ARCADIS Design & Consultancy for natural and built assets

Mr. Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

RECEIVED
By Alameda County Environmental Health 8:23 am, Oct 28, 2016

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Subject:
2016 Annual Groundwater Monitoring Report
Former Atlantic Richfield Company Station No. 4931
731 West MacArthur Boulevard
Oakland, California 94609
ACEH Site No. RO0000076

ENVIRONMENT

Date:
October 27, 2016

Dear Mr. Detterman:

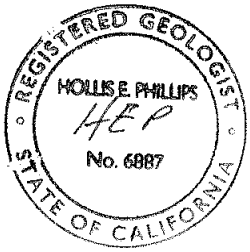
Arcadis U.S., Inc. (Arcadis) has prepared this report on behalf of the Atlantic Richfield Company, a BP affiliated company (ARCO), for the former ARCO service station listed below.

ARCO Facility No.	ACEH Site No.	Location
4931	RO0000076	731 West MacArthur Blvd., Oakland, CA

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.com.

Sincerely,

Arcadis U.S., Inc.



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

Copies:
Alameda County Environmental Health (Submitted via ACEH ftp site)
Mr. Nick Goyal, Owner, electronic copy e-mailed (nick@vintnersdist.com)

Contact:
Hollis Phillips

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415.432.6903

Email:
Hollis. Phillips@arcadis.com

Our ref:
GP09BPNA.C110.N0000

WORK PERFORMED DURING THIS REPORTING PERIOD (OCTOBER 1, 2015 TO SEPTEMBER 30, 2016)

1. Submitted the *Second Quarter 2015 and Third Quarter 2015 Semi-Annual Groundwater Monitoring Report*, dated November 30, 2015, to the Alameda County Environmental Health (ACEH) which summarized the groundwater monitoring and sampling activities performed on October 19, 2015.
2. Performed semi-annual groundwater monitoring and sampling on March 25, 2016 and August 25, 2016.

WORK PROPOSED – NEXT REPORTING PERIOD (OCTOBER 1, 2016 TO SEPTEMBER 30, 2017)

1. Submit the *2016 Annual Groundwater Monitoring Report*, contained herein.
2. Perform annual groundwater monitoring and sampling in August 2017.
3. Perform site investigation activities as described in the Arcadis *Site Investigation Work Plan* dated July 25, 2016 and the ACEH directive letter dated September 8, 2016.

BACKGROUND

The Site is a former ARCO service station and is currently operated as a Westco-branded retail fuel dispensing facility (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 Attachment 1.

GROUNDWATER MONITORING/SAMPLING ACTIVITIES AND RESULTS

Current groundwater monitoring and sampling data are summarized in Table 2 and graphically presented on Figures 3 through 6. Historical groundwater monitoring and sampling results are summarized in Table 3. A rose diagram illustrating historical groundwater flow directions and gradients is provided on Figure 7. Per the ACEH directive letter dated May 10, 2016, groundwater monitoring and sampling at the Site has been reduced to an annual frequency in the month of August of a given year.

Before groundwater samples were collected, depth to groundwater was measured to within 0.01 foot below top of casing in A-2 through A-13 and AR-1 through AR-3 using a water level indicator. During the March 25, 2016 event, offsite wells A-11 and A-12 could not be gauged or sampled due to incomplete encroachment permitting with the City of Oakland. During the August 25, 2016 event A-9 and A-11 were obstructed and new building attachment was placed over the top of AR-2. As a result, these 3 wells could not be gauged or sampled. During both the March and August events, A-6 and A-13 were paved over and could not be gauged or sampled.

Groundwater monitoring wells A-3, A-4, A-5, A-8, AR-1, AR-2, and AR-3 were sampled on March 25, 2016 and groundwater monitoring wells A-2, A-3, A-4, A-5, A-7, A-8, A-10, A-12, AR-1 and AR-3 were sampled on August 25, 2016 by Blaine Tech Services, Inc.

Collected groundwater samples were submitted under chain-of-custody protocol to TestAmerica Laboratories, Inc., a California-certified laboratory located in Pleasanton, California. The groundwater sampling data package and laboratory analytical report for the current monitoring periods are included in Attachments 2 and 3, respectively.

Current Phase of Project:	*Monitoring*
Frequency of Monitoring/Sampling:	*1Q/3Q Semi-Annual (2016)* *3Q Annual (starting in 2017)*
Are Liquid Phase Hydrocarbons (LPH) Present On-site:	*No*
Approximate Depth to Groundwater (feet below top of casing):	1Q Range: 2.89 (A-3) to 6.74 (A-10) 3Q Range: 9.22 (A-5) to 13.00 (A-2)
Groundwater Flow Direction:	1Q: West-southwest 3Q: Southwest
Groundwater Flow Magnitude (feet/foot):	1Q: 0.042 3Q: 0.014

RECOMMENDATIONS

Arcadis is scheduled to perform further site investigation and soil-vapor sampling starting the week of October 31, 2016. Task items include the installation of four soil borings and a minimum of one soil vapor probe along the property line with the adjacent residential property at 721 MacArthur Boulevard. Results of the forthcoming investigation will be used to evaluate the Site to the State Water Resources Control Board's (SWRCB) Low Threat Closure (LTC) Policy to assess whether the Site is a candidate for low-risk closure.

Tables

Figures

Attachments

TABLES

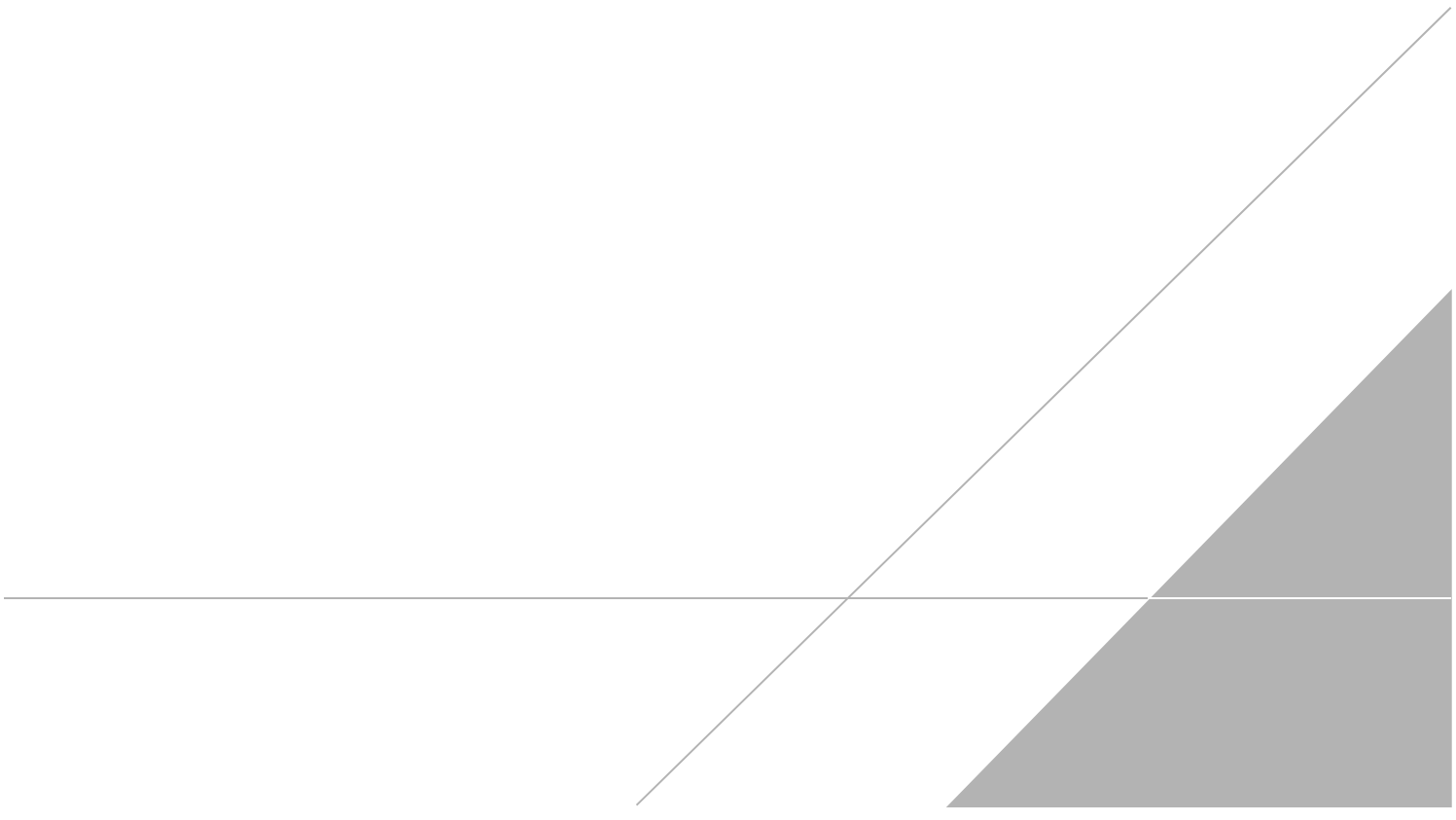

Table 1
Soil Boring and Well Construction Details
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well I.D.	Drill Date	Well		Screen		Screen Length (feet)
		Depth (feet bgs)	Diameter (inches)	Top (feet bgs)	Bottom (feet bgs)	
Monitoring Wells						
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
Soil Vapor Extraction Well						
AV-1	01/17/92	16	2	5	15	10

Notes
-- = Soil Boring Log and Well Construction Details are not available
bgs = Below ground surface
Wells are constructed of poly-vinyl-chloride (PVC)

Table 2
Current Groundwater Monitoring Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	3/25/2016		60.65	3.42	--	57.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/25/2016		60.65	13.00	--	47.65	--	--	--	--	--	--	2.1	--	--	--	--	--	--	--	0.44	
A-3	3/25/2016		59.32	2.89	--	56.43	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	1.11	
A-3	8/25/2016		59.32	9.78	--	49.54	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	0.44	
A-4	3/25/2016		59.59	5.76	--	53.83	300	--	1.1	<0.50	<0.50	<1.0	12	440	<0.50	<0.50	3.3	<500	<0.50	<0.50	0.30	
A-4	8/25/2016		59.59	9.84	--	49.75	1,600	--	<0.50	0.55	<0.50	<1.0	41	1,400	<0.50	<0.50	13	<500	<0.50	<0.50	0.24	
A-5	3/25/2016		58.78	6.22	--	52.56	<50	--	--	--	--	--	0.80	--	--	--	--	--	--	--	0.36	
A-5	8/25/2016		58.78	9.22	--	49.56	<50	--	--	--	--	--	7.0	--	--	--	--	--	--	--	0.22	
A-6	3/25/2016		55.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
A-6	8/25/2016		55.17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-7	3/25/2016		59.75	5.37	--	54.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/25/2016		59.75	9.58	--	50.17	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	0.39	
A-8	3/25/2016		58.70	5.09	--	53.61	1,700	--	110	<2.5	<2.5	<5.0	6.7	<100	<2.5	<2.5	5.4	<2,500	<2.5	<2.5	0.46	
A-8	8/25/2016		58.70	9.49	--	49.21	2,200	--	230	4.4	<2.5	<5.0	19	240	<2.5	<2.5	15	<2.500	<2.5	<2.5	0.37	
A-9	3/25/2016		57.73	4.47	--	53.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-9	8/25/2016		57.73		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
A-10	3/25/2016		59.39	6.74	--	52.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	8/25/2016		59.39	10.11	--	49.28	--	--	--	--	--	--	16	--	--	--	--	--	--	--	0.43	
A-11	3/25/2016		59.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-11	8/25/2016		59.16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
A-12	3/25/2016		57.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-12	8/25/2016		57.06	10.03	--	47.03	<50	--	<0.50	<0.50	<0.50	<1.0	2.1	<20	<0.50	0.53	0.53	<500	<0.50	<0.50	0.61	
A-13	3/25/2016		60.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
A-13	8/25/2016		60.26		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
AR-1	3/25/2016		59.52	6.32	--	53.20	290	--	<0.50	<0.50	<0.50	<1.0	2.0	220	<0.50	<0.50	<0.50	<500	<0.50	<0.50	0.37	
AR-1	8/25/2016		59.52	9.94	--	49.58	410	--	<0.50	<0.50	<0.50	<1.0	2.9	210	<0.50	<0.50	<0.50	<500	<0.50	<0.50	0.31	
AR-2	3/25/2016		59.18	3.93	--	55.25	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	<20	<0.50	<0.50	<0.50	<500	<0.50	<0.50	0.59	
AR-2	8/25/2016		59.18		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
AR-3	3/25/2016		59.10	6.16	--	52.94	<50	--	<0.50	<0.50	<0.50	<1.0	0.55	<20	<0.50	<0.50	<0.50	<500	<0.50	<0.50	0.20	
AR-3	8/25/2016		59.10	9.65	--	49.45	<50	--	<0.50	<0.50	<0.50	<1.0	1.9	<20	<0.50	<0.50	0.53	<500	<0.50	<0.50	0.26	

Table 2
Current Groundwater Monitoring Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Notes:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above laboratory reporting limit
ft = Feet
ft btoc = Feet below top of casing
ft msl = Feet above mean sea level
µg/L = Micrograms per liter
mg/L = Milligrams per liter
TOC = Top of casing measured in ft msl
DTW = Depth to water in ft btoc
LNAPL = Light non-aqueous phase liquid
GW Elev = Groundwater elevation measured in ft msl
TPH-g = Total petroleum hydrocarbons as gasoline
GRO = Gasoline range organics
DRO = Diesel range organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MTBE = Methyl tert butyl ether
TBA = Tert-butyl alcohol
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = Tert-amyl methyl ether
EDB = 1,2-Dibromoethane
1,2-DCA = 1,2-Dichloroethane
DO = Dissolved oxygen
HC = Hydrocarbon
INA = Well inaccessible during monitoring event
NS = Well not sampled
NSP = Well not sampled in accordance with groundwater sampling schedule
Dry = Well dry during monitoring event
OBS = Well obstructed; not sampled
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 were obtained through field measurements
GRO analysis was completed by EPA method 8260B (C4-C12) for samples collected from the time period April 2006 through February 4, 2008.
The analysis for GRO was changed to EPA method 8015B (C6-C12) for samples collected from the time period February 5, 2008 through the present.
The data within this table collected prior to August 2009 was provided to Arcadis U.S., Inc. (Arcadis) by Atlantic Richfield Company and their previous consultants. Arcadis has not verified the accuracy of this information.

Table 3
Historical Groundwater Monitoring and Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	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	1.0	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	--	--	--	--	--	--	--	3.10	
A-2	12/6/2002		55.48	10.01	--	45.47	<50	--	<0.50	<0.50	<0.50	<0.50	6	--	--	--	--	--	--	--	3.10	
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	<40	--	--	2.60	
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	--	--	5.70	
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	<0.50	<0.50	2.30	
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	<0.50	<0.50	3.10	
A-2	11/10/2004		60.65	6.10	--	54.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	2/2/2005		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	<0.50	<0.50	3.20	
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	3.6	<20	<0.50	<0.50	<0.50	<300	<0.50	<0.50	0.16	
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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	--	
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	2/8/2013		60.65	4.51	--	56.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
A-2	8/7/2013		60.65	10.07	--	50.58	--	--	--	--	--	--	12	--	--	--	--	--	--	--	1.50	(NSP)

Table 3
Historical Groundwater Monitoring and Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	2/13/2014		60.65	5.34	--	55.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/28/2014		60.65	12.11	--	48.54	--	--	--	--	--	--	8.9	--	--	--	--	--	--	--	1.33	
A-2	2/27/2015		60.65	4.41	--	56.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	10/19/2015		60.65	13.80	--	46.85	--	--	--	--	--	--	7.8	--	--	--	--	--	--	--	17.13	
A-2	3/25/2016		60.65	3.42	--	57.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-2	8/25/2016		60.65	13.00	--	47.65	--	--	--	--	--	--	2.1	--	--	--	--	--	--	--	0.44	
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	<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	--	--	--	--	--	--	--	2.40	
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	--	--	1.50	
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	<0.50	<0.50	1.20	
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	1.30	
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	<0.50	<0.50	1.90	
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	<0.50	<0.50	1.80	
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	<0.50	<0.50	3.60	
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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	1.01	
A-3	3/23/2010		59.32	4.45	--	54.87	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<100	<0.50	<0.50	--	
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	<0.50	<0.50	--	

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Historical Groundwater Monitoring and Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	--	--	--	--	--	--	
A-3	8/7/2013		59.32	9.45	--	49.87	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	2.25	(NSP)
A-3	2/13/2014		59.32	5.89	--	53.43	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	7.72	
A-3	8/28/2014		59.32	9.61	--	49.71	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	2.90	
A-3	2/27/2015		59.32	6.63	--	52.69	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	5.23	
A-3	10/19/2015		59.32	10.20	--	49.12	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	16.04	
A-3	3/25/2016		59.32	2.89	--	56.43	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	1.11	
A-3	8/25/2016		59.32	9.78	--	49.54	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	0.44	
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	--	--	--	--	--	--	--	2.00	
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	--	--	1.80	
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	--	--	1.50	
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	1.50	
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	--	--	1.60	
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	1.00	
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	6.40	
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	9.10	
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	2.00	
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	1.50	
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	1.40	
A-4	2/15/2006		59.59	7.12	--	52.47	2,200	--	46	<2.5	29	7	910	2,700	<2.5	<2.5	270	<1,500	<2.5	<2.5	0.90	
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	1.40	
A-4	11/1/2006		59.59	9.93	--	49.66	1,300	--	<10	<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	<5.0	<5.0	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	<0.50	<0.50	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	<0.50	<0.50	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	

