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By Alameda County Environmental Health 12:48 pm, Oct 04, 2017

Mr. Keith Nowell
Alameda County LOP
1131 Harbor Bay Parkway
Alameda, California 94502

Subject:

Third Quarter 2017

Groundwater Monitoring Report

Former Atlantic Richfield Company Station #11132
3201 35th Avenue, Oakland, California 94619
Alameda County LOP Case #RO0000014
SFB-RWQCB Case #01-0227

Arcadis U.S., Inc.
1728 3rd Avenue North
Suite 300
Birmingham
AL 35203
Tel 205 930 5700
Fax 205 930 5707
www.arcadis.com

Dear Mr. Nowell:

Arcadis U.S., Inc. (Arcadis) has prepared this semi-annual groundwater monitoring report (GMR) to document the results of groundwater monitoring and sampling at the former Atlantic Richfield Company (ARCO) Service Station #11132, located at 3201 35th Avenue in Oakland, California (the Site).

If you have any questions or comments regarding the contents of this report, please contact Megan Smoley at 626.590.1502 or by e-mail at Megan.Smoley@arcadis.com.

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

Sincerely,

Arcadis U.S., Inc.



Megan Smoley, P.G. No. 8614
Certified Project Manager



ENVIRONMENT

Date:
October 3, 2017

Contact:
Megan Smoley

Phone:
626.590.1502

Email:
Megan.Smoley@arcadis.com

Our ref:
GP09BPNA.C112.N0000

WORK PERFORMED DURING THE SECOND AND THIRD QUARTER 2017

- Submitted the *First Quarter 2017 Groundwater Monitoring Report* to the Alameda County Department of Environmental Health (ACDEH) on April 24, 2017.
- Submitted the *Property Foundation Survey* to ACDEH on April 24, 2017 to document the results of a foundation survey completed south of the Site to determine soil vapor sample probe installation depths.
- Revised historical groundwater flow direction on figures and in rose diagram because some figures have previously depicted the north arrow incorrectly. Uploaded revised figures as GEO_MAPS to GeoTracker per ACDEH's request on June 22, 2017.
- Submitted the *Offsite Soil Vapor and Groundwater Investigation Work Plan (Work Plan)* to ACDEH on July 21, 2017.
- Conducted semi-annual groundwater monitoring and sampling in third quarter 2017 on August 2, 2017.
- Submitted correspondence with revised figures on August 28, 2017 to address ACDEH's August 21, 2017 comments to the Work Plan.
- Acquired well permit application from the Alameda County Public Works Agency – Water Resources for monitoring well and soil vapor probe installation.
- Began compiling information needed to complete the indenture agreement with the City of Oakland Public Works Department (City).

WORK PROPOSED FOR THE FOURTH QUARTER 2017 AND FIRST QUARTER 2018

- Submit the *Third Quarter 2017 Groundwater Monitoring Report*, contained herein.
- Finalize the necessary indenture agreement and excavation and obstruction permits with the City.
- Install two offsite monitoring wells and four offsite soil vapor probes and conduct associated sampling in accordance with the Work Plan, revised figures, and comments in ACDEH's August 29, 2017 conditional approval letter.
- Conduct semi-annual groundwater monitoring and sampling in the first quarter 2018.

SITE INFORMATION

Current Phase of Project:	Groundwater Monitoring and Sampling
Frequency of Monitoring and Sampling	Semi-Annual Gauging (1/3Q): MW-1 through MW-11, OW-1 and RW-1 Semi-Annual Sampling (1/3Q): MW-1, MW-2, MW-5, MW-8, MW-9, MW-10R, MW-11, OW-1 and RW-1 Annual Sampling (1Q): MW-4 and MW-7 Annual Sampling (3Q): MW-3 and MW-6
Have Liquid Phase Hydrocarbons (LPH) Been Measured Onsite, Historically?	Yes
Historical Range in Depth to Water (DTW; feet below top of casing [btoc]):	8.63 (MW-6 1Q/2017) to 32.20 (RW-1 2Q/1994)

CURRENT QUARTER MONITORING DATA

Wells Gauged:	MW-1 through MW-11, RW-1 and OW-1
Wells Sampled:	MW-1, MW-2, MW-3, MW-5, MW-6, MW-8, MW-10R, MW-11 and RW-1. OW-1 contained LPH and was not sampled. MW-9 was inaccessible and could not be sampled.
Monitoring and Sampling Date:	August 2, 2017
LPH Measured This Quarter (thickness in feet):	3Q 2017: OW-1 (0.07)
LPH Recovered This Quarter:	None
Cumulative LPH Recovered to Date:	113.7 gallons
3Q 2017 DTW Range (feet btoc):	16.34 (MW-11) to 22.10 (OW-1)
3Q 2017 Groundwater Flow Direction and Gradient (feet/foot):	Southwest (0.004 ft/ft)

GROUNDWATER MONITORING AND SAMPLING

During the third quarter 2017 sampling event, HydraSleeves were used to collect groundwater samples at the Site. Prior to groundwater sampling, depths to water were measured to within 0.01 feet below top of casing (btoc) in all wells using an oil/water interface probe. All monitoring and sampling activities were performed by Blaine Tech Services, Inc. (Blaine Tech).

Groundwater samples were submitted under chain-of-custody protocol to ESC Lab Sciences (ESC), a California state-certified laboratory. Samples were analyzed for total petroleum hydrocarbons gasoline range organics (GRO) by EPA Method 8015, benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX), methyl tert-butyl ether (MTBE), tert-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), ethanol, 1,2-dichloroethane (1,2-DCA), and ethylene dibromide (EDB) by EPA Method 8260B.

No issues were noted by ESC during sample analysis that would have an adverse effect on the quality of the data and no issues affecting the sampling protocol were noted.

RECOMMENDATIONS

Arcadis recommends continuation of groundwater monitoring and sampling on a semi-annual or annual basis at all site monitoring well locations in accordance with the approved schedule.

LIMITATIONS

The findings presented in this report are based upon observations of field personnel, points investigated, results of laboratory tests performed by ESC, and our understanding of the San Francisco Regional Water Quality Control Board (SF-RWQCB) requirements. Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty, expressed or implied was made. This report has been prepared for the exclusive use of Arcadis and ARCO. It is

possible that variations in soil or groundwater conditions could exist beyond points explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

Tables

- 1 Well Construction Details
- 2 Current Groundwater Monitoring and Analytical Data
- 3 Historical Groundwater Monitoring and Analytical Data
- 4 Historical Groundwater Gradient and Flow Direction

Figures

- 1 Site Location Map
- 2 Site Plan
- 3 Groundwater Elevation map – August 2, 2017
- 4 Groundwater Analytical Summary Map – August 2, 2017
- 5 Groundwater Flow Direction Rose Diagram

Attachments

- 1 Groundwater Sampling Data Package
- 2 Certified Laboratory Analytical Reports and Chain of Custody Documentation

TABLES



Well ID	Completion Date	Total Depth (feet bgs)	Well Depth (feet bgs)	Screen Interval (feet bgs)	Borehole Diameter (inches)	Casing Diameter (inches)	Destruction Date
AS-1	09/08/10	47	45	42 - 45	8	2	--
MW-1	07/30/86	45	45	10 - 45	8	2	--
MW-2	07/31/86	35	35	10 - 35	8	2	--
MW-3	07/31/86	35	35	10 - 35	8	2	--
MW-4	01/29/90	41	40	10 - 40	8	2	--
MW-5	02/01/90	35	35	10 - 35	8	2	--
MW-6	02/01/90	35	35	15 - 35	8	2	--
MW-7	02/01/90	35	35	17 - 35	8	2	--
MW-8	01/25/91	41.5	40	20 - 40	8	2	--
MW-9	02/26/91	35	35	15 - 35	8	2	--
MW-10	02/27/91	36	35	20 - 35	8	2	02/03/16
MW-10R	02/03/16	27	26	11 - 26	8	2	--
MW-11	02/10/16	28	26	11 - 26	8	2	--
OW-1	09/08/10	40	42	20 - 40	8	2	--
RW-1	01/29/90	41.5	40	20 - 40	12	6	--
SVE-1	09/07/10	20	20	10 - 20	8	2	--
VM-1	09/07/10	20	20	10 - 20	8	2	--
VM-2	09/07/10	20	22	10 - 20	8	2	--

Notes:

- AS = air sparge well
- MW = monitoring Well
- OW = observation well
- RW = groundwater recovery well
- SVE = soil vapor extraction well
- VM = soil vapor monitoring well
- bgs = below ground surface
- = not applicable

Table 2
 Current Groundwater Monitoring and Analytical Data
 CA-11132
 3201 35th Ave, Oakland CA



Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	Notes	
MW-1	8/2/2017		169.75	20.94	--	148.81	17,800	<10.0	<10.0	52.4	<30.0	<10.0	<50.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<1,000	1.33	
MW-2	8/2/2017		168.14	22.03	--	146.11	8,600	1,960	82.1	130	311	46.5	<50.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<1,000	1.22	
MW-3	8/2/2017		167.17	18.74	--	148.43	448	0.477J	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	1.75	
MW-4	8/2/2017		170.36	21.33	--	149.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	8/2/2017		165.14	16.93	--	148.21	482	22.1	0.683J	1.55	1.08J	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	2.01	
MW-6	8/2/2017		165.40	17.40	--	148.00	<100	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	1.55	
MW-7	8/2/2017		168.08	19.29	--	148.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	8/2/2017		165.74	17.70	--	148.04	5,830	17.6	7.14	161	266	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	1.68	
MW-9	8/2/2017		166.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-10R	8/2/2017		166.80	18.20	--	148.60	28,500	1,900	280	3150	8,100	<25.0	<125	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<2,500	1.99	
MW-11	8/2/2017		165.64	16.34	--	149.30	104	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	1.13	
RW-1	8/2/2017		168.01	19.13	--	148.88	1,120	1.79	0.775J	1.43	1.06J	2.52	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	1.97	
OW-1	8/2/2017		--	22.10	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LPH)

Notes:
 TOC = Top of casing measured
 DTW = Depth to water
 LNAPL = Light non-aqueous phase liquid (LPH)
 GW Elev = Groundwater elevation
 GRO = Gasoline 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
 DO = Dissolved oxygen
 1,2-DCA = 1,2-dichloroethane
 EDB = 1,2-dibromoethane
 Ft msl = Feet above mean sea level
 LPH = Well not sampled due to presence of LPH and nature of the product
 INA - Well inaccessible; well could not be sampled
 J = The identification of the analyte is acceptable; the reported value is an estimate
 -- = Not analyzed/applicable/measured/available
 < = Not detected at or above specified laboratory reporting limit
 mg/L = Milligrams per liter
 µg/L = Micrograms per liter
 Values for DO was 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 August 6, 2009 and EPA method 8260B (C6-C12) from March 4, 2010 to the present

Table 3
 Historical Groundwater Monitoring and Analytical Data
 CA-11132
 3201 35th Ave, Oakland CA



Well ID	Date	Type	TOC (ft ms)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft ms)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes	
MW-1	03/07/1991		169.75	20.59	--	149.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	04/01/1991		169.75	16.51	0.15	153.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	07/03/1992		169.75	22.30	0.27	147.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	10/05/1992		169.75	23.98	0.24	145.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	01/13/1993		169.75	17.03	0.24	152.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	04/23/1993		169.75	18.10	0.42	151.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	07/12/1993		169.75	22.02	0.49	147.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	10/21/1993		169.75	25.12	1.09	143.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	01/21/1994		169.75	23.02	0.76	145.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	04/20/1994		169.75	24.54	1.8	143.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	08/01/1994		169.75	24.11	0.35	145.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/23/1994		169.75	18.19	--	151.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	01/26/1995		169.75	16.25	1.1	152.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	06/08/1995		169.75	22.92	--	146.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	08/22/1995		169.75	24.45	0.85	144.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	10/27/1995		169.75	25.41	--	143.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	01/25/1996		169.75	18.20	--	151.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	04/19/1996		169.75	19.06	1.22	149.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	07/23/1996		169.75	22.98	0.89	145.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/11/1996		169.75	23.99	0.89	144.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	01/21/1997		169.75	16.80	0.9	152.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	04/29/1997		169.75	21.90	0.85	147.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	04/30/1997	Dup	--	--	--	--	92,000	3,500	8,100	4,400	23,800	6,900	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-1	04/30/1997		--	--	--	--	100,000	3,600	8,000	4,000	21,300	7,700	--	--	--	--	--	--	--	5.2	--	--	
MW-1	08/21/1997	Dup	169.75	23.40	--	146.35	120,000	3,200	8,100	3,800	19,600	5,200	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-1	08/21/1997		169.75	23.40	--	146.35	140,000	3,000	8,500	3,900	22,100	5,700	--	--	--	--	--	--	--	5.3	--	--	
MW-1	11/05/1997	Dup	169.75	23.70	--	145.51	88,000	7,300	4,800	3,600	16,900	8,200	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-1	11/05/1997		169.75	23.70	--	145.51	68,000	6,200	4,400	3,300	14,300	8,000	--	--	--	--	--	--	--	4.7	--	--	
MW-1	02/03/1998		169.75	13.63	0.32	155.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	02/04/1998	Dup	--	--	--	--	160,000	2,300	8,400	5,000	29,400	<10,000	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-1	02/04/1998		--	--	--	--	190,000	2,200	10,000	5,600	32,000	<10,000	--	--	--	--	--	--	--	5.3	--	--	
MW-1	05/28/1998		169.75	18.03	0.17	151.55	87,000	980	3,900	3,600	19,000	2,900	--	--	--	--	--	--	--	3.8	--	--	
MW-1	12/30/1998		169.75	19.50	0.08	150.17	70,000	530	3,200	2,900	16,000	3,600	--	--	--	--	--	--	--	--	--	--	
MW-1	02/02/1999		169.75	18.93	0.03	150.79	79,000	480	3,100	3,500	21,000	3,500	--	--	--	--	--	--	--	--	--	--	
MW-1	05/10/1999		169.75	18.28	0.03	151.44	110,000	160	1,900	3,700	24,000	3,000	--	--	--	--	--	--	--	--	--	--	
MW-1	08/24/1999		169.75	20.13	0.06	149.56	110,000	850	1,300	1,900	19,000	<50	--	--	--	--	--	--	--	--	--	--	
MW-1	11/03/1999		169.75	22.27	0.36	147.12	65,000	6,300	1,100	3,300	9,500	8,900	--	--	--	--	--	--	--	--	--	--	
MW-1	03/01/2000		169.75	14.79	0.23	154.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	04/21/2000		169.75	18.10	0.33	151.32	61,000	330	780	2,700	17,000	1,300	--	--	--	--	--	--	--	--	--	--	
MW-1	07/31/2000		169.75	21.60	0.53	147.62	1,500,000	340	2,100	24,000	120,000	2,700	--	--	--	--	--	--	--	--	--	--	
MW-1	11/20/2000		169.75	21.69	0.37	147.69	1,700,000	1,800	2,300	19,000	93,000	3,900	--	--	--	--	--	--	--	--	--	--	
MW-1	02/18/2001		169.75	16.70	0.13	152.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	02/26/2001		169.75	14.38	0.15	155.22	100,000	658	466	4,210	15,000	1,890	--	--	--	--	--	--	--	--	--	--	
MW-1	06/07/2001		169.75	20.78	--	148.97	70,000	705	440	3,870	12,200	2,720	--	--	--	--	--	--	--	--	--	--	
MW-1	09/05/2001		169.75	23.36	0.35	146.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/30/2001		169.75	20.85	0.41	148.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/06/2001		169.75	18.72	0.27	150.76	39,000	3,500	237	2,150	4,500	5,400	--	--	--	--	--	--	--	--	--	--	
MW-1	02/20/2002		169.75	17.43	0.15	152.17	52,000	465	271	1,600	11,400	106	--	--	--	--	--	--	--	--	--	--	
MW-1	06/20/2002		169.75	21.18	0.34	148.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/11/2002		169.75	22.86	0.4	146.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/12/2002		169.75	22.65	0.37	146.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	01/28/2003		169.75	18.15	0.3	151.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	05/22/2003		169.75	18.49	0.2	151.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	06/24/2003		169.75	21.44	0.35	147.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	07/28/2003		169.75	22.72	0.35	146.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	08/12/2003		169.75	22.64	0.23	146.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/12/2003		169.75	20.70	0.24	148.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/18/2003		169.75	21.70	0.25	148.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	02/23/2004		169.75	16.34	0.09	153.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	05/04/2004		169.75	21.28	0.16	148.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	08/04/2004		169.75	22.54	0.1	147.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/22/2004		169.75	22.76	0.2	147.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/10/2004		169.75	20.19	0.14	149.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	01/13/2005		169.75	14.58	0.03	155.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	02/15/2005		169.75	16.13	0.04	153.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	03/07/2005		169.75	13.31	0.01	156.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	05/16/2005		169.75	15.74	0.02	154.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	08/17/2005		169.75	21.15	0.08	148.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/18/2005		169.75	20.15	--	149.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	02/07/2006		169.75	15.19	0.01	154.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	05/19/2006		169.75	17.42	--	152.33	44,000	73	510	3,300	5,300	86	<400	<10	<10	<10	<10	<10	<6,000	--	--	--	
MW-1	08/23/2006		169.75	22.01	0.14	147.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/15/2006		169.75	21.98																			

