

Ms. Dilan Roe, P.E.  
 Hazardous Materials Specialist  
 Alameda County Environmental Health  
 1131 Harbor Bay Parkway  
 Alameda, California 94502

ARCADIS U.S., Inc.  
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**RECEIVED**

*By Alameda County Environmental Health at 9:18 am, Apr 15, 2013*

Subject:

**Fourth Quarter 2012 and First Quarter 2013  
 Semi-Annual Groundwater Monitoring Report**  
 Former Atlantic Richfield Company Station No. 4931  
 731 West MacArthur Boulevard  
 Oakland, California 94609

ENVIRONMENT

Date:  
 April 11, 2013

Dear Ms. Roe:

ARCADIS U.S., Inc (ARCADIS) has prepared this report on behalf of BP Remediation Management, a BP affiliated company, for the former BP service station listed below.

<u>BP Facility No.</u>	<u>ACEH Site No.</u>	<u>Location</u>
4931	RO0000076	731 West MacArthur Blvd. Oakland, California

Contact:  
**Hollis Phillips**

Phone:  
**415.432.6903**

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Our ref:  
**GP09BPNA.C110.N0000**

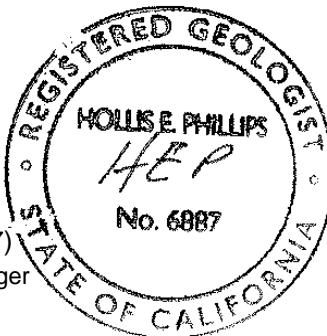
I declare, to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct. If you have any questions or comments regarding the content of this report, please contact Hollis Phillips by telephone at 415.432.6903 or by e-mail at [hollis.phillips@arcadis-us.com](mailto:hollis.phillips@arcadis-us.com).

Sincerely,

ARCADIS U.S., Inc.



Hollis E. Phillips, P.G. (No. 6887)  
 Principal Geologist/Project Manager



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Ms. Dilan Roe  
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Subject:

**Fourth Quarter 2012 and First Quarter 2013  
Semi-Annual Groundwater Monitoring Report**  
Former Atlantic Richfield Company Station #4931  
731 West MacArthur Boulevard  
Oakland, California  
ACEH Case #RO0000076

ENVIRONMENT

Date:  
April 11, 2013

Dear Ms. Roe:

ARCADIS U.S., Inc. (ARCADIS) has prepared this semi-annual groundwater monitoring report to document the results of groundwater monitoring and sampling at the former BP service station No. 4931, located at 731 West MacArthur Boulevard in Oakland, California (the Site; Figure 1).

Contact:  
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## 1. Summary

A summary of the work performed at the Site during this reporting period and the proposed work for the next reporting period is provided below.

### Work Performed – Reporting Period (October 2012 to March 2013)

- Submitted the *Second Quarter and Third Quarter 2012, Semi-Annual Groundwater Monitoring Report* on October 23, 2012 to Alameda County Environmental Health Services Agency (ACEH).
- Performed soil vapor sampling at the Site on January 4, January 9, and February 15, 2013.
- Attempted to uncover monitoring well A-13 on February 8, 2013.
- Performed semi-annual groundwater monitoring and sampling on February 8, 2013 in accordance with the ACEH. The groundwater sampling event included establishing traffic control to facilitate monitoring and sampling at A-11 and A-12.

**Work Proposed – Reporting Period (April 2013 to September 2013)**

- Submit the *Fourth Quarter 2012 and First Quarter 2013, Semi-Annual Groundwater Monitoring Report*, contained herein.
- Prepare and submit an ACEH Low Threat Closure Policy Checklist that will include a summary of the First Quarter 2013 soil vapor sampling results.
- Perform semi-annual groundwater monitoring and sampling in August 2013.

**2. Background**

The Site is a former BP service station and is currently operated as a Beacon gasoline station (Figures 1 and 2). Improvements to the Site include four 10,000-gallon double-wall fiberglass gasoline underground storage tanks (USTs) installed on April 8, 1992. Product lines were excavated, removed, inspected, and replaced on October 2, 2002. Soil boring and well construction details are summarized in Table 1. Previous investigation information and site history are summarized in Appendix A.

**3. Groundwater Monitoring/Sampling Activities and Results**

Historical and current groundwater monitoring and sampling results are summarized in Table 2. Current groundwater monitoring and sampling data are graphically presented on Figures 3 and 4. A rose diagram illustrating historical groundwater flow directions and gradients is provided on Figure 5.

Before groundwater samples were collected, depth to groundwater was measured to within 0.01 foot below top of casing in wells A-2 through A-5, A-7 through A-12, AR-1, and AR-3 using a water level indicator. Monitoring well AR-2 could not be gauged due to the well being parked over. Monitoring well A-13 could not be gauged due to the well currently being paved over.

Monitoring wells A-3, A-4, A-5, A-8, A-11, and A-12 were sampled on February 8, 2013 by Broadbent & Associates, Inc. (Broadbent). Field activities conducted by Broadbent were reviewed and certified by a Broadbent California Professional Geologist. Groundwater sampling data packages and laboratory analytical reports for the current monitoring period are included in Appendices B and C, respectively.

Collected groundwater samples were submitted under chain-of-custody protocol to TestAmerica Laboratories, Inc. (TestAmerica), a California-certified laboratory located in Pleasanton, California.

Collected groundwater samples from A-3 were analyzed for fuel additive methyl tert-butyl ether (MTBE) by USEPA Method 8260.

Collected groundwater samples from A-5 were analyzed for the following:

- Gasoline range organics (C6-C12) (GRO) using United States Environmental Protection Agency (USEPA) Method 8260B Modified;
- MTBE using USEPA Method 8260.

Collected groundwater samples from A-4 and A-8 were analyzed for the following:

- GRO using USEPA Method 8260B Modified;
- Benzene, toluene, ethylbenzene, and xylenes (BTEX), ethylene dibromide (EDB), and 1,2-dichloroethane (1,2-DCA) using USEPA Method 8260; and
- tert-amyl-methyl ether (TAME), diisopropyl ether (DIPE), ethanol, and ethyl t-butyl ether (ETBE) by USEPA Method 8260.

Collected groundwater samples from A-11 and A-12 were analyzed for the following:

- GRO using USEPA Method 8260B Modified;
- BTEX, EDB, and 1,2-DCA using USEPA Method 8260; and
- MTBE, TAME, DIPE, ethanol, and ETBE by USEPA Method 8260.

#### **4. Discussion**

- As shown on Figure 3, groundwater flow direction during the reporting period was to the west at an approximate gradient of 0.02 foot per foot (ft/ft). Historical data indicate the groundwater flow direction is predominantly toward the west as shown on Figure 5.

- GRO was detected in one of five wells sampled at a concentration of 890 micrograms per liter ( $\mu\text{g}/\text{L}$ ) (A-4). This detection is consistent with historical analytical results.
- Benzene was detected in two of five wells sampled at concentrations of 5.0  $\mu\text{g}/\text{L}$  (A-4) and 6.0  $\mu\text{g}/\text{L}$  (A-8).
- Ethylbenzene was detected in one of four wells sampled at a concentration of 1.6  $\mu\text{g}/\text{L}$  (A-4).
- MTBE was detected in two of four wells sampled at concentrations of 3.3  $\mu\text{g}/\text{L}$  (A-12) and 240  $\mu\text{g}/\text{L}$  (A-5).
- TBA was detected in one of four wells sampled at a concentration of 1,600  $\mu\text{g}/\text{L}$  (A-4). This detection is consistent with historical analytical results.
- TAME was detected in three of four wells sampled ranging in concentrations of 0.92  $\mu\text{g}/\text{L}$  (A-8) to 19  $\mu\text{g}/\text{L}$  (A-4).
- Toluene, xylenes, DIPE, ETBE, Ethanol, EDB, and 1,2-DCA were not detected in the four wells sampled and analyzed for these constituents.

An attempt was made to uncover monitoring well A-13 on February 8, 2013. A-13 was last gauged for a depth-to-water measurement in March 2011. Monitoring field sheets since the March 2011 event have noted that this well is inaccessible and paved over. Although gauging at A-13 had been conducted on a consistent basis until being paved over, groundwater sampling had not been performed at this well since 2004.

ARCADIS conducted a site visit on September 7, 2012, and engaged PLS Surveys, Inc. (PLS) a California-licensed land surveyor, to determine the location of A-13 based on previous survey coordinates for the well and nearby site features. The location of the well was marked out on the surface based on the previous survey coordinates. A metal detector was used to further confirm the location of A-13 and verify that the well box remained present. Based on the marked locations by PLS and the use of a metal detector, ARCADIS was able to locate A-13 within a few inches of the survey marks. Surface markings around the covered well included an 18-inch-diameter circle centered over well box that was identified by the metal detector.

Prior to initiating intrusive subsurface work to uncover A-13, underground utilities and other potential subsurface obstructions in the vicinity of A-13 were located and marked.

The utility survey included identifying the Site using white paint and obtaining an Underground Service Alert (USA-North) ticket prior to intrusive activities. Additionally, a private third-party utility locator screened the area around A-13 to determine the location of nearby underground utilities.

During the utility survey, the utility location contractor identified a subsurface gas line within 3 inches of A-13 (Appendix D). The gas line had not previously been identified by the USA-North service provider (Pacific Gas & Electric Company [PG&E]). Upon identifying the gas line, ARCADIS contacted PG&E and requested them to send personnel to the Site to verify the location of the gas line in the vicinity of A-13. Later in the day, PG&E personnel arrived to the Site and confirmed the location of the gas line identified by the utility location contractor. For safety concerns, uncovering activities were not conducted at A-13. ARCADIS is currently evaluating other options to uncover A-13 due to the close proximity to the gas line.

## 5. Recommendations

Based on the observed groundwater concentration trends, ARCADIS recommends the following:

- Continue groundwater monitoring on a semi-annual basis during the third quarter of 2013.

If you have any questions or comments regarding the contents of this report, please contact Hollis Phillips by telephone (415.432.6903) or by e-mail (hollis.phillips@arcadis-us.com).

Sincerely,

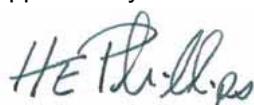
ARCADIS U.S., Inc.

Prepared by:

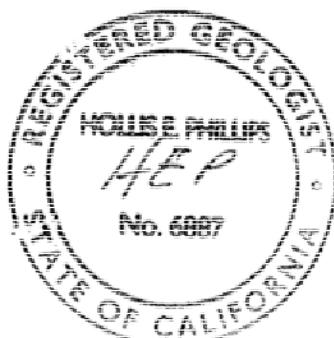


Jamey Peterson  
Staff Geologist

Approved by:



Hollis E. Phillips, P.G. (CA 6887)  
Principal Geologist/Project Manager



## Enclosures:

Table 1	Soil Boring and Well Construction Details
Table 2	Historical and Current Groundwater Monitoring and Analytical Data
Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Elevation Contour Map – February 8, 2013
Figure 4	Analytical Summary Map – February 8, 2013
Figure 5	Groundwater Flow Direction Rose Diagram
Appendix A	Previous Investigations and Site History Summary
Appendix B	Groundwater Sampling Data Package
Appendix C	Certified Laboratory Analytical Report
Appendix D	Photograph of Utility Markings nearby A-13

## Copies:

Ms. Dilan Roe, Alameda County Environmental Health (Submitted via ACEH ftp site)  
Mr. Nick Goyal, Owner, electronic copy e-mailed ([nick@vintnersdist.com](mailto:nick@vintnersdist.com))  
Electronic copy uploaded to GeoTracker

**ARCADIS**

**Tables**

**Table 1**  
**Soil Boring and Well Construction Details**  
Former Atlantic-Richfield Oil Company Station No. 4931  
731 West MacArthur Boulevard, Oakland, California

Well I.D.	Drill Date	Well		Screen		Screen Length (feet)
		Depth (feet bgs)	Diameter (inches)	Top (feet bgs)	Bottom (feet bgs)	
<b>Monitoring Wells</b>						
A-2	--	--	--	--	--	--
A-3	--	--	--	--	--	--
A-4	--	--	--	--	--	--
A-5	--	--	--	--	--	--
A-6	--	--	--	--	--	--
A-7	--	--	--	--	--	--
A-8	--	--	--	--	--	--
A-9	12/15/87	40	6	5	40	35
A-10	12/15/87	30	3	5	30	25
A-11	12/16/87	30	3	5	30	25
A-12	12/16/87	30	3	5	30	25
A-13	06/15/92	30	3	10	30	20
AR-1	06/15/92	30	6	10	30	20
AR-2	06/15/92	30	6	8	28	20
AR-3	06/16/92	30	4	10	30	20
<b>Soil Vapor Extraction Well</b>						
AV-1	01/17/92	16	2	5	15	10

**Notes**

Wells are constructed of poly-vinyl-chloride (PVC).

bgs = Below ground surface

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**  
**731 W Macarthur Blvd, Oakland, CA 94609**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes
AR-1	12/26/2000		54.72	9.95	--	44.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	3/20/2001		54.72	8.34	--	46.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	6/12/2001		54.72	10.17	--	44.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	9/23/2001		54.72	10.72	--	44.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	12/31/2001		54.72	5.91	--	48.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	3/21/2002		54.72	7.00	--	47.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	4/17/2002		54.72	8.33	--	46.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	8/12/2002		54.72	10.18	--	44.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	12/6/2002		54.72	10.21	--	44.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	1/30/2003		54.72	8.22	--	46.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	5/28/2003		54.72	9.62	--	45.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	8/6/2003		54.72	10.47	--	44.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	11/14/2003		54.72	10.40	--	44.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	2/2/2004		59.52	7.96	--	51.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	5/4/2004		59.52	10.17	--	49.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	9/2/2004		59.52	10.28	--	49.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	11/10/2004		59.52	9.15	--	50.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	2/2/2005		59.52	7.80	--	51.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	5/9/2005		59.52	7.03	--	52.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	8/11/2005		59.52	9.82	--	49.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	11/18/2005		59.52	9.83	--	49.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	2/15/2006		59.52	7.78	--	51.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	5/30/2006		59.52	8.65	--	50.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	8/11/2006		59.52	9.69	--	49.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	11/1/2006		59.52	10.07	--	49.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	2/7/2007		59.52	9.33	--	50.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	5/9/2007		59.52	8.45	--	51.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	8/7/2007		59.52	10.12	--	49.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	11/14/2007		59.52	9.31	--	50.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	2/28/2008		59.52	7.05	--	52.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	8/13/2008		59.52	10.20	--	49.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	11/19/2008		59.52	9.73	--	49.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	2/10/2009		59.52	8.61	--	50.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	5/7/2009		59.52	8.17	--	51.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	9/3/2009		59.52	10.19	--	49.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	8/24/2012		59.52	9.65	--	49.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	2/8/2013		59.52	8.44	--	51.08	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)	
A-2	6/21/2000		55.48	6.85	--	48.63	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--	--	--	--	--	--	--	
A-2	9/20/2000		55.48	10.45	--	45.03	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-2	12/26/2000		55.48	6.27	--	49.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-2	3/20/2001		55.48	4.57	--	50.91	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-2	6/12/2001		55.48	9.27	--	46.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-2	9/23/2001		55.48	10.75	--	44.73	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-2	12/31/2001		55.48	4.13	--	51.35	<50	<0.5	<0.5	<0.5	1	3.2	<2.5	--	--	--	--	--	--	--	
A-2	3/21/2002		55.48	3.26	--	52.22	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-2	4/17/2002		55.48	3.72	--	51.76	<50	<0.5	<0.5	<0.5	<0.5	3.1	--	--	--	--	--	--	--	--	
A-2	8/12/2002		55.48	9.95	--	45.53	<10	<0.10	<0.10	<0.10	<0.10	<0.50	--	--	--	--	--	--	--	3.1	
A-2	12/6/2002		55.48	10.01	--	45.47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6	--	--	--	--	--	--	3.1	
A-2	1/30/2003		55.48	5.08	--	50.40	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<40	--		
A-2	5/28/2003		55.48	4.82	--	50.66	<50	<0.50	<0.50	<0.50	<0.50	1.1	<20	<0.50	<0.50	<0.50	<100	--	--	5.7	
A-2	8/6/2003		55.48	9.73	--	45.75	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<100	<0.5	<0.5	2.3	
A-2	11/14/2003		55.48	9.36	--	46.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	2/2/2004		60.65	4.45	--	56.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	5/4/2004		60.65	6.79	--	53.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	9/2/2004		60.65	10.51	--	50.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<100	<0.5	<0.5	3.1	
A-2	11/10/2004		60.65	6.10	--	54.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	1/2/2005		60.65	4.00	--	56.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	5/9/2005		60.65	4.35	--	56.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/11/2005		60.65	9.08	--	51.57	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<100	<0.5	<0.5	3.2	
A-2	11/18/2005		60.65	8.53	--	52.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	2/15/2006		60.65	3.89	--	56.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	5/30/2006		60.65	4.45	--	56.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/11/2006		60.65	9.03	--	51.62	160	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.16	

