques:	<u>None</u>
Approximate Depth to Groundwater:	<u>4.33 (AR-2) to 10.02 (A-10) feet</u>
Groundwater Gradient (direction):	<u>West</u>
Groundwater Gradient (magnitude):	<u>0.02 feet per foot</u>

#### DISCUSSION:

Gasoline range organics were detected at or above the laboratory reporting limit in three of the ten wells sampled this quarter at concentrations ranging from 69 micrograms per liter ( $\mu\text{g/L}$ ) (A-10) to 1,700  $\mu\text{g/L}$  (A-4). Benzene was detected at or above the laboratory reporting limit in two wells at concentrations of 51  $\mu\text{g/L}$  (A-4) and 1,300  $\mu\text{g/L}$  (A-8). Methyl tert-butyl ether was detected at or above the laboratory reporting limit in eight wells at concentrations ranging from 1.5  $\mu\text{g/L}$  (A-9) to 1,200  $\mu\text{g/L}$  (A-4). Tert-butyl alcohol was detected at or above laboratory reporting limit in two wells at concentrations of 530  $\mu\text{g/L}$  (A-5) and 2,400  $\mu\text{g/L}$  (A-4). Tert-amyl methyl ether was detected at or above the laboratory reporting limit in seven wells at concentrations ranging from 1.1  $\mu\text{g/L}$  (A-12) to 310  $\mu\text{g/L}$  (A-4 & A-8). No other fuel components were detected at or above their respective laboratory reporting limits. During sampling, well A-4 dewatered after purging 6.5 gallons. Well A-6 was not sampled because it has been paved over.

## **ATTACHMENTS:**

- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – August 11, 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 and Chain-of-Custody Records
- Attachment C – Historical Groundwater Data
- Attachment D – Error Check Reports and EDF/Geowell Submittal Confirmations



	Project No. 38487182	<b>GROUNDWATER ELEVATION CONTOUR          AND ANALYTICAL SUMMARY MAP</b> Third Quarter 2005 (August 11, 2005)	FIGURE <b>1</b>
	ARCO Service Station #4931 731 West MacArthur Boulevard Oakland, California		

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #4931

731 West 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)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
A-2	6/21/2000	--		55.48	5.00	20.00	6.85	48.63	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--
	9/20/2000	--		55.48	5.00	20.00	10.45	45.03	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	12/26/2000	--		55.48	5.00	20.00	6.27	49.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	3/20/2001	--		55.48	5.00	20.00	4.57	50.91	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	6/12/2001	--		55.48	5.00	20.00	9.27	46.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	9/23/2001	--		55.48	5.00	20.00	10.75	44.73	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	12/31/2001	--		55.48	5.00	20.00	4.13	51.35	<50	<0.5	<0.5	1	3.2	<2.5	--	--
	3/21/2002	--		55.48	5.00	20.00	3.26	52.22	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	4/17/2002	--		55.48	5.00	20.00	3.72	51.76	<50	<0.5	<0.5	<0.5	<0.5	3.1	--	--
	8/12/2002	NP		55.48	5.00	20.00	9.95	45.53	<10	<0.10	<0.10	<0.10	<0.10	<0.50	3.1	7.7
	12/6/2002	NP		55.48	5.00	20.00	10.01	45.47	<50	<0.50	<0.50	<0.50	<0.50	6	3.1	6.1
	1/30/2003	NP		55.48	5.00	20.00	5.08	50.40	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	6.7
	5/28/2003	--		55.48	5.00	20.00	4.82	50.66	<50	<0.50	<0.50	<0.50	<0.50	1.1	5.7	6.8
	8/6/2003	--		55.48	5.00	20.00	9.73	45.75	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.3	7.7
	11/14/2003	--		55.48	5.00	20.00	9.36	46.12	--	--	--	--	--	--	--	--
02/02/2004	--	g	60.65	5.00	20.00	4.45	56.20	--	--	--	--	--	--	--	--	--
05/04/2004	--		60.65	5.00	20.00	6.79	53.86	--	--	--	--	--	--	--	--	--
09/02/2004	NP		60.65	5.00	20.00	10.51	50.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.10	--
11/10/2004	--		60.65	5.00	20.00	6.10	54.55	--	--	--	--	--	--	--	--	--
02/02/2005	--		60.65	5.00	20.00	4.00	56.65	--	--	--	--	--	--	--	--	--
05/09/2005	--		60.65	5.00	20.00	4.35	56.30	--	--	--	--	--	--	--	--	--
08/11/2005	NP	h	60.65	5.00	20.00	9.08	51.57	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.20	6.9
A-3	6/21/2000	--		54.66	5.00	20.00	9.48	45.18	<50	<0.5	<0.5	<0.5	<1.0	46	--	--
	9/20/2000	--		54.66	5.00	20.00	10.24	44.42	<50	<0.5	<0.5	<0.5	<0.5	89.6	--	--
	12/26/2000	--		54.66	5.00	20.00	9.58	45.08	<50	<0.5	<0.5	<0.5	<0.5	7.11	--	--
	3/20/2001	--		54.66	5.00	20.00	6.34	48.32	--	--	--	--	--	--	--	--
	6/12/2001	--		54.66	5.00	20.00	9.76	44.90	<50	<0.5	<0.5	<0.5	<0.5	86	--	--
	9/23/2001	--		54.66	5.00	20.00	10.55	44.11	--	--	--	--	--	--	--	--
	12/31/2001	--		54.66	5.00	20.00	3.70	50.96	<50	<0.5	<0.5	<0.5	1	60	--	--
	3/21/2002	--		54.66	5.00	20.00	5.75	48.91	--	--	--	--	--	--	--	--
	4/17/2002	--		54.66	5.00	20.00	7.27	47.39	<50	<0.5	<0.5	<0.5	<0.5	45	--	--
	8/12/2002	--		54.66	5.00	20.00	9.71	44.95	--	--	--	--	--	--	--	--
12/6/2002	P		54.66	5.00	20.00	9.55	45.11	<500	<5.0	<5.0	<5.0	<5.0	150	2.4	6.6	

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #4931

731 West 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	
A-3	1/30/2003	--		54.66	5.00	20.00	6.05	48.61	--	--	--	--	--	--	--	--	
	5/28/2003	--		54.66	5.00	20.00	8.06	46.60	74	<0.50	<0.50	<0.50	<0.50	43	1.5	6.9	
	8/6/2003	--		54.66	5.00	20.00	9.91	44.75	--	--	--	--	--	--	--	--	
	11/14/2003	--		54.66	5.00	20.00	9.52	45.14	--	--	--	--	--	--	--	--	
	02/02/2004	P	g	59.32	5.00	20.00	5.63	53.69	<50	<0.50	<0.50	<0.50	<0.50	13	1.20	7.1	
	05/04/2004	--		59.32	5.00	20.00	8.14	51.18	--	--	--	--	--	--	--	--	
	09/02/2004	P		59.32	5.00	20.00	10.10	49.22	<250	<2.5	<2.5	<2.5	<2.5	62	1.30	6.6	
	11/10/2004	--		59.32	5.00	20.00	7.89	51.43	--	--	--	--	--	--	--	--	
	02/02/2005	P		59.32	5.00	20.00	5.00	54.32	<50	<0.50	<0.50	<0.50	<0.50	6.8	1.90	6.9	
	05/09/2005	--		59.32	5.00	20.00	5.96	53.36	--	--	--	--	--	--	--	--	
	08/11/2005	P	h	59.32	5.00	20.00	9.28	50.04	<50	<0.50	<0.50	<0.50	<0.50	39	1.80	5.5	
	A-4	6/21/2000	--		54.73	5.00	20.00	9.49	45.24	2,100	110	2.1	11	5.9	2,000	--	--
		9/20/2000	--		54.73	5.00	20.00	10.33	44.40	1,540	127	<5.0	9.07	7.42	1,940	--	--
12/26/2000		--		54.73	5.00	20.00	9.34	45.39	1,550	42.7	<5.0	11	10.9	1,210	--	--	
3/20/2001		--		54.73	5.00	20.00	7.56	47.17	913	40.9	<5.0	15.5	14.6	<25	--	--	
6/12/2001		--		54.73	5.00	20.00	9.83	44.90	2,000	230	<20	21	<20	4,700	--	--	
9/23/2001		--		54.73	5.00	20.00	10.54	44.19	1,600	35	<10	<10	<10	3,000	--	--	
12/31/2001		--		54.73	5.00	20.00	5.42	49.31	<500	<5.0	<5.0	<5.0	<5.0	880	--	--	
3/21/2002		--		54.73	5.00	20.00	6.18	48.55	<5,000	<50	<50	<50	<50	1,400	--	--	
4/17/2002		--		54.73	5.00	20.00	7.34	47.39	1,300	79	31	17	55	2,200	--	--	
8/12/2002		P	a	54.73	5.00	20.00	9.56	45.17	2,400	120	<5.0	<5.0	<5.0	2,100	2	7.2	
12/6/2002		P		54.73	5.00	20.00	10.02	44.71	2,200	110	10	42	56	2,000	--	6.7	
1/30/2003		P		54.73	5.00	20.00	7.55	47.18	6,000	180	<50	85	<50	2,100	1.8	6.8	
5/28/2003		--		54.73	5.00	20.00	8.94	45.79	6,000	120	<50	<50	<50	2,500	1.5	6.7	
8/6/2003		--		54.73	5.00	20.00	10.03	44.70	5,800	100	<25	<25	33	2,500	1.5	6.7	
11/14/2003		P	d, f	54.73	5.00	20.00	10.37	44.36	1,000	17	<5.0	<5.0	<5.0	310	1.60	6.8	
02/02/2004		P	d, g	59.59	5.00	20.00	6.70	52.89	3,600	46	<25	<25	<25	1,500	1.0	7.1	
05/04/2004		P	d	59.59	5.00	20.00	9.12	50.47	<5,000	<50	<50	<50	<50	2,300	6.40	6.8	
09/02/2004		P		59.59	5.00	20.00	9.95	49.64	3,000	<25	<25	<25	<25	1,200	9.10	6.8	
11/10/2004	P		59.59	5.00	20.00	8.68	50.91	1,800	16	<10	<10	<10	1,100	2.0	7.2		
02/02/2005	P		59.59	5.00	20.00	6.92	52.67	3,300	120	<10	66	11	1,700	1.50	6.5		
05/09/2005	P		59.59	5.00	20.00	7.21	52.38	<5,000	140	<50	62	<50	1,800	1.64	6.6		
08/11/2005	P	f, h	59.59	5.00	20.00	9.71	49.88	1,700	51	<10	<10	<10	1,200	--	6.9		

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #4931

731 West 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
A-5	6/21/2000	--		54.17	3.00	24.00	9.29	44.88	980	<0.5	<0.5	<0.5	<1.0	2,000	--	--
	9/20/2000	--		54.17	3.00	24.00	10.23	43.94	--	--	--	--	--	--	--	--
	12/26/2000	--		54.17	3.00	24.00	9.65	44.52	525	<0.5	<0.5	<0.5	<0.5	1,200	--	--
	3/20/2001	--		54.17	3.00	24.00	8.05	46.12	--	--	--	--	--	--	--	--
	6/12/2001	--		54.17	3.00	24.00	9.81	44.36	830	<5.0	<5.0	<5.0	<5.0	3,200	--	--
	9/23/2001	--		54.17	3.00	24.00	10.42	43.75	--	--	--	--	--	--	--	--
	12/31/2001	--		54.17	3.00	24.00	6.03	48.14	320	<0.5	<0.5	<0.5	<0.5	60	--	--
	3/21/2002	--		54.17	3.00	24.00	6.71	47.46	--	--	--	--	--	--	--	--
	4/17/2002	--		54.17	3.00	24.00	8.01	46.16	1,600	<10	<10	<10	<10	3,200	--	--
	8/12/2002	--		54.17	3.00	24.00	9.87	44.30	--	--	--	--	--	--	--	--
	12/6/2002	P		54.17	3.00	24.00	9.66	44.51	310	<0.50	<0.50	<0.50	<0.50	330	1.9	6.6
	1/30/2003	--		54.17	3.00	24.00	7.67	46.50	--	--	--	--	--	--	--	--
	5/28/2003	--		54.17	3.00	24.00	8.56	45.61	<5,000	<50	<50	<50	<50	1,500	1.6	6.6
	8/6/2003	--		54.17	3.00	24.00	9.58	44.59	--	--	--	--	--	--	--	--
	11/14/2003	--		54.17	3.00	24.00	9.81	44.36	--	--	--	--	--	--	--	--
02/02/2004	P	g	58.78	3.00	24.00	7.43	51.35	390	<2.5	9.2	<2.5	2.6	140	1.0	6.8	
05/04/2004	--		58.78	3.00	24.00	9.98	48.80	--	--	--	--	--	--	--	--	
09/02/2004	P		58.78	3.00	24.00	9.65	49.13	<250	<2.5	<2.5	<2.5	<2.5	66	1.10	6.4	
11/10/2004	--		58.78	3.00	24.00	8.48	50.30	--	--	--	--	--	--	--	--	
02/02/2005	P		58.78	3.00	24.00	7.10	51.68	68	<0.50	<0.50	<0.50	<0.50	17	1.0	7.2	
05/09/2005	--		58.78	3.00	24.00	7.20	51.58	--	--	--	--	--	--	--	--	
08/11/2005	P	h	58.78	3.00	24.00	9.21	49.57	<50	<0.50	<0.50	<0.50	<0.50	6.8	1.30	6.2	
A-6	6/21/2000	--		55.17	3.00	25.00	8.67	46.50	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--
	9/20/2000	--		55.17	3.00	25.00	9.34	45.83	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	12/26/2000	--		55.17	3.00	25.00	8.65	46.52	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	3/20/2001	--		55.17	3.00	25.00	6.84	48.33	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	6/12/2001	--		55.17	3.00	25.00	8.93	46.24	<50	<0.5	<0.5	<0.5	<0.5	7	--	--
	9/23/2001	--		55.17	3.00	25.00	9.74	45.43	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	12/31/2001	--		55.17	3.00	25.00	4.81	50.36	<50	<0.5	<0.5	<0.5	<0.5	3.2	--	--
	3/21/2002	--		55.17	3.00	25.00	5.44	49.73	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	4/17/2002	--		55.17	3.00	25.00	6.95	48.22	<50	<0.5	<0.5	<0.5	<0.5	3.1	--	--
	8/12/2002	NP		55.17	3.00	25.00	8.90	46.27	<50	<0.5	<0.5	<0.5	<0.5	<2.5	4.3	7.9
12/6/2002	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	



Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #4931

731 West 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	
A-6	1/30/2003	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	
	5/28/2003	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	
	8/6/2003	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	
	11/14/2003	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	
	02/02/2004	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	
	05/04/2004	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	
	09/02/2004	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	
	11/10/2004	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	
	02/02/2005	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	--
	05/09/2005	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	--
	08/11/2005	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--	--
A-7	6/21/2000	--		54.71	3.00	22.00	8.58	46.13	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--	
	9/20/2000	--		54.71	3.00	22.00	9.19	45.52	--	--	--	--	--	--	--	--	
	12/26/2000	--		54.71	3.00	22.00	8.50	46.21	--	--	--	--	--	--	--	--	
	3/20/2001	--		54.71	3.00	22.00	6.75	47.96	--	--	--	--	--	--	--	--	
	6/12/2001	--		54.71	3.00	22.00	8.80	45.91	< 50	< 0.5	< 0.5	< 0.5	<0.5	<2.5	--	--	
	9/23/2001	--		54.71	3.00	22.00	9.59	45.12	--	--	--	--	--	--	--	--	
	12/31/2001	--		54.71	3.00	22.00	4.78	49.93	--	--	--	--	--	--	--	--	
	3/21/2002	--		54.71	3.00	22.00	5.35	49.36	--	--	--	--	--	--	--	--	
	4/17/2002	--		54.71	3.00	22.00	6.88	47.83	<50	<0.5	<0.5	<0.5	<0.5	2.5	--	--	
	8/12/2002	--		54.71	3.00	22.00	8.77	45.94	--	--	--	--	--	--	--	--	
	12/6/2002	--		54.71	3.00	22.00	9.07	45.64	--	--	--	--	--	--	--	--	
	1/30/2003	--		54.71	3.00	22.00	6.65	48.06	--	--	--	--	--	--	--	--	
	5/28/2003	--		54.71	3.00	22.00	7.63	47.08	<50	<0.50	<0.50	<0.50	<0.50	3.8	2.3	6.7	
	8/6/2003	--		54.71	3.00	22.00	8.90	45.81	--	--	--	--	--	--	--	--	
	11/14/2003	--		54.71	3.00	22.00	9.08	45.63	--	--	--	--	--	--	--	--	
	02/02/2004	--	g	59.75	3.00	22.00	5.96	53.79	--	--	--	--	--	--	--	--	
	05/04/2004	--		59.75	3.00	22.00	8.21	51.54	--	--	--	--	--	--	--	--	
	09/02/2004	P		59.75	3.00	22.00	9.02	50.73	<50	<0.50	<0.50	<0.50	<0.50	8.9	3.0	6.7	
	11/10/2004	--		59.75	3.00	22.00	7.50	52.25	--	--	--	--	--	--	--	--	
02/02/2005	--		59.75	3.00	22.00	6.10	53.65	--	--	--	--	--	--	--	--		
05/09/2005	--		59.75	3.00	22.00	6.48	53.27	--	--	--	--	--	--	--	--		
08/11/2005	P	h	59.75	3.00	22.00	8.45	51.30	<50	<0.50	<0.50	<0.50	<0.50	18	1.60	6.6		

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #4931

731 West 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
A-8	6/21/2000	--		53.77	3.00	25.00	9.07	44.70	810	<0.5	<0.5	<0.5	810	1,500	--	--
	9/20/2000	--		53.77	3.00	25.00	9.72	44.05	10,800	2,680	46	439	370	4,410	--	--
	12/26/2000	--		53.77	3.00	25.00	9.20	44.57	7,700	1,440	<50	202	106	2,230	--	--
	3/20/2001	--		53.77	3.00	25.00	7.51	46.26	<5,000	1,280	<50	53.9	<50	2,880	--	--
	6/12/2001	--		53.77	3.00	25.00	9.53	44.24	5,600	1,700	<50	61	54	2,900	--	--
	9/23/2001	--		53.77	3.00	25.00	10.08	43.69	10,000	3,500	<50	110	64	6,500	--	--
	12/31/2001	--		53.77	3.00	25.00	4.34	49.43	4,300	610	<10	60	24	520	--	--
	3/21/2002	--		53.77	3.00	25.00	6.67	47.10	6,600	1,400	<50	130	<50	2,700	--	--
	4/17/2002	--		53.77	3.00	25.00	7.72	46.05	3,800	540	<10	<10	12	3,100	--	--
	8/12/2002	NP		53.77	3.00	25.00	9.64	44.13	9,400	1,800	<20	35	28	4,200	1	6.7
	12/6/2002	NP	b	53.77	3.00	25.00	9.62	44.15	5,300	1,100	11	11	<10	2,200	1.4	6.7
	1/30/2003	NP		53.77	3.00	25.00	7.49	46.28	<10,000	1,100	<100	<100	<100	2,200	1.5	6.9
	5/28/2003	--		53.77	3.00	25.00	9.17	44.60	7,700	1,700	<50	<50	<50	2,100	1	6.8
	8/6/2003	--		53.77	3.00	25.00	9.67	44.10	13,000	2,400	<50	<50	<50	3,000	0.9	6.5
	11/14/2003	NP	d	53.77	3.00	25.00	9.80	43.97	3,100	570	<5.0	<5.0	<5.0	850	2.30	6.2
	02/02/2004	NP	d, g	58.70	3.00	25.00	7.10	51.60	3,900	300	<25	<25	<25	1,100	1.10	6.8
	05/04/2004	NP		58.70	3.00	25.00	9.44	49.26	<5,000	490	<50	<50	<50	1,600	1.0	6.9
	09/02/2004	NP		58.70	3.00	25.00	9.67	49.03	<2,500	30	<25	<25	<25	680	1.0	6.2
	11/10/2004	NP		58.70	3.00	25.00	8.15	50.55	580	61	<2.5	<2.5	<2.5	290	1.50	6.4
	02/02/2005	NP		58.70	3.00	25.00	6.53	52.17	5,000	890	<25	<25	<25	1,900	1.0	7.4
	05/09/2005	NP		58.70	3.00	25.00	6.31	52.39	69	0.90	<0.50	<0.50	<0.50	66	4.10	7.2
	08/11/2005	NP	h	58.70	3.00	25.00	9.15	49.55	1,400	1,300	<12	<12	<12	1,100	0.70	6.4
A-9	6/21/2000	--		53.04	5.00	40.00	8.56	44.48	<50	<0.5	<0.5	<0.5	<1.0	5	--	--
	9/20/2000	--		53.04	5.00	40.00	9.05	43.99	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	12/26/2000	--		53.04	5.00	40.00	8.49	44.55	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	3/20/2001	--		53.04	5.00	40.00	6.95	46.09	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	6/12/2001	--		53.04	5.00	40.00	8.67	44.37	<50	<0.5	<0.5	<0.5	<0.5	4.8	--	--
	9/23/2001	--		53.04	5.00	40.00	9.21	43.83	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	12/31/2001	--		53.04	5.00	40.00	4.57	48.47	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	3/21/2002	--		53.04	5.00	40.00	5.60	47.44	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	4/17/2002	--		53.04	5.00	40.00	6.89	46.15	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	8/12/2002	P		53.04	5.00	40.00	8.71	44.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	4	7.6
	12/6/2002	P		53.04	5.00	40.00	8.77	44.27	<50	<0.50	<0.50	<0.50	<0.50	<2.0	1.1	6.7

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #4931

731 West 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
A-9	1/30/2003	P		53.04	5.00	40.00	6.88	46.16	<50	<0.50	<0.50	<0.50	<0.50	1.1	0.9	6.8
	5/28/2003	--		53.04	5.00	40.00	9.75	43.29	<50	<0.50	<0.50	<0.50	<0.50	0.74	1.9	6.8
	8/6/2003	--		53.04	5.00	40.00	9.00	44.04	<50	<0.50	<0.50	<0.50	<0.50	1.8	2.2	6.7
	11/14/2003	--	d	53.04	5.00	40.00	8.82	44.22	--	--	--	--	--	--	--	--
	02/02/2004	--	d, g	57.73	5.00	40.00	7.10	50.63	--	--	--	--	--	--	--	--
	05/04/2004	--		57.73	5.00	40.00	8.12	49.61	--	--	--	--	--	--	--	--
	09/02/2004	P		57.73	5.00	40.00	8.78	48.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.60	6.5
	11/10/2004	--		57.73	5.00	40.00	7.88	49.85	--	--	--	--	--	--	--	--
	02/02/2005	--		57.73	5.00	40.00	6.40	51.33	--	--	--	--	--	--	--	--
	05/09/2005	--		57.73	5.00	40.00	6.82	50.91	--	--	--	--	--	--	--	--
08/11/2005	P		57.73	5.00	40.00	8.37	49.36	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	1.80	6.7
A-10	6/21/2000	--		54.26	5.00	30.00	10.47	43.79	--	--	--	--	--	--	--	--
	9/20/2000	--		54.26	5.00	30.00	10.76	43.50	--	--	--	--	--	--	--	--
	12/26/2000	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	3/20/2001	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	9/23/2001	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	12/31/2001	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	3/21/2002	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	4/17/2002	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	8/12/2002	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	12/6/2002	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	1/30/2003	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	5/28/2003	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	8/6/2003	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
	11/14/2003	--		54.26	5.00	30.00	10.37	43.89	--	--	--	--	--	--	--	--
	02/02/2004	--	g	59.39	5.00	30.00	7.97	51.42	--	--	--	--	--	--	--	--
	05/04/2004	--		59.39	5.00	30.00	8.69	50.70	--	--	--	--	--	--	--	--
	09/02/2004	P		59.39	5.00	30.00	10.55	48.84	<500	<5.0	<5.0	<5.0	<5.0	270	0.80	6.6
11/10/2004	--		59.39	5.00	30.00	9.16	50.23	--	--	--	--	--	--	--	--	
02/02/2005	--		59.39	5.00	30.00	7.90	51.49	--	--	--	--	--	--	--	--	
05/09/2005	--		59.39	5.00	30.00	8.21	51.18	--	--	--	--	--	--	--	--	
08/11/2005	P		h, i	59.39	5.00	30.00	10.02	49.37	69	<0.50	<0.50	<0.50	<0.50	97	0.90	6.6
A-11	6/21/2000	--		53.74	5.00	30.00	9.54	44.20	<50	<0.5	<0.5	<0.5	<1.0	4	--	--

Table 1

Groundwater Elevation and Analytical Data

ARCO Service Station #4931

731 West 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
A-11	9/20/2000	--		53.74	5.00	30.00	10.62	43.12	--	--	--	--	--	--	--	--
	12/26/2000	--		53.74	5.00	30.00	10.03	43.71	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	--	--
	3/20/2001	--		53.74	5.00	30.00	8.49	45.25	--	--	--	--	--	--	--	--
	6/12/2001	--		53.74	5.00	30.00	10.21	43.53	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	--	--
	9/23/2001	--		53.74	5.00	30.00	10.77	42.97	--	--	--	--	--	--	--	--
	12/31/2001	--		53.74	5.00	30.00	6.06	47.68	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	--	--
	3/21/2002	--		53.74	5.00	30.00	7.14	46.60	--	--	--	--	--	--	--	--
	4/17/2002	--		53.74	5.00	30.00	8.41	45.33	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	--	--
	8/12/2002	--		53.74	5.00	30.00	10.25	43.49	--	--	--	--	--	--	--	--
	12/6/2002	P		53.74	5.00	30.00	10.43	43.31	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0	2.4	6.7
	1/30/2003	--		53.74	5.00	30.00	8.42	45.32	--	--	--	--	--	--	--	--
	5/28/2003	--		53.74	5.00	30.00	9.30	44.44	< 50	< 0.50	< 0.50	< 0.50	< 0.50	0.53	1.8	7
	8/6/2003	--		53.74	5.00	30.00	10.28	43.46	--	--	--	--	--	--	--	--
	11/14/2003	--		53.74	5.00	30.00	10.40	43.34	--	--	--	--	--	--	--	--
	02/02/2004	--	g	59.16	5.00	30.00	7.95	51.21	--	--	--	--	--	--	--	--
	05/04/2004	--		59.16	5.00	30.00	8.72	50.44	--	--	--	--	--	--	--	--
09/02/2004	P		59.16	5.00	30.00	10.44	48.72	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.60	6.6	
11/10/2004	--		59.16	5.00	30.00	9.20	49.96	--	--	--	--	--	--	--	--	
02/02/2005	--		59.16	5.00	30.00	7.95	51.21	--	--	--	--	--	--	--	--	
05/09/2005	--		59.16	5.00	30.00	8.07	51.09	--	--	--	--	--	--	--	--	
08/11/2005	P	h	59.16	5.00	30.00	9.87	49.29	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.80	6.7	
A-12	6/21/2000	--		52.05	5.00	30.00	9.28	42.77	< 50	< 0.5	< 0.5	< 0.5	< 1.0	18	--	--
	9/20/2000	--		52.05	5.00	30.00	9.55	42.50	--	--	--	--	--	--	--	--
	12/26/2000	--		52.05	5.00	30.00	9.05	43.00	< 50	< 0.5	< 0.5	< 0.5	< 0.5	17.3	--	--
	3/20/2001	--		52.05	5.00	30.00	7.92	44.13	--	--	--	--	--	--	--	--
	6/12/2001	--		52.05	5.00	30.00	9.26	42.79	< 50	< 0.5	< 0.5	< 0.5	< 0.5	25	--	--
	9/23/2001	--		52.05	5.00	30.00	9.68	42.37	--	--	--	--	--	--	--	--
	12/31/2001	--		52.05	5.00	30.00	5.74	46.31	< 50	< 0.5	< 0.5	< 0.5	< 0.5	9.5	--	--
	3/21/2002	--		52.05	5.00	30.00	6.64	45.41	--	--	--	--	--	--	--	--
	4/17/2002	--		52.05	5.00	30.00	7.68	44.37	< 50	< 0.5	< 0.5	< 0.5	< 0.5	29	--	--
	8/12/2002	--		52.05	5.00	30.00	9.30	42.75	--	--	--	--	--	--	--	--
	12/06/02	P	c	52.05	5.00	30.00	9.38	42.67	< 50	< 0.50	< 0.50	< 0.50	< 0.50	13	2.3	6.5
1/30/2003	--		52.05	5.00	30.00	7.87	44.18	--	--	--	--	--	--	--	--	

