

Re: Third Quarter 2011 Monitoring Report  
Former BP Station #4931  
731 West MacArthur Blvd  
Oakland, California  
ACEH Case #RO0000076

**RECEIVED**

**2:49 pm, Nov 01, 2011**

Alameda County  
Environmental Health

ARCADIS U.S., Inc.  
100 Montgomery Street, Suite 300  
San Francisco, California 94105  
Tel 415.374.2744  
Fax 415.374.2745  
www.arcadis-us.com

ENVIRONMENTAL

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

Submitted by:

ARCADIS U.S., Inc.



Hollis E. Phillips, PG  
Project Manager

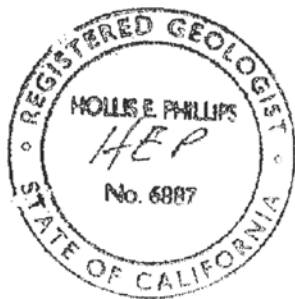
Date:  
10/31/2011

Contact:  
Hollis E. Phillips

Phone:  
415.374.2744 ext 13

Email:  
Hollis.phillips@arcadis-us.com

Our ref:  
GP09BPNA.C110



**Third Quarter 2011 Monitoring Report**  
Former Atlantic Richfield Company Station #4931  
731 West MacArthur Blvd, Oakland, California  
ACEH Case #RO0000076

Prepared for  
Ms. Hollis Phillips, PG  
Senior Geologist  
ARCADIS-US, Inc.  
100 Montgomery Street, Ste. 300  
San Francisco, California 94104

On behalf of  
Atlantic Richfield Company  
PO Box 1257  
San Ramon, California 94583

Prepared by



875 Cotting Lane, Suite G  
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October 31, 2011

Project No. 09-88-624

Broadbent & Associates, Inc.  
875 Cotting Ln., Suite G  
Vacaville, CA 95688  
(707) 455-7290 Tel  
(707) 455-7295 Fax



October 31, 2011

Project No. 09-88-624

ARCADIS-US, Inc.  
100 Montgomery Street, Ste. 300  
San Francisco, California 94104

Attn.: Ms. Hollis Phillips, PG

Re: Third Quarter 2011 Monitoring Report, Former Atlantic Richfield Company Station #4931, 731 West MacArthur Blvd, Oakland, California; ACEH Case #RO0000076


Dear Ms. Phillips:

Attached is the *Third Quarter 2011 Monitoring Report* for Former Atlantic Richfield Company Station #4931 located at 731 West MacArthur Boulevard, Oakland, Alameda County, California. Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (707) 455-7290.

Sincerely,

BROADBENT & ASSOCIATES, INC.

  
Samuel Barkley  
Senior Staff Geologist

  
Thomas Sparrowe, PG  
Senior Geologist



Enclosures

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH FTP site)  
Mr. Nick Goyal, Owner, electronic copy e-mailed (nick@vintnersdist.com)  
Electronic copy uploaded to GeoTracker

**THIRD QUARTER 2011  
MONITORING REPORT  
STATION #4931, OAKLAND, CALIFORNIA**

Broadbent & Associates, Inc. (BAI) is pleased to present this *Third Quarter 2011 Monitoring Report* on behalf ARCADIS US., Inc and of Atlantic Richfield Company (a BP affiliated company) for Station #4931 located in Oakland, Alameda County, California. Monitoring activities at the site were performed in accordance with the reporting requirements issued by the Alameda County Environmental Health Services Agency (ACEH). Details of work performed, discussion of results, and recommendations are provided below.

Facility Name / Address:	<u>Station #4931 / 731 West MacArthur Blvd., Oakland</u>
Client Project Manager / Title:	<u>Ms. Hollis Phillips, PG</u>
BAI Contact:	<u>Sam Barkley &amp; Tom Sparrowe, (707) 455-7290</u>
BAI Project No.:	<u>09-88-624</u>
Primary Regulatory Agency / ID No.:	<u>ACEH / Case #RO0000076</u>
Current phase of project:	<u>Monitoring and Sampling</u>
List of Acronyms / Abbreviations:	<u>See end of report text for list of acronyms/abbreviations used in report.</u>

**WORK PERFORMED THIS QUARTER (Third Quarter 2011):**

1. Conducted groundwater monitoring/sampling for Third Quarter 2011 on August 18, 2011.

**WORK SCHEDULED FOR NEXT QUARTER (Fourth Quarter 2011):**

1. Submit *Third Quarter 2011 Monitoring Report* (contained herein).
2. No environmental work is scheduled for Fourth Quarter 2011.

**ADDITIONAL WORK RECOMMENDED FOR NEXT QUARTER (Fourth Quarter 2011)**

1. None.

**GROUNDWATER MONITORING PLAN SUMMARY:**

Groundwater level gauging:	<u>A-2 through A-5, A-7 through A-13, AR-1 through AR-3</u>	(Semi-Annually: 1Q & 3Q)
Groundwater sample collection:	<u>A-3, A-4, A-5 and A-8 A-2, A-7, A-9, A-10, A-11 and A-12</u>	(Semi-Annually: 1Q & 3Q) (Annually: 3Q)
Biodegradation indicator parameter monitoring:	<u>None</u>	

**QUARTERLY RESULTS SUMMARY:**

**LNAPL**

LNAPL observed this quarter:	<u>No</u>	
LNAPL recovered this quarter:	<u>None</u>	(gal)
Cumulative LNAPL recovered:	<u>None</u>	(gal)

**Groundwater Elevation and Gradient:**

Depth to groundwater:	<u>3.79 (AR-2) to 9.58 (A-10)</u>	(ft below TOC)
Gradient direction:	<u>West</u>	(compass direction)
Gradient magnitude:	<u>0.03</u>	(ft/ft)
Average change in elevation:	<u>-2.57</u>	(ft since last measurement)

## Laboratory Analytical Data

### Summary:

GRO detected in two of the wells at concentrations up to 3,300 µg/L in well A-8. Benzene detected in two of the wells at concentrations up to 1,500 µg/L in well A-8. MTBE detected in five of the wells at concentrations up to 120 µg/L in well A-8. Toluene and Ethylbenzene detected in well A-8 at concentrations of 13 µg/L and 5.4 µg/L, respectively. TBA detected in well A-4 at a concentration of 1,400 µg/L. TAME detected in two of the wells at concentrations up to 57 µg/L in well A-8.

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## ACTIVITIES CONDUCTED & RESULTS:

Third Quarter 2011 groundwater monitoring was conducted on August 18, 2011 by BAI personnel in accordance with the monitoring plan summary above. BAI personnel noted during water level gauging that wells A-11, A-12, and A-13 were not monitored due to A-11 and A-12 needing traffic control and A-13 appeared to have been paved over with asphalt during road repair. Depth to water measurements ranged from 3.79 ft at AR-2 to 9.58 ft at A-10. Resulting groundwater surface elevations ranged from 49.79 ft at A-9 to 55.39 ft at AR-2. Groundwater elevations are summarized in Table 1. Water level elevations yielded a potentiometric groundwater gradient to the west at approximately 0.03 ft/ft. Field methods used during groundwater monitoring are provided in Appendix A. Field data sheets are included in Appendix B. A Site Location Map is presented as Drawing 1. Potentiometric groundwater elevation contours are presented in Drawing 2.

Groundwater samples were collected on August 18, 2011, consistent with the current monitoring schedule. BAI personnel reported during sampling that wells A-8 had a visible sheen and A-9 had debris in the well. Samples were submitted under chain-of-custody protocol to TestAmerica Laboratories, Inc. (Pleasanton, California) for analysis of Gasoline-Range Organics (GRO, C6-C12), Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX), Methyl Tertiary Butyl Ether (MTBE), Ethyl Tertiary Butyl Ether (ETBE), Tert-Amyl Methyl Ether (TAME), Di-Isopropyl Ether (DIPE), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), Tert-Butyl Alcohol (TBA) and Ethanol by EPA Method 8260B. No significant irregularities were encountered during analysis of the samples. The laboratory analytical report, including chain-of-custody documentation, is provided in Appendix C.

Hydrocarbons in the GRO range were detected above the laboratory reporting limit in two wells sampled at concentrations up to 3,300 µg/L in A-8. Benzene was detected above the laboratory reporting limit in two wells sampled at concentrations up to 1,500 µg/L in A-8. Toluene was detected above the laboratory reporting limit in one well sampled at a concentration of 13 µg/L in A-8. Ethylbenzene was detected above the laboratory reporting limit in one well sampled at a concentration of 5.4 µg/L in A-8. MTBE was detected above the laboratory reporting limit in five wells sampled at concentrations up to 120 µg/L in A-8. TAME was detected above the laboratory reporting limit in two wells sampled at concentrations up to 57 µg/L in A-8. TBA was detected above the laboratory reporting limit in one well sampled at a concentration of 1,400 µg/L in A-4. The remaining analytes were not detected above their laboratory reporting limits in the wells sampled this last monitoring event. Groundwater monitoring laboratory analytical results are summarized in Table 1 and Table 2. The most recent GRO, Benzene and MTBE concentrations are also presented in Drawing 2. Groundwater monitoring data (GEO\_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation receipts are provided in Appendix D.

## **DISCUSSION:**

Groundwater levels were between historic minimum and maximum elevations for each well. Groundwater elevations yielded a potentiometric groundwater gradient to the west at approximately 0.03 ft/ft, within the variable range of the historic gradient data presented in Table 3.

Third Quarter 2011 detected analytical concentrations were within the historic minimum and maximum ranges recorded for each well with exception: MTBE was a historic minimum in well A-10 with a concentration of 2.1 µg/L. Recent and historic laboratory analytical results are summarized in Table 1 and Table 2.

## **RECOMMENDATIONS:**

No environmental work is currently scheduled to occur for the Fourth Quarter of 2011. The next environmental work to be conducted is scheduled for the First Quarter of 2012.

## **LIMITATIONS:**

The findings presented in this report are based upon observations of field personnel, points investigated, results of laboratory tests performed by TestAmerica Laboratories, Inc. (Pleasanton, California), and our understanding of ACEH requirements. Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty, expressed or implied was made. This report has been prepared for the exclusive use of ARCADIS US., Inc and the Atlantic Richfield Company. It is possible that variations in soil or groundwater conditions could exist beyond points explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

## **ATTACHMENTS:**

- Drawing 1: Site Location Map
- Drawing 2: Groundwater Elevation Contours and Analytical Summary Map August 18, 2011
  
- Table 1: Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
- Table 2: Summary of Fuel Additives Analytical Data
- Table 3: Historical Groundwater Gradient - Direction and Magnitude
  
- Appendix A: Field Methods
- Appendix B: Field Data Sheets and Non-Hazardous Waste Data Form
- Appendix C: Laboratory Report and Chain-of-Custody Documentation
- Appendix D: GeoTracker Upload Confirmation Receipts

**LIST OF COMMONLY USED ACCRONYMS/ABBREVIATIONS:**

ACEH:	Alameda County Environmental Health	ft/ft:	feet per foot
BAI:	Broadbent & Associates, Inc.	gal:	Gallons
BTEX:	Benzene, Toluene, Ethylbenzene, Total Xylenes	GRO:	Gasoline-Range Organics
1,2-DCA:	1,2-Dichloroethane	LNAPL:	Light Non-Aqueous Phase Liquid
DIPE:	Di-Isopropyl Ether	MTBE:	Methyl Tertiary Butyl Ether
EDB:	1,2-Dibromomethane	NO <sub>3</sub> :	Nitrate
Eh:	Oxidation Reduction Potential	TAME:	Tert-Amyl Methyl Ether
ETBE:	Ethyl Tertiary Butyl Ether	TBA:	Tertiary Butyl Ether
µg/L:	Micrograms per liter	TOC:	Top of Casing

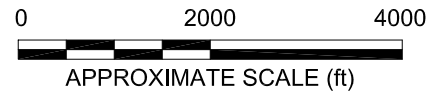
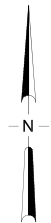
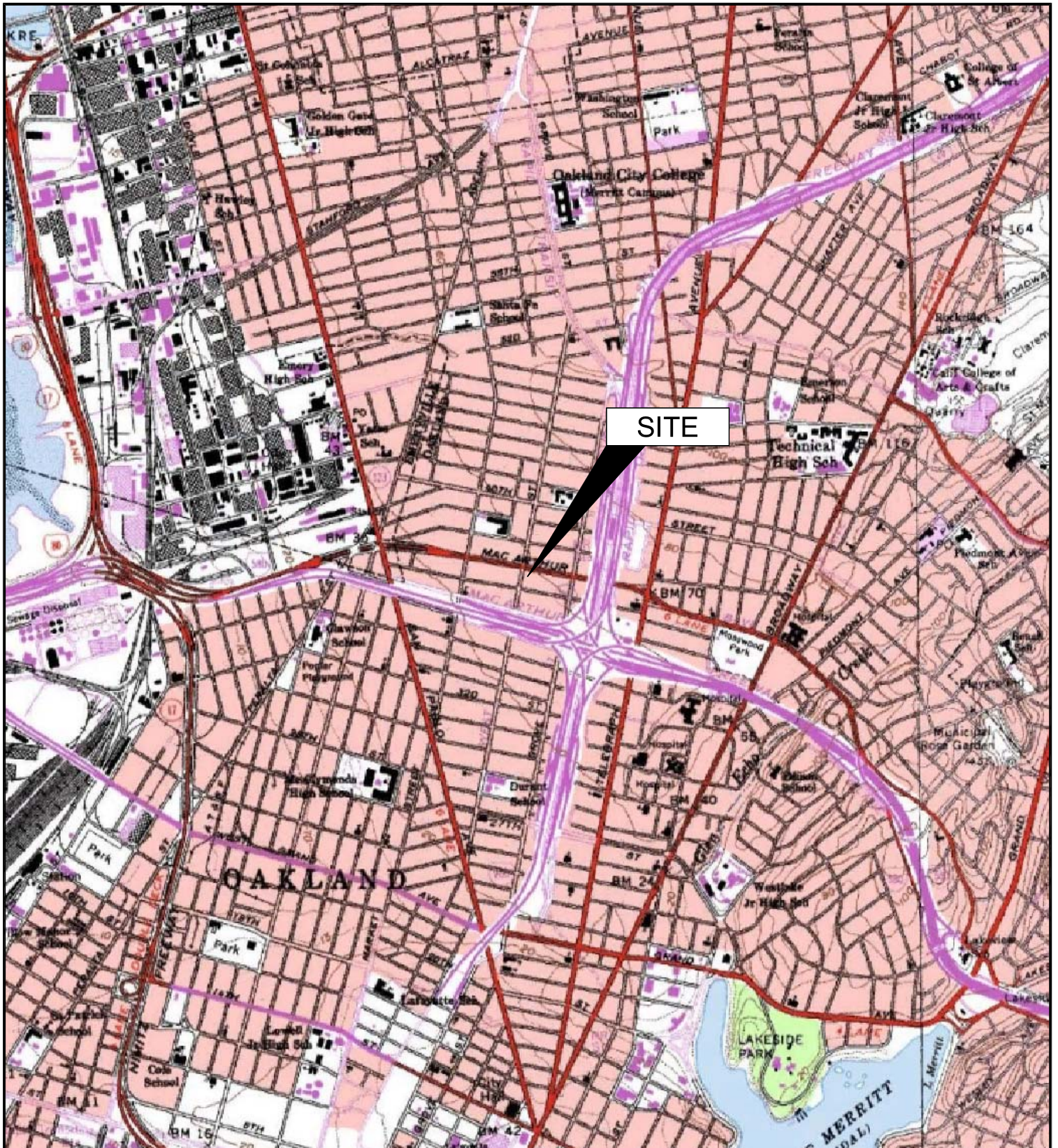


IMAGE SOURCE: USGS

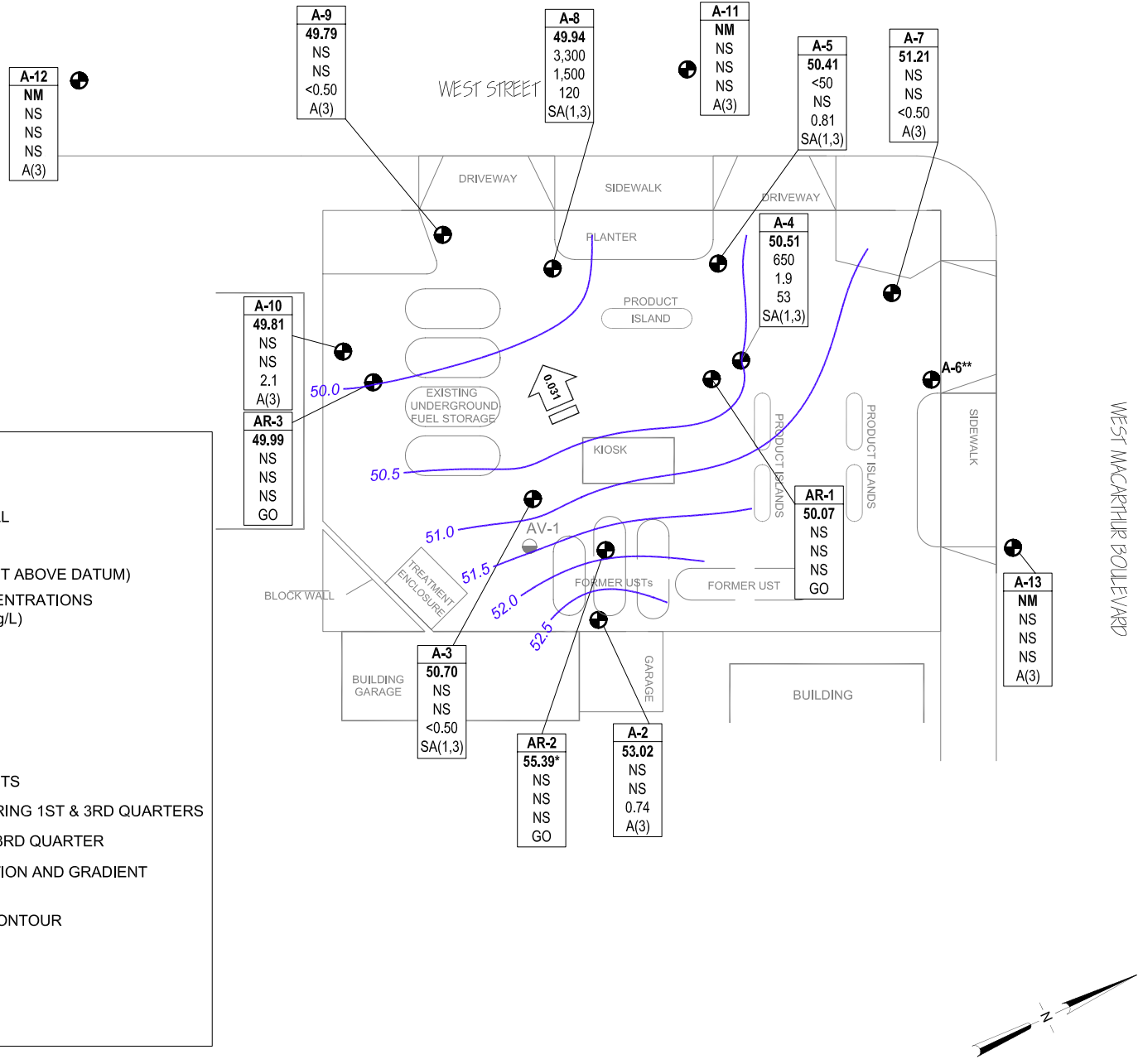
**BROADBENT & ASSOCIATES, INC**  
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL  
 1324 Mangrove Ave. Suite 212, Chico, CA 95926  
 Project No.: 06-88-624 Date: 10/1/09