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**  
**731 W Macarthur Blvd, Oakland, CA 94609**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes
A-2	11/1/2006		60.65	9.98	--	50.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	2/7/2007		60.65	7.51	--	53.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	5/9/2007		60.65	4.57	--	56.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/7/2007		60.65	9.67	--	50.98	<50	<0.50	<0.50	<0.50	<0.50	3.4	<20	<0.50	<0.50	<0.50	<300	<0.5	<0.5	2.18	
A-2	11/14/2007		60.65	7.84	--	52.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	2/28/2008		60.65	3.30	--	57.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	5/23/2008		60.65	8.80	--	51.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/13/2008		60.65	10.20	--	50.45	<50	<0.50	<0.50	<0.50	<0.50	19	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.87	
A-2	11/19/2008		60.65	9.20	--	51.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	2/10/2009		60.65	7.83	--	52.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	5/7/2009		60.65	4.40	--	56.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	9/3/2009		60.65	10.07	--	50.58	<50	<0.50	<0.50	<0.50	<0.50	12	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	1.03	
A-2	3/23/2010		60.65	3.67	--	56.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/16/2010		60.65	9.40	--	51.25	<50	<0.50	<0.50	<0.50	<1.0	6.1	<4.0	<0.50	<0.50	<0.50	<100	<0.5	<0.5	--	
A-2	3/18/2011		60.65	2.89	--	57.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/18/2011		60.65	7.63	--	53.02	--	--	--	--	--	0.74	--	--	--	--	--	--	--	--	
A-2	2/29/2012		60.65	8.42	--	52.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/24/2012		60.65	10.54	--	50.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/31/2012		60.65	10.70	--	49.95	--	--	--	--	--	9.6	--	--	--	--	--	--	--	--	
A-2	1/8/2013		60.65	4.51	--	56.14	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)	
AR-2	3/20/2001		54.77	3.13	--	51.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	6/12/2001		54.77	4.51	--	50.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	9/23/2001		54.77	6.05	--	48.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	12/31/2001		54.77	2.79	--	51.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	3/21/2002		54.77	7.75	--	47.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	4/17/2002		54.77	2.24	--	52.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	8/12/2002		54.77	4.93	--	49.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	12/6/2002		54.77	6.09	--	48.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	1/30/2003		54.77	3.89	--	50.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	5/28/2003		54.77	3.33	--	51.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	8/6/2003		54.77	5.05	--	49.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	11/14/2003		54.77	6.01	--	48.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	2/2/2004		59.18	3.88	--	55.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	5/4/2004		59.18	6.01	--	53.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	9/2/2004		59.18	5.65	--	53.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	11/10/2004		59.18	5.48	--	53.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	2/2/2005		59.18	2.62	--	56.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	5/9/2005		59.18	2.84	--	56.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	8/11/2005		59.18	4.33	--	54.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	11/18/2005		59.18	5.34	--	53.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	2/15/2006		59.18	2.49	--	56.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	5/30/2006		59.18	3.02	--	56.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	8/11/2006		59.18	4.32	--	54.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	11/1/2006		59.18	5.25	--	53.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	2/7/2007		59.18	4.64	--	54.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	5/9/2007		59.18	3.15	--	56.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	8/7/2007		59.18	4.55	--	54.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	11/14/2007		59.18	5.03	--	54.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	2/28/2008		59.18	1.82	--	57.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	8/13/2008		59.18	5.05	--	54.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	11/19/2008		59.18	5.49	--	53.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	2/10/2009		59.18	5.10	--	54.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	5/7/2009		59.18	2.90	--	56.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	9/3/2009		59.18	5.99	--	53.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	8/24/2012		59.18	4.55	--	54.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	2/8/2013		59.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)	
A-3	6/21/2000		54.66	9.48	--	45.18	<50	<0.5	<0.5	<0.5	<1.0	46	--	--	--	--	--	--	--	--	
A-3	9/20/2000		54.66	10.24	--	44.42	<50	<0.5	<0.5	<0.5	<0.5	89.6	--	--	--	--	--	--	--	--	
A-3	12/26/2000		54.66	9.58	--	45.08	<50	<0.5	<0.5	<0.5	<0.5	7.11	--	--	--	--	--	--	--	--	
A-3	3/20/2001		54.66	6.34	--	48.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	6/12/2001		54.66	9.76	--	44.90	<50	<0.5	<0.5	<0.5	<0.5	86	--	--	--	--	--	--	--	--	
A-3	9/23/2001		54.66	10.55	--	44.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**  
**731 W Macarthur Blvd, Oakland, CA 94609**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes
A-3	12/31/2001		54.66	3.70	--	50.96	<50	<0.5	<0.5	<0.5	1	60	--	--	--	--	--	--	--	--	
A-3	3/21/2002		54.66	5.75	--	48.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	4/17/2002		54.66	7.27	--	47.39	<50	<0.5	<0.5	<0.5	--	45	--	--	--	--	--	--	--	--	
A-3	8/12/2002		54.66	9.71	--	44.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	12/6/2002		54.66	9.55	--	45.11	<500	<5.0	<5.0	<5.0	<5.0	150	--	--	--	--	--	--	--	2.4	
A-3	1/30/2003		54.66	6.05	--	48.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	5/28/2003		54.66	8.06	--	46.60	74	<0.50	<0.50	<0.50	<0.50	43	<20	<0.50	<0.50	24	<100	--	--	1.5	
A-3	8/6/2003		54.66	9.91	--	44.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	11/14/2003		54.66	9.52	--	45.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	2/2/2004		59.32	5.63	--	53.69	<50	<0.50	<0.50	<0.50	<0.50	13	<20	<0.50	<0.50	4.6	<100	<0.5	<0.5	1.2	
A-3	5/4/2004		59.32	8.14	--	51.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	9/2/2004		59.32	10.10	--	49.22	<250	<2.5	<2.5	<2.5	<2.5	62	<100	<2.5	<2.5	15	<500	<2.5	<2.5	1.3	
A-3	11/10/2004		59.32	7.89	--	51.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	2/2/2005		59.32	5.00	--	54.32	<50	<0.50	<0.50	<0.50	<0.50	6.8	<20	<0.50	<0.50	2.4	<100	<0.5	<0.5	1.9	
A-3	5/9/2005		59.32	5.96	--	53.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	8/11/2005		59.32	9.28	--	50.04	<50	<0.50	<0.50	<0.50	<0.50	39	<20	<0.50	<0.50	4.2	<100	<0.5	<0.5	1.8	
A-3	11/18/2005		59.32	8.61	--	50.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	2/15/2006		59.32	4.36	--	54.96	<50	<0.50	<0.50	<0.50	<0.50	2.2	<20	<0.50	<0.50	0.58	<300	<0.5	<0.5	3.6	
A-3	5/30/2006		59.32	6.28	--	53.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	8/11/2006		59.32	9.27	--	50.05	<50	<0.50	<0.50	<0.50	<0.50	4.1	<20	<0.50	<0.50	<0.50	<300	<0.5	<0.5	2.10	
A-3	11/1/2006		59.32	9.52	--	49.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	2/7/2007		59.32	7.90	--	51.42	<50	<0.50	<0.50	<0.50	<0.50	0.58	<20	<0.50	<0.50	<0.50	<300	<0.5	<0.5	1.74	
A-3	5/9/2007		59.32	6.55	--	52.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	8/7/2007		59.32	9.57	--	49.75	<50	<0.50	<0.50	<0.50	<0.50	3.9	<20	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.95	
A-3	11/14/2007		59.32	8.00	--	51.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	2/28/2008		59.32	3.75	--	55.57	<50	<0.50	<0.50	<0.50	<0.50	0.58	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	6.16	
A-3	5/23/2008		59.32	9.10	--	50.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	8/13/2008		59.32	9.80	--	49.52	<50	<0.50	<0.50	<0.50	<0.50	0.55	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.69	
A-3	11/19/2008		59.32	8.31	--	51.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	2/10/2009		59.32	7.30	--	52.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.90	
A-3	5/7/2009		59.32	6.10	--	53.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-3	9/3/2009		59.32	9.50	--	49.82	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	1.01	
A-3	3/23/2010		59.32	4.45	--	54.87	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<100	<0.5	<0.5	--	
A-3	8/16/2010		59.32	9.45	--	49.87	<50	<0.50	<0.50	<0.50	<1.0	0.72	<4.0	<0.50	<0.50	<0.50	<100	<0.5	<0.5	--	
A-3	3/18/2011		59.32	4.00	--	55.32	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	--	
A-3	8/18/2011		59.32	8.62	--	50.70	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	--	
A-3	2/29/2012		59.32	7.22	--	52.10	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	--	
A-3	8/24/2012		59.32	9.31	--	50.01	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	--	
A-3	8/31/2012		59.32	9.41	--	49.91	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	--	
A-3	2/8/2013		59.32	6.33	--	52.99	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	--	
AR-3	12/26/2000		54.19	9.70	--	44.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	9/23/2001		54.19	10.43	--	43.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	12/31/2001		54.19	5.18	--	49.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	3/21/2002		54.19	6.78	--	47.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	4/17/2002		54.19	8.06	--	46.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	8/12/2002		54.19	9.94	--	44.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	12/6/2002		54.19	9.99	--	44.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	1/30/2003		54.19	7.96	--	46.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	5/28/2003		54.19	8.94	--	45.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	8/6/2003		54.19	9.94	--	44.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	11/14/2003		54.19	10.03	--	44.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	2/2/2004		59.10	6.90	--	52.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	5/4/2004		59.10	9.12	--	49.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	9/2/2004		59.10	10.15	--	48.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	11/10/2004		59.10	8.79	--	50.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	2/2/2005		59.10	7.30	--	51.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	5/9/2005		59.10	7.71	--	51.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	8/11/2005		59.10	9.54	--	49.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	11/18/2005		59.10	9.43	--	49.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	2/15/2006		59.10	7.50	--	51.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	5/30/2006		59.10	8.82	--	50.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	8/11/2006		59.10	9.38	--	49.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	11/1/2006		59.10	9.75	--	49.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes
AR-3	2/7/2007		59.10	9.00	--	50.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	5/9/2007		59.10	8.12	--	50.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	8/7/2007		59.10	9.75	--	49.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	11/14/2007		59.10	8.91	--	50.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	2/28/2008		59.10	6.73	--	52.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	8/13/2008		59.10	9.85	--	49.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	11/19/2008		59.10	9.35	--	49.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	2/10/2009		59.10	8.29	--	50.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	5/7/2009		59.10	7.83	--	51.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	9/3/2009		59.10	9.80	--	49.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	8/24/2012		59.10	9.10	--	50.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	2/8/2013		59.10	7.62	--	51.48	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)	
A-4	6/21/2000		54.73	9.49	--	45.24	2,100	110	2.1	11	5.9	2,000	--	--	--	--	--	--	--	--	
A-4	9/20/2000		54.73	10.33	--	44.40	1,540	127	<5.0	9.07	7.42	1,940	--	--	--	--	--	--	--	--	
A-4	12/26/2000		54.73	9.34	--	45.39	1,550	42.7	<5.0	11	10.9	1,210	--	--	--	--	--	--	--	--	
A-4	3/20/2001		54.73	7.56	--	47.17	913	40.9	<5.0	15.5	14.6	<25	--	--	--	--	--	--	--	--	
A-4	6/12/2001		54.73	9.83	--	44.90	2,000	230	<20	21	<20	4,700	--	--	--	--	--	--	--	--	
A-4	9/23/2001		54.73	10.54	--	44.19	1,600	35	<10	<10	<10	3,000	--	--	--	--	--	--	--	--	
A-4	12/31/2001		54.73	5.42	--	49.31	<500	<5.0	<5.0	<5.0	<5.0	880	--	--	--	--	--	--	--	--	
A-4	3/21/2002		54.73	6.18	--	48.55	<5,000	<50	<50	<50	<50	1,400	--	--	--	--	--	--	--	--	
A-4	4/17/2002		54.73	7.34	--	47.39	1,300	79	31	17	55	2,200	--	--	--	--	--	--	--	--	
A-4	8/12/2002		54.73	9.56	--	45.17	2,400	120	<5.0	<5.0	<5.0	2,100	--	--	--	--	--	--	--	2	
A-4	12/6/2002		54.73	10.02	--	44.71	2,200	110	10	42	56	2,000	--	--	--	--	--	--	--	--	
A-4	1/30/2003		54.73	7.55	--	47.18	6,000	180	<50	85	<50	2,100	<2,000	<50	<50	530	<4,000	--	--	1.8	
A-4	5/28/2003		54.73	8.94	--	45.79	6,000	120	<50	<50	<50	2,500	<2,000	<50	<50	590	<10,000	--	--	1.5	
A-4	8/6/2003		54.73	10.03	--	44.70	5,800	100	<25	<25	33	2,500	<1,000	<25	<25	560	<5,000	<25	<25	1.5	
A-4	11/14/2003		54.73	10.37	--	44.36	1,000	17	<5.0	<5.0	<5.0	310	320	<5.0	<5.0	76	<1,000	--	--	1.6	
A-4	2/2/2004		59.59	6.70	--	52.89	3,600	46	<25	<25	<25	1,500	<1,000	<25	<25	350	<5,000	<25	<25	1.0	
A-4	5/4/2004		59.59	9.12	--	50.47	<5,000	<50	<50	<50	<50	2,300	<2,000	<50	<50	510	<10,000	<50	<50	6.4	
A-4	9/2/2004		59.59	9.95	--	49.64	3,000	<25	<25	<25	<25	1,200	1,200	<25	<25	280	<5,000	<25	<25	9.1	
A-4	11/10/2004		59.59	8.68	--	50.91	1,800	16	<10	<10	<10	1,100	910	<10	<10	270	<2,000	<10	<10	2.0	
A-4	2/2/2005		59.59	6.92	--	52.67	3,300	120	<10	66	11	1,700	2,100	<10	<10	430	<2,000	<10	<10	1.5	
A-4	5/9/2005		59.59	7.21	--	52.38	<5,000	140	<50	62	<50	1,800	2,000	<50	<50	460	<10,000	<50	<50	1.64	
A-4	8/11/2005		59.59	9.71	--	49.88	1,700	51	<10	<10	<10	1,200	2,400	<10	<10	310	<2,000	<10	<10	--	
A-4	11/18/2005		59.59	9.45	--	50.14	1,300	23	<2.5	7.2	11	310	1,400	<2.5	<2.5	98	<500	<2.5	<2.5	1.4	
A-4	2/5/2006		59.59	7.12	--	52.47	2,200	46	<2.5	29	7.0	910	2,700	<2.5	<2.5	270	<1,500	<2.5	<2.5	0.9	
A-4	5/30/2006		59.59	7.95	--	51.64	3,300	95	<10	55	<10	1,200	3,000	<10	<10	340	<6,000	<10	<10	1.76	
A-4	8/11/2006		59.59	9.50	--	50.09	350	93	<10	<10	<10	1,200	3,200	<10	<10	350	<6,000	<10	<10	1.4	
A-4	11/1/2006		59.59	9.93	--	49.66	1,300	<10	<10	<10	360	1,700	<10	<10	95	<6,000	--	<10	4.56		
A-4	2/7/2007		59.59	8.82	--	50.77	4,900	85	<10	40	<10	1,500	3,000	<10	<10	460	<6,000	<10	<10	0.72	
A-4	5/9/2007		59.59	7.56	--	52.03	1,700	19	<10	<10	<10	340	2,200	<10	<10	91	<6,000	<10	<10	3.00	
A-4	8/7/2007		59.59	9.80	--	49.79	2,700	69	<5.0	<5.0	<5.0	510	1,800	<5.0	<5.0	140	<3,000	<5	<5	1.04	
A-4	11/14/2007		59.59	8.65	--	50.94	500	4.9	<0.50	<0.50	<0.50	280	600	<0.50	<0.50	90	<300	<0.5	<0.5	1.27	
A-4	2/28/2008		59.59	6.15	--	53.44	850	17	<0.50	4.4	1.4	350	1,600	<0.50	<0.50	73	<300	<0.5	<0.5	1.76	
A-4	5/23/2008		59.59	9.40	--	50.19	1,900	75	<20	<20	<20	1,000	2,500	<20	<20	270	<12,000	<20	<20	1.28	
A-4	8/13/2008		59.59	9.92	--	49.67	3,100	47	<10	<10	<10	530	3,200	<10	<10	190	<6,000	<10	<10	0.89	
A-4	11/19/2008		59.59	9.19	--	50.40	1,800	70	<10	21	<10	430	2,000	<10	<10	140	<6,000	<10	<10	0.83	
A-4	2/10/2009		59.59	7.68	--	51.91	1,900	33	<10	14	<10	400	2,300	<10	<10	120	<6,000	<10	<10	0.87	
A-4	5/7/2009		59.59	7.31	--	52.28	<50	<0.50	<0.50	<0.50	<0.50	9.9	11	<0.50	<0.50	2.0	<300	<0.5	<0.5	2.40	
A-4	9/3/2009		59.59	10.02	--	49.57	3,800	49	<10	<10	<10	360	3,200	<10	<10	120	<6,000	<10	<10	0.79	
A-4	3/23/2010		59.59	6.62	--	52.97	1,000	17	<0.50	5.0	1.3	150	1,600	<0.50	<0.50	45	<100	<0.5	<0.5	--	
A-4	8/16/2010		59.59	9.85	--	49.74	1,600	18	0.50	0.56	<1.0	160	3,400	<0.50	<0.50	47	<100	<0.5	<0.5	--	
A-4	3/18/2011		59.59	5.34	--	54.25	490	9.9	<0.50	1.9	<1.0	66	1,400	<0.50	<0.50	18	<250	<0.5	<0.5	--	
A-4	8/18/2011		59.59	9.08	--	50.51	650	1.9	<0.50	<0.50	<1.0	53	1,400	<0.50	<0.50	15	<250	<0.5	<0.5	--	
A-4	2/29/2012		59.59	6.70	--	52.89	1,300	12	<0.50	4.2	1.1	140	2,200	<0.50	<0.50	38	<250	<0.5	<0.5	--	
A-4	8/24/2012		59.59	9.95	--	49.64	720	<0.50	<0.50	<0.50	<1.0	5.7	370	<0.50	<0.50	45	<250	<0.5	<0.5	--	
A-4	2/8/2013		59.59	7.05	--	52.54	890	5.0	<0.50	1.6	<1.0	--	1,600	<0.50	<0.50	19	<250	<0.5	<0.5	--	
A-5	6/21/2000		54.17	9.29	--	44.88	980	<0.5	<0.5	<0.5	<1.0	2,000	--	--	--	--	--	--	--		
A-5	9/20/2000		54.17	10.23	--	43.94	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-5	12/26/2000		54.17	9.65	--	44.52	525	<0.5	<0.5	<0.5	<0.5	1,200	--	--	--	--	--	--	--		
A-5	3/20/2001		54.17	8.05	--	46.12	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-5	6/12/2001		54.17	9.81	--	44.36	830	<5.0	<5.0	<5.0	<5.0	3,200	--	--	--	--	--	--	--		