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #4931

731 West 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
A-12	5/28/2003	--		52.05	5.00	30.00	8.51	43.54	50	<0.50	<0.50	<0.50	<0.50	10	1.4	7
	8/6/2003	--		52.05	5.00	30.00	9.28	42.77	--	--	--	--	--	--	--	--
	11/14/2003	--		52.05	5.00	30.00	9.37	42.68	--	--	--	--	--	--	--	--
	02/02/2004	P	g	57.06	5.00	30.00	7.90	49.16	<50	<0.50	<0.50	<0.50	<0.50	0.91	1.0	6.9
	05/04/2004	--		57.06	5.00	30.00	8.74	48.32	--	--	--	--	--	--	--	--
	09/02/2004	P		57.06	5.00	30.00	9.41	47.65	<50	<0.50	<0.50	<0.50	<0.50	6.2	1.10	6.5
	11/10/2004	--		57.06	5.00	30.00	8.32	48.74	--	--	--	--	--	--	--	--
	02/02/2005	P		57.06	5.00	30.00	7.45	49.61	<50	<0.50	<0.50	<0.50	<0.50	8.3	1.40	7.1
	05/09/2005	--		57.06	5.00	30.00	7.57	49.49	--	--	--	--	--	--	--	--
	08/11/2005	P	h	57.06	5.00	30.00	9.05	48.01	<50	<0.50	<0.50	<0.50	<0.50	5.4	0.90	6.4
A-13	6/21/2000	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
	9/20/2000	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
	12/26/2000	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
	3/20/2001	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
	6/12/2001	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
	9/23/2001	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
	12/31/2001	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
	3/21/2002	--		55.11	10.00	10.00	6.70	48.41	--	--	--	--	--	--	--	--
	4/17/2002	--		55.11	10.00	10.00	7.95	47.16	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
	8/12/2002	--		55.11	10.00	10.00	10.11	45.00	--	--	--	--	--	--	--	--
	12/6/2002	--		55.11	10.00	10.00	10.26	44.85	--	--	--	--	--	--	--	--
	1/30/2003	--		55.11	10.00	10.00	7.81	47.30	--	--	--	--	--	--	--	--
	5/28/2003	--		55.11	10.00	10.00	9.06	46.05	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.9	6.5
	8/6/2003	--		55.11	10.00	10.00	10.22	44.89	--	--	--	--	--	--	--	--
	11/14/2003	--		55.11	10.00	10.00	10.27	44.84	--	--	--	--	--	--	--	--
	02/02/2004	--	g	60.26	10.00	10.00	7.92	52.34	--	--	--	--	--	--	--	--
	05/04/2004	--		60.26	10.00	10.00	10.06	50.20	--	--	--	--	--	--	--	--
09/02/2004	P		60.26	10.00	10.00	10.34	49.92	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.0	6.6	
11/10/2004	--		60.26	10.00	10.00	8.95	51.31	--	--	--	--	--	--	--	--	
02/02/2005	--		60.26	10.00	10.00	7.28	52.98	--	--	--	--	--	--	--	--	
05/09/2005	--		60.26	10.00	10.00	7.85	52.41	--	--	--	--	--	--	--	--	
08/11/2005	--		60.26	10.00	10.00	9.70	50.56	--	--	--	--	--	--	--	--	
AR-1	6/21/2000	--		54.72	10.00	30.00	--	--	--	--	--	--	--	--	--	--

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #4931

731 West 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
AR-1	9/20/2000	--		54.72	10.00	30.00	--	--	--	--	--	--	--	--	--	--
	12/26/2000	--		54.72	10.00	30.00	9.95	44.77	--	--	--	--	--	--	--	--
	3/20/2001	--		54.72	10.00	30.00	8.34	46.38	--	--	--	--	--	--	--	--
	6/12/2001	--		54.72	10.00	30.00	10.17	44.55	--	--	--	--	--	--	--	--
	9/23/2001	--		54.72	10.00	30.00	10.72	44.00	--	--	--	--	--	--	--	--
	12/31/2001	--		54.72	10.00	30.00	5.91	48.81	--	--	--	--	--	--	--	--
	3/21/2002	--		54.72	10.00	30.00	7.00	47.72	--	--	--	--	--	--	--	--
	4/17/2002	--		54.72	10.00	30.00	8.33	46.39	--	--	--	--	--	--	--	--
	8/12/2002	--		54.72	10.00	30.00	10.18	44.54	--	--	--	--	--	--	--	--
	12/6/2002	--		54.72	10.00	30.00	10.21	44.51	--	--	--	--	--	--	--	--
	1/30/2003	--		54.72	10.00	30.00	8.22	46.50	--	--	--	--	--	--	--	--
	5/28/2003	--		54.72	10.00	30.00	9.62	45.10	--	--	--	--	--	--	--	--
	8/6/2003	--		54.72	10.00	30.00	10.47	44.25	--	--	--	--	--	--	--	--
	11/14/2003	--	d	54.72	10.00	30.00	10.40	44.32	--	--	--	--	--	--	--	--
	02/02/2004	--	d, g	59.52	10.00	30.00	7.96	51.56	--	--	--	--	--	--	--	--
	05/04/2004	--	d	59.52	10.00	30.00	10.17	49.35	--	--	--	--	--	--	--	--
	09/02/2004	--		59.52	10.00	30.00	10.28	49.24	--	--	--	--	--	--	--	--
	11/10/2004	--		59.52	10.00	30.00	9.15	50.37	--	--	--	--	--	--	--	--
	02/02/2005	--		59.52	10.00	30.00	7.80	51.72	--	--	--	--	--	--	--	--
	05/09/2005	--		59.52	10.00	30.00	7.03	52.49	--	--	--	--	--	--	--	--
	08/11/2005	--		59.52	10.00	30.00	9.82	49.70	--	--	--	--	--	--	--	--
AR-2	6/21/2000	--		54.77	8.00	28.00	--	--	--	--	--	--	--	--	--	--
	9/20/2000	--		54.77	8.00	28.00	--	--	--	--	--	--	--	--	--	--
	12/26/2000	--		54.77	8.00	28.00	--	--	--	--	--	--	--	--	--	--
	3/20/2001	--		54.77	8.00	28.00	3.13	51.64	--	--	--	--	--	--	--	--
	6/12/2001	--		54.77	8.00	28.00	4.51	50.26	--	--	--	--	--	--	--	--
	9/23/2001	--		54.77	8.00	28.00	6.05	48.72	--	--	--	--	--	--	--	--
	12/31/2001	--		54.77	8.00	28.00	2.79	51.98	--	--	--	--	--	--	--	--
	3/21/2002	--		54.77	8.00	28.00	7.75	47.02	--	--	--	--	--	--	--	--
	4/17/2002	--		54.77	8.00	28.00	2.24	52.53	--	--	--	--	--	--	--	--
	8/12/2002	--		54.77	8.00	28.00	4.93	49.84	--	--	--	--	--	--	--	--
	12/6/2002	--		54.77	8.00	28.00	6.09	48.68	--	--	--	--	--	--	--	--
	1/30/2003	--		54.77	8.00	28.00	3.89	50.88	--	--	--	--	--	--	--	--

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #4931

731 West 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
AR-2	5/28/2003	--		54.77	8.00	28.00	3.33	51.44	--	--	--	--	--	--	--	--
	8/6/2003	--		54.77	8.00	28.00	5.05	49.72	--	--	--	--	--	--	--	--
	11/14/2003	--		54.77	8.00	28.00	6.01	48.76	--	--	--	--	--	--	--	--
	02/02/2004	--	g	59.18	8.00	28.00	3.88	55.30	--	--	--	--	--	--	--	--
	05/04/2004	--		59.18	8.00	28.00	6.01	53.17	--	--	--	--	--	--	--	--
	09/02/2004	--		59.18	8.00	28.00	5.65	53.53	--	--	--	--	--	--	--	--
	11/10/2004	--		59.18	8.00	28.00	5.48	53.70	--	--	--	--	--	--	--	--
	02/02/2005	--		59.18	8.00	28.00	2.62	56.56	--	--	--	--	--	--	--	--
	05/09/2005	--		59.18	8.00	28.00	2.84	56.34	--	--	--	--	--	--	--	--
	08/11/2005	--		59.18	8.00	28.00	4.33	54.85	--	--	--	--	--	--	--	--
AR-3	6/21/2000	--		54.19	10.00	30.00	--	--	--	--	--	--	--	--	--	--
	9/20/2000	--		54.19	10.00	30.00	--	--	--	--	--	--	--	--	--	--
	12/26/2000	--		54.19	10.00	30.00	9.70	44.49	--	--	--	--	--	--	--	--
	3/20/2001	--		54.19	10.00	30.00	--	--	--	--	--	--	--	--	--	--
	6/12/2001	--		54.19	10.00	30.00	--	--	--	--	--	--	--	--	--	--
	9/23/2001	--		54.19	10.00	30.00	10.43	43.76	--	--	--	--	--	--	--	--
	12/31/2001	--		54.19	10.00	30.00	5.18	49.01	--	--	--	--	--	--	--	--
	3/21/2002	--		54.19	10.00	30.00	6.78	47.41	--	--	--	--	--	--	--	--
	4/17/2002	--		54.19	10.00	30.00	8.06	46.13	--	--	--	--	--	--	--	--
	8/12/2002	--		54.19	10.00	30.00	9.94	44.25	--	--	--	--	--	--	--	--
	12/6/2002	--		54.19	10.00	30.00	9.99	44.20	--	--	--	--	--	--	--	--
	1/30/2003	--		54.19	10.00	30.00	7.96	46.23	--	--	--	--	--	--	--	--
	5/28/2003	--		54.19	10.00	30.00	8.94	45.25	--	--	--	--	--	--	--	--
	8/6/2003	--		54.19	10.00	30.00	9.94	44.25	--	--	--	--	--	--	--	--
	11/14/2003	--		54.19	10.00	30.00	10.03	44.16	--	--	--	--	--	--	--	--
	02/02/2004	--	g	59.10	10.00	30.00	6.90	52.20	--	--	--	--	--	--	--	--
	05/04/2004	--		59.10	10.00	30.00	9.12	49.98	--	--	--	--	--	--	--	--
	09/02/2004	--		59.10	10.00	30.00	10.15	48.95	--	--	--	--	--	--	--	--
	11/10/2004	--		59.10	10.00	30.00	8.79	50.31	--	--	--	--	--	--	--	--
	02/02/2005	--		59.10	10.00	30.00	7.30	51.80	--	--	--	--	--	--	--	--
05/09/2005	--		59.10	10.00	30.00	7.71	51.39	--	--	--	--	--	--	--	--	
08/11/2005	--		59.10	10.00	30.00	9.54	49.56	--	--	--	--	--	--	--	--	

**Table 1**

**Groundwater Elevation and Analytical Data**

ARCO Service Station #4931

731 West MacArthur Blvd., Oakland, CA

**SYMBOLS AND 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 = Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel for GRO/TPH-g.  
b = The concentration indicated for this analyte (MTBE) is an estimated value above the calibration range of the instrument.  
c = This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.  
d = ORC sock in well.  
e = Well inaccessible; well paved over.  
f = Sheen in well.  
g = Well surveyed to NAVD '88 datum on January 28, 2004.  
h = Possible low bias due to CCV falling outside acceptance criteria for GRO.  
i = Hydrocarbon result partly due to individual peak(s) in quant. range for GRO.

**NOTES:**

Top and bottom of screen measurements for wells A-2 through A-5 were estimated from the EMCON sampling sheet.

Beginning in the first quarter 2003 (1/30/2003), groundwater samples were analyzed by EPA method 8260B for TPH-g, BTEX, and fuel oxygenates. Prior to 1/30/03, TPH-g was analyzed using EPA Method 8015B modified and MTBE by 8021B unless otherwise noted.

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

Values for DO and pH were obtained through field measurements.

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



Table 2

Fuel Additives Analytical Data  
 ARCO Service Station #4931  
 731 West 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)	Footnotes/ Comments
A-2	1/30/2003	<40	<20	--	<0.50	<0.50	<0.50	--	--	a
	5/28/2003	<100	<20	1.1	<0.50	<0.50	<0.50	--	--	
	8/6/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	09/02/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	08/11/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
A-3	1/30/2003	--	--	--	--	--	--	--	--	b
	5/28/2003	<100	<20	43	<0.50	<0.50	24	--	--	
	8/6/2003	--	--	--	--	--	--	--	--	
	02/02/2004	<100	<20	13	<0.50	<0.50	4.6	<0.50	<0.50	
	09/02/2004	<500	<100	62	<2.5	<2.5	15	<2.5	<2.5	
	02/02/2005	<100	<20	6.8	<0.50	<0.50	2.4	<0.50	<0.50	
	08/11/2005	<100	<20	39	<0.50	<0.50	4.2	<0.50	<0.50	
A-4	1/30/2003	<4,000	<2,000	2,100	<50	<50	530	--	--	b
	5/28/2003	<10,000	<2,000	2,500	<50	<50	590	--	--	
	8/6/2003	<5,000	<1,000	2,500	<25	<25	560	<25	<25	
	11/14/2003	<1,000	320	310	<5.0	<5.0	76	--	--	
	02/02/2004	<5,000	<1,000	1,500	<25	<25	350	<25	<25	
	05/04/2004	<10,000	<2,000	2,300	<50	<50	510	<50	<50	
	09/02/2004	<5,000	1,200	1,200	<25	<25	280	<25	<25	
	11/10/2004	<2,000	910	1,100	<10	<10	270	<10	<10	
	02/02/2005	<2,000	2,100	1,700	<10	<10	430	<10	<10	
	05/09/2005	<10,000	2,000	1,800	<50	<50	460	<50	<50	
08/11/2005	<2,000	2,400	1,200	<10	<10	310	<10	<10		
A-5	1/30/2003	--	--	--	--	--	--	--	--	b
	5/28/2003	<10,000	<2,000	1,500	<50	<50	620	--	--	
	8/6/2003	--	--	--	--	--	--	--	--	
	02/02/2004	<500	170	140	<2.5	<2.5	54	<2.5	<2.5	
	09/02/2004	<500	150	66	<2.5	<2.5	29	<2.5	<2.5	
	02/02/2005	<100	840	17	<0.50	<0.50	7.6	<0.50	<0.50	
	08/11/2005	<100	530	6.8	<0.50	<0.50	7.1	<0.50	<0.50	
A-7	1/30/2003	--	--	--	--	--	--	--	--	b
	5/28/2003	<100	<20	3.8	<0.50	<0.50	0.94	--	--	
	8/6/2003	--	--	--	--	--	--	--	--	