Table 3
Historical Groundwater Monitoring and Analytical Data
CA-11132
3201 35th Ave, Oakland CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes	
MW-2	05/16/2005		168.14	14.71	--	153.43	94,000	11,000	7,600	4,100	17,000	560	<10,000	<250	<250	<250	<250	<250	<50,000	--	--		
MW-2	06/17/2005		168.14	20.00	--	148.14	110,000	13,000	8,300	4,300	18,000	480	<4,000	<100	<100	<100	<100	<100	<100	<20,000	--	--	
MW-2	11/18/2005		168.14	20.89	--	147.25	37,000	11,000	2,400	1,500	4,600	340	<4,000	<100	<100	<100	<100	<100	<100	<20,000	--	--	
MW-2	02/07/2006		168.14	13.31	--	154.83	74,000	8,900	5,800	3,600	14,000	440	<4,000	160	<100	<100	<100	<100	<100	<60,000	--	--	
MW-2	05/19/2006		168.14	16.30	--	151.84	78,000	11,000	3,700	4,500	14,000	430	<4,000	<100	<100	<100	<100	<100	<100	<60,000	--	--	
MW-2	08/23/2006		168.14	20.83	--	147.31	100,000	12,000	9,100	5,800	25,000	480	<4,000	<100	<100	<100	<100	<100	<100	<60,000	--	--	
MW-2	11/15/2006		168.14	20.80	--	147.34	46,000	8,800	3,600	2,300	8,500	400	<4,000	<100	<100	<100	<100	<100	<100	<60,000	0.7	--	
MW-2	02/14/2007		168.14	15.96	(Sheen)	152.18	100,000	13,000	3,600	6,200	26,000	810	<4,000	<100	<100	<100	<100	<100	<100	<60,000	1.43	--	
MW-2	05/22/2007		168.14	18.20	--	149.94	91,000	15,000	8,700	4,700	20,000	1,000	<10,000	<250	<250	<250	<250	<250	<150,000	0.08	--	--	
MW-2	08/15/2007		168.14	21.23	(Sheen)	146.91	14,000	7,300	130	280	600	260	2,400	<50	<50	<50	<50	<50	<50	<30,000	4.24	--	
MW-2	11/08/2007		168.14	20.32	--	147.82	22,000	7,400	420	640	1,700	240	2,800	<50	<50	<50	<50	<50	<50	<30,000	1.21	--	
MW-2	02/20/2008		168.14	15.20	0.06	152.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	05/07/2008		168.14	19.80	0.04	148.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	08/20/2008		168.14	21.70	0.01	146.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	11/17/2008		168.14	20.73	--	147.41	45,000	8,400	700	1,500	5,600	320	1,800	<10	<10	<10	<10	<10	<10	<6,000	--	--	
MW-2	02/25/2009		168.14	14.15	--	153.99	18,000	5,200	<250	380	1,400	<250	<5,000	<250	<250	<250	<250	<250	<150,000	2.11	--	--	
MW-2	04/08/2009		168.14	17.00	--	151.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	05/28/2009		168.14	18.43	(Sheen)	149.71	37,000	5,300	1,600	1,400	5,600	510	<2,500	<120	<120	<120	<120	<120	<75,000	0.16	--	--	
MW-2	06/16/2009		168.14	19.80	0.01	148.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	08/06/2009		168.14	21.17	0.01	146.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	03/04/2010		168.14	13.03	--	155.11	18,000	9,500	270	510	1,400	350	2,600	<5.0	<5.0	<5.0	<5.0	12	<1,000	1.28	--	(P)	
MW-2	09/02/2010		168.14	20.62	--	147.52	58,000	11,000	3,600	3,900	16,000	470	<80	<10	<10	<10	<10	14	<2,000	--	--	(NP, y)	
MW-2	03/15/2011		168.14	13.70	--	154.44	63,000	12,000	2,900	4,100	15,000	500	<800	<100	<100	<100	<100	<100	<100	<50,000	--	--	(P)
MW-2	08/17/2011		168.14	19.31	--	148.83	23,000	4,900	620	1,500	4,400	150	<800	<100	<100	<100	<100	<100	<50,000	--	--	(P)	
MW-2	02/06/2012		168.14	17.49	--	150.65	26,000	6,400	200	1,700	3,400	360	<800	<100	<100	<100	<100(*)	<100	<50,000	--	--	(P)	
MW-2	08/21/2012		168.14	20.66	--	147.48	20,000	4,900	440	1,400	2,400	220	<800	<100	<100	<100	<100	<100	<50,000	--	--		
MW-2	02/04/2013		168.14	17.24	--	150.90	25,000	4,000	1,700	1,600	5,300	130	<800	<100	<100	<100	<100	<100	<50,000	--	--		
MW-2	08/01/2013		168.14	21.10	--	147.04	43,000	9,100	630	2,800	9,700	220	<2,000	<100	<100	<100	<100	<100	<50,000	--	--		
MW-2	02/27/2014		168.14	18.65	--	149.49	31,000	9,600	180	2,700	6,100	310	<2,000	<100	<100	<100	<100	<100	<50,000	--	--		
MW-2	08/27/2014		168.14	20.78	--	147.36	35,000	9,900	230	3,100	5,500	240	<4,000	<100	<100	<100	<100	<100	<100,000	3.24	450	(odor)	
MW-2	03/27/2015		168.14	18.32	--	149.82	29,000	13,000	210	1,400	1,300	140	<4,000	<100	<100	<100	<100	<100	<100,000	2.29	--	(odor)	
MW-2	08/27/2015		168.14	20.40	--	147.74	22,400	8,550	80.3	1,110	444	41.1J	416J	<1.00	<1.00	<1.00	--	<1.00	<100	6.2	--		
MW-2	03/28/2016		168.14	13.55	--	154.59	36,500	7,360	609	1,350	3,140	118	463	<50.0	<50.0J3	<50.0	<50.0	<50.0	<5,000	1.64	--		
MW-2	09/07/2016		168.14	19.54	--	148.60	24,200	8,960	122J	626	668	90.8J	<500	<100	<100	<100	<100	<100	<10,000	0.38	--		
MW-2	03/01/2017		168.14	11.95	--	156.19	35,000	7,630	897	1,810	3,920	175	<500	<100	<100	<100	<100	<100	<10,000	3.13	--		
MW-2	08/02/2017		168.14	22.03	--	146.11	8,600	1,960	82.1	130	311	46.5	<50.0	<10.0	<10.0	<10.0	<10.0	<10.0	<1,000	1.22	--		
MW-3	07/09/1990		--	--	--	--	140	5.3	4.6	2	3.8	--	--	--	--	--	--	--	--	--	--	--	
MW-3	12/21/1990		--	--	--	--	0.19	100	6	0.9	27	--	--	--	--	--	--	--	--	--	--	--	
MW-3	03/07/1991		167.17	17.40	--	149.77	0.4	69	22	6.1	57	--	--	--	--	--	--	--	--	--	--	--	
MW-3	04/01/1991		167.17	13.69	--	153.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	06/27/1991		--	--	--	--	380	28	26	13	46	--	--	--	--	--	--	--	--	--	--	--	
MW-3	09/27/1991		--	--	--	--	0.07	7.9	--	0.4	1.1	--	--	--	--	--	--	--	--	--	--	--	
MW-3	12/18/1991		--	--	--	--	0.26	34	24	0.8	28	--	--	--	--	--	--	--	--	--	--	--	
MW-3	07/03/1992		167.17	19.59	--	147.58	71	9.4	0.9	5	13	--	--	--	--	--	--	--	--	--	--	--	
MW-3	10/05/1992	Dup	167.17	21.22	--	148.95	<50	2.2	<0.5	1.5	2.8	--	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-3	10/05/1992		167.17	21.22	--	148.95	67	5.1	1.1	6.1	8.1	--	--	--	--	--	--	--	--	--	--	--	
MW-3	01/13/1993		167.17	13.63	--	153.54	830	50	34	42	89	--	--	--	--	--	--	--	--	--	--	--	
MW-3	04/23/1993	Dup	167.17	15.02	--	152.15	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-3	04/23/1993		167.17	15.02	--	152.15	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	--	
MW-3	07/12/1993		167.17	19.16	--	148.01	250	12	4.2	12	16	<5.0	--	--	--	--	--	--	--	--	--	--	
MW-3	10/21/1993	Dup	167.17	21.81	--	145.36	65	7.4	1	6.9	4.2	--	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-3	10/21/1993		167.17	21.81	--	145.36	52	4.4	1.4	4.7	3.3	<5.0	--	--	--	--	--	--	--	--	--	--	
MW-3	01/21/1994		167.17	19.94	--	147.23	57	3	3.4	3.6	9	<5.0	--	--	--	--	--	--	--	--	--	--	
MW-3	04/20/1994		167.17	20.24	--	146.93	600	26	23	33	88	28.7	--	--	--	--	--	--	--	--	--	--	1.8
MW-3	08/01/1994	Dup	167.17	20.74	--	146.43	120	7.7	1.6	5.9	6.7	5.43	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-3	08/01/1994		167.17	20.74	--	146.43	99	6.2	1.1	4.5	5.2	<5.0	--	--	--	--	--	--	--	--	--	--	1.4
MW-3	12/23/1994	Dup	167.17	14.70	--	152.47	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-3	12/23/1994		167.17	14.70	--	152.47	<50	<0.5	0.78	<0.5	<0.5	9.8	--	--	--	--	--	--	--	--	--	--	
MW-3	01/26/1995		167.17	12.89	--	154.28	190	16	0.5	35	24	--	--	--	--	--	--	--	--	--	--	--	6.6
MW-3	06/08/1995		167.17	19.95	--	147.22	330	21	4	34	32	--	--	--	--	--	--	--	--	--	--	--	7
MW-3	08/22/1995		167.17	21.41	--	145.76	150	14	<0.50	<0.50	1.6	<5.0	--	--	--	--	--	--	--	--	--	--	6.6
MW-3	10/27/1995		167.17	22.43	--	144.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	10/30/1995		--	--	--	--																	

Table 3
Historical Groundwater Monitoring and Analytical Data
CA-11132
3201 35th Ave, Oakland CA



Well ID	Date	Type	TOC (ft ms)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes
MW-3	11/03/1999		167.17	19.21	--	147.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	03/01/2000		167.17	15.17	--	152.00	<50	<0.5	0.57	<0.5	0.62	<0.5	--	--	--	--	--	--	--	--	--	--
MW-3	04/21/2000		167.17	14.88	--	152.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	07/31/2000		167.17	15.29	--	151.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/20/2000		167.17	17.31	--	149.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/18/2001		167.17	12.85	--	154.32	160	1.95	1.31	10.2	9.09	1	--	--	--	--	--	--	--	--	--	--
MW-3	06/07/2001		167.17	18.00	--	149.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	09/05/2001		167.17	20.32	--	146.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/30/2001		167.17	16.94	--	150.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/20/2002		167.17	14.84	--	152.33	86	<0.5	0.845	6.58	5.75	<0.5	--	--	--	--	--	--	--	--	--	--
MW-3	06/20/2002		167.17	18.40	--	148.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	09/11/2002		167.17	20.06	--	147.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/12/2002		167.17	19.84	--	147.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	01/27/2003		167.17	14.83	--	152.34	850	20	9.7	24	45	0.76	--	--	--	--	--	--	--	--	--	--
MW-3	01/29/2003		--	--	--	--	--	--	--	--	--	0.76	<20	<50	<50	<50	<50	<50	<50	<40	--	--
MW-3	05/22/2003		167.17	15.60	--	151.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	07/28/2003		167.17	20.12	--	147.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/18/2003		167.17	19.15	--	148.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/23/2004		167.17	13.53	--	153.64	160	<0.50	1.1	9.6	12	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--
MW-3	05/04/2004		167.17	18.61	--	148.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/04/2004		167.17	19.21	--	147.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/10/2004		167.17	17.48	--	149.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/15/2005		167.17	14.31	--	152.86	500	7.8	1.8	9.2	9.6	1.7	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--
MW-3	05/16/2005		167.17	13.11	--	154.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/17/2005		167.17	18.53	--	148.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/18/2005		167.17	19.34	--	147.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/07/2006		167.17	11.64	--	155.53	65	<0.50	<0.50	1.4	2.3	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	--	--	--
MW-3	05/19/2006		167.17	14.88	--	152.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/23/2006		167.17	19.43	--	147.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/15/2006		167.17	19.22	--	147.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/14/2007		167.17	13.80	--	153.37	200	1.1	<0.50	5.9	3.2	3.8	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.68	--	--
MW-3	05/22/2007		167.17	16.80	--	150.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/15/2007		167.17	19.87	--	147.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/08/2007		167.17	19.27	--	147.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/20/2008		167.17	13.58	--	153.59	240	1.1	<0.50	0.99	0.79	2.3	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<100	2.58	--	--
MW-3	05/07/2008		167.17	18.32	--	148.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/20/2008		167.17	20.29	--	146.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/17/2008		167.17	19.35	--	147.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/25/2009		167.17	11.77	--	155.40	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	3.45	--	--
MW-3	05/28/2009		167.17	17.02	--	150.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/06/2009		167.17	19.87	--	147.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	03/04/2010		167.17	10.79	--	156.38	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<100	3.16	--	(P)
MW-3	09/02/2010		167.17	19.32	--	147.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	03/15/2011		167.17	11.77	--	155.40	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<250	--	--	(P)
MW-3	08/17/2011		167.17	17.98	--	149.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/06/2012		167.17	15.92	--	151.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/21/2012		167.17	19.42	--	147.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/04/2013		167.17	15.75	--	151.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/01/2013		167.17	19.78	--	147.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	02/27/2014		167.17	16.95	--	150.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/27/2014		167.17	19.64	--	147.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	03/27/2015		167.17	17.16	--	150.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/27/2015		167.17	19.40	--	147.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	03/28/2016		167.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	09/07/2016		167.17	18.75	--	148.42	280	<1.00	<5.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	0.40	--	--
MW-3	03/01/2017		167.17	10.16	--	157.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	08/02/2017		167.17	18.74	--	148.43	448	0.477J	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	1.75	--	--
MW-4	12/21/1990		--	--	--	--	--	--	--	--	0.8	--	--	--	--	--	--	--	--	--	--	--
MW-4	03/07/1991		170.36	20.72	--	149.64	--	2.2	3.8	1.5	2.8	--	--	--	--	--	--	--	--	--	--	--
MW-4	04/01/1991		170.36	17.49	--	152.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	06/27/1991		--	--	--	--	--	6.3	1.8	0.4	1	--	--	--	--	--	--	--	--	--	--	--
MW-4	07/03/1992		170.36	22.16	--	148.20	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	--
MW-4	10/05/1992		170.36	23.38	--	146.98	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	--
MW-4	01/13/1993		170.36	17.58	--	152.78	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	--
MW-4	04/23/1993		170.36	15.72	--	154.64	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	--
MW-4	07/12/1993		170.36	21.74	--	148.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	--	--	--
MW-4	10/21/1993		170.36	23.84	--	146.52	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	--	--	--
MW-4	01/21/1994		170.36	22.42	--	147.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	--	--	--
MW-4	04/20/1994		170.36	22.66	--	147.70	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	--	2.2	--
MW-4	08/01/1994		170.36	23.01	--	147.35	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	--	1.9	--
MW-4	12/23/1994		170.36	17.03	--	153.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	01/26/1995		170.36	17.42	--	152.94	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	--	7.5	--
MW-4	06/08/1995		170.36	21.55	--	148.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	08/22/1995		170																			