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**  
**731 W Macarthur Blvd, Oakland, CA 94609**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes
A-5	9/23/2001		54.17	10.42	--	43.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	12/31/2001		54.17	6.03	--	48.14	320	<0.5	<0.5	<0.5	<0.5	60	--	--	--	--	--	--	--	--	
A-5	3/21/2002		54.17	6.71	--	47.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	4/17/2002		54.17	8.01	--	46.16	1,600	<10	<10	<10	<10	3,200	--	--	--	--	--	--	--	--	
A-5	8/12/2002		54.17	9.87	--	44.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	12/6/2002		54.17	9.66	--	44.51	310	<0.50	<0.50	<0.50	<0.50	330	--	--	--	--	--	--	--	1.9	
A-5	1/30/2003		54.17	7.67	--	46.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	5/28/2003		54.17	8.56	--	45.61	<5,000	<50	<50	<50	<50	1,500	<2,000	<50	<50	620	<10,000	--	--	1.6	
A-5	8/6/2003		54.17	9.58	--	44.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	11/14/2003		54.17	9.81	--	44.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	2/2/2004		58.78	7.43	--	51.35	390	<2.5	9.2	<2.5	2.6	140	170	<2.5	<2.5	54	<500	<2.5	<2.5	1.0	
A-5	5/4/2004		58.78	9.98	--	48.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	9/2/2004		58.78	9.65	--	49.13	<250	<2.5	<2.5	<2.5	<2.5	66	150	<2.5	<2.5	29	<500	<2.5	<2.5	1.1	
A-5	11/10/2004		58.78	8.48	--	50.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	2/2/2005		58.78	7.10	--	51.68	68	<0.50	<0.50	<0.50	<0.50	17	840	<0.50	<0.50	7.6	<100	<0.5	<0.5	1.0	
A-5	5/9/2005		58.78	7.20	--	51.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	8/11/2005		58.78	9.21	--	49.57	<50	<0.50	<0.50	<0.50	<0.50	6.8	530	<0.50	<0.50	7.1	<100	<0.5	<0.5	1.3	
A-5	11/18/2005		58.78	9.10	--	49.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	2/15/2006		58.78	7.16	--	51.62	<50	<0.50	<0.50	<0.50	<0.50	5.1	460	<0.50	<0.50	4.2	<300	<0.5	<0.5	1.2	
A-5	5/30/2006		58.78	7.87	--	50.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	8/11/2006		58.78	8.90	--	49.88	920	<0.50	<0.50	<0.50	<0.50	12	1,100	<0.50	<0.50	5.0	<300	<0.5	<0.5	1.4	
A-5	11/1/2006		58.78	9.30	--	49.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	2/7/2007		58.78	8.50	--	50.28	60	<0.50	<0.50	<0.50	<0.50	1.5	600	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.73	
A-5	5/9/2007		58.78	7.60	--	51.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	8/7/2007		58.78	9.30	--	49.48	<50	<0.50	<0.50	<0.50	<0.50	0.81	79	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.41	
A-5	11/14/2007		58.78	8.48	--	50.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	2/28/2008		58.78	6.21	--	52.57	<50	<0.50	<0.50	<0.50	<0.50	0.97	230	<0.50	<0.50	<0.50	<300	<0.5	<0.5	2.24	
A-5	5/23/2008		58.78	8.97	--	49.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	8/13/2008		58.78	9.42	--	49.36	<50	<0.50	<0.50	<0.50	<0.50	0.69	33	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.62	
A-5	11/19/2008		58.78	8.91	--	49.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	2/10/2009		58.78	7.80	--	50.98	<50	<0.50	<0.50	<0.50	<0.50	1.6	18	<0.50	<0.50	0.59	<300	<0.5	<0.5	0.85	
A-5	5/7/2009		58.78	7.37	--	51.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	9/3/2009		58.78	9.33	--	49.45	<50	<0.50	<0.50	<0.50	<0.50	20	<10	<0.50	<0.50	9.1	<300	<0.5	<0.5	0.91	
A-5	3/23/2010		58.78	6.84	--	51.94	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	33	<0.50	<0.50	<0.50	<100	<0.5	<0.5	
A-5	8/16/2010		58.78	8.85	--	49.93	<50	<0.50	<0.50	<0.50	<0.50	<1.0	7.9	35	<0.50	<0.50	3.1	<100	<0.5	<0.5	--
A-5	3/18/2011		58.78	5.45	--	53.33	<50	--	--	--	--	<0.50	--	--	--	--	--	--	--	--	
A-5	8/18/2011		58.78	8.37	--	50.41	<50	--	--	--	--	0.81	--	--	--	--	--	--	--	--	
A-5	2/29/2012		58.78	8.12	--	50.66	<50	--	--	--	--	<0.50	--	--	--	--	--	--	--	--	
A-5	8/24/2012		58.78	9.15	--	49.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-5	2/8/2013		58.78	7.65	--	51.13	<2,500	--	--	--	--	240	--	--	--	--	--	--	--	--	
A-6	6/21/2000		55.17	8.67	--	46.50	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--	--	--	--	--	--	--	
A-6	9/20/2000		55.17	9.34	--	45.83	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-6	12/26/2000		55.17	8.65	--	46.52	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-6	3/20/2001		55.17	6.84	--	48.33	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-6	6/12/2001		55.17	8.93	--	46.24	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-6	9/23/2001		55.17	9.74	--	45.43	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-6	12/31/2001		55.17	4.81	--	50.36	<50	<0.5	<0.5	<0.5	<0.5	3.2	--	--	--	--	--	--	--	--	
A-6	3/21/2002		55.17	5.44	--	49.73	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-6	4/17/2002		55.17	6.95	--	48.22	<50	<0.5	<0.5	<0.5	<0.5	3.1	--	--	--	--	--	--	--	--	
A-6	8/12/2002		55.17	8.90	--	46.27	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	4.3	
A-7	6/21/2000		54.71	8.58	--	46.13	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--	--	--	--	--	--	--	
A-7	9/20/2000		54.71	9.19	--	45.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	12/26/2000		54.71	8.50	--	46.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	3/20/2001		54.71	6.75	--	47.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	6/12/2001		54.71	8.80	--	45.91	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-7	9/23/2001		54.71	9.59	--	45.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	12/31/2001		54.71	4.78	--	49.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	3/21/2002		54.71	5.35	--	49.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	4/17/2002		54.71	6.88	--	47.83	<50	<0.5	<0.5	<0.5	<0.5	2.5	--	--	--	--	--	--	--	--	
A-7	8/12/2002		54.71	8.77	--	45.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	12/6/2002		54.71	9.07	--	45.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	1/30/2003		54.71	6.65	--	48.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**  
**731 W Macarthur Blvd, Oakland, CA 94609**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes
A-7	5/28/2003		54.71	7.63	--	47.08	<50	<0.50	<0.50	<0.50	<0.50	3.8	<20	<0.50	<0.50	0.94	<100	--	--	2.3	
A-7	8/6/2003		54.71	8.90	--	45.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	11/14/2003		54.71	9.08	--	45.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	2/2/2004		59.75	5.96	--	53.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	5/4/2004		59.75	8.21	--	51.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	9/2/2004		59.75	9.02	--	50.73	<50	<0.50	<0.50	<0.50	<0.50	8.9	<20	<0.50	<0.50	3.0	<100	<0.5	<0.5	3.0	
A-7	11/10/2004		59.75	7.50	--	52.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	2/2/2005		59.75	6.10	--	53.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	5/9/2005		59.75	6.48	--	53.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/11/2005		59.75	8.45	--	51.30	<50	<0.50	<0.50	<0.50	<0.50	18	<20	<0.50	<0.50	4.4	<100	<0.5	<0.5	1.6	
A-7	11/18/2005		59.75	8.65	--	51.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	2/15/2006		59.75	6.51	--	53.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	5/30/2006		59.75	7.13	--	52.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/11/2006		59.75	8.46	--	51.29	<50	<0.50	<0.50	<0.50	<0.50	3.6	<20	<0.50	<0.50	0.91	<300	<0.5	0.54	1.7	
A-7	11/1/2006		59.75	8.99	--	50.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	2/7/2007		59.75	8.12	--	51.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	5/9/2007		59.75	7.04	--	52.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/7/2007		59.75	9.10	--	50.65	<50	<0.50	<0.50	<0.50	<0.50	2.7	<20	<0.50	<0.50	<0.50	<300	<0.5	<0.5	1.34	
A-7	11/14/2007		59.75	8.00	--	51.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	2/28/2008		59.75	5.81	--	53.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	5/23/2008		59.75	8.74	--	51.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/13/2008		59.75	9.27	--	50.48	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	1.05	
A-7	11/19/2008		59.75	8.67	--	51.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	2/10/2009		59.75	7.47	--	52.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	5/7/2009		59.75	6.88	--	52.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	9/3/2009		59.75	9.25	--	50.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.93	
A-7	3/23/2010		59.75	6.33	--	53.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/16/2010		59.75	9.13	--	50.62	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	1.05	
A-7	3/18/2011		59.75	5.20	--	54.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/18/2011		59.75	8.54	--	51.21	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	--	
A-7	2/29/2012		59.75	8.00	--	51.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/24/2012		59.75	9.06	--	50.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/31/2012		59.75	9.04	--	50.71	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	--	
A-7	2/8/2013		59.75	7.44	--	52.31	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)	
A-8	6/21/2000		53.77	9.07	--	44.70	810	<0.5	<0.5	<0.5	810	1,500	--	--	--	--	--	--	--	--	
A-8	9/20/2000		53.77	9.72	--	44.05	10,800	2,680	46	439	370	4,410	--	--	--	--	--	--	--	--	
A-8	12/26/2000		53.77	9.20	--	44.57	7,700	1,440	<50	202	106	2,230	--	--	--	--	--	--	--	--	
A-8	3/20/2001		53.77	7.51	--	46.26	<5,000	1,280	<50	53.9	<50	2,880	--	--	--	--	--	--	--	--	
A-8	6/12/2001		53.77	9.53	--	44.24	5,600	1,700	<50	61	54	2,900	--	--	--	--	--	--	--	--	
A-8	9/23/2001		53.77	10.08	--	43.69	10,000	3,500	<50	110	64	6,500	--	--	--	--	--	--	--	--	
A-8	12/31/2001		53.77	4.34	--	49.43	4,300	610	<10	60	24	520	--	--	--	--	--	--	--	--	
A-8	3/21/2002		53.77	6.67	--	47.10	6,600	1,400	<50	130	<50	2,700	--	--	--	--	--	--	--	--	
A-8	4/17/2002		53.77	7.72	--	46.05	3,800	540	<10	<10	12	3,100	--	--	--	--	--	--	--	--	
A-8	8/12/2002		53.77	9.64	--	44.13	9,400	1,800	<20	35	28	4,200	--	--	--	--	--	--	--	1	
A-8	12/6/2002		53.77	9.62	--	44.15	5,300	1,100	11	11	<10	2,200	--	--	--	--	--	--	--	1.4	
A-8	1/30/2003		53.77	7.49	--	46.28	<10,000	1,100	<100	<100	2,200	<4,000	<100	<100	900	<8,000	--	--	--	1.5	
A-8	5/28/2003		53.77	9.17	--	44.60	7,700	1,700	<50	<50	2,100	<2,000	<50	<50	1,100	<10,000	--	--	--	1	
A-8	8/6/2003		53.77	9.67	--	44.10	13,000	2,400	<50	<50	<50	3,000	<2,000	<50	<50	1,200	<10,000	<50	<50	0.9	
A-8	11/14/2003		53.77	9.80	--	43.97	3,100	570	<5.0	<5.0	<5.0	850	<200	<5.0	<5.0	320	<1,000	--	--	2.3	
A-8	2/2/2004		58.70	7.10	--	51.60	3,900	300	<25	<25	<25	1,100	<1,000	<25	<25	380	<5,000	<25	<25	1.1	
A-8	5/4/2004		58.70	9.44	--	49.26	<5,000	490	<50	<50	<50	1,600	<2,000	<50	<50	440	<10,000	<50	<50	1.0	
A-8	9/2/2004		58.70	9.67	--	49.03	<2,500	30	<25	<25	<25	680	<1,000	<25	<25	170	<5,000	<25	<25	1.0	
A-8	11/10/2004		58.70	8.15	--	50.55	580	61	<2.5	<2.5	<2.5	290	<100	<2.5	<2.5	66	<500	<2.5	<2.5	1.5	
A-8	2/2/2005		58.70	6.53	--	52.17	5,000	890	<25	<25	<25	1,900	<1,000	<25	<25	510	<5,000	<25	<25	1.0	
A-8	5/9/2005		58.70	6.31	--	52.39	69	0.90	<0.50	<0.50	<0.50	66	<20	<0.50	<0.50	2.9	<100	<0.5	<0.5	4.1	
A-8	8/11/2005		58.70	9.15	--	49.55	1,400	1,300	<12	<12	<12	1,100	<500	<12	<12	310	<2,500	<12	<12	0.7	
A-8	11/18/2005		58.70	8.89	--	49.81	1,200	420	<5.0	<5.0	<5.0	340	<200	<5.0	<5.0	120	<1,000	<5	<5	0.7	
A-8	2/15/2006		58.70	6.34	--	52.36	3,200	970	<10	<10	<10	1,100	880	<10	<10	330	<6,000	<10	<10	0.9	
A-8	5/30/2006		58.70	7.53	--	51.17	510	210	<2.5	<2.5	<2.5	140	<100	<2.5	<2.5	43	<1,500	<2.5	<2.5	2.6	
A-8	8/11/2006		58.70	8.90	--	49.80	1,300	500	<5.0	<5.0	<5.0	290	<200	<5.0	<5.0	92	<3,000	<5	<5	0.7	
A-8	11/1/2006		58.70	9.15	--	49.55	4,800	790	6.6	<5.0	<5.0	910	1,200	<5.0	<5.0	250	<3,000	<5	<5	1.72	
A-8	2/7/2007		58.70	8.48	--	50.22	7,600	2,300	<25	<25	<25	1,200	<1,000	<25	<25	330	<15,000	<25	<25	1.25	
A-8	5/9/2007		58.70	7.25	--	51.45	750	180	<2.5	<2.5	<2.5	55	<100	<2.5	<2.5	16	<1,500	<2.5	<2.5	1.75	