Table 2

**Fuel Additives Analytical Data**  
 ARCO Service Station #4931  
 731 West 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)	Footnotes/Comments
A-7	09/02/2004	<100	<20	8.9	<0.50	<0.50	3.0	<0.50	<0.50	
	08/11/2005	<100	<20	18	<0.50	<0.50	4.4	<0.50	<0.50	
A-8	1/30/2003	<8,000	<4,000	2,200	<100	<100	900	--	--	a
	5/28/2003	<10,000	<2,000	2,100	<50	<50	1,100	--	--	
	8/6/2003	<10,000	<2,000	3,000	<50	<50	1,200	<50	<50	
	11/14/2003	<1,000	<200	850	<5.0	<5.0	320	--	--	
	02/02/2004	<5,000	<1,000	1,100	<25	<25	380	<25	<25	
	05/04/2004	<10,000	<2,000	1,600	<50	<50	440	<50	<50	
	09/02/2004	<5,000	<1,000	680	<25	<25	170	<25	<25	
	11/10/2004	<500	<100	290	<2.5	<2.5	66	<2.5	<2.5	
	02/02/2005	<5,000	<1,000	1,900	<25	<25	510	<25	<25	b
	05/09/2005	<100	<20	66	<0.50	<0.50	2.9	<0.50	<0.50	
	08/11/2005	<2,500	<500	1,100	<12	<12	310	<12	<12	
A-9	1/30/2003	<40	<20	1.1	<0.50	<0.50	<0.50	--	--	
	5/28/2003	<100	<20	0.74	<0.50	<0.50	<0.50	--	--	
	8/6/2003	<100	<20	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	
	09/02/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
		08/11/2005	<100	<20	1.5	<0.50	<0.50	<0.50	<0.50	<0.50
A-10	09/02/2004	<1,000	<200	270	<5.0	<5.0	44	<5.0	<5.0	
		08/11/2005	<100	<20	97	<0.50	<0.50	14	<0.50	<0.50
A-11	1/30/2003	--	--	--	--	--	--	--	--	
	5/28/2003	<100	<20	0.53	<0.50	<0.50	<0.50	--	--	
	8/6/2003	--	--	--	--	--	--	--	--	
	09/02/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
		08/11/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
A-12	1/30/2003	--	--	--	--	--	--	--	--	
	5/28/2003	<100	<20	10	<0.50	<0.50	2.5	--	--	
	8/6/2003	--	--	--	--	--	--	--	--	
	02/02/2004	<100	<20	0.91	<0.50	<0.50	<0.50	<0.50	<0.50	
	09/02/2004	<100	<20	6.2	<0.50	<0.50	1.7	<0.50	<0.50	
	02/02/2005	<100	<20	8.3	<0.50	<0.50	2.2	<0.50	<0.50	b
		08/11/2005	<100	<20	5.4	<0.50	<0.50	1.1	<0.50	<0.50

Table 2

Fuel Additives Analytical Data  
ARCO Service Station #4931  
731 West 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)	Footnotes/ Comments
A-13	1/30/2003	--	--	--	--	--	--	--	--	
	5/28/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
	8/6/2003	--	--	--	--	--	--	--	--	
	09/02/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

**Table 2**

**Fuel Additives Analytical Data**  
ARCO Service Station #4931  
731 West MacArthur Blvd., Oakland, CA

**ABBREVIATIONS:**

-- = Not analyzed/applicable/measured/available  
< = Not detected at or above the laboratory reporting limit.  
1,2-DCA = 1,2-Dichloroethane  
DIPE = Di-isopropyl ether  
EDB = 1,2-Dibromoethane  
ETBE = Ethyl tert-butyl ether  
MTBE = Methyl tert-butyl ether  
TAME = tert-Amyl methyl ether  
TBA = tert-Butyl alcohol  
ug/L = Micrograms per Liter

**FOOTNOTES:**

a = The result for TBA was reported with a possible high bias due to the continuing calibration verification falling outside acceptance criteria.  
b = The calibration verification for ethanol was within the method limits but outside the contract limits.

**NOTES:**

All volatile organic compounds analyzed using EPA Method 8260B.

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

**Table 3**  
**Groundwater Gradient Data**  
 ARCO Service Station #4931  
 731 West MacArthur Blvd., Oakland, CA

<b>Date Sampled</b>	<b>Approximate Flow Direction</b>	<b>Approximate Hydraulic Gradient</b>
06/21/2000	West-Southwest	0.031
09/20/2000	Southwest	0.013
12/26/2000	West	0.028
03/20/2001	West	0.046
06/12/2001	West	0.014
09/23/2001	West	0.012
12/31/2001	West	0.024
03/21/2002	West	0.047
04/17/2002	West	0.03
08/12/2002	West	0.016
12/06/2002	West	0.015
01/30/2003	West	Variable
05/28/2003	West	0.022 a
08/06/2003	West-Southwest	0.018
11/14/2003	West	0.02
02/02/2004	West	0.04
05/04/2004	West to North	0.025 to 0.033
09/02/2004	West	0.033
11/10/2004	West	0.031
02/02/2005	West-Southwest	0.04
05/09/2005	Northwest-Southwest	0.04
08/11/2005	West	0.02

FOOTNOTES:  
 a = using wells AR-1 and A-9

NOTES:  
 Source : The data within this table collected prior to August 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 # 050811-BA1 Date 8/11/05 Client ARCO #4931

Site 731 W. 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	
A-2	4					9.08	19.43	TOC	NPE5'
A-3	4					9.28	16.24		
A-4	4					9.71	19.37		
A-5	3					9.21	24.52		
A-7	3					8.45	22.18		
A-8	3					9.15	16.85		NPE2'
A-9	6					8.37	34.20		
A-10	3					10.02	29.75		
A-11	3					9.87	29.75		
A-12	3					9.05	29.80		
A-13	3					9.70	29.04		60
AR-1	6					9.82	28.67		60
AR-2	6					4.33	26.30		60
AR-3	4					9.54	29.00	→	60



## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050811-BA1	Station # 4931
Sampler: Brian Alcorn	Date: 8/11/05
Well I.D.: A-2	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 19.43	Depth to Water: 9.08
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) 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: <del>Bailer</del> <del>Disposable Bailer</del> Positive Air Displacement <del>Electric Submersible</del> <del>Extraction Pump</del> Other: _____	Sampling Method: <del>Bailer</del> (Disposable Bailer) Extraction Port Other: _____
---	--

Top of Screen: 5' If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

No Purge

	X		=		Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
0831	69.5	6.9	622	—	clear

Did well dewater? Yes    No                      Gallons actually evacuated: —

Sampling Time: 0825                                      Sampling Date: 8/11/05

Sample I.D.: A-2                                      Laboratory: Pace (Sequoia) Other \_\_\_\_\_

Analyzed for: (GRO) (BTEX) MTBE DRO    Other: Oxy, EDB, 12-DCA, Ethanol All by 8260

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	3.2 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050811-BA1	Station # 4931
Sampler: Brian Alcorn	Date: 8/11/05
Well I.D.: A-3	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 16.24	Depth to Water: 9.29
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI 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 Disposable Bailer Positive Air Displacement Electric Submersible Extraction Pump Other: _____	Sampling Method: Bailer Disposable Bailer 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.

4.6	x	3	=	13.8	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1125	71.7	6.1	717	5.0	cloudy gray
		Well Dewatered e		5 gallons	
1135	73.0	5.5	793	5.0	"

Did well dewater? (Yes) No      Gallons actually evacuated: 5

Sampling Time: 1135 edge of water      Sampling Date: 8/11/05

Sample I.D.: A-3      Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: GRO BTEX MTBE DRO      Other: See A-2

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.8 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050811-BA1</u>	Station # <u>4931</u>
Sampler: <u>Brian Alcom</u>	Date: <u>8/11/05</u>
Well I.D.: <u>A-4</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 <u>   </u>
Total Well Depth: <u>19.37</u>	Depth to Water: <u>9.71</u>
Depth to Free Product: <u>   </u>	Thickness of Free Product (feet): <u>   </u>
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> Disposable Bailer Positive Air Displacement <u>Electric Submersible</u> Extraction Pump Other: <u>   </u>	Sampling Method: <u>Bailer</u> <u>Disposable 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>6.3</u>	X	<u>3</u>	=	<u>18.9</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or (uS))	Gals. Removed	Observations
<u>1109</u>	<u>70.4</u>	<u>6.5</u>	<u>1,330</u>	<u>6.5</u>	<u>gray, odor, slight sheen</u>
				<u>Well Dewatered @ 6.5 gallons</u>	
<u>1115</u>	<u>68.8</u>	<u>6.9</u>	<u>1,348</u>	<u>6.5</u>	<u>" " "</u>

Did well dewater? <u>(Yes)</u> No	Gallons actually evacuated: <u>6.5</u>
Sampling Time: <u>1115 @ departure</u>	Sampling Date: <u>8/11/05</u>
Sample I.D.: <u>A-4</u>	Laboratory: Pace <u>(Sequoia)</u> Other <u>   </u>
Analyzed for: GRO BTEX MTBE DRO	Other: <u>See A-Z</u>
D.O. (if req'd):	Pre-purge: <u>   </u> mg/L
	Post-purge: <u>not taken due to sheen</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 #: 050811-BA1	Station # 4931
Sampler: Brian Alcom	Date: 8/11/05
Well I.D.: A-5	Well Diameter: 2 (3) 4 6 8
Total Well Depth: 24.52	Depth to Water: 9.21
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) 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 Disposable Bailer Positive Air Displacement (Electric Submersible) Extraction Pump Other: _____	Sampling Method: Bailer (Disposable Bailer) 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.

5.7	X	3	=	17.1	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or (μS))	Gals. Removed	Observations
1052	72.3	6.6	949	6.0	cloudy brown
1054	70.2	6.5	948	12.0	"
1056	69.9	6.2	827	18.0	"

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 18.0
Sampling Time: 1000	Sampling Date: 8/11/05
Sample I.D.: A-5	Laboratory: Pace (Sequoia) Other _____
Analyzed for: GRO BTEX MTBE DRO	Other: See A-2
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: (1.3) mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050811-BA1	Station # 4931
Sampler: Brian Alcorn	Date: 8/11/05
Well I.D.: A-7	Well Diameter: 2 (3) 4 6 8
Total Well Depth: 22.18	Depth to Water: 8.45
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) 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.

5.1	x	3	=	15.3	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1022	69.3	5.9	608	5.25	cloudy brown
1027	69.5	6.3	604	10.5	"
1036	70.0	6.6	659	15.75	clear
					3 extra vols

Did well dewater? Yes  No  Gallons actually evacuated: 15.75

Sampling Time: 1040      Sampling Date: 8/11/05

Sample I.D.: A-7      Laboratory: Pace (Sequoia) Other: \_\_\_\_\_

Analyzed for: GRO BTEX MTBE DRO Other: See A2

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.6	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050811-BA1	Station # 4931
Sampler: <u>9W</u>	Date: <u>8/11/05</u>
Well I.D.: <u>A-8</u>	Well Diameter: 2 <u>(3)</u> 4 6 8
Total Well Depth: <u>16.85</u>	Depth to Water: <u>9.15</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
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: <del>Bailer</del> Disposable Bailer Positive Air Displacement Electric Submersible Extraction Pump Other: _____	Sampling Method: Bailer Disposable Bailer Extraction Port Other: _____
--	---

Top of Screen: 2'      If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
<u>0900</u>	<u>71.4</u>	<u>6.4</u>	<u>1144</u>	—	

Did well dewater?    Yes      No	Gallons actually evacuated: <u>—</u>
Sampling Time: <u>0900</u>	Sampling Date: <u>8-11-05</u>
Sample I.D.: <u>A-8</u>	Laboratory: Pace <u>(Sequoia)</u> Other _____
Analyzed for:    GRO    BTEX    MTBE    DRO	Other: <u>See A-2</u>
D.O. (if req'd):	Pre-purge: _____ mg/L <u>(Post-purge): 0.7</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV      Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050811-BA1	Station # 4731
Sampler: DW	Date: 8/11/05
Well I.D.: A-9	Well Diameter: 2 3 4 (6) 8
Total Well Depth: <del>27.80</del> 34.20	Depth to Water: <del>8.37</del> 8.37
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) 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  
 Positive Air Displacement       Disposable Bailer  
 Electric Submersible      Extraction Port  
 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.

38	x	3	=	114	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1032	67.1	7.0	671	38	
1042	66.7	6.8	677	76	
1051	66.4	6.7	677	114	

Did well dewater? Yes  No  Gallons actually evacuated: 114

Sampling Time: 1056      Sampling Date: \_\_\_\_\_

Sample I.D.: A-9      Laboratory: Pace (Sequita) Other: \_\_\_\_\_

Analyzed for: GRO BTEX MTBE DRO      Other: See A-2

D.O. (if req'd):	Pre-purge:	$\text{mg/L}$	Post-purge:	1.8	$\text{mg/L}$
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050841-BA1</u>	Station # <u>4931</u>
Sampler: <u>DW</u>	Date: <u>8/11/05</u>
Well I.D.: <u>A-10</u>	Well Diameter: 2 <u>(3)</u> 4 6 8 <u>   </u>
Total Well Depth: <u>29.75</u>	Depth to Water: <u>10.02</u>
Depth to Free Product: <u>   </u>	Thickness of Free Product (feet): <u>   </u>
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> Disposable Bailer <input checked="" type="checkbox"/> Positive Air Displacement Electric Submersible Extraction Pump Other: <u>                  </u>	Sampling Method: <u>Bailer</u> <input checked="" type="checkbox"/> Disposable Bailer 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>7.3</u>	X	<u>3</u>	=	<u>21.9</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1112	66.2	6.6	644	7.3	
1120	66.3	6.6	655	14.6	
1128	66.7	6.6	664	21.9	

Did well dewater? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>21.9</u>
Sampling Time: <u>1133</u>	Sampling Date: <u>8-11-05</u>
Sample I.D.: <u>A-10</u>	Laboratory: Pace <u>(Sequoia)</u> Other <u>          </u>

Analyzed for: GRO BTEX MTBE DRO Other: <u>See A-2</u>				
D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV



## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050811-BA1	Station # 4931
Sampler: Brian Alcorn	Date: 8/11/05
Well I.D.: A-11	Well Diameter: 2 (3) 4 6 8
Total Well Depth: 29.75	Depth to Water: 9.87
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) 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 Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposable Bailer 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.