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Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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-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	<300	<0.50	<0.50	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	1.3	150	1,600	<0.50	<0.50	45	<100	<0.50	<0.50	--	
A-4	8/16/2010		59.59	9.85	--	49.74	1,600	--	18	0.5	0.56	<1.0	160	3,400	<0.50	<0.50	47	<100	<0.50	<0.50	--	
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	<0.50	<0.50	--	
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	<0.50	<0.50	--	
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	<0.50	<0.50	--	
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	<0.50	<250	<0.50	<0.50	--	
A-4	2/8/2013		59.59	7.05	--	52.54	890	--	5	<0.50	1.6	<1.0	--	1,600	<0.50	<0.50	19	<250	<0.50	<0.50	--	
A-4	8/7/2013		59.59	9.26	--	50.33	1,500	--	2.7	<0.50	<0.50	<1.0	56	1,600	<0.50	<0.50	16	<250	<0.50	<0.50	1.53	
A-4	2/13/2014		59.59	6.86	--	52.73	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	3.77	
A-4	8/28/2014		59.59	9.65	--	49.94	1,900	--	<5.0	<5.0	<5.0	<10	41	1,600	<5.0	<5.0	11	<5,000	<5.0	<5.0	3.36	
A-4	2/27/2015		59.59	7.87	--	51.72	470	--	<0.50	<0.50	<0.50	<1.0	2.2	220	<0.50	<0.50	<0.50	<500	<0.50	<0.50	3.62	
A-4	10/19/2015		59.59	10.26	--	49.33	1,500	--	<0.50	0.84	<0.50	3	31	1,500	<0.50	<0.50	8.1	<500	<0.50	<0.50	11.08	
A-4	3/25/2016		59.59	5.76	--	53.83	300	--	1.1	<0.50	<0.50	<1.0	12	440	<0.50	<0.50	3.3	<500	<0.50	<0.50	0.30	
A-4	8/25/2016		59.59	9.84	--	49.75	1,600	--	<0.50	0.55	<0.50	<1.0	41	1,400	<0.50	<0.50	13	<500	<0.50	<0.50	0.24	
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	--	--	--	--	--	--	--	--	
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	--	--	--	--	--	--	--	1.90	
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	--	--	1.60	
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	1.00	
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	1.10	
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	<0.50	<0.50	1.00	
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	<0.50	<0.50	1.30	
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	<0.50	<0.50	1.20	
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	<300	<0.50	<0.50	1.40	
A-5	11/1/2006		58.78	9.30	--	49.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Table 3
Historical Groundwater Monitoring and Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	0.91	
A-5	3/23/2010		58.78	6.84	--	51.94	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	33	<0.50	<0.50	<0.50	<100	<0.50	<0.50	--	
A-5	8/16/2010		58.78	8.85	--	49.93	<50	--	<0.50	<0.50	<0.50	<1.0	7.9	35	<0.50	<0.50	3.1	<100	<0.50	<0.50	--	
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-5	8/7/2013		58.78	9.02	--	49.76	<50	--	--	--	--	--	13	--	--	--	--	--	--	--	2.16	
A-5	2/13/2014		58.78	6.55	--	52.23	<50	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	1.34	
A-5	8/28/2014		58.78	9.06	--	49.72	<50	--	--	--	--	--	3.7	--	--	--	--	--	--	--	0.27	
A-5	2/27/2015		58.78	7.14	--	51.64	<50	--	--	--	--	--	2	--	--	--	--	--	--	--	4.02	
A-5	10/19/2015		58.78	10.62	--	48.16	<50	--	--	--	--	--	2	--	--	--	--	--	--	--	18.92	
A-5	3/25/2016		58.78	6.22	--	52.56	<50	--	--	--	--	--	0.8	--	--	--	--	--	--	--	0.36	
A-5	8/25/2016		58.78	9.22	--	49.56	<50	--	--	--	--	--	7.0	--	--	--	--	--	--	--	0.22	
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	7	--	--	--	--	--	--	--	--	
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	--	--	--	--	--	--	--	4.30	
A-6	3/25/2016		55.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
A-6	8/25/2016		55.17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Table 3
Historical Groundwater Monitoring and Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	2.30	
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	<100	<0.50	<0.50	3.00	
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	<0.50	<0.50	1.60	
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	<0.50	0.54	1.70	
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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	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	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<100	<0.50	<0.50	--	
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-7	8/7/2013		59.75	8.96	--	50.79	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	2.07	
A-7	2/13/2014		59.75	6.58	--	53.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/28/2014		59.75	9.15	--	50.60	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	0.22	
A-7	2/27/2015		59.75	6.81	--	52.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	10/19/2015		59.75	9.66	--	50.09	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	19.99	
A-7	3/25/2016		59.75	5.37	--	54.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-7	8/25/2016		59.75	9.58	--	50.17	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	0.39	
A-8	6/21/2000		53.77	9.07	--	44.70	810	--	<0.5	<0.5	<0.5	810	1,500	--	--	--	--	--	--	--	--	

Table 3
Historical Groundwater Monitoring and Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	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	--	--	--	--	--	--	--	1.00	
A-8	12/6/2002		53.77	9.62	--	44.15	5,300	--	1,100	11	11	<10	2,200	--	--	--	--	--	--	--	1.40	
A-8	1/30/2003		53.77	7.49	--	46.28	<10,000	--	1,100	<100	<100	<100	2,200	<4,000	<100	<100	900	<8,000	--	--	1.50	
A-8	5/28/2003		53.77	9.17	--	44.60	7,700	--	1,700	<50	<50	<50	2,100	<2,000	<50	<50	1,100	<10,000	--	--	1.00	
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	0.90	
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	--	--	2.30	
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	1.10	
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	1.00	
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	1.00	
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	1.50	
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	1.00	
A-8	5/9/2005		58.70	6.31	--	52.39	69	--	0.9	<0.50	<0.50	<0.50	66	<20	<0.50	<0.50	2.9	<100	<0.50	<0.50	4.10	
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	0.70	
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	<5.0	<5.0	0.70	
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	0.90	
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	2.60	
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	<5.0	<5.0	0.70	
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	<5.0	<5.0	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	
A-8	8/7/2007		58.70	9.17	--	49.53	2,100	--	700	4	<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	<0.50	<0.50	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	<5.0	<5.0	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	<1.0	<1.0	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	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<100	<0.50	<0.50	--	
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	<0.50	<0.50	--	
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	<0.50	<0.50	--	
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	<5.0	<5.0	--	
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	<0.50	<0.50	--	
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	<0.50	<0.50	<1.0	--	<4.0	<0.50	<0.50	0.92	<250	<0.50	<0.50	--	
A-8	8/7/2013		58.70	9.20	--	49.50	1,400	--	940	5.5	1.6	1.5	27	67	<0.50	<0.50	14	<250	<0.50	<0.50	2.20	
A-8	2/13/2014		58.70	6.51	--	52.19	190	--	4.4	<0.50	<0.50	<1.0	0.85	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	1.33	
A-8	8/28/2014		58.70	9.35	--	49.35	1,000	--	130	<5.0	<5.0	<10	15	210	<5.0	<5.0	5.3	<5,000	<5.0	<5.0	0.43	
A-8	2/27/2015		58.70	6.99	--	51.71	370	--	70	<0.50	<0.50	<1.0	7.5	61	<0.50	<0.50	4.8	<500	<0.50	<0.50	3.11	

Table 3
Historical Groundwater Monitoring and Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	10/19/2015		58.70	9.02	--	49.68	830	--	95	<2.5	<2.5	<5.0	11	220	<2.5	<2.5	4.5	<2,500	<2.5	<2.5	17.52	
A-8	3/25/2016		58.70	5.09	--	53.61	1,700	--	110	<2.5	<2.5	<5.0	6.7	<100	<2.5	<2.5	5.4	<2,500	<2.5	<2.5	0.46	
A-8	8/25/2016		58.70	9.49	--	49.21	2,200	--	230	4.4	<2.5	<5.0	19	240	<2.5	<2.5	15	<2.500	<2.5	<2.5	0.37	
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	--	--	--	--	--	--	--	4.00	
A-9	12/6/2002		53.04	8.77	--	44.27	<50	--	<0.50	<0.50	<0.50	<0.50	<2.0	--	--	--	--	--	--	--	1.10	
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	--	--	0.90	
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	--	--	1.90	
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	<0.50	<0.50	2.20	
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	<0.50	<0.50	6.60	
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	<0.50	<100	<0.50	<0.50	1.80	
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	<0.50	<300	<0.50	<0.50	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	<0.50	<300	<0.50	<0.50	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	<0.50	<300	<0.50	<0.50	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	<0.50	<300	<0.50	<0.50	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	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<100	<0.50	<0.50	--	
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(Dry)

Table 3
Historical Groundwater Monitoring and Analytical Results
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Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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-9	2/8/2013		57.73	6.63	--	51.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
A-9	8/7/2013		57.73	8.08	--	49.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
A-9	2/13/2014		57.73	5.62	--	52.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
A-9	8/28/2014		57.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
A-9	2/27/2015		57.73	6.08	--	51.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-9	10/19/2015		57.73	0.00	--	57.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
A-9	3/25/2016		57.73	4.47	--	53.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-9	8/25/2016		57.73		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	<5.0	<5.0	0.80	
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	<0.50	<0.50	0.90	
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	<0.50	<0.50	1.30	
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	<0.50	<0.50	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	<0.50	<0.50	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	<0.50	<0.50	--	
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-10	8/7/2013		59.39	9.95	--	49.44	--	--	--	--	--	--	20	--	--	--	--	--	--	--	1.63	
A-10	2/13/2014		59.39	7.40	--	51.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	8/28/2014		59.39	9.93	--	49.46	--	--	--	--	--	--	6.1	--	--	--	--	--	--	--	0.76	
A-10	2/27/2015		59.39	8.09	--	51.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-10	10/19/2015		59.39	10.44	--	48.95	--	--	--	--	--	--	7.6	--	--	--	--	--	--	--	15.53	
A-10	3/25/2016		59.39	6.74	--	52.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Table 3
Historical Groundwater Monitoring and Analytical Results
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Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	8/25/2016		59.39	10.11	--	49.28	--	--	--	--	--	--	16	--	--	--	--	--	--	--	0.43	
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	--	--	--	--	--	--	--	2.40	
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	--	--	1.80	
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	<0.50	<0.50	2.60	
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	<0.50	<0.50	3.80	
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	<0.50	<0.50	3.80	
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	<0.50	<0.50	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	<0.50	<0.50	0.89	
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	<0.50	<0.50	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	<0.50	<100	<0.50	<0.50	--	
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	<0.50	<250	<0.50	<0.50	--	
A-11	8/7/2013		59.16	9.66	--	49.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
A-11	2/13/2014		59.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-11	8/28/2014		59.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)

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Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	2/27/2015		59.16	7.92	--	51.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-11	10/19/2015		59.16	9.80	--	49.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
A-11	3/25/2016		59.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-11	8/25/2016		59.16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
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	--	--	--	--	--	--	--	2.30	
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	--	--	1.40	
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	<0.50	<0.50	1.00	
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	<0.50	<0.50	1.10	
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	<0.50	<0.50	1.40	
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	<0.50	<0.50	0.90	
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	<0.50	<0.50	1.80	
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	<0.50	<0.50	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	<0.50	<0.50	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	<300	<0.50	<0.50	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	<0.50	<0.50	--	
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	<0.50	<0.50	--	

Table 3
Historical Groundwater Monitoring and Analytical Results
CA-04931
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Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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-12	8/7/2013		57.06	9.37	--	47.69	--	--	--	--	--	--	2	--	--	--	--	--	--	--	1.85	(NSP)
A-12	2/13/2014		57.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-12	8/28/2014		57.06	9.30	--	47.76	<50	--	<0.50	<0.50	<0.50	<1.0	1.9	<20	<0.50	<0.50	<0.50	<500	<0.50	<0.50	0.78	
A-12	2/27/2015		57.06	8.09	--	48.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
A-12	10/19/2015		57.06	9.90	--	47.16	<50	--	<0.50	<0.50	<0.50	<1.0	1.6	<20	<0.50	<0.50	<0.50	<500	<0.50	<0.50	15.98	
A-12	3/25/2016		57.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-12	8/25/2016		57.06	10.03	--	47.03	<50	--	<0.50	<0.50	<0.50	<1.0	2.1	<20	<0.50	0.53	0.53	<500	<0.50	<0.50	0.61	
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	1.90	
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	<0.50	<0.50	2.00	
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-13	2/8/2013		60.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-13	8/7/2013		60.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-13	2/13/2014		60.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-13	8/28/2014		60.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)

Table 3
Historical Groundwater Monitoring and Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	2/27/2015		60.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-13	10/19/2015		60.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
A-13	3/25/2016		60.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(OBS)
A-13	8/25/2016		60.26		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
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)
AR-1	8/7/2013		59.52	10.08	--	49.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
AR-1	2/13/2014		59.52	7.39	--	52.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-1	8/28/2014		59.52	9.88	--	49.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
AR-1	2/27/2015		59.52	6.95	--	52.57	660	--	2	<0.50	<0.50	1.1	25	910	<0.50	<0.50	7.3	<500	<0.50	<0.50	3.76	
AR-1	10/19/2015		59.52	10.39	--	49.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Table 3
Historical Groundwater Monitoring and Analytical Results
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731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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	3/25/2016		59.52	6.32	--	53.20	290	--	<0.50	<0.50	<0.50	<1.0	2	220	<0.50	<0.50	<0.50	<500	<0.50	<0.50	0.37	
AR-1	8/25/2016		59.52	9.94	--	49.58	410	--	<0.50	<0.50	<0.50	<1.0	2.9	210	<0.50	<0.50	<0.50	<500	<0.50	<0.50	0.31	
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)
AR-2	8/7/2013		59.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
AR-2	2/13/2014		59.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
AR-2	8/28/2014		59.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
AR-2	2/27/2015		59.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
AR-2	10/19/2015		59.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-2	3/25/2016		59.18	3.93	--	55.25	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	<20	<0.50	<0.50	<0.50	<500	<0.50	<0.50	0.59	
AR-2	8/25/2016		59.18		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)

Table 3
Historical Groundwater Monitoring and Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

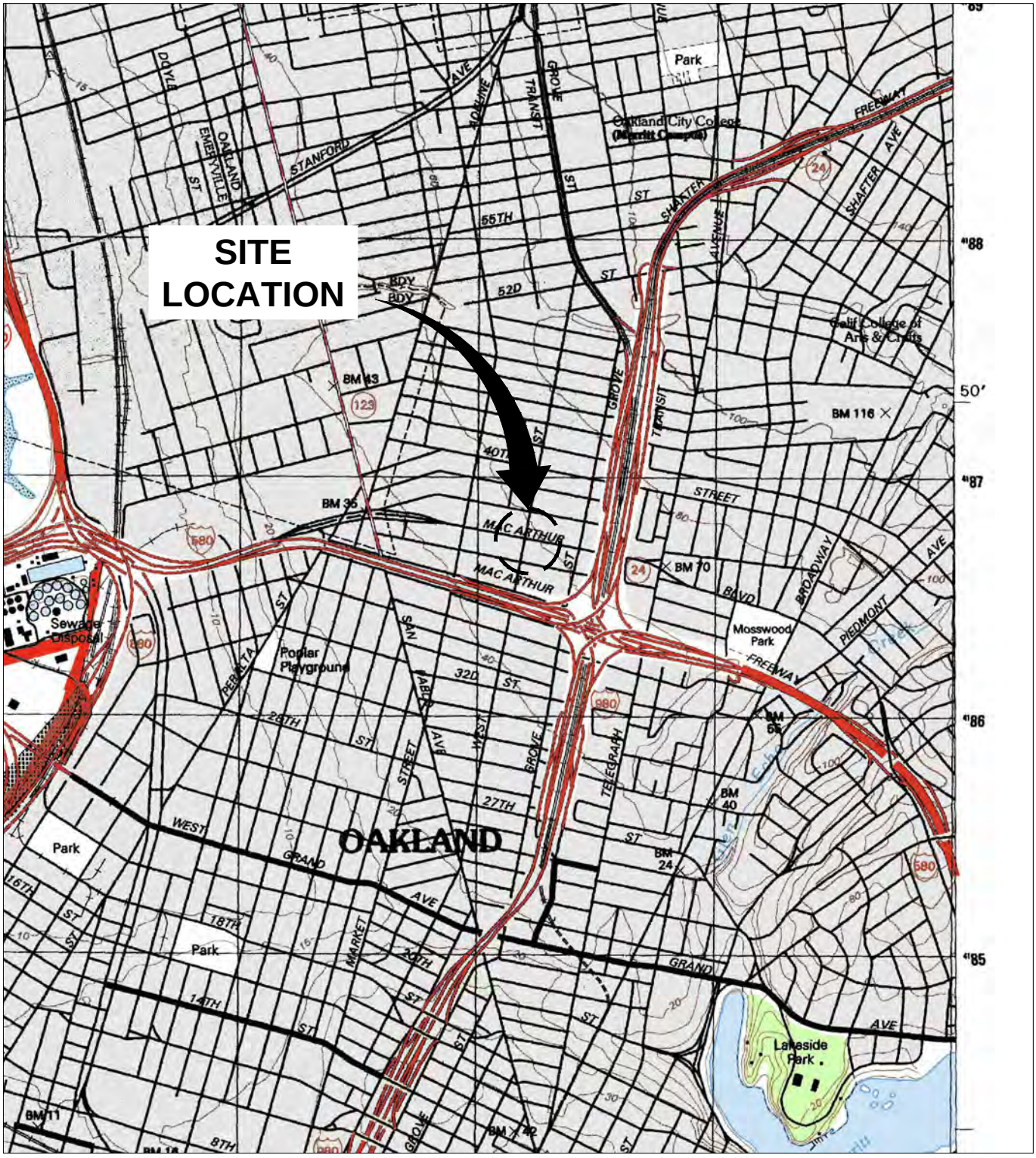
Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DO (mg/L)	Notes
AR-3	12/26/2000		54.19	9.70	--	44.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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)
AR-3	8/7/2013		59.10	9.47	--	49.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
AR-3	2/13/2014		59.10	7.00	--	52.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AR-3	8/28/2014		59.10	9.45	--	49.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
AR-3	2/27/2015		59.10	7.60	--	51.50	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	<20	<0.50	<0.50	<0.50	<500	<0.50	<0.50	3.80	
AR-3	10/19/2015		59.10	10.02	--	49.08	<50	--	<0.50	<0.50	<0.50	<1.0	2.3	<20	<0.50	<0.50	<0.50	<500	<0.50	<0.50	--	
AR-3	3/25/2016		59.10	6.16	--	52.94	<50	--	<0.50	<0.50	<0.50	<1.0	0.55	<20	<0.50	<0.50	<0.50	<500	<0.50	<0.50	0.20	
AR-3	8/25/2016		59.10	9.65	--	49.45	<50	--	<0.50	<0.50	<0.50	<1.0	1.9	<20	<0.50	<0.50	0.53	<500	<0.50	<0.50	0.26	
SB-7	5/12/2015		--	--	--	--	<50	--	<0.50	<0.50	<0.50	<1.0	4.3	<20	<0.50	<0.50	1.4	<500	<0.50	<0.50	--	

Table 3
Historical Groundwater Monitoring and Analytical Results
CA-04931
731 West MacArthur Blvd, Oakland, CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (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
ft = Feet
ft btoc = Feet below top of casing
ft msl = Feet above mean sea level
µg/L = Micrograms per liter
mg/L = Milligrams per liter
TOC = Top of casing measured in ft msl
DTW = Depth to water in ft btoc
LNAPL = Light non-aqueous phase liquid
GW Elev = Groundwater elevation measured in ft msl
TPH-g = Total petroleum hydrocarbons as gasoline
GRO = Gasoline range organics
DRO = Diesel range organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MTBE = Methyl tert butyl ether
TBA = Tert-butyl alcohol
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = Tert-amyl methyl ether
EDB = 1,2-Dibromoethane
1,2-DCA = 1,2-Dichloroethane
DO = Dissolved oxygen
HC = Hydrocarbon
INA = Well inaccessible during monitoring event
NS = Well not sampled
NSP = Well not sampled in accordance with groundwater sampling schedule
Dry = Well dry during monitoring event
OBS = Well obstructed; not sampled
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 were obtained through field measurements
GRO analysis was completed by EPA method 8260B (C4-C12) for samples collected from the time period April 2006 through February 4, 2008.
The analysis for GRO was changed to EPA method 8015B (C6-C12) for samples collected from the time period February 5, 2008 through the present.
The data within this table collected prior to August 2009 was provided to Arcadis U.S., Inc. (Arcadis) by Atlantic Richfield Company and their previous consultants. Arcadis has not verified the accuracy of this information.