Table 3
Historical Groundwater Monitoring and Analytical Data
CA-11132
3201 35th Ave, Oakland CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes	
MW-4	07/23/1996		170.36	22.56	--	147.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/11/1996		170.36	23.63	--	146.73	<50	<1.0	<1.0	<1.0	<1.0	34	--	--	--	--	--	--	--	--	8.2	--	
MW-4	01/21/1997		170.36	16.59	--	153.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	04/29/1997		170.36	21.43	--	148.93	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	--	4.7	--	
MW-4	08/21/1997		170.36	22.91	--	147.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/05/1997		170.36	22.34	--	148.02	60	<0.5	<1.0	<1.0	<1.0	76	--	--	--	--	--	--	--	--	4.9	--	
MW-4	02/03/1998		170.36	12.26	--	158.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	05/28/1998		170.36	18.50	--	151.86	70	<0.5	<1.0	<1.0	<1.0	160	--	--	--	--	--	--	--	--	4.2	--	
MW-4	12/30/1998		170.36	19.69	--	150.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/02/1999		170.36	18.26	--	152.10	70	<1.0	<1.0	<1.0	<1.0	130	--	--	--	--	--	--	--	--	--	--	
MW-4	05/10/1999		170.36	17.86	--	152.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	08/24/1999		170.36	17.93	--	152.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/03/1999		170.36	22.78	--	147.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	03/01/2000		170.36	18.04	--	152.32	<50	<0.5	0.67	<0.5	0.7	110	--	--	--	--	--	--	--	--	--	--	
MW-4	04/21/2000		170.36	17.36	--	153.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	07/31/2000		170.36	17.83	--	152.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/20/2000		170.36	18.91	--	151.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/18/2001		170.36	17.72	--	152.64	88	<0.5	<0.5	<0.5	<0.5	97.3	--	--	--	--	--	--	--	--	--	--	
MW-4	06/07/2001		170.36	20.23	--	150.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	09/05/2001		170.36	22.76	--	147.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/30/2001		170.36	21.30	--	149.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/20/2002		170.36	19.32	--	151.04	76	<0.5	<0.5	<0.5	<1.0	81	--	--	--	--	--	--	--	--	--	--	
MW-4	06/20/2002		170.36	20.71	--	149.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	09/11/2002		170.36	22.22	--	148.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/12/2002		170.36	22.22	--	148.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	01/29/2003		170.36	19.80	--	150.56	100	<0.5	<0.5	<0.5	<0.5	66	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<40	--	--	
MW-4	05/22/2003		170.36	19.35	--	151.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	07/28/2003		170.36	22.18	--	148.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/18/2003		170.36	21.65	--	148.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/23/2004		170.36	17.53	--	152.83	75	<0.50	<0.50	<0.50	<0.50	65	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	
MW-4	05/04/2004		170.36	20.62	--	149.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	08/04/2004		170.36	21.30	--	149.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/10/2004		170.36	20.65	--	149.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/15/2005		170.36	18.91	--	151.45	<50	<0.50	<0.50	<0.50	<0.50	62	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	
MW-4	05/16/2005		170.36	17.34	--	153.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	08/17/2005		170.36	21.31	--	149.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/18/2005		170.36	21.67	--	148.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/07/2006		170.36	16.74	--	153.62	100	<0.50	<0.50	1	3	29	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<300	--	--	
MW-4	05/19/2006		170.36	18.22	--	152.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	08/23/2006		170.36	20.95	--	149.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/15/2006		170.36	22.21	--	148.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/14/2007		170.36	18.25	--	152.11	<50	<0.50	<0.50	<0.50	<0.50	61	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.95	--	
MW-4	05/22/2007		170.36	20.16	--	150.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	08/15/2007		170.36	22.34	--	148.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/08/2007		170.36	21.86	--	148.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/20/2008		170.36	17.74	--	152.62	<50	<0.50	<0.50	<0.50	<0.50	36	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	2.13	--	
MW-4	05/07/2008		170.36	21.38	--	148.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	08/20/2008		170.36	22.44	--	147.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/17/2008		170.36	22.20	--	148.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/25/2009		170.36	16.81	--	153.55	<50	<0.50	<0.50	<0.50	<0.50	26	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.8	--	
MW-4	05/28/2009		170.36	20.37	--	149.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	08/06/2009		170.36	22.46	--	147.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	03/04/2010		170.36	17.11	--	153.25	<50	<0.50	<0.50	<0.50	<1.0	34	4.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.63	--	(P)
MW-4	09/02/2010		170.36	20.63	--	149.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	03/15/2011		170.36	16.47	--	153.89	<50	<0.50	<0.50	<0.50	<1.0	26	4.1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250	--	--	(P)
MW-4	08/17/2011		170.36	20.94	--	149.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/06/2012		170.36	19.65	--	150.71	<50	<0.50	<0.50	<0.50	<1.0	32	<4.0	<0.50	<0.50	<0.50	<0.50(*)	<0.50	<0.50	<250	--	--	(P)
MW-4	08/21/2012		170.36	22.00	--	148.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/04/2013		170.36	19.43	--	150.93	<50	<0.50	<0.50	<0.50	<1.0	34	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250	--	--	
MW-4	08/01/2013		170.36	22.43	--	147.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/27/2014		170.36	20.64	--	149.72	<50	<0.50	<0.50	<0.50	<1.0	24	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250	--	--	
MW-4	08/27/2014		170.36	22.24	--	148.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	03/27/2015		170.36	20.23	--	150.13	<50	<0.50	<0.50	<0.50	<1.0	22	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<500	3.5	--	
MW-4	08/27/2015		170.36	21.87	--	148.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	03/28/2016		170.36	16.29	--	154.07	<100	<1.0	<5.00	<1.00	<3.00	15	<5.00	<1.00	<1.00J3	<1.00	<1.00	<1.00	<100	<100	2.27	--	
MW-4	09/07/2016		170.36	21.21	--	149.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	03/01/2017		170.36	15.00	--	155.36	<100	<1.00	<1.00	<1.00	<3.00	2.31	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	<100	1.99	--	
MW-4	08/02/2017		170.36	21.33	--	149.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	07/09/1990		--	--	--	--	280	200	210	46	290	--	--	--	--	--	--	--	--	--	--	--	
MW-5	12/21/1990		--	--	--	--	0.69																

Table 3
 Historical Groundwater Monitoring and Analytical Data
 CA-11132
 3201 35th Ave, Oakland CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes
MW-5	04/23/1993		165.14	13.51	--	151.63	8,700	440	96	35	136	--	--	--	--	--	--	--	--	--	--	--
MW-5	07/12/1993		165.14	18.06	--	147.08	250	57	2.9	2.1	16	<5.0	--	--	--	--	--	--	--	--	--	--
MW-5	10/21/1993		165.14	20.41	--	144.73	210	82	1.5	<0.5	1.4	--	--	--	--	--	--	--	--	--	--	--
MW-5	01/21/1994		165.14	18.86	--	146.28	110	36	1.2	<0.5	0.7	<5.0	--	--	--	--	--	--	--	--	--	--
MW-5	04/20/1994		165.14	17.30	--	147.84	690	230	4.5	1.6	11	21.2	--	--	--	--	--	--	--	--	--	1.3
MW-5	08/01/1994		165.14	17.53	--	147.61	170	44	1.6	0.9	2.7	<5.0	--	--	--	--	--	--	--	--	--	0.9
MW-5	12/23/1994		165.14	11.63	--	153.51	630	180	1.9	0.66	1.9	7.81	--	--	--	--	--	--	--	--	--	1.4
MW-5	01/28/1995		165.14	11.25	--	153.89	160	68	<0.5	<0.5	22	--	--	--	--	--	--	--	--	--	--	5.9
MW-5	06/08/1995	Dup	165.14	16.80	--	148.34	1,700	560	51	55	170	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-5	06/08/1995		165.14	16.80	--	148.34	2,000	630	58	61	180	--	--	--	--	--	--	--	--	--	--	6.5
MW-5	08/22/1995		165.14	19.02	--	146.12	3,700	1,100	18	27	58	<130	--	--	--	--	--	--	--	--	--	7.3
MW-5	10/27/1995		165.14	20.94	--	144.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	10/30/1995		--	--	--	--	6,500	2,200	55	180	270	<250	--	--	--	--	--	--	--	--	--	7.5
MW-5	01/25/1996	Dup	165.14	13.30	--	151.84	540	37	0.66	<0.50	<1.0	<5.0	--	--	--	--	--	--	--	--	--	(Dup)
MW-5	01/25/1996		165.14	13.30	--	151.84	590	37	0.7	<0.50	<1.0	<5.0	--	--	--	--	--	--	--	--	--	--
MW-5	04/19/1996		165.14	13.63	--	151.51	1,500	470	38	49	210	<50	--	--	--	--	--	--	--	--	--	8.1
MW-5	07/23/1996		165.14	17.61	--	147.53	140	4.6	<0.5	<0.5	<0.5	<10	--	--	--	--	--	--	--	--	--	8
MW-5	11/11/1996		165.14	18.70	--	146.44	140	40	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	--	--	7.9
MW-5	01/21/1997		165.14	11.63	--	153.51	730	300	<5.0	7.8	26	<50	--	--	--	--	--	--	--	--	--	5
MW-5	04/29/1997		165.14	16.74	--	148.40	340	530	<5.0	<5.0	<5.0	<50	--	--	--	--	--	--	--	--	--	4.8
MW-5	08/21/1997		165.14	18.26	--	146.88	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	--	--	4.9
MW-5	11/05/1997		165.14	18.84	--	146.30	120	13	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	--	--	4.4
MW-5	02/03/1998		165.14	9.49	--	155.65	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	--	--	4.3
MW-5	05/28/1998		165.14	13.57	--	151.57	4,900	1,500	34	180	311	<10	--	--	--	--	--	--	--	--	--	4.1
MW-5	12/30/1998		165.14	14.65	--	150.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	02/02/1999		165.14	12.56	--	152.58	100	<1.0	<1.0	<1.0	<1.0	9.1	--	--	--	--	--	--	--	--	--	--
MW-5	05/10/1999		165.14	13.36	--	151.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	08/24/1999		165.14	13.50	--	151.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	11/03/1999		165.14	18.48	--	146.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	03/01/2000		165.14	9.59	--	155.55	<50	<0.5	0.58	<0.5	0.54	2.9	--	--	--	--	--	--	--	--	--	--
MW-5	04/21/2000		165.14	13.52	--	151.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	07/31/2000		165.14	14.04	--	151.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	11/20/2000		165.14	15.89	--	149.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	02/18/2001		165.14	11.88	--	153.26	560	161	2.38	6.11	13	5.67	--	--	--	--	--	--	--	--	--	--
MW-5	06/07/2001		165.14	15.30	--	149.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	09/05/2001		165.14	19.32	--	145.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	11/30/2001		165.14	17.44	--	147.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	02/20/2002		165.14	13.88	--	151.26	4,200	940	18.7	98.2	176	55.6	--	--	--	--	--	--	--	--	--	--
MW-5	06/20/2002		165.14	16.20	--	148.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	09/11/2002		165.14	19.15	--	145.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	11/12/2002		165.14	19.01	--	146.13	390	55	0.89	3.4	3.5	210	--	--	--	--	--	--	--	--	--	--
MW-5	01/29/2003		165.14	16.33	--	148.81	7,900	1,400	34	220	350	82	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<400	--	--
MW-5	05/22/2003		165.14	14.35	--	150.79	9,900	2,300	91	400	690	<50	<2,000	--	<50	<50	<50	<50	<50	<10,000	--	--
MW-5	07/28/2003		165.14	18.90	--	146.24	3,200	690	14	81	100	120	<400	<10	<10	<10	<10	<10	<10	<2,000	--	--
MW-5	02/23/2004		165.14	12.21	--	152.93	7,500	1,500	100	190	350	100	<1,000	38	<25	<25	<25	<25	<25	<5,000	--	--
MW-5	05/04/2004		165.14	17.12	--	148.02	5,900	1,500	57	200	280	42	<1,000	<25	<25	<25	<25	<25	<25	<5,000	--	--
MW-5	08/04/2004		165.14	19.05	--	146.09	<2,500	<25	<25	<25	390	<1,000	<25	<25	<25	<25	<25	<25	<25	<5,000	--	--
MW-5	11/10/2004		165.14	16.95	--	148.19	870	80	<5.0	<5.0	<5.0	530	<200	<5.0	<5.0	<5.0	<5.0	5.5	<1,000	--	--	--
MW-5	02/15/2005		165.14	12.75	--	152.39	1,600	330	8	37	67	260	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	--
MW-5	05/16/2005		165.14	15.46	--	149.68	<500	<5.0	<5.0	<5.0	<5.0	370	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	--
MW-5	08/17/2005		165.14	17.00	--	148.14	7,900	1,000	17	110	130	51	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	--
MW-5	11/18/2005		165.14	18.33	--	146.81	1,900	91	<5.0	33	29	340	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	--
MW-5	02/07/2006		165.14	10.27	--	154.87	2,100	590	9.6	86	110	200	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	--	--
MW-5	05/19/2006		165.14	13.08	--	152.06	3,200	720	9.7	150	170	44	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	--	--
MW-5	08/23/2006		165.14	17.02	--	148.12	1,400	69	<5.0	20	24	230	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	--	--
MW-5	11/15/2006		165.14	18.30	--	146.84	1,100	24	<2.5	10	8.6	490	<100	<2.5	<2.5	<2.5	<2.5	4.2	<1,500	0.85	--	--
MW-5	02/14/2007		165.14	13.16	--	151.98	680	110	<2.5	16	11	420	<100	<2.5	<2.5	<2.5	<2.5	3.6	<1,500	2.54	--	--
MW-5	05/22/2007		165.14	15.42	--	149.72	2,800	660	8.8	74	100	26	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	1.41	--	--
MW-5	08/15/2007		165.14	18.80	--	146.34	2,800	50	<10	26	29	280	<400	<10	<10	<10	<10	<10	<6,000	3.81	--	--
MW-5	11/08/2007		165.14	18.55	(Sheen)	146.59	3,800	77	<2.5	46	35	270	310	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	1.08	--	--
MW-5	02/20/2008		165.14	12.21	--	152.93	2,500	530	<5.0	75	62	43	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	2.01	--	--
MW-5	05/07/2008		165.14	16.91	--	148.23	6,700	1,800	29	270	360	30	<200	<10	<10	<10	<10	<10	<6,000	2.45	--	--
MW-5	08/20/2008		165.14	19.45	--	145.69	300	22	<2.0	8.5	5.3	260	270	<2.0	<2.0	<2.0	<2.0	3	<1,200	5.57	--	--
MW-5	02/25/2009		165.14	11.12	--	154.02	140	6.4	<0.50	2.4	3.1	68	110	<0.50	<0.50	<0.50	<0.50	0.62	<300	4.38	--	--
MW-5	05/28/2009		165.14	15.70	--	149.44	3,800	790	9.5	140	110	11	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<600	0.04	--	--
MW-5	08/06/2009		165.14	18.84	(Sheen)	146.30	78	<5.0	<5.0	<5.0	<5.0	190	340	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	0.06	--	--
MW-5	03																					

Table 3
 Historical Groundwater Monitoring and Analytical Data
 CA-11132
 3201 35th Ave, Oakland CA



Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes		
MW-5	03/28/2016		165.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)	
MW-5	09/07/2016		165.14	17.10	--	148.04	1,830	325	9.99J	47.3	22.1J	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.29	--
MW-5	03/01/2017		165.14	8.89	--	156.25	426	32.8	1.01	22.6	8.62	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2.65	--
MW-5	08/02/2017		165.14	16.93	--	148.21	482	22.1	0.683J	1.55	1.08J	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2.01	--
MW-6	12/21/1990		--	--	--	--	0.17	2.6	7	4.9	26	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	02/04/2013		165.40	14.13	--	151.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Table 3
Historical Groundwater Monitoring and Analytical Data
 CA-11132
 3201 35th Ave, Oakland CA



Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes
MW-6	06/01/2013		165.40	18.27	--	147.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	02/27/2014		165.40	15.33	--	150.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	06/27/2014		165.40	19.12	--	146.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	03/27/2015		165.40	15.58	--	149.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	06/27/2015		165.40	17.82	--	147.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	03/28/2016		165.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	09/07/2016		165.40	17.12	--	148.28	<100	<1.00	<5.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	1.63	--	(NS)
MW-6	03/01/2017		165.40	8.63	--	156.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	08/02/2017		165.40	17.40	--	148	<100	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	1.55	--	
MW-7	03/07/1991		167.61	19.04	--	148.57	--	--	0.4	0.3	2.4	--	--	--	--	--	--	--	--	--	--	
MW-7	04/01/1991		167.61	15.18	--	152.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	06/27/1991		--	--	--	--	70	17	4	0.8	2.2	--	--	--	--	--	--	--	--	--	--	
MW-7	09/27/1991		--	--	--	--	--	0.4	--	--	0.4	--	--	--	--	--	--	--	--	--	--	
MW-7	12/18/1991		--	--	--	--	--	0.7	2.9	0.8	3.3	--	--	--	--	--	--	--	--	--	--	
MW-7	07/03/1992		167.61	20.28	--	147.33	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	
MW-7	10/05/1992		167.61	21.56	--	146.05	<50	<0.5	<0.5	<0.5	1.5	--	--	--	--	--	--	--	--	--	--	
MW-7	01/13/1993		167.61	15.41	--	152.20	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	
MW-7	04/23/1993		167.61	15.84	--	151.77	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	
MW-7	07/12/1993		167.61	19.84	--	147.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	--	--	
MW-7	10/21/1993		167.61	21.61	--	146.00	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	
MW-7	01/21/1994	Dup	167.61	20.49	--	147.12	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	(Dup)
MW-7	01/21/1994		167.61	20.49	--	147.12	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	--	--	
MW-7	04/20/1994		167.61	20.54	--	147.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	1.5	--	
MW-7	08/01/1994		167.61	20.99	--	146.62	<50	0.7	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	1.9	--	
MW-7	12/23/1994		167.61	15.00	--	152.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	01/26/1995		167.61	14.69	--	152.92	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	7	--	
MW-7	06/08/1995		167.61	19.87	--	147.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	08/22/1995		167.61	21.49	--	146.12	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	--	--	--	6.4	--	
MW-7	10/27/1995		167.61	22.53	--	145.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	01/25/1996		167.61	17.21	--	150.40	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	--	--	--	--	--	
MW-7	04/19/1996		167.61	17.09	--	150.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	07/23/1996		167.61	21.02	--	146.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/11/1996		167.61	22.03	--	145.58	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	7.8	--	
MW-7	01/21/1997		167.61	15.06	--	152.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	04/29/1997		167.61	20.11	--	147.50	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	4.4	--	
MW-7	08/21/1997		167.61	21.59	--	146.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/05/1997		167.61	20.05	--	147.56	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	4.4	--	
MW-7	02/03/1998		167.61	9.97	--	157.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	05/28/1998		167.61	13.52	--	154.09	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	4.3	--	
MW-7	12/30/1998		167.61	18.33	--	149.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/02/1999		167.61	12.33	--	155.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	05/10/1999		167.61	13.52	--	154.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	08/24/1999		167.61	14.01	--	153.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/03/1999		167.61	19.91	--	147.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	03/01/2000		167.61	19.89	--	147.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	04/21/2000		167.61	17.94	--	149.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	07/31/2000		167.61	17.33	--	150.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/20/2000		167.61	18.41	--	149.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/18/2001		167.61	15.13	--	152.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	06/07/2001		167.61	18.75	--	148.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	09/05/2001		167.61	20.48	--	147.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/30/2001		167.61	20.11	--	147.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/20/2002		167.61	18.40	--	149.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	06/20/2002		167.61	18.62	--	148.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	09/11/2002		167.61	20.05	--	147.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/12/2002		167.61	21.13	--	146.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	01/29/2003		167.61	19.10	--	148.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	05/22/2003		167.61	18.83	--	148.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	07/28/2003		167.61	19.88	--	147.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/18/2003		167.61	20.50	--	147.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/23/2004		168.08	15.92	--	152.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	05/04/2004		168.08	18.86	--	149.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	08/04/2004		168.08	19.10	--	148.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/10/2004		168.08	20.25	--	147.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/15/2005		168.08	16.37	--	151.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	08/17/2005		168.08	19.74	--	148.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/18/2005		168.08	20.82	--	147.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/07/2006		168.08	14.26	--	153.82	<500	<5.0	<5.0	<5.0	<5.0	270	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	--	
MW-7	05/19/2006		168.08	16.51	--	151.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	08/23/2006		168.08	20.30	--	147.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/15/2006		168.08	20.85	--	147.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/14/2007		168.08	16.57	--	151.51	520	<5.0	<5.0	<5.0	<5.0	740	<200	<5.0	<5.0	<5.0	<5.0	9.6	<3,000	3.08	--	
MW-7	05/22/2007		168.08	18.40	--	149.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	08/15/2007		168.08	20.85	--	147.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/08/2007		168.08	20.41	--	147.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/20/2008		168.08	15.90	--	152.18	<50	<0.50	<0.50													