Station #4931  
 731 West MacArthur Boulevard  
 Oakland, California

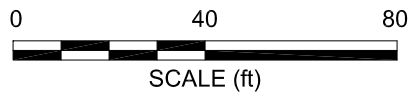
Site Location Map

Drawing  
**1**





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



**BROADBENT & ASSOCIATES, INC.**  
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL  
1324 Mangrove Ave. Suite 212, Chico, California 95926  
Project No.: 09-88-624 Date: 10/20/2011

Station #4931  
731 West MacArthur Boulevard  
Oakland, California

Groundwater Elevation Contour  
and Analytical Summary Map  
August 18, 2011

Drawing

2

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**

**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-2</b>															
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	--		5.00	20.00	10.45	45.03	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
12/26/2000	--		5.00	20.00	6.27	49.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
3/20/2001	--		5.00	20.00	4.57	50.91	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
6/12/2001	--		5.00	20.00	9.27	46.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
9/23/2001	--		5.00	20.00	10.75	44.73	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
12/31/2001	--		5.00	20.00	4.13	51.35	<50	<0.5	<0.5	1	3.2	<2.5	--	--	
3/21/2002	--		5.00	20.00	3.26	52.22	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
4/17/2002	--		5.00	20.00	3.72	51.76	<50	<0.5	<0.5	<0.5	<0.5	3.1	--	--	
8/12/2002	NP		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		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		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	--		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	--		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	--		5.00	20.00	9.36	46.12	--	--	--	--	--	--	--	--	
02/02/2004	--	60.65	5.00	20.00	4.45	56.20	--	--	--	--	--	--	--	--	g
05/04/2004	--		5.00	20.00	6.79	53.86	--	--	--	--	--	--	--	--	
09/02/2004	NP		5.00	20.00	10.51	50.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	--	
11/10/2004	--		5.00	20.00	6.10	54.55	--	--	--	--	--	--	--	--	
02/02/2005	--		5.00	20.00	4.00	56.65	--	--	--	--	--	--	--	--	
05/09/2005	--		5.00	20.00	4.35	56.30	--	--	--	--	--	--	--	--	
08/11/2005	NP		5.00	20.00	9.08	51.57	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.2	6.9	h
11/18/2005	--		5.00	20.00	8.53	52.12	--	--	--	--	--	--	--	--	
02/15/2006	--		5.00	20.00	3.89	56.76	--	--	--	--	--	--	--	--	
5/30/2006	--		5.00	20.00	4.45	56.20	--	--	--	--	--	--	--	--	
8/11/2006	NP		5.00	20.00	9.03	51.62	160	<0.50	<0.50	<0.50	<0.50	3.6	0.16	5.9	
11/1/2006	--		5.00	20.00	9.98	50.67	--	--	--	--	--	--	--	--	
2/7/2007	--		5.00	20.00	7.51	53.14	--	--	--	--	--	--	--	--	
5/9/2007	--		5.00	20.00	4.57	56.08	--	--	--	--	--	--	--	--	
8/7/2007	NP		5.00	20.00	9.67	50.98	<50	<0.50	<0.50	<0.50	<0.50	3.4	2.18	7.17	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**

**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-2 Cont.</b>															
11/14/2007	--	60.65	5.00	20.00	7.84	52.81	--	--	--	--	--	--	--	--	
2/28/2008	--		5.00	20.00	3.30	57.35	--	--	--	--	--	--	--	--	
5/23/2008	--		5.00	20.00	8.80	51.85	--	--	--	--	--	--	--	--	
8/13/2008	NP		5.00	20.00	10.20	50.45	<50	<0.50	<0.50	<0.50	<0.50	19	0.87	9.29	
11/19/2008	--		5.00	20.00	9.20	51.45	--	--	--	--	--	--	--	--	
2/10/2009	--		5.00	20.00	7.83	52.82	--	--	--	--	--	--	--	--	
5/7/2009	--		5.00	20.00	4.40	56.25	--	--	--	--	--	--	--	--	
9/3/2009	NP		5.00	20.00	10.07	50.58	<50	<0.50	<0.50	<0.50	<0.50	12	1.03	6.86	k
3/23/2010	--		5.00	20.00	3.67	56.98	--	--	--	--	--	--	--	--	
8/16/2010	NP		5.00	20.00	9.40	51.25	<50	<0.50	<0.50	<0.50	<1.0	6.1	0.89	6.94	
3/18/2011	--		5.00	20.00	2.89	57.76	--	--	--	--	--	--	--	--	
<b>8/18/2011</b>	<b>NP</b>		<b>5.00</b>	<b>20.00</b>	<b>7.63</b>	<b>53.02</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.74</b>	<b>1.13</b>	<b>6.81</b>	<b>f</b>
<b>A-3</b>															
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	--		5.00	20.00	10.24	44.42	<50	<0.5	<0.5	<0.5	<0.5	89.6	--	--	
12/26/2000	--		5.00	20.00	9.58	45.08	<50	<0.5	<0.5	<0.5	<0.5	7.11	--	--	
3/20/2001	--		5.00	20.00	6.34	48.32	--	--	--	--	--	--	--	--	
6/12/2001	--		5.00	20.00	9.76	44.90	<50	<0.5	<0.5	<0.5	<0.5	86	--	--	
9/23/2001	--		5.00	20.00	10.55	44.11	--	--	--	--	--	--	--	--	
12/31/2001	--		5.00	20.00	3.70	50.96	<50	<0.5	<0.5	<0.5	1	60	--	--	
3/21/2002	--		5.00	20.00	5.75	48.91	--	--	--	--	--	--	--	--	
4/17/2002	--		5.00	20.00	7.27	47.39	<50	<0.5	<0.5	<0.5	<0.5	45	--	--	
8/12/2002	--		5.00	20.00	9.71	44.95	--	--	--	--	--	--	--	--	
12/6/2002	P		5.00	20.00	9.55	45.11	<500	<5.0	<5.0	<5.0	<5.0	150	2.4	6.6	
1/30/2003	--		5.00	20.00	6.05	48.61	--	--	--	--	--	--	--	--	
1/30/2003	--		5.00	20.00	6.05	48.61	--	--	--	--	--	--	--	--	
5/28/2003	--		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	--		5.00	20.00	9.91	44.75	--	--	--	--	--	--	--	--	
11/14/2003	--		5.00	20.00	9.52	45.14	--	--	--	--	--	--	--	--	
02/02/2004	P	59.32	5.00	20.00	5.63	53.69	<50	<0.50	<0.50	<0.50	<0.50	13	1.2	7.1	g

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**

**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-3 Cont.</b>															
05/04/2004	--	59.32	5.00	20.00	8.14	51.18	--	--	--	--	--	--	--	--	
09/02/2004	P		5.00	20.00	10.10	49.22	<250	<2.5	<2.5	<2.5	<2.5	62	1.3	6.6	
11/10/2004	--		5.00	20.00	7.89	51.43	--	--	--	--	--	--	--	--	
02/02/2005	P		5.00	20.00	5.00	54.32	<50	<0.50	<0.50	<0.50	<0.50	6.8	1.9	6.9	
05/09/2005	--		5.00	20.00	5.96	53.36	--	--	--	--	--	--	--	--	
08/11/2005	P		5.00	20.00	9.28	50.04	<50	<0.50	<0.50	<0.50	<0.50	39	1.8	5.5	h
11/18/2005	--		5.00	20.00	8.61	50.71	--	--	--	--	--	--	--	--	
02/15/2006	P		5.00	20.00	4.36	54.96	<50	<0.50	<0.50	<0.50	<0.50	2.2	3.6	7.2	
5/30/2006	--		5.00	20.00	6.28	53.04	--	--	--	--	--	--	--	--	
8/11/2006	P		5.00	20.00	9.27	50.05	<50	<0.50	<0.50	<0.50	<0.50	4.1	2.10	6.4	
11/1/2006	--		5.00	20.00	9.52	49.80	--	--	--	--	--	--	--	--	
2/7/2007	NP		5.00	20.00	7.90	51.42	<50	<0.50	<0.50	<0.50	<0.50	0.58	1.74	7.70	
5/9/2007	--		5.00	20.00	6.55	52.77	--	--	--	--	--	--	--	--	
8/7/2007	NP		5.00	20.00	9.57	49.75	<50	<0.50	<0.50	<0.50	<0.50	3.9	0.95	6.82	
11/14/2007	--		5.00	20.00	8.00	51.32	--	--	--	--	--	--	--	--	
2/28/2008	P		5.00	20.00	3.75	55.57	<50	<0.50	<0.50	<0.50	<0.50	0.58	6.16	6.92	
5/23/2008	--		5.00	20.00	9.10	50.22	--	--	--	--	--	--	--	--	
8/13/2008	NP		5.00	20.00	9.80	49.52	<50	<0.50	<0.50	<0.50	<0.50	0.55	0.69	8.63	
11/19/2008	--		5.00	20.00	8.31	51.01	--	--	--	--	--	--	--	--	
2/10/2009	NP		5.00	20.00	7.30	52.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.90	7.14	
5/7/2009	--		5.00	20.00	6.10	53.22	--	--	--	--	--	--	--	--	
9/3/2009	NP		5.00	20.00	9.50	49.82	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.01	6.95	
3/23/2010	NP		5.00	20.00	4.45	54.87	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.58	6.71	
8/16/2010	NP		5.00	20.00	9.45	49.87	<50	<0.50	<0.50	<0.50	<1.0	0.72	1.05	7.45	
3/18/2011	NP		5.00	20.00	4.00	55.32	--	--	--	--	--	<0.50	1.15	7.7	
<b>8/18/2011</b>	<b>NP</b>		<b>5.00</b>	<b>20.00</b>	<b>8.62</b>	<b>50.70</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>&lt;0.50</b>	<b>1.26</b>	<b>6.95</b>	
<b>A-4</b>															
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	--		5.00	20.00	10.33	44.40	1,540	127	<5.0	9.07	7.42	1,940	--	--	
12/26/2000	--		5.00	20.00	9.34	45.39	1,550	42.7	<5.0	11	10.9	1,210	--	--	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-4 Cont.</b>															
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	--		5.00	20.00	9.83	44.90	2,000	230	<20	21	<20	4,700	--	--	
9/23/2001	--		5.00	20.00	10.54	44.19	1,600	35	<10	<10	<10	3,000	--	--	
12/31/2001	--		5.00	20.00	5.42	49.31	<500	<5.0	<5.0	<5.0	<5.0	880	--	--	
3/21/2002	--		5.00	20.00	6.18	48.55	<5,000	<50	<50	<50	<50	1,400	--	--	
4/17/2002	--		5.00	20.00	7.34	47.39	1,300	79	31	17	55	2,200	--	--	
8/12/2002	P		5.00	20.00	9.56	45.17	2,400	120	<5.0	<5.0	<5.0	2,100	2	7.2	a
12/6/2002	P		5.00	20.00	10.02	44.71	2,200	110	10	42	56	2,000	--	6.7	
1/30/2003	P		5.00	20.00	7.55	47.18	6,000	180	<50	85	<50	2,100	1.8	6.8	
5/28/2003	--		5.00	20.00	8.94	45.79	6,000	120	<50	<50	<50	2,500	1.5	6.7	
8/6/2003	--		5.00	20.00	10.03	44.70	5,800	100	<25	<25	33	2,500	1.5	6.7	
11/14/2003	P		5.00	20.00	10.37	44.36	1,000	17	<5.0	<5.0	<5.0	310	1.6	6.8	d, f
02/02/2004	P	59.59	5.00	20.00	6.70	52.89	3,600	46	<25	<25	<25	1,500	1.0	7.1	d, g
05/04/2004	P		5.00	20.00	9.12	50.47	<5,000	<50	<50	<50	<50	2,300	6.4	6.8	d
09/02/2004	P		5.00	20.00	9.95	49.64	3,000	<25	<25	<25	<25	1,200	9.1	6.8	
11/10/2004	P		5.00	20.00	8.68	50.91	1,800	16	<10	<10	<10	1,100	2.0	7.2	
02/02/2005	P		5.00	20.00	6.92	52.67	3,300	120	<10	66	11	1,700	1.5	6.5	
05/09/2005	P		5.00	20.00	7.21	52.38	<5,000	140	<50	62	<50	1,800	1.64	6.6	
08/11/2005	P		5.00	20.00	9.71	49.88	1,700	51	<10	<10	<10	1,200	--	6.9	f, h
11/18/2005	P		5.00	20.00	9.45	50.14	1,300	23	<2.5	7.2	11	310	1.4	6.7	
02/15/2006	P		5.00	20.00	7.12	52.47	2,200	46	<2.5	29	7.0	910	0.9	6.8	
5/30/2006	P		5.00	20.00	7.95	51.64	3,300	95	<10	55	<10	1,200	1.76	6.5	
8/11/2006	P		5.00	20.00	9.50	50.09	350	93	<10	<10	<10	1,200	1.4	6.6	
11/1/2006	P		5.00	20.00	9.93	49.66	1,300	<10	<10	<10	<10	360	4.56	6.94	
2/7/2007	NP		5.00	20.00	8.82	50.77	4,900	85	<10	40	<10	1,500	0.72	6.86	
5/9/2007	NP		5.00	20.00	7.56	52.03	1,700	19	<10	<10	<10	340	3.00	7.03	
8/7/2007	NP		5.00	20.00	9.80	49.79	2,700	69	<5.0	<5.0	<5.0	510	1.04	6.95	
11/14/2007	NP		5.00	20.00	8.65	50.94	500	4.9	<0.50	<0.50	<0.50	280	1.27	6.94	
2/28/2008	NP		5.00	20.00	6.15	53.44	850	17	<0.50	4.4	1.4	350	1.76	7.03	
5/23/2008	NP		5.00	20.00	9.40	50.19	1,900	75	<20	<20	<20	1,000	1.28	6.58	

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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-4 Cont.</b>															
8/13/2008	NP	59.59	5.00	20.00	9.92	49.67	3,100	47	<10	<10	<10	530	0.89	8.97	
11/19/2008	NP		5.00	20.00	9.19	50.40	1,800	70	<10	21	<10	430	0.83	6.50	
2/10/2009	NP		5.00	20.00	7.68	51.91	1,900	33	<10	14	<10	400	0.87	7.31	
5/7/2009	NP		5.00	20.00	7.31	52.28	<50	<0.50	<0.50	<0.50	<0.50	9.9	2.40	7.10	
9/3/2009	NP		5.00	20.00	10.02	49.57	3,800	49	<10	<10	<10	360	0.79	6.75	
3/23/2010	NP		5.00	20.00	6.62	52.97	820	17	<0.50	5.0	1.3	150	1.37	6.54	
8/16/2010	NP		5.00	20.00	9.85	49.74	1,600	18	0.50	0.56	<1.0	160	0.10	6.64	
3/18/2011	NP		5.00	20.00	5.34	54.25	490	9.9	<0.50	1.9	<1.0	66	3.39	6.7	
<b>8/18/2011</b>	<b>NP</b>		<b>5.00</b>	<b>20.00</b>	<b>9.08</b>	<b>50.51</b>	<b>650</b>	<b>1.9</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>53</b>	<b>1.64</b>	<b>7.00</b>	
<b>A-5</b>															
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	--		3.00	24.00	10.23	43.94	--	--	--	--	--	--	--	--	
12/26/2000	--		3.00	24.00	9.65	44.52	525	<0.5	<0.5	<0.5	<0.5	1,200	--	--	
3/20/2001	--		3.00	24.00	8.05	46.12	--	--	--	--	--	--	--	--	
6/12/2001	--		3.00	24.00	9.81	44.36	830	<5.0	<5.0	<5.0	<5.0	3,200	--	--	
9/23/2001	--		3.00	24.00	10.42	43.75	--	--	--	--	--	--	--	--	
12/31/2001	--		3.00	24.00	6.03	48.14	320	<0.5	<0.5	<0.5	<0.5	60	--	--	
3/21/2002	--		3.00	24.00	6.71	47.46	--	--	--	--	--	--	--	--	
4/17/2002	--		3.00	24.00	8.01	46.16	1,600	<10	<10	<10	<10	3,200	--	--	
8/12/2002	--		3.00	24.00	9.87	44.30	--	--	--	--	--	--	--	--	
12/6/2002	P		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	--		3.00	24.00	7.67	46.50	--	--	--	--	--	--	--	--	
5/28/2003	--		3.00	24.00	8.56	45.61	<5,000	<50	<50	<50	<50	1,500	1.6	6.6	
8/6/2003	--		3.00	24.00	9.58	44.59	--	--	--	--	--	--	--	--	
11/14/2003	--		3.00	24.00	9.81	44.36	--	--	--	--	--	--	--	--	
02/02/2004	P	58.78	3.00	24.00	7.43	51.35	390	<2.5	9.2	<2.5	2.6	140	1.0	6.8	g
05/04/2004	--		3.00	24.00	9.98	48.80	--	--	--	--	--	--	--	--	
09/02/2004	P		3.00	24.00	9.65	49.13	<250	<2.5	<2.5	<2.5	<2.5	66	1.1	6.4	
11/10/2004	--		3.00	24.00	8.48	50.30	--	--	--	--	--	--	--	--	
02/02/2005	P		3.00	24.00	7.10	51.68	68	<0.50	<0.50	<0.50	<0.50	17	1.0	7.2	