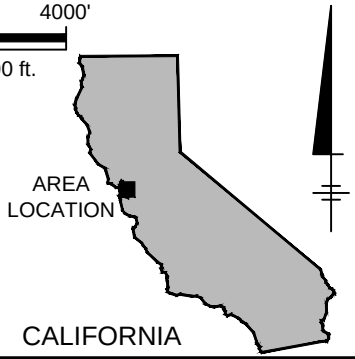
FIGURES



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

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



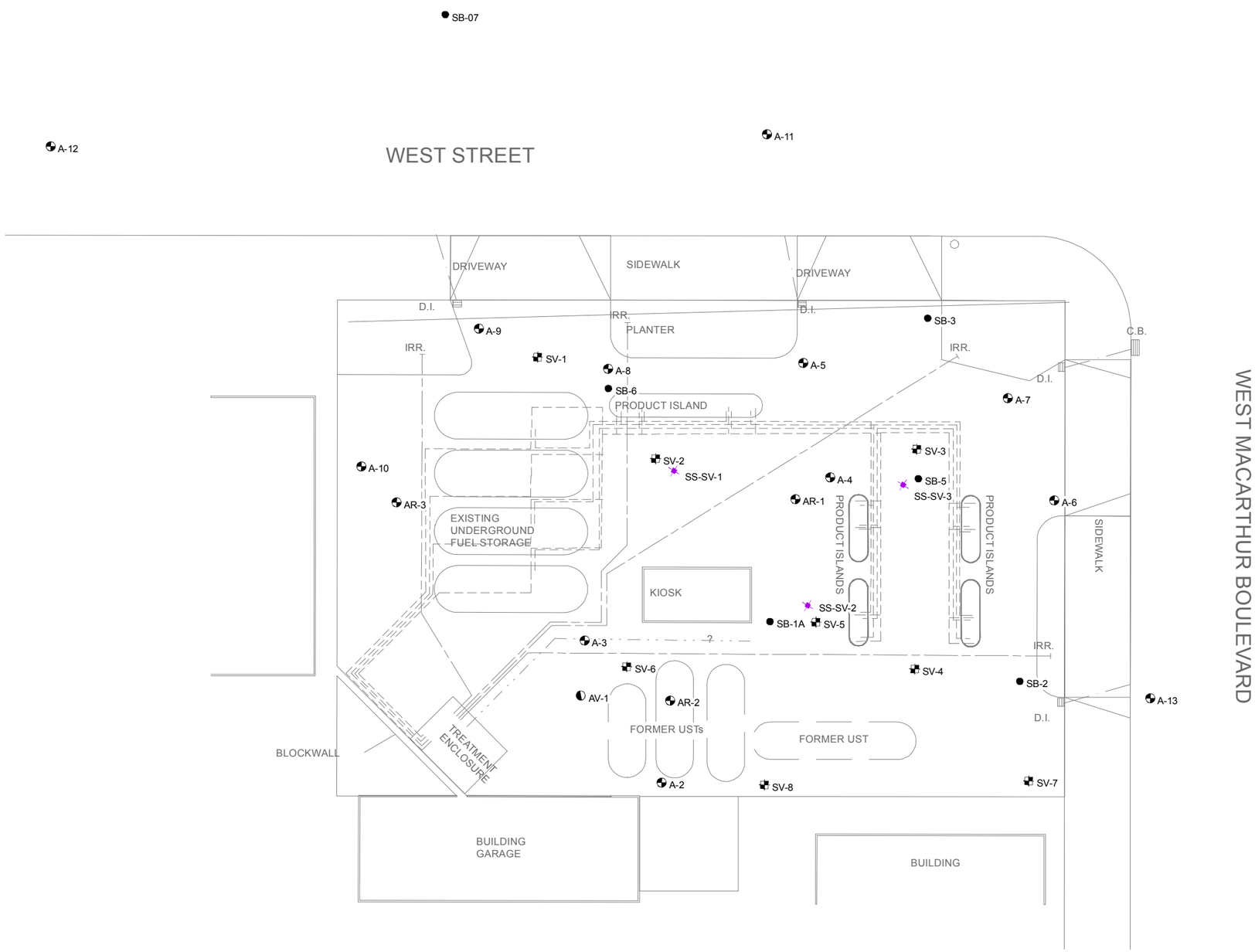
FORMER ARCO STATION #4931
731 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
C:\Users\jharris\Desktop\ENVCAD\RETURN-TO\EMERYVILLE, CA\GP09BPNAC110N00003Q12\DWG\GP09BPNAC110-N01.dwg LAYOUT: 1 SAVED: 10/1/2012 11:40 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 10/1/2012 11:59 AM BY: HARRIS, JESSICA
XREFS: IMAGES: PROJECTNAME: ---
Oakland West.jpg



LEGEND:

- SUB-SLAB SOIL VAPOR SAMPLING LOCATION
- SOIL VAPOR SAMPLE LOCATION
- SOIL BORING
- GROUNDWATER MONITORING WELL
- SOIL VAPOR EXTRACTION WELL
- PRODUCT/VENT LINE
- WATER
- SANITARY SEWER
- STORM DRAIN

0 30 60

SCALE IN FEET

NOTE:
SITE MAP ADOPTED FROM FIGURES BY OTHERS.
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

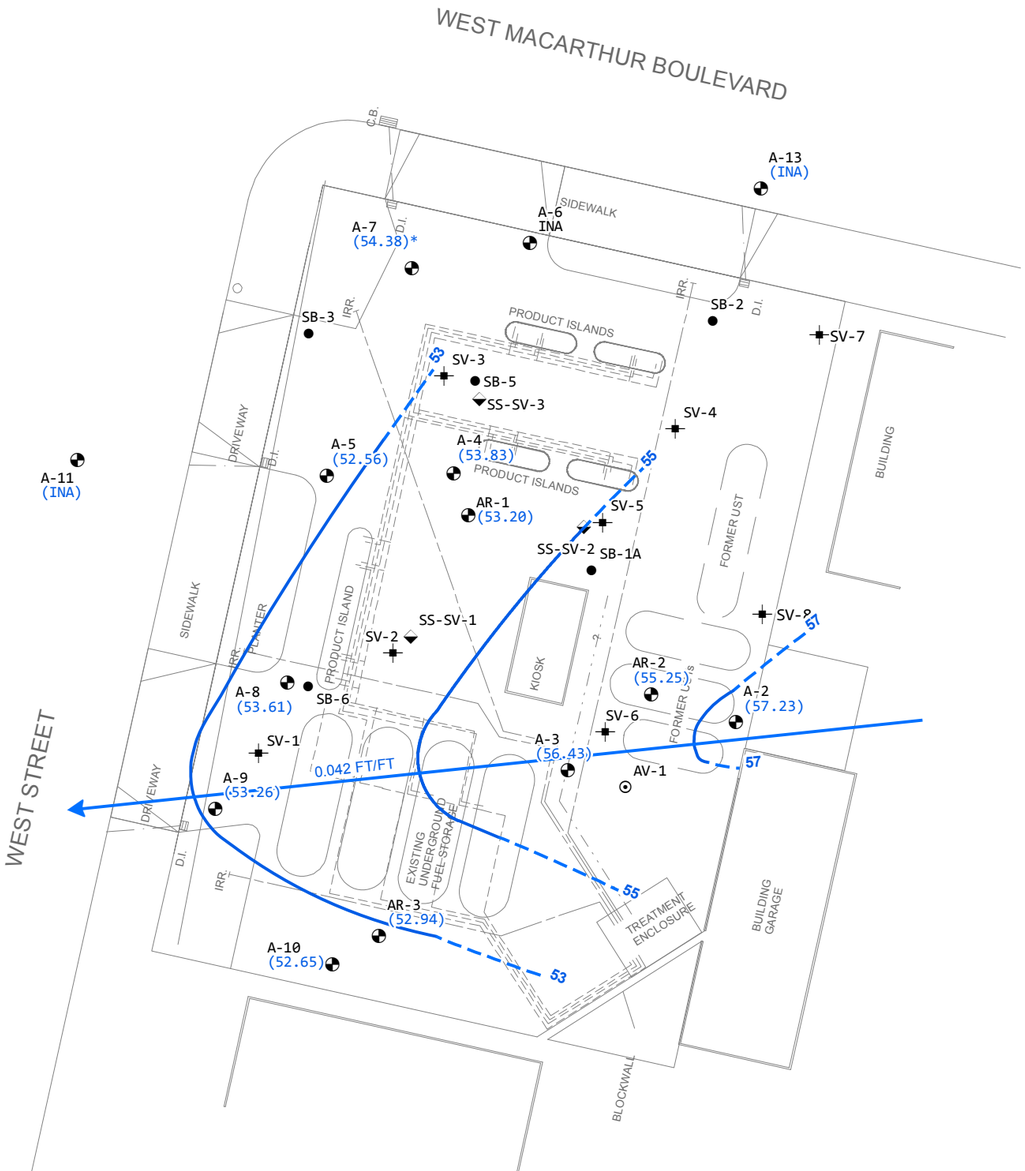
FORMER BP STATION No. 04931
731 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: kgpeters LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\04931\GIS\MXD\CA-04931-Fig2_STPL_Sitemap.mxd DATE: 11/17/2015 5:43:20 PM



LEGEND:

- GROUNDWATER MONITORING WELL
- SOIL BORING
- SOIL VAPOR EXTRACTION WELL
- SOIL VAPOR SAMPLE LOCATION
- SUB-SLAB SOIL VAPOR SAMPLING LOCATION
- (53.83) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- 49.00 GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE INFERRED)
- 0.042 FT/FT GROUNDWATER FLOW DIRECTION (FOOT PER FOOT)
- (INA) WELL INACCESSIBLE
- * NOT USED IN CONTOURING

0 30 60

SCALE IN FEET

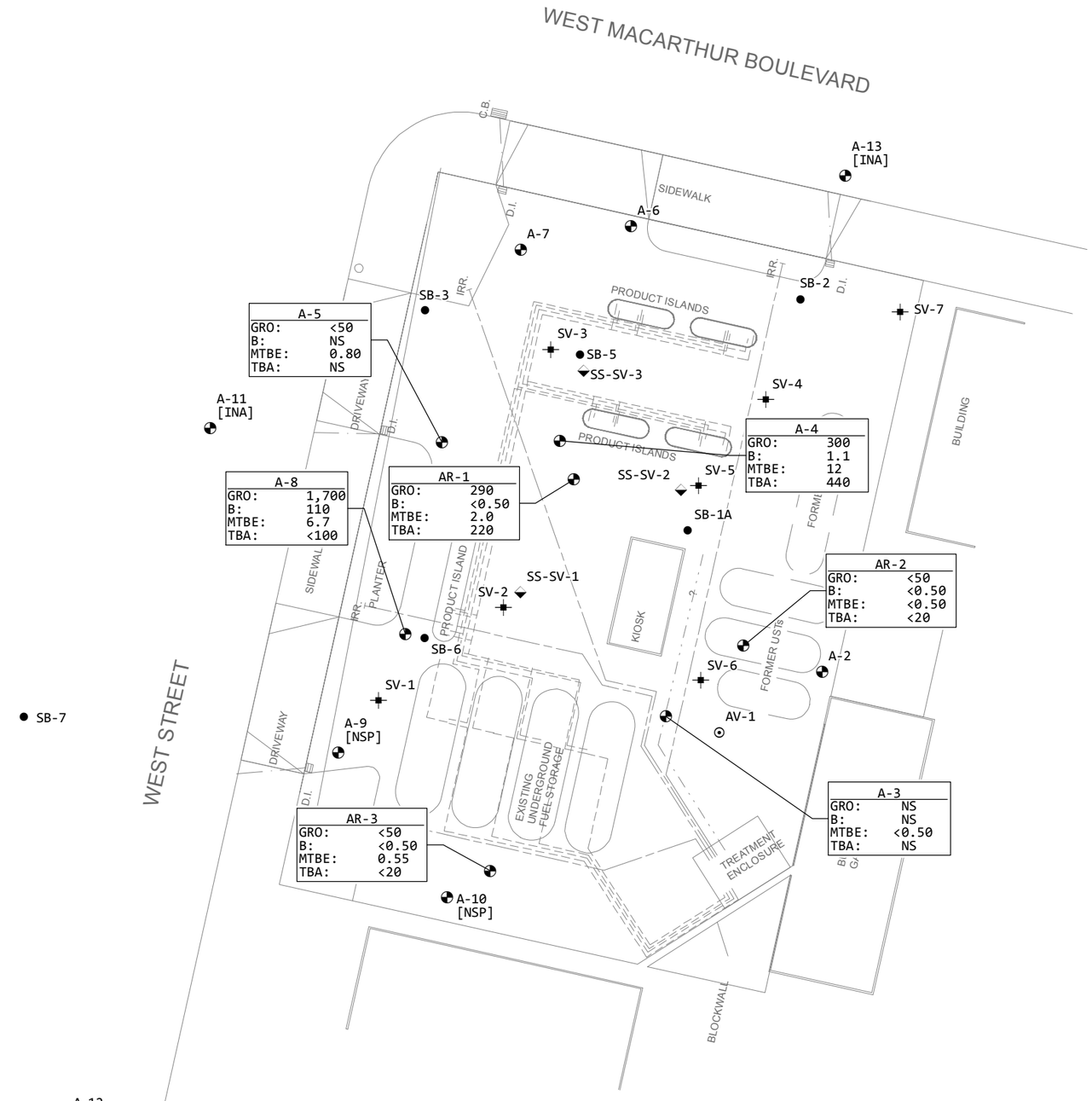
FORMER ARCO No. 4931
731 WEST MACARTHUR BOULEVARD,
OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP MARCH 25, 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: msmiller LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA04931\GIS\MXD\1q2016\CA-04931-Fig3_GWE.mxd DATE: 5/5/2016 10:02:03 AM



LEGEND:

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

AR-2	
GRO:	<50
B:	<0.50
MTBE:	<0.50
TBA:	<20

SAMPLE LOCATION ID

CONCENTRATION IN MICROGRAMS PER LITER (µg/L)

ANALYTE

GRO	GASOLINE RANGE ORGANICS (C6-C12)
B	BENZENE
MTBE	METHYL TERTIARY-BUTYL ETHER
TBA	TERTIARY-BUTYL ALCOHOL
<	NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT
NS	NOT SAMPLED
NSP	NOT SAMPLED IN ACCORDANCE WITH GROUNDWATER SAMPLING SCHEDULE
INA	WELL INACCESSIBLE

0 30 60

SCALE IN FEET

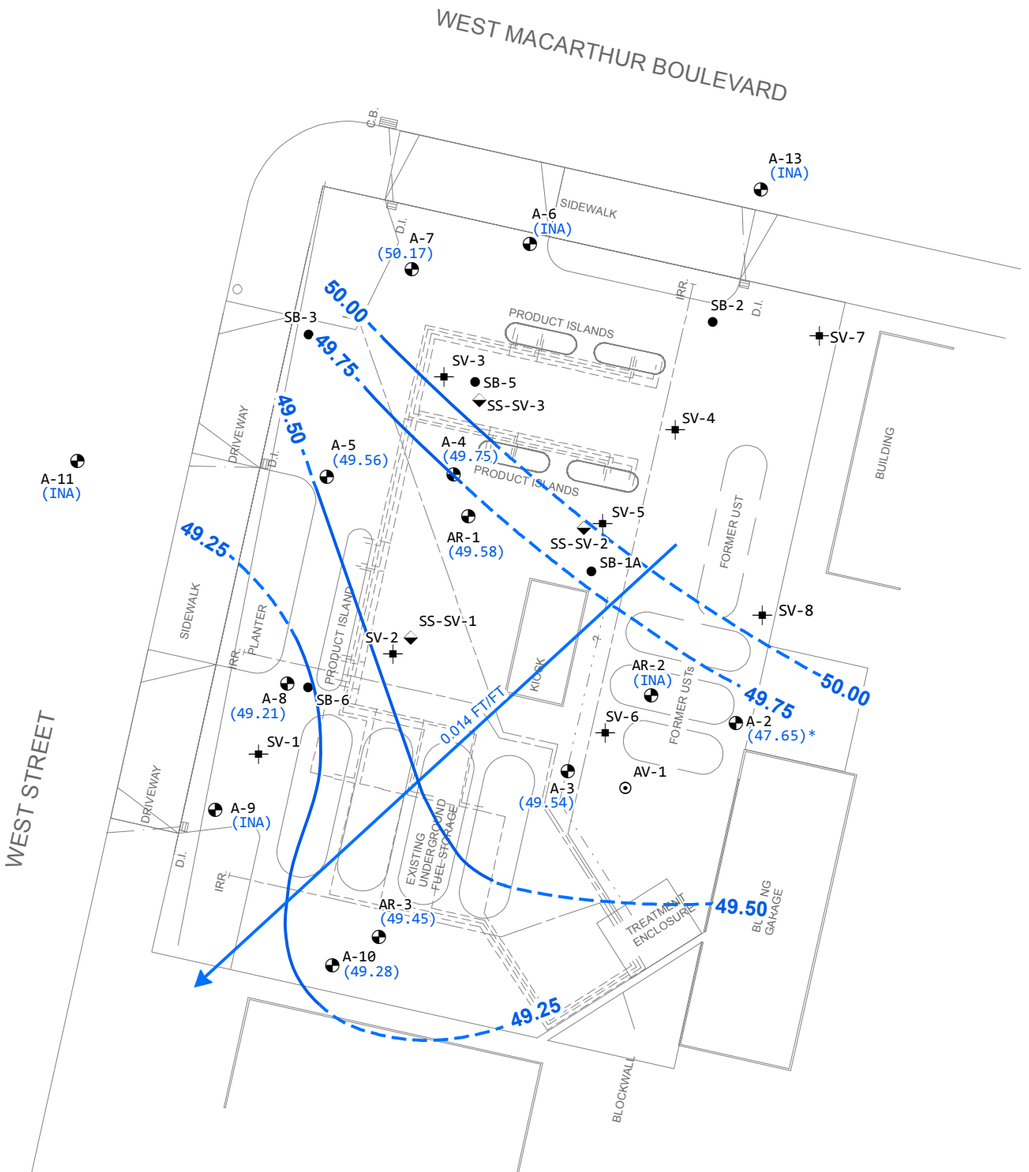
FORMER ARCO No. 4931
731 WEST MACARTHUR BOULEVARD,
OAKLAND, CALIFORNIA

ANALYTICAL SUMMARY MAP
MARCH 25, 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE
4

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: mamiller LD: PIC: PM: TM:
PROJECT PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA04931\GIS\MXD\1q2016\CA-04931-Fig4_GWE_Analytical.mxd DATE: 5/5/2016 9:50:03 AM



LEGEND:

- GROUNDWATER MONITORING WELL
- SOIL BORING
- SOIL VAPOR EXTRACTION WELL
- SOIL VAPOR SAMPLE LOCATION
- SUB-SLAB SOIL VAPOR SAMPLING LOCATION
- (47.65) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- 50.00 GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE INFERRED)
- 0.014 FT/FT GROUNDWATER FLOW DIRECTION (FOOT PER FOOT)
- (INA) WELL INACCESSIBLE
- * NOT USED IN CONTOURING

