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Alameda County
Environmental Health

ARCADIS U.S., Inc.
100 Montgomery Street, Suite 300
San Francisco, California 94104
Tel 415.374.2744
Fax 415.374.2745
www.arcadis-us.com

Re: Third Quarter 2010 Semi-Annual Ground-Water Monitoring Report
Former BP Station #4931
731 West MacArthur Blvd.
Oakland, California
ACEH Case #RO0000076

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."

Date:
10/29/2010

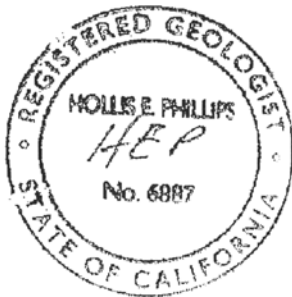
Submitted by:
ARCADIS U.S., Inc.

Contact:
Hollis E. Phillips

Phone:
415.374.2744 ext 13

Hollis E. Phillips, PG
Project Manager

Email:
Hollis.phillips@arcadis-us.com



Our ref:
GP09BPNA.C110

**Third Quarter 2010 Semi-Annual
Ground-Water Monitoring Report**
Former Atlantic Richfield Company Station #4931
731 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



1324 Mangrove Avenue, Suite 212
Chico, California 95926
(530) 566-1400
www.broadbentinc.com

October 29, 2010

Project No. 09-88-624

October 29, 2010

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 2010 Semi-Annual Ground-Water Monitoring Report, Former Atlantic Richfield Company Station #4931, 731 West MacArthur Blvd, Oakland, California; ACEH Case #RO0000076

Dear Ms. Phillips:

Provided herein is the *Third Quarter 2010 Semi-Annual Ground-Water Monitoring Report* for Former Atlantic Richfield Company Station #4931 located at 731 West MacArthur Boulevard, Oakland, Alameda County, California (Site). This report presents a status update and the results of ground-water monitoring conducted at the Site during the Third Quarter of 2010.

Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

BROADBENT & ASSOCIATES, INC.



Jason Duda
Project Scientist



Thomas A. Venus, P.E.
Senior Engineer



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

STATION #4931 SEMI-ANNUAL GROUND-WATER MONITORING REPORT

Facility: #4931	Address: 731 MacArthur Blvd, Oakland
ARCADIS Project Manager:	Ms. Hollis Phillips, PG
Consulting Co./Contact Persons:	Broadbent & Associates, Inc.(BAI)/Jason Duda & Tom Venus (530) 566-1400
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case #RO0000076
Consultant Project No.:	09-88-624
Facility Permits/Permitting Agency:	NA

WORK PERFORMED THIS QUARTER (Third Quarter 2010):

1. Conducted semi-annual ground-water monitoring/sampling for Third Quarter 2010.

WORK PROPOSED FOR NEXT QUARTER (Fourth Quarter 2010):

1. Prepared and submitted this *Third Quarter 2010 Semi-Annual Ground-Water Monitoring Report* (contained herein).
2. Conduct subsurface investigation as approved by ACEH in correspondence dated September 3, 2010. Work to be conducted by ARCADIS-US, Inc.

RESULTS SUMMARY:

Current phase of project:	Ground-water monitoring/sampling
Frequency of ground-water monitoring:	Semi-Annually (1Q & 3Q) = A-2 through A-5, A-7 through A-13, AR-1 through AR-3
Frequency of ground-water sampling:	Semi-Annually (1Q & 3Q) = A-3, A-4, A-5 and A-8 Annually (3Q) = A-2, A-7, A-9, A-10, A-11, and A-12
Is free product (FP) present on-site:	No
Current remediation techniques:	NA
Depth to ground water (below TOC):	4.37 ft (AR-2) to 10.05 ft (A-10)
General ground-water flow direction:	West-southwest
Approximate hydraulic gradient:	0.01 ft/ft

DISCUSSION:

The Third Quarter 2010 ground-water monitoring and sampling event was conducted at Station #4931 by BAI on August 16, 2010. Water levels were gauged in monitoring wells A-2 through A-5, A-7 through A-13, AR-1 and AR-2. Well AR-3 could not be opened during gauging activities. No other irregularities were noted during water level gauging at Station #4931. Depth to water measurements at the Site ranged from 4.37 ft at well AR-2 to 10.05 ft at well A-10. Resulting ground-water surface elevations at the Site ranged from 54.81 ft above datum (NAVD88) in well AR-2 to 47.76 ft in well A-12. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the west-southwest at 0.01 ft/ft. Ground-water monitoring field data sheets are provided within Appendix A. Measured depths to ground water and respective ground-water elevations are summarized in Table 1. Current and historic ground-water flow directions and gradients are provided within Table 3. A Site Location Map is provided as Drawing 1. Potentiometric ground-water elevation contours are presented in Drawing 2.

Consistent with the current ground-water sampling schedule, water samples were collected from wells A-2 through A-5, and A-7 through A-12. No irregularities were encountered during sampling at the Site. The samples were submitted under chain-of-custody protocol to TestAmerica Laboratories, Inc. (Pleasanton, California) for analysis of Gasoline Range Organics (GRO, C6-12), Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX), and Methyl Tert-Butyl Ether (MTBE), Ethyl Tert-Butyl Ether (ETBE), Di-Isopropyl Ether (DIPE), Tert-Amyl Methyl Ether (TAME), Tert-Butyl Alcohol (TBA), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), and Ethanol by EPA Method 8260B. No significant irregularities were reported during analysis of the samples. Ground-water sampling field data sheets and the laboratory analytical report, including chain-of-custody documentation, are provided in Appendix A.

Gasoline Range Organics (GRO) were detected above the laboratory reporting limit in two of the ten wells sampled at concentrations of 1,600 micrograms per liter ($\mu\text{g/L}$) in well A-4 and 4,300 $\mu\text{g/L}$ in well A-8. Benzene was detected above the laboratory reporting limit in two of the ten wells sampled at concentrations of 18 $\mu\text{g/L}$ in well A-4 and 1,600 $\mu\text{g/L}$ in well A-8. Toluene was detected above the laboratory reporting limit in two of the ten wells sampled at concentrations of 0.5 $\mu\text{g/L}$ in well A-4 and 12 $\mu\text{g/L}$ in well A-8. Ethylbenzene was detected above the laboratory reporting limit in two of the ten wells sampled at concentrations of 0.56 $\mu\text{g/L}$ in well A-4 and 5.3 $\mu\text{g/L}$ in well A-8. Total Xylenes were detected above the laboratory reporting limit in well A-8 at a concentration of 6.1 $\mu\text{g/L}$. MTBE was detected above the laboratory reporting limit in seven of the ten wells sampled at concentrations up to 160 $\mu\text{g/L}$ in well A-4. TAME was detected above the laboratory reporting limit in four of the ten wells sampled at concentrations up to 47 $\mu\text{g/L}$ in well A-4. TBA was detected above the laboratory reporting limit in two of the ten wells sampled at concentrations of 3,400 $\mu\text{g/L}$ in well A-4 and 35 $\mu\text{g/L}$ in well A-5. The remaining analytes were not detected above their respective laboratory reporting limits in the ten wells sampled this quarter. Historic laboratory analytical results for the Site are summarized in Table 1. The most recent GRO, Benzene, and MTBE concentrations are also presented in Drawing 2. Ground-water monitoring data (GEO_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation receipts are provided in Appendix B.

CONCLUSIONS AND RECOMMENDATIONS:

Water level elevations were between historic minimum and maximum ranges for each well. The potentiometric ground-water flow direction and gradient of 0.01 ft/ft to the west-southwest is consistent with historical data. Detected concentrations of petroleum hydrocarbons were within the historic minimum and maximum ranges recorded for each well sampled this quarter with the following exceptions: TBA reached a historic maximum concentration in well A-4 and MTBE reached a historic minimum concentration in well A-10. Overall, hydrocarbon concentrations were relatively consistent when compared to concentrations observed during the First Quarter 2010 sampling event with the exception of the increased concentrations observed in well A-8, which rebounded from non-detect concentrations during the First Quarter 2010. No environmental work is currently scheduled to occur at the site during the Fourth Quarter of 2010. The next semi-annual ground-water monitoring and sampling event is scheduled to be conducted during the First Quarter of 2011.

CLOSURE:

The findings presented in this report are based upon: observations of BAI personnel (see Appendix A), the points investigated, and results of laboratory tests performed by TestAmerica Laboratories, Inc. (Pleasanton, California). Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty, expressed or implied,

was made. This report has been prepared for the exclusive use of ARCADIS-US and Atlantic Richfield Company. It is possible that variations in soil or ground-water conditions could exist beyond points

explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

ATTACHMENTS:

- Drawing 1. Site Location Map, Station #4931, 731 West MacArthur Blvd, Oakland, CA
- Drawing 2. Ground-Water Elevation Contour and Analytical Summary Map, August 16, 2010, Station #4931, 731 West MacArthur Blvd, Oakland, CA
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analysis, Station #4931, 731 West MacArthur Blvd, Oakland, CA
- Table 2. Summary of Fuel Additives Analytical Data, Station #4931, 731 West MacArthur Blvd, Oakland, CA
- Table 3. Historical Ground-Water Flow Direction and Gradient, Station #4931, 731 West MacArthur Blvd, Oakland, CA
- Appendix A. BAI Ground-Water Sampling Data Package (Includes Field Data Sheets, Laboratory Report, Chain-of-Custody Documentation, and Field Procedures)
- Appendix B. GeoTracker Upload Confirmation Receipts

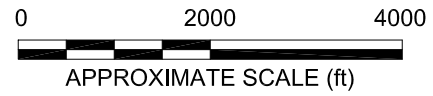
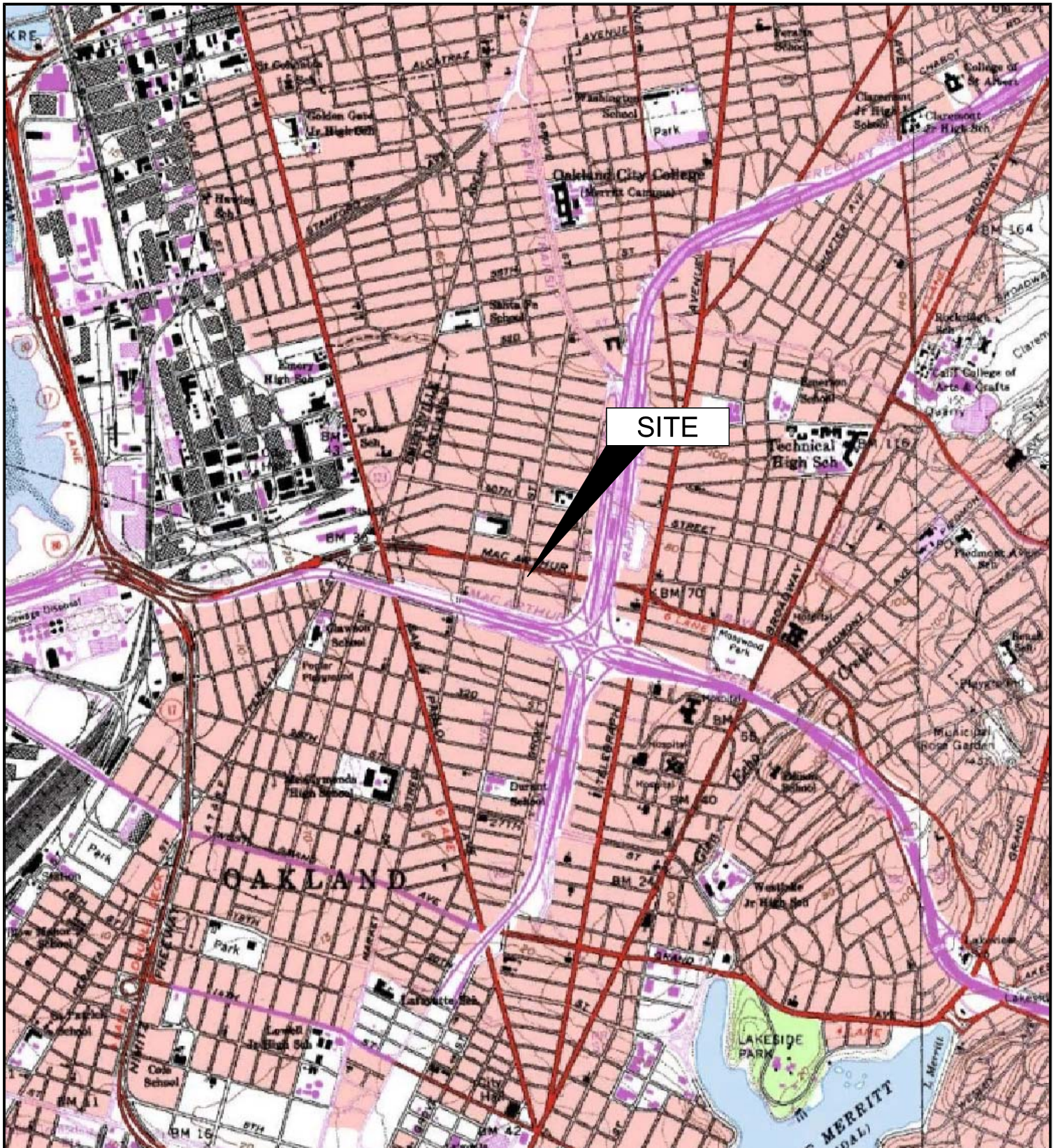
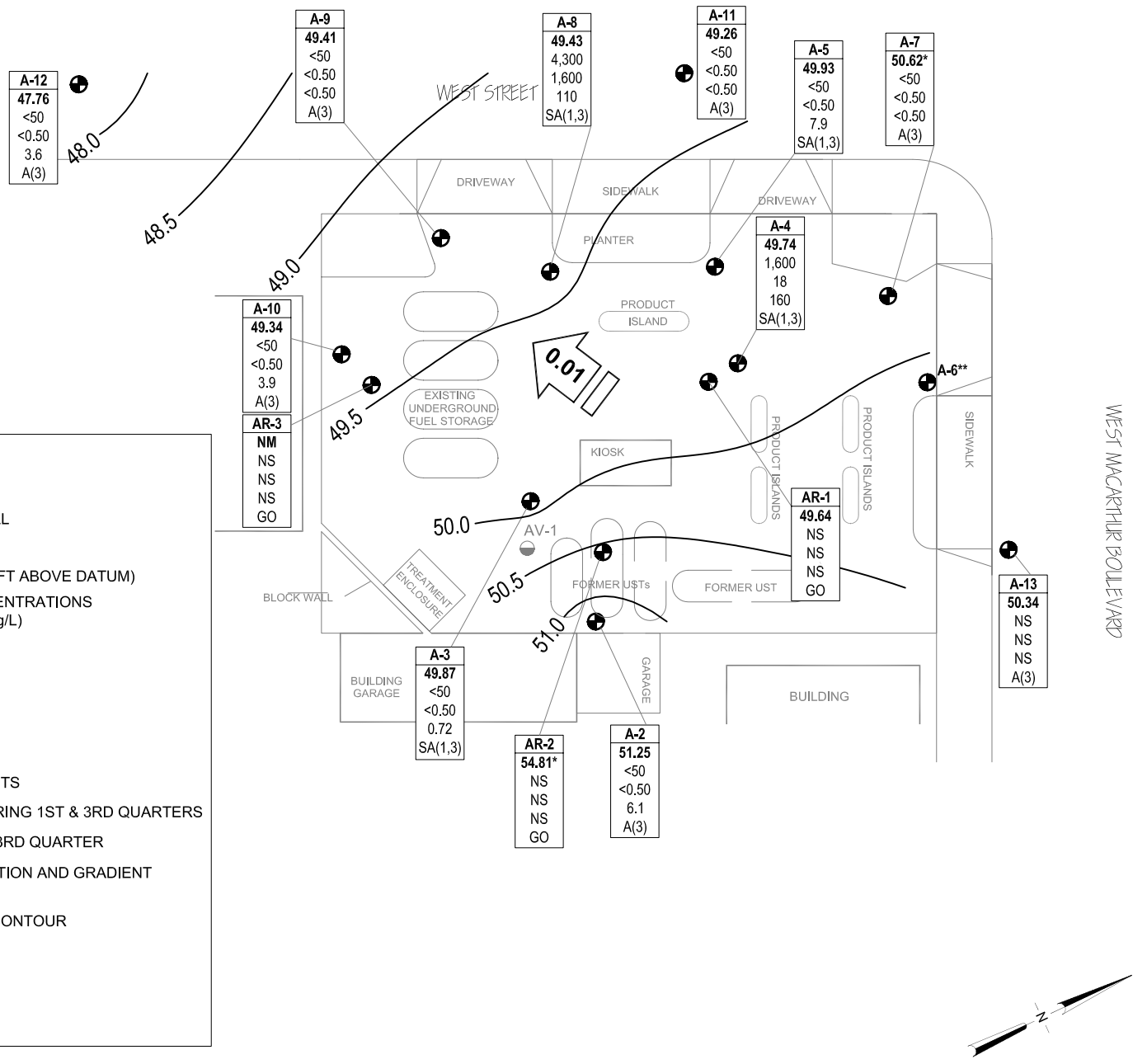