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**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-5 Cont.</b>															
05/09/2005	--	58.78	3.00	24.00	7.20	51.58	--	--	--	--	--	--	--	--	
08/11/2005	P		3.00	24.00	9.21	49.57	<50	<0.50	<0.50	<0.50	<0.50	6.8	1.3	6.2	h
11/18/2005	--		3.00	24.00	9.10	49.68	--	--	--	--	--	--	--	--	
02/15/2006	P		3.00	24.00	7.16	51.62	<50	<0.50	<0.50	<0.50	<0.50	5.1	1.2	6.9	
5/30/2006	--		3.00	24.00	7.87	50.91	--	--	--	--	--	--	--	--	
8/11/2006	P		3.00	24.00	8.90	49.88	920	<0.50	<0.50	<0.50	<0.50	12	1.4	6.7	
11/1/2006	--		3.00	24.00	9.30	49.48	--	--	--	--	--	--	--	--	
2/7/2007	NP		3.00	24.00	8.50	50.28	60	<0.50	<0.50	<0.50	<0.50	1.5	0.73	7.14	i
5/9/2007	--		3.00	24.00	7.60	51.18	--	--	--	--	--	--	--	--	
8/7/2007	NP		3.00	24.00	9.30	49.48	<50	<0.50	<0.50	<0.50	<0.50	0.81	0.41	7.18	
11/14/2007	--		3.00	24.00	8.48	50.30	--	--	--	--	--	--	--	--	
2/28/2008	NP		3.00	24.00	6.21	52.57	<50	<0.50	<0.50	<0.50	<0.50	0.97	2.24	7.40	
5/23/2008	--		3.00	24.00	8.97	49.81	--	--	--	--	--	--	--	--	
8/13/2008	NP		3.00	24.00	9.42	49.36	<50	<0.50	<0.50	<0.50	<0.50	0.69	0.62	8.96	
11/19/2008	--		3.00	24.00	8.91	49.87	--	--	--	--	--	--	--	--	
2/10/2009	NP		3.00	24.00	7.80	50.98	<50	<0.50	<0.50	<0.50	<0.50	1.6	0.85	7.52	
5/7/2009	--		3.00	24.00	7.37	51.41	--	--	--	--	--	--	--	--	
9/3/2009	NP		3.00	24.00	9.33	49.45	<50	<0.50	<0.50	<0.50	<0.50	20	0.91	6.68	
3/23/2010	NP		3.00	24.00	6.84	51.94	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.20	6.67	
8/16/2010	NP		3.00	24.00	8.85	49.93	<50	<0.50	<0.50	<0.50	<1.0	7.9	0.97	6.84	
3/18/2011	NP		3.00	24.00	5.45	53.33	<50	--	--	--	--	<0.50	2.72	6.6	
<b>8/18/2011</b>	<b>NP</b>		<b>3.00</b>	<b>24.00</b>	<b>8.37</b>	<b>50.41</b>	<b>&lt;50</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.81</b>	<b>1.42</b>	<b>7.70</b>	
<b>A-6</b>															
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	--		3.00	25.00	9.34	45.83	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
12/26/2000	--		3.00	25.00	8.65	46.52	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
3/20/2001	--		3.00	25.00	6.84	48.33	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
6/12/2001	--		3.00	25.00	8.93	46.24	<50	<0.5	<0.5	<0.5	<0.5	7	--	--	
9/23/2001	--		3.00	25.00	9.74	45.43	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
12/31/2001	--		3.00	25.00	4.81	50.36	<50	<0.5	<0.5	<0.5	<0.5	3.2	--	--	

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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-6 Cont.</b>															
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	--		3.00	25.00	6.95	48.22	<50	<0.5	<0.5	<0.5	<0.5	3.1	--	--	
8/12/2002	NP		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	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
1/30/2003	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
5/28/2003	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
8/6/2003	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
11/14/2003	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	Well inaccessible e
02/02/2004	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	Well inaccessible e
05/04/2004	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	Well inaccessible e
09/02/2004	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	Well inaccessible e
11/10/2004	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	Well inaccessible e
02/02/2005	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
05/09/2005	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
08/11/2005	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
11/18/2005	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
2/15/2006	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
5/30/2006	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
8/11/2006	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
11/1/2006	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	e
<b>A-7</b>															
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	--		3.00	22.00	9.19	45.52	--	--	--	--	--	--	--	--	
12/26/2000	--		3.00	22.00	8.50	46.21	--	--	--	--	--	--	--	--	
3/20/2001	--		3.00	22.00	6.75	47.96	--	--	--	--	--	--	--	--	
6/12/2001	--		3.00	22.00	8.80	45.91	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
9/23/2001	--		3.00	22.00	9.59	45.12	--	--	--	--	--	--	--	--	
12/31/2001	--		3.00	22.00	4.78	49.93	--	--	--	--	--	--	--	--	
3/21/2002	--		3.00	22.00	5.35	49.36	--	--	--	--	--	--	--	--	
4/17/2002	--		3.00	22.00	6.88	47.83	<50	<0.5	<0.5	<0.5	<0.5	2.5	--	--	



**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-7 Cont.</b>															
8/12/2002	--	54.71	3.00	22.00	8.77	45.94	--	--	--	--	--	--	--	--	
12/6/2002	--		3.00	22.00	9.07	45.64	--	--	--	--	--	--	--	--	
1/30/2003	--		3.00	22.00	6.65	48.06	--	--	--	--	--	--	--	--	
5/28/2003	--		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	--		3.00	22.00	8.90	45.81	--	--	--	--	--	--	--	--	
11/14/2003	--		3.00	22.00	9.08	45.63	--	--	--	--	--	--	--	--	
02/02/2004	--	59.75	3.00	22.00	5.96	53.79	--	--	--	--	--	--	--	--	g
05/04/2004	--		3.00	22.00	8.21	51.54	--	--	--	--	--	--	--	--	
09/02/2004	P		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	--		3.00	22.00	7.50	52.25	--	--	--	--	--	--	--	--	
02/02/2005	--		3.00	22.00	6.10	53.65	--	--	--	--	--	--	--	--	
05/09/2005	--		3.00	22.00	6.48	53.27	--	--	--	--	--	--	--	--	
08/11/2005	P		3.00	22.00	8.45	51.30	<50	<0.50	<0.50	<0.50	<0.50	18	1.6	6.6	h
11/18/2005	--		3.00	22.00	8.65	51.10	--	--	--	--	--	--	--	--	
02/15/2006	--		3.00	22.00	6.51	53.24	--	--	--	--	--	--	--	--	
5/30/2006	--		3.00	22.00	7.13	52.62	--	--	--	--	--	--	--	--	
8/11/2006	P		3.00	22.00	8.46	51.29	<50	<0.50	<0.50	<0.50	<0.50	3.6	1.7	6.7	
11/1/2006	--		3.00	22.00	8.99	50.76	--	--	--	--	--	--	--	--	
2/7/2007	--		3.00	22.00	8.12	51.63	--	--	--	--	--	--	--	--	
5/9/2007	--		3.00	22.00	7.04	52.71	--	--	--	--	--	--	--	--	
8/7/2007	NP		3.00	22.00	9.10	50.65	<50	<0.50	<0.50	<0.50	<0.50	2.7	1.34	7.09	
11/14/2007	--		3.00	22.00	8.00	51.75	--	--	--	--	--	--	--	--	
2/28/2008	--		3.00	22.00	5.81	53.94	--	--	--	--	--	--	--	--	
5/23/2008	--		3.00	22.00	8.74	51.01	--	--	--	--	--	--	--	--	
8/13/2008	NP		3.00	22.00	9.27	50.48	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.05	8.45	
11/19/2008	--		3.00	22.00	8.67	51.08	--	--	--	--	--	--	--	--	
2/10/2009	--		3.00	22.00	7.47	52.28	--	--	--	--	--	--	--	--	
5/7/2009	--		3.00	22.00	6.88	52.87	--	--	--	--	--	--	--	--	
9/3/2009	NP		3.00	22.00	9.25	50.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.93	6.78	
3/23/2010	--		3.00	22.00	6.33	53.42	--	--	--	--	--	--	--	--	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-7 Cont.</b>															
8/16/2010	NP	59.75	3.00	22.00	9.13	50.62	<50	<0.50	<0.50	<0.50	<1.0	<0.50	0.73	6.72	
3/18/2011	--		3.00	22.00	5.20	54.55	--	--	--	--	--	--	--	--	
<b>8/18/2011</b>	<b>NP</b>		<b>3.00</b>	<b>22.00</b>	<b>8.54</b>	<b>51.21</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>&lt;0.50</b>	<b>0.98</b>	<b>7.11</b>	
<b>A-8</b>															
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	--		3.00	25.00	9.72	44.05	10,800	2,680	46	439	370	4,410	--	--	
12/26/2000	--		3.00	25.00	9.20	44.57	7,700	1,440	<50	202	106	2,230	--	--	
3/20/2001	--		3.00	25.00	7.51	46.26	<5,000	1,280	<50	53.9	<50	2,880	--	--	
6/12/2001	--		3.00	25.00	9.53	44.24	5,600	1,700	<50	61	54	2,900	--	--	
9/23/2001	--		3.00	25.00	10.08	43.69	10,000	3,500	<50	110	64	6,500	--	--	
12/31/2001	--		3.00	25.00	4.34	49.43	4,300	610	<10	60	24	520	--	--	
3/21/2002	--		3.00	25.00	6.67	47.10	6,600	1,400	<50	130	<50	2,700	--	--	
4/17/2002	--		3.00	25.00	7.72	46.05	3,800	540	<10	<10	12	3,100	--	--	
8/12/2002	NP		3.00	25.00	9.64	44.13	9,400	1,800	<20	35	28	4,200	1	6.7	
12/6/2002	NP		3.00	25.00	9.62	44.15	5,300	1,100	11	11	<10	2,200	1.4	6.7	b
1/30/2003	NP		3.00	25.00	7.49	46.28	<10,000	1,100	<100	<100	<100	2,200	1.5	6.9	
5/28/2003	--		3.00	25.00	9.17	44.60	7,700	1,700	<50	<50	<50	2,100	1	6.8	
8/6/2003	--		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		3.00	25.00	9.80	43.97	3,100	570	<5.0	<5.0	<5.0	850	2.3	6.2	d
02/02/2004	NP	58.70	3.00	25.00	7.10	51.60	3,900	300	<25	<25	<25	1,100	1.1	6.8	d, g
05/04/2004	NP		3.00	25.00	9.44	49.26	<5,000	490	<50	<50	<50	1,600	1.0	6.9	
09/02/2004	NP		3.00	25.00	9.67	49.03	<2,500	30	<25	<25	<25	680	1.0	6.2	
11/10/2004	NP		3.00	25.00	8.15	50.55	580	61	<2.5	<2.5	<2.5	290	1.5	6.4	
02/02/2005	NP		3.00	25.00	6.53	52.17	5,000	890	<25	<25	<25	1,900	1.0	7.4	
05/09/2005	NP		3.00	25.00	6.31	52.39	69	0.90	<0.50	<0.50	<0.50	66	4.1	7.2	
08/11/2005	NP		3.00	25.00	9.15	49.55	1,400	1,300	<12	<12	<12	1,100	0.7	6.4	h
11/18/2005	NP		3.00	25.00	8.89	49.81	1,200	420	<5.0	<5.0	<5.0	340	0.7	7.0	
02/15/2006	NP		3.00	25.00	6.34	52.36	3,200	970	<10	<10	<10	1,100	0.9	6.1	
5/30/2006	NP		3.00	25.00	7.53	51.17	510	210	<2.5	<2.5	<2.5	140	2.6	6.7	
8/11/2006	P		3.00	25.00	8.90	49.80	1,300	500	<5.0	<5.0	<5.0	290	0.7	7.0	i

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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-8 Cont.</b>															
11/1/2006	P	58.70	3.00	25.00	9.15	49.55	4,800	790	6.6	<5.0	<5.0	910	1.72	7.11	
2/7/2007	NP		3.00	25.00	8.48	50.22	7,600	2,300	<25	<25	<25	1,200	1.25	7.11	
5/9/2007	NP		3.00	25.00	7.25	51.45	750	180	<2.5	<2.5	<2.5	55	1.75	7.14	
8/7/2007	NP		3.00	25.00	9.17	49.53	2,100	700	4.0	<2.5	<2.5	430	0.77	6.95	
11/14/2007	NP		3.00	25.00	7.77	50.93	990	300	2.5	0.68	0.96	100	1.01	6.73	
2/28/2008	NP		3.00	25.00	5.14	53.56	2,100	670	<5.0	<5.0	<5.0	220	1.67	7.09	
5/23/2008	--		3.00	25.00	--	--	--	--	--	--	--	--	--	--	j
8/13/2008	NP		3.00	25.00	9.48	49.22	3,100	970	<25	<25	<25	250	0.84	8.73	
11/19/2008	NP		3.00	25.00	8.87	49.83	3,800	1,000	<20	<20	<20	230	0.89	6.87	
2/10/2009	NP		3.00	25.00	7.11	51.59	3,600	1,300	<25	<25	<25	320	0.89	6.87	
5/7/2009	NP		3.00	25.00	6.47	52.23	270	65	<1.0	<1.0	<1.0	12	0.97	6.56	
9/3/2009	NP		3.00	25.00	9.47	49.23	3,200	1,400	<25	<25	<25	100	0.87	6.51	
3/23/2010	NP		3.00	25.00	6.12	52.58	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.69	6.75	
8/16/2010	NP		3.00	25.00	9.27	49.43	4,300	1,600	12	5.3	6.1	110	1.05	6.70	
3/18/2011	NP		3.00	25.00	5.01	53.69	2,000	620	4.7	0.96	1.4	87	4.36	6.8	
<b>8/18/2011</b>	<b>NP</b>		<b>3.00</b>	<b>25.00</b>	<b>8.76</b>	<b>49.94</b>	<b>3,300</b>	<b>1,500</b>	<b>13</b>	<b>5.4</b>	<b>&lt;10</b>	<b>120</b>	<b>1.38</b>	<b>6.84</b>	<b>f</b>
<b>A-9</b>															
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	--		5.00	40.00	9.05	43.99	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
12/26/2000	--		5.00	40.00	8.49	44.55	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
3/20/2001	--		5.00	40.00	6.95	46.09	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
6/12/2001	--		5.00	40.00	8.67	44.37	<50	<0.5	<0.5	<0.5	<0.5	4.8	--	--	
9/23/2001	--		5.00	40.00	9.21	43.83	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
12/31/2001	--		5.00	40.00	4.57	48.47	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
3/21/2002	--		5.00	40.00	5.60	47.44	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
4/17/2002	--		5.00	40.00	6.89	46.15	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
8/12/2002	P		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		5.00	40.00	8.77	44.27	<50	<0.50	<0.50	<0.50	<0.50	<2.0	1.1	6.7	
1/30/2003	P		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	--		5.00	40.00	9.75	43.29	<50	<0.50	<0.50	<0.50	<0.50	0.74	1.9	6.8	

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**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-9 Cont.</b>															
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	--		5.00	40.00	8.82	44.22	--	--	--	--	--	--	--	--	d
02/02/2004	--	57.73	5.00	40.00	7.10	50.63	--	--	--	--	--	--	--	--	d, g
05/04/2004	--		5.00	40.00	8.12	49.61	--	--	--	--	--	--	--	--	
09/02/2004	P		5.00	40.00	8.78	48.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.6	6.5	
11/10/2004	--		5.00	40.00	7.88	49.85	--	--	--	--	--	--	--	--	
02/02/2005	--		5.00	40.00	6.40	51.33	--	--	--	--	--	--	--	--	
05/09/2005	--		5.00	40.00	6.82	50.91	--	--	--	--	--	--	--	--	
08/11/2005	P		5.00	40.00	8.37	49.36	<50	<0.50	<0.50	<0.50	<0.50	1.5	1.8	6.7	
11/18/2005	--		5.00	40.00	8.24	49.49	--	--	--	--	--	--	--	--	
02/15/2006	--		5.00	40.00	6.38	51.35	--	--	--	--	--	--	--	--	
5/30/2006	--		5.00	40.00	7.17	50.56	--	--	--	--	--	--	--	--	
8/11/2006	P		5.00	40.00	8.20	49.53	<50	<0.50	<0.50	<0.50	<0.50	1.6	1.02	6.6	
11/1/2006	--		5.00	40.00	8.90	48.83	--	--	--	--	--	--	--	--	
2/7/2007	--		5.00	40.00	7.83	49.90	--	--	--	--	--	--	--	--	
5/9/2007	--		5.00	40.00	6.92	50.81	--	--	--	--	--	--	--	--	
8/7/2007	NP		5.00	40.00	8.58	49.15	<50	<0.50	<0.50	<0.50	<0.50	0.64	1.81	6.90	
11/14/2007	--		5.00	40.00	7.77	49.96	--	--	--	--	--	--	--	--	
2/28/2008	--		5.00	40.00	5.61	52.12	--	--	--	--	--	--	--	--	
5/23/2008	--		5.00	40.00	--	--	--	--	--	--	--	--	--	--	j
8/13/2008	NP		5.00	40.00	8.65	49.08	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.55	9.04	
11/19/2008	--		5.00	40.00	8.49	49.24	--	--	--	--	--	--	--	--	
2/10/2009	--		5.00	40.00	7.07	50.66	--	--	--	--	--	--	--	--	
5/7/2009	--		5.00	40.00	6.65	51.08	--	--	--	--	--	--	--	--	
9/3/2009	NP		5.00	40.00	8.56	49.17	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.89	6.86	
3/23/2010	--		5.00	40.00	5.98	51.75	--	--	--	--	--	--	--	--	
8/16/2010	NP		5.00	40.00	8.32	49.41	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.06	6.82	
3/18/2011	--		5.00	40.00	4.40	53.33	--	--	--	--	--	--	--	--	
<b>8/18/2011</b>	<b>NP</b>		<b>5.00</b>	<b>40.00</b>	<b>7.94</b>	<b>49.79</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>&lt;0.50</b>	<b>0.85</b>	<b>7.28</b>	
<b>A-10</b>															