0 30 60

SCALE IN FEET

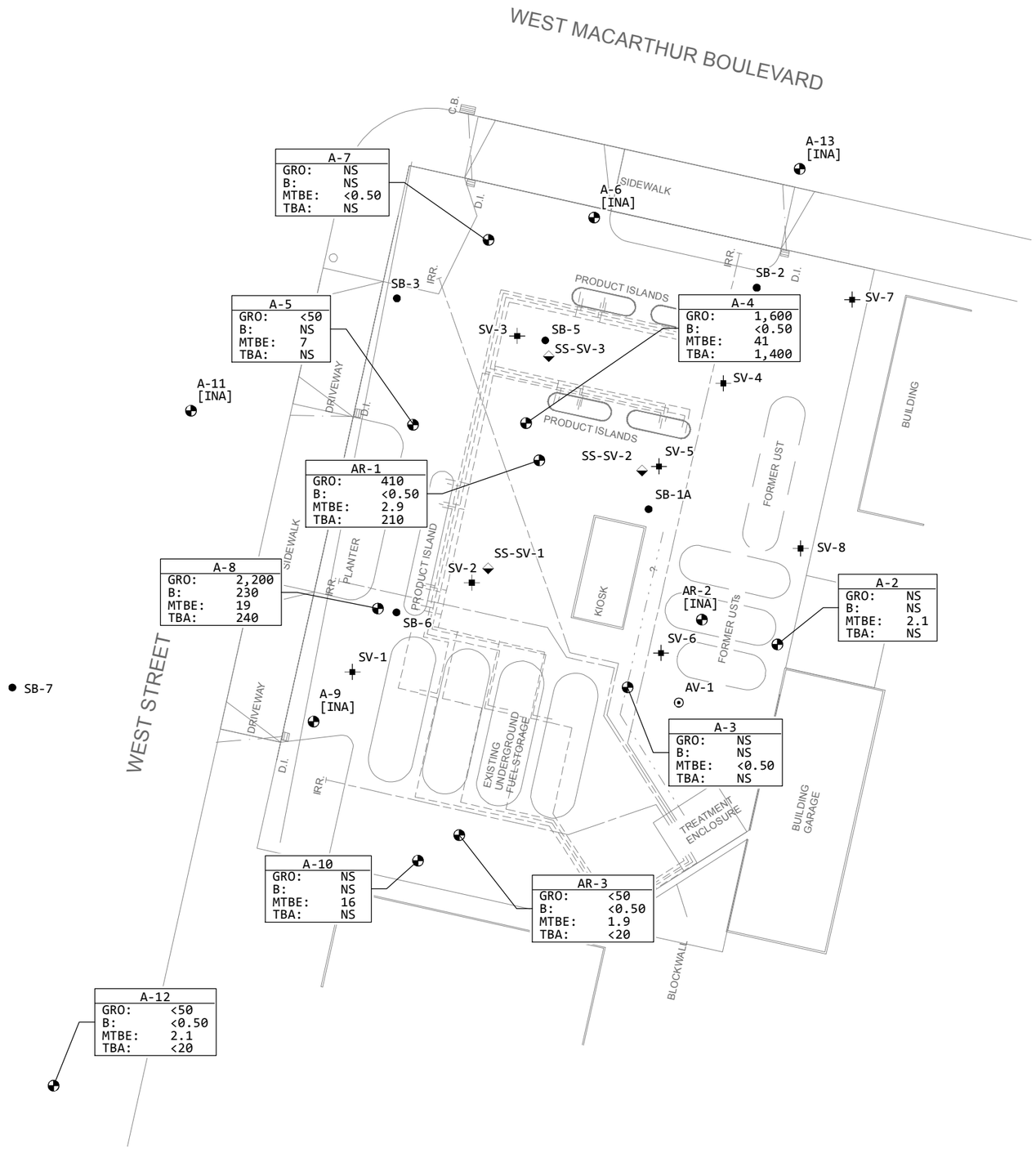
FORMER ARCO No. 4931
731 WEST MACARTHUR BOULEVARD,
OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP AUGUST 25, 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE 5

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: Amohammad LD: PIC: PM: TM:
PROJECT: PATH: Z:\GIS\PROJECTS_ENV\BP_FOXGLOVE\CA\CA04931\GIS\MXD\3Q2016\CA-04931-Fig5_GWE.mxd DATE: 10/7/2016 5:52:28 PM



LEGEND:

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

AR-3	
GRO:	<50
B:	<0.50
MTBE:	1.9
TBA:	<20

SAMPLE LOCATION ID

CONCENTRATION IN MICROGRAMS PER LITER (µg/L)

ANALYTE

GRO	GASOLINE RANGE ORGANICS (C6-C12)
B	BENZENE
MTBE	METHYL TERT-BUTYL ETHER
TBA	TERT-BUTYL ALCOHOL
<	NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT
INA	WELL INACCESSIBLE
NS	NOT SAMPLED

0 30 60

SCALE IN FEET

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

ANNUAL GROUNDWATER MONITORING REPORT- 2016

ANALYTICAL SUMMARY MAP AUGUST 25, 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE 6

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: kgpeters LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA04931\GIS\MXD\3Q2016\CA-04931-Fig6_GWE_Analytical.mxd DATE: 10/25/2016 12:47:15 PM

Figure 7
Groundwater Flow Direction Rose Diagram
CA-04931
731 West MacArthur Blvd, Oakland, CA

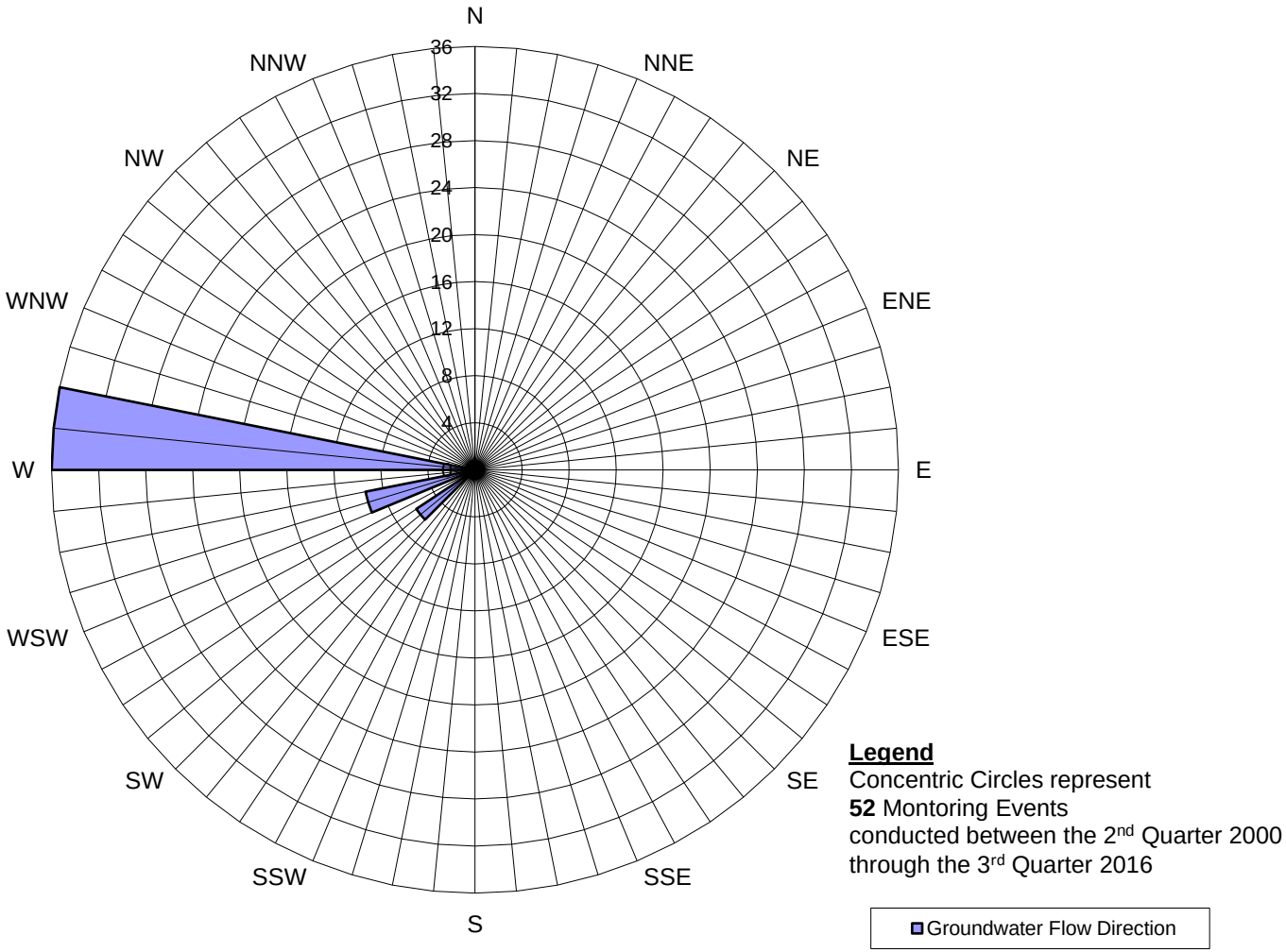


Figure 7 - Rose Diagram and Flow Gradients

ATTACHMENT 1

Previous Investigations and Site History Summary

The Site is located at 731 West MacArthur Boulevard in Oakland, California. It is an active Westco-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.

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 May 15, 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 January 20, 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 the Cooper-Jacob method, and 996 to 2,502 gpd/ft using the Neuman method. Storativity was calculated to be 1.18×10^{-2} to 4.24×10^{-6}, which was reportedly indicative of a heterogeneous environment. According to GSI, "Specific yield [sic – capacity?] values ranged from 1.74×10^{-2} to 9.65×10^{-3}," suggesting unconfined to semi-confined subsurface conditions (GSI, 7/10/1991). In GSI's *Remedial Action Plan* dated May 15, 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.

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 November 18, 1991 and April 8, 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 November 19.1991. It was reported that according to the Alameda County Environmental Health (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 November 21, 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 November 21, 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 December 20, 1991 and February 13, 1992. The former tank cavity was backfilled on February 27, 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 December 1-2, 1991. Select locations along the former product line trenches were over-excavated on December 20, 1991. The current UST pit excavation was initiated on March 9, 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 June 15-16, 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 June 27,1994, GSI reports that the GWETS wells A-9, AR-1, AR-2, and AR-3 contained only one pump each for groundwater, and a product pump was installed in well A-8. The GWETS was shut down on July 5, 1995 for the following reasons cited by Pacific Environment Group, Inc. (PEG) in their *Quarterly Report – Second Quarter 1995, Remedial System Performance Evaluation*, dated September 29, 1995: 1). Since 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 December 31, 1995, 23 pounds (3.75 gallons) of free product have been removed from the Site (PEG, 3/15/1996).

After the GWETS had been shut down and pumps removed from the remediation wells, PEG initiated an in-situ bioremediation enhancement program. On November 17, 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 October 2, 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 was monitored on a semiannual basis by Broadbent & Associates, Inc. (BAI) during the first and third calendar quarters until the third quarter of 2015, and is now monitored on the same schedule by Blaine Tech Services, Inc. (Blaine Tech).

In 2016, the ACEH approved an annual sampling schedule. Following the first and third quarter 2016 semi-annual groundwater events, the site will be sampled and reported annually in the third quarter of each year.

ATTACHMENT 2

Groundwater Sampling Data Package

WELL GAUGING DATA

Project # 160325-1515 Date 3-25-16 Client Arcadis

Site 731 W. MacArthur Blvd Oakland CA

	Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
	A-7	0750	3	N	—	—		5.37	25.49		
	A-9	0800	6	odor Y sheen	—	—		4.47	8.02		
*	A-8	0815	3	sheen odor	—	—		5.09	16.31		hydra sleeve
*	A-5	0820	3	odor	—	—		6.22	21.83		hydra sleeve
	AR-3	0935	4 (1/2)	N	—	—		2.74 (1/16)	25.82		
*	A-10	0930	3 4 (1/2)	Y	—	—		6.16	29.70		hydra sleeve
*	A-3	0750	4	N				2.89	16.20		hydra sleeve
	AR-2	0800	2	N				3.93	14.58		
*	A-2	0811	4	N				3.42	19.41		hydra sleeve
	AR-1	0823	6	N				6.32	28.60		
*	A-4	0826	4	N				5.76	19.33		hydra sleeve
	* wells were gauged with hydra sleeve still in well										

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160325-KK1	Station # : 4931
Sampler: MK	Start Date: 3-25-16
Well I.D.: A-3	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 16.20	Depth to Water: 2.89
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter: YSI Pro plus

Purge Method:

(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:

Dedicated Tubing
(New Tubing)

Instruments Used:

(Myron L Ultrameter) MK
(HACH Turbidimeter)
(Durham Geoslope Indicator)
(YSI 556 Flow-Thru Cell)
GeoTech Interface Probe
YSI 550 DO Meter
MMC Interface Probe
Other: _____

Flow Rate: 200 ml/min

Pump Depth: 10'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
0854	17.6	6.31	359	55.4	1.23	27.7	600	3.00
0857	17.6	6.43	358	48.9	1.12	11.3	1200	3.03
0900	17.6	6.49	359	47.9	1.11	6.9	1800	3.06
0903	17.6	6.50	359	47.6	1.11	6.8	2400	3.08
0906	17.6	6.51	359	47.8	1.11	6.5	3000	3.10

Did well dewater? Yes (No)	Amount actually evacuated: 3000 ml
Sampling Time: 0907	Sampling Date: 3-25-16
Sample I.D.: A-3	Laboratory: (Test America)
Analyzed for: (TPH-G) (BTEX) MTBE TPH-D	Other: See COC
Equipment Blank I.D.: @ Time	Duplicate I.D.:

*Hydra sleeve removed for sampling

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160325-KK1	Station # : 4931
Sampler: MK	Start Date: 3-25-16
Well I.D.: A-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.33	Depth to Water: 5.76
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter: YSI Pro Plus

Purge Method:

(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:

Dedicated Tubing
(New Tubing)

Instruments Used:

Myron L Ultrameter
(HACH Turbidimeter)
(Durham Geoslope Indicator)
(YSI 556 Flow-Thru Cell)
GeoTech Interface Probe
YSI 550 DO Meter
MMC Interface Probe
Other: _____

Flow Rate: 100 mL/min

Pump Depth: 12'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1043	18.4	6.61	774	332	0.29	-73.5	300	6.14
1046	18.3	6.60	778	207	0.43	-75.0	600	6.25
1049	18.2	6.58	782	216	0.30	-76.4	900	6.25
1052	18.1	6.59	785	215	0.31	-78.2	1200	6.25
1055	18.1	6.58	784	212	0.30	-79.4	1500	6.25

Did well dewater? Yes (No)	Amount actually evacuated: 1500
Sampling Time: 1056	Sampling Date: 3-25-16
Sample I.D.: A-4	Laboratory: (Test America)
Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D	Other: Sa Lac
Equipment Blank I.D.: @ Time	Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160325-1551	Station # : 4931
Sampler: ISK	Start Date: 3-25-16
Well I.D.: A-S	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth: 21.85	Depth to Water: 6.22
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter: YSI ProPlus

Purge Method: (Peristaltic) Bladder Pump Electric Submersible

Sampling Method: (Dedicated Tubing) (New Tubing)

Instruments Used: (Myron L Ultrameter) (HACH Turbidimeter) (Durham Geoslope Indicator) (YSI 556 Flow-Thru Cell) (GeoTech Interface Probe) YSI 550 DO Meter MMC Interface Probe Other: ___

Flow Rate: 100mL/min Pump Depth: ~~19~~ 12' (12)

ST = 1109 Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1112	18.4	6.44	545	46	0.64	-300	300	6.31
1115	18.3	6.38	544	31	0.46	-316	600	6.31
1118	18.1	6.36	540	25	0.35	-324	980	6.31
1121	18.2	6.35	538	23	0.37	-325	1200	6.31
1124	18.2	6.35	537	23	0.36	-323	1500	6.31

Did well dewater? Yes (No) Amount actually evacuated: 1500mL

Sampling Time: 1127 Sampling Date: 3-25-16

Sample I.D.: A-S Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: see COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160325-KKC	Station # : 4931
Sampler: KKC	Start Date: 3-25-16
Well I.D.: A-8	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth: 16.31	Depth to Water: 5.09
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI Pro Plus

Purge Method: (Peristaltic) Bladder Pump / Electric Submersible

Sampling Method: (Dedicated Tubing) / (New Tubing)

Instruments Used: (Myron L Ultrameter) (HACH Turbidimeter) (Durham Geoslope Indicator) (YSI 556 Flow-Thru Cell) (GeoTech Interface Probe) YSI 550 DO Meter / MMC Interface Probe Other: ___

Flow Rate: 100mL/min

Pump Depth: 10'

ST: 0853 Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water
0856	16.8	6.62	1013	24	0.83	-234	300	5.17
0859	17.1	6.75	1023	24	0.76	-255	600	5.20
0902	17.0	6.79	1030	23	0.65	-270	900	5.24
0905	17.5	6.80	1027	26	0.54	-279	1200	5.28
0908	17.7	6.82	1030	26	0.49	-293	1500	5.32
0911	17.8	6.82	1031	26	0.46	-301	1800	5.36

Did well dewater? Yes (No) Amount actually evacuated: 1800mL

Sampling Time: 0914 Sampling Date: 3-25-16

Sample I.D.: A-8 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

~~Equipment~~ Trip blank I.D.: TB-4931-032516 @ 0850 Time Duplicate I.D.:

* hydra sleeve removed during sampling

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160325-1561	Station # : 4931
Sampler: MK	Start Date: 3-25-16
Well I.D.: AR-1	Well Diameter: 2 3 4 (6) 8 ____
Total Well Depth: 28.60	Depth to Water: 6.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter: YSI Pro plus

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
(New Tubing)

Instruments Used:
Myron L Ultrameter
(Durham Geoslope Indicator)
GeoTech Interface Probe
MMC Interface Probe
(HACH Turbidimeter)
(YSI 556 Flow-Thru Cell)
YSI 550 DO Meter
Other: _____

Flow Rate: 100 mL/min

Pump Depth: 19'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1012	18.1	6.56	1161	13.4	0.43	-97.2	300	6.49
1015	17.2	6.61	1176	5.2	0.53	-103.6	600	6.50
1018	18.1	6.63	1188	5.0	0.39	-106.8	900	6.52
1021	18.2	6.64	1190	5.1	0.38	-110.0	1200	6.52
1024	18.2	6.64	1194	5.1	0.37	-111.2	1500	6.52

Did well dewater? Yes (No)	Amount actually evacuated: 1500 mL
Sampling Time: 1025	Sampling Date: 3-25-16
Sample I.D.: AR-1	Laboratory: (Test America)
Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D	Other: See COC
Equipment Blank I.D.: @ Time	Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160325-KS1	Station # : 4931
Sampler: MK	Start Date: 3-25-16
Well I.D.: AR-2	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 14.58	Depth to Water: 3.93
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter: YSI Pro Plus