Table 3
Historical Groundwater Monitoring and Analytical Data
CA-11132
3201 35th Ave, Oakland CA

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes	
MW-7	06/20/2008		168.08	21.34	--	146.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/17/2008		168.08	20.54	--	147.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/25/2009		168.08	14.89	--	153.19	130	<20	<20	<20	<20	540	<400	<20	<20	<20	<20	<20	<20	<12,000	4.28	--	
MW-7	05/28/2009		168.08	18.57	--	149.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	08/06/2009		168.08	20.83	--	147.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	03/04/2010		168.08	14.02	--	154.06	430	<0.50	<0.50	<0.50	<1.0	920	4	0.74	<0.50	<0.50	<0.50	17	<100	3.3	--	(P)	
MW-7	09/02/2010		168.08	20.43	--	147.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	03/15/2011		168.08	14.86	--	153.22	<1,000	<0.50	<0.50	<0.50	<1.0	990	130	0.81	<0.50	<0.50	<0.50	17	<250	--	--	(P)	
MW-7	08/17/2011		168.08	19.01	--	149.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/06/2012		168.08	18.20	--	149.88	<50	<0.50	<0.50	<0.50	<1.0	22	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<250	--	--	(P)	
MW-7	08/21/2012		168.08	20.29	--	147.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/04/2013		168.08	17.60	--	150.48	<500	<0.50	<0.50	<0.50	<1.0	290	<4.0	<0.50	<0.50	<0.50	<0.50	6.4	<250	--	--		
MW-7	08/01/2013		168.08	20.68	--	147.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/27/2014		168.08	18.86	--	149.22	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	--	--		
MW-7	08/27/2014		168.08	19.68	--	148.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	03/27/2015		168.08	18.09	--	149.99	<50	<0.50	<0.50	<0.50	<1.0	240	<20	<0.50	<0.50	<0.50	<0.50	3.3	<500	3.42	--		
MW-7	08/27/2015		168.08	19.59	--	148.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	03/28/2016		168.08	13.92	--	154.16	222	<1.00	<5.00	<1.00	<3.00	458	<5.00	<1.00	<1.00J3	<1.00	<1.00	7	<100	2.51	--		
MW-7	09/07/2016		168.08	18.90	--	149.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	03/01/2017		168.08	12.75	--	155.33	<100	<1.00	<1.00	<1.00	<3.00	7.44	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	1.87	--		
MW-7	08/02/2017		168.08	19.29	--	148.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	03/07/1991		165.74	16.72	--	149.02	2.7	780	450	64	310	--	--	--	--	--	--	--	--	--	--	--	
MW-8	04/01/1991		165.74	12.54	--	153.20	15,000	3,600	2,600	410	1,900	--	--	--	--	--	--	--	--	--	--	--	
MW-8	06/27/1991		--	--	--	--	12,000	3,400	1,100	240	750	--	--	--	--	--	--	--	--	--	--	--	
MW-8	09/27/1991		--	--	--	--	41	5,700	5,200	1,100	4,300	--	--	--	--	--	--	--	--	--	--	--	
MW-8	12/18/1991		--	--	--	--	3.2	990	150	120	250	--	--	--	--	--	--	--	--	--	--	--	
MW-8	07/03/1992		165.74	18.78	--	146.96	72,000	19,000	32,000	3,000	15,000	--	--	--	--	--	--	--	--	--	--	--	
MW-8	10/05/1992		165.74	20.48	--	145.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	01/13/1993		165.74	12.87	--	152.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	04/23/1993		165.74	13.90	--	151.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	07/12/1993		165.74	18.30	--	147.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	10/21/1993		165.74	21.91	--	142.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	01/21/1994		165.74	19.12	--	146.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	04/20/1994		165.74	19.28	--	146.46	26,000	1,700	4,100	960	4,000	632	--	--	--	--	--	--	--	--	1.1	--	
MW-8	12/23/1994		165.74	13.81	--	151.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	06/08/1995		165.74	17.82	--	147.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	08/22/1995		165.74	19.41	--	146.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	10/27/1995		165.74	20.47	--	145.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	01/25/1996		165.74	13.35	--	152.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	04/19/1996		165.74	14.40	--	151.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	07/23/1996		165.74	18.35	--	147.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/11/1996		165.74	19.41	--	146.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	01/21/1997		165.74	12.29	--	153.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	08/21/1997		165.74	19.61	--	146.13	240,000	1,100	9,300	4,100	31,100	<1,000	--	--	--	--	--	--	--	--	5.2	--	
MW-8	11/05/1997		165.74	19.45	--	146.29	57,000	790	2,700	2,300	15,200	<1,000	--	--	--	--	--	--	--	--	5	--	
MW-8	02/03/1998		165.74	9.33	--	156.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	02/04/1998		--	--	--	--	94,000	570	1,500	2,100	15,200	<2,500	--	--	--	--	--	--	--	--	5.5	--	
MW-8	12/30/1998		165.74	15.48	--	150.26	120,000	460	2,300	2,200	15,000	150	--	--	--	--	--	--	--	--	--	--	
MW-8	02/02/1999		165.74	18.29	--	147.45	82,000	450	2,200	3,700	26,000	<500	--	--	--	--	--	--	--	--	--	--	
MW-8	05/10/1999		165.74	15.62	--	150.12	28,000	740	1,800	1,100	5,800	<25	--	--	--	--	--	--	--	--	--	--	
MW-8	08/24/1999		165.74	18.41	--	147.33	75,000	530	1,400	3,300	21,000	150	--	--	--	--	--	--	--	--	--	--	
MW-8	11/03/1999		165.74	18.71	--	147.03	70,000	600	1,300	3,600	20,500	750	--	--	--	--	--	--	--	--	--	--	
MW-8	03/01/2000		165.74	19.37	--	146.37	27,000	1,600	1,200	2,600	6,600	120	--	--	--	--	--	--	--	--	--	--	
MW-8	11/20/2000		165.74	17.42	--	148.32	1,300,000	1,400	1,700	20,000	16,000	5,700	--	--	--	--	--	--	--	--	--	--	
MW-8	09/05/2001		165.74	21.45	0.04	144.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/30/2001		165.74	18.31	--	147.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	02/20/2002		165.74	14.02	--	151.72	20,000	163	114	403	3,810	80.4	--	--	--	--	--	--	--	--	--	--	
MW-8	06/20/2002		165.74	17.56	--	148.18	28,000	466	141	962	5,850	2,520	--	--	--	--	--	--	--	--	--	--	
MW-8	09/11/2002		165.74	19.45	--	146.29	190,000	1,500	670	4,500	23,000	1,200	--	--	--	--	--	--	--	--	--	--	
MW-8	11/12/2002		165.74	19.15	--	146.59	420	6.4	2.9	16	110	31	--	--	--	--	--	--	--	--	--	--	
MW-8	01/29/2003		165.74	15.02	--	150.72	200,000	810	<500	2,000	11,000	<500	<2,000	<50	<50	<50	<50	<50	<50	<4,000	--	--	
MW-8	05/22/2003		165.74	15.07	--	150.67	--	--	--	--	--	--	<1,000	--	<25	<25	--	--	<25	<5,000	--	--	
MW-8	06/24/2003		165.74	17.95	--	147.79	43,000	860	300	2,100	9,600	46	--	--	--	--	--	--	--	--	--	--	
MW-8	07/28/2003		165.74	19.45	--	146.29	62,000	690	230	1,800	15,000	2,100	<4,000	<100	<100	<100	<100	<100	<20,000	--	--		
MW-8	08/12/2003		165.74	19.40	0.01	146.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	09/12/2003		165.74	19.34	--	146.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/18/2003		165.74	18.80	0.01	146.94	8,800	500	37	530	930	1,700	<400	--	<10	<10	--	20	<2,000	--	--		
MW-8	02/23/2004		165.74	12.82	0.01	152.92	32,000	840	360	1,000	7,100	110	<2,000	<50	<50	<50	<50	<50	<10,000	--	--		
MW-8	05/04/2004		165.74	18.87	0.01	146.87	42,000	570	230	1,700	8,400	2,000	<1,000	<25	<25	<25	<25	33	<5,				

Table 3
 Historical Groundwater Monitoring and Analytical Data
 CA-11132
 3201 35th Ave, Oakland CA



Well ID	Date	Type	TOC (ft ms)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft ms)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes
MW-9	11/12/2002		166.20	19.40	--	146.80	840	5.8	3.6	28	160	21	--	--	--	--	--	--	--	--	--	--
MW-9	01/25/2003		166.20	14.30	0.1	151.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	05/22/2003		166.20	15.16	--	151.04	23,000	420	<50	1,000	2,900	<50	38	<0.50	<50	<50	<0.50	<50	<100	--	--	
MW-9	07/28/2003		166.20	19.55	0.01	146.65	1,500,000	<500	<500	9,800	79,000	<500	<20,000	<500	<500	<500	<500	<500	<100,000	--	--	
MW-9	08/12/2003		166.20	19.60	0.01	146.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	09/12/2003		166.20	19.60	0.01	146.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	11/18/2003		166.20	18.98	0.01	147.22	19,000	250	18	690	2,400	45	<400	--	<10	<10	--	<10	<2,000	--	--	
MW-9	02/23/2004		166.20	13.91	0.01	152.29	91,000	<250	440	2,200	13,000	<250	<10,000	<250	<250	<250	<250	<250	<50,000	--	--	
MW-9	05/04/2004		166.20	18.11	0.01	148.09	39,000	230	44	1,100	4,200	<25	<1,000	<25	<25	<25	<25	<25	<5,000	--	--	
MW-9	08/04/2004		166.20	18.90	0.03	147.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	09/22/2004		166.20	19.69	--	146.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	11/10/2004		166.20	16.95	--	149.25	31,000	300	<50	1,100	3,800	<50	<2,000	<50	<50	<50	<50	<50	<10,000	--	--	
MW-9	02/15/2005		166.20	12.95	--	153.25	19,000	200	<50	720	2,000	<50	<2,000	<50	<50	<50	<50	<50	<10,000	--	--	
MW-9	05/16/2005		166.20	12.53	--	153.67	17,000	99	15	770	2,500	<10	4.4	<10	<10	<10	<10	<10	<2,000	--	--	
MW-9	08/17/2005		166.20	18.03	--	148.17	28,000	160	26	1,000	2,700	<12	<500	<12	<12	<12	<12	<12	<2,500	--	--	
MW-9	11/18/2005		166.20	19.04	--	147.16	12,000	98	<5.0	410	510	19	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	--	
MW-9	02/07/2006		166.20	10.95	(Sheen)	155.25	18,000	110	8.7	770	1,500	<5.0	<4.0	<5.0	<5.0	<5.0	<5.0	5.4	<3,000	--	--	
MW-9	08/23/2006		166.20	18.91	--	147.29	28,000	84	<50	1,600	6,200	<50	<2,000	<50	<50	<50	<50	<50	<30,000	--	--	
MW-9	11/15/2006		166.20	18.60	--	147.60	8,200	44	<25	190	370	26	<1,000	<25	<25	<25	<25	<25	<15,000	0.92	--	
MW-9	02/14/2007		166.20	13.30	--	152.90	20,000	64	<25	720	2,000	<25	<1,000	<25	<25	<25	<25	<25	<15,000	0.87	--	
MW-9	05/22/2007		166.20	16.14	(Sheen)	150.06	16,000	80	<25	460	1,200	<25	<1,000	<25	<25	<25	<25	<25	<15,000	0.81	--	
MW-9	08/15/2007		166.20	19.31	(Sheen)	146.89	5,900	27	<2.5	59	170	27	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	2.57	--	
MW-9	11/08/2007		166.20	18.70	--	147.50	6,100	29	<5.0	98	250	52	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	1.24	--	
MW-9	02/20/2008		166.20	12.79	0.03	153.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	05/07/2008		166.20	17.68	0.03	148.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	08/20/2008		166.20	19.75	0.01	146.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	11/17/2008		166.20	18.73	--	147.47	10,000	24	<2.5	160	140	33	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	--	--	
MW-9	02/25/2009		166.20	11.23	(Sheen)	154.97	14,000	60	<10	550	140	<10	<200	<10	<10	<10	<10	<10	<6,000	2.27	--	
MW-9	04/08/2009		166.20	14.21	--	151.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	05/28/2009		166.20	16.33	(Sheen)	149.87	8,000	49	<2.5	790	140	<2.5	<200	<2.5	<2.5	<2.5	<2.5	<2.5	<6,000	0.07	--	
MW-9	06/16/2009		166.20	17.82	0.01	148.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	08/06/2009		166.20	19.25	(Sheen)	146.95	6,800	19	<2.0	120	250	18	<40	<2.0	<2.0	<2.0	<2.0	<2.0	<1,200	0	--	
MW-9	03/04/2010		166.20	10.32	--	155.88	6,000	29	<2.5	<2.5	100	<2.5	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<500	0.62	(P)	
MW-9	09/02/2010		166.20	18.72	--	147.48	5,700	31	<2.5	160	120	<2.5	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	(NP)	
MW-9	03/15/2011		166.20	11.08	--	155.12	6,500	17	<2.5	150	73	<2.5	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<1,200	--	(P)	
MW-9	08/17/2011		166.20	17.35	--	148.85	5,200	9.5	<2.5	71	54	<2.5	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<1,300	--	--	
MW-9	02/06/2012		166.20	15.52	--	150.68	4,200	14	<2.5	49	22	<2.5	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<1,300	--	(P)	
MW-9	08/21/2012		166.20	18.79	--	147.41	4,200	22	<2.5	42	21	<2.5	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<1,300	--	--	
MW-9	02/04/2013		166.20	14.16	--	152.04	4,100	4.8	<2.5	34	13	<2.5	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<1,300	--	--	
MW-9	08/01/2013		166.20	19.16	--	147.04	5,500	4.8	<2.5	36	21	<2.5	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<1,300	--	--	
MW-9	02/27/2014		166.20	16.27	--	149.93	6,300	9.1	<2.5	36	11	<2.5	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<1,300	--	--	
MW-9	08/27/2014		166.20	18.94	--	147.26	5,400	8.5	<2.5	41	6.3	<2.5	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2,500	0.2	17	
MW-9	03/27/2015		166.20	16.42	--	149.78	6,500	7.8	<2.5	38	5.6	<2.5	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2,500	1.96	--	
MW-9	08/27/2015		166.20	18.69	--	147.51	10,000	10.7	<5.00	21.7	2.86J	<1.00	<5.00	<1.00	<1.00	<1.00	--	<1.00	<100	2.99	--	
MW-9	03/28/2016		166.20	10.96	--	155.24	7,630	4.41	<5.00	26.8	6.32	<1.00	<5.00	<1.00	<1.00J3	<1.00	<1.00	<1.00	<100	3.56	--	
MW-9	09/07/2016		166.20	17.89	--	148.31	7,730	7.22	<5.00	17.4	2.7J	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	3.24	--	
MW-9	03/01/2017		166.20	9.44	--	156.76	9,210	1.92	<1.00	16.7	3.65	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	3.24	--	
MW-9	08/02/2017		166.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-10	03/07/1991		167.01	18.09	--	148.92	1.6	120	190	32	230	--	--	--	--	--	--	--	--	--	--	--
MW-10	04/01/1991		167.01	13.92	--	153.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	06/27/1991		--	--	--	--	12,000	7,300	500	150	300	--	--	--	--	--	--	--	--	--	--	--
MW-10	09/27/1991		--	--	--	--	57	12,000	7,200	1,400	4,600	--	--	--	--	--	--	--	--	--	--	--
MW-10	12/18/1991		--	--	--	--	5.3	2,500	120	36	79	--	--	--	--	--	--	--	--	--	--	--
MW-10	07/03/1992		167.01	19.92	--	147.09	8,600	5,100	1,300	180	690	--	--	--	--	--	--	--	--	--	--	--
MW-10	10/05/1992		167.01	21.92	--	145.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	01/13/1993		167.01	14.43	--	152.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	04/23/1993		167.01	15.26	--	151.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	07/12/1993		167.01	19.79	--	147.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	10/21/1993		167.01	22.90	--	144.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	01/21/1994		167.01	20.25	--	146.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	04/20/1994		167.01	20.74	--	146.27	100,000	12,000	24,000	2,400	14,000	1,577	--	--	--	--	--	--	--	1	--	--
MW-10	08/01/1994		167.01	22.00	--	145.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	12/23/1994		167.01	16.08	--	150.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	01/28/1995		167.01	13.68	--	153.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	06/08/1995		167.01	19.08	--	147.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	08/22/1995		167.01	20.73	--	146.28	--	--	--													

Table 3
 Historical Groundwater Monitoring and Analytical Data
 CA-11132
 3201 35th Ave, Oakland CA



Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes
MW-10	02/04/1998		--	--	--	--	72,000	500	1,300	1,700	12,000	<1,000	--	--	--	--	--	--	--	5.1	--	
MW-10	05/28/1998		167.01	15.46	--	151.55	220,000	3,200	24,000	5,200	43,000	<1,000	--	--	--	--	--	--	--	4.8	--	
MW-10	12/30/1998		167.01	16.65	--	150.36	110,000	3,500	14,000	5,800	50,000	<50	--	--	--	--	--	--	--	--	--	
MW-10	02/02/1999		167.01	14.58	--	152.43	74,000	1,000	2,800	1,000	26,000	860	--	--	--	--	--	--	--	--	--	
MW-10	05/10/1999		167.01	15.72	--	151.29	81,000	2,800	2,800	3,000	17,000	220	--	--	--	--	--	--	--	--	--	
MW-10	08/24/1999		167.01	19.85	--	147.16	54,000	3,500	3,800	1,500	9,100	<250	--	--	--	--	--	--	--	--	--	
MW-10	11/03/1999		167.01	20.00	--	147.01	30,000	3,000	3,500	1,200	5,000	31	--	--	--	--	--	--	--	--	--	
MW-10	03/01/2000		167.01	14.62	--	152.39	62,000	320	1,200	1,100	26,000	4,400	--	--	--	--	--	--	--	--	--	
MW-10	04/21/2000		167.01	15.46	--	151.55	88,000	2,700	7,400	3,700	35,000	2,400	--	--	--	--	--	--	--	--	--	
MW-10	11/20/2000		167.01	18.74	--	148.27	78,000	3,800	5,500	2,800	13,000	450	--	--	--	--	--	--	--	--	--	
MW-10	02/18/2001		167.01	14.10	--	152.91	39,000	1,050	1,160	1,550	14,700	4,180	--	--	--	--	--	--	--	--	--	
MW-10	06/07/2001		167.01	18.78	--	148.23	76,000	2,460	2,840	3,330	20,700	635	--	--	--	--	--	--	--	--	--	
MW-10	09/05/2001		167.01	21.40	0.01	145.60	25,000	2,510	2,070	1,090	4,540	189	--	--	--	--	--	--	--	--	--	
MW-10	11/30/2001		167.01	18.50	--	148.51	100,000	2,480	5,720	3,890	22,800	325	--	--	--	--	--	--	--	--	--	
MW-10	02/20/2002		167.01	14.39	--	152.62	49,000	2,170	3,070	1,960	12,300	1,090	--	--	--	--	--	--	--	--	--	
MW-10	06/20/2002		167.01	18.80	--	148.21	44,000	2,040	3,050	1,690	8,430	224	--	--	--	--	--	--	--	--	--	
MW-10	09/11/2002		167.01	20.52	--	146.49	28,000	1,200	2,700	1,400	6,800	<250	--	--	--	--	--	--	--	--	--	
MW-10	11/12/2002		167.01	20.37	0.07	146.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	01/29/2003		167.01	16.33	0.03	150.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	05/22/2003		167.01	16.32	--	150.69	13,000	2,100	850	630	1,600	300	<2,000	--	<50	<50	--	<50	<10,000	--	--	
MW-10	06/24/2003		167.01	18.73	0.04	148.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	07/28/2003		167.01	20.39	0.04	146.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	08/12/2003		167.01	20.43	0.01	146.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	09/12/2003		167.01	20.41	--	146.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	11/18/2003		167.01	19.55	0.01	147.46	9,900	2,200	530	320	860	<50	<2,000	--	<50	<50	--	<50	<10,000	--	--	
MW-10	02/23/2004		167.01	15.45	0.01	151.56	46,000	1,900	2,000	1,800	9,000	180	<4,000	<100	<100	<100	<100	<100	<20,000	--	--	
MW-10	05/04/2004		167.01	18.81	0.01	148.20	35,000	3,100	3,600	1,400	5,600	<25	<1,000	<25	<25	<25	<25	<25	<5,000	--	--	
MW-10	08/04/2004		167.01	18.90	--	148.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	09/22/2004		167.01	20.60	--	146.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	11/10/2004		167.01	17.95	--	149.06	9,800	470	91	450	1,700	230	<1,000	<25	<25	<25	<25	<25	<5,000	--	--	
MW-10	01/13/2005		167.01	12.21	--	154.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	02/15/2005		167.01	14.19	--	152.82	30,000	510	330	1,800	7,200	77	<2,000	<50	<50	<50	<50	<50	<10,000	--	--	
MW-10	05/16/2005		167.01	13.85	--	153.16	37,000	540	730	2,100	9,200	<50	<2,000	<50	<50	<50	<50	<50	<10,000	--	--	
MW-10	08/17/2005		167.01	19.01	--	148.00	15,000	1,100	420	1,200	4,100	<50	<2,000	<50	<50	<50	<50	<50	<10,000	--	--	
MW-10	11/18/2005		167.01	19.95	--	147.06	12,000	1,200	240	550	1,300	16	<500	<12	<12	<12	<12	<12	<2,500	--	--	
MW-10	02/07/2006		167.01	12.28	(Sheen)	154.73	22,000	340	580	1,300	4,500	73	<1,000	<25	<25	<25	<25	<25	<15,000	--	--	
MW-10	05/19/2006		167.01	15.12	--	151.89	40,000	690	430	2,600	4,900	<25	<1,000	<25	<25	<25	<25	<25	<15,000	--	--	
MW-10	08/23/2006		167.01	20.00	--	147.01	13,000	1,500	540	1,200	3,000	<10	<400	<10	<10	<10	<10	<10	<6,000	--	--	
MW-10	11/15/2006		167.01	19.84	--	147.17	3,800	700	22	67	160	54	<400	<10	<10	<10	<10	<10	<6,000	0.65	--	
MW-10	02/14/2007		167.01	14.94	(Sheen)	152.07	37,000	350	120	2,400	8,100	120	<400	<10	<10	<10	<25	<10	<6,000	2.12	--	
MW-10	05/22/2007		167.01	17.17	(Sheen)	149.84	13,000	810	130	750	2,200	15	<400	<10	<10	<10	<10	<10	<6,000	0.06	--	
MW-10	08/15/2007		167.01	20.30	(Sheen)	146.71	4,400	550	38	160	310	<10	<400	<10	<10	<10	<10	<10	<6,000	3.09	--	
MW-10	11/08/2007		167.01	19.58	(Sheen)	147.43	13,000	970	130	480	1,600	6	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	1.47	--	
MW-10	02/20/2008		167.01	14.27	0.05	152.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	05/07/2008		167.01	18.61	--	148.40	16,000	970	150	770	2,000	<20	<400	<20	<20	<20	<20	<20	<12,000	2.18	--	
MW-10	08/20/2008		167.01	20.71	0.01	146.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	11/17/2008		167.01	19.71	--	147.30	10,000	960	57	270	720	23	<400	<20	<20	<20	<20	<20	<12,000	--	--	
MW-10	02/25/2009		167.01	13.10	--	153.91	2,900	53	14	69	160	170	280	<10	<10	<10	<10	<10	<6,000	4.06	--	
MW-10	04/08/2009		167.01	15.91	--	151.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	05/28/2009		167.01	17.37	(Sheen)	149.64	15,000	640	280	790	2,500	65	110	<2.5	<2.5	<2.5	<2.5	<2.5	<15,000	0.03	--	
MW-10	06/16/2009		167.01	18.79	0.01	148.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	08/06/2009		167.01	20.19	(Sheen)	146.62	23,000	850	490	1,200	4,100	<25	<500	<25	<25	<25	<25	<25	<15,000	0.06	--	
MW-10	03/04/2010		167.01	12.32	--	154.69	12,000	71	72	740	1,800	<2.5	160	<2.5	<2.5	<2.5	<2.5	<2.5	<500	0.56	--	(P)
MW-10	09/02/2010		167.01	19.63	--	147.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(b.i)
MW-10	03/15/2011		167.01	13.20	--	153.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(b.i)
MW-10	08/17/2011		167.01	18.27	--	148.74	4,000	780	39	250	290	<5.0	<40	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500	--	--	(P)
MW-10	02/06/2012		167.01	16.32	--	150.69	6,300	1,100	39	340	470	<5.0	<40	<5.0	<5.0	<5.0	<5.0(*)	<5.0	<2,500	--	--	(P)
MW-10	08/21/2012		167.01	19.66	0.02	147.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LPH)
MW-10	02/04/2013		167.01	15.75	(Sheen)	151.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	08/01/2013		167.01	20.03	0.01	146.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LPH)
MW-10	02/27/2014		167.01	17.65	0.01	149.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	08/27/2014		167.01	19.69	0.01	147.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	03/27/2015		167.01	17.19	0.01	149.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(b.i)
MW-10	08/27/2015		167.01	19.26	0.02	147.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LPH)
MW-10R	03/28/2016		166.80	12.50	--	154.30	38,000	3,830	2,810	1,130	5,310	1.3	40.5	<1.00	<1.00J3	<1.00	<1.00	<1.00	<1.00	1.82	--	
MW-10R	06/19/2016		166.80	17.51	--	149.29	24,800	447	68.8	1,090												

Table 3
 Historical Groundwater Monitoring and Analytical Data
 CA-11132
 3201 35th Ave, Oakland CA



Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes	
RW-1	03/07/1991		168.01	17.62	--	150.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	04/01/1991		168.01	14.40	--	153.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	07/03/1992		168.01	20.66	--	147.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	10/05/1992		168.01	23.34	--	144.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	01/13/1993		168.01	16.59	--	151.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	04/23/1993		168.01	16.17	--	151.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	07/12/1993		168.01	20.18	--	147.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	10/21/1993		168.01	25.70	--	142.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	01/21/1994		168.01	21.24	--	146.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	04/20/1994		168.01	32.20	--	135.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	08/01/1994		168.01	21.70	--	146.31	29,000	580	950	300	7,800	1,200	--	--	--	--	--	--	--	--	1.1	--	
RW-1	12/23/1994		168.01	16.02	--	151.99	1,300	25	8.6	1.4	69	616	--	--	--	--	--	--	--	--	1.8	--	
RW-1	01/26/1995	Dup	168.01	13.78	--	154.23	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	--	--	--	(Dup)
RW-1	01/26/1995		168.01	13.78	--	154.23	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	--	--	--	
RW-1	06/08/1995		168.01	20.05	--	147.96	1,300	130	<1.0	<1.0	36	--	--	--	--	--	--	--	--	--	--	--	
RW-1	08/22/1995	Dup	168.01	21.74	--	146.27	3,300	230	13	4.9	280	<25	--	--	--	--	--	--	--	--	--	--	(Dup)
RW-1	08/22/1995		168.01	21.74	--	146.27	2,800	210	9.3	4.3	250	<25	--	--	--	--	--	--	--	--	6.6	--	
RW-1	10/27/1995		168.01	32.00	--	136.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	10/30/1995	Dup	--	--	--	--	240	1.6	<1.0	<1.0	<2.0	630	--	--	--	--	--	--	--	--	--	--	(Dup)
RW-1	10/30/1995		--	--	--	--	230	1.4	<1.0	<1.0	<2.0	650	--	--	--	--	--	--	--	--	6.9	--	
RW-1	01/25/1996		168.01	15.41	--	152.60	15,000	3,400	930	330	2,500	5,300	--	--	--	--	--	--	--	--	--	--	
RW-1	04/19/1996	Dup	168.01	16.83	--	151.18	33,000	5,600	3,200	1,700	8,800	15,000	--	--	--	--	--	--	--	--	--	--	(Dup)
RW-1	04/19/1996		168.01	16.83	--	151.18	35,000	5,500	3,300	1,700	9,400	14,000	--	--	--	--	--	--	--	--	7.6	--	
RW-1	07/23/1996	Dup	168.01	20.76	--	147.25	47,000	3,700	2,500	930	5,300	35,000	--	--	--	--	--	--	--	--	--	--	(Dup)
RW-1	07/23/1996		168.01	20.76	--	147.25	46,000	3,600	2,300	900	5,100	36,000	--	--	--	--	--	--	--	--	7.4	--	
RW-1	11/11/1996	Dup	168.01	21.73	--	146.28	31,000	2,900	1,000	860	4,600	22,000	--	--	--	--	--	--	--	--	--	--	(Dup)
RW-1	11/11/1996		168.01	21.73	--	146.28	34,000	3,000	1,200	880	4,600	22,000	--	--	--	--	--	--	--	--	8.3	--	
RW-1	01/21/1997	Dup	168.01	14.20	--	153.81	270	42	17	2.7	36	1,500	--	--	--	--	--	--	--	--	--	--	(Dup)
RW-1	01/21/1997		168.01	14.20	--	153.81	260	40	16	2.7	34	1,500	--	--	--	--	--	--	--	--	6.1	--	
RW-1	04/29/1997		168.01	19.15	--	148.86	32,000	3,100	590	1,300	6,000	46,000	--	--	--	--	--	--	--	--	5.3	--	
RW-1	08/21/1997		168.01	20.67	--	147.34	7,600	730	58	370	1,780	9,500	--	--	--	--	--	--	--	--	4.7	--	
RW-1	11/05/1997		168.01	21.01	--	147.00	39,000	2,300	86	1,300	3,840	56,000	--	--	--	--	--	--	--	--	4.5	--	
RW-1	02/03/1998		168.01	10.68	--	157.33	3,400	31	11	29	161	3,200	--	--	--	--	--	--	--	--	5.1	--	
RW-1	05/28/1998		168.01	15.55	--	152.46	2,000	90	15	60	305	2,700	--	--	--	--	--	--	--	--	4.3	--	
RW-1	12/30/1998		168.01	17.35	--	150.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	02/02/1999		168.01	14.58	--	153.43	82,000	2,300	120	2,000	3,200	78,000	--	--	--	--	--	--	--	--	--	--	
RW-1	05/10/1999		168.01	16.00	--	152.01	15,000	620	88	340	660	61,000	--	--	--	--	--	--	--	--	--	--	
RW-1	08/24/1999		168.01	20.00	--	148.01	52,000	1,400	170	2,200	2,900	37,000	--	--	--	--	--	--	--	--	--	--	
RW-1	11/03/1999		168.01	20.39	--	147.62	17,000	2,500	86	1,500	970	54,000	--	--	--	--	--	--	--	--	--	--	
RW-1	03/01/2000		168.01	12.97	--	155.04	17,000	580	78	790	1,100	13,000	--	--	--	--	--	--	--	--	--	--	
RW-1	04/21/2000		168.01	16.02	--	151.99	31,000	2,100	100	1,400	1,100	39,000	--	--	--	--	--	--	--	--	--	--	
RW-1	07/31/2000		168.01	21.89	--	146.12	47,000	1,300	170	2,700	2,300	30,000	--	--	--	--	--	--	--	--	--	--	
RW-1	11/20/2000		168.01	19.15	--	148.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	02/18/2001		168.01	15.35	--	152.66	14,000	589	89	600	712	13,000	--	--	--	--	--	--	--	--	--	--	
RW-1	06/07/2001		168.01	19.09	--	148.92	28,000	1,140	68.2	504	530	19,100	--	--	--	--	--	--	--	--	--	--	
RW-1	09/05/2001		168.01	22.06	0.02	145.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/30/2001		168.01	19.53	--	148.48	20,000	405	39.4	545	740	8,260	--	--	--	--	--	--	--	--	--	--	
RW-1	02/20/2002		168.01	15.99	--	152.02	13,000	469	29	434	655	7,240	--	--	--	--	--	--	--	--	--	--	
RW-1	06/20/2002		168.01	19.31	--	148.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	09/11/2002		168.01	21.07	0.03	146.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/12/2002		168.01	20.92	0.02	147.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	01/29/2003		168.01	16.31	0.04	151.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	05/22/2003		168.01	16.68	--	151.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	06/24/2003		168.01	19.76	0.07	148.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	07/28/2003		168.01	21.04	0.04	146.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	08/12/2003		168.01	21.41	0.01	146.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	09/12/2003		168.01	21.10	0.07	146.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/18/2003		168.01	20.10	0.01	147.91	12,000	770	<50	320	250	6,100	11,000	--	<50	<50	--	160	<10,000	--	--		
RW-1	02/23/2004		168.01	14.35	0.01	153.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	05/04/2004		168.01	19.58	0.02	148.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	08/04/2004		168.01	22.05	0.05	146.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	09/22/2004		168.01	21.28	0.06	146.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/10/2004		168.01	18.56	0.02	149.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	01/13/2005		168.01	12.51	0.01	155.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	02/15/2005		168.01	15.24	0.03	152.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	03/07/2005		168.01	11.90	0.02	156.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	05/16/2005		168.01	14.39	0.02	153.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	08/17/2005		168.01	19.91	0.03	148.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/18/2005		168.01	20.36	0.07	147.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	02/07/2006		168.01	12.87	0.01	155.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	05/19/2006		168.01	15.87	0.04	152.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	08/23/2006		168.01	20.50	0.07	147.51	--																

Table 3
 Historical Groundwater Monitoring and Analytical Data
 CA-11132
 3201 35th Ave, Oakland CA



Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/l)	NAPH (µg/L)	Notes	
RW-1	02/20/2008		168.01	14.55	0.02	153.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	06/20/2008		168.01	21.34	0.02	146.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/17/2008		168.01	20.41	--	147.60	13,000	120	<20	590	320	120	<400	<20	<20	<20	<20	<20	<12,000	--	--	--	
RW-1	02/25/2009		168.01	13.40	0.02	154.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	04/08/2009		168.01	16.45	--	151.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	05/28/2009		168.01	17.88	0.01	150.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	06/16/2009		168.01	19.30	0.01	148.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	08/06/2009		168.01	20.72	0.01	147.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	03/04/2010		168.01	12.33	--	155.68	8,000	20	<2.5	230	140	110	45	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	1.24	--	(P)	
RW-1	09/02/2010		168.01	20.14	--	147.87	4,700	18	<2.5	78	46	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	(NP)	
RW-1	03/15/2011		168.01	13.03	--	154.98	7,000	3.7	<2.5	44	31	6.7	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<1,200	--	(P)	
RW-1	08/17/2011		168.01	18.60	--	149.41	2,800	7.5	<2.5	12	10	8.8	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<1,300	--	(P)	
RW-1	02/06/2012		168.01	16.81	--	151.20	1,300	3.1	<2.5	5.2	5.1	2.9	<20	<2.5	<2.5	<2.5	<2.5(*)	<2.5	<2.5	<1,300	--	(P)	
RW-1	08/21/2012		168.01	20.06	--	147.95	1,200	10	0.58	10	5.2	15	<4.0	<0.50	<0.50	<0.50	<0.50	1	<250	--	--	(P)	
RW-1	02/04/2013		168.01	16.36	(Sheen)	151.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	08/01/2013		168.01	20.50	0.01	147.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LPH)	
RW-1	02/27/2014		168.01	17.66	--	150.35	800	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250	--	--	
RW-1	08/27/2014		168.01	20.35	(Sheen)	147.66	2,800	5.9	1.7	12	5.2	6.7	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<500	0.22	6.8	(odor)
RW-1	03/27/2015		168.01	17.57	--	150.44	970	0.98	<0.50	0.91	1.5	0.74	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<500	2.35	--	(odor)
RW-1	08/27/2015		168.01	19.90	--	148.11	2,550	4.57	1.14J	4.54	3.66	<1.00	6.22	<1.00	<1.00	<1.00	--	<1.00	<100	8.36	--	(odor)	
RW-1	03/28/2016		168.01	12.68	--	155.33	199	<1.00	<5.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00J3	<1.00	<1.00	<1.00	<100	1.01	--	--	
RW-1	09/07/2016		168.01	19.36	--	148.65	1,120	2.86	0.919J	2.28	2.66J	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	0.18	--	--	
RW-1	03/01/2017		168.01	10.63	--	157.38	225	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	2.31	--	--	
RW-1	08/02/2017		168.01	19.13	--	148.88	1,120	2	0.775J	1	1.06J	3	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	1.97	--	--	
OW-1	09/07/2016		--	19.74	0.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LPH)	
OW-1	03/01/2017		--	12.04	0.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LPH)	
OW-1	08/02/2017		--	22.10	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LPH)	

Notes:

TOC = Top of casing measured
 DTW = Depth to water
 LNAPL = Light non-aqueous phase liquid (LPH)
 GW Elev = Groundwater elevation
 GRO = Gasoline 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
 DO = Dissolved oxygen
 1,2-DCA = 1,2-dichloroethane
 EDB = 1,2-dibromoethane
 Ft msl = Feet above mean sea level
 DUP = Duplicate sample
 -- = Not analyzed/applicable/measured/available
 < = Not detected at or above specified laboratory reporting limit
 mg/L = Milligrams per liter
 µg/L = Micrograms per liter
 NP = Well not purged prior to sampling
 P = Well purged prior to sampling
 b = GWE adjusted assuming a specific gravity of 0.75 for free product
 j or LPH = Well not sampled due to presence of LPH and nature of the product
 J3 = The associated batch QC was outside the established quality control range for precision.
 J = The identification of the analyte is acceptable; the reported value is an estimate
 INA - Well inaccessible; well could not be sampled
 t = Sheen in well
 y = Sample dilution was done with headspace in the sample vial; the samples were originally analyzed from VOAs without headspace
 * = LCS or LCS D exceeds the control limits
 Beginning in the Fourth Quarter 2003, the laboratory modified the reported analyte list; TPHg 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 was 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 August 6, 2009 and EPA method 8260B (C6-C12) from March 4, 2010 to the present
 The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants; Broadbent & Associates, Inc. has not verified the accuracy of this information

Table 4
Historical Groundwater Gradient and Flow Direction
CA-11132
3201 35th Ave, Oakland CA

Site No.	Monitoring Date	Groundwater Gradient (feet per foot)	Groundwater Flow Direction															
			N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
11132	4Q00 ¹	0.03	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	1Q01 ¹	0.009	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	2Q01 ¹	0.01	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	3Q01 ¹	0.02	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4Q01	0.016	0	0	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	0
	1Q02	0.016	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0	0	0	0
	2Q02	0.010	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	3Q02	0.02	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	4Q02	0.005	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	1Q03	0.013	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	2Q03	0.006 to 0.016	0	0	0	0	0	0	0	0.33	0	0.33	0	0.33	0	0	0	0
	3Q03	0.008	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	4Q03	0.007	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	1Q04	0.004 to 0.045	0	0	0	0	0	0.33	0	0.33	0	0	0	0.33	0	0	0	0
	2Q04	0.011	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	3Q04	0.018	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	4Q04	0.002	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	1Q05	0.01	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	2Q05 ²	0.01	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	3Q05 ²	0.005	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	4Q05	0.03	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	1Q06	0.02	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	2Q06	0.003 to 0.005	0	0	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0
	3Q06	0.01	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	4Q06	0.004	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	1Q07	0.01	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	2Q07	0.005	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	3Q07	0.008	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4Q07	0.006	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	1Q08	0.008	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	2Q08	0.003	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	3Q08	0.007	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4Q08	0.005	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	1Q09	0.01	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	2Q09	0.004	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	3Q09	0.005	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	1Q10	0.02	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3Q10	0.01	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
1Q11	0.01	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
3Q11	0.003	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
1Q12	0.005	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
3Q12 ¹	0.007	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
1Q13 ¹	0.01	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
3Q13 ¹	0.007	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
1Q14 ¹	0.007	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
3Q14 ¹	0.01	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
1Q15 ¹	0.004	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
3Q15 ¹	0.010	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
1Q16 ¹	0.007	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
3Q16	0.005	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
1Q17	0.01	0	0	0	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0	
3Q17	0.004	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
Avg Gradient: **		0.010	0.00	0.00	0.00	0.50	1.33	2.50	9.67	0.50	4.33	14.00	14.17	5.00	0.00	0.00	0.00	

Notes:

Number of Events: ~ 52

~ Total number of gauging events, manually updated

Groundwater gradient and flow direction data from 2Q06 to 1Q12 provided by Broadbent & Associates, Inc.

Groundwater flow direction data from 4Q00 to 1Q06 estimated from figures provided by RRM, Cambria and URS consultants.

¹ Groundwater flow direction was updated to reflect a change made to the north arrow on the historic groundwater elevation figure.

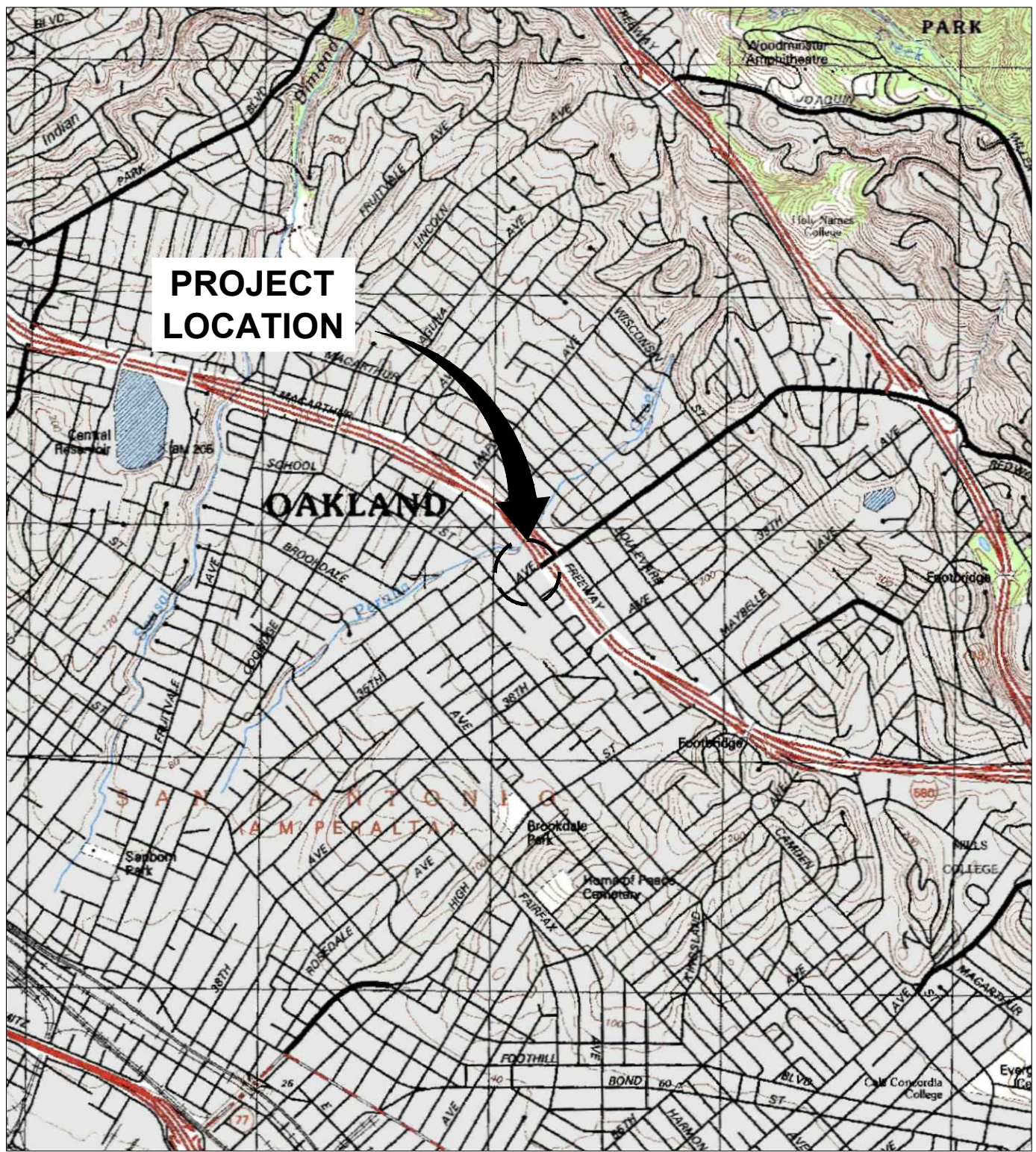
² After a review of the historical groundwater elevation figure, an error observed in the groundwater flow direction was corrected.

** Average gradient only includes single listed values.

FIGURES

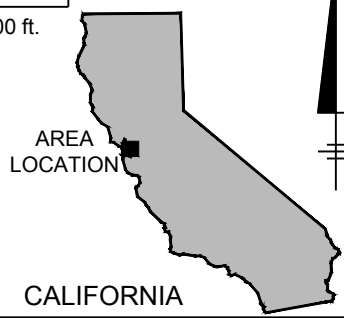
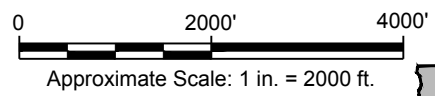



CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS ID: PIC: PM: H. PHILLIPS TM: J. PETERSON L YR: 01/01/2016 OFF: REF.
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 XREFS: IMAGES: PROJECTNAME: USGS TOPO 11132.jp



**PROJECT
LOCATION**

REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., OAKLAND EAST, CALIFORNIA, 1997.



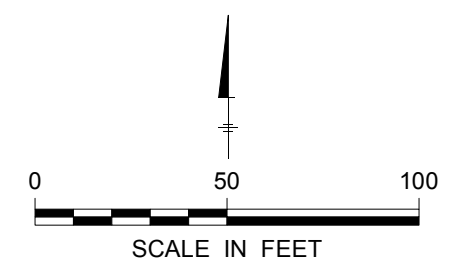
FORMER BP STATION No. 11132 3201 35TH AVENUE OAKLAND, CALIFORNIA	
SITE LOCATION MAP	
	Design & Consultancy for natural and built assets
FIGURE	1

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: kgpieters LD: PIC: PM: TM:
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- LEGEND:**
- GROUNDWATER MONITORING WELL
 - GROUNDWATER RECOVERY WELL
 - OBSERVATION WELL
 - SOIL VAPOR EXTRACTION WELL
 - SOIL VAPOR MONITORING WELL
 - SOIL BORING
 - CPT/UVOST LOCATION
 - SOIL GAS BORING
 - AIR SPARGE WELL
 - ABANDONED MONITORING WELL
 - PROPERTY BOUNDARIES
 - PROPERTY BOUNDARY
 - CANOPY
 - UNDERGROUND STORAGE TANKS

NOTES:
 1. PARCEL DATA BOUNDARIES FROM ALAMEDA COUNTY WEBB SERVER
<https://www.acgov.org/government/geospatial.htm>



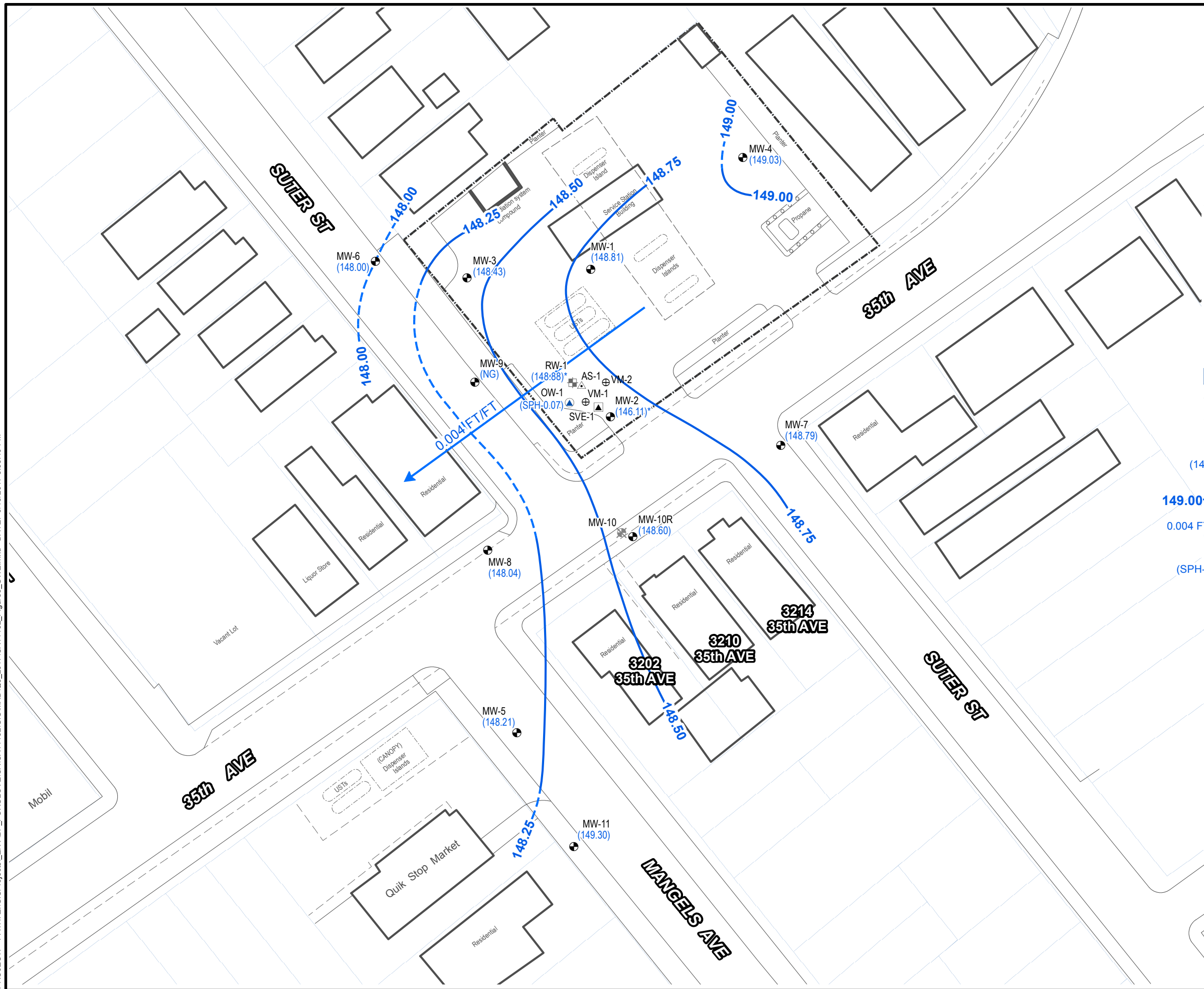
FORMER BP SERVICE STATION #11132
 3201 35TH AVENUE
 OAKLAND, CALIFORNIA

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

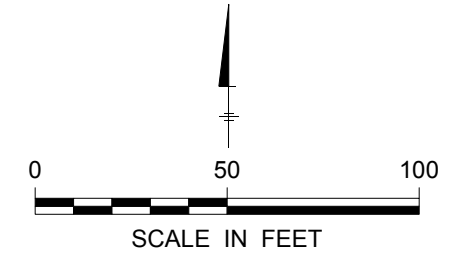
FIGURE **2**

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- LEGEND:**
- GROUNDWATER MONITORING WELL
 - GROUNDWATER RECOVERY WELL
 - OBSERVATION WELL
 - SOIL VAPOR EXTRACTION WELL
 - SOIL VAPOR MONITORING WELL
 - AIR SPARGE WELL
 - ABANDONED MONITORING WELL
 - PROPERTY BOUNDARIES
 - PROPERTY BOUNDARY
 - CANOPY
 - UNDERGROUND STORAGE TANKS
 - (149.03) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
 - 149.00 — GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE INFERRED)
 - 0.004 FT/FT → GROUNDWATER FLOW DIRECTION (FOOT PER FOOT)
 - (SPH-0.07) SEPARATE PHASE HYDROCARBONS - THICKNESS IN FEET
 - (NG) NOT GAUGED
 - * NOT USED IN CONTOURING

NOTES:
 1. PARCEL DATA BOUNDARIES FROM ALAMEDA COUNTY WEBB SERVER
<https://www.acgov.org/government/geospatial.htm>