IMAGE SOURCE: USGS



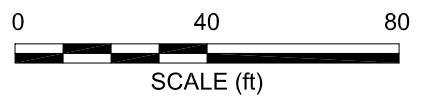
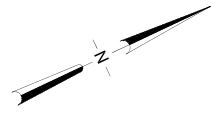
LEGEND

- ⊕ MONITORING WELL
- SOIL VAPOR EXTRACTION WELL

Well	WELL DESIGNATION
ELEV	GROUND-WATER ELEVATION (FT ABOVE DATUM)
GRO	GRO, BENZENE & MTBE CONCENTRATIONS IN MICROGRAMS PER LITER (µg/L)
Benzene	
MTBE	
A/Q/SA	SAMPLING FREQUENCY

- GO GAUGE ONLY
- NM NOT MEASURED
- NS NOT SAMPLED
- < NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS
- SA(1,3) SAMPLED SEMI-ANNUALLY DURING 1ST & 3RD QUARTERS
- A(3) SAMPLED ANNUALLY DURING 3RD QUARTER
- ← 0.01 GROUND-WATER FLOW DIRECTION AND GRADIENT (FEET/FOOT)
- 50 GROUND-WATER ELEVATION CONTOUR (FT ABOVE DATUM)
- * NOT USED IN CONTOURING
- ** PAVED OVER

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: 9/10/2010

Station #4931
731 West MacArthur Boulevard
Oakland, California

Ground-Water Elevation Contour
and Analytical Summary Map
August 16, 2010

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

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-2															
6/21/2000	--		55.48	5.00	20.00	6.85	48.63	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--
9/20/2000	--		55.48	5.00	20.00	10.45	45.03	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/26/2000	--		55.48	5.00	20.00	6.27	49.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/20/2001	--		55.48	5.00	20.00	4.57	50.91	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
6/12/2001	--		55.48	5.00	20.00	9.27	46.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/23/2001	--		55.48	5.00	20.00	10.75	44.73	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/31/2001	--		55.48	5.00	20.00	4.13	51.35	<50	<0.5	<0.5	1	3.2	<2.5	--	--
3/21/2002	--		55.48	5.00	20.00	3.26	52.22	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/17/2002	--		55.48	5.00	20.00	3.72	51.76	<50	<0.5	<0.5	<0.5	<0.5	3.1	--	--
8/12/2002	NP		55.48	5.00	20.00	9.95	45.53	<10	<0.10	<0.10	<0.10	<0.10	<0.50	3.1	7.7
12/6/2002	NP		55.48	5.00	20.00	10.01	45.47	<50	<0.50	<0.50	<0.50	<0.50	6	3.1	6.1
1/30/2003	NP		55.48	5.00	20.00	5.08	50.40	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	6.7
5/28/2003	--		55.48	5.00	20.00	4.82	50.66	<50	<0.50	<0.50	<0.50	<0.50	1.1	5.7	6.8
8/6/2003	--		55.48	5.00	20.00	9.73	45.75	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.3	7.7
11/14/2003	--		55.48	5.00	20.00	9.36	46.12	--	--	--	--	--	--	--	--
02/02/2004	--	g	60.65	5.00	20.00	4.45	56.20	--	--	--	--	--	--	--	--
05/04/2004	--		60.65	5.00	20.00	6.79	53.86	--	--	--	--	--	--	--	--
09/02/2004	NP		60.65	5.00	20.00	10.51	50.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	--
11/10/2004	--		60.65	5.00	20.00	6.10	54.55	--	--	--	--	--	--	--	--
02/02/2005	--		60.65	5.00	20.00	4.00	56.65	--	--	--	--	--	--	--	--
05/09/2005	--		60.65	5.00	20.00	4.35	56.30	--	--	--	--	--	--	--	--
08/11/2005	NP	h	60.65	5.00	20.00	9.08	51.57	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.2	6.9
11/18/2005	--		60.65	5.00	20.00	8.53	52.12	--	--	--	--	--	--	--	--
02/15/2006	--		60.65	5.00	20.00	3.89	56.76	--	--	--	--	--	--	--	--
5/30/2006	--		60.65	5.00	20.00	4.45	56.20	--	--	--	--	--	--	--	--
8/11/2006	NP		60.65	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	--		60.65	5.00	20.00	9.98	50.67	--	--	--	--	--	--	--	--
2/7/2007	--		60.65	5.00	20.00	7.51	53.14	--	--	--	--	--	--	--	--
5/9/2007	--		60.65	5.00	20.00	4.57	56.08	--	--	--	--	--	--	--	--
8/7/2007	NP		60.65	5.00	20.00	9.67	50.98	<50	<0.50	<0.50	<0.50	<0.50	3.4	2.18	7.17
11/14/2007	--		60.65	5.00	20.00	7.84	52.81	--	--	--	--	--	--	--	--

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

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-2 Cont.															
2/28/2008	--		60.65	5.00	20.00	3.30	57.35	--	--	--	--	--	--	--	--
5/23/2008	--		60.65	5.00	20.00	8.80	51.85	--	--	--	--	--	--	--	--
8/13/2008	NP		60.65	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	--		60.65	5.00	20.00	9.20	51.45	--	--	--	--	--	--	--	--
2/10/2009	--		60.65	5.00	20.00	7.83	52.82	--	--	--	--	--	--	--	--
5/7/2009	--		60.65	5.00	20.00	4.40	56.25	--	--	--	--	--	--	--	--
9/3/2009	NP	k	60.65	5.00	20.00	10.07	50.58	<50	<0.50	<0.50	<0.50	<0.50	12	1.03	6.86
3/23/2010	--		60.65	5.00	20.00	3.67	56.98	--	--	--	--	--	--	--	--
8/16/2010	NP		60.65	5.00	20.00	9.40	51.25	<50	<0.50	<0.50	<0.50	<1.0	6.1	0.89	6.94
A-3															
6/21/2000	--		54.66	5.00	20.00	9.48	45.18	<50	<0.5	<0.5	<0.5	<1.0	46	--	--
9/20/2000	--		54.66	5.00	20.00	10.24	44.42	<50	<0.5	<0.5	<0.5	<0.5	89.6	--	--
12/26/2000	--		54.66	5.00	20.00	9.58	45.08	<50	<0.5	<0.5	<0.5	<0.5	7.11	--	--
3/20/2001	--		54.66	5.00	20.00	6.34	48.32	--	--	--	--	--	--	--	--
6/12/2001	--		54.66	5.00	20.00	9.76	44.90	<50	<0.5	<0.5	<0.5	<0.5	86	--	--
9/23/2001	--		54.66	5.00	20.00	10.55	44.11	--	--	--	--	--	--	--	--
12/31/2001	--		54.66	5.00	20.00	3.70	50.96	<50	<0.5	<0.5	<0.5	1	60	--	--
3/21/2002	--		54.66	5.00	20.00	5.75	48.91	--	--	--	--	--	--	--	--
4/17/2002	--		54.66	5.00	20.00	7.27	47.39	<50	<0.5	<0.5	<0.5	<0.5	45	--	--
8/12/2002	--		54.66	5.00	20.00	9.71	44.95	--	--	--	--	--	--	--	--
12/6/2002	P		54.66	5.00	20.00	9.55	45.11	<500	<5.0	<5.0	<5.0	<5.0	150	2.4	6.6
1/30/2003	--		54.66	5.00	20.00	6.05	48.61	--	--	--	--	--	--	--	--
1/30/2003	--		54.66	5.00	20.00	6.05	48.61	--	--	--	--	--	--	--	--
5/28/2003	--		54.66	5.00	20.00	8.06	46.60	74	<0.50	<0.50	<0.50	<0.50	43	1.5	6.9
8/6/2003	--		54.66	5.00	20.00	9.91	44.75	--	--	--	--	--	--	--	--
11/14/2003	--		54.66	5.00	20.00	9.52	45.14	--	--	--	--	--	--	--	--
02/02/2004	P	g	59.32	5.00	20.00	5.63	53.69	<50	<0.50	<0.50	<0.50	<0.50	13	1.2	7.1
05/04/2004	--		59.32	5.00	20.00	8.14	51.18	--	--	--	--	--	--	--	--
09/02/2004	P		59.32	5.00	20.00	10.10	49.22	<250	<2.5	<2.5	<2.5	<2.5	62	1.3	6.6
11/10/2004	--		59.32	5.00	20.00	7.89	51.43	--	--	--	--	--	--	--	--

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

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-3 Cont.															
02/02/2005	P		59.32	5.00	20.00	5.00	54.32	<50	<0.50	<0.50	<0.50	<0.50	6.8	1.9	6.9
05/09/2005	--		59.32	5.00	20.00	5.96	53.36	--	--	--	--	--	--	--	--
08/11/2005	P	h	59.32	5.00	20.00	9.28	50.04	<50	<0.50	<0.50	<0.50	<0.50	39	1.8	5.5
11/18/2005	--		59.32	5.00	20.00	8.61	50.71	--	--	--	--	--	--	--	--
02/15/2006	P		59.32	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	--		59.32	5.00	20.00	6.28	53.04	--	--	--	--	--	--	--	--
8/11/2006	P		59.32	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	--		59.32	5.00	20.00	9.52	49.80	--	--	--	--	--	--	--	--
2/7/2007	NP		59.32	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	--		59.32	5.00	20.00	6.55	52.77	--	--	--	--	--	--	--	--
8/7/2007	NP		59.32	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	--		59.32	5.00	20.00	8.00	51.32	--	--	--	--	--	--	--	--
2/28/2008	P		59.32	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	--		59.32	5.00	20.00	9.10	50.22	--	--	--	--	--	--	--	--
8/13/2008	NP		59.32	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	--		59.32	5.00	20.00	8.31	51.01	--	--	--	--	--	--	--	--
2/10/2009	NP		59.32	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	--		59.32	5.00	20.00	6.10	53.22	--	--	--	--	--	--	--	--
9/3/2009	NP		59.32	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		59.32	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		59.32	5.00	20.00	9.45	49.87	<50	<0.50	<0.50	<0.50	<1.0	0.72	1.05	7.45
A-4															
6/21/2000	--		54.73	5.00	20.00	9.49	45.24	2,100	110	2.1	11	5.9	2,000	--	--
9/20/2000	--		54.73	5.00	20.00	10.33	44.40	1,540	127	<5.0	9.07	7.42	1,940	--	--
12/26/2000	--		54.73	5.00	20.00	9.34	45.39	1,550	42.7	<5.0	11	10.9	1,210	--	--
3/20/2001	--		54.73	5.00	20.00	7.56	47.17	913	40.9	<5.0	15.5	14.6	<25	--	--
6/12/2001	--		54.73	5.00	20.00	9.83	44.90	2,000	230	<20	21	<20	4,700	--	--
9/23/2001	--		54.73	5.00	20.00	10.54	44.19	1,600	35	<10	<10	<10	3,000	--	--
12/31/2001	--		54.73	5.00	20.00	5.42	49.31	<500	<5.0	<5.0	<5.0	<5.0	880	--	--
3/21/2002	--		54.73	5.00	20.00	6.18	48.55	<5,000	<50	<50	<50	<50	1,400	--	--