7.4	x	3	=	22.2	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
0926	66.7	6.5	610	7.5	clear
0934	66.7	6.6	607	15.0	"
0942	67.3	6.7	607	22.5	"

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 22.5	
Sampling Time: 0945	Sampling Date: 8/11/05	
Sample I.D.: A-11	Laboratory: Pace (Sequoia) Other _____	
Analyzed for: GRO BTEX MTBE DRO	Other: See A-2	
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: (3.8) mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050811-BA1	Station # 4931
Sampler: DW	Date: 8/11/05
Well I.D.: A-12	Well Diameter: 2 (3) 4 6 8
Total Well Depth: 29.80	Depth to Water: 9.05
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) 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 Disposable Bailer X Positive Air Displacement Electric Submersible Extraction Pump Other: _____	Sampling Method: Bailer X Disposable Bailer 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.

7.7	x	3	=	23.1	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
0925	66.7	6.5	791	7.7	
0933	66.5	6.5	714	15.4	
0941	66.3	6.4	698	23.1	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 23.1
Sampling Time: 0946	Sampling Date: 8-11-05
Sample I.D.: A-12	Laboratory: Pace (Sequoia) Other _____
Analyzed for: GRO BTEX MTBE DRO	Other: See A-2
D.O. (if req'd):	Pre-purge: _____ mg/L      Post-purge: (0.9) 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:

4931

Station #

731 W. Mac Arthur Blvd, Oakland

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

added equip.  
rinse water \_\_\_\_\_

any other  
adjustments \_\_\_\_\_

TOTAL GALS.  
RECOVERED 230

loaded onto  
BTS vehicle # 64

BTS event #

time date

050811-BA1

1145

8/11/05

signature

\*\*\*\*\*

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 RM have been reviewed and verified by that laboratory.



26 August, 2005

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

RE: ARCO #4931, Oakland, CA  
Work Order: MOH0679

Enclosed are the results of analyses for samples received by the laboratory on 08/12/05 15:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jamshid Kekobad  
Project Manager

CA ELAP Certificate #1210

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

Project: ARCO #4931, Oakland, CA  
Project Number: G0C8C-0004  
Project Manager: Scott Robinson

MOH0679  
Reported:  
08/26/05 17:23

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
A-2	MOH0679-01	Water	08/11/05 08:25	08/12/05 15:05
A-3	MOH0679-02	Water	08/11/05 11:35	08/12/05 15:05
A-4	MOH0679-03	Water	08/11/05 11:15	08/12/05 15:05
A-5	MOH0679-04	Water	08/11/05 11:00	08/12/05 15:05
A-7	MOH0679-05	Water	08/11/05 10:40	08/12/05 15:05
A-8	MOH0679-06	Water	08/11/05 09:00	08/12/05 15:05
A-9	MOH0679-07	Water	08/11/05 10:56	08/12/05 15:05
A-10	MOH0679-08	Water	08/11/05 11:33	08/12/05 15:05
A-11	MOH0679-09	Water	08/11/05 09:45	08/12/05 15:05
A-12	MOH0679-10	Water	08/11/05 09:46	08/12/05 15:05
TB-4931-08112005	MOH0679-11	Water	08/11/05 08:15	08/12/05 15:05

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 #4931, Oakland, CA  
Project Number: G0C8C-0004  
Project Manager: Scott Robinson

MOH0679  
Reported:  
08/26/05 17:23

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>A-2 (MOH0679-01) Water</b> Sampled: 08/11/05 08:25 Received: 08/12/05 15:05									
tert-Amyl methyl ether	ND	0.50	ug/l	1	5H22019	08/22/05	08/22/05	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	"	"	"	"	"	"	
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	"	"	"	"	"	"	PF
<i>Surrogate: 1,2-Dichloroethane-d4</i>		94 %	60-135	"	"	"	"	"	
<b>A-3 (MOH0679-02) Water</b> Sampled: 08/11/05 11:35 Received: 08/12/05 15:05									
tert-Amyl methyl ether	4.2	0.50	ug/l	1	5H22019	08/22/05	08/22/05	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	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>39</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	PF
<i>Surrogate: 1,2-Dichloroethane-d4</i>		80 %	60-135	"	"	"	"	"	



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

Project: ARCO #4931, Oakland, CA  
Project Number: G0C8C-0004  
Project Manager: Scott Robinson

MOH0679  
Reported:  
08/26/05 17:23

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>A-4 (MOH0679-03) Water</b> <b>Sampled: 08/11/05 11:15</b> <b>Received: 08/12/05 15:05</b>										
tert-Amyl methyl ether	310	10		ug/l	20	5H22019	08/22/05	08/22/05	EPA 8260B	
Benzene	51	10		"	"	"	"	"	"	
tert-Butyl alcohol	2400	400		"	"	"	"	"	"	
Di-isopropyl ether	ND	10		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10		"	"	"	"	"	"	
1,2-Dichloroethane	ND	10		"	"	"	"	"	"	
Ethanol	ND	2000		"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	10		"	"	"	"	"	"	
Ethylbenzene	ND	10		"	"	"	"	"	"	
Methyl tert-butyl ether	1200	10		"	"	"	"	"	"	
Toluene	ND	10		"	"	"	"	"	"	
Xylenes (total)	ND	10		"	"	"	"	"	"	
<b>Gasoline Range Organics (C4-C12)</b>	<b>1700</b>	<b>1000</b>		"	"	"	"	"	"	<b>PF</b>
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>99 %</i>		<i>60-135</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<b>A-5 (MOH0679-04) Water</b> <b>Sampled: 08/11/05 11:00</b> <b>Received: 08/12/05 15:05</b>										
tert-Amyl methyl ether	7.1	0.50		ug/l	1	5H22019	08/22/05	08/22/05	EPA 8260B	
Benzene	ND	0.50		"	"	"	"	"	"	
tert-Butyl alcohol	530	20		"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50		"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50		"	"	"	"	"	"	
Ethanol	ND	100		"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Ethylbenzene	ND	0.50		"	"	"	"	"	"	
Methyl tert-butyl ether	6.8	0.50		"	"	"	"	"	"	
Toluene	ND	0.50		"	"	"	"	"	"	
Xylenes (total)	ND	0.50		"	"	"	"	"	"	
<b>Gasoline Range Organics (C4-C12)</b>	<b>ND</b>	<b>50</b>		"	"	"	"	"	"	<b>PF</b>
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>102 %</i>		<i>60-135</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

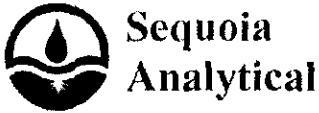
URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland CA, 94612

Project: ARCO #4931, Oakland, CA  
Project Number: G0C8C-0004  
Project Manager: Scott Robinson

MOH0679  
Reported:  
08/26/05 17:23

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>A-7 (MOH0679-05) Water</b> Sampled: 08/11/05 10:40 Received: 08/12/05 15:05									
tert-Amyl methyl ether	4.4	0.50	ug/l	1	5H22019	08/22/05	08/22/05	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	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	18	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	PF
Surrogate: 1,2-Dichloroethane-d4		89 %		60-135	"	"	"	"	
<b>A-8 (MOH0679-06) Water</b> Sampled: 08/11/05 09:00 Received: 08/12/05 15:05									
tert-Amyl methyl ether	310	12	ug/l	25	5H22019	08/22/05	08/23/05	EPA 8260B	
Benzene	1300	12	"	"	"	"	"	"	
tert-Butyl alcohol	ND	500	"	"	"	"	"	"	
Di-isopropyl ether	ND	12	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	12	"	"	"	"	"	"	
1,2-Dichloroethane	ND	12	"	"	"	"	"	"	
Ethanol	ND	2500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	12	"	"	"	"	"	"	
Ethylbenzene	ND	12	"	"	"	"	"	"	
Methyl tert-butyl ether	1100	12	"	"	"	"	"	"	
Toluene	ND	12	"	"	"	"	"	"	
Xylenes (total)	ND	12	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	1400	1200	"	"	"	"	"	"	PF
Surrogate: 1,2-Dichloroethane-d4		89 %		60-135	"	"	"	"	



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

Project: ARCO #4931, Oakland, CA  
 Project Number: G0C8C-0004  
 Project Manager: Scott Robinson

MOH0679  
 Reported:  
 08/26/05 17:23

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>A-9 (MOH0679-07) Water</b> <b>Sampled: 08/11/05 10:56</b> <b>Received: 08/12/05 15:05</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	5H24009	08/24/05	08/24/05	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	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>1.5</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<b>Gasoline Range Organics (C4-C12)</b>	<b>ND</b>	<b>50</b>	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<b>96 %</b>		<b>60-135</b>	"	"	"	"	
<b>A-10 (MOH0679-08) Water</b> <b>Sampled: 08/11/05 11:33</b> <b>Received: 08/12/05 15:05</b>									
tert-Amyl methyl ether	<b>14</b>	0.50	ug/l	1	5H22019	08/22/05	08/23/05	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	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>97</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<b>Gasoline Range Organics (C4-C12)</b>	<b>69</b>	<b>50</b>	"	"	"	"	"	"	PF, PV
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<b>100 %</b>		<b>60-135</b>	"	"	"	"	



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

Project: ARCO #4931, Oakland, CA  
Project Number: G0C8C-0004  
Project Manager: Scott Robinson

MOH0679  
Reported:  
08/26/05 17:23

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>A-11 (MOH0679-09) Water Sampled: 08/11/05 09:45 Received: 08/12/05 15:05</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	5H22019	08/22/05	08/23/05	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	"	"	"	"	"	"	
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	"	"	"	"	"	"	
Gasolme Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	PF
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %	60-135	"	"	"	"	"	
<b>A-12 (MOH0679-10) Water Sampled: 08/11/05 09:46 Received: 08/12/05 15:05</b>									
tert-Amyl methyl ether	1.1	0.50	ug/l	1	5H22019	08/22/05	08/23/05	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	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>5.4</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	PF
<i>Surrogate: 1,2-Dichloroethane-d4</i>		104 %	60-135	"	"	"	"	"	

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

Project: ARCO #4931, Oakland, CA  
Project Number: G0C8C-0004  
Project Manager: Scott Robinson

MOH0679  
Reported:  
08/26/05 17:23

**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 5H22019 - EPA 5030B P/T / EPA 8260B**

**Blank (5H22019-BLK1)**

Prepared & Analyzed: 08/22/05

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>4.30</i>		<i>"</i>	<i>5.00</i>		<i>86</i>	<i>60-135</i>			

**Blank (5H22019-BLK2)**

Prepared & Analyzed: 08/22/05

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	"							
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	"							PF
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.28</i>		<i>"</i>	<i>5.00</i>		<i>86</i>	<i>60-135</i>			

URS Corporation [Arco]  
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 Project Number: G0C8C-0004  
 Project Manager: Scott Robinson

 MOH0679  
 Reported:  
 08/26/05 17:23

**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 5H22019 - EPA 5030B P/T / EPA 8260B**
**Laboratory Control Sample (5H22019-BS1)**

Prepared &amp; Analyzed: 08/22/05

tert-Amyl methyl ether	16.8	0.50	ug/l	15.0		112	80-115			
Benzene	4.84	0.50	"	5.16		94	65-115			
tert-Butyl alcohol	152	20	"	143		106	75-150			
Di-isopropyl ether	14.0	0.50	"	15.1		93	75-125			
1,2-Dibromoethane (EDB)	17.3	0.50	"	14.8		117	85-120			
1,2-Dichloroethane	15.8	0.50	"	14.7		107	85-130			
Ethanol	141	100	"	141		100	70-135			IC
Ethyl tert-butyl ether	15.4	0.50	"	15.0		103	75-130			
Ethylbenzene	7.39	0.50	"	7.54		98	75-135			
Methyl tert-butyl ether	7.74	0.50	"	7.02		110	65-125			
Toluene	37.5	0.50	"	37.2		101	85-120			
Xylenes (total)	39.0	0.50	"	41.4		94	85-125			
Gasoline Range Organics (C4-C12)	355	50	"	440		81	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.22</i>		<i>"</i>	<i>5.00</i>		<i>84</i>	<i>60-135</i>			

**Matrix Spike (5H22019-MS1)**

Source: MOH0679-03

Prepared &amp; Analyzed: 08/22/05

tert-Amyl methyl ether	610	10	ug/l	301	310	100	80-115			
Benzene	144	10	"	103	51	90	65-115			
tert-Butyl alcohol	5300	400	"	2860	2400	101	75-120			
Di-isopropyl ether	273	10	"	303	ND	90	75-125			
1,2-Dibromoethane (EDB)	330	10	"	297	ND	111	85-120			
1,2-Dichloroethane	323	10	"	294	ND	110	85-130			
Ethanol	2890	2000	"	2830	ND	102	70-135			
Ethyl tert-butyl ether	286	10	"	300	ND	95	75-130			
Ethylbenzene	156	10	"	151	2.0	102	75-135			
Methyl tert-butyl ether	1060	10	"	140	1200	NR	65-125			BB, LN
Toluene	720	10	"	744	ND	97	85-120			
Xylenes (total)	791	10	"	828	6.2	95	85-125			
Gasoline Range Organics (C4-C12)	8390	1000	"	8800	1700	76	70-124			PF
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.42</i>		<i>"</i>	<i>5.00</i>		<i>88</i>	<i>60-135</i>			



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

Project: ARCO #4931, Oakland, CA  
Project Number: G0C8C-0004  
Project Manager: Scott Robinson

MOH0679  
Reported:  
08/26/05 17:23

**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 5H22019 - EPA 5030B P/T / EPA 8260B**

Matrix Spike Dup (5H22019-MSD1)	Source: MOH0679-03			Prepared & Analyzed: 08/22/05						
tert-Amyl methyl ether	594	10	ug/l	301	310	94	80-115	3	15	
Benzene	138	10	"	103	51	84	65-115	4	20	
tert-Butyl alcohol	5240	400	"	2860	2400	99	75-120	1	25	
Di-isopropyl ether	274	10	"	303	ND	90	75-125	0.4	15	
1,2-Dibromoethane (EDB)	329	10	"	297	ND	111	85-120	0.3	15	
1,2-Dichloroethane	303	10	"	294	ND	103	85-130	6	20	
Ethanol	2670	2000	"	2830	ND	94	70-135	8	35	
Ethyl tert-butyl ether	340	10	"	300	ND	113	75-130	17	25	
Ethylbenzene	156	10	"	151	2.0	102	75-135	0	15	
Methyl tert-butyl ether	1050	10	"	140	1200	NR	65-125	0.9	20	BB, LN
Toluene	744	10	"	744	ND	100	85-120	3	20	
Xylenes (total)	814	10	"	828	6.2	98	85-125	3	20	
Gasoline Range Organics (C4-C12)	8300	1000	"	8800	1700	75	70-124	1	20	PF
Surrogate: 1,2-Dichloroethane-d4	4.16		"	5.00		83	60-135			