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
New Tubing

Instruments Used:
Myron L Ultrameter
(HACH Turbidimeter)
(Durham Geoslope Indicator)
(YSI 556 Flow-Thru Cell)
GeoTech Interface Probe
YSI 550 DO Meter
MMC Interface Probe
Other: _____

Flow Rate: 100 mL/min

Pump Depth: 10'

Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water
0928	17.8	6.29	571	42.3	0.53	-5.8	~~1.05~~ 300	4.05
0931	17.6	6.21	575	27.2	0.63	-5.4	600	4.85
0934	17.5	6.22	586	26.7	0.58	-5.7	900	5.29
0937	17.5	6.22	588	26.5	0.60	-6.1	1200	5.30
0940	17.6	6.21	587	26.4	0.59	-6.2	1500	5.31

Did well dewater? Yes (No)	Amount actually evacuated: 1500
Sampling Time: 0941	Sampling Date: 3-25-16
Sample I.D.: AR-2	Laboratory: (Test America)
Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D	Other: See COC
Equipment Blank I.D.: @ Time	Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160325-1511	Station # : 4931
Sampler: ISK	Start Date: 3-25-16
Well I.D.: AR-3	Well Diameter: 2 3 (4) 6 8 (12) (10)
Total Well Depth: (TW) 15.35 28.82	Depth to Water: 2.74 (DTW) 6.16
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI Pro Plus

Purge Method: (Peristaltic) Bladder Pump Electric Submersible

Sampling Method: (Dedicated Tubing) (New Tubing)

Instruments Used: (Myron L Ultrameter) (Durham Geoslope Indicator) (GeoTech Interface Probe) MMC Interface Probe (HACH Turbidimeter) (YSI 556 Flow-Thru Cell) YSI 550 DO Meter Other:

Flow Rate: 100 mL/min

Pump Depth: (TD) 20'

ST: 1030 Time	Temp (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1033	18.5	7.03	545	163	0.48	-339	300	6.28
1036	18.4	7.02	544	146	0.30	-335	600	6.32
1039	18.5	7.03	541	147	0.24	-328	900	6.32
1042	18.6	7.05	539	143	0.22	-338	1200	6.32
1045	18.6	7.06	537	146	0.20	-340	1500	6.32

Did well dewater? Yes (No)	Amount actually evacuated: 1500 mL
Sampling Time: ~~AR-3~~ (TW) 1045	Sampling Date: 3-25-16
Sample I.D.: AR-3	Laboratory: Test America
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC
Equipment Blank I.D.: @ Time	Duplicate I.D.:

WELLHEAD INSPECTION CHECKLIST

Client Arcadis Date 3-25-16

Site Address 731 W. MacArthur Blvd. Oakland CA

Job Number 160325-K1R1 Technician Kris Kubota, Matthew K

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
A-7						X		
A-9	X							
A-8	X							
A-5	X							
AR-3	X							
A-10	X							
AR-1	X							
AR-2	X							
A-2	X							
A-3	X							
A-4	X							

NOTES: A-7 1/2 bolts missing

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME				PROJECT NUMBER			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI ProPlus	12J10792	3-25-16 @ 0830	pH 7.00 7.00 10.00	4.01 7.00 9.99	yes	17.5°C	ISK
"	"	"	Orp 240	242	yes	17.5°C	ISK
"	"	"	Cond 3500	3404	yes	"	ISK

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Arco 4931				PROJECT NUMBER 160325			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI Pro plus	13E102999	3-25-16 0540	pH 4,7,10 Cond 3900	4,7,10 3900	✓	17.4°C	MK
↓	↓	↓	ORP 240 D.O. 100% sat	235 99.6%	✓	18.°C	MK

WELL GAUGING DATA

Project # 160825-CM1 Date 8/25/16 Client ARCADIS

Site 731 W. MACARTHUR BLVD, OAKLAND

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
A-2	0846	4					13.00	19.46		
A-3	0840	4					9.78	16.24		
A-4	0842	4					9.84	19.40		
A-5	0923	3					9.22	23.65		
A-6	WELL	PAVED	OVER							
A-7	0850	3					9.50	22.40		
A-8	1000	3					9.49	16.47		
A-9	0852	6					~~DRY~~ @	OBS @ 7.87		
A-10	0920	3					10.11	~~29.64~~		
A-11	1019	3					~~DRY~~	OBS @ 10.01		
A-12	1020	3					10.03	~~29.00~~		
A-13	WELL	PAVED	OVER							
AR-1	0950	6					9.94	29.39		
AR-2	NEWER	BUILDING	ATTACHMENT			OVER WELL.				
AR-3	0917	4					9.65	28.95	↓	

WELLHEAD INSPECTION CHECKLIST

Client ARCADIS Date 8/25/16

Site Address 731 W. MACARTHUR BLVD.

Job Number 160825-CM1 Technician CM / KK

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
A-2	X							
A-3	X							
A-4	X							
A-5						X		
A-6	PAVED	OVER						
A-7						X		
A-8						X		
A-9	X							
A-10	X							
A-11	X							
A-12	X							
A-13	PAVED	OVER						
AR-1						X		
AR-2	BUILDING	ON TOP OF WELL						
AR-3	X							

NOTES: AR-1 VAULT, -1/4 BOLTS. HANDLE BROKEN

A-8 VAULT, -1/4 BOLTS, HANDLE BROKEN A-5 - 3/8 BOLTS

A-7 -1 1/2 BOLTS

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-C141	Station # : 4931
Sampler: KK	Start Date: 8-25-16
Well I.D.: A-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.46	Depth to Water: 13.00
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI Pro Plus

Purge Method: (Peristaltic) Bladder Pump Electric Submersible

Sampling Method: (Dedicated Tubing) (New Tubing)

Instruments Used: Myron L Ultrameter, (HACH Turbidimeter), Durham Geoslope Indicator, (YSI 556 Flow-Thru Cell), GeoTech Interface Probe, YSI 550 DO Meter, MMC Interface Probe, Other: ___

Flow Rate: 100 mL/min @ 1132

Pump Depth: 17'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1135	19.3	6.26	420	8	0.88	-99	300	13.02
1138	19.0	6.20	419	4	0.65	-103	600	13.04
1141	19.3	6.17	418	3	0.47	-106	900	13.05
1144	19.2	6.15	417	3	0.45	-105	1200	13.06
1147	19.3	6.15	417	3	0.44	-107	1500	13.07

Did well dewater? Yes (No) Amount actually evacuated: 1500

Sampling Time: 1152 Sampling Date: 8-25-16

Sample I.D.: A-2 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-C191	Station # : 1931
Sampler: ISK	Start Date: 8-25-16
Well I.D.: A-3	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 16.24	Depth to Water: 9.78
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI Pro Plus

Purge Method: (Peristaltic) Bladder Pump Electric Submersible

Sampling Method: (Dedicated Tubing) New Tubing

Instruments Used: Myron L Ultrameter, (HACH Turbidimeter), (Durham Geoslope Indicator), (YSI 556 Flow-Thru Cell), (GeoTech Interface Probe), YSI 550 DO Meter, MMC Interface Probe, Other: ____

Flow Rate: 100mL/min @ 1057

Pump Depth: 13'

Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water
1100	20.1	6.49	560	14	0.83	-12	300	9.91
1103	20.7	6.44	557	4	0.65	-34	600	9.92
1106	21.0	6.42	557	4	0.47	-46	900	9.93
1109	20.9	6.40	555	4	0.45	-54	1200	9.93
1112	20.8	6.40	554	4	0.44	-57	1500	9.94

Did well dewater? Yes (No) Amount actually evacuated: 1500

Sampling Time: 1117 Sampling Date: 8-25-16

Sample I.D.: A-3 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-CK1	Station # : 4931
Sampler: CK	Start Date: 8/25/16
Well I.D.: A-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.40	Depth to Water: 9.84
Depth to Free Product: ___	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI PRO PLUS

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
(New Tubing)

Instruments Used:
Myron L Ultrameter
Durham Geoslope Indicator
GeoTech Interface Probe
MMC Interface Probe
HACH Turbidimeter
(YSI 556 Flow-Thru Cell)
YSI 550 DO Meter
Other: ___

Flow Rate: 200

Pump Depth: 14.62

@1213 Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1216	20.8	6.39	1275	10	0.35	-81.2	600	9.84
1219	20.7	6.40	1280	9	0.30	-88.7	1200	9.84
1222	20.7	6.42	1284	9	0.26	-90.2	1800	9.84
1225	20.7	6.42	1285	8	0.24	-91.4	2400	9.85
1228	20.7	6.42	1286	8	0.24	-91.7	3000	9.85
*	3x HCl	VOAs						

Did well dewater? Yes (No) Amount actually evacuated: 3000

Sampling Time: 1230 Sampling Date: 9/25/16

Sample I.D.: A-4 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-cw1	Station # : 4931
Sampler: CW	Start Date: 8/25/16
Well I.D.: A-5	Well Diameter: 2 (3) 4 6 8
Total Well Depth: 23.65	Depth to Water: 9.22
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI PRO PLUS

Purge Method:

(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:

(Dedicated Tubing)
New Tubing

Instruments Used:

Myron L Ultrameter — HACH Turbidimeter
Durham Geoslope Indicator — (YSI 556 Flow-Thru Cell)
GeoTech Interface Probe — YSI 550 DO Meter
MMC Interface Probe — Other: _____

Flow Rate: 200 — Pump Depth: 16.50

@ 1111 Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1114	21.0	6.30	836	42	0.28	-1.6	600	9.22
1117	21.0	6.30	836	20	0.27	-4.0	1200	9.22
1120	21.0	6.30	836	15	0.23	-4.3	1800	9.23
1123	21.0	6.30	837	12	0.23	-5.0	2400	9.23
1126	21.0	6.30	837	12	0.22	-5.2	3000	9.23
1129	21.0	6.30	837	13	0.22	-5.6	3600	9.23
✱	3x Hel	WAS						

Did well dewater? Yes (No) — Amount actually evacuated: 3600

Sampling Time: 1130 — Sampling Date: 8/25/16

Sample I.D.: A-5 — Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D — Other: SCL-OC

Equipment Blank I.D.: @ Time — Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-cm1	Station # : 4931
Sampler: CM	Start Date: 8/25/16
Well I.D.: A-6	Well Diameter: 2 3 4 6 8 ____
Total Well Depth:	Depth to Water:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	DO Meter:

Purge Method:

Peristaltic
Bladder Pump
Electric Submersible

Sampling Method:

Dedicated Tubing
New Tubing

Instruments Used:

Myron L Ultrameter
Durham Geoslope Indicator
GeoTech Interface Probe
MMC Interface Probe
HACH Turbidimeter
YSI 556 Flow-Thru Cell
YSI 550 DO Meter
Other: _____

Flow Rate: _____

Pump Depth: _____

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
*	WELL	PAVED	OVER					

Did well dewater? Yes No	Amount actually evacuated:
Sampling Time:	Sampling Date:
Sample I.D.:	Laboratory: Test America
Analyzed for: TPH-G BTEX MTBE TPH-D	Other:
Equipment Blank I.D.: @ Time	Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-cle	Station # : 4931
Sampler: CE	Start Date: 8/25/16
Well I.D.: A-7	Well Diameter: 2 (3) 4 6 8 ____
Total Well Depth: 22.40	Depth to Water: 9.58
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI PRO PLUS

Purge Method: (Peristaltic) / Bladder Pump / Electric Submersible

Sampling Method: Dedicated Tubing / (New Tubing)

Instruments Used: Myron L Ultrameter / Durham Geoslope Indicator / GeoTech Interface Probe / MMC Interface Probe / HACH Turbidimeter / (YSI 556 Flow-Thru Cell) / YSI 550 DO Meter / Other: _____

Flow Rate: 200 mL/min

Pump Depth: 16.0'

(1045 Time	Temp. (°C) or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1048	21.5	6.76	752	32	0.38	-10.3	600	9.60
1051	21.6	6.62	750	30	0.38	-12.4	1200	9.61
1054	21.6	6.60	750	27	0.38	-14.9	1800	9.61
1057	21.6	6.59	750	26	0.38	-14.9	2400	9.61
1100	21.6	6.59	749	26	0.39	-14.7	3000	9.61
*	6 VOAs	HCl	COLLECTED					

Did well dewater? Yes (No) — Amount actually evacuated: 3000

Sampling Time: 1102 — Sampling Date: 8/25/16

Sample I.D.: A-7 — Laboratory: Test America

Analyzed for: TPH-G BTEX (MTBE) TPH-D — (Other): SEE COC

Equipment Blank I.D.: TB-4931 @ 08252016 Time 0830 — Duplicate I.D.:

TRIP

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-CR1	Station # : 4931
Sampler: CR	Start Date: 8/25/16
Well I.D.: A-8	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth: 16.47	Depth to Water: 9.49
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	DO Meter: YSI PRO PLUS

Purge Method: (Peristaltic) Bladder Pump Electric Submersible

Sampling Method: (Dedicated Tubing) New Tubing

Instruments Used: Myron L Ultrameter, HACH Turbidimeter, Durham Geoslope Indicator, (YSI 556 Flow-Thru Cell), GeoTech Interface Probe, YSI 550 DO Meter, MMC Interface Probe, Other: ___

Flow Rate: 200 Pump Depth: 13.00'

@1250 Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1253	20.4	6.63	1361	24	0.32	-101.8	600	9.50
1256	20.4	6.66	1356	20	0.33	-110.2	1200	9.50
1259	20.5	6.67	1356	16	0.35	-117.8	1800	9.50
1302	20.5	6.67	1350	16	0.37	-119.4	2400	9.50
1305	20.5	6.67	1349	15	0.37	-120.1	3000	9.51
1308	20.5	6.67	1349	15	0.37	-120.1	3600	9.51
✓	3x HCl	VOAs						

Did well dewater? Yes (No) Amount actually evacuated: 7600

Sampling Time: 1310 Sampling Date: 8/25/16

Sample I.D.: A-8 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Std COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160625-cm	Station # : 4931
Sampler: cm	Start Date: 6/25/16
Well I.D.: A-9	Well Diameter: 2 3 4 (6) 8 ____
Total Well Depth: — OBS @ 7.07	Depth to Water: —
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	DO Meter: _____

Purge Method:

Peristaltic /
Bladder Pump
Electric Submersible

Sampling Method:

Dedicated Tubing /
New Tubing

Instruments Used:

Myron L Ultrameter / HACH Turbidimeter
Durham Geoslope Indicator / YSI 556 Flow-Thru Cell
GeoTech Interface Probe / YSI 550 DO Meter
MMC Interface Probe Other: _____

Flow Rate: _____ Pump Depth: _____

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
X	OBSTRUCTION @ 7.07							
	ATTEMPT TO REMOVE W/ BAILER RETRIEVAL TOOL.							
	REMOVED SOME ROOTS. OBSTRUCTION STILL							
	@ 7.07.							

Did well dewater? Yes No Amount actually evacuated:

Sampling Time: Sampling Date:

Sample I.D.: Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-C151	Station # : 4931
Sampler: RG	Start Date: 8-25-16
Well I.D.: A-10	Well Diameter: 2 (3) 4 6 8 ____
Total Well Depth: 29.64	Depth to Water: 10.11
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter: YSI Pro Plus

Purge Method:

(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:

Dedicated Tubing
(New Tubing)

Instruments Used:

Myron L Ultrameter
(HACH Turbidimeter)
~~Durham Geoslope Indicator~~
(YSI 556 Flow-Thru Cell)
~~GeoTech Interface Probe~~
YSI 550 DO Meter
MMC Interface Probe
Other: _____

Flow Rate: 100 mL/min @ 1242

Pump Depth: 24'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1245	20.9	6.43	584	6	0.62	-6	300	10.12
1248	21.1	6.40	583	4	0.52	-11	600	10.12
1251	21.3	6.38	581	(510) 3	0.44	-15	900	10.13
1254	21.4	6.37	582	3	0.43	-17	1200	10.14
1257	21.4	6.37	580	1	0.43	-18	1500	10.14

Did well dewater? Yes (No) Amount actually evacuated: 1500

Sampling Time: 1302 Sampling Date: 8-25-16

Sample I.D.: A-10 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: see COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-cm1	Station # : 4431
Sampler: CM	Start Date: 8/25/16
Well I.D.: A-11	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth: OBS @ 10.81	Depth to Water: —
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: —

Purge Method:

Peristaltic /
Bladder Pump /
Electric Submersible

Sampling Method:

Dedicated Tubing /
New Tubing /

Instruments Used:

Myron L Ultrameter — HACH Turbidimeter
Durham Geoslope Indicator / — YSI 556 Flow-Thru Cell
GeoTech Interface Probe — YSI 550 DO Meter /
MMC Interface Probe — Other: _____

Flow Rate: _____

Pump Depth: _____

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
* OBSTRUCTION @ 10.81								
	ATTEMPT TO REMOVE OBSTRUCTION W/ BRT.							
	ROOTS ON BTR.							
	USED PAD PUMP TO BREAK UP OBSTRUCTION.							
	OBSTRUCTION DID NOT DISLODGE							

Did well dewater? Yes / No — Amount actually evacuated:

Sampling Time: — Sampling Date:

Sample I.D.: — Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D — Other:

Equipment Blank I.D.: @ Time — Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-KK1	Station # : 4937
Sampler: KK	Start Date: 8-25-16
Well I.D.: A-12	Well Diameter: 2 (3) 4 6 8 ____
Total Well Depth: 29.80	Depth to Water: 10.03
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI Pro Plus

Purge Method: (Peristaltic) (Bladder Pump) (KK) Electric Submersible

Sampling Method: (Dedicated Tubing) (New Tubing)

Instruments Used: Myron L Ultrameter; ~~HACH Turbidimeter~~; (Durham Geoslope Indicator); ~~YSI 556 Flow-Thru Cell~~; GeoTech Interface Probe; YSI 550 DO Meter; MMC Interface Probe; Other: ____

Flow Rate: 100mL/min @1027

Pump Depth: 20'

Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water
1030	19.8	6.59	618	17	1.54	-25	300	10.08
1033	19.7	6.53	613	18	0.92	-38	600	12.09
1036	19.6	6.51	613	18	0.62	-45	900	10.10
~~1039~~ (1042)	19.6	6.51	611	18	0.61	-49	1200	12.11
1042	19.5	6.49	609	17	0.61	-51	1500	10.11

Did well dewater? Yes (No) Amount actually evacuated: 1500

Sampling Time: 1047 Sampling Date: 8-25-16

Sample I.D.: A-12 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-cu1	Station # : 4931
Sampler: CU	Start Date: 8/25/16
Well I.D.: A-13	Well Diameter: 2 3 4 6 8 ____
Total Well Depth:	Depth to Water:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	DO Meter: _____

Purge Method:

Peristaltic
Bladder Pump
Electric Submersible

Sampling Method:

Dedicated Tubing
New Tubing

Instruments Used:

Myron L Ultrameter
Durham Geoslope Indicator
GeoTech Interface Probe
MMC Interface Probe
HACH Turbidimeter
YSI 556 Flow-Thru Cell
YSI 550 DO Meter
Other: _____