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

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-4 Cont.															
4/17/2002	--		54.73	5.00	20.00	7.34	47.39	1,300	79	31	17	55	2,200	--	--
8/12/2002	P	a	54.73	5.00	20.00	9.56	45.17	2,400	120	<5.0	<5.0	<5.0	2,100	2	7.2
12/6/2002	P		54.73	5.00	20.00	10.02	44.71	2,200	110	10	42	56	2,000	--	6.7
1/30/2003	P		54.73	5.00	20.00	7.55	47.18	6,000	180	<50	85	<50	2,100	1.8	6.8
5/28/2003	--		54.73	5.00	20.00	8.94	45.79	6,000	120	<50	<50	<50	2,500	1.5	6.7
8/6/2003	--		54.73	5.00	20.00	10.03	44.70	5,800	100	<25	<25	33	2,500	1.5	6.7
11/14/2003	P	d, f	54.73	5.00	20.00	10.37	44.36	1,000	17	<5.0	<5.0	<5.0	310	1.6	6.8
02/02/2004	P	d, g	59.59	5.00	20.00	6.70	52.89	3,600	46	<25	<25	<25	1,500	1.0	7.1
05/04/2004	P	d	59.59	5.00	20.00	9.12	50.47	<5,000	<50	<50	<50	<50	2,300	6.4	6.8
09/02/2004	P		59.59	5.00	20.00	9.95	49.64	3,000	<25	<25	<25	<25	1,200	9.1	6.8
11/10/2004	P		59.59	5.00	20.00	8.68	50.91	1,800	16	<10	<10	<10	1,100	2.0	7.2
02/02/2005	P		59.59	5.00	20.00	6.92	52.67	3,300	120	<10	66	11	1,700	1.5	6.5
05/09/2005	P		59.59	5.00	20.00	7.21	52.38	<5,000	140	<50	62	<50	1,800	1.64	6.6
08/11/2005	P	f, h	59.59	5.00	20.00	9.71	49.88	1,700	51	<10	<10	<10	1,200	--	6.9
11/18/2005	P		59.59	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		59.59	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		59.59	5.00	20.00	7.95	51.64	3,300	95	<10	55	<10	1,200	1.76	6.5
8/11/2006	P		59.59	5.00	20.00	9.50	50.09	350	93	<10	<10	<10	1,200	1.4	6.6
11/1/2006	P		59.59	5.00	20.00	9.93	49.66	1,300	<10	<10	<10	<10	360	4.56	6.94
2/7/2007	NP		59.59	5.00	20.00	8.82	50.77	4,900	85	<10	40	<10	1,500	0.72	6.86
5/9/2007	NP		59.59	5.00	20.00	7.56	52.03	1,700	19	<10	<10	<10	340	3.00	7.03
8/7/2007	NP		59.59	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		59.59	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		59.59	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		59.59	5.00	20.00	9.40	50.19	1,900	75	<20	<20	<20	1,000	1.28	6.58
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		59.59	5.00	20.00	9.19	50.40	1,800	70	<10	21	<10	430	0.83	6.50
2/10/2009	NP		59.59	5.00	20.00	7.68	51.91	1,900	33	<10	14	<10	400	0.87	7.31
5/7/2009	NP		59.59	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		59.59	5.00	20.00	10.02	49.57	3,800	49	<10	<10	<10	360	0.79	6.75
3/23/2010	NP		59.59	5.00	20.00	6.62	52.97	820	17	<0.50	5.0	1.3	150	1.37	6.54

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-4 Cont.															
8/16/2010	NP		59.59	5.00	20.00	9.85	49.74	1,600	18	0.50	0.56	<1.0	160	0.10	6.64
A-5															
6/21/2000	--		54.17	3.00	24.00	9.29	44.88	980	<0.5	<0.5	<0.5	<1.0	2,000	--	--
9/20/2000	--		54.17	3.00	24.00	10.23	43.94	--	--	--	--	--	--	--	--
12/26/2000	--		54.17	3.00	24.00	9.65	44.52	525	<0.5	<0.5	<0.5	<0.5	1,200	--	--
3/20/2001	--		54.17	3.00	24.00	8.05	46.12	--	--	--	--	--	--	--	--
6/12/2001	--		54.17	3.00	24.00	9.81	44.36	830	<5.0	<5.0	<5.0	<5.0	3,200	--	--
9/23/2001	--		54.17	3.00	24.00	10.42	43.75	--	--	--	--	--	--	--	--
12/31/2001	--		54.17	3.00	24.00	6.03	48.14	320	<0.5	<0.5	<0.5	<0.5	60	--	--
3/21/2002	--		54.17	3.00	24.00	6.71	47.46	--	--	--	--	--	--	--	--
4/17/2002	--		54.17	3.00	24.00	8.01	46.16	1,600	<10	<10	<10	<10	3,200	--	--
8/12/2002	--		54.17	3.00	24.00	9.87	44.30	--	--	--	--	--	--	--	--
12/6/2002	P		54.17	3.00	24.00	9.66	44.51	310	<0.50	<0.50	<0.50	<0.50	330	1.9	6.6
1/30/2003	--		54.17	3.00	24.00	7.67	46.50	--	--	--	--	--	--	--	--
5/28/2003	--		54.17	3.00	24.00	8.56	45.61	<5,000	<50	<50	<50	<50	1,500	1.6	6.6
8/6/2003	--		54.17	3.00	24.00	9.58	44.59	--	--	--	--	--	--	--	--
11/14/2003	--		54.17	3.00	24.00	9.81	44.36	--	--	--	--	--	--	--	--
02/02/2004	P	g	58.78	3.00	24.00	7.43	51.35	390	<2.5	9.2	<2.5	2.6	140	1.0	6.8
05/04/2004	--		58.78	3.00	24.00	9.98	48.80	--	--	--	--	--	--	--	--
09/02/2004	P		58.78	3.00	24.00	9.65	49.13	<250	<2.5	<2.5	<2.5	<2.5	66	1.1	6.4
11/10/2004	--		58.78	3.00	24.00	8.48	50.30	--	--	--	--	--	--	--	--
02/02/2005	P		58.78	3.00	24.00	7.10	51.68	68	<0.50	<0.50	<0.50	<0.50	17	1.0	7.2
05/09/2005	--		58.78	3.00	24.00	7.20	51.58	--	--	--	--	--	--	--	--
08/11/2005	P	h	58.78	3.00	24.00	9.21	49.57	<50	<0.50	<0.50	<0.50	<0.50	6.8	1.3	6.2
11/18/2005	--		58.78	3.00	24.00	9.10	49.68	--	--	--	--	--	--	--	--
02/15/2006	P		58.78	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	--		58.78	3.00	24.00	7.87	50.91	--	--	--	--	--	--	--	--
8/11/2006	P		58.78	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	--		58.78	3.00	24.00	9.30	49.48	--	--	--	--	--	--	--	--
2/7/2007	NP	i	58.78	3.00	24.00	8.50	50.28	60	<0.50	<0.50	<0.50	<0.50	1.5	0.73	7.14

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-5 Cont.															
5/9/2007	--		58.78	3.00	24.00	7.60	51.18	--	--	--	--	--	--	--	--
8/7/2007	NP		58.78	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	--		58.78	3.00	24.00	8.48	50.30	--	--	--	--	--	--	--	--
2/28/2008	NP		58.78	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	--		58.78	3.00	24.00	8.97	49.81	--	--	--	--	--	--	--	--
8/13/2008	NP		58.78	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	--		58.78	3.00	24.00	8.91	49.87	--	--	--	--	--	--	--	--
2/10/2009	NP		58.78	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	--		58.78	3.00	24.00	7.37	51.41	--	--	--	--	--	--	--	--
9/3/2009	NP		58.78	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		58.78	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		58.78	3.00	24.00	8.85	49.93	<50	<0.50	<0.50	<0.50	<1.0	7.9	0.97	6.84
A-6															
6/21/2000	--		55.17	3.00	25.00	8.67	46.50	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--
9/20/2000	--		55.17	3.00	25.00	9.34	45.83	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/26/2000	--		55.17	3.00	25.00	8.65	46.52	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/20/2001	--		55.17	3.00	25.00	6.84	48.33	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
6/12/2001	--		55.17	3.00	25.00	8.93	46.24	<50	<0.5	<0.5	<0.5	<0.5	7	--	--
9/23/2001	--		55.17	3.00	25.00	9.74	45.43	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/31/2001	--		55.17	3.00	25.00	4.81	50.36	<50	<0.5	<0.5	<0.5	<0.5	3.2	--	--
3/21/2002	--		55.17	3.00	25.00	5.44	49.73	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/17/2002	--		55.17	3.00	25.00	6.95	48.22	<50	<0.5	<0.5	<0.5	<0.5	3.1	--	--
8/12/2002	NP		55.17	3.00	25.00	8.90	46.27	<50	<0.5	<0.5	<0.5	<0.5	<2.5	4.3	7.9
12/6/2002	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
1/30/2003	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
5/28/2003	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
8/6/2003	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
11/14/2003	--	Well inaccessible e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
02/02/2004	--	Well inaccessible e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
05/04/2004	--	Well inaccessible e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-6 Cont.															
09/02/2004	--	Well inaccessible e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
11/10/2004	--	Well inaccessible e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
02/02/2005	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
05/09/2005	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
08/11/2005	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
11/18/2005	--	e	55.17	3.00	25.00	--	--	--	--	--	--	--	--	--	--
2/15/2006	--	e	--	3.00	25.00	--	--	--	--	--	--	--	--	--	--
5/30/2006	--	e	--	3.00	25.00	--	--	--	--	--	--	--	--	--	--
8/11/2006	--	e	--	3.00	25.00	--	--	--	--	--	--	--	--	--	--
11/1/2006	--	e	--	3.00	25.00	--	--	--	--	--	--	--	--	--	--
A-7															
6/21/2000	--		54.71	3.00	22.00	8.58	46.13	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--
9/20/2000	--		54.71	3.00	22.00	9.19	45.52	--	--	--	--	--	--	--	--
12/26/2000	--		54.71	3.00	22.00	8.50	46.21	--	--	--	--	--	--	--	--
3/20/2001	--		54.71	3.00	22.00	6.75	47.96	--	--	--	--	--	--	--	--
6/12/2001	--		54.71	3.00	22.00	8.80	45.91	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/23/2001	--		54.71	3.00	22.00	9.59	45.12	--	--	--	--	--	--	--	--
12/31/2001	--		54.71	3.00	22.00	4.78	49.93	--	--	--	--	--	--	--	--
3/21/2002	--		54.71	3.00	22.00	5.35	49.36	--	--	--	--	--	--	--	--
4/17/2002	--		54.71	3.00	22.00	6.88	47.83	<50	<0.5	<0.5	<0.5	<0.5	2.5	--	--
8/12/2002	--		54.71	3.00	22.00	8.77	45.94	--	--	--	--	--	--	--	--
12/6/2002	--		54.71	3.00	22.00	9.07	45.64	--	--	--	--	--	--	--	--
1/30/2003	--		54.71	3.00	22.00	6.65	48.06	--	--	--	--	--	--	--	--
5/28/2003	--		54.71	3.00	22.00	7.63	47.08	<50	<0.50	<0.50	<0.50	<0.50	3.8	2.3	6.7
8/6/2003	--		54.71	3.00	22.00	8.90	45.81	--	--	--	--	--	--	--	--
11/14/2003	--		54.71	3.00	22.00	9.08	45.63	--	--	--	--	--	--	--	--
02/02/2004	--	g	59.75	3.00	22.00	5.96	53.79	--	--	--	--	--	--	--	--
05/04/2004	--		59.75	3.00	22.00	8.21	51.54	--	--	--	--	--	--	--	--
09/02/2004	P		59.75	3.00	22.00	9.02	50.73	<50	<0.50	<0.50	<0.50	<0.50	8.9	3.0	6.7
11/10/2004	--		59.75	3.00	22.00	7.50	52.25	--	--	--	--	--	--	--	--

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

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-7 Cont.															
02/02/2005	--		59.75	3.00	22.00	6.10	53.65	--	--	--	--	--	--	--	--
05/09/2005	--		59.75	3.00	22.00	6.48	53.27	--	--	--	--	--	--	--	--
08/11/2005	P	h	59.75	3.00	22.00	8.45	51.30	<50	<0.50	<0.50	<0.50	<0.50	18	1.6	6.6
11/18/2005	--		59.75	3.00	22.00	8.65	51.10	--	--	--	--	--	--	--	--
02/15/2006	--		59.75	3.00	22.00	6.51	53.24	--	--	--	--	--	--	--	--
5/30/2006	--		59.75	3.00	22.00	7.13	52.62	--	--	--	--	--	--	--	--
8/11/2006	P		59.75	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	--		59.75	3.00	22.00	8.99	50.76	--	--	--	--	--	--	--	--
2/7/2007	--		59.75	3.00	22.00	8.12	51.63	--	--	--	--	--	--	--	--
5/9/2007	--		59.75	3.00	22.00	7.04	52.71	--	--	--	--	--	--	--	--
8/7/2007	NP		59.75	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	--		59.75	3.00	22.00	8.00	51.75	--	--	--	--	--	--	--	--
2/28/2008	--		59.75	3.00	22.00	5.81	53.94	--	--	--	--	--	--	--	--
5/23/2008	--		59.75	3.00	22.00	8.74	51.01	--	--	--	--	--	--	--	--
8/13/2008	NP		59.75	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	--		59.75	3.00	22.00	8.67	51.08	--	--	--	--	--	--	--	--
2/10/2009	--		59.75	3.00	22.00	7.47	52.28	--	--	--	--	--	--	--	--
5/7/2009	--		59.75	3.00	22.00	6.88	52.87	--	--	--	--	--	--	--	--
9/3/2009	NP		59.75	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	--		59.75	3.00	22.00	6.33	53.42	--	--	--	--	--	--	--	--
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
A-8															
6/21/2000	--		53.77	3.00	25.00	9.07	44.70	810	<0.5	<0.5	<0.5	810	1,500	--	--
9/20/2000	--		53.77	3.00	25.00	9.72	44.05	10,800	2,680	46	439	370	4,410	--	--
12/26/2000	--		53.77	3.00	25.00	9.20	44.57	7,700	1,440	<50	202	106	2,230	--	--
3/20/2001	--		53.77	3.00	25.00	7.51	46.26	<5,000	1,280	<50	53.9	<50	2,880	--	--
6/12/2001	--		53.77	3.00	25.00	9.53	44.24	5,600	1,700	<50	61	54	2,900	--	--
9/23/2001	--		53.77	3.00	25.00	10.08	43.69	10,000	3,500	<50	110	64	6,500	--	--
12/31/2001	--		53.77	3.00	25.00	4.34	49.43	4,300	610	<10	60	24	520	--	--
3/21/2002	--		53.77	3.00	25.00	6.67	47.10	6,600	1,400	<50	130	<50	2,700	--	--

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

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-8 Cont.															
4/17/2002	--		53.77	3.00	25.00	7.72	46.05	3,800	540	<10	<10	12	3,100	--	--
8/12/2002	NP		53.77	3.00	25.00	9.64	44.13	9,400	1,800	<20	35	28	4,200	1	6.7
12/6/2002	NP	b	53.77	3.00	25.00	9.62	44.15	5,300	1,100	11	11	<10	2,200	1.4	6.7
1/30/2003	NP		53.77	3.00	25.00	7.49	46.28	<10,000	1,100	<100	<100	<100	2,200	1.5	6.9
5/28/2003	--		53.77	3.00	25.00	9.17	44.60	7,700	1,700	<50	<50	<50	2,100	1	6.8
8/6/2003	--		53.77	3.00	25.00	9.67	44.10	13,000	2,400	<50	<50	<50	3,000	0.9	6.5
11/14/2003	NP	d	53.77	3.00	25.00	9.80	43.97	3,100	570	<5.0	<5.0	<5.0	850	2.3	6.2
02/02/2004	NP	d, g	58.70	3.00	25.00	7.10	51.60	3,900	300	<25	<25	<25	1,100	1.1	6.8
05/04/2004	NP		58.70	3.00	25.00	9.44	49.26	<5,000	490	<50	<50	<50	1,600	1.0	6.9
09/02/2004	NP		58.70	3.00	25.00	9.67	49.03	<2,500	30	<25	<25	<25	680	1.0	6.2
11/10/2004	NP		58.70	3.00	25.00	8.15	50.55	580	61	<2.5	<2.5	<2.5	290	1.5	6.4
02/02/2005	NP		58.70	3.00	25.00	6.53	52.17	5,000	890	<25	<25	<25	1,900	1.0	7.4
05/09/2005	NP		58.70	3.00	25.00	6.31	52.39	69	0.90	<0.50	<0.50	<0.50	66	4.1	7.2
08/11/2005	NP	h	58.70	3.00	25.00	9.15	49.55	1,400	1,300	<12	<12	<12	1,100	0.7	6.4
11/18/2005	NP		58.70	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		58.70	3.00	25.00	6.34	52.36	3,200	970	<10	<10	<10	1,100	0.9	6.1
5/30/2006	NP		58.70	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	i	58.70	3.00	25.00	8.90	49.80	1,300	500	<5.0	<5.0	<5.0	290	0.7	7.0
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		58.70	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		58.70	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		58.70	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		58.70	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		58.70	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	--	j	58.70	3.00	25.00	--	--	--	--	--	--	--	--	--	--
8/13/2008	NP		58.70	3.00	25.00	9.48	49.22	3,100	970	<25	<25	<25	250	0.84	8.73
11/19/2008	NP		58.70	3.00	25.00	8.87	49.83	3,800	1,000	<20	<20	<20	230	0.89	6.87
2/10/2009	NP		58.70	3.00	25.00	7.11	51.59	3,600	1,300	<25	<25	<25	320	0.89	6.87
5/7/2009	NP		58.70	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		58.70	3.00	25.00	9.47	49.23	3,200	1,400	<25	<25	<25	100	0.87	6.51
3/23/2010	NP		58.70	3.00	25.00	6.12	52.58	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.69	6.75