**Batch 5H24009 - EPA 5030B P/T / EPA 8260B**

Blank (5H24009-BLK1)	Prepared & Analyzed: 08/24/05									
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	6.11	5.0	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
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	"							
Surrogate: 1,2-Dichloroethane-d4	2.46		"	2.50		98	60-135			

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

Project: ARCO #4931, Oakland, CA  
Project Number: G0C8C-0004  
Project Manager: Scott Robinson

MOH0679  
Reported:  
08/26/05 17:23

**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 5H24009 - EPA 5030B P/T / EPA 8260B**

**Blank (5H24009-BLK2)**

Prepared & Analyzed: 08/24/05

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	5.0	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
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>2.49</i>		<i>"</i>	<i>2.50</i>		<i>100</i>	<i>60-135</i>			

**Laboratory Control Sample (5H24009-BS1)**

Prepared & Analyzed: 08/24/05

tert-Amyl methyl ether	17.0	0.50	ug/l	15.0		113	80-115			
Benzene	5.36	0.50	"	5.16		104	65-115			
tert-Butyl alcohol	155	5.0	"	143		108	75-150			MB
Di-isopropyl ether	16.7	0.50	"	15.1		111	75-125			
1,2-Dibromoethane (EDB)	17.6	0.50	"	14.8		119	85-120			
1,2-Dichloroethane	16.1	0.50	"	14.7		110	85-130			
Ethanol	164	100	"	141		116	70-135			
Ethyl tert-butyl ether	16.9	0.50	"	15.0		113	75-130			
Ethylbenzene	7.82	0.50	"	7.54		104	75-135			
Methyl tert-butyl ether	6.32	0.50	"	7.02		90	65-125			
Toluene	37.1	0.50	"	37.2		100	85-120			
Xylenes (total)	45.1	0.50	"	41.4		109	85-125			
Gasoline Range Organics (C4-C12)	526	50	"	440		120	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.27</i>		<i>"</i>	<i>2.50</i>		<i>91</i>	<i>60-135</i>			



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

 Project: ARCO #4931, Oakland, CA  
 Project Number: G0C8C-0004  
 Project Manager: Scott Robinson

 MOH0679  
 Reported:  
 08/26/05 17:23

**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 5H24009 - EPA 5030B P/T / EPA 8260B**

<b>Matrix Spike (5H24009-MS1)</b>	<b>Source: MOH0687-03</b>			<b>Prepared &amp; Analyzed: 08/24/05</b>						
tert-Amyl methyl ether	908	25	ug/l	752	ND	121	80-115			LM
Benzene	288	25	"	258	ND	112	65-115			
tert-Butyl alcohol	7540	250	"	7150	ND	105	75-120			MB
Di-isopropyl ether	889	25	"	757	ND	117	75-125			
1,2-Dibromoethane (EDB)	930	25	"	742	ND	125	85-120			LM
1,2-Dichloroethane	836	25	"	736	ND	114	85-130			
Ethanol	7640	5000	"	7070	ND	108	70-135			
Ethyl tert-butyl ether	900	25	"	751	ND	120	75-130			
Ethylbenzene	412	25	"	377	ND	109	75-135			
Methyl tert-butyl ether	985	25	"	351	800	53	65-125			LN
Toluene	1950	25	"	1860	ND	105	85-120			
Xylenes (total)	2400	25	"	2070	ND	116	85-125			
Gasoline Range Organics (C4-C12)	29400	2500	"	22000	800	130	70-124			LM
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.26</i>		<i>"</i>	<i>2.50</i>		<i>90</i>	<i>60-135</i>			

<b>Matrix Spike Dup (5H24009-MSD1)</b>	<b>Source: MOH0687-03</b>			<b>Prepared &amp; Analyzed: 08/24/05</b>						
tert-Amyl methyl ether	892	25	ug/l	752	ND	119	80-115	2	15	LM
Benzene	278	25	"	258	ND	108	65-115	4	20	
tert-Butyl alcohol	7850	250	"	7150	ND	110	75-120	4	25	MB
Di-isopropyl ether	874	25	"	757	ND	115	75-125	2	15	
1,2-Dibromoethane (EDB)	905	25	"	742	ND	122	85-120	3	15	LM
1,2-Dichloroethane	834	25	"	736	ND	113	85-130	0.2	20	
Ethanol	8390	5000	"	7070	ND	119	70-135	9	35	
Ethyl tert-butyl ether	890	25	"	751	ND	119	75-130	1	25	
Ethylbenzene	400	25	"	377	ND	106	75-135	3	15	
Methyl tert-butyl ether	982	25	"	351	800	52	65-125	0.3	20	LN
Toluene	1870	25	"	1860	ND	101	85-120	4	20	
Xylenes (total)	2310	25	"	2070	ND	112	85-125	4	20	
Gasoline Range Organics (C4-C12)	28000	2500	"	22000	800	124	70-124	5	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.23</i>		<i>"</i>	<i>2.50</i>		<i>89</i>	<i>60-135</i>			

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

Project:ARCO #4931, Oakland, CA  
Project Number:G0C8C-0004  
Project Manager:Scott Robinson

MOH0679  
Reported:  
08/26/05 17:23

#### Notes and Definitions

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

PF Possible low bias due to CCV falling outside acceptance criteria

MB Analyte present in the method blank

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

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

IC Calib. verif. is within method limits but outside contract limits

BB, LN Sample > 4x spike concentration.

DET Analyte DETECTED

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

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference



# Chain of Custody Record

Project Name: Analytical for QMR sampling  
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 4931 > Historical/BL  
 State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Francisco  
 Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: <u>085</u>	Temp: <u>65</u>
Off-site Time: <u>1145</u>	Temp: <u>75</u>
Sky Conditions: <u>clear</u>	
Meteorological Events:	
Wind Speed: <u>—</u>	Direction:

Lab Name: <u>Sequoia</u>	BP/AR Facility No.: <u>4931</u>	Consultant/Contractor: <u>URS</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>731 West MacArthur Blvd., Oakland, CA 94612</u>	Address: <u>1333 Broadway, Suite 800</u>
<u>Morgan Hill, CA 95037</u>	Site Lat/Long: <u>37.80773 / -122.2413</u>	<u>Oakland, CA 94612</u>
Lab PM: <u>Lisa Race / Jamshid Kekobad</u>	California Global ID No.: <u>T0600100110</u>	Consultant/Contractor Project No.: <u>38487032</u>
Tele/Fax: <u>408.782.8156 / 408.782.6308</u>	Enfos Project No.: <u>G0C8C-0004</u>	Consultant/Contractor PM: <u>Scott Robinson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or RCOP: <u>Provision</u>	Tele/Fax: <u>510.874.3280 / 510.874.3268</u>
Address: <u>P.O. Box 6549</u>	Phase/WBS: <u>04 - Mon/Remed by Natural Attenuation</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
<u>Moraga, CA 94570</u>	Sub Phase/Task: <u>03 - Analytical</u>	E-mail EDD To: <u>Donna Cospers@urscorp.com</u>
Tele/Fax: <u>925.299.8891 / 925.299.8872</u>	Cost Element: <u>05 - Subcontracted Costs</u>	Invoice to: <u>Atlantic Richfield Company</u>

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	ORO/BTEX (8260)	MTBE, ETBE, DIPE	TAME, TBA (8260)	EDR, 1,2-DCA (8260)		ETHANOL (8260)	
1	A-2	0825	8/11	X			01	3						X	X	X	X			
2	A-3	1135		X			02	3						X	X	X	X			
3	A-4	1115		X			03	3						X	X	X	X			
4	A-5	1100		X			04	3						X	X	X	X			
5	A-7	1040		X			05	6						X	X	X	X			
6	A-8	0900		X			06	3						X	X	X	X			
7	A-9	1056		X			07	3						X	X	X	X			
8	A-10	1133		X			08	3						X	X	X	X			
9	A-11	0945		X			09	3						X	X	X	X			
10	A-12	0946		X			10	3						X	X	X	X			

MOH6679  
 Sample Point Lat/Long and Comments

Sampler's Name: <u>Brian Alcorn</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>Blaine Tech Services</u>	<u>[Signature]</u>	<u>8/11</u>	<u>1800</u>	<u>[Signature]</u>	<u>8/11/04</u>	<u>1800</u>
Shipment Date:	<u>[Signature]</u>	<u>8/12</u>	<u>9:00</u>	<u>[Signature]</u>	<u>8/12/04</u>	<u>9:02</u>
Shipment Method:	<u>[Signature]</u>	<u>8/12</u>	<u>1505</u>	<u>[Signature]</u>	<u>8/12/04</u>	<u>1505</u>
Shipment Tracking No:						

Additional Instructions:

Seals In Place Yes  No  Temp Blank Yes  No  Cooler Temperature on Receipt C<sup>o</sup>10 Trip Blank Yes  No



# Chain of Custody Record

Project Name: Analytical for QMR sampling  
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 4931 > Historical/BL  
 State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Francisco  
 Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: <u>0815</u>	Temp: <u>65</u>
Off-site Time: <u>1145</u>	Temp: <u>75</u>
Sky Conditions: <u>clear</u>	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: <u>Sequoia</u>	BP/AR Facility No.: <u>4931</u>	Consultant/Contractor: <u>URS</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>731 West MacArthur Blvd., Oakland, CA 94612</u>	Address: <u>1333 Broadway, Suite 800</u>
<u>Morgan Hill, CA 95037</u>	Site Lat/Long: <u>37.80773 / -122.2413</u>	<u>Oakland, CA 94612</u>
Lab PM: <u>Lisa Race / Jamshid Kekobad</u>	California Global ID No.: <u>T0600100110</u>	Consultant/Contractor Project No.: <u>38487032</u>
Tele/Fax: <u>408.782.8156 / 408.782.6308</u>	Enfos Project No.: <u>G0C8C-0004</u>	Consultant/Contractor PM: <u>Scott Robinson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or RCOP: <u>Provision</u>	Tele/Fax: <u>510.874.3280 / 510.874.3268</u>
Address: <u>P.O. Box 6549</u>	Phase/WBS: <u>04 - Mon/Remed by Natural Attenuation</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
<u>Moraga, CA 94570</u>	Sub Phase/Task: <u>03 - Analytical</u>	E-mail EDD To: <u>Donna Cosper@urscorp.com</u>
Tele/Fax: <u>925.299.8891 / 925.299.8872</u>	Cost Element: <u>05 - Subcontracted Costs</u>	Invoice to: <u>Atlantic Richfield Company</u>

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	GROBTEX (9260)	MTBE, ETBE, DIBP	TAME, TBA (3260)	EDB, 1,2-DCA (3260)	ETHANOL (9260)	
1	<u>TB-4931-08112005</u>	<u>0815</u>	<u>8/11</u>		<u>X</u>		<u>11</u>	<u>2</u>											<u>MOA 0679</u> <u>ON HOLD</u>
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Sampler's Name: <u>Brian Atcom</u>	Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation		Date	Time
Sampler's Company: <u>Blaine Tech Services</u>	<u>[Signature]</u>		<u>8/11/05</u>	<u>1800</u>	<u>[Signature]</u>		<u>8/11/05</u>	<u>1800</u>
Shipment Date:	<u>[Signature]</u>		<u>8/12</u>	<u>900</u>	<u>[Signature]</u>		<u>8/12/05</u>	<u>900</u>
Shipment Method:	<u>[Signature]</u>		<u>8/12/05</u>	<u>1305</u>				
Shipment Tracking No:								

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

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

## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: BP  
 REC. BY (PRINT) E. Fallin  
 WORKORDER: M040679

DATE REC'D AT LAB: 8/12/05  
 TIME REC'D AT LAB: 1535  
 DATE LOGGED IN: 8-13-05

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

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 / Absent Intact / Broken*	01	A-C	A-2	VOA(3)	HCl	-	L	8/11/05	
2. Chain-of-Custody Present / Absent*	02		A-3						
3. Traffic Reports or Packing List Present / Absent	03		A-4						
4. Airbill: Airbill / Sticker Present / Absent	04		A-5						
5. Airbill #: Present / Absent	05		A-7	VOA(6)					
6. Sample Labels: Present / Absent	06		A-8	VOA(3)					
7. Sample IDs: Listed / Not Listed on Chain-of-Custody	07		A-9						
8. Sample Condition: Intact / Broken* / Leaking*	08		A-10						
9. Does information on chain-of-custody, traffic reports and sample labels agree? Yes / No*	09		A-11						
10. Sample received within hold time? Yes / No*	10		A-12						
11. Adequate sample volume received? Yes / No*	11	A, B	TB-4931-0811205	VOA(2)	✓	✓	✓	✓	
12. Proper preservatives used? Yes / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / No*									
14. Read Temp: <u>6.0°C</u> Corrected Temp: <u>6.0°C</u> Is corrected temp 4 +/- 2°C? Yes / No**									