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**  
**731 W Macarthur Blvd, Oakland, CA 94609**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes	
A-8	8/7/2007		58.70	9.17	--	49.53	2,100	700	4.0	<2.5	<2.5	430	140	<2.5	<2.5	160	<1,500	<2.5	<2.5	0.77		
A-8	11/14/2007		58.70	7.77	--	50.93	990	300	2.5	0.68	0.96	100	28	<0.50	<0.50	44	<300	<0.5	<0.5	1.01		
A-8	2/28/2008		58.70	5.14	--	53.56	2,100	670	<5.0	<5.0	<5.0	220	230	<5.0	<5.0	72	<3,000	<5	<5	1.67		
A-8	8/13/2008		58.70	9.48	--	49.22	3,100	970	<25	<25	<25	250	<500	<25	<25	86	<15,000	<25	<25	0.84		
A-8	11/19/2008		58.70	8.87	--	49.83	3,800	1,000	<20	<20	<20	230	<400	<20	<20	100	<12,000	<20	<20	0.89		
A-8	2/10/2009		58.70	7.11	--	51.59	3,600	1,300	<25	<25	<25	320	<500	<25	<25	120	<15,000	<25	<25	0.89		
A-8	5/7/2009		58.70	6.47	--	52.23	270	65	<1.0	<1.0	<1.0	12	20	<1.0	<1.0	3.3	<600	<1	<1	0.97		
A-8	9/3/2009		58.70	9.47	--	49.23	3,200	1,400	<25	<25	<25	100	<500	<25	<25	52	<15,000	<25	<25	0.87		
A-8	3/23/2010		58.70	6.12	--	52.58	<50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<100	<0.5	<0.5	<0.5	--		
A-8	8/16/2010		58.70	9.27	--	49.43	4,300	1,600	12	5.3	6.1	110	<4.0	<0.50	<0.50	41	<100	<0.5	<0.5	--		
A-8	3/18/2011		58.70	5.01	--	53.69	2,000	620	4.7	0.96	1.4	87	220	<0.50	<0.50	43	<250	<0.5	<0.5	--		
A-8	8/18/2011		58.70	8.76	--	49.94	3,300	1,500	13	5.4	<10	120	<40	<5.0	<5.0	57	<2,500	<5	<5	--		
A-8	2/29/2012		58.70	8.19	--	50.51	3,400	1,700	10	3.4	3.9	160	460	<0.50	<0.50	71	<250	<0.5	<0.5	--		
A-8	8/24/2012		58.70	9.44	--	49.26	3,700	1,800	<25	<25	<50	64	220	<25	<25	33	<13,000	<25	<25	--		
A-8	2/8/2013		58.70	7.35	--	51.35	<50	6.0	<0.50	<0.50	<1.0	--	<4.0	<0.50	<0.50	0.92	<250	<0.5	<0.5	--		
A-9	6/21/2000		53.04	8.56	--	44.48	<50	<0.5	<0.5	<0.5	<1.0	5	--	--	--	--	--	--	--	--		
A-9	9/20/2000		53.04	9.05	--	43.99	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--		
A-9	12/26/2000		53.04	8.49	--	44.55	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--		
A-9	3/20/2001		53.04	6.95	--	46.09	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--		
A-9	6/12/2001		53.04	8.67	--	44.37	<50	<0.5	<0.5	<0.5	<0.5	4.8	--	--	--	--	--	--	--	--		
A-9	9/23/2001		53.04	9.21	--	43.83	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--		
A-9	12/31/2001		53.04	4.57	--	48.47	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--		
A-9	3/21/2002		53.04	5.60	--	47.44	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--		
A-9	4/17/2002		53.04	6.89	--	46.15	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--		
A-9	8/12/2002		53.04	8.71	--	44.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	4		
A-9	12/6/2002		53.04	8.77	--	44.27	<50	<0.50	<0.50	<0.50	<0.50	<2.0	--	--	--	--	--	--	--	1.1		
A-9	1/30/2003		53.04	6.88	--	46.16	<50	<0.50	<0.50	<0.50	<0.50	1.1	<20	<0.50	<0.50	<0.50	<40	--	--	0.9		
A-9	5/28/2003		53.04	9.75	--	43.29	<50	<0.50	<0.50	<0.50	<0.50	0.74	<20	<0.50	<0.50	<0.50	<100	--	--	--	1.9	
A-9	8/6/2003		53.04	9.00	--	44.04	<50	<0.50	<0.50	<0.50	<0.50	1.8	<20	<0.50	<0.50	<0.50	<100	<0.5	<0.5	2.2		
A-9	11/14/2003		53.04	8.82	--	44.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	2/2/2004		57.73	7.10	--	50.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	5/4/2004		57.73	8.12	--	49.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	9/2/2004		57.73	8.78	--	48.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<100	<0.5	<0.5	6.6		
A-9	11/10/2004		57.73	7.88	--	49.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	2/2/2005		57.73	6.40	--	51.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	5/9/2005		57.73	6.82	--	50.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	8/11/2005		57.73	8.37	--	49.36	<50	<0.50	<0.50	<0.50	<0.50	1.5	<20	<0.50	<0.50	<100	<0.5	<0.5	1.8			
A-9	11/18/2005		57.73	8.24	--	49.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	2/15/2006		57.73	6.38	--	51.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	5/30/2006		57.73	7.17	--	50.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	8/11/2006		57.73	8.20	--	49.53	<50	<0.50	<0.50	<0.50	<0.50	1.6	<20	<0.50	<0.50	<300	<0.5	<0.5	1.02			
A-9	11/1/2006		57.73	8.90	--	48.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	2/7/2007		57.73	7.83	--	49.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	5/9/2007		57.73	6.92	--	50.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	8/7/2007		57.73	8.58	--	49.15	<50	<0.50	<0.50	<0.50	<0.50	0.64	<20	<0.50	<0.50	<300	<0.5	<0.5	1.81			
A-9	11/14/2007		57.73	7.77	--	49.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	2/28/2008		57.73	5.61	--	52.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	8/13/2008		57.73	8.65	--	49.08	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<300	<0.5	<0.5	0.55			
A-9	11/19/2008		57.73	8.49	--	49.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	2/10/2009		57.73	7.07	--	50.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	5/7/2009		57.73	6.65	--	51.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	9/3/2009		57.73	8.56	--	49.17	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<300	<0.5	<0.5	0.89			
A-9	3/23/2010		57.73	5.98	--	51.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	8/16/2010		57.73	8.32	--	49.41	<50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<100	<0.5	<0.5	--			
A-9	3/18/2011		57.73	4.40	--	53.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	8/18/2011		57.73	7.94	--	49.79	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	--		
A-9	2/29/2012		57.73	7.48	--	50.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-9	8/24/2012		57.73	--	--	51.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(Dry)	
A-9	2/8/2013		57.73	6.63	--	51.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)	
A-10	6/21/2000		54.26	10.47	--	43.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-10	9/20/2000		54.26	10.76	--	43.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
A-10	11/14/2003		54.26	10.37	--	43.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**  
**731 W Macarthur Blvd, Oakland, CA 94609**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes
A-10	2/2/2004		59.39	7.97	--	51.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	5/4/2004		59.39	8.69	--	50.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	9/2/2004		59.39	10.55	--	48.84	<500	<5.0	<5.0	<5.0	<5.0	270	<200	<5.0	<5.0	44	<1,000	<5	<5	0.8	
A-10	11/10/2004		59.39	9.16	--	50.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	2/2/2005		59.39	7.90	--	51.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	5/9/2005		59.39	8.21	--	51.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	8/11/2005		59.39	10.02	--	49.37	69	<0.50	<0.50	<0.50	<0.50	97	<20	<0.50	<0.50	14	<100	<0.5	<0.5	0.9	
A-10	11/18/2005		59.39	9.86	--	49.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	2/15/2006		59.39	7.53	--	51.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	5/30/2006		59.39	8.82	--	50.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	8/11/2006		59.39	9.88	--	49.51	<50	<0.50	<0.50	<0.50	<0.50	46	<20	<0.50	<0.50	7.3	<300	<0.5	<0.5	1.3	
A-10	11/1/2006		59.39	10.28	--	49.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	2/7/2007		59.39	9.50	--	49.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	5/9/2007		59.39	8.67	--	50.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	8/7/2007		59.39	10.25	--	49.14	<50	<0.50	<0.50	<0.50	<0.50	8.9	<20	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.59	
A-10	11/14/2007		59.39	9.48	--	49.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	2/28/2008		59.39	7.23	--	52.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	5/23/2008		59.39	9.94	--	49.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	8/13/2008		59.39	10.30	--	49.09	<50	<0.50	<0.50	<0.50	<0.50	28	<10	<0.50	<0.50	6.9	<300	<0.5	<0.5	0.74	
A-10	11/19/2008		59.39	9.90	--	49.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	2/10/2009		59.39	8.74	--	50.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	5/7/2009		59.39	8.23	--	51.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	3/23/2010		59.39	7.65	--	51.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	8/16/2010		59.39	10.05	--	49.34	<50	<0.50	<0.50	<0.50	<1.0	3.9	<4.0	<0.50	<0.50	<0.50	<100	<0.5	<0.5	--	
A-10	3/18/2011		59.39	6.52	--	52.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	8/18/2011		59.39	9.58	--	49.81	--	--	--	--	--	2.1	--	--	--	--	--	--	--	--	
A-10	2/29/2012		59.39	9.02	--	50.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	8/24/2012		59.39	10.03	--	49.36	--	--	--	--	--	1.8	--	--	--	--	--	--	--	--	
A-10	2/8/2013		59.39	8.30	--	51.09	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)	
A-11	6/21/2000		53.74	9.54	--	44.20	<50	<0.5	<0.5	<0.5	<1.0	4	--	--	--	--	--	--	--	--	
A-11	9/20/2000		53.74	10.62	--	43.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	12/26/2000		53.74	10.03	--	43.71	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-11	3/20/2001		53.74	8.49	--	45.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	6/12/2001		53.74	10.21	--	43.53	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-11	9/23/2001		53.74	10.77	--	42.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	12/31/2001		53.74	6.06	--	47.68	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-11	3/21/2002		53.74	7.14	--	46.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	4/17/2002		53.74	8.41	--	45.33	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-11	8/12/2002		53.74	10.25	--	43.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	12/6/2002		53.74	10.43	--	43.31	<50	<0.50	<0.50	<0.50	<0.50	<2.0	--	--	--	--	--	--	--	2.4	
A-11	1/30/2003		53.74	8.42	--	45.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	5/28/2003		53.74	9.30	--	44.44	<50	<0.50	<0.50	<0.50	<0.50	0.53	<20	<0.50	<0.50	<0.50	<100	--	--	1.8	
A-11	8/6/2003		53.74	10.28	--	43.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	11/14/2003		53.74	10.40	--	43.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	2/2/2004		59.16	7.95	--	51.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	5/4/2004		59.16	8.72	--	50.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	9/2/2004		59.16	10.44	--	48.72	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<100	<0.5	<0.5	2.6	
A-11	11/10/2004		59.16	9.20	--	49.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	2/2/2005		59.16	7.95	--	51.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	5/9/2005		59.16	8.07	--	51.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	8/11/2005		59.16	9.87	--	49.29	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<100	<0.5	<0.5	3.8	
A-11	11/18/2005		59.16	8.88	--	50.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	2/15/2006		59.16	7.90	--	51.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	5/30/2006		59.16	8.78	--	50.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	8/11/2006		59.16	10.33	--	48.83	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<300	<0.5	<0.5	3.8	
A-11	11/1/2006		59.16	10.10	--	49.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	2/7/2007		59.16	9.35	--	49.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	5/9/2007		59.16	8.48	--	50.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	8/7/2007		59.16	10.10	--	49.06	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<300	<0.5	<0.5	2.67	
A-11	11/14/2007		59.16	9.31	--	49.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	2/28/2008		59.16	7.12	--	52.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	5/23/2008		59.16	9.77	--	49.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	8/13/2008		59.16	10.08	--	49.08	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.89	

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**  
**731 W Macarthur Blvd, Oakland, CA 94609**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes
A-11	11/19/2008		59.16	9.75	--	49.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	2/10/2009		59.16	8.67	--	50.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	5/7/2009		59.16	8.20	--	50.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	9/3/2009		59.16	10.15	--	49.01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	0.98	
A-11	3/23/2010		59.16	7.70	--	51.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	8/16/2010		59.16	9.90	--	49.26	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<100	<0.5	<0.5	--	--	
A-11	8/24/2012		59.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)	
A-11	2/8/2013		59.16	8.47	--	50.69	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<250	<0.5	<0.5	<0.5	--	
A-12	6/21/2000		52.05	9.28	--	42.77	<50	<0.5	<0.5	<0.5	<1.0	18	--	--	--	--	--	--	--	--	
A-12	9/20/2000		52.05	9.55	--	42.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	12/26/2000		52.05	9.05	--	43.00	<50	<0.5	<0.5	<0.5	<0.5	17.3	--	--	--	--	--	--	--	--	
A-12	3/20/2001		52.05	7.92	--	44.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	6/12/2001		52.05	9.26	--	42.79	<50	<0.5	<0.5	<0.5	<0.5	25	--	--	--	--	--	--	--	--	
A-12	9/23/2001		52.05	9.68	--	42.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	12/31/2001		52.05	5.74	--	46.31	<50	<0.5	<0.5	<0.5	<0.5	9.5	--	--	--	--	--	--	--	--	
A-12	3/21/2002		52.05	6.64	--	45.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	4/17/2002		52.05	7.68	--	44.37	<50	<0.5	<0.5	<0.5	<0.5	29	--	--	--	--	--	--	--	--	
A-12	8/12/2002		52.05	9.30	--	42.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	12/6/2002		52.05	9.38	--	42.67	<50	<0.50	<0.50	<0.50	<0.50	13	--	--	--	--	--	--	--	2.3	
A-12	1/30/2003		52.05	7.87	--	44.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	5/28/2003		52.05	8.51	--	43.54	50	<0.50	<0.50	<0.50	<0.50	10	<20	<0.50	<0.50	2.5	<100	--	--	1.4	
A-12	8/6/2003		52.05	9.28	--	42.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	11/14/2003		52.05	9.37	--	42.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	2/2/2004		57.06	7.90	--	49.16	<50	<0.50	<0.50	<0.50	<0.50	0.91	<20	<0.50	<0.50	<0.50	<100	<0.5	<0.5	1.0	
A-12	5/4/2004		57.06	8.74	--	48.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	9/2/2004		57.06	9.41	--	47.65	<50	<0.50	<0.50	<0.50	<0.50	6.2	<20	<0.50	<0.50	1.7	<100	<0.5	<0.5	1.1	
A-12	11/10/2004		57.06	8.32	--	48.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	2/2/2005		57.06	7.45	--	49.61	<50	<0.50	<0.50	<0.50	<0.50	8.3	<20	<0.50	<0.50	2.2	<100	<0.5	<0.5	1.4	
A-12	5/9/2005		57.06	7.57	--	49.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	8/11/2005		57.06	9.05	--	48.01	<50	<0.50	<0.50	<0.50	<0.50	5.4	<20	<0.50	<0.50	1.1	<100	<0.5	<0.5	0.9	
A-12	11/18/2005		57.06	8.90	--	48.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	2/15/2006		57.06	7.47	--	49.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	5/30/2006		57.06	8.21	--	48.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	8/11/2006		57.06	8.85	--	48.21	<50	<0.50	<0.50	<0.50	<0.50	7.4	<20	<0.50	<0.50	2.5	<300	<0.5	<0.5	1.8	
A-12	11/1/2006		57.06	9.17	--	47.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	2/7/2007		57.06	8.58	--	48.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	5/9/2007		57.06	7.93	--	49.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	8/7/2007		57.06	9.20	--	47.86	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<300	<0.5	<0.5	1.49	
A-12	11/14/2007		57.06	8.52	--	48.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	2/28/2008		57.06	7.04	--	50.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	5/23/2008		57.06	9.00	--	48.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	8/13/2008		57.06	9.38	--	47.68	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.5	<0.5	1.03	
A-12	11/19/2008		57.06	9.01	--	48.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	2/10/2009		57.06	8.10	--	48.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	5/7/2009		57.06	7.80	--	49.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	9/3/2009		57.06	9.40	--	47.66	<50	<0.50	<0.50	<0.50	<0.50	3.6	<10	<0.50	<0.50	1.0	<300	<0.5	<0.5	0.98	
A-12	3/23/2010		57.06	7.68	--	49.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	8/16/2010		57.06	9.30	--	47.76	<50	<0.50	<0.50	<0.50	<1.0	3.6	<4.0	<0.50	<0.50	0.85	<100	<0.5	<0.5	--	
A-12	8/24/2012		57.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)	
A-12	2/8/2013		57.06	8.38	--	48.68	<50	<0.50	<0.50	<0.50	<1.0	3.3	<4.0	<0.50	<0.50	1.2	<250	<0.5	<0.5	--	
A-13	3/21/2002		55.11	6.70	--	48.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	4/17/2002		55.11	7.95	--	47.16	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
A-13	8/12/2002		55.11	10.11	--	45.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	12/6/2002		55.11	10.26	--	44.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**  
**731 W Macarthur Blvd, Oakland, CA 94609**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes
A-13	1/30/2003		55.11	7.81	--	47.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	5/28/2003		55.11	9.06	--	46.05	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<100	--	--	1.9	
A-13	8/6/2003		55.11	10.22	--	44.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	11/14/2003		55.11	10.27	--	44.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	2/2/2004		60.26	7.92	--	52.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	5/4/2004		60.26	10.06	--	50.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	9/2/2004		60.26	10.34	--	49.92	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<100	<0.5	<0.5	2.0	
A-13	11/10/2004		60.26	8.95	--	51.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	2/2/2005		60.26	7.28	--	52.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	5/9/2005		60.26	7.85	--	52.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	8/11/2005		60.26	9.70	--	50.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	11/18/2005		60.26	9.27	--	50.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	2/15/2006		60.26	7.24	--	53.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	5/30/2006		60.26	8.38	--	51.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	8/11/2006		60.26	9.55	--	50.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	11/1/2006		60.26	9.98	--	50.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	2/7/2007		60.26	9.07	--	51.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	5/9/2007		60.26	8.15	--	52.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	8/7/2007		60.26	10.05	--	50.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	11/14/2007		60.26	9.20	--	51.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	2/28/2008		60.26	6.82	--	53.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	5/23/2008		60.26	9.67	--	50.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	8/13/2008		60.26	10.17	--	50.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	11/19/2008		60.26	9.63	--	50.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	2/10/2009		60.26	8.48	--	51.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	5/7/2009		60.26	7.97	--	52.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	9/3/2009		60.26	10.14	--	50.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	3/23/2010		60.26	7.29	--	52.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	8/16/2010		60.26	9.92	--	50.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	3/18/2011		60.26	6.33	--	53.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-13	8/24/2012		60.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(Well has been paved over) (INA)	
A-13	2/8/2013		60.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 2**  
**Historical and Current Groundwater Monitoring and Analytical Data**  
**CA-04931**  
**731 W Macarthur Blvd, Oakland, CA 94609**

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/l)	Notes
---------	------	------	-----------------	-------------	--	---------------------	---------------	-------------	-------------	-------------	-------------	----------------	---------------	----------------	----------------	----------------	-------------------	---------------	-------------------	--------------	-------

**Notes:**

-- = 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

EDB = Ethylene dibromide/1,2-Dibromoethane

1,2-DCA = 1,2-Dichloroethane

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

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.