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-8 Cont.															
8/16/2010	NP		58.70	3.00	25.00	9.27	49.43	4,300	1,600	12	5.3	6.1	110	1.05	6.70
A-9															
6/21/2000	--		53.04	5.00	40.00	8.56	44.48	<50	<0.5	<0.5	<0.5	<1.0	5	--	--
9/20/2000	--		53.04	5.00	40.00	9.05	43.99	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/26/2000	--		53.04	5.00	40.00	8.49	44.55	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/20/2001	--		53.04	5.00	40.00	6.95	46.09	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
6/12/2001	--		53.04	5.00	40.00	8.67	44.37	<50	<0.5	<0.5	<0.5	<0.5	4.8	--	--
9/23/2001	--		53.04	5.00	40.00	9.21	43.83	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/31/2001	--		53.04	5.00	40.00	4.57	48.47	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/21/2002	--		53.04	5.00	40.00	5.60	47.44	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/17/2002	--		53.04	5.00	40.00	6.89	46.15	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
8/12/2002	P		53.04	5.00	40.00	8.71	44.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	4	7.6
12/6/2002	P		53.04	5.00	40.00	8.77	44.27	<50	<0.50	<0.50	<0.50	<0.50	<2.0	1.1	6.7
1/30/2003	P		53.04	5.00	40.00	6.88	46.16	<50	<0.50	<0.50	<0.50	<0.50	1.1	0.9	6.8
5/28/2003	--		53.04	5.00	40.00	9.75	43.29	<50	<0.50	<0.50	<0.50	<0.50	0.74	1.9	6.8
8/6/2003	--		53.04	5.00	40.00	9.00	44.04	<50	<0.50	<0.50	<0.50	<0.50	1.8	2.2	6.7
11/14/2003	--	d	53.04	5.00	40.00	8.82	44.22	--	--	--	--	--	--	--	--
02/02/2004	--	d, g	57.73	5.00	40.00	7.10	50.63	--	--	--	--	--	--	--	--
05/04/2004	--		57.73	5.00	40.00	8.12	49.61	--	--	--	--	--	--	--	--
09/02/2004	P		57.73	5.00	40.00	8.78	48.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.6	6.5
11/10/2004	--		57.73	5.00	40.00	7.88	49.85	--	--	--	--	--	--	--	--
02/02/2005	--		57.73	5.00	40.00	6.40	51.33	--	--	--	--	--	--	--	--
05/09/2005	--		57.73	5.00	40.00	6.82	50.91	--	--	--	--	--	--	--	--
08/11/2005	P		57.73	5.00	40.00	8.37	49.36	<50	<0.50	<0.50	<0.50	<0.50	1.5	1.8	6.7
11/18/2005	--		57.73	5.00	40.00	8.24	49.49	--	--	--	--	--	--	--	--
02/15/2006	--		57.73	5.00	40.00	6.38	51.35	--	--	--	--	--	--	--	--
5/30/2006	--		57.73	5.00	40.00	7.17	50.56	--	--	--	--	--	--	--	--
8/11/2006	P		57.73	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	--		57.73	5.00	40.00	8.90	48.83	--	--	--	--	--	--	--	--
2/7/2007	--		57.73	5.00	40.00	7.83	49.90	--	--	--	--	--	--	--	--

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Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-9 Cont.															
5/9/2007	--		57.73	5.00	40.00	6.92	50.81	--	--	--	--	--	--	--	--
8/7/2007	NP		57.73	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	--		57.73	5.00	40.00	7.77	49.96	--	--	--	--	--	--	--	--
2/28/2008	--		57.73	5.00	40.00	5.61	52.12	--	--	--	--	--	--	--	--
5/23/2008	--	j	57.73	5.00	40.00	--	--	--	--	--	--	--	--	--	--
8/13/2008	NP		57.73	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	--		57.73	5.00	40.00	8.49	49.24	--	--	--	--	--	--	--	--
2/10/2009	--		57.73	5.00	40.00	7.07	50.66	--	--	--	--	--	--	--	--
5/7/2009	--		57.73	5.00	40.00	6.65	51.08	--	--	--	--	--	--	--	--
9/3/2009	NP		57.73	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	--		57.73	5.00	40.00	5.98	51.75	--	--	--	--	--	--	--	--
8/16/2010	NP		57.73	5.00	40.00	8.32	49.41	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.06	6.82
A-10															
6/21/2000	--		54.26	5.00	30.00	10.47	43.79	--	--	--	--	--	--	--	--
9/20/2000	--		54.26	5.00	30.00	10.76	43.50	--	--	--	--	--	--	--	--
12/26/2000	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
3/20/2001	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
9/23/2001	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
12/31/2001	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
3/21/2002	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
4/17/2002	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
8/12/2002	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
12/6/2002	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
1/30/2003	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
5/28/2003	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
8/6/2003	--		54.26	5.00	30.00	--	--	--	--	--	--	--	--	--	--
11/14/2003	--		54.26	5.00	30.00	10.37	43.89	--	--	--	--	--	--	--	--
02/02/2004	--	g	59.39	5.00	30.00	7.97	51.42	--	--	--	--	--	--	--	--
05/04/2004	--		59.39	5.00	30.00	8.69	50.70	--	--	--	--	--	--	--	--
09/02/2004	P		59.39	5.00	30.00	10.55	48.84	<500	<5.0	<5.0	<5.0	<5.0	270	0.8	6.6

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								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-10 Cont.															
11/10/2004	--		59.39	5.00	30.00	9.16	50.23	--	--	--	--	--	--	--	--
02/02/2005	--		59.39	5.00	30.00	7.90	51.49	--	--	--	--	--	--	--	--
05/09/2005	--		59.39	5.00	30.00	8.21	51.18	--	--	--	--	--	--	--	--
08/11/2005	P	h, i	59.39	5.00	30.00	10.02	49.37	69	<0.50	<0.50	<0.50	<0.50	97	0.9	6.6
11/18/2005	--		59.39	5.00	30.00	9.86	49.53	--	--	--	--	--	--	--	--
02/15/2006	--		59.39	5.00	30.00	7.53	51.86	--	--	--	--	--	--	--	--
5/30/2006	--		59.39	5.00	30.00	8.82	50.57	--	--	--	--	--	--	--	--
8/11/2006	P		59.39	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	--		59.39	5.00	30.00	10.28	49.11	--	--	--	--	--	--	--	--
2/7/2007	--		59.39	5.00	30.00	9.50	49.89	--	--	--	--	--	--	--	--
5/9/2007	--		59.39	5.00	30.00	8.67	50.72	--	--	--	--	--	--	--	--
8/7/2007	NP		59.39	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	--		59.39	5.00	30.00	9.48	49.91	--	--	--	--	--	--	--	--
2/28/2008	--		59.39	5.00	30.00	7.23	52.16	--	--	--	--	--	--	--	--
5/23/2008	--		59.39	5.00	30.00	9.94	49.45	--	--	--	--	--	--	--	--
8/13/2008	NP		59.39	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	--		59.39	5.00	30.00	9.90	49.49	--	--	--	--	--	--	--	--
2/10/2009	--		59.39	5.00	30.00	8.74	50.65	--	--	--	--	--	--	--	--
5/7/2009	--	1	59.39	5.00	30.00	8.23	51.16	--	--	--	--	--	--	--	--
9/3/2009	--	j, 1	59.39	5.00	30.00	--	--	--	--	--	--	--	--	--	--
3/23/2010	--		59.39	5.00	30.00	7.65	51.74	--	--	--	--	--	--	--	--
8/16/2010	NP		59.39	5.00	30.00	10.05	49.34	<50	<0.50	<0.50	<0.50	<1.0	3.9	1.02	7.03
A-11															
6/21/2000	--		53.74	5.00	30.00	9.54	44.20	<50	<0.5	<0.5	<0.5	<1.0	4	--	--
9/20/2000	--		53.74	5.00	30.00	10.62	43.12	--	--	--	--	--	--	--	--
12/26/2000	--		53.74	5.00	30.00	10.03	43.71	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/20/2001	--		53.74	5.00	30.00	8.49	45.25	--	--	--	--	--	--	--	--
6/12/2001	--		53.74	5.00	30.00	10.21	43.53	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/23/2001	--		53.74	5.00	30.00	10.77	42.97	--	--	--	--	--	--	--	--
12/31/2001	--		53.74	5.00	30.00	6.06	47.68	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--

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

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-11 Cont.															
3/21/2002	--		53.74	5.00	30.00	7.14	46.60	--	--	--	--	--	--	--	--
4/17/2002	--		53.74	5.00	30.00	8.41	45.33	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
8/12/2002	--		53.74	5.00	30.00	10.25	43.49	--	--	--	--	--	--	--	--
12/6/2002	P		53.74	5.00	30.00	10.43	43.31	<50	<0.50	<0.50	<0.50	<0.50	<2.0	2.4	6.7
1/30/2003	--		53.74	5.00	30.00	8.42	45.32	--	--	--	--	--	--	--	--
5/28/2003	--		53.74	5.00	30.00	9.30	44.44	<50	<0.50	<0.50	<0.50	<0.50	0.53	1.8	7
8/6/2003	--		53.74	5.00	30.00	10.28	43.46	--	--	--	--	--	--	--	--
11/14/2003	--		53.74	5.00	30.00	10.40	43.34	--	--	--	--	--	--	--	--
02/02/2004	--	g	59.16	5.00	30.00	7.95	51.21	--	--	--	--	--	--	--	--
05/04/2004	--		59.16	5.00	30.00	8.72	50.44	--	--	--	--	--	--	--	--
09/02/2004	P		59.16	5.00	30.00	10.44	48.72	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	6.6
11/10/2004	--		59.16	5.00	30.00	9.20	49.96	--	--	--	--	--	--	--	--
02/02/2005	--		59.16	5.00	30.00	7.95	51.21	--	--	--	--	--	--	--	--
05/09/2005	--		59.16	5.00	30.00	8.07	51.09	--	--	--	--	--	--	--	--
08/11/2005	P	h	59.16	5.00	30.00	9.87	49.29	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.8	6.7
11/18/2005	--		59.16	5.00	30.00	8.88	50.28	--	--	--	--	--	--	--	--
02/15/2006	--		59.16	5.00	30.00	7.90	51.26	--	--	--	--	--	--	--	--
5/30/2006	--		59.16	5.00	30.00	8.78	50.38	--	--	--	--	--	--	--	--
8/11/2006	P		59.16	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	--		59.16	5.00	30.00	10.10	49.06	--	--	--	--	--	--	--	--
2/7/2007	--		59.16	5.00	30.00	9.35	49.81	--	--	--	--	--	--	--	--
5/9/2007	--		59.16	5.00	30.00	8.48	50.68	--	--	--	--	--	--	--	--
8/7/2007	NP		59.16	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	--		59.16	5.00	30.00	9.31	49.85	--	--	--	--	--	--	--	--
2/28/2008	--		59.16	5.00	30.00	7.12	52.04	--	--	--	--	--	--	--	--
5/23/2008	--		59.16	5.00	30.00	9.77	49.39	--	--	--	--	--	--	--	--
8/13/2008	NP		59.16	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	--		59.16	5.00	30.00	9.75	49.41	--	--	--	--	--	--	--	--
2/10/2009	--		59.16	5.00	30.00	8.67	50.49	--	--	--	--	--	--	--	--
5/7/2009	--		59.16	5.00	30.00	8.20	50.96	--	--	--	--	--	--	--	--
9/3/2009	NP		59.16	5.00	30.00	10.15	49.01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.98	6.78

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Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-11 Cont.															
3/23/2010	--		59.16	5.00	30.00	7.70	51.46	--	--	--	--	--	--	--	--
8/16/2010	NP		59.16	5.00	30.00	9.90	49.26	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.60	6.86
A-12															
6/21/2000	--		52.05	5.00	30.00	9.28	42.77	<50	<0.5	<0.5	<0.5	<1.0	18	--	--
9/20/2000	--		52.05	5.00	30.00	9.55	42.50	--	--	--	--	--	--	--	--
12/26/2000	--		52.05	5.00	30.00	9.05	43.00	<50	<0.5	<0.5	<0.5	<0.5	17.3	--	--
3/20/2001	--		52.05	5.00	30.00	7.92	44.13	--	--	--	--	--	--	--	--
6/12/2001	--		52.05	5.00	30.00	9.26	42.79	<50	<0.5	<0.5	<0.5	<0.5	25	--	--
9/23/2001	--		52.05	5.00	30.00	9.68	42.37	--	--	--	--	--	--	--	--
12/31/2001	--		52.05	5.00	30.00	5.74	46.31	<50	<0.5	<0.5	<0.5	<0.5	9.5	--	--
3/21/2002	--		52.05	5.00	30.00	6.64	45.41	--	--	--	--	--	--	--	--
4/17/2002	--		52.05	5.00	30.00	7.68	44.37	<50	<0.5	<0.5	<0.5	<0.5	29	--	--
8/12/2002	--		52.05	5.00	30.00	9.30	42.75	--	--	--	--	--	--	--	--
12/06/02	P	c	52.05	5.00	30.00	9.38	42.67	<50	<0.50	<0.50	<0.50	<0.50	13	2.3	6.5
1/30/2003	--		52.05	5.00	30.00	7.87	44.18	--	--	--	--	--	--	--	--
5/28/2003	--		52.05	5.00	30.00	8.51	43.54	50	<0.50	<0.50	<0.50	<0.50	10	1.4	7
8/6/2003	--		52.05	5.00	30.00	9.28	42.77	--	--	--	--	--	--	--	--
11/14/2003	--		52.05	5.00	30.00	9.37	42.68	--	--	--	--	--	--	--	--
02/02/2004	P	g	57.06	5.00	30.00	7.90	49.16	<50	<0.50	<0.50	<0.50	<0.50	0.91	1.0	6.9
05/04/2004	--		57.06	5.00	30.00	8.74	48.32	--	--	--	--	--	--	--	--
09/02/2004	P		57.06	5.00	30.00	9.41	47.65	<50	<0.50	<0.50	<0.50	<0.50	6.2	1.1	6.5
11/10/2004	--		57.06	5.00	30.00	8.32	48.74	--	--	--	--	--	--	--	--
02/02/2005	P		57.06	5.00	30.00	7.45	49.61	<50	<0.50	<0.50	<0.50	<0.50	8.3	1.4	7.1
05/09/2005	--		57.06	5.00	30.00	7.57	49.49	--	--	--	--	--	--	--	--
08/11/2005	P	h	57.06	5.00	30.00	9.05	48.01	<50	<0.50	<0.50	<0.50	<0.50	5.4	0.9	6.4
11/18/2005	--		57.06	5.00	30.00	8.90	48.16	--	--	--	--	--	--	--	--
02/15/2006	--		57.06	5.00	30.00	7.47	49.59	--	--	--	--	--	--	--	--
5/30/2006	--		57.06	5.00	30.00	8.21	48.85	--	--	--	--	--	--	--	--
8/11/2006	P		57.06	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	--		57.06	5.00	30.00	9.17	47.89	--	--	--	--	--	--	--	--