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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-10 Cont.</b>															
6/21/2000	--	54.26	5.00	30.00	10.47	43.79	--	--	--	--	--	--	--	--	
9/20/2000	--		5.00	30.00	10.76	43.50	--	--	--	--	--	--	--	--	
12/26/2000	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
3/20/2001	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
9/23/2001	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
12/31/2001	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
3/21/2002	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
4/17/2002	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
8/12/2002	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
12/6/2002	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
1/30/2003	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
5/28/2003	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
8/6/2003	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	
11/14/2003	--		5.00	30.00	10.37	43.89	--	--	--	--	--	--	--	--	
02/02/2004	--	59.39	5.00	30.00	7.97	51.42	--	--	--	--	--	--	--	--	g
05/04/2004	--		5.00	30.00	8.69	50.70	--	--	--	--	--	--	--	--	
09/02/2004	P		5.00	30.00	10.55	48.84	<500	<5.0	<5.0	<5.0	<5.0	270	0.8	6.6	
11/10/2004	--		5.00	30.00	9.16	50.23	--	--	--	--	--	--	--	--	
02/02/2005	--		5.00	30.00	7.90	51.49	--	--	--	--	--	--	--	--	
05/09/2005	--		5.00	30.00	8.21	51.18	--	--	--	--	--	--	--	--	
08/11/2005	P		5.00	30.00	10.02	49.37	69	<0.50	<0.50	<0.50	<0.50	97	0.9	6.6	h, i
11/18/2005	--		5.00	30.00	9.86	49.53	--	--	--	--	--	--	--	--	
02/15/2006	--		5.00	30.00	7.53	51.86	--	--	--	--	--	--	--	--	
5/30/2006	--		5.00	30.00	8.82	50.57	--	--	--	--	--	--	--	--	
8/11/2006	P		5.00	30.00	9.88	49.51	<50	<0.50	<0.50	<0.50	<0.50	46	1.3	6.8	
11/1/2006	--		5.00	30.00	10.28	49.11	--	--	--	--	--	--	--	--	
2/7/2007	--		5.00	30.00	9.50	49.89	--	--	--	--	--	--	--	--	
5/9/2007	--		5.00	30.00	8.67	50.72	--	--	--	--	--	--	--	--	
8/7/2007	NP		5.00	30.00	10.25	49.14	<50	<0.50	<0.50	<0.50	<0.50	8.9	0.59	6.89	
11/14/2007	--		5.00	30.00	9.48	49.91	--	--	--	--	--	--	--	--	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-10 Cont.</b>															
2/28/2008	--	59.39	5.00	30.00	7.23	52.16	--	--	--	--	--	--	--	--	
5/23/2008	--		5.00	30.00	9.94	49.45	--	--	--	--	--	--	--	--	
8/13/2008	NP		5.00	30.00	10.30	49.09	<50	<0.50	<0.50	<0.50	<0.50	28	0.74	9.16	
11/19/2008	--		5.00	30.00	9.90	49.49	--	--	--	--	--	--	--	--	
2/10/2009	--		5.00	30.00	8.74	50.65	--	--	--	--	--	--	--	--	
5/7/2009	--		5.00	30.00	8.23	51.16	--	--	--	--	--	--	--	--	1
9/3/2009	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	j,1
3/23/2010	--		5.00	30.00	7.65	51.74	--	--	--	--	--	--	--	--	
8/16/2010	NP		5.00	30.00	10.05	49.34	<50	<0.50	<0.50	<0.50	<1.0	3.9	1.02	7.03	
3/18/2011	--		5.00	30.00	6.52	52.87	--	--	--	--	--	--	--	--	
<b>8/18/2011</b>	<b>NP</b>		<b>5.00</b>	<b>30.00</b>	<b>9.58</b>	<b>49.81</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.1</b>	<b>0.79</b>	<b>6.94</b>	
<b>A-11</b>															
6/21/2000	--	53.74	5.00	30.00	9.54	44.20	<50	<0.5	<0.5	<0.5	<1.0	4	--	--	
9/20/2000	--		5.00	30.00	10.62	43.12	--	--	--	--	--	--	--	--	
12/26/2000	--		5.00	30.00	10.03	43.71	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
3/20/2001	--		5.00	30.00	8.49	45.25	--	--	--	--	--	--	--	--	
6/12/2001	--		5.00	30.00	10.21	43.53	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
9/23/2001	--		5.00	30.00	10.77	42.97	--	--	--	--	--	--	--	--	
12/31/2001	--		5.00	30.00	6.06	47.68	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
3/21/2002	--		5.00	30.00	7.14	46.60	--	--	--	--	--	--	--	--	
4/17/2002	--		5.00	30.00	8.41	45.33	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
8/12/2002	--		5.00	30.00	10.25	43.49	--	--	--	--	--	--	--	--	
12/6/2002	P		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	--		5.00	30.00	8.42	45.32	--	--	--	--	--	--	--	--	
5/28/2003	--		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	--		5.00	30.00	10.28	43.46	--	--	--	--	--	--	--	--	
11/14/2003	--		5.00	30.00	10.40	43.34	--	--	--	--	--	--	--	--	
02/02/2004	--	59.16	5.00	30.00	7.95	51.21	--	--	--	--	--	--	--	--	ng
05/04/2004	--		5.00	30.00	8.72	50.44	--	--	--	--	--	--	--	--	
09/02/2004	P		5.00	30.00	10.44	48.72	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	6.6	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-11 Cont.</b>															
11/10/2004	--	59.16	5.00	30.00	9.20	49.96	--	--	--	--	--	--	--	--	
02/02/2005	--		5.00	30.00	7.95	51.21	--	--	--	--	--	--	--	--	
05/09/2005	--		5.00	30.00	8.07	51.09	--	--	--	--	--	--	--	--	
08/11/2005	P		5.00	30.00	9.87	49.29	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.8	6.7	h
11/18/2005	--		5.00	30.00	8.88	50.28	--	--	--	--	--	--	--	--	
02/15/2006	--		5.00	30.00	7.90	51.26	--	--	--	--	--	--	--	--	
5/30/2006	--		5.00	30.00	8.78	50.38	--	--	--	--	--	--	--	--	
8/11/2006	P		5.00	30.00	10.33	48.83	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.8	6.8	
11/1/2006	--		5.00	30.00	10.10	49.06	--	--	--	--	--	--	--	--	
2/7/2007	--		5.00	30.00	9.35	49.81	--	--	--	--	--	--	--	--	
5/9/2007	--		5.00	30.00	8.48	50.68	--	--	--	--	--	--	--	--	
8/7/2007	NP		5.00	30.00	10.10	49.06	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.67	7.07	
11/14/2007	--		5.00	30.00	9.31	49.85	--	--	--	--	--	--	--	--	
2/28/2008	--		5.00	30.00	7.12	52.04	--	--	--	--	--	--	--	--	
5/23/2008	--		5.00	30.00	9.77	49.39	--	--	--	--	--	--	--	--	
8/13/2008	NP		5.00	30.00	10.08	49.08	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.89	8.94	
11/19/2008	--		5.00	30.00	9.75	49.41	--	--	--	--	--	--	--	--	
2/10/2009	--		5.00	30.00	8.67	50.49	--	--	--	--	--	--	--	--	
5/7/2009	--		5.00	30.00	8.20	50.96	--	--	--	--	--	--	--	--	
9/3/2009	NP		5.00	30.00	10.15	49.01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.98	6.78	
3/23/2010	--		5.00	30.00	7.70	51.46	--	--	--	--	--	--	--	--	
8/16/2010	NP		5.00	30.00	9.90	49.26	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.60	6.86	
3/18/2011	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	m
<b>8/18/2011</b>	<b>--</b>		<b>5.00</b>	<b>30.00</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>m</b>
<b>A-12</b>															
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	--		5.00	30.00	9.55	42.50	--	--	--	--	--	--	--	--	
12/26/2000	--		5.00	30.00	9.05	43.00	<50	<0.5	<0.5	<0.5	<0.5	17.3	--	--	
3/20/2001	--		5.00	30.00	7.92	44.13	--	--	--	--	--	--	--	--	
6/12/2001	--		5.00	30.00	9.26	42.79	<50	<0.5	<0.5	<0.5	<0.5	25	--	--	

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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-12 Cont.</b>															
9/23/2001	--	52.05	5.00	30.00	9.68	42.37	--	--	--	--	--	--	--	--	
12/31/2001	--		5.00	30.00	5.74	46.31	<50	<0.5	<0.5	<0.5	<0.5	9.5	--	--	
3/21/2002	--		5.00	30.00	6.64	45.41	--	--	--	--	--	--	--	--	
4/17/2002	--		5.00	30.00	7.68	44.37	<50	<0.5	<0.5	<0.5	<0.5	29	--	--	
8/12/2002	--		5.00	30.00	9.30	42.75	--	--	--	--	--	--	--	--	
12/06/02	P		5.00	30.00	9.38	42.67	<50	<0.50	<0.50	<0.50	<0.50	13	2.3	6.5	c
1/30/2003	--		5.00	30.00	7.87	44.18	--	--	--	--	--	--	--	--	
5/28/2003	--		5.00	30.00	8.51	43.54	50	<0.50	<0.50	<0.50	<0.50	10	1.4	7	
8/6/2003	--		5.00	30.00	9.28	42.77	--	--	--	--	--	--	--	--	
11/14/2003	--		5.00	30.00	9.37	42.68	--	--	--	--	--	--	--	--	
02/02/2004	P	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	g
05/04/2004	--		5.00	30.00	8.74	48.32	--	--	--	--	--	--	--	--	
09/02/2004	P		5.00	30.00	9.41	47.65	<50	<0.50	<0.50	<0.50	<0.50	6.2	1.1	6.5	
11/10/2004	--		5.00	30.00	8.32	48.74	--	--	--	--	--	--	--	--	
02/02/2005	P		5.00	30.00	7.45	49.61	<50	<0.50	<0.50	<0.50	<0.50	8.3	1.4	7.1	
05/09/2005	--		5.00	30.00	7.57	49.49	--	--	--	--	--	--	--	--	
08/11/2005	P		5.00	30.00	9.05	48.01	<50	<0.50	<0.50	<0.50	<0.50	5.4	0.9	6.4	h
11/18/2005	--		5.00	30.00	8.90	48.16	--	--	--	--	--	--	--	--	
02/15/2006	--		5.00	30.00	7.47	49.59	--	--	--	--	--	--	--	--	
5/30/2006	--		5.00	30.00	8.21	48.85	--	--	--	--	--	--	--	--	
8/11/2006	P		5.00	30.00	8.85	48.21	<50	<0.50	<0.50	<0.50	<0.50	7.4	1.8	6.9	
11/1/2006	--		5.00	30.00	9.17	47.89	--	--	--	--	--	--	--	--	
2/7/2007	--		5.00	30.00	8.58	48.48	--	--	--	--	--	--	--	--	
5/9/2007	--		5.00	30.00	7.93	49.13	--	--	--	--	--	--	--	--	
8/7/2007	NP		5.00	30.00	9.20	47.86	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.49	7.34	
11/14/2007	--		5.00	30.00	8.52	48.54	--	--	--	--	--	--	--	--	
2/28/2008	--		5.00	30.00	7.04	50.02	--	--	--	--	--	--	--	--	
5/23/2008	--		5.00	30.00	9.00	48.06	--	--	--	--	--	--	--	--	
8/13/2008	NP		5.00	30.00	9.38	47.68	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.03	8.39	
11/19/2008	--		5.00	30.00	9.01	48.05	--	--	--	--	--	--	--	--	



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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-12 Cont.</b>															
2/10/2009	--	57.06	5.00	30.00	8.10	48.96	--	--	--	--	--	--	--	--	
5/7/2009	--		5.00	30.00	7.80	49.26	--	--	--	--	--	--	--	--	
9/3/2009	NP		5.00	30.00	9.40	47.66	<50	<0.50	<0.50	<0.50	<0.50	3.6	0.98	7.14	
3/23/2010	--		5.00	30.00	7.68	49.38	--	--	--	--	--	--	--	--	
8/16/2010	NP		5.00	30.00	9.30	47.76	<50	<0.50	<0.50	<0.50	<1.0	3.6	--	6.72	
3/18/2011	--		5.00	30.00	--	--	--	--	--	--	--	--	--	--	m
<b>8/18/2011</b>	<b>--</b>		<b>5.00</b>	<b>30.00</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>m</b>
<b>A-13</b>															
6/21/2000	--	55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--	
9/20/2000	--		10.00	10.00	--	--	--	--	--	--	--	--	--	--	
12/26/2000	--		10.00	10.00	--	--	--	--	--	--	--	--	--	--	
3/20/2001	--		10.00	10.00	--	--	--	--	--	--	--	--	--	--	
6/12/2001	--		10.00	10.00	--	--	--	--	--	--	--	--	--	--	
9/23/2001	--		10.00	10.00	--	--	--	--	--	--	--	--	--	--	
12/31/2001	--		10.00	10.00	--	--	--	--	--	--	--	--	--	--	
3/21/2002	--		10.00	10.00	6.70	48.41	--	--	--	--	--	--	--	--	
4/17/2002	--		10.00	10.00	7.95	47.16	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
8/12/2002	--		10.00	10.00	10.11	45.00	--	--	--	--	--	--	--	--	
12/6/2002	--		10.00	10.00	10.26	44.85	--	--	--	--	--	--	--	--	
1/30/2003	--		10.00	10.00	7.81	47.30	--	--	--	--	--	--	--	--	
5/28/2003	--		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	--		10.00	10.00	10.22	44.89	--	--	--	--	--	--	--	--	
11/14/2003	--		10.00	10.00	10.27	44.84	--	--	--	--	--	--	--	--	
02/02/2004	--	60.26	10.00	10.00	7.92	52.34	--	--	--	--	--	--	--	--	nc
05/04/2004	--		10.00	10.00	10.06	50.20	--	--	--	--	--	--	--	--	
09/02/2004	P		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	--		10.00	10.00	8.95	51.31	--	--	--	--	--	--	--	--	
02/02/2005	--		10.00	10.00	7.28	52.98	--	--	--	--	--	--	--	--	
05/09/2005	--		10.00	10.00	7.85	52.41	--	--	--	--	--	--	--	--	
08/11/2005	--		10.00	10.00	9.70	50.56	--	--	--	--	--	--	--	--	