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.

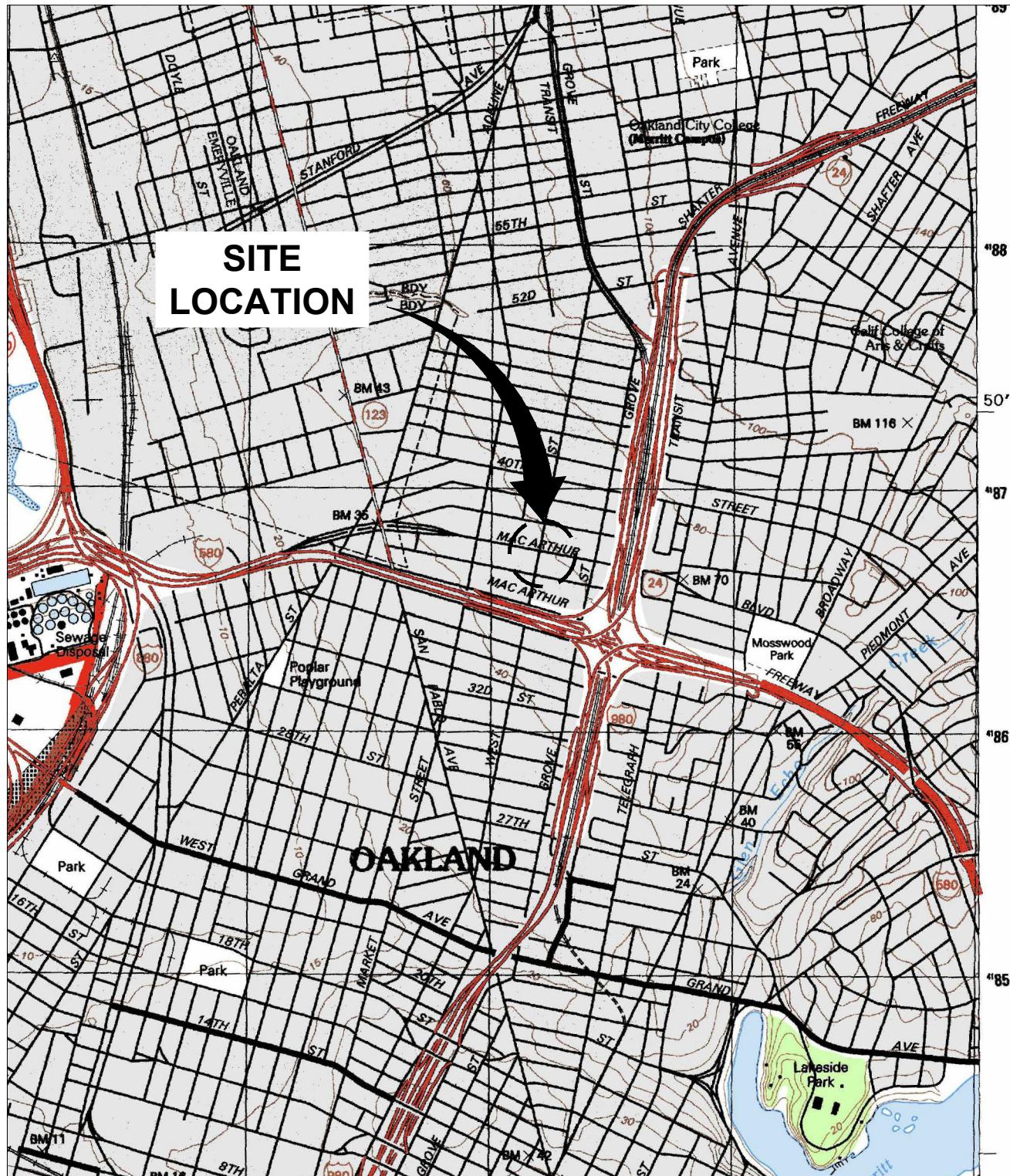
Values for DO and pH were obtained through field measurements.

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.

**ARCADIS**

**Figures**



REFERENCE: BASE MAP USGS 7.5 MIN. TOPO. QUAD., OAKLAND WEST, CALIFORNIA, 1993.

0 2000 4000

Approximate Scale: 1 in = 2000 ft.

PROJECTNAME: ---  
IMAGES: Oa la d West pg  
XREFS: AREA LOCATION

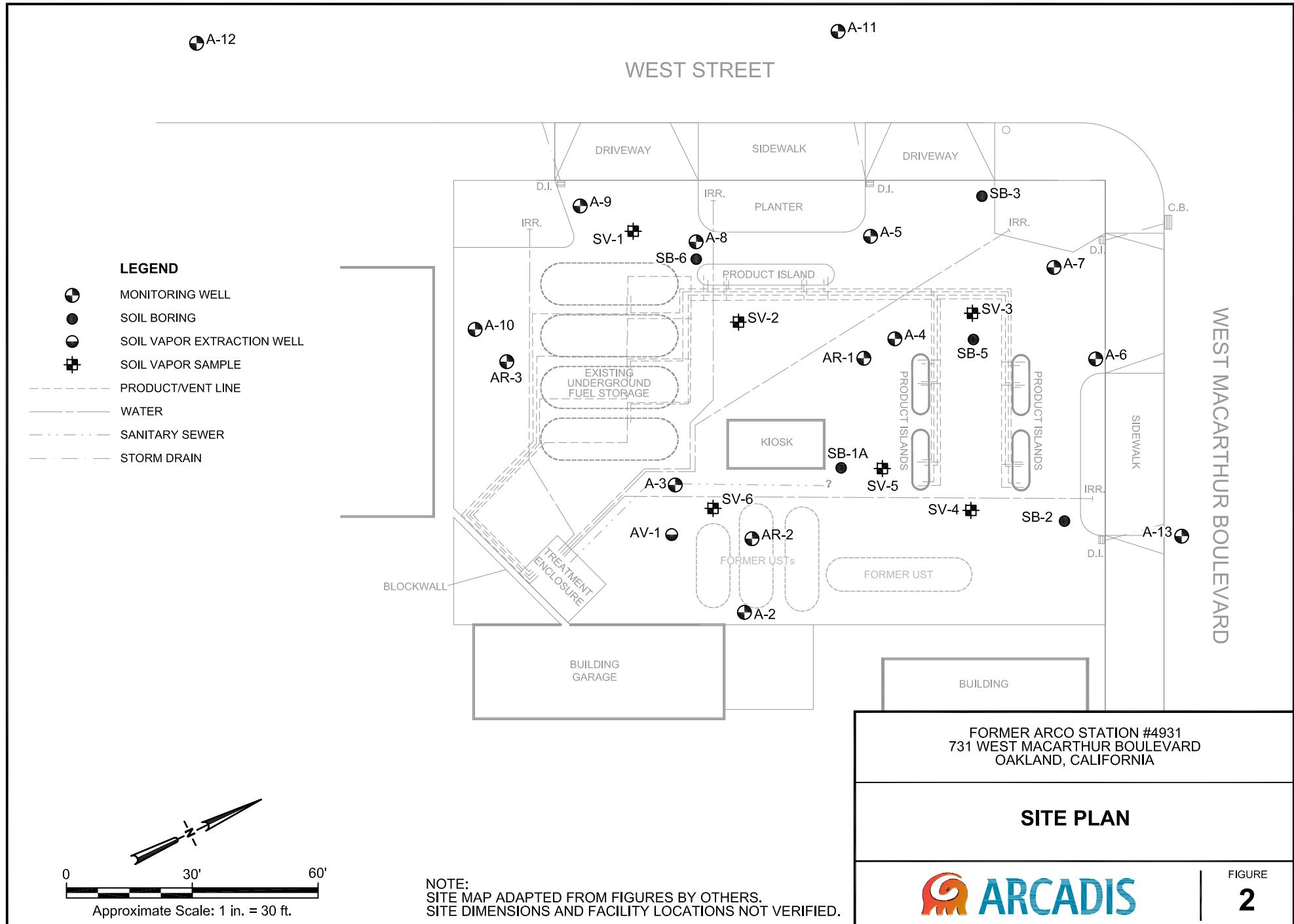


FORMER ARCO STATION #4931  
731 WEST MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

### SITE LOCATION MAP

 **ARCADIS**

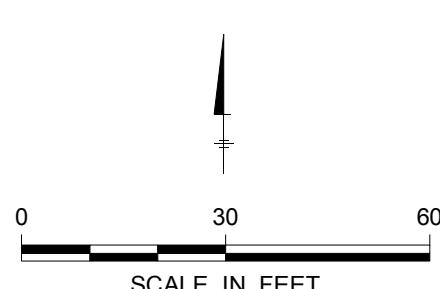
FIGURE  
1





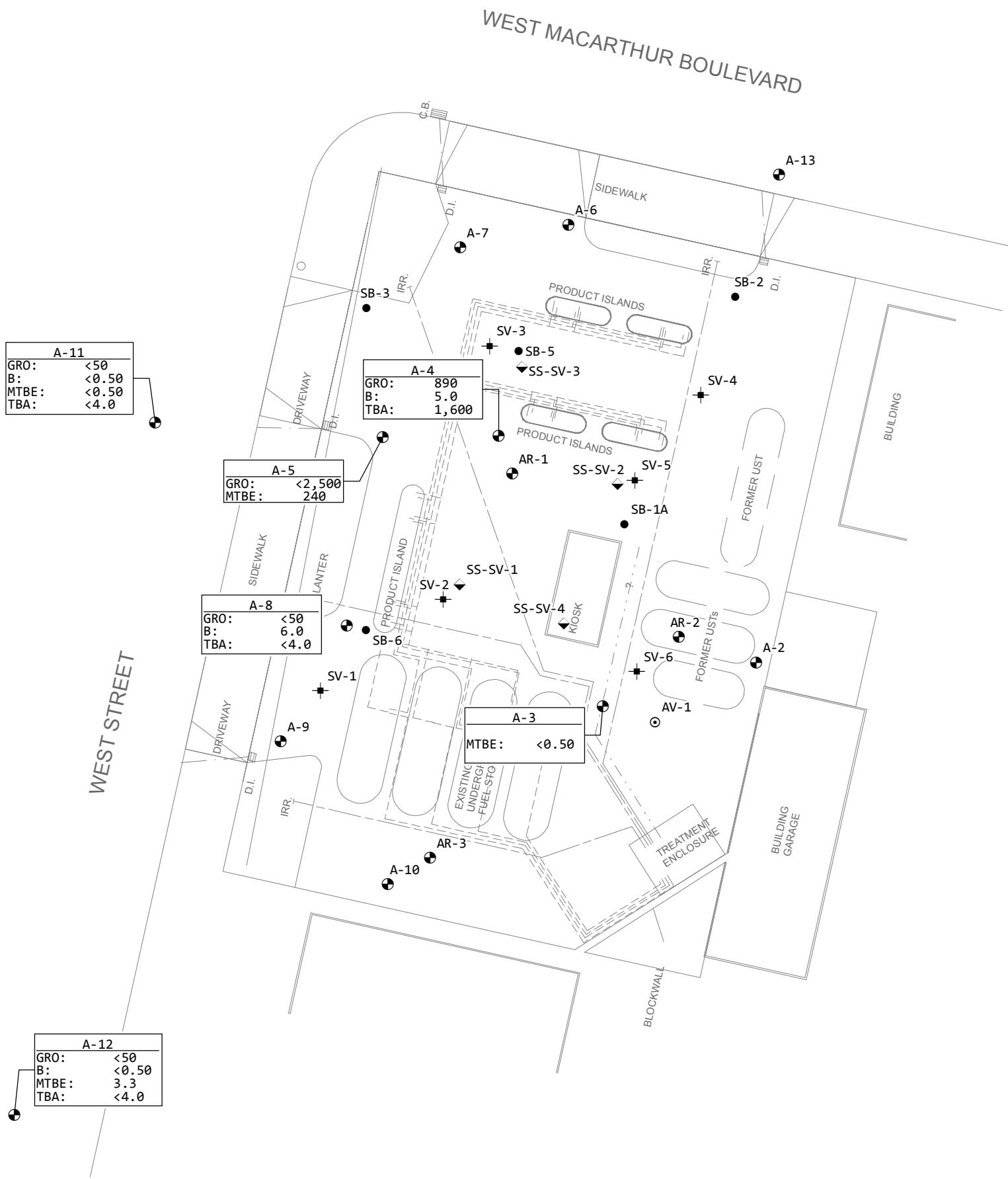
### LEGEND:

- GROUNDWATER MONITORING WELL
- SOIL BORING
- SOIL VAPOR EXTRACTION WELL
- ✚ SOIL VAPOR SAMPLE LOCATION
- ▼ SUB-SLAB SOIL VAPOR SAMPLING LOCATION
- (xx.xx) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- FF.dd — GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION (FOOT PER FOOT)
- (INA) WELL INACCESSIBLE



FORMER BP STATION No. 04931  
731 WEST MACARTHUR BOULEVARD,  
OAKLAND, CALIFORNIA

**GROUNDWATER ELEVATION MAP  
FEBRUARY 2013**



### LEGEND:

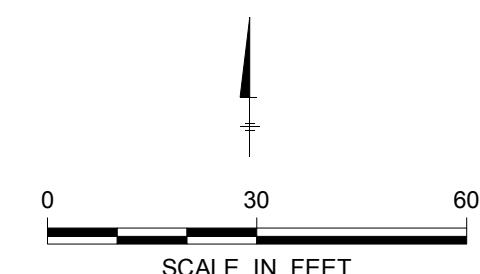
- GROUNDWATER MONITORING WELL
- SOIL BORING
- SOIL VAPOR EXTRACTION WELL
- ✚ SOIL VAPOR SAMPLE LOCATION
- ▼ SUB-SLAB SOIL VAPOR SAMPLING LOCATION

XX-1	SAMPLE LOCATION ID
GRO:	<XX
B:	<X.X
MTBE:	<X.X
TBA:	<XX

CONCENTRATION IN MICROGRAMS PER LITER ( $\mu\text{g/L}$ )