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Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-12 Cont.															
2/7/2007	--		57.06	5.00	30.00	8.58	48.48	--	--	--	--	--	--	--	--
5/9/2007	--		57.06	5.00	30.00	7.93	49.13	--	--	--	--	--	--	--	--
8/7/2007	NP		57.06	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	--		57.06	5.00	30.00	8.52	48.54	--	--	--	--	--	--	--	--
2/28/2008	--		57.06	5.00	30.00	7.04	50.02	--	--	--	--	--	--	--	--
5/23/2008	--		57.06	5.00	30.00	9.00	48.06	--	--	--	--	--	--	--	--
8/13/2008	NP		57.06	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	--		57.06	5.00	30.00	9.01	48.05	--	--	--	--	--	--	--	--
2/10/2009	--		57.06	5.00	30.00	8.10	48.96	--	--	--	--	--	--	--	--
5/7/2009	--		57.06	5.00	30.00	7.80	49.26	--	--	--	--	--	--	--	--
9/3/2009	NP		57.06	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	--		57.06	5.00	30.00	7.68	49.38	--	--	--	--	--	--	--	--
8/16/2010	NP		57.06	5.00	30.00	9.30	47.76	<50	<0.50	<0.50	<0.50	<1.0	3.6	--	6.72
A-13															
6/21/2000	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
9/20/2000	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
12/26/2000	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
3/20/2001	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
6/12/2001	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
9/23/2001	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
12/31/2001	--		55.11	10.00	10.00	--	--	--	--	--	--	--	--	--	--
3/21/2002	--		55.11	10.00	10.00	6.70	48.41	--	--	--	--	--	--	--	--
4/17/2002	--		55.11	10.00	10.00	7.95	47.16	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
8/12/2002	--		55.11	10.00	10.00	10.11	45.00	--	--	--	--	--	--	--	--
12/6/2002	--		55.11	10.00	10.00	10.26	44.85	--	--	--	--	--	--	--	--
1/30/2003	--		55.11	10.00	10.00	7.81	47.30	--	--	--	--	--	--	--	--
5/28/2003	--		55.11	10.00	10.00	9.06	46.05	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.9	6.5
8/6/2003	--		55.11	10.00	10.00	10.22	44.89	--	--	--	--	--	--	--	--
11/14/2003	--		55.11	10.00	10.00	10.27	44.84	--	--	--	--	--	--	--	--
02/02/2004	--	g	60.26	10.00	10.00	7.92	52.34	--	--	--	--	--	--	--	--

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Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-13 Cont.															
05/04/2004	--		60.26	10.00	10.00	10.06	50.20	--	--	--	--	--	--	--	--
09/02/2004	P		60.26	10.00	10.00	10.34	49.92	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.0	6.6
11/10/2004	--		60.26	10.00	10.00	8.95	51.31	--	--	--	--	--	--	--	--
02/02/2005	--		60.26	10.00	10.00	7.28	52.98	--	--	--	--	--	--	--	--
05/09/2005	--		60.26	10.00	10.00	7.85	52.41	--	--	--	--	--	--	--	--
08/11/2005	--		60.26	10.00	10.00	9.70	50.56	--	--	--	--	--	--	--	--
11/18/2005	--		60.26	10.00	10.00	9.27	50.99	--	--	--	--	--	--	--	--
02/15/2006	--		60.26	10.00	10.00	7.24	53.02	--	--	--	--	--	--	--	--
5/30/2006	--		60.26	10.00	10.00	8.38	51.88	--	--	--	--	--	--	--	--
8/11/2006	--		60.26	10.00	10.00	9.55	50.71	--	--	--	--	--	--	--	--
11/1/2006	--		60.26	10.00	10.00	9.98	50.28	--	--	--	--	--	--	--	--
2/7/2007	--		60.26	10.00	10.00	9.07	51.19	--	--	--	--	--	--	--	--
5/9/2007	--		60.26	10.00	10.00	8.15	52.11	--	--	--	--	--	--	--	--
8/7/2007	--		60.26	10.00	10.00	10.05	50.21	--	--	--	--	--	--	--	--
11/14/2007	--		60.26	10.00	10.00	9.20	51.06	--	--	--	--	--	--	--	--
2/28/2008	--		60.26	10.00	10.00	6.82	53.44	--	--	--	--	--	--	--	--
5/23/2008	--		60.26	10.00	10.00	9.67	50.59	--	--	--	--	--	--	--	--
8/13/2008	--		60.26	10.00	10.00	10.17	50.09	--	--	--	--	--	--	--	--
11/19/2008	--		60.26	10.00	10.00	9.63	50.63	--	--	--	--	--	--	--	--
2/10/2009	--		60.26	10.00	10.00	8.48	51.78	--	--	--	--	--	--	--	--
5/7/2009	--		60.26	10.00	10.00	7.97	52.29	--	--	--	--	--	--	--	--
9/3/2009	--		60.26	10.00	10.00	10.14	50.12	--	--	--	--	--	--	--	--
3/23/2010	--		60.26	10.00	10.00	7.29	52.97	--	--	--	--	--	--	--	--
8/16/2010	--		60.26	10.00	10.00	9.92	50.34	--	--	--	--	--	--	--	--
AR-1															
6/21/2000	--		54.72	10.00	30.00	--	--	--	--	--	--	--	--	--	--
9/20/2000	--		54.72	10.00	30.00	--	--	--	--	--	--	--	--	--	--
12/26/2000	--		54.72	10.00	30.00	9.95	44.77	--	--	--	--	--	--	--	--
3/20/2001	--		54.72	10.00	30.00	8.34	46.38	--	--	--	--	--	--	--	--
6/12/2001	--		54.72	10.00	30.00	10.17	44.55	--	--	--	--	--	--	--	--

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								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes			MTBE
AR-1 Cont.															
9/23/2001	--		54.72	10.00	30.00	10.72	44.00	--	--	--	--	--	--	--	--
12/31/2001	--		54.72	10.00	30.00	5.91	48.81	--	--	--	--	--	--	--	--
3/21/2002	--		54.72	10.00	30.00	7.00	47.72	--	--	--	--	--	--	--	--
4/17/2002	--		54.72	10.00	30.00	8.33	46.39	--	--	--	--	--	--	--	--
8/12/2002	--		54.72	10.00	30.00	10.18	44.54	--	--	--	--	--	--	--	--
12/6/2002	--		54.72	10.00	30.00	10.21	44.51	--	--	--	--	--	--	--	--
1/30/2003	--		54.72	10.00	30.00	8.22	46.50	--	--	--	--	--	--	--	--
5/28/2003	--		54.72	10.00	30.00	9.62	45.10	--	--	--	--	--	--	--	--
8/6/2003	--		54.72	10.00	30.00	10.47	44.25	--	--	--	--	--	--	--	--
11/14/2003	--	d	54.72	10.00	30.00	10.40	44.32	--	--	--	--	--	--	--	--
02/02/2004	--	d, g	59.52	10.00	30.00	7.96	51.56	--	--	--	--	--	--	--	--
05/04/2004	--	d	59.52	10.00	30.00	10.17	49.35	--	--	--	--	--	--	--	--
09/02/2004	--		59.52	10.00	30.00	10.28	49.24	--	--	--	--	--	--	--	--
11/10/2004	--		59.52	10.00	30.00	9.15	50.37	--	--	--	--	--	--	--	--
02/02/2005	--		59.52	10.00	30.00	7.80	51.72	--	--	--	--	--	--	--	--
05/09/2005	--		59.52	10.00	30.00	7.03	52.49	--	--	--	--	--	--	--	--
08/11/2005	--		59.52	10.00	30.00	9.82	49.70	--	--	--	--	--	--	--	--
11/18/2005	--		59.52	10.00	30.00	9.83	49.69	--	--	--	--	--	--	--	--
02/15/2006	--		59.52	10.00	30.00	7.78	51.74	--	--	--	--	--	--	--	--
5/30/2006	--		59.52	10.00	30.00	8.65	50.87	--	--	--	--	--	--	--	--
8/11/2006	--		59.52	10.00	30.00	9.69	49.83	--	--	--	--	--	--	--	--
11/1/2006	--		59.52	10.00	30.00	10.07	49.45	--	--	--	--	--	--	--	--
2/7/2007	--		59.52	10.00	30.00	9.33	50.19	--	--	--	--	--	--	--	--
5/9/2007	--		59.52	10.00	30.00	8.45	51.07	--	--	--	--	--	--	--	--
8/7/2007	--		59.52	10.00	30.00	10.12	49.40	--	--	--	--	--	--	--	--
11/14/2007	--		59.52	10.00	30.00	9.31	50.21	--	--	--	--	--	--	--	--
2/28/2008	--		59.52	10.00	30.00	7.05	52.47	--	--	--	--	--	--	--	--
5/23/2008	--	j	59.52	10.00	30.00	--	--	--	--	--	--	--	--	--	--
8/13/2008	--		59.52	10.00	30.00	10.20	49.32	--	--	--	--	--	--	--	--
11/19/2008	--		59.52	10.00	30.00	9.73	49.79	--	--	--	--	--	--	--	--
2/10/2009	--		59.52	10.00	30.00	8.61	50.91	--	--	--	--	--	--	--	--

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

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
AR-1 Cont.															
5/7/2009	--		59.52	10.00	30.00	8.17	51.35	--	--	--	--	--	--	--	--
9/3/2009	--		59.52	10.00	30.00	10.19	49.33	--	--	--	--	--	--	--	--
3/23/2010	--		59.52	10.00	30.00	7.61	51.91	--	--	--	--	--	--	--	--
8/16/2010	--		59.52	10.00	30.00	9.88	49.64	--	--	--	--	--	--	--	--
AR-2															
6/21/2000	--		54.77	8.00	28.00	--	--	--	--	--	--	--	--	--	--
9/20/2000	--		54.77	8.00	28.00	--	--	--	--	--	--	--	--	--	--
12/26/2000	--		54.77	8.00	28.00	--	--	--	--	--	--	--	--	--	--
3/20/2001	--		54.77	8.00	28.00	3.13	51.64	--	--	--	--	--	--	--	--
6/12/2001	--		54.77	8.00	28.00	4.51	50.26	--	--	--	--	--	--	--	--
9/23/2001	--		54.77	8.00	28.00	6.05	48.72	--	--	--	--	--	--	--	--
12/31/2001	--		54.77	8.00	28.00	2.79	51.98	--	--	--	--	--	--	--	--
3/21/2002	--		54.77	8.00	28.00	7.75	47.02	--	--	--	--	--	--	--	--
4/17/2002	--		54.77	8.00	28.00	2.24	52.53	--	--	--	--	--	--	--	--
8/12/2002	--		54.77	8.00	28.00	4.93	49.84	--	--	--	--	--	--	--	--
12/6/2002	--		54.77	8.00	28.00	6.09	48.68	--	--	--	--	--	--	--	--
1/30/2003	--		54.77	8.00	28.00	3.89	50.88	--	--	--	--	--	--	--	--
5/28/2003	--		54.77	8.00	28.00	3.33	51.44	--	--	--	--	--	--	--	--
8/6/2003	--		54.77	8.00	28.00	5.05	49.72	--	--	--	--	--	--	--	--
11/14/2003	--		54.77	8.00	28.00	6.01	48.76	--	--	--	--	--	--	--	--
02/02/2004	--	g	59.18	8.00	28.00	3.88	55.30	--	--	--	--	--	--	--	--
05/04/2004	--		59.18	8.00	28.00	6.01	53.17	--	--	--	--	--	--	--	--
09/02/2004	--		59.18	8.00	28.00	5.65	53.53	--	--	--	--	--	--	--	--
11/10/2004	--		59.18	8.00	28.00	5.48	53.70	--	--	--	--	--	--	--	--
02/02/2005	--		59.18	8.00	28.00	2.62	56.56	--	--	--	--	--	--	--	--
05/09/2005	--		59.18	8.00	28.00	2.84	56.34	--	--	--	--	--	--	--	--
08/11/2005	--		59.18	8.00	28.00	4.33	54.85	--	--	--	--	--	--	--	--
11/18/2005	--		59.18	8.00	28.00	5.34	53.84	--	--	--	--	--	--	--	--
02/15/2006	--		59.18	8.00	28.00	2.49	56.69	--	--	--	--	--	--	--	--
5/30/2006	--		59.18	8.00	28.00	3.02	56.16	--	--	--	--	--	--	--	--