EBF 8/12/05

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

**ATTACHMENT C**

**HISTORICAL GROUNDWATER DATA**

**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBB \$021B* (ppb)	MTBE \$260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
A-2	03/26/96	55.48	5.37	50.11	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM	
A-2	05/22/96	55.48	5.25	50.23	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM	
A-2	08/22/96	55.48	10.45	45.03	<50	1.1	1.8	<0.5	1.3	<2.5	NA	NM	
A-2	12/19/96	55.48	5.53	49.95	<50	<0.5	<0.5	<0.5	<0.5	2.7	NA	NM	
A-2	04/01/97	55.48	8.77	46.71	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM	
A-2	05/27/97	55.48	9.87	45.61	<50	<0.5	<0.5	<0.5	<0.5	4.6	NA	NM	
A-2	08/12/97	55.48	11.11	44.37	<50	<0.5	<0.5	<0.5	<0.5	5.6	NA	NM	
A-2	11/14/97	55.48	10.63	44.85	<50	0.9	2.8	<0.5	2.4	27	NA	2.6	
A-2	03/18/98	55.48	3.58	51.90	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	NM	
A-2	05/19/98	55.48	4.82	50.66	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.30	P
A-2	07/29/98	55.48	8.94	46.54	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.2	NP
A-2	10/09/98	55.48	10.82	44.66	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	0.5	NP
A-2	02/19/99	55.48	4.46	51.02	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	3.0	P
A-2	06/02/99	55.48	5.59	49.89	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	5.35	NP
A-2	08/26/99	55.48	10.67	44.81	<50	<0.5	0.6	<0.5	<0.5	<3	NA	0.79	NP
A-2	10/26/99	55.48	4.61	50.87	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.14	P
A-2	02/25/00	55.48	3.10	52.38	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	4.21	NP
A-3	03/26/96	54.66	7.20	47.46	Not Sampled: Well Sampled Semiannually								
A-3	05/22/96	54.66	7.70	46.96	<50	1.2	1.9	0.7	1.3	NA	NA	NM	
A-3	08/22/96	54.66	10.88	43.78	Not Sampled: Well Sampled Semiannually								
A-3	12/19/96	54.66	7.70	46.96	5,900	<2.5	<2.5	<2.5	<2.5	NA	5,300	NM	
A-3	04/01/97	54.66	9.78	44.88	Not Sampled: Well Sampled Semiannually								
A-3	05/27/97	54.66	10.55	44.11	2,300	<20	<20	<20	<20	3,800	NA	NM	
A-3	08/12/97	54.66	11.12	43.54	Not Sampled: Well Sampled Semiannually								
A-3	11/14/97	54.66	8.24	46.42	<1,000	<10	<10	<10	<10	1,500	NA	3.8	
A-3	03/18/98	54.66	5.05	49.61	Not Sampled: Well Sampled Semiannually								
A-3	05/19/98	54.66	9.00	45.66	<250	<2.5	<2.5	<2.5	<2.5	220	NA	4.60	P
A-3	07/29/98	54.66	9.86	44.80	Not Sampled: Well Sampled Semiannually								
A-3	10/09/98	54.66	11.36	43.30	<250	<2.5	<2.5	<2.5	<2.5	260	NA	1.0	NP
A-3	02/19/99	54.66	6.19	48.47	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.5	NP
A-3	06/02/99	54.66	10.82	43.84	120	<1	<1	<1	<1	160	NA	2.78	NP

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**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)	
A-3	08/26/99	54.66	10.73	43.93	Not Sampled: Well Sampled Semiannually									
A-3	10/26/99	54.66	6.58	48.08	<50	<0.5	<0.5	<0.5	<1	32	NA	0.95		
A-3	02/25/00	54.66	5.41	49.25	Not Sampled: Well Sampled Semiannually								2.06	NP
A-4	03/26/96	54.73	7.95	46.78	8,900	1,200	21	209	220	NA	NA	NM		
A-4	05/22/96	54.73	8.35	46.38	5,300	700	<10	170	130	NA	NA	NM		
A-4	08/22/96	54.73	11.03	43.70	3,000	480	<5.0	75	26	150	NA	NM		
A-4	12/19/96	54.73	8.67	46.06	<2,000	<20	<20	<20	<20	NA	15,000	NM		
A-4	04/01/97	54.73	11.95	42.78	8,900	1,700	22	310	260	6,900	NA	NM		
A-4	05/27/97	54.73	10.80	43.93	7,100	960	<20	150	74	7,900	NA	NM		
A-4	08/12/97	54.73	11.38	43.35	4,300	670	12	51	27	2,800	NA	NM		
A-4	11/14/97	54.73	7.74	46.99	<20,000	300	500	<200	<200	27,000	NA	2.2		
A-4	03/18/98	54.73	6.80	47.93	4,700	600	<20	99	94	1,200	NA	1.0		
A-4	05/19/98	54.73	9.06	45.67	<2000	<20	<20	<20	720	2,000	NA	1.28	P	
A-4	07/29/98	54.73	10.05	44.68	8,400	1,300	<20	290	130	1,800	NA	0.7	NP	
A-4	10/09/98	54.73	11.20	43.53	3,500	400	<20	54	<20	1,700	NA	1.0	NP	
A-4	02/19/99	54.73	6.85	47.88	<1,000	<10	<10	<10	12	650	NA	0.1	NP	
A-4	06/02/99	54.73	11.00	43.73	6,100	760	16	260	89	2,300	NA	1.12	NP	
A-4	08/26/99	54.73	10.80	43.93	1,100	68	5	8	4	1,400	NA	1.15	NP	
A-4	10/26/99	54.73	10.11	44.62	1,500	39	2.3	9.0	5	1,700	NA	10.12	NP	
A-4	02/25/00	54.73	5.90	48.83	870	53	1.1	4.6	20	600	NA	1.72	NP	
A-5	03/26/96	54.17	7.93	46.24	Not Sampled: Well Sampled Semiannually									
A-5	05/22/96	54.17	8.20	45.97	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		
A-5	08/22/96	54.17	10.70	43.47	Not Sampled: Well Sampled Semiannually									
A-5	12/19/96	54.17	8.39	45.78	9,900	1,100	330	230	700	NA	24	NM		
A-5	04/01/97	54.17	10.83	43.34	Not Sampled: Well Sampled Semiannually									
A-5	05/27/97	54.17	10.65	43.52	100	<0.5	<0.5	<0.5	<0.5	120	NA	NM		
A-5	08/12/97	54.17	11.05	43.12	Not Sampled: Well Sampled Semiannually									
A-5	11/14/97	54.17	10.51	43.66	<50	<0.5	<0.5	<0.5	<0.5	41	NA	4.8		
A-5	03/18/98	54.17	8.10	46.07	Not Sampled: Well Sampled Semiannually									
A-5	05/19/98	54.17	9.31	44.86	590	<5	<5	<5	<5	710	NA	2.48	P	

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**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/Not Purged (P/NP)
A-5	07/29/98	54.17	9.89	44.28	Not Sampled: Well Sampled Semiannually								
A-5	10/09/98	54.17	11.02	43.15	690	<5	<5	<5	<5	710	NA	1.0	NP
A-5	02/19/99	54.17	6.82	47.35	<5000	<20	<20	<20	<20	2,300	NA	0.6	NP
A-5	06/02/99	54.17	10.82	43.35	1,500	<0.5	2.3	<0.5	<0.5	2,400	NA	2.81	NP
A-5	08/26/99	54.17	10.65	43.52	Not Sampled: Well Sampled Semiannually								
A-5	10/26/99	54.17	10.35	43.82	380	<0.5	<0.5	<0.5	<1	440	NA	0.49	NP
A-5	02/25/00	54.17	6.89	47.28	Not Sampled: Well Sampled Semiannually								
A-6	03/26/96	55.17	7.15	48.02	52	2.7	<0.5	1.1	2.0	NA	NA	NM	
A-6	05/22/96	55.17	7.35	47.82	<50	2.4	<0.5	0.88	1.7	NA	NA	NM	
A-6	08/22/96	55.17	10.12	45.05	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM	
A-6	12/19/96	55.17	7.43	47.74	<50	1.7	<0.5	0.78	1.5	<2.5	NA	NM	
A-6	04/01/97	55.17	9.97	45.20	<50	4.7	<0.5	1.9	3.2	<2.5	NA	NM	
A-6	05/27/97	55.17	9.66	45.51	<50	0.69	<0.5	<0.5	<0.5	<2.5	NA	NM	
A-6	08/12/97	55.17	10.43	44.74	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM	
A-6	11/14/97	55.17	9.76	45.41	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM	
A-6	03/18/98	55.17	7.00	48.17	<50	6.2	0.5	2.3	2.6	<3	NA	<1.0	
A-6	05/19/98	55.17	8.27	46.90	<50	<0.5	<0.5	1.3	4.7	<3	NA	3.0	
A-6	07/29/98	55.17	8.96	46.21	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.16	P
A-6	10/09/98	55.17	10.23	44.94	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	0.8	NP
A-6	02/19/99	55.17	5.79	49.38	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.0	NP
A-6	06/02/99	55.17	9.71	45.46	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	0.4	NP
A-6	08/26/99	55.17	9.79	45.38	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.00	NP
A-6	10/26/99	55.17	9.70	45.47	<50	<0.5	<0.5	<0.5	0.7	<3	NA	0.66	NP
A-6	02/25/00	55.17	5.68	49.49	<50	<0.5	<0.5	<0.5	<1	<3	NA	1.66	NP
A-7	03/26/96	54.71	6.90	47.81	<50	<0.5	<0.5	<0.5	<1	<3	NA	1.22	NP
A-7	05/22/96	54.71	8.27	46.44	Not Sampled: Well Sampled Semiannually								
A-7	08/22/96	54.71	9.80	44.91	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM	
A-7	12/19/96	54.71	7.19	47.52	Not Sampled: Well Sampled Semiannually								
A-7	04/01/97	54.71	9.63	45.08	Not Sampled: Well Sampled Annually								
A-7	05/27/97	54.71	9.34	45.37	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM	

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**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**  
**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Ganged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)	
A-7	08/12/97	54.71	10.10	44.61	Not Sampled: Well Sampled Annually									
A-7	11/14/97	54.71	9.35	45.36	Not Sampled: Well Sampled Annually									
A-7	03/18/98	54.71	6.75	47.96	Not Sampled: Well Sampled Annually									
A-7	05/19/98	54.71	8.85	45.86	<50	<0.5	<0.5	<0.5	<0.5	Δ	NA	1.82	P	
A-7	07/29/98	54.71	8.84	45.87	Not Sampled: Well Sampled Annually									
A-7	10/09/98	54.71	10.05	44.66	Not Sampled: Well Sampled Annually									
A-7	02/19/99	54.71	5.57	49.14	<50	<0.5	<0.5	<0.5	<0.5	Δ	NA	4.7	NP	
A-7	06/02/99	54.71	9.56	45.15	<50	<0.5	<0.5	<0.5	<0.5	Δ	NA	2.17	NP	
A-7	08/26/99	54.71	9.66	45.05	Not Sampled: Well Sampled Annually									
A-7	10/26/99	54.71	9.54	45.17	Not Sampled: Well Sampled Annually									
A-7	02/25/00	54.71	5.60	49.11	Not Sampled: Well Sampled Annually									
A-8	03/26/96	53.77	7.10	46.67	48,000	2,600	<100	650	1,100	NA	NA	NM		
A-8	05/22/96	53.77	7.20	46.57	14,000	2,800	160	320	190	NA	NA	NM		
A-8	08/22/96	53.77	11.57	42.20	8,000	1,000	76	150	96	4,300	NA	NM		
A-8	12/19/96	53.77	8.04	45.73	12,000	450	110	210	230	<500	NA	NM		
A-8	04/01/97	53.77	9.98	43.79	Not Sampled: Well Sampled Semiannually									
A-8	05/27/97	53.77	11.45	42.32	11,000	1,600	100	220	210	2,300	NA	NM		
A-8	08/12/97	53.77	11.59	42.18	Not Sampled: Well Sampled Semiannually									
A-8	11/14/97	53.77	9.85	43.92	26,000	2,300	<200	400	400	4,100	NA	2.2		
A-8	03/18/98	53.77	7.80	45.97	Not Sampled: Well Sampled Semiannually									
A-8	05/19/98	53.77	8.78	44.99	83,000	4,200	150	640	600	6,700	NA	1.36	P	
A-8	07/29/98	53.77	9.59	44.18	46,000	4,900	160	620	580	13,000	NA	0.5	NP	
A-8	10/09/98	53.77	11.23	42.54	130,000	3,700	110	500	770	7,300	NA	1.0	NP	
A-8	02/19/99	53.77	6.51	47.26	<1,000	39	<10	<10	<10	840	NA	0.2	NP	
A-8	06/02/99	53.77	10.68	43.09	8,500	1,300	32	180	110	6,700	NA	1.31	NP	
A-8	08/26/99	53.77	10.43	43.34	6,200	870	17	64	60	3,700	NA	0.69	NP	
A-8	10/26/99	53.77	10.23	43.54	15,000	2,800	140	370	360	480	NA	0.62	NP	
A-8	02/25/00	53.77	5.93	47.84	2,600	330	6.6	18	26	1,100	NA	1.43	NP	
A-9	03/26/96	53.04	7.05	45.99	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		
A-9	05/22/96	53.04	7.20	45.84	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		

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**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 2021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)	
A-9	08/22/96	53.04	9.68	43.36	<50	<0.5	<0.5	<0.5	<0.5	8.5	NA	NM		
A-9	12/19/96	53.04	7.43	45.61	<50	<0.5	<0.5	<0.5	<0.5	2.6	NA	NM		
A-9	04/01/97	53.04	9.95	43.09	Not Sampled: Well Sampled Semiannually									
A-9	05/27/97	53.04	9.56	43.48	<50	23	<0.5	<0.5	<0.5	45	NA	NM		
A-9	08/12/97	53.04	10.15	42.89	Not Sampled: Well Sampled Semiannually									
A-9	11/14/97	53.04	8.64	44.40	<200	<2.0	<2.0	<2.0	<2.0	190	NA	9.6		
A-9	03/18/98	53.04	6.45	46.59	Not Sampled: Well Sampled Semiannually									
A-9	05/19/98	53.04	8.35	44.69	<50	<0.5	<0.5	<0.5	<0.5	7	NA	1.27	P	
A-9	07/29/98	53.04	8.74	44.30	<50	<0.5	<0.5	<0.5	<0.5	3	NA	0.99	NP	
A-9	10/09/98	53.04	10.05	42.99	<50	<0.5	<0.5	<0.5	<0.5	3	NA	1.0	NP	
A-9	02/19/99	53.04	6.91	46.13	<50	<0.5	<0.5	<0.5	<0.5	3	NA	2.0	NP	
A-9	06/02/99	53.04	9.72	43.32	<50	<0.5	<0.5	<0.5	<0.5	16	NA	2.32	NP	
A-9	08/26/99	53.04	9.48	43.56	<50	<0.5	<0.5	<0.5	<0.5	3	NA	0.71	NP	
A-9	10/26/99	53.04	9.17	43.87	1,500	62	0.7	78	11	91	NA	2.15	NP	
A-9	02/25/00	53.04	5.84	47.20	<50	<0.5	<0.5	<0.5	<1	3	NA	1.55	NP	
A-10	03/26/96	54.26	8.28	45.98	Not Sampled: Well Removed from Sampling Program									
A-10	05/22/96	54.26	8.60	45.66	Not Sampled: Well Removed from Sampling Program									
A-10	08/22/96	54.26	10.98	43.28	Not Sampled: Well Removed from Sampling Program									
A-10	12/19/96	54.26	8.80	45.46	Not Sampled: Well Removed from Sampling Program									
A-10	04/01/97	54.26	11.15	43.11	Not Sampled: Well Removed from Sampling Program									
A-10	05/27/97	54.26	10.90	43.36	Not Sampled: Well Removed from Sampling Program									
A-10	08/12/97	54.26	11.30	42.96	Not Sampled: Well Removed from Sampling Program									
A-10	11/14/97	54.26	10.80	43.46	Not Sampled: Well Removed from Sampling Program									
A-10	03/18/98				Well Removed from Survey Program									
A-11	03/26/96	53.74	8.10	45.64	Not Sampled: Well Sampled Semiannually									
A-11	05/22/96	53.74	8.25	45.49	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		
A-11	08/22/96	53.74	10.58	43.16	Not Sampled: Well Sampled Semiannually									
A-11	12/19/96	53.74	8.37	45.37	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM		
A-11	04/01/97	53.74	10.95	42.79	Not Sampled: Well Sampled Semiannually									
A-11	05/27/97	53.74	10.60	43.14	<50	<0.5	<0.5	<0.5	<0.5	3.1	NA	NM		