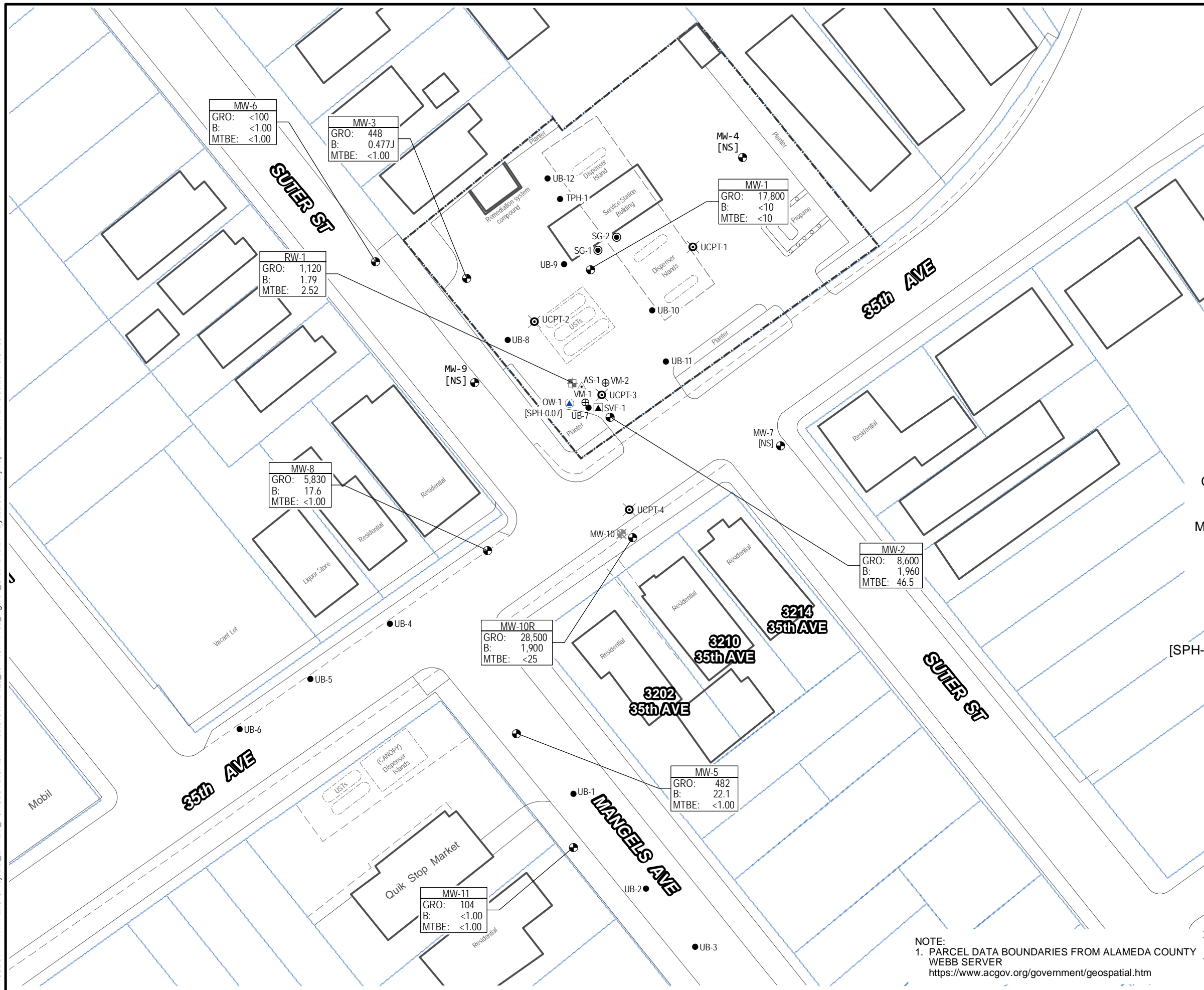
FORMER BP SERVICE STATION #11132
 3201 35TH AVENUE
 OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION MAP
AUGUST 02, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE **3**

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: ms01059 LD: PIC: PM: TM:
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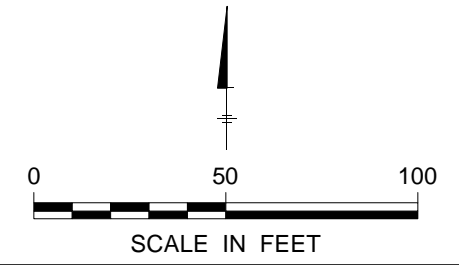
LEGEND:

- GROUNDWATER MONITORING WELL
- ⊕ GROUNDWATER RECOVERY WELL
- ▲ OBSERVATION WELL
- ▲ SOIL VAPOR EXTRACTION WELL
- ⊕ SOIL VAPOR MONITORING WELL
- SOIL BORING
- ⊗ CPT/UVOST LOCATION
- SOIL GAS BORING
- ▲ AIR SPARGE WELL
- ⊗ ABANDONED MONITORING WELL
- ▭ PROPERTY BOUNDARIES
- PROPERTY BOUNDARY
- CANOPY
- UNDERGROUND STORAGE TANKS

MW-2		SAMPLE LOCATION ID
GRO:	8,600	CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
B:	1,960	
MTBE:	46.5	

ANALYTE

- GRO GASOLINE RANGE ORGANICS
- B BENZENE
- MTBE METHYL TERT-BUTYL ETHER
- J CONCENTRATION BETWEEN REPORTING AND DETECTION LIMITS
- [NS] NOT SAMPLED
- < NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT
- [SPH-0.07] SEPARATE PHASE HYDROCARBONS - THICKNESS IN FEET



FORMER BP SERVICE STATION #11132
 3201 35TH AVENUE
 OAKLAND, CALIFORNIA

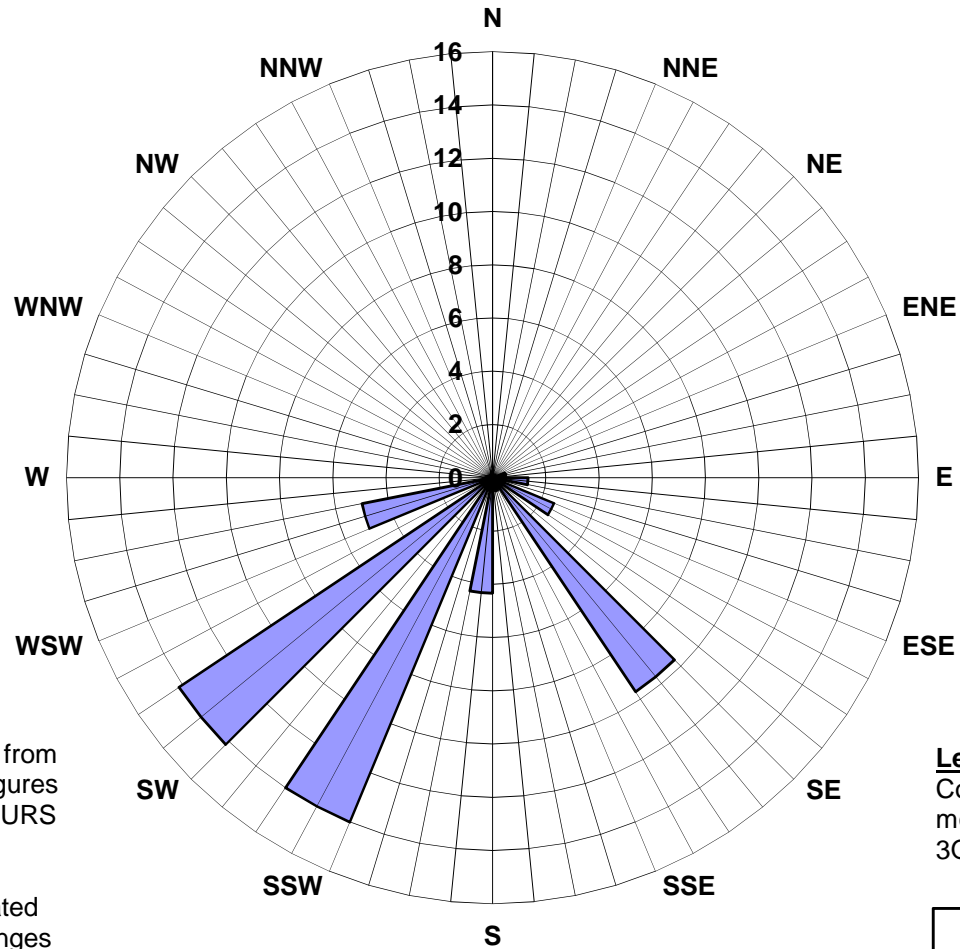
GROUNDWATER ANALYTICAL SUMMARY MAP
 AUGUST 02, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4

NOTE:
 1. PARCEL DATA BOUNDARIES FROM ALAMEDA COUNTY WEBB SERVER
<https://www.acgov.org/government/geospatial.htm>

**Figure 5
Groundwater Flow Direction Rose Diagram
CA BP 11132
3201 35th Ave
Oakland, California 94619**



Notes

Groundwater gradient and flow data from 2Q06 to 1Q12 monitoring events provided by Broadbent & Associates, Inc.

Groundwater flow direction data from 4Q00 to 1Q06 estimated from figures provided by RRM, Cambria and URS consultants.

On June 20, 2017, Arcadis updated the Rose Diagram to reflect changes made to the north arrow on select groundwater elevation figures.

Legend

Concentric circles represent 52 monitoring events from 4Q00 to 3Q17.

■ Groundwater Flow Direction

ATTACHMENT 1

Groundwater Sampling Data Package



WELL GAUGING DATA

Project # 170802-ND1 Date 8/2/17 Client Arcadis

Site 3201 35th Ave. - 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
MW-1	0952	2	odor				20.94	34.26		
MW-2	0958	2					22.03	28.55		
MW-3	0935	2					18.74	33.15		
MW-4	0839	2					21.33	39.61		
MW-5	0949	2					16.93	32.00		
MW-6	0940	2					17.40	34.52		
MW-7	0929	2					19.29	34.60		
MW-8	0946	2					17.70	38.75		
MW-9	* Unable to access -			well parked over -			*			
MW-10R	0955	2					18.20	25.64		
MW-11	0855	2					16.34	25.88		
MW-1	0911	6					19.13	38.71		
OW-1	1000	2		22.03	0.07		22.10	-		

Durham Geoslope water level indicator + Geotech oil/water interface probe

* All caps removed for 15 mins. prior to gauging

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8
Total Well Depth: 41.26	Depth to Water: 20.94
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer _____ Disposable Bailer _____ Positive Air Displacement _____ Electric Submersible _____ Other: _____ Model #: _____	Sampling Method: Waterra _____ Peristaltic _____ Extraction Pump _____ Extraction Port _____ Dedicated Tubing _____ Other: <u>Hydroserve</u>	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: _____
--	---	--

(Gals.) X _____ = _____ Gals. 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
1135	69.4	7.02	592	67	GRAB	Black specks, gasoline odor

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: GRAB	
Sampling Date: 8/2/17	Sampling Time: 1140	Depth to Water: 20.94
Sample I.D.: MW-1	Laboratory: Calscience	Other: (ESC)
Analyzed for: GRO BTEX OXYS ETHANOL Other: (see coc)		
Duplicate I.D.: _____ Analyzed for: GRO BTEX OXYS ETHANOL Other: _____		
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: 1.33 mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: -162 mV

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8
Total Well Depth: 28.55	Depth to Water: 22.03
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: (PVC) Grade	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: -	

Purge Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible Other: _____ Model #: _____	Sampling Method: Waterra Peristaltic Extraction Pump Dedicated Tubing Other: <u>Off-Well</u>	Instruments Used: Myron L Ultrameter Durham Geoslope Indicator GeoTech Interface Probe MMC Interface Probe HACK Turbidimeter YSI 556 Flow-Thru Cell YSI 550 DO Meter Other: _____
--	--	--

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
12:10	71.0	6.35	929	213	GRAB	

Did well dewater? Yes No Gallons actually evacuated: GRAB

Sampling Date: 8/2/17 Sampling Time: 12:15 Depth to Water: 22.03

Sample I.D.: MW-2 Laboratory: Calscience Other: ESC

Analyzed for: GRO BTEX OXYS ETHANOL Other: See COC

Duplicate I.D.: _____ Analyzed for: GRO BTEX OXYS ETHANOL Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.22 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	-92 mV

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 33.15	Depth to Water: 18.74
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: (PVC) Grade	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: -	

Purge Method:	Sampling Method:	Instruments Used:
Bailer	Waterra	Myron L Ultrameter
Disposable Bailer	Peristaltic	HACH (Turbidimeter)
Positive Air Displacement	Extraction Pump	Durham Geoslope Indicator
Electric Submersible	Extraction Port	YSI 556 Flow-Thru Cell
Other: _____	Dedicated Tubing	GeoTech Interface Probe
	Other: Hydroseive	YSI 550 DO Meter
Model #: _____	Pump Depth: _____	MMC Interface Probe
		Other: _____

$$\frac{\text{I Case Volume (Gals.)} \times \text{Specified Volumes}}{\text{Specified Volumes}} = \text{Calculated Volume Gals.}$$

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (S))	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
1035	65.7	7.09	713	77	GRAB	clear

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Gallons actually evacuated: GRAB	
Sampling Date: 8/2/17	Sampling Time: 1040	Depth to Water: 18.74
Sample I.D.: MW-3	Laboratory: Calscience	Other: ESC
Analyzed for: GRO BTEX OXYS ETHANOL	Other: see WL	
Duplicate I.D.:	Analyzed for: GRO BTEX OXYS ETHANOL Other:	
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: 1.75 mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: -99 mV

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8
Total Well Depth: 37.00	Depth to Water: 16.93
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: (PVC) Grade	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: -	

Purge Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible Other: _____ Model #: _____	Sampling Method: Waterra Peristaltic Extraction Pump Dedicated Tubing Other: <u>Hydrosteeve</u>	Instruments Used: Myron L Ultrameter Durham Geoslope Indicator GeoTech Interface Probe MMC Interface Probe HACH (Turbidimeter) YSI 556 Flow-Thru Cell YSI 580 DO Meter Other: _____
--	---	--

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (μS))	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
1115	69.0	7.22	744	171	GRAB	

Did well dewater? Yes No Gallons actually evacuated: GRAB

Sampling Date: 8/2/17 Sampling Time: 1120 Depth to Water: 16.93

Sample I.D.: MW-5 Laboratory: Calscience Other: ESC

Analyzed for: GRO BTEX OXYS ETHANOL Other: see coc

Duplicate I.D.: Analyzed for: GRO BTEX OXYS ETHANOL Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	2.01 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	73 mV

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: MW-6	Well Diameter: (2) 3 4 6 8
Total Well Depth: 34.52	Depth to Water: 17.40
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: (RVC) Grade	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: -	

Purge Method:	Sampling Method:	Instruments Used:
Bailer	Bailer	Myron Ultrameter
Disposable Bailer	Disposable Bailer	HACH Turbidimeter
Positive Air Displacement	Extraction Port	Durham Geoslope Indicator
Electric Submersible	Dedicated Tubing	GeoTech Interface Probe
Other: _____	Other: Hydrosteeve	YSI 556 Flow-Thru Cell
Model #: _____	Pump Depth: _____	YSI 550 DO Meter
		Other: _____

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
1045	66.4	6.50	566	31	GRAB	slight odor

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

Sampling Date: 8/2/17 Sampling Time: 1050 Depth to Water: 17.40

Sample I.D.: MW-6 Laboratory: Calscience Other: (ESC)

Analyzed for: GRO BTEX OXYS ETHANOL Other: (See COC)

Duplicate I.D.: Analyzed for: GRO BTEX OXYS ETHANOL Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.55	mg/L
	O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	124
					mV

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8
Total Well Depth: 38.75	Depth to Water: 17.70
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer _____ Disposable Bailer _____ Positive Air Displacement _____ Electric Submersible _____ Other: _____ Model #: _____	Sampling Method: Waterra _____ Peristaltic _____ Extraction Pump _____ Extraction Port _____ Dedicated Tubing _____ Other: Hydrasleeve	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: _____
--	---	--

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
1100	69.0	7.11	679	113	GRAB	clear

Did well dewater? Yes No Gallons actually evacuated: GRAB

Sampling Date: 8/2/17 Sampling Time: 1105 Depth to Water: 17.70

Sample I.D.: MW-3 Laboratory: Calscience Other: ESC

Analyzed for: GRO BTEX OXYS ETHANOL Other: see calc

Duplicate I.D.: _____ Analyzed for: GRO BTEX OXYS ETHANOL Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.68 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	175 mV

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: MW-9	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	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer _____ Disposable Bailer _____ Positive Air Displacement _____ Electric Submersible _____ Other: _____	Sampling Method: Waterra _____ Peristaltic _____ Extraction Pump _____ Other: _____	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: _____
Model #: _____	Pump Depth: _____	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

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

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
						Well parked over Unable to access

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Date: _____ Sampling Time: _____ Depth to Water: _____

Sample I.D.: _____ Laboratory: Calscience Other _____

Analyzed for: GRO BTEX OXYS ETHANOL Other: _____

Duplicate I.D.: _____ Analyzed for: GRO BTEX OXYS ETHANOL Other: _____

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

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: MW-10R	Well Diameter: (2) 3 4 6 8
Total Well Depth: 25.64	Depth to Water: 18.20
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: PVC Grade	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: -	

Purge Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible Other: _____ Model #: _____	Sampling Method: Waterra Peristaltic Extraction Pump Other: <u>Hydrisleeve</u>	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: _____
--	---	--

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
1145	70.4	6.28	1462	71000	GRAB	dark brown