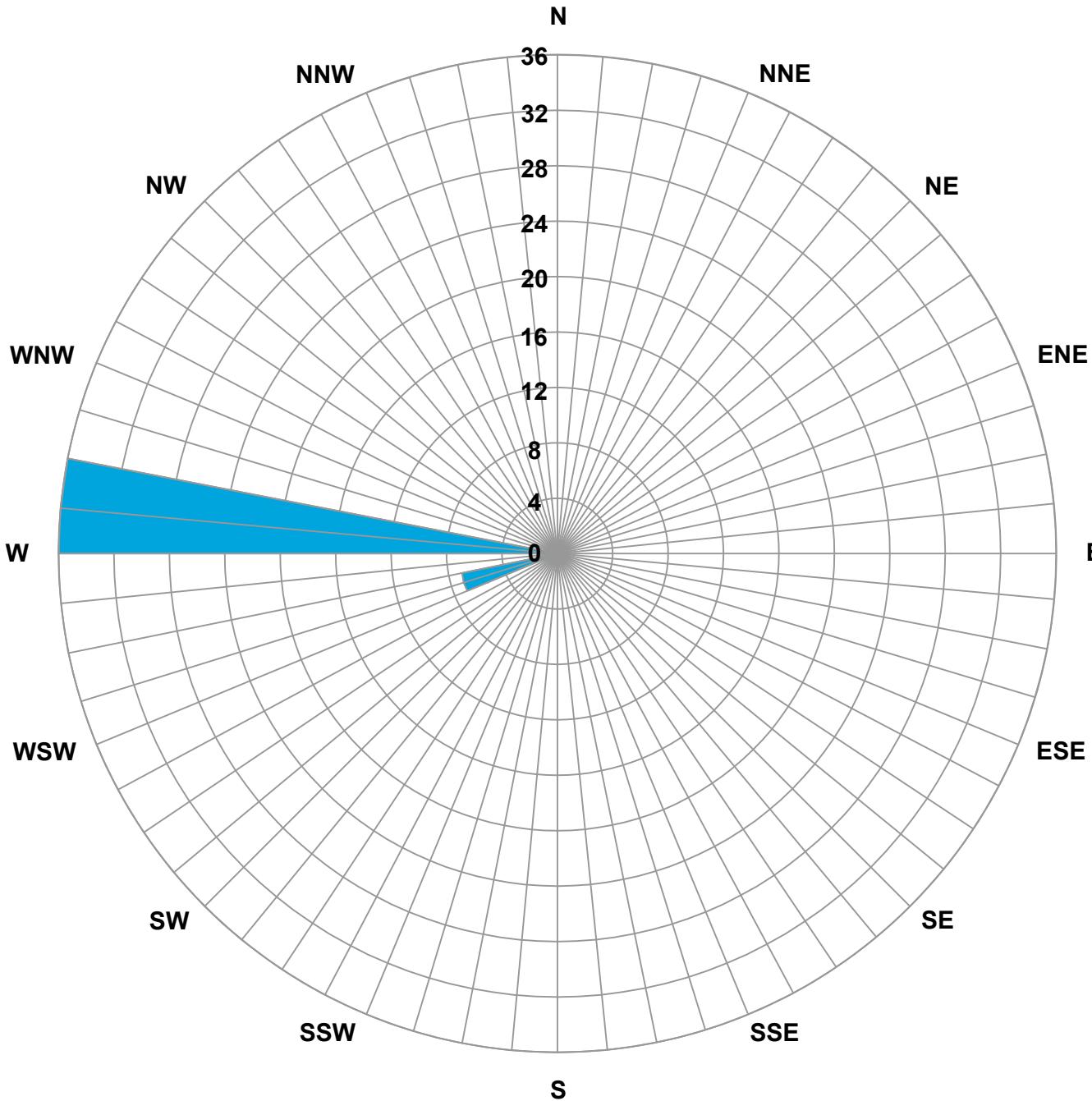
ANALYTE

GRO GASOLINE RANGE ORGANICS  
 B BENZENE  
 MTBE METHYL TERTIARY-BUTYL ETHER  
 TBA TERTIARY-BUTYL ALCOHOL  
 < NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT



FORMER BP STATION No. 04931  
 731 WEST MACARTHUR BOULEVARD,  
 OAKLAND, CALIFORNIA

GROUNDWATER ANALYTICAL MAP  
 FEBRUARY 8, 2013



**LEGEND**

CONCENTRIC CIRCLES REPRESENT 45  
MONITORING EVENTS CONDUCTED  
BETWEEN THE SECOND QUARTER 2000  
THROUGH THE FIRST QUARTER 2013.

■ GROUNDWATER FLOW DIRECTION

FORMER ARCO STATION No. 4931  
731 WEST MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

**GROUNDWATER FLOW DIRECTION  
ROSE DIAGRAM**



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**Appendix A**

Previous Investigations and Site  
History Summary

The Site is located at 731 West MacArthur Boulevard in Oakland, California. It is an active Beacon-branded gasoline station. Improvements to the Site include four 10,000 gallon double-wall fiberglass gasoline underground storage tanks (USTs) installed on April 8, 1992. Product lines were excavated, removed, inspected, and replaced October 2, 2002. The majority of the Site surface is paved with concrete and asphalt.

Former Atlantic-Richfield Oil Co. Station No. 4931

The Site is bound by West MacArthur Boulevard to the north-northeast, West Street to the west-northwest and single-family residential dwellings to the south-southwest and east-southeast. Interstate 580 is located approximately 620 feet south-southwest of the Site.

A super unleaded product leak was reported to have occurred in November 1982 at the Site, however the quantity of product released is unknown (Gettler-Ryan, 4/3/1989). Wells A-1 through A-4 are known to have been installed prior to December 1982; however exact dates and consultants responsible are unknown. Wells A-5 through A-8 were installed by Groundwater Technology, Inc. (GTI) in March 1983. Wells A-9 through A-12 were installed by Pacific Environmental Group, Inc. (PEG) in December 1987. Soil samples were reportedly collected from borings A-9 through A-12 at five-foot intervals for logging purposes, but were not analyzed. Well A-9 was advanced to 45 ft below ground surface (bgs) and constructed with six-inch diameter PVC casing. Wells A-10 through A-12 were advanced to 30.5 ft bgs and constructed with three-inch diameter PVC casing and 0.020 inch slotted screen (PEG, 1/20/1988). GeoStrategies, Inc. (GSI) reported in their 15 May 1991 *Remedial Action Plan* that well A-1 was destroyed during underground storage tank (UST) replacement activities in August 1983. Additional information pertaining to the 1983 UST replacement activities was not available.

In late 1987, PEG conducted a water-supply well search within a 0.5 mile radius of the Site, as reported in their 20 January 1988 *Soil and Groundwater Investigation Report*. The Department of Water Resources (DWR) reported three historical wells within 0.5 miles of the Site. Two wells were identified approximately 1,300 feet northwest of the site. One was of an unknown depth and use, drilled in 1928. The second was drilled in 1926 to a depth of either 575 or 420 feet. The well was abandoned in 1956. The third well was identified approximately 2,400 feet west (downgradient) of the Site. It was drilled in 1927 to 97 ft bgs for industrial use.

In April 1991, GSI performed a hybrid step-drawdown/constant-rate aquifer test utilizing well A-9. The test consisted of four pumping steps followed by a recovery step. Transmissivity was calculated as 1,092 to 2,668 gallons per day per foot (gpd/ft) using Jacob's method, and 996 to 2,502 gpd/ft using the Neuman method. Storativity was calculated to be  $1.18 \cdot 10^{-2}$  to  $4.24 \cdot 10^{-3}$ , which was reportedly indicative of a heterogeneous environment. According to GSI, "Specific yield [sic – capacity?] values ranged from  $1.74 \cdot 10^{-2}$  to  $9.65 \cdot 10^{-3}$ ," suggesting unconfined to semi-confined subsurface conditions (GSI, 7/10/1991). In GSI's *Remedial Action Plan*, dated 15 May 1991, approximately 30 years of pumping on well A-9 was modeled, which suggested that hydrodynamic control of the hydrocarbon plume within the groundwater was achievable at the Site. A groundwater extraction treatment system was proposed within the same report, designed to pump from well A-9 and treat groundwater onsite using carbon vessels.

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In January 1992, GSI observed the advancement of one vapor extraction well (AV-1). AV-1 was installed to a depth of 15 ft bgs and screened from 5 ft bgs to total depth. Three Vapor Extraction Monitoring Points (VEMPs) were also installed at this time. The VEMPs were 0.75- inch diameter metal pipe driven to a depth of eight ft bgs, then withdrawn six to eight inches. The VEMPs were located at approximately four foot intervals linearly east of well AV-1. GSI conducted a four-hour vapor extraction test on 20 January 1992 on well AV-1, utilizing an internal combustion engine to create vacuum and combust vapors. Vacuum pressure in well AV-1 was sustained between 158.0 to 169.3 inches of water, while manometers were used to measure pressure changes at the VEMPs. No measurable influence was recorded at the three VEMPs, indicating less than a four-foot radius of influence for well AV-1. GSI subsequently concluded that vapor extraction was not likely to be a feasible remedial option at the Site (GSI, 5/21/1992).

Between 18 November 1991 and 8 April 1992, Roux Associates (RA) observed the UST removal and replacement installation activities. Paradiso Construction Company (Paradiso) removed one 12,000 gallon single-walled fiberglass tank, two 8,000 gallon single-walled steel tanks, and one 6,000 single-walled steel tank on 19 November 1991. It was reported that according to the ACEH and RA personnel, the former tanks appeared to be in good condition, with no holes or obvious leaks. Two preexisting four-inch tank observation wells near tank T1 were also removed at this time. Black oil staining was observed on the inside of the tank observation well casing, as well as on the surface of the exposed groundwater near where the wells were located. A vacuum truck was utilized on 21 November 1991 to remove approximately 2,800 gallons of oil/groundwater mixture from the tank cavity. Due to

reported soil staining and hydrocarbon odors, the tank cavity was over-excavated on 21 November 1991. The south end of the tank cavity (former tanks T2, T3, and T4) was excavated to approximately 14 ft bgs, while the north end (former tank T1) was excavated to approximately 12 ft bgs. Further over-excavation along the north and west side-walls of the tank cavity occurred between 20 December 1991 and 13 February 1992. The former tank cavity was backfilled on 27 February 1992 with two to four feet of pea gravel and road base aggregate to near the surface. Product lines associated with the former UST complex were excavated and removed on 1 and 2 December 1991. Select locations along the former product line trenches were overexcavated on 20 December 1991. The current UST pit excavation was initiated on 9 March 1992. Four double-walled 10,000 gallon fiberglass tanks were installed at 14 ft bgs on 8 April 1992. One 12-inch diameter slotted PVC conductor casing was installed to 13 ft bgs in the new UST cavity (RA, 7/20/1992).

On 15 and 16 June 1992 GSI observed the advancement of one soil boring offsite (A-13) and three soil borings onsite (AR-1, AR-2, and AR-3). Monitoring well A-13 was installed to a depth of 30 ft bgs and constructed with three-inch diameter Schedule 40 PVC casing and screened from 10 to 30 ft bgs with 0.020-inch machine slotted casing. Recovery wells AR-1 and AR-3 were installed to a depth of 30 ft bgs and constructed with six-inch diameter Schedule 40 PVC casing and screened from 10 to 30 ft bgs with 0.020-inch slotted carbon steel casing. Recovery well AR-2 was installed to a depth of 28 ft bgs and constructed with six-inch diameter Schedule 40 PVC casing and screened from 8 to 28 ft bgs with 0.020-inch slotted carbon steel casing. Also during second quarter 1992, a passive product skimmer was installed in well A-8 (GSI, 11/13/1992).

In late 1992, GSI oversaw the installation of an interim groundwater extraction remediation system (GWETS). The system began operation on 10 November 1992, utilizing two pumps in each of wells A-9, AR-1, AR-2, and AR-3, removing hydrocarbon impacted groundwater and free product (FP) from the subsurface. Collected FP was contained in 55-gallon drums. Groundwater was passed through a centrifugal separator, particulate filter, three in-series 1,500 pound activated carbon vessels, and ultimately discharged into the sanitary sewer system (GSI, 2/22/1994). In their *Recovery System Evaluation Report, First Quarter 1994*, dated 27 June 1994, GSI reports that the GWETS wells A-9, AR-1, AR-2, and AR-3 contain only one pump each for groundwater, and a product pump has been installed in well A-8. The GWETS was shutdown on 5 July 1995 for the following reasons cited by Pacific Environment Group, Inc. (PEG) in their *Quarterly Report – Second Quarter 1995, Remedial System Performance Evaluation*, dated 29 September 1995: 1). Since

Former Atlantic-Richfield Oil Co. Station No. 4931

system startup only 2.74 pounds (0.45 gallons) total petroleum hydrocarbons in the gasoline range (TPHg) and 0.46 pounds (0.06 gallons) of benzene had been removed; and 2). Downgradient wells A-11 and A-12 had remained non-detect for TPHg and benzene since groundwater monitoring began in 1988, indicating that the plume had stabilized and downgradient migration was minimal. At shutdown, the system had removed and treated approximately 4,643,696 gallons of groundwater. As of 31 December 1995, 23 pounds (3.75 gallons) of FP have been removed from the Site (PEG, 3/15/1996).

After the GWETS had been shutdown and pumps removed from the remediation wells, PEG initiated an in-situ bioremediation enhancement program. On 17 November 1995, eight oxygen releasing compound (ORC) socks were installed in well A-9. ORC is a magnesium peroxide powder, which slowly releases oxygen when hydrated (PEG, 3/15/1996).

On 2 October 2002, URS Corporation (URS) observed product line upgrade activities at the Site. The product lines were excavated, removed, inspected, and replaced. URS reported no observable cracks or deterioration of the former product lines. Soil samples were collected and analyzed from the product line trenches as well as from beneath the former dispenser islands. Two locations required minor over-excavation due to observed soil staining and hydrocarbon odors. The new product lines were replaced within the same trenches (URS, 1/21/2003).

Quarterly groundwater monitoring at the Site was initiated in the First Quarter 1989 by Gettler- Ryan, Inc. The site is currently monitored on a semiannual basis by Broadbent & Associates, Inc. (BAI) during the first and third calendar quarters.

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**Appendix B**

Groundwater Sampling Data  
Package



## DAILY REPORT

Page 1 of 1

Project: Arcadis 4931

Project No.: 09-88-624

Field Representative(s): Alex Martinez Day: Friday Date: 2/8/13

Time Onsite: From: 0715 To: 1345; From: \_\_\_\_\_ To: \_\_\_\_\_; From: \_\_\_\_\_ To: \_\_\_\_\_

Signed HASP     Safety Glasses     Hard Hat     Steel Toe Boots     Safety Vest

UST Emergency System Shut-off Switches Located     Proper Gloves

Proper Level of Barricading     Other PPE (describe) \_\_\_\_\_

Weather: Partly Cloudy & cool

Equipment In Use: Water level meter, hydrosleeves

Visitors: Arcadis personnel, Cruz Bros, Statewide, Gregg Drilling

### TIME:

### WORK DESCRIPTION:

0715    Arrived onsite. Arcadis onsite as well.

0735    Set up for round of gauging and placement of hydrosleeves

0945    After gauging completion, Arcadis personnel informed BAI to collect water samples from A-11 & A-12. Arcadis would like samples collected via bailer with standard three casing volume purge. Awaiting Statewide to set up traffic control and will conduct sampling activities.

1010    Set up to sample wells A-11 & A-12 per Arcadis' request.

1220    Set up to sample regularly scheduled hydrosleeve wells.

1345    Completed sampling activities & offsite

No parameters were collected for wells A-11 & A-12 because each well only needed to be gauged for this sampling event. Hydrosleeves were not brought out to the site for those two wells. Nor was a water quality meter. Arcadis confirmed sample collection with a bailer.