Flow Rate: _____

Pump Depth: _____

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
*	WELL	PAVED	OVER					

Did well dewater? Yes No

Amount actually evacuated:

Sampling Time:

Sampling Date:

Sample I.D.:

Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D

Other:

Equipment Blank I.D.: @ Time

Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160925-CK1	Station # : 4931
Sampler: CK	Start Date: 9/25/16
Well I.D.: AR-1	Well Diameter: 2 3 4 (6) 8 ___
Total Well Depth: 29.39	Depth to Water: 9.94
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI PRO PLUS

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
New Tubing

Instruments Used:
Myron L Ultrameter
Durham Geoslope Indicator
GeoTech Interface Probe
MMC Interface Probe
HACH Turbidimeter
YSI 556 Flow-Thru Cell
YSI 550 DO Meter
Other: _____

Flow Rate: 200

Pump Depth: 20.0'

@1142 Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1145	20.1	6.83	1161	5	0.42	-83.8	600	9.94
1148	20.0	6.75	1161	5	0.35	-100.4	1200	9.94
1151	20.0	6.72	1161	4	0.32	-105.8	1800	9.94
1154	20.0	6.70	1160	4	0.31	-106.2	2400	9.94
1157	20.0	6.70	1160	4	0.31	-106.3	3000	9.94
*	3x HCl	VOAs						

Did well dewater? Yes (No) Amount actually evacuated: 3000

Sampling Time: 1200 Sampling Date: 9/25/16

Sample I.D.: AR-1 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-C181	Station # : 4931
Sampler: RH	Start Date: 8-25-16
Well I.D.: AR-2	Well Diameter: 2 3 4 6 8 ____
Total Well Depth: —	Depth to Water: —
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	DO Meter: —

Purge Method:

Peristaltic
Bladder Pump
Electric Submersible

Sampling Method:

Dedicated Tubing
New Tubing

Instruments Used:

Myron L Ultrameter
Durham Geoslope Indicator
GeoTech Interface Probe
MMC Interface Probe
HACH Turbidimeter
YSI 556 Flow-Thru Cell
YSI 550 DO Meter
Other: _____

Flow Rate: _____

Pump Depth: _____

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
	unable to access well covered by building addition							
		no sample taken						

Did well dewater? Yes No — Amount actually evacuated:

Sampling Time: — Sampling Date:

Sample I.D.: — Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D — Other:

Equipment Blank I.D.: @ Time — Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160825-CK1	Station # : 4931
Sampler: ISIS	Start Date: 8-25-16
Well I.D.: AR-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 28.95	Depth to Water: 9.65
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI Pro Plus

Purge Method:

(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:

~~Dedicated Tubing~~
New Tubing

Instruments Used:

~~Myron L Ultrameter~~ (HACH Turbidimeter)
~~Durham Geoslope Indicator~~ (YSI 556 Flow-Thru Cell)
~~GeoTech Interface Probe~~ YSI 550 DO Meter
MMC Interface Probe Other: _____

Flow Rate: 100 mL/min @ 1200

Pump Depth: 24'

Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water
1203	20.7	6.71	530	19	0.45	-103	300	9.71
1206	20.8	6.80	532	13	0.35	-92	600	9.72
1209	20.6	6.87	533	9	0.27	-85	900	9.72
1212	20.7	6.90	532	10	0.27	-82	1200	9.73
1215	20.8	6.92	533	9	0.26	-84	1500	9.74

Did well dewater? Yes (No) Amount actually evacuated: 1500

Sampling Time: 1220 Sampling Date: 8-25-16

Sample I.D.: AR-3 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: see COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME 731 W. MACARTHUR / OAKLAND				PROJECT NUMBER 160825-CK1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI Pro Plus	12J101702	8-25-16 @ 0600	pH 4.00 7.00 10.00	4.02 7.01 10.00	X	26.1°C	KS
			Cond 3400	3702	X	26.2°C	KS
			ORP 231	220.>	X	26.6°C	KS

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME 731 W. MACARTHUR, OAKLAND				PROJECT NUMBER 160825-CV1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI PRO PLUS	14A100545	8/25/16 0700	3900 conduct.	3896	Y		CM
"	"	"	DO 100%	99.4%			
"	"	"	ORP 240.0	240.9	Y	17°C	CM
"	"	"	7.00 pH 10.00 4.00	7.01 10.01 3.98	Y		CM

ARCADIS Design & Consultancy for natural and built assets

Chain of Custody Record

Page ____ of ____

ARCADIS Project Name: CA 4931

Req Due Date (mm/dd/yy): Standard TAT **Rush TAT:** Yes ____ No x

Lab Work Order Number: ____

Lab Name: Test America	Facility Address: 731 W. Macarthur Blvd.	Consultant/Contractor: Blaine Tech Services, Inc.
Lab Address: 1220 Quarry Lane, Pleasanton, CA, 94566	City, State, ZIP Code: Oakland, CA	Blaine Tech Project No: ARCADIS/BP-4931
Lab PM: Dimple Sharma	Lead Regulatory Agency: Alameda County Env. Health Svcs	Consultant/Contractor Address: 1680 Rogers Ave., San Jose, CA 95112
Lab Phone: 925.484.1919	California Global ID No.: T0600100110	Consultant/Contractor PM: Michael Ninokata
Lab Shipping Accnt:	ARCADIS Project No: GP09BPNA.C110	Phone: 408.573.0555 x202
Lab Bottle Order No:	ARCADIS PM/ Phone: Jamey Peterson	Email EDD To: jamey.peterson@arcadis.com
Other Info:	Email: jamey.peterson@arcadis.com	Invoice To: ARCADIS X Contractor ____

Report Type & QC Level: Standard x Full Data Package ____

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Water / Liquid	Air / Vapor		No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: GRO 8260B	BTEX 8260B	MTBE 8260B	(5) Oxygenates 8260B	1,2-DCA, EDB 8260B	Ethanol 8260B					Comments
	TB-4931-08252016	8/25/16	0830		X			2				X			X	X	X	X	X	X					ON HOLD
	A-2	↓	1152		X			3				X					X								
	A-3		1117		X			3				X					X								
	A-4		1230		X			3				X			X	X	X	X	X	X					
	A-5		1130		X			3				X			X		X								
	A-7		1102		X			6				X					X								
	A-8		1310		X			3				X			X	X	X	X	X	X					
	A-10		1302		X			3				X					X								
	A-12		1047		X			3				X			X	X	X	X	X	X					
	AR-1	↓	1200		X			3				X			X	X	X	X	X	X					

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: Corey Kilpatrick / Kris Kubota

Sampler's Company: Blaine Tech Services

Shipment Method: Ship Date:

Shipment Tracking No:

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[signature] / BTS	8/25/16	1600	[signature] / BTS (S.C.)	8/25/16	1600

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ______ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

ARCADIS Design & Consultancy for natural and built assets

Chain of Custody Record

ARCADIS Project Name: CA 4931

Req Due Date (mm/dd/yy): Standard TAT Rush TAT: Yes ____ No ____

Lab Work Order Number:

Lab Name: Test America	Facility Address: 731 W. Macarthur Blvd.	Consultant/Contractor: Blaine Tech Services, Inc.
Lab Address: 1220 Quarry Lane, Pleasanton, CA, 94566	City, State, ZIP Code: Oakland, CA	Blaine Tech Project No: ARCADIS/BP-4931
Lab PM: Dimple Sharma	Lead Regulatory Agency: Alameda County Env. Health Svcs	Consultant/Contractor Address: 1680 Rogers Ave., San Jose, CA 95112
Lab Phone: 925.484.1919	California Global ID No.: T0600100110	Consultant/Contractor PM: Michael Ninokata
Lab Shipping Accnt:	ARCADIS Project No: GP09BPNA.C110	Phone: 408.573.0555 x202
Lab Bottle Order No:	ARCADIS PM/ Phone: Jamey Peterson	Email EDD To: jamey.peterson@arcadis.com
Other Info:	Email: jamey.peterson@arcadis.com	Invoice To: ARCADIS X Contractor ____

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO 8260B	BTEX 8260B	MTBE 8260B	(5) Oxygenates 8260B	1,2-DCA, EDB 8260B	Ethanol 8260B				
	AR-3	8/25/16	1220		X			3				X		X	X	X	X	X	X				

Report Type & QC Level

Standard X

Full Data Package ____

Comments

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: Curtis Kupstrich / Kris Kubota

Sampler's Company: Blaine Tech Services

Shipment Method: Ship Date:

Shipment Tracking No:

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
/ BTS	8/25/16	1600	/ BTS (S.C.)	8/25/16	1600

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

ATTACHMENT 3

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: 720-71162-1
Client Project/Site: BP #4931, Oakland

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

Attn: Hollis Phillips

Authorized for release by:
4/4/2016 5:34:47 PM

Dimple Sharma, Senior Project Manager
(925)484-1919
dimple.sharma@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Job ID: 720-71162-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-71162-1

Comments
No additional comments.

Receipt
The samples were received on 3/28/2016 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.3º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

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

TestAmerica Job ID: 720-71162-1

Client Sample ID: A-3 — Lab Sample ID: 720-71162-1

No Detections.

Client Sample ID: A-4 — Lab Sample ID: 720-71162-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	12		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Benzene	1.1		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	300		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	440		20		ug/L	1		8260B/CA_LUFT MS	Total/NA
TAME	3.3		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: A-5 — Lab Sample ID: 720-71162-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.80		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: A-8 — Lab Sample ID: 720-71162-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	6.7		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Benzene	110		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	1700		250		ug/L	5		8260B/CA_LUFT MS	Total/NA
TAME	5.4		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA

Client Sample ID: AR-1 — Lab Sample ID: 720-71162-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	2.0		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	290		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	220		20		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: AR-2 — Lab Sample ID: 720-71162-6

No Detections.

Client Sample ID: AR-3 — Lab Sample ID: 720-71162-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.55		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 720-71162-1

Client Sample ID: A-3
Date Collected: 03/25/16 09:07
Date Received: 03/28/16 16:30

Lab Sample ID: 720-71162-1
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			03/31/16 11:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*85*		*67 - 130*		*03/31/16 11:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*72 - 130*		*03/31/16 11:18*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*		*03/31/16 11:18*	*1*

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

TestAmerica Job ID: 720-71162-1

Client Sample ID: A-4
Date Collected: 03/25/16 10:56
Date Received: 03/28/16 16:30

Lab Sample ID: 720-71162-2
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**12**		0.50		ug/L			04/02/16 20:10	1
Benzene	**1.1**		0.50		ug/L			04/02/16 20:10	1
EDB	ND		0.50		ug/L			04/02/16 20:10	1
1,2-DCA	ND		0.50		ug/L			04/02/16 20:10	1
Ethylbenzene	ND		0.50		ug/L			04/02/16 20:10	1
Toluene	ND		0.50		ug/L			04/02/16 20:10	1
Xylenes, Total	ND		1.0		ug/L			04/02/16 20:10	1
Gasoline Range Organics (GRO) -C6-C12	**300**		50		ug/L			04/02/16 20:10	1
TBA	**440**		20		ug/L			04/02/16 20:10	1
Ethanol	ND		500		ug/L			04/02/16 20:10	1
DIPE	ND		0.50		ug/L			04/02/16 20:10	1
TAME	**3.3**		0.50		ug/L			04/02/16 20:10	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/02/16 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*67 - 130*		*04/02/16 20:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*72 - 130*		*04/02/16 20:10*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*		*04/02/16 20:10*	*1*

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

TestAmerica Job ID: 720-71162-1

Client Sample ID: A-5
Date Collected: 03/25/16 11:27
Date Received: 03/28/16 16:30

Lab Sample ID: 720-71162-3
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	**0.80**		0.50		ug/L			03/31/16 12:46	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			03/31/16 12:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*83*		*67 - 130*		*03/31/16 12:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*		*03/31/16 12:46*	*1*
Toluene-d8 (Surr)	*88*		*70 - 130*		*03/31/16 12:46*	*1*

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

TestAmerica Job ID: 720-71162-1

Client Sample ID: A-8
Date Collected: 03/25/16 09:14
Date Received: 03/28/16 16:30

Lab Sample ID: 720-71162-4
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**6.7**		2.5		ug/L			04/02/16 20:39	5
Benzene	**110**		2.5		ug/L			04/02/16 20:39	5
EDB	ND		2.5		ug/L			04/02/16 20:39	5
1,2-DCA	ND		2.5		ug/L			04/02/16 20:39	5
Ethylbenzene	ND		2.5		ug/L			04/02/16 20:39	5
Toluene	ND		2.5		ug/L			04/02/16 20:39	5
Xylenes, Total	ND		5.0		ug/L			04/02/16 20:39	5
Gasoline Range Organics (GRO) -C6-C12	**1700**		250		ug/L			04/02/16 20:39	5
TBA	ND		100		ug/L			04/02/16 20:39	5
Ethanol	ND		2500		ug/L			04/02/16 20:39	5
DIPE	ND		2.5		ug/L			04/02/16 20:39	5
TAME	**5.4**		2.5		ug/L			04/02/16 20:39	5
Ethyl t-butyl ether	ND		2.5		ug/L			04/02/16 20:39	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*67 - 130*		*04/02/16 20:39*	*5*
1,2-Dichloroethane-d4 (Surr)	*90*		*72 - 130*		*04/02/16 20:39*	*5*
Toluene-d8 (Surr)	*90*		*70 - 130*		*04/02/16 20:39*	*5*

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

TestAmerica Job ID: 720-71162-1

Client Sample ID: AR-1
Date Collected: 03/25/16 10:25
Date Received: 03/28/16 16:30

Lab Sample ID: 720-71162-5
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**2.0**		0.50		ug/L			04/02/16 18:42	1
Benzene	ND		0.50		ug/L			04/02/16 18:42	1
EDB	ND		0.50		ug/L			04/02/16 18:42	1
1,2-DCA	ND		0.50		ug/L			04/02/16 18:42	1
Ethylbenzene	ND		0.50		ug/L			04/02/16 18:42	1
Toluene	ND		0.50		ug/L			04/02/16 18:42	1
Xylenes, Total	ND		1.0		ug/L			04/02/16 18:42	1
Gasoline Range Organics (GRO) -C6-C12	**290**		50		ug/L			04/02/16 18:42	1
TBA	**220**		20		ug/L			04/02/16 18:42	1
Ethanol	ND		500		ug/L			04/02/16 18:42	1
DIPE	ND		0.50		ug/L			04/02/16 18:42	1
TAME	ND		0.50		ug/L			04/02/16 18:42	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/02/16 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*77*		*67 - 130*		*04/02/16 18:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*72 - 130*		*04/02/16 18:42*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*04/02/16 18:42*	*1*

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

TestAmerica Job ID: 720-71162-1

Client Sample ID: AR-2
Date Collected: 03/25/16 09:41
Date Received: 03/28/16 16:30

Lab Sample ID: 720-71162-6
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			04/02/16 19:12	1
Benzene	ND		0.50		ug/L			04/02/16 19:12	1
EDB	ND		0.50		ug/L			04/02/16 19:12	1
1,2-DCA	ND		0.50		ug/L			04/02/16 19:12	1
Ethylbenzene	ND		0.50		ug/L			04/02/16 19:12	1
Toluene	ND		0.50		ug/L			04/02/16 19:12	1
Xylenes, Total	ND		1.0		ug/L			04/02/16 19:12	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			04/02/16 19:12	1
TBA	ND		20		ug/L			04/02/16 19:12	1
Ethanol	ND		500		ug/L			04/02/16 19:12	1
DIPE	ND		0.50		ug/L			04/02/16 19:12	1
TAME	ND		0.50		ug/L			04/02/16 19:12	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/02/16 19:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*82*		*67 - 130*		*04/02/16 19:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*		*04/02/16 19:12*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*		*04/02/16 19:12*	*1*

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

TestAmerica Job ID: 720-71162-1

Client Sample ID: AR-3
Date Collected: 03/25/16 10:48
Date Received: 03/28/16 16:30

Lab Sample ID: 720-71162-7
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**0.55**		0.50		ug/L			04/02/16 19:41	1
Benzene	ND		0.50		ug/L			04/02/16 19:41	1
EDB	ND		0.50		ug/L			04/02/16 19:41	1
1,2-DCA	ND		0.50		ug/L			04/02/16 19:41	1
Ethylbenzene	ND		0.50		ug/L			04/02/16 19:41	1
Toluene	ND		0.50		ug/L			04/02/16 19:41	1
Xylenes, Total	ND		1.0		ug/L			04/02/16 19:41	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			04/02/16 19:41	1
TBA	ND		20		ug/L			04/02/16 19:41	1
Ethanol	ND		500		ug/L			04/02/16 19:41	1
DIPE	ND		0.50		ug/L			04/02/16 19:41	1
TAME	ND		0.50		ug/L			04/02/16 19:41	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/02/16 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*87*		*67 - 130*		*04/02/16 19:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*72 - 130*		*04/02/16 19:41*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*		*04/02/16 19:41*	*1*

Surrogate Summary

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

TestAmerica Job ID: 720-71162-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(67-130)	(72-130)	(70-130)
720-71162-1	A-3	85	90	89
720-71162-1 MS	A-3	90	93	94
720-71162-1 MSD	A-3	88	91	94
720-71162-2	A-4	91	98	92
720-71162-3	A-5	83	96	88
720-71162-4	A-8	95	90	90
720-71162-5	AR-1	77	90	95
720-71162-5 MS	AR-1	108	89	95
720-71162-5 MSD	AR-1	108	93	96
720-71162-6	AR-2	82	93	93
720-71162-7	AR-3	87	90	89
LCS 720-199670/6	Lab Control Sample	90	91	92
LCS 720-199670/8	Lab Control Sample	90	93	94
LCS 720-199849/5	Lab Control Sample	88	88	92
LCS 720-199849/7	Lab Control Sample	92	94	92
LCSD 720-199670/7	Lab Control Sample Dup	91	92	92
LCSD 720-199670/9	Lab Control Sample Dup	85	95	92
LCSD 720-199849/6	Lab Control Sample Dup	89	95	92
LCSD 720-199849/8	Lab Control Sample Dup	89	92	93
MB 720-199670/5	Method Blank	85	92	89
MB 720-199849/4	Method Blank	86	92	90

Surrogate Legend

BFB = 4-Bromofluorobenzene

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-199670/5
Matrix: Water
Analysis Batch: 199670

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			03/31/16 08:52	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			03/31/16 08:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*85*		*67 - 130*		*03/31/16 08:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*72 - 130*		*03/31/16 08:52*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*		*03/31/16 08:52*	*1*

Lab Sample ID: LCS 720-199670/6
Matrix: Water
Analysis Batch: 199670

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	20.9		ug/L		84	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*90*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*91*		*72 - 130*
Toluene-d8 (Surr)	*92*		*70 - 130*

Lab Sample ID: LCS 720-199670/8
Matrix: Water
Analysis Batch: 199670

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	471		ug/L		94	58 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*90*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*

Lab Sample ID: LCSD 720-199670/7
Matrix: Water
Analysis Batch: 199670

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	22.3		ug/L		89	62 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*91*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*92*		*72 - 130*
Toluene-d8 (Surr)	*92*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-199670/9
Matrix: Water
Analysis Batch: 199670