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

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

Well and Sample Date	P/NP	Comments	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
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
AR-2 Cont.															
8/11/2006	--		59.18	8.00	28.00	4.32	54.86	--	--	--	--	--	--	--	--
11/1/2006	--		59.18	8.00	28.00	5.25	53.93	--	--	--	--	--	--	--	--
2/7/2007	--		59.18	8.00	28.00	4.64	54.54	--	--	--	--	--	--	--	--
5/9/2007	--		59.18	8.00	28.00	3.15	56.03	--	--	--	--	--	--	--	--
8/7/2007	--		59.18	8.00	28.00	4.55	54.63	--	--	--	--	--	--	--	--
11/14/2007	--		59.18	8.00	28.00	5.03	54.15	--	--	--	--	--	--	--	--
2/28/2008	--		59.18	8.00	28.00	1.82	57.36	--	--	--	--	--	--	--	--
5/23/2008	--	j	59.18	8.00	28.00	--	--	--	--	--	--	--	--	--	--
8/13/2008	--		59.18	8.00	28.00	5.05	54.13	--	--	--	--	--	--	--	--
11/19/2008	--		59.18	8.00	28.00	5.49	53.69	--	--	--	--	--	--	--	--
2/10/2009	--		59.18	8.00	28.00	5.10	54.08	--	--	--	--	--	--	--	--
5/7/2009	--		59.18	8.00	28.00	2.90	56.28	--	--	--	--	--	--	--	--
9/3/2009	--		59.18	8.00	28.00	5.99	53.19	--	--	--	--	--	--	--	--
3/23/2010	--		59.18	8.00	28.00	1.94	57.24	--	--	--	--	--	--	--	--
8/16/2010	--		59.18	8.00	28.00	4.37	54.81	--	--	--	--	--	--	--	--
AR-3															
6/21/2000	--		54.19	10.00	30.00	--	--	--	--	--	--	--	--	--	--
9/20/2000	--		54.19	10.00	30.00	--	--	--	--	--	--	--	--	--	--
12/26/2000	--		54.19	10.00	30.00	9.70	44.49	--	--	--	--	--	--	--	--
3/20/2001	--		54.19	10.00	30.00	--	--	--	--	--	--	--	--	--	--
6/12/2001	--		54.19	10.00	30.00	--	--	--	--	--	--	--	--	--	--
9/23/2001	--		54.19	10.00	30.00	10.43	43.76	--	--	--	--	--	--	--	--
12/31/2001	--		54.19	10.00	30.00	5.18	49.01	--	--	--	--	--	--	--	--
3/21/2002	--		54.19	10.00	30.00	6.78	47.41	--	--	--	--	--	--	--	--
4/17/2002	--		54.19	10.00	30.00	8.06	46.13	--	--	--	--	--	--	--	--
8/12/2002	--		54.19	10.00	30.00	9.94	44.25	--	--	--	--	--	--	--	--
12/6/2002	--		54.19	10.00	30.00	9.99	44.20	--	--	--	--	--	--	--	--
1/30/2003	--		54.19	10.00	30.00	7.96	46.23	--	--	--	--	--	--	--	--
5/28/2003	--		54.19	10.00	30.00	8.94	45.25	--	--	--	--	--	--	--	--
8/6/2003	--		54.19	10.00	30.00	9.94	44.25	--	--	--	--	--	--	--	--

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

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

Well and Sample Date	P/NP	Comments	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	
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes			MTBE
AR-3 Cont.															
11/14/2003	--		54.19	10.00	30.00	10.03	44.16	--	--	--	--	--	--	--	--
02/02/2004	--	g	59.10	10.00	30.00	6.90	52.20	--	--	--	--	--	--	--	--
05/04/2004	--		59.10	10.00	30.00	9.12	49.98	--	--	--	--	--	--	--	--
09/02/2004	--		59.10	10.00	30.00	10.15	48.95	--	--	--	--	--	--	--	--
11/10/2004	--		59.10	10.00	30.00	8.79	50.31	--	--	--	--	--	--	--	--
02/02/2005	--		59.10	10.00	30.00	7.30	51.80	--	--	--	--	--	--	--	--
05/09/2005	--		59.10	10.00	30.00	7.71	51.39	--	--	--	--	--	--	--	--
08/11/2005	--		59.10	10.00	30.00	9.54	49.56	--	--	--	--	--	--	--	--
11/18/2005	--		59.10	10.00	30.00	9.43	49.67	--	--	--	--	--	--	--	--
02/15/2006	--		59.10	10.00	30.00	7.50	51.60	--	--	--	--	--	--	--	--
5/30/2006	--		59.10	10.00	30.00	8.82	50.28	--	--	--	--	--	--	--	--
8/11/2006	--		59.10	10.00	30.00	9.38	49.72	--	--	--	--	--	--	--	--
11/1/2006	--		59.10	10.00	30.00	9.75	49.35	--	--	--	--	--	--	--	--
2/7/2007	--		59.10	10.00	30.00	9.00	50.10	--	--	--	--	--	--	--	--
5/9/2007	--		59.10	10.00	30.00	8.12	50.98	--	--	--	--	--	--	--	--
8/7/2007	--		59.10	10.00	30.00	9.75	49.35	--	--	--	--	--	--	--	--
11/14/2007	--		59.10	10.00	30.00	8.91	50.19	--	--	--	--	--	--	--	--
2/28/2008	--		59.10	10.00	30.00	6.73	52.37	--	--	--	--	--	--	--	--
5/23/2008	--	j	59.10	10.00	30.00	--	--	--	--	--	--	--	--	--	--
8/13/2008	--		59.10	10.00	30.00	9.85	49.25	--	--	--	--	--	--	--	--
11/19/2008	--		59.10	10.00	30.00	9.35	49.75	--	--	--	--	--	--	--	--
2/10/2009	--		59.10	10.00	30.00	8.29	50.81	--	--	--	--	--	--	--	--
5/7/2009	--		59.10	10.00	30.00	7.83	51.27	--	--	--	--	--	--	--	--
9/3/2009	--		59.10	10.00	30.00	9.80	49.30	--	--	--	--	--	--	--	--
3/23/2010	--		59.10	10.00	30.00	7.34	51.76	--	--	--	--	--	--	--	--
8/16/2010	--	Unable to open	--	10.00	30.00	--	--	--	--	--	--	--	--	--	--

SYMBOLS AND ABBREVIATIONS:

-- = Not analyzed/applicable/measured/available
< = Not detected at or above laboratory reporting limit
DO = Dissolved oxygen
DTW = Depth to water in ft bgs
ft bgs = 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 Ground-Water Monitoring Report.

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.

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

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

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
A-2									
1/30/2003	<40	<20	--	<0.50	<0.50	<0.50	--	--	a
5/28/2003	<100	<20	1.1	<0.50	<0.50	<0.50	--	--	
8/6/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
09/02/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
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	
A-3									
5/28/2003	<100	<20	43	<0.50	<0.50	24	--	--	
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	
A-4									
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 and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
A-4 Cont.									
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	
A-5									
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	

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

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
A-5 Cont.									
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	
A-6									
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
8/11/2005	--	--	--	--	--	--	--	--	Well inaccessible
8/11/2006	--	--	--	--	--	--	--	--	Well inaccessible
A-7									
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	
A-8									
1/30/2003	<8,000	<4,000	2,200	<100	<100	900	--	--	a

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

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
A-8 Cont.									
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	
A-9									
1/30/2003	<40	<20	1.1	<0.50	<0.50	<0.50	--	--	
5/28/2003	<100	<20	0.74	<0.50	<0.50	<0.50	--	--	

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

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
A-9 Cont.									
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	
A-10									
09/02/2004	<1,000	<200	270	<5.0	<5.0	44	<5.0	<5.0	
08/11/2005	<100	<20	97	<0.50	<0.50	14	<0.50	<0.50	
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
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	
A-11									
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	
A-12									
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 and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
A-12 Cont.									
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	
A-13									
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	
AR-1									
AR-2									
AR-3									

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.

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

Table 3. Historical Ground-Water Flow Direction and Gradient
ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
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

Table 3. Historical Ground-Water Flow Direction and Gradient
ARCO Service Station #4931, 731 West MacArthur Blvd., Oakland, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
---------------------	-----------------------------------	---------------------------------------

FOOTNOTES:

a = Using wells AR-1 and A-9

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

APPENDIX A

BAI GROUND-WATER SAMPLING DATA PACKAGE
(Includes Field Data Sheets, Laboratory Analytical Report with Chain-of-Custody
Documentation, and Field Procedures)

FIELD DATA REPORT

DATE: 8/16/10
 PERSONNEL: EE
 WEATHER: _____

PROJECT NO.: BP 4931
 COMMENTS: _____

Equip: _____ Geosquirt _____ Tubing _____ Bailers _____ DO _____ wli _____ Ec/pH _____

Well ID	Time	MEASURING POINT	DTW (FT)	PRODUCT THICKNESS	pH	Cond. (X100)	Temp. (C/F)	DO (mg/l)	Redox (mV)	Iron (mg/l)	Alk. (mg/l)	WELL HEAD CONDITION: VAULT, BOLTS, CAP, LOCK, ETC
A-2	1158		9.40									
A-3	1238		9.45									
A-4	1234		8.85									
A-5	1254		8.85									
A-7	1219		9.13									
A-8	1310		9.27									
A-9	1101		8.52									
A-10	1122		10.05									
A-11	1338		9.90									
A-12	1349		7.30									
A-13	1211		9.92									
AR-1	1247		9.88									
AR-2	1153		4.31									
AR-5												unable to open



Groundwater Sampling Data Sheet

Well I.D.: A-11
 Project Name/Location: BP4401 Project #: _____
 Sampler's Name: ES Date: 8/16/10
 Purging Equipment: _____
 Sampling Equipment: butte

Casing Type: PVC
 Casing Diameter: _____ inch
 Total Well Depth: _____ 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
<u>✓</u>	<u>1340</u>	<u>6.0</u>	<u>-77</u>		<u>610.8</u>	<u>73.4</u>	<u>6.86</u>	
		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: 1340 Purged Dry? (Y/N) (N)

Comments: _____

Groundwater Sampling Data Sheet

Well I.D.: A-8
 Project Name/Location: Bp4931 Project #: _____
 Sampler's Name: GF Date: 08-16-10
 Purging Equipment: B
 Sampling Equipment: Bur

Casing Type: PVC

Casing Diameter: _____ inch ***UNIT CASING VOLUMES**
 Total Well Depth: _____ feet 2" = 0.16 gal/lin ft.
 Depth to Water: - _____ feet 3" = 0.37 gal/lin ft.
 Water Column Thickness: = _____ feet 4" = 0.65 gal/lin ft.
 Unit Casing Volume*: x _____ gallon / foot 6" = 1.47 gal/lin ft.
 Casing Water Volume: = _____ gallons
 Casing Volume: x 3 each
 Estimated Purge Volume: = _____ gallons

Free product measurement (if present): _____

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
<u>0</u>	<u>1315</u>	<u>1.05</u>	<u>15</u>		<u>1231</u>	<u>71.8</u>	<u>6.70</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: 1315

Purged Dry? (Y/N) (N)

Comments:

Groundwater Sampling Data Sheet

Well I.D.: A-S
 Project Name/Location: BP 4931 Project #: _____
 Sampler's Name: ES Date: 9/16/10
 Purging Equipment: _____
 Sampling Equipment: Boyle

Casing Type: PVC

Casing Diameter: _____ inch

***UNIT CASING VOLUMES**

Total Well Depth: _____ feet

2" = 0.16 gal/lin ft.

Depth to Water: - 8.85 feet

3" = 0.37 gal/lin ft.

Water Column Thickness: = _____ feet

4" = 0.65 gal/lin ft.

Unit Casing Volume*: x _____ gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume: = _____ gallons

Casing Volume: x 3 each

Estimated Purge Volume: = _____ gallons

Free product measurement (if present): _____

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
<u>0</u>	<u>1300</u>	<u>0.97</u>	<u>-104</u>		<u>1073</u>	<u>69.9</u>	<u>6.84</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: 1300

Purged Dry? (Y/N)

Comments: lots of weeds & sediment in well. Difficult to Sample.

Groundwater Sampling Data Sheet

Well I.D.: A-4
 Project Name/Location: BP 4931 Project #: _____
 Sampler's Name: EF Date: 8/16/10
 Purging Equipment: -
 Sampling Equipment: Back
 Casing Type: PVC

Casing Diameter: _____ inch ***UNIT CASING VOLUMES**
 Total Well Depth: _____ feet 2" = 0.16 gal/lin ft.
 Depth to Water: - _____ feet 3" = 0.37 gal/lin ft.
 Water Column Thickness: = _____ feet 4" = 0.65 gal/lin ft.
 Unit Casing Volume*: x _____ gallon / foot 6" = 1.47 gal/lin ft.
 Casing Water Volume: = _____ gallons
 Casing Volume: x 3 each
 Estimated Purge Volume: = _____ gallons

Free product measurement (if present): _____

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
<u>0</u>	<u>(237)</u>	<u>11.0</u>	<u>27</u>		<u>1274</u>	<u>71.1</u>	<u>6.64</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: 1239 Purged Dry? (Y/N) (N)

Comments: _____

Groundwater Sampling Data Sheet

Well I.D.: A-7

Project Name/Location: EX BAA31 Project #: _____

Sampler's Name: EP Date: 08/16/10

Purging Equipment: -

Sampling Equipment: Book

Casing Type: PVC

Casing Diameter: _____ inch ***UNIT CASING VOLUMES**

Total Well Depth: _____ feet 2" = 0.16 gal/lin ft.

Depth to Water: - _____ feet 3" = 0.37 gal/lin ft.

Water Column Thickness: = _____ feet 4" = 0.65 gal/lin ft.

Unit Casing Volume*: x _____ gallon / foot 6" = 1.47 gal/lin ft.

Casing Water Volume: = _____ gallons

Casing Volume: x 3 each

Estimated Purge Volume: = _____ gallons

Free product measurement (if present): _____

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (μS)	Temperature (Fahrenheit)	pH	Observations
<u>0</u>	<u>1225</u>	<u>0.25</u>	<u>-7</u>		<u>637.0</u>	<u>74.5</u>	<u>6.72</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: 1225 Purged Dry? (Y/N) (N)

Comments: _____

Groundwater Sampling Data Sheet

Well I.D.: A-10
 Project Name/Location: BP 4931 Project #: _____
 Sampler's Name: E.F. Date: 8/16/10
 Purging Equipment: _____
 Sampling Equipment: Bent

Casing Type: PVC
 Casing Diameter: _____ inch
 Total Well Depth: _____ feet
 Depth to Water: - 10.03 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
<u>0</u>	<u>1125</u>	<u>1.02</u>	<u>71</u>		<u>409.6</u>	<u>67.0</u>	<u>7.03</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: 0 gallons
 Depth to Water at Sample Collection: _____ feet
 Sample Collection Time: 1125 Purged Dry? (Y/N) (N)

Comments: NP



Groundwater Sampling Data Sheet

Well I.D.: A-3
 Project Name/Location: DP4931 Project #: _____
 Sampler's Name: EF Date: 8/16/10
 Purging Equipment: B
 Sampling Equipment: Bottle

Casing Type: PVC

Casing Diameter: _____ inch
 Total Well Depth: _____ 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
<u>0</u>	<u>1142</u>	<u>1.05</u>	<u>57</u>		<u>638.7</u>	<u>67.7</u>	<u>7.45</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: 1142

Purged Dry? (Y/N) (N)

Comments: _____

Groundwater Sampling Data Sheet

Well I.D.: A-9

Project Name/Location: BP 4931 Project #: _____

Sampler's Name: _____ Date: 8/16/10

Purging Equipment: -

Sampling Equipment: Bur

Casing Type: PVC

Casing Diameter: 6 inch

Total Well Depth: _____ feet

Depth to Water: - 8.32 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
<u>0</u>	<u>1105</u>	<u>1.06</u>	<u>92</u>		<u>614.7</u>	<u>68.8</u>	<u>6.82</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: 0 gallons

Depth to Water at Sample Collection: - feet

Sample Collection Time: 1105 Purged Dry? (Y/N) (N)

Comments: update Gems - well is 6"
MP03

Groundwater Sampling Data Sheet

Well I.D.: A-2
 Project Name/Location: BP4931 Project #: _____
 Sampler's Name: EF Date: 8/10/10
 Purging Equipment: _____
 Sampling Equipment: Brk

Casing Type: PVC

Casing Diameter: _____ inch

***UNIT CASING VOLUMES**

Total Well Depth: _____ feet

2" = 0.16 gal/lin ft.