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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>A-13 Cont.</b>															
11/18/2005	--	60.26	10.00	10.00	9.27	50.99	--	--	--	--	--	--	--	--	
02/15/2006	--		10.00	10.00	7.24	53.02	--	--	--	--	--	--	--	--	
5/30/2006	--		10.00	10.00	8.38	51.88	--	--	--	--	--	--	--	--	
8/11/2006	--		10.00	10.00	9.55	50.71	--	--	--	--	--	--	--	--	
11/1/2006	--		10.00	10.00	9.98	50.28	--	--	--	--	--	--	--	--	
2/7/2007	--		10.00	10.00	9.07	51.19	--	--	--	--	--	--	--	--	
5/9/2007	--		10.00	10.00	8.15	52.11	--	--	--	--	--	--	--	--	
8/7/2007	--		10.00	10.00	10.05	50.21	--	--	--	--	--	--	--	--	
11/14/2007	--		10.00	10.00	9.20	51.06	--	--	--	--	--	--	--	--	
2/28/2008	--		10.00	10.00	6.82	53.44	--	--	--	--	--	--	--	--	
5/23/2008	--		10.00	10.00	9.67	50.59	--	--	--	--	--	--	--	--	
8/13/2008	--		10.00	10.00	10.17	50.09	--	--	--	--	--	--	--	--	
11/19/2008	--		10.00	10.00	9.63	50.63	--	--	--	--	--	--	--	--	
2/10/2009	--		10.00	10.00	8.48	51.78	--	--	--	--	--	--	--	--	
5/7/2009	--		10.00	10.00	7.97	52.29	--	--	--	--	--	--	--	--	
9/3/2009	--		10.00	10.00	10.14	50.12	--	--	--	--	--	--	--	--	
3/23/2010	--		10.00	10.00	7.29	52.97	--	--	--	--	--	--	--	--	
8/16/2010	--		10.00	10.00	9.92	50.34	--	--	--	--	--	--	--	--	
3/18/2011	--		10.00	10.00	6.33	53.93	--	--	--	--	--	--	--	--	
<b>8/18/2011</b>	--		<b>10.00</b>	<b>10.00</b>	--	--	--	--	--	--	--	--	--	--	<b>e</b>
<b>AR-1</b>															
6/21/2000	--	54.72	10.00	30.00	--	--	--	--	--	--	--	--	--	--	
9/20/2000	--		10.00	30.00	--	--	--	--	--	--	--	--	--	--	
12/26/2000	--		10.00	30.00	9.95	44.77	--	--	--	--	--	--	--	--	
3/20/2001	--		10.00	30.00	8.34	46.38	--	--	--	--	--	--	--	--	
6/12/2001	--		10.00	30.00	10.17	44.55	--	--	--	--	--	--	--	--	
9/23/2001	--		10.00	30.00	10.72	44.00	--	--	--	--	--	--	--	--	
12/31/2001	--		10.00	30.00	5.91	48.81	--	--	--	--	--	--	--	--	
3/21/2002	--		10.00	30.00	7.00	47.72	--	--	--	--	--	--	--	--	
4/17/2002	--		10.00	30.00	8.33	46.39	--	--	--	--	--	--	--	--	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AR-1 Cont.</b>															
8/12/2002	--	54.72	10.00	30.00	10.18	44.54	--	--	--	--	--	--	--	--	
12/6/2002	--		10.00	30.00	10.21	44.51	--	--	--	--	--	--	--	--	
1/30/2003	--		10.00	30.00	8.22	46.50	--	--	--	--	--	--	--	--	
5/28/2003	--		10.00	30.00	9.62	45.10	--	--	--	--	--	--	--	--	
8/6/2003	--		10.00	30.00	10.47	44.25	--	--	--	--	--	--	--	--	
11/14/2003	--		10.00	30.00	10.40	44.32	--	--	--	--	--	--	--	--	d
02/02/2004	--	59.52	10.00	30.00	7.96	51.56	--	--	--	--	--	--	--	--	d, g
05/04/2004	--		10.00	30.00	10.17	49.35	--	--	--	--	--	--	--	--	d
09/02/2004	--		10.00	30.00	10.28	49.24	--	--	--	--	--	--	--	--	
11/10/2004	--		10.00	30.00	9.15	50.37	--	--	--	--	--	--	--	--	
02/02/2005	--		10.00	30.00	7.80	51.72	--	--	--	--	--	--	--	--	
05/09/2005	--		10.00	30.00	7.03	52.49	--	--	--	--	--	--	--	--	
08/11/2005	--		10.00	30.00	9.82	49.70	--	--	--	--	--	--	--	--	
11/18/2005	--		10.00	30.00	9.83	49.69	--	--	--	--	--	--	--	--	
02/15/2006	--		10.00	30.00	7.78	51.74	--	--	--	--	--	--	--	--	
5/30/2006	--		10.00	30.00	8.65	50.87	--	--	--	--	--	--	--	--	
8/11/2006	--		10.00	30.00	9.69	49.83	--	--	--	--	--	--	--	--	
11/1/2006	--		10.00	30.00	10.07	49.45	--	--	--	--	--	--	--	--	
2/7/2007	--		10.00	30.00	9.33	50.19	--	--	--	--	--	--	--	--	
5/9/2007	--		10.00	30.00	8.45	51.07	--	--	--	--	--	--	--	--	
8/7/2007	--		10.00	30.00	10.12	49.40	--	--	--	--	--	--	--	--	
11/14/2007	--		10.00	30.00	9.31	50.21	--	--	--	--	--	--	--	--	
2/28/2008	--		10.00	30.00	7.05	52.47	--	--	--	--	--	--	--	--	
5/23/2008	--		10.00	30.00	--	--	--	--	--	--	--	--	--	--	j
8/13/2008	--		10.00	30.00	10.20	49.32	--	--	--	--	--	--	--	--	
11/19/2008	--		10.00	30.00	9.73	49.79	--	--	--	--	--	--	--	--	
2/10/2009	--		10.00	30.00	8.61	50.91	--	--	--	--	--	--	--	--	
5/7/2009	--		10.00	30.00	8.17	51.35	--	--	--	--	--	--	--	--	
9/3/2009	--		10.00	30.00	10.19	49.33	--	--	--	--	--	--	--	--	
3/23/2010	--		10.00	30.00	7.61	51.91	--	--	--	--	--	--	--	--	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AR-1 Cont.</b>															
8/16/2010	--	59.52	10.00	30.00	9.88	49.64	--	--	--	--	--	--	--	--	
3/18/2011	--		10.00	30.00	6.26	53.26	--	--	--	--	--	--	--	--	
<b>8/18/2011</b>	<b>--</b>		<b>10.00</b>	<b>30.00</b>	<b>9.45</b>	<b>50.07</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
<b>AR-2</b>															
6/21/2000	--	54.77	8.00	28.00	--	--	--	--	--	--	--	--	--	--	
9/20/2000	--		8.00	28.00	--	--	--	--	--	--	--	--	--	--	
12/26/2000	--		8.00	28.00	--	--	--	--	--	--	--	--	--	--	
3/20/2001	--		8.00	28.00	3.13	51.64	--	--	--	--	--	--	--	--	
6/12/2001	--		8.00	28.00	4.51	50.26	--	--	--	--	--	--	--	--	
9/23/2001	--		8.00	28.00	6.05	48.72	--	--	--	--	--	--	--	--	
12/31/2001	--		8.00	28.00	2.79	51.98	--	--	--	--	--	--	--	--	
3/21/2002	--		8.00	28.00	7.75	47.02	--	--	--	--	--	--	--	--	
4/17/2002	--		8.00	28.00	2.24	52.53	--	--	--	--	--	--	--	--	
8/12/2002	--		8.00	28.00	4.93	49.84	--	--	--	--	--	--	--	--	
12/6/2002	--		8.00	28.00	6.09	48.68	--	--	--	--	--	--	--	--	
1/30/2003	--		8.00	28.00	3.89	50.88	--	--	--	--	--	--	--	--	
5/28/2003	--		8.00	28.00	3.33	51.44	--	--	--	--	--	--	--	--	
8/6/2003	--		8.00	28.00	5.05	49.72	--	--	--	--	--	--	--	--	
11/14/2003	--		8.00	28.00	6.01	48.76	--	--	--	--	--	--	--	--	
02/02/2004	--	59.18	8.00	28.00	3.88	55.30	--	--	--	--	--	--	--	--	nc
05/04/2004	--		8.00	28.00	6.01	53.17	--	--	--	--	--	--	--	--	
09/02/2004	--		8.00	28.00	5.65	53.53	--	--	--	--	--	--	--	--	
11/10/2004	--		8.00	28.00	5.48	53.70	--	--	--	--	--	--	--	--	
02/02/2005	--		8.00	28.00	2.62	56.56	--	--	--	--	--	--	--	--	
05/09/2005	--		8.00	28.00	2.84	56.34	--	--	--	--	--	--	--	--	
08/11/2005	--		8.00	28.00	4.33	54.85	--	--	--	--	--	--	--	--	
11/18/2005	--		8.00	28.00	5.34	53.84	--	--	--	--	--	--	--	--	
02/15/2006	--		8.00	28.00	2.49	56.69	--	--	--	--	--	--	--	--	
5/30/2006	--		8.00	28.00	3.02	56.16	--	--	--	--	--	--	--	--	
8/11/2006	--		8.00	28.00	4.32	54.86	--	--	--	--	--	--	--	--	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AR-2 Cont.</b>															
11/1/2006	--	59.18	8.00	28.00	5.25	53.93	--	--	--	--	--	--	--	--	
2/7/2007	--		8.00	28.00	4.64	54.54	--	--	--	--	--	--	--	--	
5/9/2007	--		8.00	28.00	3.15	56.03	--	--	--	--	--	--	--	--	
8/7/2007	--		8.00	28.00	4.55	54.63	--	--	--	--	--	--	--	--	
11/14/2007	--		8.00	28.00	5.03	54.15	--	--	--	--	--	--	--	--	
2/28/2008	--		8.00	28.00	1.82	57.36	--	--	--	--	--	--	--	--	
5/23/2008	--		8.00	28.00	--	--	--	--	--	--	--	--	--	--	j
8/13/2008	--		8.00	28.00	5.05	54.13	--	--	--	--	--	--	--	--	
11/19/2008	--		8.00	28.00	5.49	53.69	--	--	--	--	--	--	--	--	
2/10/2009	--		8.00	28.00	5.10	54.08	--	--	--	--	--	--	--	--	
5/7/2009	--		8.00	28.00	2.90	56.28	--	--	--	--	--	--	--	--	
9/3/2009	--		8.00	28.00	5.99	53.19	--	--	--	--	--	--	--	--	
3/23/2010	--		8.00	28.00	1.94	57.24	--	--	--	--	--	--	--	--	
8/16/2010	--		8.00	28.00	4.37	54.81	--	--	--	--	--	--	--	--	
3/18/2011	--		8.00	28.00	--	--	--	--	--	--	--	--	--	--	j
<b>8/18/2011</b>	--		<b>8.00</b>	<b>28.00</b>	<b>3.79</b>	<b>55.39</b>	--	--	--	--	--	--	--	--	
<b>AR-3</b>															
6/21/2000	--	54.19	10.00	30.00	--	--	--	--	--	--	--	--	--	--	
9/20/2000	--		10.00	30.00	--	--	--	--	--	--	--	--	--	--	
12/26/2000	--		10.00	30.00	9.70	44.49	--	--	--	--	--	--	--	--	
3/20/2001	--		10.00	30.00	--	--	--	--	--	--	--	--	--	--	
6/12/2001	--		10.00	30.00	--	--	--	--	--	--	--	--	--	--	
9/23/2001	--		10.00	30.00	10.43	43.76	--	--	--	--	--	--	--	--	
12/31/2001	--		10.00	30.00	5.18	49.01	--	--	--	--	--	--	--	--	
3/21/2002	--		10.00	30.00	6.78	47.41	--	--	--	--	--	--	--	--	
4/17/2002	--		10.00	30.00	8.06	46.13	--	--	--	--	--	--	--	--	
8/12/2002	--		10.00	30.00	9.94	44.25	--	--	--	--	--	--	--	--	
12/6/2002	--		10.00	30.00	9.99	44.20	--	--	--	--	--	--	--	--	
1/30/2003	--		10.00	30.00	7.96	46.23	--	--	--	--	--	--	--	--	
5/28/2003	--		10.00	30.00	8.94	45.25	--	--	--	--	--	--	--	--	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AR-3 Cont.</b>															
8/6/2003	--	54.19	10.00	30.00	9.94	44.25	--	--	--	--	--	--	--	--	
11/14/2003	--		10.00	30.00	10.03	44.16	--	--	--	--	--	--	--	--	
02/02/2004	--	59.10	10.00	30.00	6.90	52.20	--	--	--	--	--	--	--	--	g
05/04/2004	--		10.00	30.00	9.12	49.98	--	--	--	--	--	--	--	--	
09/02/2004	--		10.00	30.00	10.15	48.95	--	--	--	--	--	--	--	--	
11/10/2004	--		10.00	30.00	8.79	50.31	--	--	--	--	--	--	--	--	
02/02/2005	--		10.00	30.00	7.30	51.80	--	--	--	--	--	--	--	--	
05/09/2005	--		10.00	30.00	7.71	51.39	--	--	--	--	--	--	--	--	
08/11/2005	--		10.00	30.00	9.54	49.56	--	--	--	--	--	--	--	--	
11/18/2005	--		10.00	30.00	9.43	49.67	--	--	--	--	--	--	--	--	
02/15/2006	--		10.00	30.00	7.50	51.60	--	--	--	--	--	--	--	--	
5/30/2006	--		10.00	30.00	8.82	50.28	--	--	--	--	--	--	--	--	
8/11/2006	--		10.00	30.00	9.38	49.72	--	--	--	--	--	--	--	--	
11/1/2006	--		10.00	30.00	9.75	49.35	--	--	--	--	--	--	--	--	
2/7/2007	--		10.00	30.00	9.00	50.10	--	--	--	--	--	--	--	--	
5/9/2007	--		10.00	30.00	8.12	50.98	--	--	--	--	--	--	--	--	
8/7/2007	--		10.00	30.00	9.75	49.35	--	--	--	--	--	--	--	--	
11/14/2007	--		10.00	30.00	8.91	50.19	--	--	--	--	--	--	--	--	
2/28/2008	--		10.00	30.00	6.73	52.37	--	--	--	--	--	--	--	--	
5/23/2008	--		10.00	30.00	--	--	--	--	--	--	--	--	--	--	j
8/13/2008	--		10.00	30.00	9.85	49.25	--	--	--	--	--	--	--	--	
11/19/2008	--		10.00	30.00	9.35	49.75	--	--	--	--	--	--	--	--	
2/10/2009	--		10.00	30.00	8.29	50.81	--	--	--	--	--	--	--	--	
5/7/2009	--		10.00	30.00	7.83	51.27	--	--	--	--	--	--	--	--	
9/3/2009	--		10.00	30.00	9.80	49.30	--	--	--	--	--	--	--	--	
3/23/2010	--		10.00	30.00	7.34	51.76	--	--	--	--	--	--	--	--	
8/16/2010	--		10.00	30.00	--	--	--	--	--	--	--	--	--	--	Unable to open
3/18/2011	--		10.00	30.00	6.00	53.10	--	--	--	--	--	--	--	--	
<b>8/18/2011</b>	--		<b>10.00</b>	<b>30.00</b>	<b>9.11</b>	<b>49.99</b>	--	--	--	--	--	--	--	--	

Symbols & Abbreviations:

-- = Not analyzed/applicable/measured/available  
< = Not detected at or above laboratory reporting limit  
DO = Dissolved oxygen  
DTW = Depth to water in ft bgs  
ft bgs = feet below ground surface  
GRO = Gasoline range organics  
GWE = Groundwater elevation measured in ft  
mg/L = Milligrams per liter  
MTBE = Methyl tert butyl ether  
NP = Not purged prior to sampling  
P = Purged prior to sampling  
TOC = Top of casing measured in ft  
TPH-g = Total petroleum hydrocarbons as gasoline  
µg/L = Micrograms per liter  
BTEX = Benzene, toluene, ethylbenzene and xylenes

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) was 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 quantitative range for GRO  
j = Well inaccessible  
k = Sample taken from VOA vial with air bubble > 6mm diameter  
l = Incorrect TOC utilized in 2nd and 3rd Quarter 2009 Groundwater Monitoring Report  
m = Well inaccessible; need traffic control

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 was 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

GRO analysis was completed by EPA method 8260B (C4-C12) for samples collected from the time period April 2006 through February 4, 2008. The analysis for GRO was changed to EPA method 8015B (C6-C12) for samples collected from the time period February 5, 2008 through the present

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

**Table 2. Summary of Fuel Additives Analytical Data**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>A-2</b>									
6/21/2000	--	--	<3.0	--	--	--	--	--	
9/20/2000	--	--	<2.5	--	--	--	--	--	
12/26/2000	--	--	<2.5	--	--	--	--	--	
3/20/2001	--	--	<2.5	--	--	--	--	--	
6/12/2001	--	--	<2.5	--	--	--	--	--	
9/23/2001	--	--	<2.5	--	--	--	--	--	
12/31/2001	--	--	<2.5	--	--	--	--	--	
3/21/2002	--	--	<2.5	--	--	--	--	--	
4/17/2002	--	--	3.1	--	--	--	--	--	
8/12/2002	--	--	<0.50	--	--	--	--	--	
12/6/2002	--	--	6	--	--	--	--	--	
1/30/2003	<40	<20	<0.50	<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	
8/11/2006	<300	<20	3.6	<0.50	<0.50	<0.50	<0.50	<0.50	
8/7/2007	<300	<20	3.4	<0.50	<0.50	<0.50	<0.50	<0.50	b
8/13/2008	<300	<10	19	<0.50	<0.50	<0.50	<0.50	<0.50	
9/3/2009	<300	<10	12	<0.50	<0.50	<0.50	<0.50	<0.50	d
8/16/2010	<100	<4.0	6.1	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>8/18/2011</b>	--	--	<b>0.74</b>	--	--	--	--	--	
<b>A-3</b>									
6/21/2000	--	--	46	--	--	--	--	--	
9/20/2000	--	--	89.6	--	--	--	--	--	
12/26/2000	--	--	7.11	--	--	--	--	--	
6/12/2001	--	--	86	--	--	--	--	--	
12/31/2001	--	--	60	--	--	--	--	--	
4/17/2002	--	--	45	--	--	--	--	--	
12/6/2002	--	--	150	--	--	--	--	--	
5/28/2003	<100	<20	43	<0.50	<0.50	24	--	--	



**Table 2. Summary of Fuel Additives Analytical Data**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>A-3 Cont.</b>									
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	b
08/11/2005	<100	<20	39	<0.50	<0.50	4.2	<0.50	<0.50	
02/15/2006	<300	<20	2.2	<0.50	<0.50	0.58	<0.50	<0.50	
8/11/2006	<300	<20	4.1	<0.50	<0.50	<0.50	<0.50	<0.50	
2/7/2007	<300	<20	0.58	<0.50	<0.50	<0.50	<0.50	<0.50	
8/7/2007	<300	<20	3.9	<0.50	<0.50	<0.50	<0.50	<0.50	b
2/28/2008	<300	<10	0.58	<0.50	<0.50	<0.50	<0.50	<0.50	
8/13/2008	<300	<10	0.55	<0.50	<0.50	<0.50	<0.50	<0.50	
2/10/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/3/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
3/23/2010	<100	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/16/2010	<100	<4.0	0.72	<0.50	<0.50	<0.50	<0.50	<0.50	
3/18/2011	--	--	<0.50	--	--	--	--	--	
<b>8/18/2011</b>	--	--	<b>&lt;0.50</b>	--	--	--	--	--	
<b>A-4</b>									
6/21/2000	--	--	2,000	--	--	--	--	--	
9/20/2000	--	--	1,940	--	--	--	--	--	
12/26/2000	--	--	1,210	--	--	--	--	--	
3/20/2001	--	--	<25	--	--	--	--	--	
6/12/2001	--	--	4,700	--	--	--	--	--	
9/23/2001	--	--	3,000	--	--	--	--	--	
12/31/2001	--	--	880	--	--	--	--	--	
3/21/2002	--	--	1,400	--	--	--	--	--	
4/17/2002	--	--	2,200	--	--	--	--	--	
8/12/2002	--	--	2,100	--	--	--	--	--	
12/6/2002	--	--	2,000	--	--	--	--	--	
1/30/2003	<4,000	<2,000	2,100	<50	<50	530	--	--	a
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	