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	474		ug/L		95	58 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*85*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*95*		*72 - 130*
Toluene-d8 (Surr)	*92*		*70 - 130*

Lab Sample ID: 720-71162-1 MS
Matrix: Water
Analysis Batch: 199670

Client Sample ID: A-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methyl tert-butyl ether	ND		25.0	23.1		ug/L		92	60 - 138		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*90*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*

Lab Sample ID: 720-71162-1 MSD
Matrix: Water
Analysis Batch: 199670

Client Sample ID: A-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	ND		25.0	21.9		ug/L		87	60 - 138	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*91*		*72 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*

Lab Sample ID: MB 720-199849/4
Matrix: Water
Analysis Batch: 199849

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			04/02/16 10:23	1
Benzene	ND		0.50		ug/L			04/02/16 10:23	1
EDB	ND		0.50		ug/L			04/02/16 10:23	1
1,2-DCA	ND		0.50		ug/L			04/02/16 10:23	1
Ethylbenzene	ND		0.50		ug/L			04/02/16 10:23	1
Toluene	ND		0.50		ug/L			04/02/16 10:23	1
Xylenes, Total	ND		1.0		ug/L			04/02/16 10:23	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			04/02/16 10:23	1
TBA	ND		20		ug/L			04/02/16 10:23	1
Ethanol	ND		500		ug/L			04/02/16 10:23	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-199849/4
Matrix: Water
Analysis Batch: 199849

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIPE	ND		0.50		ug/L			04/02/16 10:23	1
TAME	ND		0.50		ug/L			04/02/16 10:23	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/02/16 10:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*86*		*67 - 130*		*04/02/16 10:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*72 - 130*		*04/02/16 10:23*	*1*
Toluene-d8 (Surr)	*90*		*70 - 130*		*04/02/16 10:23*	*1*

Lab Sample ID: LCS 720-199849/5
Matrix: Water
Analysis Batch: 199849

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MTBE	25.0	22.7		ug/L		91	62 - 130
Benzene	25.0	23.7		ug/L		95	79 - 130
EDB	25.0	24.4		ug/L		98	70 - 130
1,2-DCA	25.0	23.0		ug/L		92	61 - 132
Ethylbenzene	25.0	23.9		ug/L		95	80 - 120
Toluene	25.0	23.8		ug/L		95	78 - 120
m-Xylene & p-Xylene	25.0	24.1		ug/L		96	70 - 142
o-Xylene	25.0	23.5		ug/L		94	70 - 130
TBA	250	259		ug/L		103	70 - 130
Ethanol	1000	1250		ug/L		125	31 - 216
DIPE	25.0	26.1		ug/L		104	69 - 134
TAME	25.0	22.9		ug/L		92	79 - 130
Ethyl t-butyl ether	25.0	23.7		ug/L		95	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*88*		*72 - 130*
Toluene-d8 (Surr)	*92*		*70 - 130*

Lab Sample ID: LCS 720-199849/7
Matrix: Water
Analysis Batch: 199849

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	511		ug/L		102	58 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*94*		*72 - 130*
Toluene-d8 (Surr)	*92*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-199849/6
Matrix: Water
Analysis Batch: 199849

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MTBE			25.0	23.8		ug/L		95	62 - 130	4	20
Benzene			25.0	23.9		ug/L		96	79 - 130	1	20
EDB			25.0	25.3		ug/L		101	70 - 130	4	20
1,2-DCA			25.0	23.5		ug/L		94	61 - 132	2	20
Ethylbenzene			25.0	23.6		ug/L		95	80 - 120	1	20
Toluene			25.0	23.5		ug/L		94	78 - 120	1	20
m-Xylene & p-Xylene			25.0	24.2		ug/L		97	70 - 142	1	20
o-Xylene			25.0	23.6		ug/L		94	70 - 130	1	20
TBA			250	249		ug/L		100	70 - 130	4	20
Ethanol			1000	1110		ug/L		111	31 - 216	12	30
DIPE			25.0	26.7		ug/L		107	69 - 134	2	20
TAME			25.0	24.0		ug/L		96	79 - 130	5	20
Ethyl t-butyl ether			25.0	24.9		ug/L		100	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*89*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*95*		*72 - 130*
Toluene-d8 (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 720-199849/8
Matrix: Water
Analysis Batch: 199849

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	521		ug/L		104	58 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*89*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*92*		*72 - 130*
Toluene-d8 (Surr)	*93*		*70 - 130*

Lab Sample ID: 720-71162-5 MS
Matrix: Water
Analysis Batch: 199849

Client Sample ID: AR-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
MTBE	2.0		25.0	22.3		ug/L		81	60 - 138
Benzene	ND		25.0	22.5		ug/L		90	60 - 140
EDB	ND		25.0	23.6		ug/L		94	60 - 140
1,2-DCA	ND		25.0	20.7		ug/L		83	60 - 140
Ethylbenzene	ND		25.0	22.2		ug/L		89	60 - 140
Toluene	ND		25.0	21.9		ug/L		88	60 - 140
m-Xylene & p-Xylene	ND		25.0	22.6		ug/L		91	60 - 140
o-Xylene	ND		25.0	22.1		ug/L		88	60 - 140
TBA	220		250	490		ug/L		108	60 - 140
Ethanol	ND		1000	1350		ug/L		135	60 - 140
DIPE	ND		25.0	24.8		ug/L		99	60 - 140

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-71162-5 MS
Matrix: Water
Analysis Batch: 199849

Client Sample ID: AR-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TAME	ND		25.0	21.0		ug/L		83	60 - 140
Ethyl t-butyl ether	ND		25.0	21.9		ug/L		87	60 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*108*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*89*		*72 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: 720-71162-5 MSD
Matrix: Water
Analysis Batch: 199849

Client Sample ID: AR-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MTBE	2.0		25.0	24.3		ug/L		89	60 - 138	8	20
Benzene	ND		25.0	22.0		ug/L		88	60 - 140	2	20
EDB	ND		25.0	24.5		ug/L		98	60 - 140	4	20
1,2-DCA	ND		25.0	21.5		ug/L		86	60 - 140	4	20
Ethylbenzene	ND		25.0	21.5		ug/L		86	60 - 140	3	20
Toluene	ND		25.0	21.1		ug/L		84	60 - 140	4	20
m-Xylene & p-Xylene	ND		25.0	22.1		ug/L		88	60 - 140	3	20
o-Xylene	ND		25.0	22.1		ug/L		88	60 - 140	0	20
TBA	220		250	464		ug/L		98	60 - 140	5	20
Ethanol	ND		1000	1170		ug/L		117	60 - 140	15	20
DIPE	ND		25.0	25.0		ug/L		100	60 - 140	1	20
TAME	ND		25.0	22.7		ug/L		90	60 - 140	8	20
Ethyl t-butyl ether	ND		25.0	23.0		ug/L		92	60 - 140	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*108*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

GC/MS VOA

Analysis Batch: 199670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-71162-1	A-3	Total/NA	Water	8260B/CA_LUFT MS	
720-71162-1 MS	A-3	Total/NA	Water	8260B/CA_LUFT MS	
720-71162-1 MSD	A-3	Total/NA	Water	8260B/CA_LUFT MS	
720-71162-3	A-5	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-199670/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-199670/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-199670/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-199670/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-199670/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 199849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-71162-2	A-4	Total/NA	Water	8260B/CA_LUFT MS	
720-71162-4	A-8	Total/NA	Water	8260B/CA_LUFT MS	
720-71162-5	AR-1	Total/NA	Water	8260B/CA_LUFT MS	
720-71162-5 MS	AR-1	Total/NA	Water	8260B/CA_LUFT MS	
720-71162-5 MSD	AR-1	Total/NA	Water	8260B/CA_LUFT MS	
720-71162-6	AR-2	Total/NA	Water	8260B/CA_LUFT MS	
720-71162-7	AR-3	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-199849/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-199849/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-199849/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-199849/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-199849/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Lab Chronicle

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

TestAmerica Job ID: 720-71162-1

Client Sample ID: A-3
Lab Sample ID: 720-71162-1
Date Collected: 03/25/16 09:07
Matrix: Water
Date Received: 03/28/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	199670	03/31/16 11:18	LPL	TAL PLS

Client Sample ID: A-4
Lab Sample ID: 720-71162-2
Date Collected: 03/25/16 10:56
Matrix: Water
Date Received: 03/28/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	199849	04/02/16 20:10	JRM	TAL PLS

Client Sample ID: A-5
Lab Sample ID: 720-71162-3
Date Collected: 03/25/16 11:27
Matrix: Water
Date Received: 03/28/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	199670	03/31/16 12:46	LPL	TAL PLS

Client Sample ID: A-8
Lab Sample ID: 720-71162-4
Date Collected: 03/25/16 09:14
Matrix: Water
Date Received: 03/28/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		5	199849	04/02/16 20:39	JRM	TAL PLS

Client Sample ID: AR-1
Lab Sample ID: 720-71162-5
Date Collected: 03/25/16 10:25
Matrix: Water
Date Received: 03/28/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	199849	04/02/16 18:42	JRM	TAL PLS

Client Sample ID: AR-2
Lab Sample ID: 720-71162-6
Date Collected: 03/25/16 09:41
Matrix: Water
Date Received: 03/28/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	199849	04/02/16 19:12	JRM	TAL PLS

Lab Chronicle

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

TestAmerica Job ID: 720-71162-1

Client Sample ID: AR-3
Date Collected: 03/25/16 10:48
Date Received: 03/28/16 16:30

Lab Sample ID: 720-71162-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	199849	04/02/16 19:41	JRM	TAL PLS

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 720-71162-1

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	01-31-17

Method Summary

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

TestAmerica Job ID: 720-71162-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS

Protocol References:

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 720-71162-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-71162-1	A-3	Water	03/25/16 09:07	03/28/16 16:30
720-71162-2	A-4	Water	03/25/16 10:56	03/28/16 16:30
720-71162-3	A-5	Water	03/25/16 11:27	03/28/16 16:30
720-71162-4	A-8	Water	03/25/16 09:14	03/28/16 16:30
720-71162-5	AR-1	Water	03/25/16 10:25	03/28/16 16:30
720-71162-6	AR-2	Water	03/25/16 09:41	03/28/16 16:30
720-71162-7	AR-3	Water	03/25/16 10:48	03/28/16 16:30

720-71162

167559

Chain of Custody Record

ARCADIS Design & Consultancy for natural and built assets

ARCADIS Project Name: CA 4931 **Req Due Date (mm/dd/yy):** Standard TAT **Rush TAT:** Yes ___ No x

Lab Work Order Number:

4/4/2016

Lab Name:	Test America	Facility Address:	731 W. Macarthur Blvd.	Consultant/Contractor:	Blaine Tech Services, Inc.
Lab Address:	1220 Quarry Lane, Pleasanton, CA, 94566	City, State, ZIP Code	Oakland, CA	Blaine Tech Project No.	ARCADIS/BP-4931
Lab PM:	Dimple Sharma	Lead Regulatory Agency:	Alameda County Env. Health Svcs	Consultant/Contractor Address:	1680 Rogers Ave., San Jose, CA 95112
Lab Phone.	925.484.1919	California Global ID No.:	T0600100110	Consultant/Contractor PM:	Michael Ninokata
Lab Shipping Accnt:		ARCADIS Project No:	GP09BPNA.C110	Phone	408.573 0555 x202
Lab Bottle Order No:		ARCADIS PM/ Phone:	Jamey Peterson	Email EDD To:	jamey.peterson@arcadis.com
Other Info:		Email:	jamey.peterson@arcadis.com	Invoice To:	ARCADIS X Contractor ___

720-71162 Chain of Custody

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	GRO 8260B	BTEX 8260B	MTBE 8260B	(6) Oxygenates 8260B	1,2-DCA, EDB 8260B	Ethanol 8260B	Report Type & QC Level
	A-3				X		3				X				X				
	A-4				X		3				X		X	X	X	X	X	X	
	A-5				X		3				X		X		X				
	A-8				X		3				X		X	X	X	X	X	X	
	AR-1				X		3				X		X	X	X	X	X	X	
	AR-2				X		3				X		X	X	X	X	X	X	
	AR-3				X		3				X		X	X	X	X	X	X	
	TB-4931-03252016				X		2				X		X	X	X	X	X	X	On Hold

0.3 °C

Comments

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Standard x

Full Data Package ___

Sampler's Name:	Chris Kubota, Matthew Is	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Blaine Tech	BTS	3-25-16	1300	BTS (Sample Cust)	3-25-16	1300
Shipment Method:	Ship Date:	BTS (Sample Custodian)	3/25/16	1100		3/25/16	1100
Shipment Tracking No.			3/28/16	1630		3/28/16	1630

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank. Yes / No | MS/MSD Sample Submitted. Yes / No

ARCADIS COC Rev. 06282012

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-71162-1

Login Number: 71162

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Arauz, Dennis

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 (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	No date or time on COC, logged in per container labels.
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	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

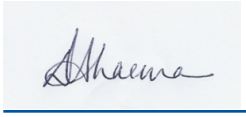
ANALYTICAL REPORT

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

TestAmerica Job ID: 720-74171-1
Client Project/Site: BP #4931, Oakland

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

Attn: Jamey Peterson



Authorized for release by:
9/8/2016 4:04:44 PM

Dimple Sharma, Senior Project Manager
(925)484-1919
dimple.sharma@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.

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Job ID: 720-74171-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-74171-1

Comments
No additional comments.

Receipt
The samples were received on 8/26/2016 2:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.6º C.

Receipt Exceptions

Received 6 voas for A-7. No QC or other analyses requested.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-2 — Lab Sample ID: 720-74171-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	2.1		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: A-3 — Lab Sample ID: 720-74171-3

No Detections.

Client Sample ID: A-4 — Lab Sample ID: 720-74171-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	41		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	0.55		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	1600		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	1400		20		ug/L	1		8260B/CA_LUFT MS	Total/NA
TAME	13		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: A-5 — Lab Sample ID: 720-74171-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	7.0		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: A-7 — Lab Sample ID: 720-74171-6

No Detections.

Client Sample ID: A-8 — Lab Sample ID: 720-74171-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	19		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Benzene	230		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Toluene	4.4		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	2200		250		ug/L	5		8260B/CA_LUFT MS	Total/NA
TBA	240		100		ug/L	5		8260B/CA_LUFT MS	Total/NA
TAME	15		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA

Client Sample ID: A-10 — Lab Sample ID: 720-74171-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	16		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: A-12 — Lab Sample ID: 720-74171-9

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-12 (Continued) — Lab Sample ID: 720-74171-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	2.1		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TAME	0.53		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: AR-1 — Lab Sample ID: 720-74171-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	2.9		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	410		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	210		20		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: AR-3 — Lab Sample ID: 720-74171-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	1.9		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TAME	0.53		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-2
Date Collected: 08/25/16 11:52
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-2
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	2.1		0.50		ug/L			09/02/16 00:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*67 - 130*		*09/02/16 00:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*		*09/02/16 00:47*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/02/16 00:47*	*1*

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-3
Date Collected: 08/25/16 11:17
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-3
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			09/02/16 01:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*67 - 130*		*09/02/16 01:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*		*09/02/16 01:16*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/02/16 01:16*	*1*

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-4
Date Collected: 08/25/16 12:30
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-4
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**41**		0.50		ug/L			09/02/16 01:44	1
Benzene	ND		0.50		ug/L			09/02/16 01:44	1
EDB	ND		0.50		ug/L			09/02/16 01:44	1
1,2-DCA	ND		0.50		ug/L			09/02/16 01:44	1
Ethylbenzene	ND		0.50		ug/L			09/02/16 01:44	1
Toluene	**0.55**		0.50		ug/L			09/02/16 01:44	1
Xylenes, Total	ND		1.0		ug/L			09/02/16 01:44	1
Gasoline Range Organics (GRO) -C6-C12	**1600**		50		ug/L			09/02/16 01:44	1
TBA	**1400**		20		ug/L			09/02/16 01:44	1
Ethanol	ND		500		ug/L			09/02/16 01:44	1
DIPE	ND		0.50		ug/L			09/02/16 01:44	1
TAME	**13**		0.50		ug/L			09/02/16 01:44	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/02/16 01:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*67 - 130*		*09/02/16 01:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*		*09/02/16 01:44*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*09/02/16 01:44*	*1*

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-5
Date Collected: 08/25/16 11:30
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-5
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**7.0**		0.50		ug/L			09/02/16 02:13	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/02/16 02:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*67 - 130*		*09/02/16 02:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 130*		*09/02/16 02:13*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/02/16 02:13*	*1*

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-7
Date Collected: 08/25/16 11:02
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-6
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			09/02/16 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*09/02/16 02:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*		*09/02/16 02:42*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/02/16 02:42*	*1*

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-8
Date Collected: 08/25/16 13:10
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-7
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**19**		2.5		ug/L			09/02/16 03:11	5
Benzene	**230**		2.5		ug/L			09/02/16 03:11	5
EDB	ND		2.5		ug/L			09/02/16 03:11	5
1,2-DCA	ND		2.5		ug/L			09/02/16 03:11	5
Ethylbenzene	ND		2.5		ug/L			09/02/16 03:11	5
Toluene	**4.4**		2.5		ug/L			09/02/16 03:11	5
Xylenes, Total	ND		5.0		ug/L			09/02/16 03:11	5
Gasoline Range Organics (GRO) -C6-C12	**2200**		250		ug/L			09/02/16 03:11	5
TBA	**240**		100		ug/L			09/02/16 03:11	5
Ethanol	ND		2500		ug/L			09/02/16 03:11	5
DIPE	ND		2.5		ug/L			09/02/16 03:11	5
TAME	**15**		2.5		ug/L			09/02/16 03:11	5
Ethyl t-butyl ether	ND		2.5		ug/L			09/02/16 03:11	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*67 - 130*		*09/02/16 03:11*	*5*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*		*09/02/16 03:11*	*5*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/02/16 03:11*	*5*

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-10
Date Collected: 08/25/16 13:02
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-8
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	16		0.50		ug/L			09/02/16 03:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*67 - 130*		*09/02/16 03:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 130*		*09/02/16 03:40*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/02/16 03:40*	*1*

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-12
Date Collected: 08/25/16 10:47
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-9
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**2.1**		0.50		ug/L			09/02/16 04:09	1
Benzene	ND		0.50		ug/L			09/02/16 04:09	1
EDB	ND		0.50		ug/L			09/02/16 04:09	1
1,2-DCA	ND		0.50		ug/L			09/02/16 04:09	1
Ethylbenzene	ND		0.50		ug/L			09/02/16 04:09	1
Toluene	ND		0.50		ug/L			09/02/16 04:09	1
Xylenes, Total	ND		1.0		ug/L			09/02/16 04:09	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/02/16 04:09	1
TBA	ND		20		ug/L			09/02/16 04:09	1
Ethanol	ND		500		ug/L			09/02/16 04:09	1
DIPE	ND		0.50		ug/L			09/02/16 04:09	1
TAME	**0.53**		0.50		ug/L			09/02/16 04:09	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/02/16 04:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*09/02/16 04:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*		*09/02/16 04:09*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/02/16 04:09*	*1*