Depth to Water: - 9.40 feet

3" = 0.37 gal/lin ft.

Water Column Thickness: = _____ feet

4" = 0.65 gal/lin ft.

Unit Casing Volume*: x _____ gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume: = _____ gallons

Casing Volume: x 3 each

Estimated Purge Volume: = _____ gallons

Free product measurement (if present): _____

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
<u>0</u>	<u>1205</u>	<u>0.81</u>	<u>73</u>		<u>353.9</u>	<u>69.0</u>	<u>6.94</u>	
		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: 1205 Purged Dry? (Y/N) (N)

Comments: _____

Groundwater Sampling Data Sheet

Well I.D.: A-12
 Project Name/Location: BP 4931 Project #: _____
 Sampler's Name: EF Date: 7/16/10
 Purging Equipment: _____
 Sampling Equipment: Brh

Casing Type: PVC

Casing Diameter: _____ inch ***UNIT CASING VOLUMES**
 Total Well Depth: _____ feet 2" = 0.16 gal/lin ft.
 Depth to Water: - _____ feet 3" = 0.37 gal/lin ft.
 Water Column Thickness: = _____ feet 4" = 0.65 gal/lin ft.
 Unit Casing Volume*: x _____ gallon / foot 6" = 1.47 gal/lin ft.
 Casing Water Volume: = _____ gallons
 Casing Volume: x 3 each
 Estimated Purge Volume: = _____ gallons

Free product measurement (if present): _____

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
<u>0</u>	<u>1355</u>		<u>-15</u>		<u>647.1</u>	<u>73.4</u>	<u>6.72</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: 1355 Purged Dry? (Y/N) _____

Comments: _____

ANALYTICAL REPORT

Job Number: 720-30021-1
Job Description: BP #4931, Oakland

For:
ARCADIS U.S., Inc.
155 Montgomery Street
Suite 1500
San Francisco, CA 94104
Attention: Hollis Phillips



Approved for release.
Dimple Sharma
Project Manager I
8/25/2010 5:30 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com
08/25/2010

cc: Mr. Jason Duda
Mr. Ben McKenna

CA ELAP Certification # 2496

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TestAmerica Laboratories, Inc.

TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566

Tel (925) 484-1919 Fax (925) 600-3002 www.testamericainc.com

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.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-30021-1 MTBE	A-2 (8/16/10)	6.1	0.50	ug/L	8260B/CA_LUFTMS
720-30021-2 MTBE	A-3 (8/16/10)	0.72	0.50	ug/L	8260B/CA_LUFTMS
720-30021-3 MTBE Benzene Ethylbenzene Toluene Gasoline Range Organics (GRO)-C6-C12 TBA TAME	A-4 (8/16/10)	160 18 0.56 0.50 1600 3400 47	0.50 0.50 0.50 0.50 50 4.0 0.50	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS
720-30021-4 MTBE TBA TAME	A-5 (8/16/10)	7.9 35 3.1	0.50 4.0 0.50	ug/L ug/L ug/L	8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS
720-30021-6 MTBE Benzene Ethylbenzene Toluene Xylenes, Total Gasoline Range Organics (GRO)-C6-C12 TAME	A-8 (8/16/10)	110 1600 5.3 12 6.1 4300 41	0.50 10 0.50 0.50 1.0 1000 0.50	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS 8260B/CA_LUFTMS
720-30021-8 MTBE	A-10 (8/16/10)	3.9	0.50	ug/L	8260B/CA_LUFTMS
720-30021-10 MTBE TAME	A-12 (8/16/10)	3.6 0.85	0.50 0.50	ug/L ug/L	8260B/CA_LUFTMS 8260B/CA_LUFTMS

METHOD SUMMARY

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
8260B / CA LUFT MS	TAL SF	SW846 8260B/CA_LUFTMS	
Purge and Trap	TAL SF		SW846 5030B

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

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

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-30021-1	A-2 (8/16/10)	Water	08/16/2010 1205	08/19/2010 1233
720-30021-2	A-3 (8/16/10)	Water	08/16/2010 1142	08/19/2010 1233
720-30021-3	A-4 (8/16/10)	Water	08/16/2010 1239	08/19/2010 1233
720-30021-4	A-5 (8/16/10)	Water	08/16/2010 1300	08/19/2010 1233
720-30021-5	A-7 (8/16/10)	Water	08/16/2010 1225	08/19/2010 1233
720-30021-6	A-8 (8/16/10)	Water	08/16/2010 1315	08/19/2010 1233
720-30021-7	A-9 (8/16/10)	Water	08/16/2010 1105	08/19/2010 1233
720-30021-8	A-10 (8/16/10)	Water	08/16/2010 1125	08/19/2010 1233
720-30021-9	A-11 (8/16/10)	Water	08/16/2010 1340	08/19/2010 1233
720-30021-10	A-12 (8/16/10)	Water	08/16/2010 1255	08/19/2010 1233

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-2 (8/16/10)

Lab Sample ID: 720-30021-1

Date Sampled: 08/16/2010 1205

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-76747	Instrument ID:	HP4
Preparation:	5030B		Lab File ID:	082010041.D
Dilution:	1.0		Initial Weight/Volume:	10 mL
Date Analyzed:	08/21/2010 0600		Final Weight/Volume:	10 mL
Date Prepared:	08/21/2010 0600			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	ND		0.50
Ethyl t-butyl ether	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	115		67 - 130
Toluene-d8 (Surr)	102		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-2 (8/16/10)

Lab Sample ID: 720-30021-1

Client Matrix: Water

Date Sampled: 08/16/2010 1205

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-76821	Instrument ID:	HP4
Preparation:	5030B		Lab File ID:	082310029.D
Dilution:	1.0		Initial Weight/Volume:	10 mL
Date Analyzed:	08/24/2010 0007		Final Weight/Volume:	10 mL
Date Prepared:	08/24/2010 0007			

Analyte	Result (ug/L)	Qualifier	RL
MTBE	6.1		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		67 - 130
1,2-Dichloroethane-d4 (Surr)	100		67 - 130
Toluene-d8 (Surr)	99		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-3 (8/16/10)

Lab Sample ID: 720-30021-2

Date Sampled: 08/16/2010 1142

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-76747	Instrument ID:	HP4
Preparation:	5030B		Lab File ID:	082010042.D
Dilution:	1.0		Initial Weight/Volume:	10 mL
Date Analyzed:	08/21/2010 0631		Final Weight/Volume:	10 mL
Date Prepared:	08/21/2010 0631			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	ND		0.50
Ethyl t-butyl ether	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	111		67 - 130
Toluene-d8 (Surr)	100		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-3 (8/16/10)

Lab Sample ID: 720-30021-2

Date Sampled: 08/16/2010 1142

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 08/24/2010 0039
Date Prepared: 08/24/2010 0039

Analysis Batch: 720-76821

Instrument ID: HP4
Lab File ID: 082310030.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
MTBE	0.72		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	100		67 - 130
Toluene-d8 (Surr)	98		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-4 (8/16/10)

Lab Sample ID: 720-30021-3

Date Sampled: 08/16/2010 1239

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-76747	Instrument ID:	HP4
Preparation:	5030B		Lab File ID:	082010043.D
Dilution:	1.0		Initial Weight/Volume:	10 mL
Date Analyzed:	08/21/2010 0703		Final Weight/Volume:	10 mL
Date Prepared:	08/21/2010 0703			

Analyte	Result (ug/L)	Qualifier	RL
MTBE	160		0.50
Benzene	18		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	0.56		0.50
Toluene	0.50		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	1600		50
TBA	3400		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	47		0.50
Ethyl t-butyl ether	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	105		67 - 130
1,2-Dichloroethane-d4 (Surr)	113		67 - 130
Toluene-d8 (Surr)	100		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-5 (8/16/10)

Lab Sample ID: 720-30021-4

Date Sampled: 08/16/2010 1300

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method: 8260B/CA_LUFTMS Analysis Batch: 720-76757 Instrument ID: HP4
Preparation: 5030B Lab File ID: 082110015.D
Dilution: 1.0 Initial Weight/Volume: 10 mL
Date Analyzed: 08/21/2010 1709 Final Weight/Volume: 10 mL
Date Prepared: 08/21/2010 1709

Analyte	Result (ug/L)	Qualifier	RL
MTBE	7.9		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	35		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	3.1		0.50
Ethyl t-butyl ether	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	105		67 - 130
1,2-Dichloroethane-d4 (Surr)	111		67 - 130
Toluene-d8 (Surr)	109		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-5 (8/16/10)

Lab Sample ID: 720-30021-4

Client Matrix: Water

Date Sampled: 08/16/2010 1300

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method: 8260B/CA_LUFTMS Analysis Batch: 720-76821 Instrument ID: HP4
Preparation: 5030B Lab File ID: 082310034.D
Dilution: 1.0 Initial Weight/Volume: 10 mL
Date Analyzed: 08/24/2010 0247 Final Weight/Volume: 10 mL
Date Prepared: 08/24/2010 0247

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	102		67 - 130
Toluene-d8 (Surr)	98		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-7 (8/16/10)

Lab Sample ID: 720-30021-5

Date Sampled: 08/16/2010 1225

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-76757	Instrument ID:	HP4
Preparation:	5030B		Lab File ID:	082110014.D
Dilution:	1.0		Initial Weight/Volume:	10 mL
Date Analyzed:	08/21/2010 1637		Final Weight/Volume:	10 mL
Date Prepared:	08/21/2010 1637			

Analyte	Result (ug/L)	Qualifier	RL
MTBE	ND		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	ND		0.50
Ethyl t-butyl ether	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	109		67 - 130
1,2-Dichloroethane-d4 (Surr)	116		67 - 130
Toluene-d8 (Surr)	116		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-7 (8/16/10)

Lab Sample ID: 720-30021-5

Date Sampled: 08/16/2010 1225

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method: 8260B/CA_LUFTMS Analysis Batch: 720-76821 Instrument ID: HP4
Preparation: 5030B Lab File ID: 082310033.D
Dilution: 1.0 Initial Weight/Volume: 10 mL
Date Analyzed: 08/24/2010 0215 Final Weight/Volume: 10 mL
Date Prepared: 08/24/2010 0215

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	103		67 - 130
Toluene-d8 (Surr)	98		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-8 (8/16/10)

Lab Sample ID: 720-30021-6

Date Sampled: 08/16/2010 1315

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method: 8260B/CA_LUFTMS Analysis Batch: 720-76757 Instrument ID: HP4
Preparation: 5030B Lab File ID: 082110013.D
Dilution: 1.0 Initial Weight/Volume: 10 mL
Date Analyzed: 08/21/2010 1605 Final Weight/Volume: 10 mL
Date Prepared: 08/21/2010 1605

Analyte	Result (ug/L)	Qualifier	RL
MTBE	110		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	5.3		0.50
Toluene	12		0.50
Xylenes, Total	6.1		1.0
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	41		0.50
Ethyl t-butyl ether	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	114		67 - 130
1,2-Dichloroethane-d4 (Surr)	109		67 - 130
Toluene-d8 (Surr)	106		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-8 (8/16/10)

Lab Sample ID: 720-30021-6

Date Sampled: 08/16/2010 1315

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method: 8260B/CA_LUFTMS Analysis Batch: 720-76841 Instrument ID: CHMSV2
Preparation: 5030B Lab File ID: 08241018.D
Dilution: 20 Initial Weight/Volume: 10 mL
Date Analyzed: 08/24/2010 1753 Final Weight/Volume: 10 mL
Date Prepared: 08/24/2010 1753

Analyte	Result (ug/L)	Qualifier	RL
Benzene	1600		10
Gasoline Range Organics (GRO)-C6-C12	4300		1000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	113		67 - 130
1,2-Dichloroethane-d4 (Surr)	113		67 - 130
Toluene-d8 (Surr)	110		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-9 (8/16/10)

Lab Sample ID: 720-30021-7

Date Sampled: 08/16/2010 1105

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-76757	Instrument ID:	HP4
Preparation:	5030B		Lab File ID:	082110012.D
Dilution:	1.0		Initial Weight/Volume:	10 mL
Date Analyzed:	08/21/2010 1533		Final Weight/Volume:	10 mL
Date Prepared:	08/21/2010 1533			

Analyte	Result (ug/L)	Qualifier	RL
MTBE	ND		0.50
Benzene	ND		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	ND		0.50
Ethyl t-butyl ether	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	113		67 - 130
Toluene-d8 (Surr)	107		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-10 (8/16/10)

Lab Sample ID: 720-30021-8

Date Sampled: 08/16/2010 1125

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-76757	Instrument ID:	HP4
Preparation:	5030B		Lab File ID:	082110011.D
Dilution:	1.0		Initial Weight/Volume:	10 mL
Date Analyzed:	08/21/2010 1501		Final Weight/Volume:	10 mL
Date Prepared:	08/21/2010 1501			

Analyte	Result (ug/L)	Qualifier	RL
MTBE	3.9		0.50
Benzene	ND		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	ND		0.50
Ethyl t-butyl ether	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	126		67 - 130
1,2-Dichloroethane-d4 (Surr)	117		67 - 130
Toluene-d8 (Surr)	113		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-11 (8/16/10)

Lab Sample ID: 720-30021-9

Date Sampled: 08/16/2010 1340

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-76757	Instrument ID:	HP4
Preparation:	5030B		Lab File ID:	082110010.D
Dilution:	1.0		Initial Weight/Volume:	10 mL
Date Analyzed:	08/21/2010 1428		Final Weight/Volume:	10 mL
Date Prepared:	08/21/2010 1428			

Analyte	Result (ug/L)	Qualifier	RL
MTBE	ND		0.50
Benzene	ND		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	ND		0.50
Ethyl t-butyl ether	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	121		67 - 130
1,2-Dichloroethane-d4 (Surr)	118		67 - 130
Toluene-d8 (Surr)	112		70 - 130

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Client Sample ID: A-12 (8/16/10)

Lab Sample ID: 720-30021-10

Date Sampled: 08/16/2010 1255

Client Matrix: Water

Date Received: 08/19/2010 1233

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-76757	Instrument ID:	HP4
Preparation:	5030B		Lab File ID:	082110009.D
Dilution:	1.0		Initial Weight/Volume:	10 mL
Date Analyzed:	08/21/2010 1356		Final Weight/Volume:	10 mL
Date Prepared:	08/21/2010 1356			