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**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Cauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
A-11	08/12/97	53.74	11.07	42.67	Not Sampled: Well Sampled Semiannually								
A-11	11/14/97	53.74	10.58	43.16	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.6	
A-11	03/18/98	53.74	8.14	45.60	Not Sampled: Well Sampled Semiannually								
A-11	05/19/98	53.74	9.40	44.34	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.13	P
A-11	07/29/98	53.74	10.32	43.42	Not Sampled: Well Sampled Semiannually								
A-11	10/09/98	53.74	10.91	42.83	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.0	NP
A-11	02/19/99	53.74	6.77	46.97	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.8	NP
A-11	06/02/99	53.74	10.95	42.79	<50	<0.5	<0.5	<0.5	<0.5	6	NA	1.38	NP
A-11	08/26/99	53.74	11.95	42.69	Not Sampled: Well Sampled Semiannually								
A-11	10/26/99	53.74	10.81	42.93	<50	<0.5	<0.5	<0.5	<1	4	NA	0.49	NP
A-11	02/25/00	53.74	6.70	47.04	Not Sampled: Well Sampled Semiannually								
A-12	03/26/96	52.05	7.83	44.22	Not Sampled: Well Sampled Semiannually								
A-12	05/22/96	52.05	7.80	44.25	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM	
A-12	08/22/96	52.05	9.97	42.08	Not Sampled: Well Sampled Semiannually								
A-12	12/19/96	52.05	8.18	43.87	85	<0.5	<0.5	<0.5	<0.5	170	NA	NM	
A-12	04/01/97	52.05	10.30	41.75	Not Sampled: Well Sampled Semiannually								
A-12	05/27/97	52.05	10.05	42.00	50	12	<0.5	<0.5	<0.5	96	NA	NM	
A-12	08/12/97	52.05	10.46	41.59	Not Sampled: Well Sampled Semiannually								
A-12	11/14/97	52.05	9.70	42.35	<50	<0.5	<0.5	<0.5	<0.5	75	NA	7.0	
A-12	03/18/98	52.05	8.15	43.90	Not Sampled: Well Sampled Semiannually								
A-12	05/19/98	52.05	9.15	42.90	<50	<0.5	<0.5	<0.5	<0.5	29	NA	1.47	P
A-12	07/29/98	52.05	9.38	42.67	Not Sampled: Well Sampled Semiannually								
A-12	10/09/98	52.05	10.21	41.84	<50	<0.5	<0.5	<0.5	<0.5	7	NA	2.0	NP
A-12	02/19/99	52.05	6.96	45.09	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	5.2	NP
A-12	06/02/99	52.05	10.25	41.80	<50	<0.5	<0.5	<0.5	<0.5	7	NA	1.38	NP
A-12	08/26/99	52.05	9.91	42.14	Not Sampled: Well Sampled Semiannually								
A-12	10/26/99	52.05	9.73	42.32	<50	<0.5	<0.5	<0.5	<1	12	NA	0.51	NP
A-12	02/25/00	52.05	6.97	45.08	Not Sampled: Well Sampled Semiannually								
A-13	03/26/96	55.11			Well Inaccessible								
A-13	05/22/96	55.11			Well Inaccessible								

0AKC:ARCO4931VQTRLYM931q102.xls:1  
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**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 6260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
A-13	08/22/96	55.11											
A-13	12/19/96	55.11											
A-13	04/01/97	55.11											
A-13	05/27/97	55.11											
A-13	08/12/97	55.11											
A-13	11/14/97	55.11											
A-13	03/18/98	55.11											
A-13	05/19/98	55.11											
A-13	07/29/98	55.11											
A-13	10/09/98	55.11											
A-13	02/19/99	55.11											
A-13	06/02/99	55.11											
A-13	08/26/99	55.11											
A-13	10/26/99	55.11											
A-13	02/25/00	55.11											
AR-1	03/26/96	54.72	8.13	46.59	6,200	110	64	38	520	NA	NA		
AR-1	05/22/96	54.72	8.57	46.15	NS	NS	NS	NS	NS	NS	NS		NM
AR-1	08/22/96	54.72	10.97	43.75	5,600	100	28	29	310	NS	NS		NM
AR-1	12/19/96	54.72	8.93	45.79	Not Sampled: Well Removed from Sampling Program								NM
AR-1	04/01/97	54.72	11.78	42.94	Not Sampled: Well Removed from Sampling Program								NM
AR-1	05/27/97	54.72	10.76	43.96	Not Sampled: Well Removed from Sampling Program								
AR-1	08/12/97	54.72	11.40	43.32	Not Sampled: Well Removed from Sampling Program								
AR-1	11/14/97	54.72	10.80	43.92	Not Sampled: Well Removed from Sampling Program								
AR-1	03/18/98	54.72	NM	NM	Not Sampled: Well Removed from Sampling Program								
AR-1	05/19/98	54.72	NM	NM	Not Sampled: Well Removed from Sampling Program								
AR-1	07/29/98	54.72	10.17	44.55	Not Sampled: Well Removed from Sampling Program								
AR-1	10/09/98	54.72	11.25	43.47	Not Sampled: Well Removed from Sampling Program								
AR-1	02/19/99	54.72	7.02	47.70	Not Sampled: Well Removed from Sampling Program								
AR-1	06/02/99	54.72	11.00	43.72	Not Sampled: Well Removed from Sampling Program								
AR-1	08/26/99	54.72	10.96	43.76	Not Sampled: Well Removed from Sampling Program								
AR-1	10/26/99	54.72	10.68	44.04	Not Sampled: Well Removed from Sampling Program								
												0.39	
												1.39	

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**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
AR-1	02/25/00	54.72	7.15	47.57	Not Sampled: Well Removed from Sampling Program								
AR-2	03/26/96	54.77	4.93	49.84	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM	
AR-2	05/22/96	54.77	5.65	49.12	NS	NS	NS	NS	NS	NS	NS	NM	
AR-2	08/22/96	54.77	7.27	47.50	<50	<0.5	<0.5	<0.5	<0.5	NS	NS	NM	
AR-2	12/19/96	54.77	7.78	46.99	Not Sampled: Well Removed from Sampling Program								
AR-2	04/01/97	54.77	6.80	47.97	Not Sampled: Well Removed from Sampling Program								
AR-2	05/27/97	54.77	6.32	48.45	Not Sampled: Well Removed from Sampling Program								
AR-2	08/12/97	54.77	7.43	47.34	Not Sampled: Well Removed from Sampling Program								
AR-2	11/14/97	54.77	8.95	45.82	Not Sampled: Well Removed from Sampling Program								
AR-2	03/18/98	54.77	NM	NM	Not Sampled: Well Removed from Sampling Program								
AR-2	05/19/98	54.77	NM	NM	Not Sampled: Well Removed from Sampling Program								
AR-2	07/29/98	54.77	4.47	50.30	Not Sampled: Well Removed from Sampling Program								
AR-2	10/09/98	54.77	6.90	47.87	Not Sampled: Well Removed from Sampling Program								
AR-2	02/19/99	54.77	3.80	50.97	Not Sampled: Well Removed from Sampling Program								
AR-2	06/02/99	54.77	4.61	50.16	Not Sampled: Well Removed from Sampling Program								
AR-2	08/26/99	54.77	5.22	49.55	Not Sampled: Well Removed from Sampling Program								
AR-2	10/26/99	54.77	3.20	51.57	Not Sampled: Well Removed from Sampling Program								
AR-2	02/25/00	54.77	2.33	52.44	Not Sampled: Well Removed from Sampling Program								
AR-3	03/26/96	54.19	7.95	46.24	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM	
AR-3	05/22/96	54.19	8.30	45.89	NS	NS	NS	NS	NS	NS	NS	NM	
AR-3	08/22/96	54.19	10.84	43.35	Not Sampled: Well Removed from Sampling Program								
AR-3	12/19/96	54.19	8.56	45.63	Not Sampled: Well Removed from Sampling Program								
AR-3	04/01/97	54.19	11.24	42.95	Not Sampled: Well Removed from Sampling Program								
AR-3	05/27/97	54.19	10.67	43.52	Not Sampled: Well Removed from Sampling Program								
AR-3	08/12/97	54.19	11.10	43.09	Not Sampled: Well Removed from Sampling Program								
AR-3	11/14/97	54.19	10.60	43.59	Not Sampled: Well Removed from Sampling Program								
AR-3	03/18/98	54.19	NM	NM	Not Sampled: Well Removed from Sampling Program								
AR-3	05/19/98	54.19	NM	NM	Not Sampled: Well Removed from Sampling Program								
AR-3	07/29/98	54.19	9.95	44.24	Not Sampled: Well Removed from Sampling Program								
AR-3	10/09/98	54.19	11.20	42.99	Not Sampled: Well Removed from Sampling Program								

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**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
AR-3	02/19/99	54.19	6.98	47.21	Not Sampled: Well Removed from Sampling Program								
AR-3	06/02/99	54.19	10.80	43.39	Not Sampled: Well Removed from Sampling Program								
AR-3	08/26/99	54.19	10.69	43.50	Not Sampled: Well Removed from Sampling Program								
AR-3	10/26/99	54.19	NM	NM	Not Sampled: Well Removed from Sampling Program								0.40
AR-3	02/25/00	54.19	7.21	46.98	Not Sampled: Well Removed from Sampling Program								

TPH	- Total petroleum hydrocarbons by modified EPA method 8015
BTEX	- Benzene, toluene, ethylbenzene, total xylenes by EPA method 8021B. (EPA method 8020 prior to 10/26/99).
MTBE	- Methyl tert-butyl ether
	- EPA method 8020 prior to 10/26/99
MSL	- Mean sea level
TOB	- Top of bore
ppb	- Parts per billion
ppm	- Parts per million
<	- Less than laboratory detection limit stated to the right
NA	- Not analyzed
NM	- Not measured
NS	- Not sampled

**Table 2  
Groundwater Flow Direction and Gradient**

**ARCO Service Station 4931  
731 West MacArthur Boulevard, Oakland, California**

<b>Date Measured</b>	<b>Average Flow Direction</b>	<b>Average Hydraulic Gradient</b>
03/26/96	Southwest	0.03
05/22/96	Southwest	0.04
08/22/96	Southwest	0.02
12/19/96	Southwest	0.03
04/01/97	Southwest	0.03
05/27/97	Southwest	0.04
08/12/97	Southwest	0.02
11/14/97	Southwest	0.02
03/18/98	West	0.03
05/19/98	West-Southwest	0.02
07/29/98	West-Southwest	0.02
10/09/98	Southwest	0.007
02/19/99	Southwest	0.04
06/02/99	West	0.04
08/26/99	West-Southwest	0.02
10/26/99	West-Northwest	0.13
02/25/00	West-Southwest	0.05



**ATTACHMENT D**

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

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GOWELL

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<u>USER NAME:</u>	URSCORP-OAKLAND
<u>DATE CHECKED:</u>	9/15/2005 5:00:46 PM
<u>GLOBAL ID:</u>	T0600100110
<u>FILE UPLOADED:</u>	ARCO#4931-EDF-MOH0679.zip

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<b>ARCO # 04931</b>	<b><u>Regional Board - Case #: 01-0118</u></b>
731 MACARTHUR BLVD	SAN FRANCISCO BAY RWQCB (REGION
W	2) - (BG)
OAKLAND, CA 94609	<b><u>Local Agency (lead agency) - Case #: 3874</u></b>
	ALAMEDA COUNTY LOP - (AG)

#### **SAMPLE DETECTIONS REPORT**

# FIELD POINTS SAMPLED	10
# FIELD POINTS WITH DETECTIONS	8
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

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

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
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	1
LAB BLANK DETECTIONS	1
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y
- MATRIX SPIKE DUPLICATE	Y
- BLANK SPIKE	Y
- SURROGATE SPIKE	Y

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

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y	
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y	
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y	
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y	
<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; REPDL</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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**Confirmation Number:** 8481732904  
**Date/Time of Submittal:** 9/15/2005 5:01:20 PM  
**Facility Global ID:** T0600100110  
**Facility Name:** ARCO # 04931  
**Submittal Title:** 3Q 2005 BP/ARCO 4931 EDF  
**Submittal Type:** GW Monitoring Report

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<b>ARCO # 04931</b> 731 MACARTHUR BLVD W OAKLAND, CA 94609	<b>Regional Board - Case #: 01-0118</b> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <b>Local Agency (lead agency) - Case #: 3874</b> ALAMEDA COUNTY LOP - (AG)
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<b>CONF #</b> 8481732904	<b>TITLE</b> 3Q 2005 BP/ARCO 4931 EDF	<b>QUARTER</b> Q3 2005
<b>SUBMITTED BY</b> Srijesh Thapa	<b>SUBMIT DATE</b> 9/15/2005	<b>STATUS</b> PENDING REVIEW

**SAMPLE DETECTIONS REPORT**

# FIELD POINTS SAMPLED	10
# FIELD POINTS WITH DETECTIONS	8
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

**METHOD QA/QC REPORT**

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
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	1
LAB BLANK DETECTIONS	1
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y
- MATRIX SPIKE DUPLICATE	Y
- BLANK SPIKE	Y
- SURROGATE SPIKE	Y

**WATER SAMPLES FOR 8021/8260 SERIES**

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

**SOIL SAMPLES FOR 8021/8260 SERIES**

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

**FIELD QC SAMPLES**

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

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