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: AR-1
Date Collected: 08/25/16 12:00
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-10
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**2.9**		0.50		ug/L			09/02/16 04:38	1
Benzene	ND		0.50		ug/L			09/02/16 04:38	1
EDB	ND		0.50		ug/L			09/02/16 04:38	1
1,2-DCA	ND		0.50		ug/L			09/02/16 04:38	1
Ethylbenzene	ND		0.50		ug/L			09/02/16 04:38	1
Toluene	ND		0.50		ug/L			09/02/16 04:38	1
Xylenes, Total	ND		1.0		ug/L			09/02/16 04:38	1
Gasoline Range Organics (GRO) -C6-C12	**410**		50		ug/L			09/02/16 04:38	1
TBA	**210**		20		ug/L			09/02/16 04:38	1
Ethanol	ND		500		ug/L			09/02/16 04:38	1
DIPE	ND		0.50		ug/L			09/02/16 04:38	1
TAME	ND		0.50		ug/L			09/02/16 04:38	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/02/16 04:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*115*		*67 - 130*		*09/02/16 04:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*		*09/02/16 04:38*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*09/02/16 04:38*	*1*

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: AR-3
Date Collected: 08/25/16 12:20
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-11
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**1.9**		0.50		ug/L			09/07/16 13:32	1
Benzene	ND		0.50		ug/L			09/07/16 13:32	1
EDB	ND		0.50		ug/L			09/07/16 13:32	1
1,2-DCA	ND		0.50		ug/L			09/07/16 13:32	1
Ethylbenzene	ND		0.50		ug/L			09/07/16 13:32	1
Toluene	ND		0.50		ug/L			09/07/16 13:32	1
Xylenes, Total	ND		1.0		ug/L			09/07/16 13:32	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/07/16 13:32	1
TBA	ND		20		ug/L			09/07/16 13:32	1
Ethanol	ND		500		ug/L			09/07/16 13:32	1
DIPE	ND		0.50		ug/L			09/07/16 13:32	1
TAME	**0.53**		0.50		ug/L			09/07/16 13:32	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/07/16 13:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*67 - 130*		*09/07/16 13:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*72 - 130*		*09/07/16 13:32*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/07/16 13:32*	*1*

Surrogate Summary

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

TestAmerica Job ID: 720-74171-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(67-130)	(72-130)	(70-130)
720-74171-2	A-2	95	101	103
720-74171-3	A-3	94	101	101
720-74171-4	A-4	98	99	107
720-74171-5	A-5	94	103	101
720-74171-6	A-7	93	99	102
720-74171-7	A-8	101	99	102
720-74171-8	A-10	96	103	103
720-74171-9	A-12	93	101	101
720-74171-10	AR-1	115	101	105
720-74171-11	AR-3	100	105	99
LCS 720-208671/5	Lab Control Sample	102	102	104
LCS 720-208671/7	Lab Control Sample	102	99	104
LCS 720-208851/5	Lab Control Sample	102	99	101
LCS 720-208851/8	Lab Control Sample	106	106	103
LCSD 720-208671/6	Lab Control Sample Dup	101	96	104
LCSD 720-208671/8	Lab Control Sample Dup	100	100	105
LCSD 720-208851/6	Lab Control Sample Dup	103	102	100
LCSD 720-208851/9	Lab Control Sample Dup	103	104	101
MB 720-208671/4	Method Blank	98	102	104
MB 720-208851/4	Method Blank	101	104	101

Surrogate Legend

BFB = 4-Bromofluorobenzene
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-208671/4
Matrix: Water
Analysis Batch: 208671

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			09/01/16 20:27	1
Benzene	ND		0.50		ug/L			09/01/16 20:27	1
EDB	ND		0.50		ug/L			09/01/16 20:27	1
1,2-DCA	ND		0.50		ug/L			09/01/16 20:27	1
Ethylbenzene	ND		0.50		ug/L			09/01/16 20:27	1
Toluene	ND		0.50		ug/L			09/01/16 20:27	1
Xylenes, Total	ND		1.0		ug/L			09/01/16 20:27	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/01/16 20:27	1
TBA	ND		20		ug/L			09/01/16 20:27	1
Ethanol	ND		500		ug/L			09/01/16 20:27	1
DIPE	ND		0.50		ug/L			09/01/16 20:27	1
TAME	ND		0.50		ug/L			09/01/16 20:27	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/01/16 20:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*67 - 130*		*09/01/16 20:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*72 - 130*		*09/01/16 20:27*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/01/16 20:27*	*1*

Lab Sample ID: LCS 720-208671/5
Matrix: Water
Analysis Batch: 208671

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MTBE	25.0	29.1		ug/L		116	62 - 130
Benzene	25.0	28.0		ug/L		112	79 - 130
EDB	25.0	30.7		ug/L		123	70 - 130
1,2-DCA	25.0	27.5		ug/L		110	61 - 132
Ethylbenzene	25.0	26.8		ug/L		107	80 - 120
Toluene	25.0	26.9		ug/L		107	78 - 120
m-Xylene & p-Xylene	25.0	26.9		ug/L		108	70 - 142
o-Xylene	25.0	27.1		ug/L		108	70 - 130
TBA	250	272		ug/L		109	70 - 130
Ethanol	1000	952		ug/L		95	31 - 216
DIPE	25.0	29.0		ug/L		116	69 - 134
TAME	25.0	30.9		ug/L		123	79 - 130
Ethyl t-butyl ether	25.0	29.4		ug/L		118	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*72 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-208671/7
Matrix: Water
Analysis Batch: 208671

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C12			500	514		ug/L		103	58 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 720-208671/6
Matrix: Water
Analysis Batch: 208671

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MTBE			25.0	28.3		ug/L		113	62 - 130	3	20
Benzene			25.0	28.4		ug/L		113	79 - 130	1	20
EDB			25.0	30.3		ug/L		121	70 - 130	1	20
1,2-DCA			25.0	27.3		ug/L		109	61 - 132	1	20
Ethylbenzene			25.0	27.4		ug/L		110	80 - 120	2	20
Toluene			25.0	27.6		ug/L		110	78 - 120	3	20
m-Xylene & p-Xylene			25.0	27.4		ug/L		109	70 - 142	2	20
o-Xylene			25.0	27.3		ug/L		109	70 - 130	1	20
TBA			250	277		ug/L		111	70 - 130	2	20
Ethanol			1000	997		ug/L		100	31 - 216	5	30
DIPE			25.0	29.1		ug/L		117	69 - 134	1	20
TAME			25.0	30.3		ug/L		121	79 - 130	2	20
Ethyl t-butyl ether			25.0	29.2		ug/L		117	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 720-208671/8
Matrix: Water
Analysis Batch: 208671

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	515		ug/L		103	58 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-208851/4
Matrix: Water
Analysis Batch: 208851

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			09/07/16 10:38	1
Benzene	ND		0.50		ug/L			09/07/16 10:38	1
EDB	ND		0.50		ug/L			09/07/16 10:38	1
1,2-DCA	ND		0.50		ug/L			09/07/16 10:38	1
Ethylbenzene	ND		0.50		ug/L			09/07/16 10:38	1
Toluene	ND		0.50		ug/L			09/07/16 10:38	1
Xylenes, Total	ND		1.0		ug/L			09/07/16 10:38	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/07/16 10:38	1
TBA	ND		20		ug/L			09/07/16 10:38	1
Ethanol	ND		500		ug/L			09/07/16 10:38	1
DIPE	ND		0.50		ug/L			09/07/16 10:38	1
TAME	ND		0.50		ug/L			09/07/16 10:38	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/07/16 10:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*67 - 130*		*09/07/16 10:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*72 - 130*		*09/07/16 10:38*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/07/16 10:38*	*1*

Lab Sample ID: LCS 720-208851/5
Matrix: Water
Analysis Batch: 208851

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MTBE	25.0	24.7		ug/L		99	62 - 130
Benzene	25.0	26.7		ug/L		107	79 - 130
EDB	25.0	25.2		ug/L		101	70 - 130
1,2-DCA	25.0	25.8		ug/L		103	61 - 132
Ethylbenzene	25.0	26.1		ug/L		104	80 - 120
Toluene	25.0	26.2		ug/L		105	78 - 120
m-Xylene & p-Xylene	25.0	26.0		ug/L		104	70 - 142
o-Xylene	25.0	26.6		ug/L		106	70 - 130
TBA	250	259		ug/L		104	70 - 130
Ethanol	1000	1120		ug/L		112	31 - 216
DIPE	25.0	27.8		ug/L		111	69 - 134
TAME	25.0	25.6		ug/L		102	79 - 130
Ethyl t-butyl ether	25.0	26.6		ug/L		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-208851/8
Matrix: Water
Analysis Batch: 208851

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C12			500	454		ug/L		91	58 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*106*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 720-208851/6
Matrix: Water
Analysis Batch: 208851

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MTBE			25.0	25.9		ug/L		104	62 - 130	5	20
Benzene			25.0	26.8		ug/L		107	79 - 130	0	20
EDB			25.0	26.4		ug/L		106	70 - 130	5	20
1,2-DCA			25.0	26.7		ug/L		107	61 - 132	3	20
Ethylbenzene			25.0	26.1		ug/L		105	80 - 120	0	20
Toluene			25.0	26.5		ug/L		106	78 - 120	1	20
m-Xylene & p-Xylene			25.0	26.2		ug/L		105	70 - 142	1	20
o-Xylene			25.0	26.8		ug/L		107	70 - 130	1	20
TBA			250	258		ug/L		103	70 - 130	0	20
Ethanol			1000	1080		ug/L		108	31 - 216	4	30
DIPE			25.0	28.9		ug/L		116	69 - 134	4	20
TAME			25.0	27.0		ug/L		108	79 - 130	5	20
Ethyl t-butyl ether			25.0	27.8		ug/L		111	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*72 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 720-208851/9
Matrix: Water
Analysis Batch: 208851

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	465		ug/L		93	58 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*104*		*72 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

GC/MS VOA

Analysis Batch: 208671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-74171-2	A-2	Total/NA	Water	8260B/CA_LUFT MS	
720-74171-3	A-3	Total/NA	Water	8260B/CA_LUFT MS	
720-74171-4	A-4	Total/NA	Water	8260B/CA_LUFT MS	
720-74171-5	A-5	Total/NA	Water	8260B/CA_LUFT MS	
720-74171-6	A-7	Total/NA	Water	8260B/CA_LUFT MS	
720-74171-7	A-8	Total/NA	Water	8260B/CA_LUFT MS	
720-74171-8	A-10	Total/NA	Water	8260B/CA_LUFT MS	
720-74171-9	A-12	Total/NA	Water	8260B/CA_LUFT MS	
720-74171-10	AR-1	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-208671/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-208671/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-208671/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-208671/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-208671/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 208851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-74171-11	AR-3	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-208851/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-208851/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-208851/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-208851/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-208851/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	

Lab Chronicle

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-2
Date Collected: 08/25/16 11:52
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208671	09/02/16 00:47	JRM	TAL PLS

Client Sample ID: A-3
Date Collected: 08/25/16 11:17
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208671	09/02/16 01:16	JRM	TAL PLS

Client Sample ID: A-4
Date Collected: 08/25/16 12:30
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208671	09/02/16 01:44	JRM	TAL PLS

Client Sample ID: A-5
Date Collected: 08/25/16 11:30
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208671	09/02/16 02:13	JRM	TAL PLS

Client Sample ID: A-7
Date Collected: 08/25/16 11:02
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208671	09/02/16 02:42	JRM	TAL PLS

Client Sample ID: A-8
Date Collected: 08/25/16 13:10
Date Received: 08/26/16 14:10

Lab Sample ID: 720-74171-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		5	208671	09/02/16 03:11	JRM	TAL PLS

Lab Chronicle

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

TestAmerica Job ID: 720-74171-1

Client Sample ID: A-10

Lab Sample ID: 720-74171-8

Date Collected: 08/25/16 13:02
Matrix: Water
Date Received: 08/26/16 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208671	09/02/16 03:40	JRM	TAL PLS

Client Sample ID: A-12

Lab Sample ID: 720-74171-9

Date Collected: 08/25/16 10:47
Matrix: Water
Date Received: 08/26/16 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208671	09/02/16 04:09	JRM	TAL PLS

Client Sample ID: AR-1

Lab Sample ID: 720-74171-10

Date Collected: 08/25/16 12:00
Matrix: Water
Date Received: 08/26/16 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208671	09/02/16 04:38	JRM	TAL PLS

Client Sample ID: AR-3

Lab Sample ID: 720-74171-11

Date Collected: 08/25/16 12:20
Matrix: Water
Date Received: 08/26/16 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208851	09/07/16 13:32	LPL	TAL PLS

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 720-74171-1

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	01-31-18

Method Summary

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

TestAmerica Job ID: 720-74171-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS

Protocol References:

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 720-74171-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-74171-2	A-2	Water	08/25/16 11:52	08/26/16 14:10
720-74171-3	A-3	Water	08/25/16 11:17	08/26/16 14:10
720-74171-4	A-4	Water	08/25/16 12:30	08/26/16 14:10
720-74171-5	A-5	Water	08/25/16 11:30	08/26/16 14:10
720-74171-6	A-7	Water	08/25/16 11:02	08/26/16 14:10
720-74171-7	A-8	Water	08/25/16 13:10	08/26/16 14:10
720-74171-8	A-10	Water	08/25/16 13:02	08/26/16 14:10
720-74171-9	A-12	Water	08/25/16 10:47	08/26/16 14:10
720-74171-10	AR-1	Water	08/25/16 12:00	08/26/16 14:10
720-74171-11	AR-3	Water	08/25/16 12:20	08/26/16 14:10

ref# 170658

Chain of Custody Record

ARCADIS Project Name: CA 4931 **720-74171**

Req Due Date (mm/dd/yy): Standard TAT Rush TAT: Yes ___ No x

Lab Work Order Number:

Lab Name:	Test America	Facility Address:	731 W. Macarthur Blvd.	Consultant/Contractor:	Blaine Tech Services, Inc.
Lab Address:	1220 Quarry Lane, Pleasanton, CA, 94566	City, State, ZIP Code:	Oakland, CA	Blaine Tech Project No:	ARCADIS/BP-4931
Lab PM:	Dimple Sharma	Lead Regulatory Agency	Alameda County Env. Health Svcs	Consultant/Contractor Address:	1680 Rogers Ave., San Jose, CA 95112
Lab Phone:	925.484 1919	California Global ID No.	T0600100110	Consultant/Contractor PM:	Michael Ninokata
Lab Shipping Accnt		ARCADIS Project No:	GP09BPNA.C110	Phone:	408.573 0555 x202
Lab Bottle Order No:		ARCADIS PM/ Phone.	Jamey Peterson	Email EDD To:	jamey.peterson@arcadis.com
Other Info:		Email:	jamey.peterson@arcadis.com	Invoice To:	ARCADIS X Contractor ___

Report Type & QC Level: Standard x Full Data Package ___

5.6 °C

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Water / Liquid	Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO 8260B	BTEX 8260B	MTBE 8260B	(5) Oxygenates 8260E	1,2-DCA, EDB 8260B	Ethanol 8260B	Comments
	TB-4931-08252016	8/25/16	0830		X		2				X		X	X	X	X	X	X	ON HOLD
	A-2		1152		X		3				X				X				
	A-3		1117		X		3				X				X				
	A-4		1230		X		3				X		X	X	X	X	X	X	
	A-5		1130		X		3				X		X		X				
	A-7		1102		X		6				X				X				
	A-8		1310		X		3				X		X	X	X	X	X	X	
	A-10		1302		X		3				X				X				
	A-12		1047		X		3				X		X	X	X	X	X	X	
	AR-1	↓	1200		X		3				X		X	X	X	X	X	X	

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

720-74171 Chain of Custody

Sampler's Name: Corey Kilpatrick / Kris Kubota

Sampler's Company: Blaine Tech Services

Shipment Method: Ship Date:

Shipment Tracking No:

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[illegible] / BTS	8/25/16	1600	[illegible] / BTS (S.C.)	8/25/16	1600
[illegible] (Sample Custodian)	8/26/16	1000	[illegible]	8/26/16	1000
[illegible]	8/26/16	1410	[illegible]	8/26/16	1410

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ______ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

ARCADIS COC Rev. 06282012

9/8/2016

Chain of Custody Record

ARCADIS Design & Consultancy for natural and built assets

ARCADIS Project Name: CA 4931

Req Due Date (mm/dd/yy): Standard TAT Rush TAT: Yes ___ No x

Lab Work Order Number: 720-74171

9/8/2016

Lab Name:	Test America	Facility Address:	731 W. Macarthur Blvd.	Consultant/Contractor:	Blaine Tech Services, Inc
Lab Address:	1220 Quarry Lane, Pleasanton, CA, 94566	City, State, ZIP Code:	Oakland, CA	Blaine Tech Project No.	ARCADIS/BP-4931
Lab PM:	Dimple Sharma	Lead Regulatory Agency:	Alameda County Env Health Svcs	Consultant/Contractor Address:	1680 Rogers Ave., San Jose, CA 95112
Lab Phone:	925.484 1919	California Global ID No.:	T0600100110	Consultant/Contractor PM:	Michael Ninokata
Lab Shipping Accnt:		ARCADIS Project No	GP09BPNA.C110	Phone:	408.573.0555 x202
Lab Bottle Order No:		ARCADIS PM/ Phone:	Jamey Peterson	Email EDD To.	jamey.peterson@arcadis.com
Other Info:		Email:	jamey.peterson@arcadis.com	Invoice To:	ARCADIS X Contractor ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: GRO 8260B	BTEX 8260B	MTBE 8260B	(5) Oxygenates 8260B	1,2-DCA, EDB 8260B	Ethanol 8260B				
	AR-3	8/25/16	1220		4			3				X			X	X	X	X	X	X				

Report Type & QC Level: Standard x; Full Data Package ___

Comments

Note If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Cooper Kurtzman / Kris Kubota						
Sampler's Company: Blaine Tech Services	/BTS	8/25/16	1600	/BTS (S.C.)	8/25/16	1600
Shipment Method:	(Sample Custodian)	8/26/16	1000		8/26/16	1000
Shipment Tracking No:		8/26/16	1410		8/26/16	1410

Special Instructions:

THIS LINE - LAB USE ONLY. Custody Seals In Place: Yes / No | Temp Blank. Yes / No | Cooler Temp on Receipt. _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-74171-1

Login Number: 74171
List Number: 1
Creator: Mullen, Joan

List Source: TestAmerica Pleasanton

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.	False	
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 (excluding tests with immediate HTs)	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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www.arcadis.com

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:	**2016 Annual Groundwater Monitoring Report 102716**
Report Type:	**Monitoring Report - Annually**
Report Date:	**10/27/2016**
Facility Global ID:	**T0600100110**
Facility Name:	**ARCO #04931**
File Name:	**CA 4931 161027 BP - 2016 Annual GW Report.pdf**
Organization Name:	**ARCADIS**
Username:	**ARCADISBP**
IP Address:	**199.116.173.57**
Submittal Date/Time:	**10/27/2016 1:35:54 PM**
Confirmation Number:	**8961707770**