**Table 2. Summary of Fuel Additives Analytical Data**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>A-4 Cont.</b>									
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	b
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	
11/18/2005	<500	1,400	310	<2.5	<2.5	98	<2.5	<2.5	b
02/15/2006	<1,500	2,700	910	<2.5	<2.5	270	<2.5	<2.5	
5/30/2006	<6,000	3,000	1,200	<10	<10	340	<10	<10	
8/11/2006	<6,000	3,200	1,200	<10	<10	350	<10	<10	
11/1/2006	<6,000	1,700	360	<10	<10	95	<10	--	b
2/7/2007	<6,000	3,000	1,500	<10	<10	460	<10	<10	
5/9/2007	<6,000	2,200	340	<10	<10	91	<10	<10	
8/7/2007	<3,000	1,800	510	<5.0	<5.0	140	<5.0	<5.0	b
11/14/2007	<300	600	280	<0.50	<0.50	90	<0.50	<0.50	
2/28/2008	<300	1,600	350	<0.50	<0.50	73	<0.50	<0.50	
5/23/2008	<12,000	2,500	1,000	<20	<20	270	<20	<20	
8/13/2008	<6,000	3,200	530	<10	<10	190	<10	<10	
11/19/2008	<6,000	2,000	430	<10	<10	140	<10	<10	
2/10/2009	<6,000	2,300	400	<10	<10	120	<10	<10	
5/7/2009	<300	11	9.9	<0.50	<0.50	2.0	<0.50	<0.50	
9/3/2009	<6,000	3,200	360	<10	<10	120	<10	<10	
3/23/2010	<100	1,600	150	<0.50	<0.50	45	<0.50	<0.50	
8/16/2010	<100	3,400	160	<0.50	<0.50	47	<0.50	<0.50	
3/18/2011	<250	1,400	66	<0.50	<0.50	18	<0.50	<0.50	
<b>8/18/2011</b>	<b>&lt;250</b>	<b>1,400</b>	<b>53</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>15</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>A-5</b>									
6/21/2000	--	--	2,000	--	--	--	--	--	
12/26/2000	--	--	1,200	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>A-5 Cont.</b>									
6/12/2001	--	--	3,200	--	--	--	--	--	
12/31/2001	--	--	60	--	--	--	--	--	
4/17/2002	--	--	3,200	--	--	--	--	--	
12/6/2002	--	--	330	--	--	--	--	--	
5/28/2003	<10,000	<2,000	1,500	<50	<50	620	--	--	
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	
02/15/2006	<300	460	5.1	<0.50	<0.50	4.2	<0.50	<0.50	
8/11/2006	<300	1,100	12	<0.50	<0.50	5.0	<0.50	<0.50	
2/7/2007	<300	600	1.5	<0.50	<0.50	<0.50	<0.50	<0.50	
8/7/2007	<300	79	0.81	<0.50	<0.50	<0.50	<0.50	<0.50	b
2/28/2008	<300	230	0.97	<0.50	<0.50	<0.50	<0.50	<0.50	
8/13/2008	<300	33	0.69	<0.50	<0.50	<0.50	<0.50	<0.50	
2/10/2009	<300	18	1.6	<0.50	<0.50	0.59	<0.50	<0.50	
9/3/2009	<300	<10	20	<0.50	<0.50	9.1	<0.50	<0.50	
3/23/2010	<100	33	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/16/2010	<100	35	7.9	<0.50	<0.50	3.1	<0.50	<0.50	
3/18/2011	--	--	<0.50	--	--	--	--	--	
<b>8/18/2011</b>	--	--	<b>0.81</b>	--	--	--	--	--	
<b>A-6</b>									
6/21/2000	--	--	<3.0	--	--	--	--	--	
9/20/2000	--	--	<2.5	--	--	--	--	--	
12/26/2000	--	--	<2.5	--	--	--	--	--	
3/20/2001	--	--	<2.5	--	--	--	--	--	
6/12/2001	--	--	7	--	--	--	--	--	
9/23/2001	--	--	<2.5	--	--	--	--	--	
12/31/2001	--	--	3.2	--	--	--	--	--	
3/21/2002	--	--	<2.5	--	--	--	--	--	
4/17/2002	--	--	3.1	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>A-6 Cont.</b>									
8/12/2002	--	--	<2.5	--	--	--	--	--	
11/14/2003	--	--	--	--	--	--	--	--	Well inaccessible
02/02/2004	--	--	--	--	--	--	--	--	Well inaccessible
05/04/2004	--	--	--	--	--	--	--	--	Well inaccessible
09/02/2004	--	--	--	--	--	--	--	--	Well inaccessible
11/10/2004	--	--	--	--	--	--	--	--	Well inaccessible
08/11/2005	--	--	--	--	--	--	--	--	Well inaccessible
8/11/2006	--	--	--	--	--	--	--	--	Well inaccessible
<b>A-7</b>									
6/21/2000	--	--	<3.0	--	--	--	--	--	
6/12/2001	--	--	<2.5	--	--	--	--	--	
4/17/2002	--	--	2.5	--	--	--	--	--	
5/28/2003	<100	<20	3.8	<0.50	<0.50	0.94	--	--	
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	
8/11/2006	<300	<20	3.6	<0.50	<0.50	0.91	0.54	<0.50	
8/7/2007	<300	<20	2.7	<0.50	<0.50	<0.50	<0.50	<0.50	b
8/13/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/3/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/16/2010	<100	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>8/18/2011</b>	--	--	<b>&lt;0.50</b>	--	--	--	--	--	
<b>A-8</b>									
6/21/2000	--	--	1,500	--	--	--	--	--	
9/20/2000	--	--	4,410	--	--	--	--	--	
12/26/2000	--	--	2,230	--	--	--	--	--	
3/20/2001	--	--	2,880	--	--	--	--	--	
6/12/2001	--	--	2,900	--	--	--	--	--	
9/23/2001	--	--	6,500	--	--	--	--	--	
12/31/2001	--	--	520	--	--	--	--	--	
3/21/2002	--	--	2,700	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>A-8 Cont.</b>									
4/17/2002	--	--	3,100	--	--	--	--	--	
8/12/2002	--	--	4,200	--	--	--	--	--	
12/6/2002	--	--	2,200	--	--	--	--	--	
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	
11/18/2005	<1,000	<200	340	<5.0	<5.0	120	<5.0	<5.0	b
02/15/2006	<6,000	880	1,100	<10	<10	330	<10	<10	
5/30/2006	<1,500	<100	140	<2.5	<2.5	43	<2.5	<2.5	
8/11/2006	<3,000	<200	290	<5.0	<5.0	92	<5.0	<5.0	
11/1/2006	<3,000	1,200	910	<5.0	<5.0	250	<5.0	<5.0	
2/7/2007	<15,000	<1,000	1,200	<25	<25	330	<25	<25	
5/9/2007	<1,500	<100	55	<2.5	<2.5	16	<2.5	<2.5	
8/7/2007	<1,500	140	430	<2.5	<2.5	160	<2.5	<2.5	b
11/14/2007	<300	28	100	<0.50	<0.50	44	<0.50	<0.50	
2/28/2008	<3,000	230	220	<5.0	<5.0	72	<5.0	<5.0	
5/23/2008	--	--	--	--	--	--	--	--	c
8/13/2008	<15,000	<500	250	<25	<25	86	<25	<25	
11/19/2008	<12,000	<400	230	<20	<20	100	<20	<20	
2/10/2009	<15,000	<500	320	<25	<25	120	<25	<25	
5/7/2009	<600	20	12	<1.0	<1.0	3.3	<1.0	<1.0	
9/3/2009	<15,000	<500	100	<25	<25	52	<25	<25	
3/23/2010	<100	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/16/2010	<100	<4.0	110	<0.50	<0.50	41	<0.50	<0.50	

**Table 2. Summary of Fuel Additives Analytical Data**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>A-8 Cont.</b>									
3/18/2011	<250	220	87	<0.50	<0.50	43	<0.50	<0.50	
<b>8/18/2011</b>	<b>&lt;2,500</b>	<b>&lt;40</b>	<b>120</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>57</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	
<b>A-9</b>									
6/21/2000	--	--	5	--	--	--	--	--	
9/20/2000	--	--	<2.5	--	--	--	--	--	
12/26/2000	--	--	<2.5	--	--	--	--	--	
3/20/2001	--	--	<2.5	--	--	--	--	--	
6/12/2001	--	--	4.8	--	--	--	--	--	
9/23/2001	--	--	<2.5	--	--	--	--	--	
12/31/2001	--	--	<2.5	--	--	--	--	--	
3/21/2002	--	--	<2.5	--	--	--	--	--	
4/17/2002	--	--	<2.5	--	--	--	--	--	
8/12/2002	--	--	<2.5	--	--	--	--	--	
12/6/2002	--	--	<2.0	--	--	--	--	--	
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	
8/11/2006	<300	<20	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	
8/7/2007	<300	<20	0.64	<0.50	<0.50	<0.50	<0.50	<0.50	b
8/13/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/3/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/16/2010	<100	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>8/18/2011</b>	--	--	<b>&lt;0.50</b>	--	--	--	--	--	
<b>A-10</b>									
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	
8/11/2006	<300	<20	46	<0.50	<0.50	7.3	<0.50	<0.50	
8/7/2007	<300	<20	8.9	<0.50	<0.50	<0.50	<0.50	<0.50	b

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**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>A-10 Cont.</b>									
8/13/2008	<300	<10	28	<0.50	<0.50	6.9	<0.50	<0.50	
8/16/2010	<100	<4.0	3.9	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>8/18/2011</b>	--	--	<b>2.1</b>	--	--	--	--	--	
<b>A-11</b>									
6/21/2000	--	--	4	--	--	--	--	--	
12/26/2000	--	--	<2.5	--	--	--	--	--	
6/12/2001	--	--	<2.5	--	--	--	--	--	
12/31/2001	--	--	<2.5	--	--	--	--	--	
4/17/2002	--	--	<2.5	--	--	--	--	--	
12/6/2002	--	--	<2.0	--	--	--	--	--	
5/28/2003	<100	<20	0.53	<0.50	<0.50	<0.50	--	--	
09/02/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/11/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/7/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
8/13/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/3/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/16/2010	<100	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>A-12</b>									
6/21/2000	--	--	18	--	--	--	--	--	
12/26/2000	--	--	17.3	--	--	--	--	--	
6/12/2001	--	--	25	--	--	--	--	--	
12/31/2001	--	--	9.5	--	--	--	--	--	
4/17/2002	--	--	29	--	--	--	--	--	
12/06/02	--	--	13	--	--	--	--	--	
5/28/2003	<100	<20	10	<0.50	<0.50	2.5	--	--	
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. Summary of Fuel Additives Analytical Data**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>A-12 Cont.</b>									
8/11/2006	<300	<20	7.4	<0.50	<0.50	2.5	<0.50	<0.50	
8/7/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
8/13/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/3/2009	<300	<10	3.6	<0.50	<0.50	1.0	<0.50	<0.50	
8/16/2010	<100	<4.0	3.6	<0.50	<0.50	0.85	<0.50	<0.50	
<b>A-13</b>									
4/17/2002	--	--	<2.5	--	--	--	--	--	
5/28/2003	<100	<20	<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	
<b>AR-1</b>									
<b>AR-2</b>									
<b>AR-3</b>									



Symbols & 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

µg/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

c = Well Inaccessible

d = Sample taken from VOA vial with air bubble > 6mm diameter

Notes:

All volatile organic compounds analyzed using EPA Method 8260B

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

**Table 3. Historical Groundwater Gradient - Direction and Magnitude**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

<b>Date Measured</b>	<b>Approximate Gradient Direction</b>	<b>Approximate Gradient Magnitude (ft/ft)</b>
6/21/2000	West-Southwest	0.031
9/20/2000	Southwest	0.013
12/26/2000	West	0.028
3/20/2001	West	0.046
6/12/2001	West	0.014
9/23/2001	West	0.012
12/31/2001	West	0.024
3/21/2002	West	0.047
4/17/2002	West	0.03
8/12/2002	West	0.016
12/6/2002	West	0.015
1/30/2003	West	Variable
5/28/2003	West	0.022 a
8/6/2003	West-Southwest	0.018
11/14/2003	West	0.02
2/2/2004	West	0.04
5/4/2004	West to North	0.025 to 0.033
9/2/2004	West	0.033
11/10/2004	West	0.031
2/2/2005	West-Southwest	0.04
5/9/2005	Northwest-Southwest	0.04
8/11/2005	West	0.02
11/18/2005	West	0.03
2/15/2006	Southwest	0.04
5/30/2006	West	0.05
8/11/2006	West	0.01
11/1/2006	West	0.01
2/7/2007	West	0.02
5/9/2007	West	0.05
8/7/2007	West	0.02
11/14/2007	West	0.02
2/28/2008	West	0.05
5/23/2008	West	0.03
8/13/2008	West	0.01
11/19/2008	West-Southwest	0.02
2/10/2009	West	0.02
5/7/2009	West	0.03
9/3/2009	West	0.01
3/23/2010	West	0.03
8/16/2010	West-Southwest	0.01
3/18/2011	West-Northwest	0.04
<b>8/18/2011</b>	<b>West</b>	<b>0.03</b>

**Table 3. Historical Groundwater Gradient - Direction and Magnitude**  
**ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA**

<b>Date Measured</b>	<b>Approximate Gradient Direction</b>	<b>Approximate Gradient Magnitude (ft/ft)</b>
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Footnotes:

a = Using wells AR-1 and A-9

Notes:

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

**APPENDIX A**  
**FIELD METHODS**

## BROADBENT & ASSOCIATES INC. FIELD PROCEDURES

### A.1 QUALITY ASSURANCE/QUALITY CONTROL FIELD PROTOCOLS

Field protocols have been implemented to enhance the accuracy and reliability of data collection, ground-water sample collection, transportation and laboratory analysis. Discussion of these protocols is provided below.

#### A.1.1 Water Level & Free-Product Measurement

Prior to ground-water sample collection from each monitoring well, the presence of separate-phase hydrocarbons (SPH or free product, FP) and depth to ground water shall be measured. Depth to ground water will be measured with a standard water level indicator that has been decontaminated prior to its use in accordance with procedures discussed below. Depth to groundwater will be gauged from a saw cut notch at the top of the well casing on each well head. Where FP is suspected, the initial gauging will be done with an oil-water interface probe. Once depth to water has been measured, the first retrieval of a new disposable bailer will be scrutinized for the presence of SPH/FP.

#### A.1.2 Monitoring Well Purging

Subsequent to measuring depth to ground water and prior to the collection of ground-water samples, purging of standing water within the monitoring well will be performed if called for. Consistent with the American Society for Testing and Materials (ASTM) Standard D6452-99, Section 7.1, the well will be purged of approximately three wetted-casing volumes of water, or until the well is dewatered, or until monitored field parameters indicate stabilization. The well will be purged using a pre-cleaned disposable bailer or submersible pump and disposable plastic tubing dedicated to each individual well. The well will be purged at a low flow rate to minimize the possibility of purging the well dry. So that the sample collected is representative of formation water, several field parameters will be monitored during the purging process. The sample will not be collected until these parameters (i.e. temperature, pH, and conductivity) have stabilized to within 10% of the previously measured value. If a well is purged dry, the sample should not be collected until the well has recovered to a minimum 50% of its initial volume.

#### A.1.3 Ground-Water Sample Collection

Once the wells are satisfactorily purged, water samples will be collected from each well. Water samples for organic analyses will be collected using a pre-cleaned, new, disposable bailer and transferred into the appropriate, new, laboratory-prepared containers such that no head space or air bubbles are present in the sample container (if appropriate to the analysis). The samples will be properly labeled (i.e. sample identification, sampler initials, date/time of collection, site location, requested analyses), placed in an ice chest with bagged ice or ice substitute, and delivered to the contracted analytical laboratory.

#### A.1.4 Surface Water Sample Collection

Unless specified otherwise, surface water samples will be collected from mid-depth in the central area of the associated surface water body. Water samples will be collected into appropriate, new, laboratory-prepared containers by dipping the container into the surface water unless the container has a preservative present. If a sample preservative is present, a new, cleaned non-preserved surrogate container will be used to obtain the sample which will then be directly transferred into a new, laboratory-provided, preserved container. Samples will be properly labeled and transported as described above.

#### A.1.5 Decontamination Protocol

Prior to use in each well, re-usable ground-water sampling equipment (e.g., water level indicator, oil-interface probe, purge pump, etc.) will be decontaminated. Decontamination protocol will include thoroughly cleaning with a solution of Liquinox, rinsing with clean water, and final rinsing with control water (potable water of known quality, distilled, or de-ionized water). Pre-cleaned new disposable bailers and disposable plastic tubing will be dedicated to each individual well.

#### A.1.6 Chain of Custody Procedures

Sample identification documents will be carefully prepared so identification and chain of custody can be maintained and sample disposition can be controlled. The sample identification documents include Chain-of-Custody (COC) records and Daily Field Report forms. Chain of custody procedures are outlined below.

##### Field Custody Procedures

The field sampler is individually responsible for the care and custody of the samples collected until they are properly transferred.

Samples will have unique labels. The information on these labels will correspond to the COC which shows the identification of individual samples and the contents of the shipping container. The original COC will accompany the shipment and a copy will be retained by the field sampler.

##### Transfer of Custody and Shipment

A COC will accompany samples during transfer and shipment. When transferring samples, the individual relinquishing and the individual receiving the samples will each sign, date, and note the time on the COC. This documents the sample custody transfer.

Samples will be packaged properly for shipment and dispatched to the appropriate laboratory for analysis, with a separate COC accompanying each shipment. Shipments will be accompanied by the original COC. Samples will be delivered by BAI personnel to the laboratory, or shipped by responsible courier. When a shipping courier is utilized, the sample shipment number will be identified on the COC.

#### A.1.7 Field Records

In addition to sample identification numbers and COC records, Daily Field Report records will be maintained by field staff to provide daily records of significant events, observations, and measurements during field investigations. These documents will contain observed information such as: the personnel present, site conditions, sampling procedures, measurement procedures, calibration records, equipment used, supplies used, etc. Field measurements will be recorded on the appropriate forms. Entries on the data forms will be signed and dated. The data forms will be kept as permanent file records.