Analyte	Result (ug/L)	Qualifier	RL
MTBE	3.6		0.50
Benzene	ND		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	0.85		0.50
Ethyl t-butyl ether	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	106		67 - 130
1,2-Dichloroethane-d4 (Surr)	111		67 - 130
Toluene-d8 (Surr)	110		70 - 130

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description
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Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC/MS VOA					
Analysis Batch:720-76747					
LCS 720-76747/5	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-76747/7	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-76747/6	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-76747/8	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-76747/4	Method Blank	T	Water	8260B/CA_LUFT	
720-30021-1	A-2 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-2	A-3 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-3	A-4 (8/16/10)	T	Water	8260B/CA_LUFT	
Analysis Batch:720-76757					
LCS 720-76757/5	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-76757/7	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-76757/6	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-76757/8	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-76757/4	Method Blank	T	Water	8260B/CA_LUFT	
720-30021-4	A-5 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-5	A-7 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-6	A-8 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-7	A-9 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-8	A-10 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-9	A-11 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-10	A-12 (8/16/10)	T	Water	8260B/CA_LUFT	
Analysis Batch:720-76821					
LCS 720-76821/6	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-76821/7	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-76821/5	Method Blank	T	Water	8260B/CA_LUFT	
720-30021-1	A-2 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-2	A-3 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-4	A-5 (8/16/10)	T	Water	8260B/CA_LUFT	
720-30021-4MS	Matrix Spike	T	Water	8260B/CA_LUFT	
720-30021-4MSD	Matrix Spike Duplicate	T	Water	8260B/CA_LUFT	
720-30021-5	A-7 (8/16/10)	T	Water	8260B/CA_LUFT	
Analysis Batch:720-76841					
LCS 720-76841/14	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-76841/16	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-76841/15	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-76841/17	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-76841/13	Method Blank	T	Water	8260B/CA_LUFT	
720-30021-6	A-8 (8/16/10)	T	Water	8260B/CA_LUFT	

Report Basis

T = Total

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Method Blank - Batch: 720-76747

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

Lab Sample ID: MB 720-76747/4
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 08/20/2010 2130
 Date Prepared: 08/20/2010 2130

Analysis Batch: 720-76747
 Prep Batch: N/A
 Units: ug/L

Instrument ID: HP4
 Lab File ID: 082010025.D
 Initial Weight/Volume: 10 mL
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
MTBE	ND		0.50
Benzene	ND		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		1.0
o-Xylene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	ND		0.50
Ethyl t-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
4-Bromofluorobenzene	102	67 - 130	
1,2-Dichloroethane-d4 (Surr)	109	67 - 130	
Toluene-d8 (Surr)	104	70 - 130	

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-76747**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-76747/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/20/2010 2202
Date Prepared: 08/20/2010 2202

Analysis Batch: 720-76747
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 082010026.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-76747/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/20/2010 2233
Date Prepared: 08/20/2010 2233

Analysis Batch: 720-76747
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 082010027.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
MTBE	89	90	62 - 130	1	20		
Benzene	96	96	82 - 127	0	20		
EDB	101	101	70 - 130	1	20		
1,2-DCA	96	96	70 - 126	0	20		
Ethylbenzene	95	95	86 - 135	0	20		
Toluene	95	95	83 - 129	0	20		
m-Xylene & p-Xylene	95	95	70 - 142	0	20		
o-Xylene	98	97	89 - 136	1	20		
TBA	100	101	82 - 116	1	20		
Ethanol	110	117	31 - 216	6	20		
DIPE	94	94	74 - 155	0	20		
TAME	94	94	79 - 129	1	20		
Ethyl t-butyl ether	91	90	70 - 130	1	20		
Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits			
4-Bromofluorobenzene	105		102	67 - 130			
1,2-Dichloroethane-d4 (Surr)	107		104	67 - 130			
Toluene-d8 (Surr)	108		106	70 - 130			

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-76747**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-76747/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/20/2010 2305
Date Prepared: 08/20/2010 2305

Analysis Batch: 720-76747
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 082010028.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-76747/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/20/2010 2337
Date Prepared: 08/20/2010 2337

Analysis Batch: 720-76747
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 082010029.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Gasoline Range Organics (GRO)-C6-C12	82	82	58 - 106	1	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	104		102			67 - 130	
1,2-Dichloroethane-d4 (Surr)	108		103			67 - 130	
Toluene-d8 (Surr)	105		105			70 - 130	

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Method Blank - Batch: 720-76757

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

Lab Sample ID: MB 720-76757/4
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 08/21/2010 1052
 Date Prepared: 08/21/2010 1052

Analysis Batch: 720-76757
 Prep Batch: N/A
 Units: ug/L

Instrument ID: HP4
 Lab File ID: 082110004.D
 Initial Weight/Volume: 10 mL
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
MTBE	ND		0.50
Benzene	ND		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		1.0
o-Xylene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	ND		0.50
Ethyl t-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
4-Bromofluorobenzene	108	67 - 130	
1,2-Dichloroethane-d4 (Surr)	115	67 - 130	
Toluene-d8 (Surr)	111	70 - 130	

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-76757**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-76757/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/21/2010 1136
Date Prepared: 08/21/2010 1136

Analysis Batch: 720-76757
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 082110005.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-76757/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/21/2010 1207
Date Prepared: 08/21/2010 1207

Analysis Batch: 720-76757
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 082110006.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
MTBE	93	94	62 - 130	2	20		
Benzene	98	95	82 - 127	2	20		
EDB	105	107	70 - 130	2	20		
1,2-DCA	98	99	70 - 126	1	20		
Ethylbenzene	97	94	86 - 135	4	20		
Toluene	95	91	83 - 129	4	20		
m-Xylene & p-Xylene	98	95	70 - 142	3	20		
o-Xylene	99	96	89 - 136	3	20		
TBA	95	97	82 - 116	1	20		
Ethanol	64	72	31 - 216	12	20		
DIPE	96	94	74 - 155	2	20		
TAME	96	95	79 - 129	1	20		
Ethyl t-butyl ether	93	92	70 - 130	1	20		
Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits			
4-Bromofluorobenzene	105		105	67 - 130			
1,2-Dichloroethane-d4 (Surr)	106		110	67 - 130			
Toluene-d8 (Surr)	109		109	70 - 130			

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-76757**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-76757/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/21/2010 1240
Date Prepared: 08/21/2010 1240

Analysis Batch: 720-76757
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 082110007.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-76757/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/21/2010 1312
Date Prepared: 08/21/2010 1312

Analysis Batch: 720-76757
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 082110008.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Gasoline Range Organics (GRO)-C6-C12	88	89	58 - 106	1	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	105		113			67 - 130	
1,2-Dichloroethane-d4 (Surr)	111		115			67 - 130	
Toluene-d8 (Surr)	106		112			70 - 130	

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Method Blank - Batch: 720-76821

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

Lab Sample ID: MB 720-76821/5
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 08/23/2010 2303
 Date Prepared: 08/23/2010 2303

Analysis Batch: 720-76821
 Prep Batch: N/A
 Units: ug/L

Instrument ID: HP4
 Lab File ID: 082310027.D
 Initial Weight/Volume: 10 mL
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
MTBE	ND		0.50
Benzene	ND		0.50
EDB	ND		0.50
1,2-DCA	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		1.0
o-Xylene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
TBA	ND		4.0
Ethanol	ND		100
DIPE	ND		0.50
TAME	ND		0.50
Ethyl t-butyl ether	ND		0.50
Surrogate	% Rec	Acceptance Limits	
4-Bromofluorobenzene	100	67 - 130	
1,2-Dichloroethane-d4 (Surr)	99	67 - 130	
Toluene-d8 (Surr)	99	70 - 130	

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-76821**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-76821/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/23/2010 2056
Date Prepared: 08/23/2010 2056

Analysis Batch: 720-76821
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 082310023.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-76821/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/23/2010 2128
Date Prepared: 08/23/2010 2128

Analysis Batch: 720-76821
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 082310024.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
MTBE	109	103	62 - 130	5	20		
Benzene	104	102	82 - 127	2	20		
EDB	109	105	70 - 130	4	20		
1,2-DCA	97	94	70 - 126	4	20		
Ethylbenzene	105	104	86 - 135	1	20		
Toluene	104	103	83 - 129	1	20		
m-Xylene & p-Xylene	101	100	70 - 142	2	20		
o-Xylene	104	103	89 - 136	1	20		
TBA	100	100	82 - 116	0	20		
Ethanol	93	100	31 - 216	7	20		
DIPE	108	106	74 - 155	2	20		
TAME	119	114	79 - 129	4	20		
Ethyl t-butyl ether	109	106	70 - 130	3	20		
Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits			
4-Bromofluorobenzene	102		99	67 - 130			
1,2-Dichloroethane-d4 (Surr)	96		95	67 - 130			
Toluene-d8 (Surr)	103		101	70 - 130			

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-76821**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

MS Lab Sample ID: 720-30021-4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 0319
Date Prepared: 08/24/2010 0319

Analysis Batch: 720-76821
Prep Batch: N/A

Instrument ID: HP4
Lab File ID: 082310035.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 720-30021-4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 0351
Date Prepared: 08/24/2010 0351

Analysis Batch: 720-76821
Prep Batch: N/A

Instrument ID: HP4
Lab File ID: 082310036.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
MTBE	108	113	60 - 138	4	20		
Benzene	102	101	60 - 140	1	20		
EDB	103	107	60 - 140	3	20		
1,2-DCA	98	98	60 - 140	0	20		
Ethylbenzene	103	101	60 - 140	2	20		
Toluene	101	99	60 - 140	3	20		
m-Xylene & p-Xylene	99	97	60 - 140	2	20		
o-Xylene	103	101	60 - 140	2	20		
TBA	106	102	60 - 140	4	20		
Ethanol	113	97	60 - 140	16	20		
DIPE	108	109	60 - 140	1	20		
TAME	117	122	60 - 140	3	20		
Ethyl t-butyl ether	107	110	60 - 140	3	20		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
4-Bromofluorobenzene		103	99			67 - 130	
1,2-Dichloroethane-d4 (Surr)		99	96			67 - 130	
Toluene-d8 (Surr)		103	101			70 - 130	

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Method Blank - Batch: 720-76841

Lab Sample ID: MB 720-76841/13
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 1048
Date Prepared: 08/24/2010 1048

Analysis Batch: 720-76841
Prep Batch: N/A
Units: ug/L

Method: 8260B/CA_LUFTMS Preparation: 5030B

Instrument ID: CHMSV2
Lab File ID: 08241004.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Benzene	ND		0.50
Gasoline Range Organics (GRO)-C6-C12	ND		50
Surrogate	% Rec	Acceptance Limits	
4-Bromofluorobenzene	99	67 - 130	
1,2-Dichloroethane-d4 (Surr)	94	67 - 130	
Toluene-d8 (Surr)	100	70 - 130	

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-76841**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-76841/14
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 1133
Date Prepared: 08/24/2010 1133

Analysis Batch: 720-76841
Prep Batch: N/A
Units: ug/L

Instrument ID: CHMSV2
Lab File ID: 08241006.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-76841/15
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 1204
Date Prepared: 08/24/2010 1204

Analysis Batch: 720-76841
Prep Batch: N/A
Units: ug/L

Instrument ID: CHMSV2
Lab File ID: 08241007.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	95	98	82 - 127	3	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	101		101			67 - 130	
1,2-Dichloroethane-d4 (Surr)	93		94			67 - 130	
Toluene-d8 (Surr)	102		102			70 - 130	

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-76841**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-76841/16
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 1235
Date Prepared: 08/24/2010 1235

Analysis Batch: 720-76841
Prep Batch: N/A
Units: ug/L

Instrument ID: CHMSV2
Lab File ID: 08241008.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-76841/17
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 1306
Date Prepared: 08/24/2010 1306

Analysis Batch: 720-76841
Prep Batch: N/A
Units: ug/L

Instrument ID: CHMSV2
Lab File ID: 08241009.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Gasoline Range Organics (GRO)-C6-C12	90	89	58 - 106	0	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	104		103		67 - 130		
1,2-Dichloroethane-d4 (Surr)	95		96		67 - 130		
Toluene-d8 (Surr)	101		102		70 - 130		

720-30021

Chain of Custody Record

126357

Client Contact Broadbent & Associates 1324 Mangrove Ave Suite 212 Chico, CA 95926 (530) 566-1400 (530) 566-1401 Project Name: BP 4931 Site: 731 W. MacArthur Blvd., Oakland, CA P O # GP09BPNA.C110		Project Manager: Jason Duda Tel/Fax: (530) 566-1400/ (530) 566-1401		Site Contact: Lab Contact: Dimple Sharma		Date: Carrier:		COC No: _____ of _____ COCs					
		Analysis Turnaround Time Calendar (C) or Work Days (W) _____ TAT if different from Below _____ <input checked="" 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 1,2 DCA, EDB, and Ethanol by 8260B				Job No.					
								SDG No.					
								Sample Specific Notes:					
Sample Identification		Sample Date	Sample Time					Sample Type	Matrix	# of Cont.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A-2 (8/16/10)		8/16/10	1205						AQ	3	X	X	X
A-3 (8/16/10)			1142							3	X	X	X
A-4 (8/16/10)			1239							3	X	X	X
A-5 (8/16/10)			1300							3	X	X	X
A-7 (8/16/10)			1225							6	X	X	X
A-8 (8/16/10)			1315							3	X	X	X
A-9 (8/16/10)			1105							3	X	X	X
A-10 (8/16/10)			1125							3	X	X	X
A-11 (8/16/10)			1340			3	X	X	X				
A-12 (8/16/10)			1355			3	X	X	X				
TB-4931-100816		8/16/10											
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____							on Hold						
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months								
Special Instructions/QC Requirements & Comments:													
Relinquished by:		Company:		Date/Time: 8:50 8/17/10		Received by:		Company:					
Relinquished by:		Company:		Date/Time:		Received by:		Company:					
Relinquished by:		Company:		Date/Time:		Received by:		Company:					

1
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9
10

5-82

8-19-10 1233

Login Sample Receipt Check List

Client: ARCADIS U.S., Inc.

Job Number: 720-30021-1

Login Number: 30021

List Source: TestAmerica San Francisco

Creator: Mullen, Joan

List Number: 1

Question	T / F / NA	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	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

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

GEOTRACKER UPLOAD CONFIRMATION RECEIPTS

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!

<u>Submittal Type:</u>	GEO_WELL
<u>Submittal Title:</u>	3Q10 GEO_WELL 4931
<u>Facility Global ID:</u>	T0600100110
<u>Facility Name:</u>	ARCO #04931
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	9/10/2010 9:32:17 AM
<u>Confirmation Number:</u>	1878342986

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!

<u>Submittal Type:</u>	EDF - Monitoring Report - Semi-Annually
<u>Submittal Title:</u>	3Q10 GW Monitoring
<u>Facility Global ID:</u>	T0600100110
<u>Facility Name:</u>	ARCO #04931
<u>File Name:</u>	720-30021-1.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	9/10/2010 9:33:27 AM
<u>Confirmation Number:</u>	8673936247

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)