Signature: Alex Martinez



## GROUNDWATER MONITORING SITE SHEET

Page 1 of 7Project: Arcadis 4931Project No.: 09-88-624 Date: 2/8/13Field Representative: AM

Elevation: \_\_\_\_\_

Formation recharge rate is historically: High Low (circle one)

W. L. Indicator ID #: \_\_\_\_\_ Oil/Water Interface ID #: \_\_\_\_\_ (List #s of all equip used.)

WELL ID RECORD				WELL GAUGING RECORD				NOTES	
Well ID	Well Sampling Order	As-Built Well Diameter (inches)	As-Built Well Screen Interval (ft)	Previous Depth to Water (ft)	Time (24:00)	Depth to LNAPL (ft)	Apparent LNAPL Thickness (ft)*	Depth to Water (ft)	Well Total Depth (ft)
A-2	10			10.54	0947	-	-	4.51	19.50
A-3	6			9.31	0936	-	-	6.33	16.30
A-4	13			9.95	0747	-	-	7.05	28.90
A-5	11			9.15	0820	-	-	7.65	9.50
A-7	7			9.06	0813	-	-	7.44	26.37
A-8	14			9.44	0839	-	-	7.35	16.35
A-9	8			-	0910	-	-	6.63	8.19
A-10	12			10.03	0718	-	-	8.30	29.66
A-11	5			-	0857	-	-	8.47	29.78
A-12	9			-	0850	-	-	8.38	29.83
A-13	4			-	Paved Over.				
AR-1	1			9.65	0807	-	-	8.44	19.45
AR-2	2			4.55	Could not gauge. Portable trailer parked over well.				Stationed
AR-3	3			9.10	0923	-	-	7.62	28.42
* Device used to measure LNAPL thickness:				Bailer	Oil/Water Interface Meter				(circle one)
If bailer used, note bailer dimensions (inches):				Entry Diameter _____	Chamber Diameter _____				

\* Device used to measure LNAPL thickness: Bailer Oil/Water Interface Meter (circle one)If bailer used, note bailer dimensions (inches): Entry Diameter \_\_\_\_\_ Chamber Diameter \_\_\_\_\_Signature: Alex Mota

Revision: 8/19/11







## **GROUNDWATER SAMPLING DATA SHEET**

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Project: Arcadia 4931 Project No.: 09-88-624 Date: 2/3/13

Field Representative: AM

Well ID: A-5 Start Time: — End Time: — Total Time (minutes): —

PURGE EQUIPMENT	<input type="checkbox"/> Disp. Bailer	<input type="checkbox"/> 120V Pump	<input type="checkbox"/> Flow Cell
<input type="checkbox"/> Disp. Tubing	<input type="checkbox"/> 12V Pump	<input type="checkbox"/> Peristaltic Pump	Other/ID#:
WELL HEAD INTEGRITY (cap, lock, vault, etc.)		Comments: _____	
<input checked="" type="checkbox"/> Good	Improvement Needed (circle one)		
PURGING/SAMPLING METHOD		Predetermined Well Volume	Low-Flow Other: <u>Hydrofracture</u> (circle one)
PREDETERMINED WELL VOLUME			
Casing Diameter   Unit Volume (gal/ft) (circle one)			
1"   (0.04)	1.25"   (0.08)	2"   (0.17)	3"   (0.38) Other: _____
4"   (0.66)	6"   (1.50)	8"   (2.60)	12"   (5.81) _____"   (_____)
Total Well Depth (a):	(ft)		
Initial Depth to Water (b):	(ft)		
Water Column Height (WCH) = (a - b):	(ft)		
Water Column Volume (WCV) = WCH x Unit Volume:	(gal)		
Three Casing Volumes = WCV x 3:	(gal)		
Five Casing Volumes = WCV x 5:	(gal)		
Pump Depth (if pump used):	(ft)		
LOW-FLOW			
Previous Low-Flow Purge Rate: _____ (lpm)			
Total Well Depth (a): _____ (ft)			
Initial Depth to Water (b): _____ (ft)			
Pump In-take Depth = b + (a-b)/2: _____ (ft)			
Maximum Allowable Drawdown = (a-b)/8: _____ (ft)			
Low-Flow Purge Rate: _____ (Lpm)*			
Comments: _____			
<small>*Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.</small>			

### Previous Stabilized Parameters

SAMPLE COLLECTION RECORD		GEOCHEMICAL PARAMETERS		
Parameter	Time	Measurement		
Depth to Water at Sampling: _____ (ft)				
Sample Collected Via: <input type="checkbox"/> Disp. Bailer <input type="checkbox"/> Dedicated Pump Tubing <input checked="" type="checkbox"/> Disp. Pump Tubing Other: _____	DO (mg/L)			
Sample ID: <u>A-5</u> Sample Collection Time: <u>125L</u> (24:00)	Ferrous Iron (mg/L)			
Containers (#): <u>3</u> VOA ( <input checked="" type="checkbox"/> preserved or <input type="checkbox"/> unpreserved) <input type="checkbox"/> Liter Amber <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Redox Potential (mV)			
	Alkalinity (mg/L)			
	Other:			
	Other:			

**Signature:** Alex Madsen **Revision:** 7/3/12

Revision: 7/3/12







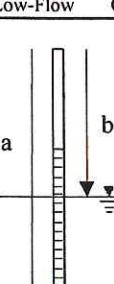
## **GROUNDWATER SAMPLING DATA SHEET**

Page 7 of 7

Project: Arcadia 4931 Project No.: 09-388-624 Date: 2/8/13

Field Representative: AM

Well ID: A-13 Start Time: - End Time: - Total Time (minutes): -

PURGE EQUIPMENT	<input checked="" type="checkbox"/> Disp. Bailer	<input type="checkbox"/> 120V Pump	<input type="checkbox"/> Flow Cell
Disp. Tubing	<input type="checkbox"/> 12V Pump	<input type="checkbox"/> Peristaltic Pump	Other/ID#:
WELL HEAD INTEGRITY (cap, lock, vault, etc.)		Comments:	
Good	Improvement Needed	(circle one)	
PURGING/SAMPLING METHOD		Predetermined Well Volume	Low-Flow Other: (circle one)
PREDETERMINED WELL VOLUME			
Casing Diameter   Unit Volume (gal/ft) (circle one)			
1"   (0.04)	1.25"   (0.08)	2"   (0.17)	3"   (0.38) Other:
4"   (0.66)	6"   (1.50)	8"   (2.60)	12"   (5.81) "   ( )
Total Well Depth (a):	<u>29.33</u> (ft)		
Initial Depth to Water (b):	<u>8.38</u> (ft)		
Water Column Height (WCH) = (a - b):	<u>21.45</u> (ft)		
Water Column Volume (WCV) = WCH x Unit Volume:	<u>8.15</u> (gal)		
Three Casing Volumes = WCV x 3:	<u>24.45</u> (gal)		
Five Casing Volumes = WCV x 5:	<u>-</u> (gal)		
Pump Depth (if pump used):	<u>-</u> (ft)		
 <b>LOW-FLOW</b> Previous Low-Flow Purge Rate: _____ (lpm) Total Well Depth (a): _____ (ft) Initial Depth to Water (b): _____ (ft) Pump In-take Depth = b + (a-b)/2: _____ (ft) Maximum Allowable Drawdown = (a-b)/8: _____ (ft) Low-Flow Purge Rate: _____ (Lpm)* Comments: _____			

Previous Stabilized Parameters

PURGE COMPLETION RECORD	<input type="checkbox"/> Low Flow & Parameters Stable	<input checked="" type="checkbox"/> 3 Casing Volumes & Parameters Stable	<input type="checkbox"/> 5 Casing Volumes
	<input type="checkbox"/> Other:		
SAMPLE COLLECTION RECORD		GEOCHEMICAL PARAMETERS	
Depth to Water at Sampling:	11.75 (ft)	Parameter	Time
Sample Collected Via:	<input checked="" type="checkbox"/> Disp. Bailer <input type="checkbox"/> Dedicated Pump Tubing	DO (mg/L)	
<input type="checkbox"/> Disp. Pump Tubing <input type="checkbox"/> Other:		Ferrous Iron (mg/L)	
Sample ID:	A-12	Redox Potential (mV)	
Containers (#):	3 VOA ( <input checked="" type="checkbox"/> preserved or <input type="checkbox"/> unpreserved) <input type="checkbox"/> Liter Amber	Alkalinity (mg/L)	
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	

Signature:  Revision: 8/19/1

Revision: 8/19/11

San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

phone 925.484.1919 fax 925.600.3002

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Kristene Tidwell			Site Contact: Alex Martinez		Date:		COC No:	
Broadbent & Associates, Inc.		Tel/Fax: 707-455-7290 / 707-445-7295			Lab Contact: Dimple Sharma		Carrier:		of ____ COCs	
875 Cotting Lane, Suite G Vacaville, CA 95688 Phone: 707-455-7290 Fax: 707-455-7295 Project Name: Arcadis 4931 731 West Macarthur Blvd., Oakland, CA P O # GP09BPNA.C110		Analysis Turnaround Time Calendar (C) or Work Days (W) _____ TAT if different from Below _____							Job No.	
		<input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day							SDG No.	
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample GIRO by 8260B BTEx/5 FO + EDB by 8260 1,2-DCA & Ethanol by 8260	MTBE by 8260B	Sample Specific Notes:	
A-3		2/8/2013	1235	GRAB	AQ	3		X		
A-4		2/8/2013	1305	GRAB	AQ	3	X X X			
A-5		2/8/2013	1252	GRAB	AQ	3	X	X		
A-8		2/8/2013	1320	GRAB	AQ	3	X X X			
TB-4931-02082013		--	--	--	AQ	1			On Hold	
A-13		2/8/13		GRAB	AQ	3	* * * * *			
A-11		2/8/13	1100	GRAB	AQ	3	* * * * *			
A-12		↓	1200	↓	↓	3	* * * * *			
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____										
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 <input type="checkbox"/>						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: Samples collected via Hydrasleeves.										
Relinquished by: <i>Alex Martinez / Alex M</i>		Company: Broadbent		Date/Time: 2/8/13 14:20		Received by: <i>J. Bulk</i>		Company: TestAmerica		Date/Time: 2/8/13 14:20
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:

2.40 C

**ARCADIS**

**Appendix C**

Certified Laboratory Analytical  
Report

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-47684-1

Client Project/Site: BP #4931, Oakland

For:

ARCADIS U.S., Inc.

100 Montgomery Street

Suite 300

San Francisco, California 94104

Attn: Hollis Phillips

A handwritten signature in black ink, appearing to read "Dimple Sharma".

Authorized for release by:

2/26/2013 4:53:02 PM

Dimple Sharma

Project Manager I

dimple.sharma@testamericainc.com

### LINKS

Review your project  
results through

TotalAccess

Have a Question?

Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Definitions/Glossary

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

TestAmerica Job ID: 720-47684-1

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.	1
□	Listed under the "D" column to designate that the result is reported on a dry weight basis	2
%R	Percent Recovery	3
CNF	Contains no Free Liquid	4
DER	Duplicate error ratio (normalized absolute difference)	5
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	6
DLC	Decision level concentration	7
MDA	Minimum detectable activity	8
EDL	Estimated Detection Limit	9
MDC	Minimum detectable concentration	10
MDL	Method Detection Limit	11
ML	Minimum Level (Dioxin)	12
ND	Not detected at the reporting limit (or MDL or EDL if shown)	13
PQL	Practical Quantitation Limit	14
QC	Quality Control	
RER	Relative error ratio	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	

## Case Narrative

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

TestAmerica Job ID: 720-47684-1

### Job ID: 720-47684-1

Laboratory: TestAmerica Pleasanton

#### Narrative

Job Narrative  
720-47684-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 2/8/2013 2:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

#### GC/MS VOA

No analytical or quality issues were noted.

# Detection Summary

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

TestAmerica Job ID: 720-47684-1

## Client Sample ID: A-3

## Lab Sample ID: 720-47684-1

No Detections

## Client Sample ID: A-4

## Lab Sample ID: 720-47684-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.0		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	1.6		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	890		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	1600		4.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
TAME	19		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

## Client Sample ID: A-5

## Lab Sample ID: 720-47684-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	240		25		ug/L	50		8260B/CA_LUFT MS	Total/NA

## Client Sample ID: A-8

## Lab Sample ID: 720-47684-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.0		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TAME	0.92		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

## Client Sample ID: A-11

## Lab Sample ID: 720-47684-6

No Detections

## Client Sample ID: A-12

## Lab Sample ID: 720-47684-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	3.3		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TAME	1.2		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

# Client Sample Results

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

TestAmerica Job ID: 720-47684-1

## Client Sample ID: A-3

Date Collected: 02/08/13 12:35  
Date Received: 02/08/13 14:20

Lab Sample ID: 720-47684-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			02/11/13 16:02	1
<hr/>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		67 - 130					02/11/13 16:02	1
1,2-Dichloroethane-d4 (Surr)	100		75 - 138					02/11/13 16:02	1
Toluene-d8 (Surr)	99		70 - 130					02/11/13 16:02	1

TestAmerica Pleasanton

# Client Sample Results

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

TestAmerica Job ID: 720-47684-1

## Client Sample ID: A-4

Date Collected: 02/08/13 13:05  
Date Received: 02/08/13 14:20

**Lab Sample ID: 720-47684-2**

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.0		0.50		ug/L			02/11/13 16:30	1
EDB	ND		0.50		ug/L			02/11/13 16:30	1
1,2-DCA	ND		0.50		ug/L			02/11/13 16:30	1
Ethylbenzene	1.6		0.50		ug/L			02/11/13 16:30	1
Toluene	ND		0.50		ug/L			02/11/13 16:30	1
Xylenes, Total	ND		1.0		ug/L			02/11/13 16:30	1
Gasoline Range Organics (GRO) -C6-C12	890		50		ug/L			02/11/13 16:30	1
TBA	1600		4.0		ug/L			02/11/13 16:30	1
Ethanol	ND		250		ug/L			02/11/13 16:30	1
DIPE	ND		0.50		ug/L			02/11/13 16:30	1
TAME	19		0.50		ug/L			02/11/13 16:30	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/11/13 16:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	112		67 - 130					02/11/13 16:30	1
1,2-Dichloroethane-d4 (Surr)	102		75 - 138					02/11/13 16:30	1
Toluene-d8 (Surr)	112		70 - 130					02/11/13 16:30	1

TestAmerica Pleasanton

# Client Sample Results

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

TestAmerica Job ID: 720-47684-1

## Client Sample ID: A-5

Date Collected: 02/08/13 12:52  
Date Received: 02/08/13 14:20

**Lab Sample ID: 720-47684-3**

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	240		25		ug/L			02/11/13 16:58	50
Gasoline Range Organics (GRO) -C6-C12	ND		2500		ug/L			02/11/13 16:58	50
<hr/>									
<b>Surrogate</b>									
4-Bromofluorobenzene	102		67 - 130				Prepared	02/11/13 16:58	50
4-Bromofluorobenzene	100		67 - 130					02/25/13 15:51	5
1,2-Dichloroethane-d4 (Surr)	101		75 - 138					02/11/13 16:58	50
1,2-Dichloroethane-d4 (Surr)	102		75 - 138					02/25/13 15:51	5
Toluene-d8 (Surr)	101		70 - 130					02/11/13 16:58	50
Toluene-d8 (Surr)	101		70 - 130					02/25/13 15:51	5

TestAmerica Pleasanton

# Client Sample Results

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

TestAmerica Job ID: 720-47684-1

## Client Sample ID: A-8

Date Collected: 02/08/13 13:20  
Date Received: 02/08/13 14:20

**Lab Sample ID: 720-47684-4**

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.0		0.50		ug/L		02/11/13 17:27		1
EDB	ND		0.50		ug/L		02/11/13 17:27		1
1,2-DCA	ND		0.50		ug/L		02/11/13 17:27		1
Ethylbenzene	ND		0.50		ug/L		02/11/13 17:27		1
Toluene	ND		0.50		ug/L		02/11/13 17:27		1
Xylenes, Total	ND		1.0		ug/L		02/11/13 17:27		1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L		02/11/13 17:27		1
TBA	ND		4.0		ug/L		02/11/13 17:27		1
Ethanol	ND		250		ug/L		02/11/13 17:27		1
DIPE	ND		0.50		ug/L		02/11/13 17:27		1
<b>TAME</b>	<b>0.92</b>		0.50		ug/L		02/11/13 17:27		1
Ethyl t-butyl ether	ND		0.50		ug/L		02/11/13 17:27		1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		67 - 130				02/11/13 17:27		1
1,2-Dichloroethane-d4 (Surr)	99		75 - 138				02/11/13 17:27		1
Toluene-d8 (Surr)	103		70 - 130				02/11/13 17:27		1

TestAmerica Pleasanton

# Client Sample Results

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

TestAmerica Job ID: 720-47684-1

**Client Sample ID: A-11**

Date Collected: 02/08/13 11:00  
Date Received: 02/08/13 14:20

**Lab Sample ID: 720-47684-6**

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			02/11/13 17:55	1
Benzene	ND		0.50		ug/L			02/11/13 17:55	1
EDB	ND		0.50		ug/L			02/11/13 17:55	1
1,2-DCA	ND		0.50		ug/L			02/11/13 17:55	1
Ethylbenzene	ND		0.50		ug/L			02/11/13 17:55	1
Toluene	ND		0.50		ug/L			02/11/13 17:55	1
Xylenes, Total	ND		1.0		ug/L			02/11/13 17:55	1
Gasoline Range Organics (GRO)	ND		50		ug/L			02/11/13 17:55	1
-C6-C12									
TBA	ND		4.0		ug/L			02/11/13 17:55	1
Ethanol	ND		250		ug/L			02/11/13 17:55	1
DIPE	ND		0.50		ug/L			02/11/13 17:55	1
TAME	ND		0.50		ug/L			02/11/13 17:55	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/11/13 17:55	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene		96		67 - 130				02/11/13 17:55	1
1,2-Dichloroethane-d4 (Surr)		102		75 - 138				02/11/13 17:55	1
Toluene-d8 (Surr)		102		70 - 130				02/11/13 17:55	1