**APPENDIX B**

**FIELD DATA SHEETS**

# FIELD DATA REPORT

**BROADBENT & ASSOCIATES, INC.**  
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

DATE: 8-18-11  
PERSONNEL: JR  
WEATHER: OVERCAST / SUNNY

PROJECT NO.: 09-88-624

COMMENTS:

Well ID	Time	MEASURING POINT	DTW (FT)	PRODUCT THICKNESS	COMMENTS							WELL HEAD CONDITION: VAULT, BOLTS, CAP, LOCK, ETC	
					Equip:	Geosquirt	Tubing	Bailers	DO	wli	Ec/pH		
					pH	Cond. (X100)	Temp. (C/F)	DO (mg/l)	Redox (mV)	Iron (mg/l)	Alk. (mg/l)		
A-2	1040	TWC	7.63										
A-3	1019		8.62										
A-4	0806		9.08										
A-5	0743		8.37										
A-7	0915		8.54										
A-8	0825		8.76										
A-9	0849		7.94										
A-10	0952		9.58										
A-11	-		-										
A-12	-		-										
A-13	-		-										
AR-1	0804			9.45									
AR-2	1121			3.77									
AR-3	0949		9.11										

NOT MONITORED; NEEDED TRAFFIC CONTROL  
NS; NEEDED TRAFFIC CONTROL  
POSSIBLY PAUSED QUOTE



**Groundwater Sampling Data Sheet**

Well I.D.: A-2  
 Project Name/Location: 4931 Project #: 09-88-624  
 Sampler's Name: JR Date: 8-18-04  
 Purging Equipment: Similar  
 Sampling Equipment: Similar

Casing Type: PVC

Casing Diameter: 4 inch

Total Well Depth: 19.41 feet

Depth to Water: - 7.63 feet

Water Column Thickness: = 11.78 feet

Unit Casing Volume\*: x 0.65 gallon / foot

Casing Water Volume: = 7.66 gallons

Casing Volume: x 3 each

Estimated Purge Volume: = 22.98 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.

3" = 0.37 gal/lin ft.

4" = 0.65 gal/lin ft.

6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
<u>0</u>	<u>1045</u>	<u>1.3</u>	<u>-72</u>		<u>3007</u>	<u>20.7</u>	<u>6.81</u>	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: 1050

Purged Dry? (Y/N) (N)

Comments: N/A

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**Groundwater Sampling Data Sheet**

Well I.D.: A-3  
 Project Name/Location: 4931 Project #: 09-58-624  
 Sampler's Name: NR Date: 8-18-11  
 Purging Equipment: Bailey  
 Sampling Equipment: Bailey

Casing Type: PVC  
 Casing Diameter: 4 inch  
 Total Well Depth: 16.18 feet  
 Depth to Water: 8.62 feet  
 Water Column Thickness: 7.56 feet  
 Unit Casing Volume\*: x 0.65 gallon / foot  
 Casing Water Volume: = 2.91 gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = 14.73 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	1025	1.26	35		474.9	20.9	6.85	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 0 gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: 1030

Purged Dry? (Y/N) \_\_\_\_\_

Comments: NPA 5

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**Groundwater Sampling Data Sheet**

Well I.D.: A-4  
 Project Name/Location: 4931 Project #: 09-88-624  
 Sampler's Name: JR Date: 8-18-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC

Casing Diameter: 4 inchTotal Well Depth: 19.4 feetDepth to Water: 9.08 feetWater Column Thickness: = 10.32 feetUnit Casing Volume\*: x 0.65 gallon / footCasing Water Volume: = 6.70 gallonsCasing Volume: x 3 eachEstimated Purge Volume: = 20.10 gallons**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.

3" = 0.37 gal/lin ft.

4" = 0.65 gal/lin ft.

6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	0811	6.64	-19		968.7	19.8	7.00	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: 0813

Purged Dry? (Y/N)

Comments: NPQS

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**Groundwater Sampling Data Sheet**

Well I.D.: A-5  
 Project Name/Location: 4931 Project #: 09-08-024  
 Sampler's Name: JB Date: 8-18-11  
 Purging Equipment: Boiler  
 Sampling Equipment: Boiler

Casing Type: PVC  
 Casing Diameter: 3 inch  
 Total Well Depth: 24.31 feet  
 Depth to Water: 8.37 feet  
 Water Column Thickness: = 15.94 feet  
 Unit Casing Volume\*: x 0.37 gallon / foot  
 Casing Water Volume: = 5.90 gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = 17.70 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	0749	1.42	-31		867.2	19.2	7.00	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons  
 Depth to Water at Sample Collection: \_\_\_\_\_ feet  
 Sample Collection Time: 0750

Purged Dry? (Y/N) (N)

Comments: NPA 3'

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**Groundwater Sampling Data Sheet**

Well I.D.: A-7  
 Project Name/Location: 4931 Project #: 09-88-624  
 Sampler's Name: JR Date: 8-18-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC  
 Casing Diameter: 3 inch  
 Total Well Depth: \_\_\_\_\_ feet  
 Depth to Water: 8.54 feet  
 Water Column Thickness: = \_\_\_\_\_ feet  
 Unit Casing Volume\*: x 0.37 gallon / foot  
 Casing Water Volume: = \_\_\_\_\_ gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = \_\_\_\_\_ gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	0919	098	17		5919	19.2	7.11	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons  
 Depth to Water at Sample Collection: \_\_\_\_\_ feet  
 Sample Collection Time: 0923

Purged Dry? (Y/N) (N)

Comments: NP03-  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**Groundwater Sampling Data Sheet**

Well I.D.: A-8  
 Project Name/Location: 4931 Project #: 09-88-624  
 Sampler's Name: JD Date: 8-18-11  
 Purging Equipment: Boiler  
 Sampling Equipment: Boiler

Casing Type: PVC  
 Casing Diameter: 3 inch  
 Total Well Depth: 22.43 feet  
 Depth to Water: 8.76 feet  
 Water Column Thickness: = 13.67 feet  
 Unit Casing Volume\*: x 0.37 gallon / foot  
 Casing Water Volume: = 5.06 gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = 15.18 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	0832	1.38	-83		1031	19.2	6.84	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons  
 Depth to Water at Sample Collection: \_\_\_\_\_ feet  
 Sample Collection Time: 0835 Purged Dry? (Y/N) (N)

Comments: NPC 3'  
- HC OOCR  
- Slit

**Groundwater Sampling Data Sheet**

Well I.D.: A-9  
 Project Name/Location: 4931 Project #: 09-88-624  
 Sampler's Name: JR Date: 8-18-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC  
 Casing Diameter: 6 inch  
 Total Well Depth: 17.76 feet  
 Depth to Water: 7.94 feet  
 Water Column Thickness: 9.72 feet  
 Unit Casing Volume\*: 1.47 gallon / foot  
 Casing Water Volume: 14.28 gallons  
 Casing Volume: 3 each  
 Estimated Purge Volume: 42.84 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	0900	0.85	-4		636.7	19.0	7.28	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: 0905

Purged Dry? (Y/N)  N

Comments: NP @ 3'

- A LOT OF DIRT/DEBRIS IN WELL MAKING  
IT DIFFICULT FOR BAILER TO OBTAIN WATER  
AS WELL AS TO DROP A BAILER DOWN  
THE WELL

**Groundwater Sampling Data Sheet**

Well I.D.: A-10  
 Project Name/Location: 4931 Project #: 09-85-624  
 Sampler's Name: JR Date: 8-18-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC  
 Casing Diameter: 4 inch  
 Total Well Depth: 37.95 feet  
 Depth to Water: 9.56 feet  
 Water Column Thickness: 27.97 feet  
 Unit Casing Volume\*: x 0.65 gallon / foot  
 Casing Water Volume: = 18.18 gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = 54.54 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
<u>0</u>	<u>1002</u>	<u>0.79</u>	<u>115</u>		<u>475.2</u>	<u>19.5</u>	<u>6.74</u>	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons  
 Depth to Water at Sample Collection: \_\_\_\_\_ feet  
 Sample Collection Time: 1009

Purged Dry? (Y/N) (N)

Comments: NPAS

- BLACK & ORANGE PARTICULATES IN WATER



**Groundwater Sampling Data Sheet**

Well I.D.: A-12  
 Project Name/Location: 4931 Project #: 09-88-624  
 Sampler's Name: JR Date: 05-18-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC  
 Casing Diameter: 3 inch  
 Total Well Depth: 29.81 feet  
 Depth to Water: - feet  
 Water Column Thickness: = feet  
 Unit Casing Volume\*: x gallon / foot  
 Casing Water Volume: = gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons  
 Depth to Water at Sample Collection: \_\_\_\_\_ feet  
 Sample Collection Time: \_\_\_\_\_ Purged Dry? (Y/N)

Comments: IN THE STREET & NO TRAFFIC CONTROL;  
DID NOT SAMPLE

**APPENDIX C**

**LABORATORY REPORT  
AND CHAIN-OF-CUSTODY DOCUMENTATION**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

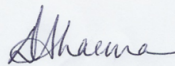
## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica San Francisco  
1220 Quarry Lane  
Pleasanton, CA 94566  
Tel: (925)484-1919

TestAmerica Job ID: 720-37011-1  
Client Project/Site: BP #4931, Oakland

For:  
ARCADIS U.S., Inc.  
100 Montgomery Street  
Suite 300  
San Francisco, California 94104

Attn: Hollis Phillips



Authorized for release by:  
08/29/2011 09:36:29 AM

Dimple Sharma  
Project Manager I  
[dimple.sharma@testamericainc.com](mailto:dimple.sharma@testamericainc.com)

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# Definitions/Glossary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit (Dioxin)
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or method detection limit if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Case Narrative

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

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**Job ID: 720-37011-1**

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**Laboratory: TestAmerica San Francisco**

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**Narrative**

**Job Narrative**  
720-37011-1

**Comments**

No additional comments.

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

No analytical or quality issues were noted.

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# Detection Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

## Client Sample ID: A-2 (8/18/11)

Lab Sample ID: 720-37011-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.74		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA

## Client Sample ID: A-3 (8/18/11)

Lab Sample ID: 720-37011-2

No Detections

## Client Sample ID: A-4 (8/18/11)

Lab Sample ID: 720-37011-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	53		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Benzene	1.9		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO) -C6-C12	650		50		ug/L	1		8260B/CA_LUFTM	Total/NA
TBA	1400		4.0		ug/L	1		8260B/CA_LUFTM	Total/NA
TAME	15		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA

## Client Sample ID: A-5 (8/18/11)

Lab Sample ID: 720-37011-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.81		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA

## Client Sample ID: A-7 (8/18/11)

Lab Sample ID: 720-37011-5

No Detections

## Client Sample ID: A-8 (8/18/11)

Lab Sample ID: 720-37011-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	120		5.0		ug/L	10		8260B/CA_LUFTM	Total/NA
Benzene	1500		5.0		ug/L	10		8260B/CA_LUFTM	Total/NA
Ethylbenzene	5.4		5.0		ug/L	10		8260B/CA_LUFTM	Total/NA
Toluene	13		5.0		ug/L	10		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO) -C6-C12	3300		500		ug/L	10		8260B/CA_LUFTM	Total/NA
TAME	57		5.0		ug/L	10		8260B/CA_LUFTM	Total/NA

## Client Sample ID: A-9 (8/18/11)

Lab Sample ID: 720-37011-7

No Detections

## Client Sample ID: A-10 (8/18/11)

Lab Sample ID: 720-37011-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	2.1		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

**Client Sample ID: A-2 (8/18/11)**

**Lab Sample ID: 720-37011-1**

**Date Collected: 08/18/11 10:50**

**Matrix: Water**

**Date Received: 08/18/11 12:35**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74		0.50		ug/L			08/20/11 20:51	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	85		67 - 130					08/20/11 20:51	1
1,2-Dichloroethane-d4 (Surr)	90		67 - 130					08/20/11 20:51	1
Toluene-d8 (Surr)	88		70 - 130					08/20/11 20:51	1





# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

**Client Sample ID: A-3 (8/18/11)**

**Lab Sample ID: 720-37011-2**

**Date Collected: 08/18/11 10:30**

**Matrix: Water**

**Date Received: 08/18/11 12:35**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			08/20/11 17:55	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	82		67 - 130					08/20/11 17:55	1
1,2-Dichloroethane-d4 (Surr)	98		67 - 130					08/20/11 17:55	1
Toluene-d8 (Surr)	90		70 - 130					08/20/11 17:55	1



# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

**Client Sample ID: A-4 (8/18/11)**

**Lab Sample ID: 720-37011-3**

Date Collected: 08/18/11 08:13

Matrix: Water

Date Received: 08/18/11 12:35

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>MTBE</b>	<b>53</b>		0.50		ug/L			08/19/11 13:16	1
<b>Benzene</b>	<b>1.9</b>		0.50		ug/L			08/19/11 13:16	1
EDB	ND		0.50		ug/L			08/19/11 13:16	1
1,2-DCA	ND		0.50		ug/L			08/19/11 13:16	1
Ethylbenzene	ND		0.50		ug/L			08/19/11 13:16	1
Toluene	ND		0.50		ug/L			08/19/11 13:16	1
Xylenes, Total	ND		1.0		ug/L			08/19/11 13:16	1
<b>Gasoline Range Organics (GRO)</b>	<b>650</b>		50		ug/L			08/19/11 13:16	1
<b>-C6-C12</b>									
<b>TBA</b>	<b>1400</b>		4.0		ug/L			08/19/11 13:16	1
Ethanol	ND		250		ug/L			08/19/11 13:16	1
DIPE	ND		0.50		ug/L			08/19/11 13:16	1
<b>TAME</b>	<b>15</b>		0.50		ug/L			08/19/11 13:16	1
Ethyl t-butyl ether	ND		0.50		ug/L			08/19/11 13:16	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	106		67 - 130					08/19/11 13:16	1
1,2-Dichloroethane-d4 (Surr)	93		67 - 130					08/19/11 13:16	1
Toluene-d8 (Surr)	106		70 - 130					08/19/11 13:16	1

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

**Client Sample ID: A-5 (8/18/11)**

**Lab Sample ID: 720-37011-4**

**Date Collected: 08/18/11 07:50**

**Matrix: Water**

**Date Received: 08/18/11 12:35**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Methyl tert-butyl ether</b>	<b>0.81</b>		0.50		ug/L			08/20/11 19:23	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			08/20/11 19:23	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		67 - 130		08/20/11 19:23	1
1,2-Dichloroethane-d4 (Surr)	97		67 - 130		08/20/11 19:23	1
Toluene-d8 (Surr)	93		70 - 130		08/20/11 19:23	1



# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

**Client Sample ID: A-7 (8/18/11)**

**Lab Sample ID: 720-37011-5**

**Date Collected: 08/18/11 09:23**

**Matrix: Water**

**Date Received: 08/18/11 12:35**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			08/20/11 19:52	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	85		67 - 130					08/20/11 19:52	1
1,2-Dichloroethane-d4 (Surr)	96		67 - 130					08/20/11 19:52	1
Toluene-d8 (Surr)	91		70 - 130					08/20/11 19:52	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

**Client Sample ID: A-8 (8/18/11)**

**Lab Sample ID: 720-37011-6**

Date Collected: 08/18/11 09:35

Matrix: Water

Date Received: 08/18/11 12:35

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>MTBE</b>	<b>120</b>		5.0		ug/L			08/19/11 14:48	10
<b>Benzene</b>	<b>1500</b>		5.0		ug/L			08/19/11 14:48	10
EDB	ND		5.0		ug/L			08/19/11 14:48	10
1,2-DCA	ND		5.0		ug/L			08/19/11 14:48	10
<b>Ethylbenzene</b>	<b>5.4</b>		5.0		ug/L			08/19/11 14:48	10
<b>Toluene</b>	<b>13</b>		5.0		ug/L			08/19/11 14:48	10
Xylenes, Total	ND		10		ug/L			08/19/11 14:48	10
<b>Gasoline Range Organics (GRO)</b>	<b>3300</b>		500		ug/L			08/19/11 14:48	10
<b>-C6-C12</b>									
TBA	ND		40		ug/L			08/19/11 14:48	10
Ethanol	ND		2500		ug/L			08/19/11 14:48	10
DIPE	ND		5.0		ug/L			08/19/11 14:48	10
<b>TAME</b>	<b>57</b>		5.0		ug/L			08/19/11 14:48	10
Ethyl t-butyl ether	ND		5.0		ug/L			08/19/11 14:48	10
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	103		67 - 130					08/19/11 14:48	10
1,2-Dichloroethane-d4 (Surr)	87		67 - 130					08/19/11 14:48	10
Toluene-d8 (Surr)	105		70 - 130					08/19/11 14:48	10

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

**Client Sample ID: A-9 (8/18/11)**

**Lab Sample ID: 720-37011-7**

**Date Collected: 08/18/11 09:05**

**Matrix: Water**

**Date Received: 08/18/11 12:35**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			08/20/11 20:21	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	83		67 - 130					08/20/11 20:21	1
1,2-Dichloroethane-d4 (Surr)	91		67 - 130					08/20/11 20:21	1
Toluene-d8 (Surr)	90		70 - 130					08/20/11 20:21	1



# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

**Client Sample ID: A-10 (8/18/11)**

**Lab Sample ID: 720-37011-8**

**Date Collected: 08/18/11 10:05**

**Matrix: Water**

**Date Received: 08/18/11 12:35**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	2.1		0.50		ug/L			08/22/11 14:19	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	89		67 - 130					08/22/11 14:19	1
1,2-Dichloroethane-d4 (Surr)	97		67 - 130					08/22/11 14:19	1
Toluene-d8 (Surr)	97		70 - 130					08/22/11 14:19	1

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS

**Lab Sample ID: MB 720-97554/10**

**Matrix: Water**

**Analysis Batch: 97554**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			08/19/11 10:30	1
Benzene	ND		0.50		ug/L			08/19/11 10:30	1
EDB	ND		0.50		ug/L			08/19/11 10:30	1
1,2-DCA	ND		0.50		ug/L			08/19/11 10:30	1
Ethylbenzene	ND		0.50		ug/L			08/19/11 10:30	1
Toluene	ND		0.50		ug/L			08/19/11 10:30	1
Xylenes, Total	ND		1.0		ug/L			08/19/11 10:30	1
Gasoline Range Organics (GRO)	ND		50		ug/L			08/19/11 10:30	1
-C6-C12									
TBA	ND		4.0		ug/L			08/19/11 10:30	1
Ethanol	ND		250		ug/L			08/19/11 10:30	1
DIPE	ND		0.50		ug/L			08/19/11 10:30	1
TAME	ND		0.50		ug/L			08/19/11 10:30	1
Ethyl t-butyl ether	ND		0.50		ug/L			08/19/11 10:30	1