TestAmerica Pleasanton

# Client Sample Results

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

TestAmerica Job ID: 720-47684-1

**Client Sample ID: A-12**

**Lab Sample ID: 720-47684-7**

Date Collected: 02/08/13 12:00

Matrix: Water

Date Received: 02/08/13 14:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>MTBE</b>	<b>3.3</b>		0.50		ug/L			02/11/13 18:24	1
Benzene	ND		0.50		ug/L			02/11/13 18:24	1
EDB	ND		0.50		ug/L			02/11/13 18:24	1
1,2-DCA	ND		0.50		ug/L			02/11/13 18:24	1
Ethylbenzene	ND		0.50		ug/L			02/11/13 18:24	1
Toluene	ND		0.50		ug/L			02/11/13 18:24	1
Xylenes, Total	ND		1.0		ug/L			02/11/13 18:24	1
Gasoline Range Organics (GRO)	ND		50		ug/L			02/11/13 18:24	1
-C6-C12									
TBA	ND		4.0		ug/L			02/11/13 18:24	1
Ethanol	ND		250		ug/L			02/11/13 18:24	1
DIPE	ND		0.50		ug/L			02/11/13 18:24	1
<b>TAME</b>	<b>1.2</b>		0.50		ug/L			02/11/13 18:24	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/11/13 18:24	1
<hr/>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		67 - 130					02/11/13 18:24	1
1,2-Dichloroethane-d4 (Surr)	99		75 - 138					02/11/13 18:24	1
Toluene-d8 (Surr)	97		70 - 130					02/11/13 18:24	1

TestAmerica Pleasanton

# QC Sample Results

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

TestAmerica Job ID: 720-47684-1

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

**Lab Sample ID:** MB 720-130401/10

**Matrix:** Water

**Analysis Batch:** 130401

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Methyl tert-butyl ether	ND		0.50		ug/L			02/11/13 10:35	1
MTBE	ND		0.50		ug/L			02/11/13 10:35	1
Benzene	ND		0.50		ug/L			02/11/13 10:35	1
EDB	ND		0.50		ug/L			02/11/13 10:35	1
1,2-DCA	ND		0.50		ug/L			02/11/13 10:35	1
Ethylbenzene	ND		0.50		ug/L			02/11/13 10:35	1
Toluene	ND		0.50		ug/L			02/11/13 10:35	1
Xylenes, Total	ND		1.0		ug/L			02/11/13 10:35	1
Gasoline Range Organics (GRO)	ND		50		ug/L			02/11/13 10:35	1
-C6-C12									
TBA	ND		4.0		ug/L			02/11/13 10:35	1
Ethanol	ND		250		ug/L			02/11/13 10:35	1
DIPE	ND		0.50		ug/L			02/11/13 10:35	1
TAME	ND		0.50		ug/L			02/11/13 10:35	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/11/13 10:35	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
4-Bromofluorobenzene	90		67 - 130				02/11/13 10:35	1
1,2-Dichloroethane-d4 (Surr)	98		75 - 138				02/11/13 10:35	1
Toluene-d8 (Surr)	99		70 - 130				02/11/13 10:35	1

**Lab Sample ID:** LCS 720-130401/6

**Matrix:** Water

**Analysis Batch:** 130401

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier					
Methyl tert-butyl ether	25.0	27.3		ug/L		109	62 - 130	
MTBE	25.0	27.3		ug/L		109	62 - 130	
Benzene	25.0	25.7		ug/L		103	79 - 130	
EDB	25.0	25.6		ug/L		102	70 - 130	
1,2-DCA	25.0	24.7		ug/L		99	61 - 132	
Ethylbenzene	25.0	26.7		ug/L		107	80 - 120	
Toluene	25.0	25.7		ug/L		103	78 - 120	
m-Xylene & p-Xylene	50.0	54.7		ug/L		109	70 - 142	
o-Xylene	25.0	28.5		ug/L		114	70 - 130	
TBA	500	512		ug/L		102	70 - 130	
Ethanol	500	406		ug/L		81	31 - 216	
DIPE	25.0	25.7		ug/L		103	69 - 134	
TAME	25.0	28.6		ug/L		114	79 - 130	
Ethyl t-butyl ether	25.0	26.0		ug/L		104	70 - 130	

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
	Result	Qualifier			
4-Bromofluorobenzene	102		67 - 130		
1,2-Dichloroethane-d4 (Surr)	94		75 - 138		
Toluene-d8 (Surr)	106		70 - 130		

TestAmerica Pleasanton

# QC Sample Results

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

TestAmerica Job ID: 720-47684-1

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

**Lab Sample ID: LCS 720-130401/8**

**Matrix: Water**

**Analysis Batch: 130401**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Gasoline Range Organics (GRO) -C6-C12	500	511		ug/L		102	58 - 120
<b>Surrogate</b>							
	LCS	LCS					
	%Recovery	Qualifier	Limits				
4-Bromofluorobenzene	100		67 - 130				
1,2-Dichloroethane-d4 (Surr)	99		75 - 138				
Toluene-d8 (Surr)	107		70 - 130				

**Lab Sample ID: LCSD 720-130401/7**

**Matrix: Water**

**Analysis Batch: 130401**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	RPD	RPD
		Result	Qualifier				ug/L		
Methyl tert-butyl ether	25.0	28.3		ug/L		113	62 - 130	4	20
MTBE	25.0	28.3		ug/L		113	62 - 130	4	20
Benzene	25.0	26.0		ug/L		104	79 - 130	1	20
EDB	25.0	25.4		ug/L		102	70 - 130	1	20
1,2-DCA	25.0	25.0		ug/L		100	61 - 132	1	20
Ethylbenzene	25.0	26.4		ug/L		106	80 - 120	1	20
Toluene	25.0	25.6		ug/L		102	78 - 120	1	20
m-Xylene & p-Xylene	50.0	53.9		ug/L		108	70 - 142	1	20
o-Xylene	25.0	28.4		ug/L		113	70 - 130	1	20
TBA	500	510		ug/L		102	70 - 130	1	20
Ethanol	500	378		ug/L		76	31 - 216	7	30
DIPE	25.0	26.2		ug/L		105	69 - 134	2	20
TAME	25.0	29.6		ug/L		118	79 - 130	3	20
Ethyl t-butyl ether	25.0	26.8		ug/L		107	70 - 130	3	20
<b>Surrogate</b>									
	LCSD	LCSD							
	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene	103		67 - 130						
1,2-Dichloroethane-d4 (Surr)	97		75 - 138						
Toluene-d8 (Surr)	106		70 - 130						

**Lab Sample ID: LCSD 720-130401/9**

**Matrix: Water**

**Analysis Batch: 130401**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	RPD	RPD
		Result	Qualifier				ug/L		
Gasoline Range Organics (GRO) -C6-C12	500	474		ug/L		95	58 - 120	7	20
<b>Surrogate</b>									
	LCSD	LCSD							
	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene	99		67 - 130						
1,2-Dichloroethane-d4 (Surr)	96		75 - 138						
Toluene-d8 (Surr)	106		70 - 130						

TestAmerica Pleasanton

# QC Sample Results

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

TestAmerica Job ID: 720-47684-1

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

**Lab Sample ID:** MB 720-131200/5

**Matrix:** Water

**Analysis Batch:** 131200

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Methyl tert-butyl ether	ND		0.50		ug/L			02/25/13 10:03	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/25/13 10:03	1

**Surrogate** MB MB %Recovery Qualifier Limits

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
4-Bromofluorobenzene	96		67 - 130				02/25/13 10:03	1
1,2-Dichloroethane-d4 (Surr)	101		75 - 138				02/25/13 10:03	1
Toluene-d8 (Surr)	100		70 - 130				02/25/13 10:03	1

**Lab Sample ID:** LCS 720-131200/6

**Matrix:** Water

**Analysis Batch:** 131200

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	MB	MB	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
	%Recovery	Qualifier							
Methyl tert-butyl ether			25.0	25.8		ug/L		103	62 - 130

**Surrogate** LCS LCS %Recovery Qualifier Limits

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
4-Bromofluorobenzene	101		67 - 130				02/25/13 10:03	1
1,2-Dichloroethane-d4 (Surr)	99		75 - 138				02/25/13 10:03	1
Toluene-d8 (Surr)	101		70 - 130				02/25/13 10:03	1

**Lab Sample ID:** LCS 720-131200/8

**Matrix:** Water

**Analysis Batch:** 131200

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	MB	MB	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
	%Recovery	Qualifier							
Gasoline Range Organics (GRO) -C6-C12			500	541		ug/L		108	58 - 120

**Surrogate** LCS LCS %Recovery Qualifier Limits

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
4-Bromofluorobenzene	101		67 - 130				02/25/13 10:03	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 138				02/25/13 10:03	1
Toluene-d8 (Surr)	102		70 - 130				02/25/13 10:03	1

**Lab Sample ID:** LCSD 720-131200/7

**Matrix:** Water

**Analysis Batch:** 131200

**Client Sample ID:** Lab Control Sample Dup  
**Prep Type:** Total/NA

Analyte	MB	MB	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.
	%Recovery	Qualifier							
Methyl tert-butyl ether			25.0	24.8		ug/L		99	62 - 130

**Surrogate** LCSD LCSD %Recovery Qualifier Limits

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
4-Bromofluorobenzene	101		67 - 130				02/25/13 10:03	1
1,2-Dichloroethane-d4 (Surr)	97		75 - 138				02/25/13 10:03	1
Toluene-d8 (Surr)	102		70 - 130				02/25/13 10:03	1

TestAmerica Pleasanton

# QC Sample Results

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

TestAmerica Job ID: 720-47684-1

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

Lab Sample ID: LCSD 720-131200/9

Matrix: Water

Analysis Batch: 131200

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
Gasoline Range Organics (GRO) -C6-C12	500	554		ug/L	111	58 - 120	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	103		75 - 138
Toluene-d8 (Surr)	102		70 - 130

TestAmerica Pleasanton

# QC Association Summary

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

TestAmerica Job ID: 720-47684-1

## GC/MS VOA

### Analysis Batch: 130401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-47684-1	A-3	Total/NA	Water	8260B/CA_LUFT MS	1
720-47684-2	A-4	Total/NA	Water	8260B/CA_LUFT MS	2
720-47684-3	A-5	Total/NA	Water	8260B/CA_LUFT MS	3
720-47684-4	A-8	Total/NA	Water	8260B/CA_LUFT MS	4
720-47684-6	A-11	Total/NA	Water	8260B/CA_LUFT MS	5
720-47684-7	A-12	Total/NA	Water	8260B/CA_LUFT MS	6
LCS 720-130401/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	7
LCS 720-130401/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	8
LCSD 720-130401/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	9
LCSD 720-130401/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	10
MB 720-130401/10	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	11

### Analysis Batch: 131200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-47684-3	A-5	Total/NA	Water	8260B/CA_LUFT MS	1
LCS 720-131200/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	2
LCS 720-131200/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	3
LCSD 720-131200/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	4
LCSD 720-131200/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	5
MB 720-131200/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	6

## Lab Chronicle

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

TestAmerica Job ID: 720-47684-1

### Client Sample ID: A-3

Lab Sample ID: 720-47684-1

Matrix: Water

Date Collected: 02/08/13 12:35  
Date Received: 02/08/13 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	130401	02/11/13 16:02	LL	TAL SF

### Client Sample ID: A-4

Lab Sample ID: 720-47684-2

Matrix: Water

Date Collected: 02/08/13 13:05  
Date Received: 02/08/13 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	130401	02/11/13 16:30	LL	TAL SF

### Client Sample ID: A-5

Lab Sample ID: 720-47684-3

Matrix: Water

Date Collected: 02/08/13 12:52  
Date Received: 02/08/13 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		50	130401	02/11/13 16:58	LL	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		5	131200	02/25/13 15:51	AC	TAL SF

### Client Sample ID: A-8

Lab Sample ID: 720-47684-4

Matrix: Water

Date Collected: 02/08/13 13:20  
Date Received: 02/08/13 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	130401	02/11/13 17:27	LL	TAL SF

### Client Sample ID: A-11

Lab Sample ID: 720-47684-6

Matrix: Water

Date Collected: 02/08/13 11:00  
Date Received: 02/08/13 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	130401	02/11/13 17:55	LL	TAL SF

### Client Sample ID: A-12

Lab Sample ID: 720-47684-7

Matrix: Water

Date Collected: 02/08/13 12:00  
Date Received: 02/08/13 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	130401	02/11/13 18:24	LL	TAL SF

#### Laboratory References:

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

TestAmerica Pleasanton

## Certification Summary

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

TestAmerica Job ID: 720-47684-1

### Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

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TestAmerica Pleasanton

## Method Summary

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

TestAmerica Job ID: 720-47684-1

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

**Protocol References:**

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

**Laboratory References:**

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

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## Sample Summary

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

TestAmerica Job ID: 720-47684-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-47684-1	A-3	Water	02/08/13 12:35	02/08/13 14:20
720-47684-2	A-4	Water	02/08/13 13:05	02/08/13 14:20
720-47684-3	A-5	Water	02/08/13 12:52	02/08/13 14:20
720-47684-4	A-8	Water	02/08/13 13:20	02/08/13 14:20
720-47684-6	A-11	Water	02/08/13 11:00	02/08/13 14:20
720-47684-7	A-12	Water	02/08/13 12:00	02/08/13 14:20

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TestAmerica Pleasanton

## San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

phone 925 484 1919 fax 925 600 3001

720-47684

## **Chain of Custody Record**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

2/26/2013

Client Contact		Project Manager: Kristene Tidwell Tel/Fax: 707-455-7290 / 707-445-7295			Site Contact: Alex Martinez Lab Contact: Dimpie Sharma		Date: Carrier:		COC No: of COCs			
Broadbent & Associates, Inc. 875 Cotting Lane, Suite G Vacaville, CA 95688 Phone: 707-455-7290 Fax: 707-455-7295 Project Name: Arcadis 4931 731 West Macarthur Blvd., Oakland, CA PO # GP09BPNA.C110		Analysis Turnaround Time Calendar (C) or Work Days (W)			TAT if different from Below				Job No.			
					<input checked="" type="checkbox"/> 2 weeks	<input type="checkbox"/> 1 week	<input type="checkbox"/> 2 days	<input type="checkbox"/> 1 day				
									SDG No.			
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	GRO by 8260B	BTEX/S FO + EDB by 8260	1,2-DCA & Ethanol by 8260	MTBE by 8260B	Sample Specific Notes:
A-3		2/8/2013	1235	GRAB	AQ	3		X				
A-4		2/8/2013	1305	GRAB	AQ	3		X	X	X		
A-5		2/8/2013	1252	GRAB	AQ	3		X		X		
A-8		2/8/2013	1320	GRAB	AQ	3		X	X	X		
TB-4931-02082013		-	--	-	AQ	1						On Hold
<u>A-13</u>		<u>2/8/13</u>	<u>GRAB</u>	<u>AQ</u>	<u>3</u>		<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>		
A-11		2/8/13	1100	GRAB	AQ	3		X	V	A	X	
A-12			↓ 1200 ↓			3		X	X	X	X	
Preservation Used: 1= Ice, 2= HCl; 3= H <sub>2</sub> SO <sub>4</sub> ; 4=HNO <sub>3</sub> ; 5=NaOH; 6= Other												
Possible Hazard Identification						Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)						
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown		<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For	Months			

Preservation Used: 1= Ice; 2= HCl; 3= H<sub>2</sub>SO<sub>4</sub>; 4= HNO<sub>3</sub>; 5= NaOH; 6= Other

### **Possible Hazard Identification**

Non-Hazard       Flammable       Skin Irritant       Poison B       Unknown

**Sample Disposal** (A fee may be assessed if samples are retained longer than 1 month)

Return To Client       Disposal By Lab       Archive For      Month(s)

**Special Instructions/OC Requirements & Comments:** Samples collected via Hydracueve

8.4°

Relinquished by: <u>Alex Martinez / Alex Mek</u>	Company: <u>Broadbent</u>	Date/Time: <u>2/8/13 14:20</u>	Received by: <u>Jy Bulk</u>	Company: <u>Test America</u>	Date/Time: <u>2/8/13 14:20</u>
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

## Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-47684-1

**Login Number: 47684**

**List Source: TestAmerica Pleasanton**

**List Number: 1**

**Creator: Bullock, Tracy**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are 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 containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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STATE WATER RESOURCES CONTROL BOARD  
**GEOTRACKER ESI**

UPLOADING A GEO\_REPORT FILE

## SUCCESS

Your GEO\_REPORT file has been successfully submitted!

Submittal Type: GEO\_REPORT  
Report Title: Fourth Quarter 2012 and First Quarter 2013 Semi-Annual Groundwater Monitoring Report 041113  
Report Type: Monitoring Report - Semi-Annually  
Report Date: 4/11/2013  
Facility Global ID: T0600100110  
Facility Name: ARCO #04931  
File Name: CA 4931 041113 BP - 4Q12 1Q13 SAGWMR.pdf  
Organization Name: ARCADIS  
Username: ARCADISBP  
IP Address: 216.207.98.101  
Submittal Date/Time: 4/11/2013 10:42:36 AM  
Confirmation Number: **8643934130**

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