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	89		67 - 130		08/19/11 10:30	1
1,2-Dichloroethane-d4 (Surr)	92		67 - 130		08/19/11 10:30	1
Toluene-d8 (Surr)	96		70 - 130		08/19/11 10:30	1

**Lab Sample ID: LCS 720-97554/5**

**Matrix: Water**

**Analysis Batch: 97554**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
MTBE	25.0	24.8		ug/L		99	62 - 130
Benzene	25.0	25.6		ug/L		102	82 - 127
EDB	25.0	24.3		ug/L		97	70 - 130
1,2-DCA	25.0	21.3		ug/L		85	70 - 126
Ethylbenzene	25.0	25.3		ug/L		101	86 - 135
Toluene	25.0	26.0		ug/L		104	83 - 129
m-Xylene & p-Xylene	50.0	52.3		ug/L		105	70 - 142
o-Xylene	25.0	26.5		ug/L		106	89 - 136
TBA	500	439		ug/L		88	82 - 116
Ethanol	500	442		ug/L		88	31 - 216
DIPE	25.0	27.6		ug/L		110	74 - 155
TAME	25.0	24.5		ug/L		98	79 - 129
Ethyl t-butyl ether	25.0	23.0		ug/L		92	70 - 130

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	90		67 - 130
Toluene-d8 (Surr)	103		70 - 130



# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-97554/7**

**Matrix: Water**

**Analysis Batch: 97554**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	393		ug/L		79	58 - 106

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	103		67 - 130
1,2-Dichloroethane-d4 (Surr)	93		67 - 130
Toluene-d8 (Surr)	105		70 - 130

**Lab Sample ID: LCSD 720-97554/6**

**Matrix: Water**

**Analysis Batch: 97554**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
MTBE	25.0	26.4		ug/L		106	62 - 130	6	20
Benzene	25.0	25.7		ug/L		103	82 - 127	0	20
EDB	25.0	25.6		ug/L		102	70 - 130	5	20
1,2-DCA	25.0	21.8		ug/L		87	70 - 126	2	20
Ethylbenzene	25.0	24.7		ug/L		99	86 - 135	2	20
Toluene	25.0	25.6		ug/L		102	83 - 129	2	20
m-Xylene & p-Xylene	50.0	51.1		ug/L		102	70 - 142	2	20
o-Xylene	25.0	26.1		ug/L		104	89 - 136	2	20
TBA	500	433		ug/L		87	82 - 116	2	20
Ethanol	500	396		ug/L		79	31 - 216	11	30
DIPE	25.0	28.6		ug/L		114	74 - 155	4	20
TAME	25.0	26.0		ug/L		104	79 - 129	6	20
Ethyl t-butyl ether	25.0	24.2		ug/L		97	70 - 130	5	20

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	91		67 - 130
Toluene-d8 (Surr)	104		70 - 130

**Lab Sample ID: LCSD 720-97554/8**

**Matrix: Water**

**Analysis Batch: 97554**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12	500	396		ug/L		79	58 - 106	1	20

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	92		67 - 130
Toluene-d8 (Surr)	105		70 - 130

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: 720-37011-3 MS**

**Matrix: Water**

**Analysis Batch: 97554**

**Client Sample ID: A-4 (8/18/11)**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	% Rec	% Rec.	
	Result	Qualifier		Result	Qualifier				Limits	Limits
MTBE	53		25.0	78.4		ug/L		103	60 - 138	
Benzene	1.9		25.0	27.3		ug/L		102	60 - 140	
EDB	ND		25.0	25.4		ug/L		101	60 - 140	
1,2-DCA	ND		25.0	20.5		ug/L		82	60 - 140	
Ethylbenzene	ND		25.0	23.7		ug/L		94	60 - 140	
Toluene	ND		25.0	25.1		ug/L		99	60 - 140	
m-Xylene & p-Xylene	ND		50.0	49.3		ug/L		98	60 - 140	
o-Xylene	ND		25.0	25.4		ug/L		100	60 - 140	
TBA	1400		500	1840		ug/L		89	60 - 140	
Ethanol	ND		500	415		ug/L		83	60 - 140	
DIPE	ND		25.0	28.6		ug/L		114	60 - 140	
TAME	15		25.0	41.7		ug/L		107	60 - 140	
Ethyl t-butyl ether	ND		25.0	24.2		ug/L		96	60 - 140	

Surrogate	MS	MS	Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	87		67 - 130
Toluene-d8 (Surr)	107		70 - 130

**Lab Sample ID: 720-37011-3 MSD**

**Matrix: Water**

**Analysis Batch: 97554**

**Client Sample ID: A-4 (8/18/11)**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	% Rec	% Rec.		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
MTBE	53		25.0	81.9		ug/L		117	60 - 138	4	20	
Benzene	1.9		25.0	26.9		ug/L		100	60 - 140	1	20	
EDB	ND		25.0	25.4		ug/L		101	60 - 140	0	20	
1,2-DCA	ND		25.0	20.9		ug/L		84	60 - 140	2	20	
Ethylbenzene	ND		25.0	23.5		ug/L		93	60 - 140	1	20	
Toluene	ND		25.0	24.6		ug/L		97	60 - 140	2	20	
m-Xylene & p-Xylene	ND		50.0	48.8		ug/L		97	60 - 140	1	20	
o-Xylene	ND		25.0	25.2		ug/L		100	60 - 140	1	20	
TBA	1400		500	1810		ug/L		82	60 - 140	2	20	
Ethanol	ND		500	446		ug/L		89	60 - 140	7	20	
DIPE	ND		25.0	28.6		ug/L		114	60 - 140	0	20	
TAME	15		25.0	42.0		ug/L		108	60 - 140	1	20	
Ethyl t-butyl ether	ND		25.0	24.4		ug/L		97	60 - 140	1	20	

Surrogate	MSD	MSD	Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	89		67 - 130
Toluene-d8 (Surr)	103		70 - 130

**Lab Sample ID: MB 720-97622/4**

**Matrix: Water**

**Analysis Batch: 97622**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Methyl tert-butyl ether	ND		0.50		ug/L			08/20/11 11:10	1

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-97622/4**

**Matrix: Water**

**Analysis Batch: 97622**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			08/20/11 11:10	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		67 - 130					08/20/11 11:10	1
1,2-Dichloroethane-d4 (Surr)	91		67 - 130					08/20/11 11:10	1
Toluene-d8 (Surr)	96		70 - 130					08/20/11 11:10	1

**Lab Sample ID: LCS 720-97622/5**

**Matrix: Water**

**Analysis Batch: 97622**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS LCS		Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Methyl tert-butyl ether	25.0	24.9		ug/L		100	62 - 130
Surrogate	% Recovery	Qualifier	Limits				
4-Bromofluorobenzene	96		67 - 130				
1,2-Dichloroethane-d4 (Surr)	89		67 - 130				
Toluene-d8 (Surr)	100		70 - 130				

**Lab Sample ID: LCS 720-97622/7**

**Matrix: Water**

**Analysis Batch: 97622**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS LCS		Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Gasoline Range Organics (GRO) -C6-C12	500	383		ug/L		77	58 - 106
Surrogate	% Recovery	Qualifier	Limits				
4-Bromofluorobenzene	97		67 - 130				
1,2-Dichloroethane-d4 (Surr)	93		67 - 130				
Toluene-d8 (Surr)	101		70 - 130				

**Lab Sample ID: LCSD 720-97622/6**

**Matrix: Water**

**Analysis Batch: 97622**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD LCSD		Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
		Result	Qualifier						
Methyl tert-butyl ether	25.0	25.5		ug/L		102	62 - 130	2	20
Surrogate	% Recovery	Qualifier	Limits						
4-Bromofluorobenzene	98		67 - 130						
1,2-Dichloroethane-d4 (Surr)	90		67 - 130						
Toluene-d8 (Surr)	100		70 - 130						

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-97622/8**

**Matrix: Water**

**Analysis Batch: 97622**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12	500	384		ug/L		77	58 - 106	0	20
<b>Surrogate</b>	<b>% Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene	97		67 - 130						
1,2-Dichloroethane-d4 (Surr)	93		67 - 130						
Toluene-d8 (Surr)	101		70 - 130						

**Lab Sample ID: 720-37011-2 MS**

**Matrix: Water**

**Analysis Batch: 97622**

**Client Sample ID: A-3 (8/18/11)**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
Methyl tert-butyl ether	ND		25.0	27.0		ug/L		107	60 - 138
<b>Surrogate</b>	<b>% Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene	99		67 - 130						
1,2-Dichloroethane-d4 (Surr)	94		67 - 130						
Toluene-d8 (Surr)	98		70 - 130						

**Lab Sample ID: 720-37011-2 MSD**

**Matrix: Water**

**Analysis Batch: 97622**

**Client Sample ID: A-3 (8/18/11)**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	ND		25.0	26.2		ug/L		103	60 - 138	3	20
<b>Surrogate</b>	<b>% Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
4-Bromofluorobenzene	99		67 - 130								
1,2-Dichloroethane-d4 (Surr)	91		67 - 130								
Toluene-d8 (Surr)	97		70 - 130								

**Lab Sample ID: MB 720-97654/4**

**Matrix: Water**

**Analysis Batch: 97654**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			08/22/11 10:51	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	88		67 - 130					08/22/11 10:51	1
1,2-Dichloroethane-d4 (Surr)	92		67 - 130					08/22/11 10:51	1
Toluene-d8 (Surr)	96		70 - 130					08/22/11 10:51	1

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-97654/5**

**Matrix: Water**

**Analysis Batch: 97654**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Methyl tert-butyl ether	25.0	26.2		ug/L		105	62 - 130

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	92		67 - 130
Toluene-d8 (Surr)	103		70 - 130

**Lab Sample ID: LCSD 720-97654/6**

**Matrix: Water**

**Analysis Batch: 97654**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	27.2		ug/L		109	62 - 130	4	20

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	92		67 - 130
Toluene-d8 (Surr)	103		70 - 130

# QC Association Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

## GC/MS VOA

### Analysis Batch: 97554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-97554/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-97554/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-97554/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-97554/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-97554/10	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-3	A-4 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-3 MS	A-4 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-3 MSD	A-4 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-6	A-8 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	

### Analysis Batch: 97622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-97622/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-97622/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-97622/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-97622/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-97622/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-2	A-3 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-2 MS	A-3 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-2 MSD	A-3 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-4	A-5 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-5	A-7 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-7	A-9 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-1	A-2 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	

### Analysis Batch: 97654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-97654/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-97654/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-97654/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
720-37011-8	A-10 (8/18/11)	Total/NA	Water	8260B/CA_LUFT MS	

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

## Client Sample ID: A-2 (8/18/11)

Date Collected: 08/18/11 10:50  
Date Received: 08/18/11 12:35

## Lab Sample ID: 720-37011-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	97622	08/20/11 20:51	AC	TAL SF

## Client Sample ID: A-3 (8/18/11)

Date Collected: 08/18/11 10:30  
Date Received: 08/18/11 12:35

## Lab Sample ID: 720-37011-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	97622	08/20/11 17:55	AC	TAL SF

## Client Sample ID: A-4 (8/18/11)

Date Collected: 08/18/11 08:13  
Date Received: 08/18/11 12:35

## Lab Sample ID: 720-37011-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	97554	08/19/11 13:16	AC	TAL SF

## Client Sample ID: A-5 (8/18/11)

Date Collected: 08/18/11 07:50  
Date Received: 08/18/11 12:35

## Lab Sample ID: 720-37011-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	97622	08/20/11 19:23	AC	TAL SF

## Client Sample ID: A-7 (8/18/11)

Date Collected: 08/18/11 09:23  
Date Received: 08/18/11 12:35

## Lab Sample ID: 720-37011-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	97622	08/20/11 19:52	AC	TAL SF

## Client Sample ID: A-8 (8/18/11)

Date Collected: 08/18/11 09:35  
Date Received: 08/18/11 12:35

## Lab Sample ID: 720-37011-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		10	97554	08/19/11 14:48	AC	TAL SF

## Client Sample ID: A-9 (8/18/11)

Date Collected: 08/18/11 09:05  
Date Received: 08/18/11 12:35

## Lab Sample ID: 720-37011-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	97622	08/20/11 20:21	AC	TAL SF

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

**Client Sample ID: A-10 (8/18/11)**

**Lab Sample ID: 720-37011-8**

**Date Collected: 08/18/11 10:05**

**Matrix: Water**

**Date Received: 08/18/11 12:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	97654	08/22/11 14:19	YB	TAL SF

**Laboratory References:**

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

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# Certification Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

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Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

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Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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# Method Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTM S	8260B / CA LUFT MS	SW846	TAL SF

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

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# Sample Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #4931, Oakland

TestAmerica Job ID: 720-37011-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-37011-1	A-2 (8/18/11)	Water	08/18/11 10:50	08/18/11 12:35
720-37011-2	A-3 (8/18/11)	Water	08/18/11 10:30	08/18/11 12:35
720-37011-3	A-4 (8/18/11)	Water	08/18/11 08:13	08/18/11 12:35
720-37011-4	A-5 (8/18/11)	Water	08/18/11 07:50	08/18/11 12:35
720-37011-5	A-7 (8/18/11)	Water	08/18/11 09:23	08/18/11 12:35
720-37011-6	A-8 (8/18/11)	Water	08/18/11 09:35	08/18/11 12:35
720-37011-7	A-9 (8/18/11)	Water	08/18/11 09:05	08/18/11 12:35
720-37011-8	A-10 (8/18/11)	Water	08/18/11 10:05	08/18/11 12:35



San Francisco  
1220 Quarry Lane

Pleasanton, CA 94566  
phone 925.484.1919 fax 925.600.3002

# 720-37011 Chain of Custody Record

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING  
183174  
TestAmerica Laboratories, Inc.

08/29/2011

<b>Client Contact</b> Broadbent and Associates, Inc. Address: 1324 Mangrove Ave. Suite 212 City/State/Zip: Chico, CA 95926 Phone: (530) 566-1400 FAX: (530) 566-1401 Project Name: BP 4931 Site: 731 W. MacArthur Boulevard, Oakland P O# GP09BPNA.C110		<b>Project Manager: Jason Duda</b> Tel/Fax: 530-566-1400/530-566-1401		<b>Site Contact:</b> Lab Contact: Dimple Sharma		<b>Date:</b> Carrier:		<b>COC No:</b> _____ of _____ COCs	
		<b>Analysis Turnaround Time</b> Calendar ( C ) or Work Days ( W ) TAT if different from Below _____ Standard <input checked="" type="checkbox"/> <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Filtered Sample GRO by 8260B BTEX and 5 Oxy's by 8260B EDB, 1,2-DCA and Ethanol by 8260B MTBE by 8260B				Job No.	
								SDG No.	
<b>Sample Identification</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type</b>	<b>Matrix</b>	<b># of Cont.</b>	<b>Sample Specific Notes:</b>		
A-2 (8/18/11)	8-18-11	1050	GRAB	AQ	-	-			
A-3 (8/18/11)		1030	GRAB	AQ	-	-			
A-4 (8/18/11)		0813	GRAB	AQ	-	x x x			
A-5 (8/18/11)		0750	GRAB	AQ	-	x			
A-7 (8/18/11)		0923	GRAB	AQ	-	-			
A-8 (8/18/11)		0835	GRAB	AQ	-	x x x			
A-9 (8/18/11)		0905	GRAB	AQ	-	-			
A-10 (8/18/11)		1005	GRAB	AQ	-	-			
A-12 (8/18/11)			GRAB	AQ	-	-			
TB-4931-08182011		8-18-11	1100						ON HAND

8-20-11  
4321  
4321

9

**Preservation Used:** 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other \_\_\_\_\_

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month )**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements & Comments:

Relinquished by: <i>James Ram</i>	Company: <i>BAI</i>	Date/Time: <i>8/18/11 12:35</i>	Received by: <i>[Signature]</i>	Company: <i>CAST</i>	Date/Time: <i>8/18/11 12:35</i>
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Temp 5.4°C

## Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-37011-1

**Login Number: 37011**

**List Source: TestAmerica San Francisco**

**List Number: 1**

**Creator: Apostol, Anita**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**APPENDIX D**

**GEOTRACKER UPLOAD CONFIRMATION RECEIPTS**

---

STATE WATER RESOURCES CONTROL BOARD  
**GEOTRACKER ESI**

UPLOADING A EDF FILE

**SUCCESS**

Processing is complete. No errors were found!  
Your file has been successfully submitted!

<b><u>Submittal Type:</u></b>	EDF - Monitoring Report - Semi-Annually
<b><u>Submittal Title:</u></b>	3Q11 GW Monitoring
<b><u>Facility Global ID:</u></b>	T0600100110
<b><u>Facility Name:</u></b>	ARCO #04931
<b><u>File Name:</u></b>	720-37011-1.zip
<b><u>Organization Name:</u></b>	Broadbent & Associates, Inc.
<b><u>Username:</u></b>	BROADBENT-C
<b><u>IP Address:</u></b>	67.118.40.90
<b><u>Submittal Date/Time:</u></b>	9/28/2011 3:38:07 PM
<b><u>Confirmation Number:</u></b>	6328800976

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)

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STATE WATER RESOURCES CONTROL BOARD  
**GEOTRACKER ESI**

UPLOADING A GEO\_WELL FILE

**SUCCESS**

Processing is complete. No errors were found!  
Your file has been successfully submitted!

<b><u>Submittal Type:</u></b>	<b>GEO_WELL</b>
<b><u>Submittal Title:</u></b>	<b>3Q11 GEO_WELL 4931</b>
<b><u>Facility Global ID:</u></b>	<b>T0600100110</b>
<b><u>Facility Name:</u></b>	<b>ARCO #04931</b>
<b><u>File Name:</u></b>	<b>GEO_WELL.zip</b>
<b><u>Organization Name:</u></b>	<b>Broadbent &amp; Associates, Inc.</b>
<b><u>Username:</u></b>	<b>BROADBENT-C</b>
<b><u>IP Address:</u></b>	<b>67.118.40.90</b>
<b><u>Submittal Date/Time:</u></b>	<b>9/28/2011 3:37:34 PM</b>
<b><u>Confirmation Number:</u></b>	<b>9527872741</b>