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

Sampling Date: 8/2/17 Sampling Time: 1150 Depth to Water: 18.20

Sample I.D.: MW-10R Laboratory: Calscience Other: ESC

Analyzed for: GRO BTEX OXYS ETHANOL Other: See COC

Duplicate I.D.: _____ Analyzed for: GRO BTEX OXYS ETHANOL Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.99 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	-25 mV

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: MW-11	Well Diameter: (2) 3 4 6 8
Total Well Depth: 25.88	Depth to Water: 16.34
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: (PVC) Grade	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: ~	

Purge Method: Bailer _____ Disposable Bailer _____ Positive Air Displacement _____ Electric Submersible _____ Other: _____ Model #: _____	Sampling Method: Waterra _____ Peristaltic _____ Extraction Pump _____ Pump Depth: _____ Bailer _____ Disposable Bailer _____ Extraction Port _____ Dedicated Tubing _____ Other: <u>Hydrostone</u>	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: _____
--	---	--

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

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

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
1005	66.9	7.29	842	213	GRAB	light brown

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

Sampling Date: 8/2/17 Sampling Time: 1010 Depth to Water: 16.34

Sample I.D.: MW-11 Laboratory: Calscience Other: FSC

Analyzed for: GRO BTEX OXYS ETHANOL Other: see COC

Duplicate I.D.: Analyzed for: GRO BTEX OXYS ETHANOL Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.13	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	77	mV

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: RW-1	Well Diameter: 2 3 4 (6) 8
Total Well Depth: 38.71	Depth to Water: 19.13
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: (RVC) Grade	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: -	

Purge Method:	Sampling Method:	Instruments Used:
Bailer	Bailer	Myron L Ultrameter
Disposable Bailer	Disposable Bailer	HACH Turbidimeter
Positive Air Displacement	Extraction Port	Durham Geoscope Indicator
Electric Submersible	Dedicated Tubing	YSI 556 Flow-Thru Cell
Other: _____	Other: Hydrosleeve	GeoTech Interface Probe
Model #: _____	Pump Depth: _____	MMC Interface Probe
		Other: _____

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
1020	64.5	7.27	649	117	GRAB	black specks in water

Did well dewater? Yes No Gallons actually evacuated: GRAB

Sampling Date: 8/2/17 Sampling Time: 1025 Depth to Water: 19.13

Sample I.D.: RW-1 Laboratory: Calscience Other: (ESC)

Analyzed for: GRO BTEX OXYS ETHANOL Other: (See WOC)

Duplicate I.D.: Analyzed for: GRO BTEX OXYS ETHANOL Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	1.97	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	106	mV

BP WELL MONITORING DATA SHEET

Project #: 170802-ND1	Station #: 11132
Sampler: ND	Date: 8/2/17
Well I.D.: OW-1	Well Diameter: (2) 3 4 6 8
Total Well Depth: —	Depth to Water: 22.10
Depth to Free Product: 22.03	Thickness of Free Product (feet): 0.07
Referenced to: (PVC) Grade	
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method:	Sampling Method:	Instruments Used:
Bailer	Waterra	Myron L Ultrameter
Disposable Bailer	Peristaltic	HACH Turbidimeter
Positive Air Displacement	Extraction Pump	Durham Geoslope Indicator
Electric Submersible	Extraction Port	YSI 556 Flow-Thru Cell
Other: _____	Dedicated Tubing	GeoTech Interface Probe
	Other: _____	YSI 550 DO Meter
		MMC Interface Probe
		Other: _____

Model #: _____ Pump Depth: _____

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
		SPH present in well				
		detected w/ interface probe				
		No sample collected				

Did well dewater?	Yes	No	Gallons actually evacuated:
Sampling Date:	Sampling Time:	Depth to Water:	
Sample I.D.:	Laboratory:	Calscience	Other _____
Analyzed for: GRO BTEX OXYS ETHANOL	Other:		
Duplicate I.D.:	Analyzed for: GRO BTEX OXYS ETHANOL	Other:	
D.O. (if req'd):	Pre-purge:	mg/L	Post-purge: mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge: mV

WELLHEAD INSPECTION CHECKLIST

Client Arcadis Date 8/2/17

Site Address 3201 35th Ave. - Oakland, CA

Job Number 170802-ND1 Technician ND

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
MW-1	X							
MW-2	X							
MW-3	X							
MW-4		2/2	tabs	stripped		X		
MW-5	X							
MW-6	X							
MW-7	X							
MW-8	X							
MW-9		- 1/2	bolts	missing		X		
MW-10R	X							
MW-11	X							
RW-1	X							
OW-1	X							

NOTES: _____

ATTACHMENT 2

Certified Laboratory Analytical Reports and Chain of Custody
Documentation



ARCADIS US - San Francisco, CA

Sample Delivery Group: L927363
Samples Received: 08/05/2017
Project Number: GP09BPNA.C112
Description: CA-11132 - GP09BPNA.C112
Site: 3201 35TH AVENUE
Report To: Megan Smoley
865 Cotting Lane, Suite C
Vacaville, CA 95688

Entire Report Reviewed By:



Brian Ford
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY



MW-1 L927363-01 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time 08/02/17 11:40	Received date/time 08/05/17 08:45
Volatile Organic Compounds (GC) by Method 8015	WG1008525	50	08/12/17 03:09	08/12/17 03:09	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	10	08/12/17 12:45	08/12/17 12:45	JAH

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

MW-2 L927363-02 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time 08/02/17 12:15	Received date/time 08/05/17 08:45
Volatile Organic Compounds (GC) by Method 8015	WG1008525	10	08/12/17 03:30	08/12/17 03:30	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	10	08/08/17 22:36	08/08/17 22:36	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	50	08/12/17 13:05	08/12/17 13:05	JAH

MW-3 L927363-03 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time 08/02/17 10:40	Received date/time 08/05/17 08:45
Volatile Organic Compounds (GC) by Method 8015	WG1008525	1	08/12/17 03:52	08/12/17 03:52	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	1	08/08/17 22:56	08/08/17 22:56	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	1	08/12/17 13:25	08/12/17 13:25	JAH

MW-5 L927363-04 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time 08/02/17 11:20	Received date/time 08/05/17 08:45
Volatile Organic Compounds (GC) by Method 8015	WG1008525	1	08/12/17 04:57	08/12/17 04:57	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	1	08/08/17 23:16	08/08/17 23:16	JAH

MW-6 L927363-05 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time 08/02/17 10:50	Received date/time 08/05/17 08:45
Volatile Organic Compounds (GC) by Method 8015	WG1008525	1	08/12/17 05:19	08/12/17 05:19	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	1	08/08/17 23:36	08/08/17 23:36	JAH

MW-8 L927363-06 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time 08/02/17 11:05	Received date/time 08/05/17 08:45
Volatile Organic Compounds (GC) by Method 8015	WG1008525	5	08/12/17 05:41	08/12/17 05:41	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	1	08/08/17 23:56	08/08/17 23:56	JAH

MW-10R L927363-07 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time 08/02/17 11:50	Received date/time 08/05/17 08:45
Volatile Organic Compounds (GC) by Method 8015	WG1008525	5	08/12/17 06:03	08/12/17 06:03	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	25	08/09/17 00:16	08/09/17 00:16	JAH

SAMPLE SUMMARY



MW-11 L927363-08 GW

			Collected by	Collected date/time	Received date/time
				08/02/17 10:10	08/05/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015	WG1008525	1	08/12/17 06:25	08/12/17 06:25	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	1	08/09/17 00:37	08/09/17 00:37	JAH

1 Cp

2 Tc

3 Ss

RW-1 L927363-09 GW

			Collected by	Collected date/time	Received date/time
				08/02/17 10:25	08/05/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015	WG1008525	1	08/12/17 06:46	08/12/17 06:46	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	1	08/09/17 00:57	08/09/17 00:57	JAH

4 Cn

5 Sr

6 Qc

TB-11132-08022017 L927363-10 GW

			Collected by	Collected date/time	Received date/time
				08/02/17 07:00	08/05/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015	WG1008525	1	08/12/17 02:25	08/12/17 02:25	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1007015	1	08/09/17 01:17	08/09/17 01:17	JAH

7 Gl

8 Al

9 Sc



All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Technical Service Representative

Sample Handling and Receiving

VOC pH outside of method requirement.

<u>ESC Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L927363-06	MW-8	8260B

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C5 - C12	17800		1520	5000	50	08/12/2017 03:09	WG1008525
(S) a,a,a-Trifluorotoluene(FID)	99.6			77.0-122		08/12/2017 03:09	WG1008525

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		3.31	10.0	10	08/12/2017 12:45	WG1007015
Toluene	U		4.12	10.0	10	08/12/2017 12:45	WG1007015
Ethylbenzene	52.4		3.84	10.0	10	08/12/2017 12:45	WG1007015
Total Xylenes	U		10.6	30.0	10	08/12/2017 12:45	WG1007015
1,2-Dichloroethane	U		3.61	10.0	10	08/12/2017 12:45	WG1007015
1,2-Dibromoethane	U		3.81	10.0	10	08/12/2017 12:45	WG1007015
Di-isopropyl ether	U		3.20	10.0	10	08/12/2017 12:45	WG1007015
Ethanol	U		420	1000	10	08/12/2017 12:45	WG1007015
Ethyl tert-butyl ether	U		2.70	10.0	10	08/12/2017 12:45	WG1007015
Methyl tert-butyl ether	U		3.67	10.0	10	08/12/2017 12:45	WG1007015
tert-Butyl alcohol	U		24.0	50.0	10	08/12/2017 12:45	WG1007015
tert-Amyl Methyl Ether	U		2.60	10.0	10	08/12/2017 12:45	WG1007015
(S) Toluene-d8	108			80.0-120		08/12/2017 12:45	WG1007015
(S) Dibromofluoromethane	98.3			76.0-123		08/12/2017 12:45	WG1007015
(S) a,a,a-Trifluorotoluene	105			80.0-120		08/12/2017 12:45	WG1007015
(S) 4-Bromofluorobenzene	106			80.0-120		08/12/2017 12:45	WG1007015

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

L927363-01 WG1007015: Non-target compounds too high to run at a lower dilution.



Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C5 - C12	8600		304	1000	10	08/12/2017 03:30	WG1008525
(S) a,a,a-Trifluorotoluene(FID) 94.2				77.0-122		08/12/2017 03:30	WG1008525

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	1960		16.6	50.0	50	08/12/2017 13:05	WG1007015
Toluene	82.1		4.12	10.0	10	08/08/2017 22:36	WG1007015
Ethylbenzene	130		3.84	10.0	10	08/08/2017 22:36	WG1007015
Total Xylenes	311		10.6	30.0	10	08/08/2017 22:36	WG1007015
1,2-Dichloroethane	U		3.61	10.0	10	08/08/2017 22:36	WG1007015
1,2-Dibromoethane	U		3.81	10.0	10	08/08/2017 22:36	WG1007015
Di-isopropyl ether	U		3.20	10.0	10	08/08/2017 22:36	WG1007015
Ethanol	U		420	1000	10	08/08/2017 22:36	WG1007015
Ethyl tert-butyl ether	U		2.70	10.0	10	08/08/2017 22:36	WG1007015
Methyl tert-butyl ether	46.5		3.67	10.0	10	08/08/2017 22:36	WG1007015
tert-Butyl alcohol	U		24.0	50.0	10	08/08/2017 22:36	WG1007015
tert-Amyl Methyl Ether	U		2.60	10.0	10	08/08/2017 22:36	WG1007015
(S) Toluene-d8	108			80.0-120		08/08/2017 22:36	WG1007015
(S) Toluene-d8	111			80.0-120		08/12/2017 13:05	WG1007015
(S) Dibromofluoromethane	92.4			76.0-123		08/08/2017 22:36	WG1007015
(S) Dibromofluoromethane	97.1			76.0-123		08/12/2017 13:05	WG1007015
(S) a,a,a-Trifluorotoluene	110			80.0-120		08/08/2017 22:36	WG1007015
(S) a,a,a-Trifluorotoluene	105			80.0-120		08/12/2017 13:05	WG1007015
(S) 4-Bromofluorobenzene	104			80.0-120		08/08/2017 22:36	WG1007015
(S) 4-Bromofluorobenzene	109			80.0-120		08/12/2017 13:05	WG1007015

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C5 - C12	448		30.4	100	1	08/12/2017 03:52	WG1008525
(S) a,a,a-Trifluorotoluene(FID)	98.4			77.0-122		08/12/2017 03:52	WG1008525

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	0.477	J	0.331	1.00	1	08/12/2017 13:25	WG1007015
Toluene	U		0.412	1.00	1	08/08/2017 22:56	WG1007015
Ethylbenzene	U		0.384	1.00	1	08/08/2017 22:56	WG1007015
Total Xylenes	U		1.06	3.00	1	08/08/2017 22:56	WG1007015
1,2-Dichloroethane	U		0.361	1.00	1	08/08/2017 22:56	WG1007015
1,2-Dibromoethane	U		0.381	1.00	1	08/08/2017 22:56	WG1007015
Di-isopropyl ether	U		0.320	1.00	1	08/08/2017 22:56	WG1007015
Ethanol	U		42.0	100	1	08/08/2017 22:56	WG1007015
Ethyl tert-butyl ether	U		0.270	1.00	1	08/08/2017 22:56	WG1007015
Methyl tert-butyl ether	U		0.367	1.00	1	08/08/2017 22:56	WG1007015
tert-Butyl alcohol	U		2.40	5.00	1	08/08/2017 22:56	WG1007015
tert-Amyl Methyl Ether	U		0.260	1.00	1	08/08/2017 22:56	WG1007015
(S) Toluene-d8	110			80.0-120		08/12/2017 13:25	WG1007015
(S) Toluene-d8	108			80.0-120		08/08/2017 22:56	WG1007015
(S) Dibromofluoromethane	91.1			76.0-123		08/08/2017 22:56	WG1007015
(S) Dibromofluoromethane	96.3			76.0-123		08/12/2017 13:25	WG1007015
(S) a,a,a-Trifluorotoluene	105			80.0-120		08/12/2017 13:25	WG1007015
(S) a,a,a-Trifluorotoluene	110			80.0-120		08/08/2017 22:56	WG1007015
(S) 4-Bromofluorobenzene	110			80.0-120		08/12/2017 13:25	WG1007015
(S) 4-Bromofluorobenzene	103			80.0-120		08/08/2017 22:56	WG1007015

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C5 - C12	482		30.4	100	1	08/12/2017 04:57	WG1008525
(S) a,a,a-Trifluorotoluene(FID)	94.2			77.0-122		08/12/2017 04:57	WG1008525

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	22.1		0.331	1.00	1	08/08/2017 23:16	WG1007015
Toluene	0.683	J	0.412	1.00	1	08/08/2017 23:16	WG1007015
Ethylbenzene	1.55		0.384	1.00	1	08/08/2017 23:16	WG1007015
Total Xylenes	1.08	J	1.06	3.00	1	08/08/2017 23:16	WG1007015
1,2-Dichloroethane	U		0.361	1.00	1	08/08/2017 23:16	WG1007015
1,2-Dibromoethane	U		0.381	1.00	1	08/08/2017 23:16	WG1007015
Di-isopropyl ether	U		0.320	1.00	1	08/08/2017 23:16	WG1007015
Ethanol	U		42.0	100	1	08/08/2017 23:16	WG1007015
Ethyl tert-butyl ether	U		0.270	1.00	1	08/08/2017 23:16	WG1007015
Methyl tert-butyl ether	U		0.367	1.00	1	08/08/2017 23:16	WG1007015
tert-Butyl alcohol	U		2.40	5.00	1	08/08/2017 23:16	WG1007015
tert-Amyl Methyl Ether	U		0.260	1.00	1	08/08/2017 23:16	WG1007015
(S) Toluene-d8	111			80.0-120		08/08/2017 23:16	WG1007015
(S) Dibromofluoromethane	92.2			76.0-123		08/08/2017 23:16	WG1007015
(S) a,a,a-Trifluorotoluene	109			80.0-120		08/08/2017 23:16	WG1007015
(S) 4-Bromofluorobenzene	102			80.0-120		08/08/2017 23:16	WG1007015

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C5 - C12	U		30.4	100	1	08/12/2017 05:19	WG1008525
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-122		08/12/2017 05:19	WG1008525

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.331	1.00	1	08/08/2017 23:36	WG1007015
Toluene	U		0.412	1.00	1	08/08/2017 23:36	WG1007015
Ethylbenzene	U		0.384	1.00	1	08/08/2017 23:36	WG1007015
Total Xylenes	U		1.06	3.00	1	08/08/2017 23:36	WG1007015
1,2-Dichloroethane	U		0.361	1.00	1	08/08/2017 23:36	WG1007015
1,2-Dibromoethane	U		0.381	1.00	1	08/08/2017 23:36	WG1007015
Di-isopropyl ether	U		0.320	1.00	1	08/08/2017 23:36	WG1007015
Ethanol	U		42.0	100	1	08/08/2017 23:36	WG1007015
Ethyl tert-butyl ether	U		0.270	1.00	1	08/08/2017 23:36	WG1007015
Methyl tert-butyl ether	U		0.367	1.00	1	08/08/2017 23:36	WG1007015
tert-Butyl alcohol	U		2.40	5.00	1	08/08/2017 23:36	WG1007015
tert-Amyl Methyl Ether	U		0.260	1.00	1	08/08/2017 23:36	WG1007015
(S) Toluene-d8	109			80.0-120		08/08/2017 23:36	WG1007015
(S) Dibromofluoromethane	91.1			76.0-123		08/08/2017 23:36	WG1007015
(S) a,a,a-Trifluorotoluene	109			80.0-120		08/08/2017 23:36	WG1007015
(S) 4-Bromofluorobenzene	103			80.0-120		08/08/2017 23:36	WG1007015

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C5 - C12	5830		152	500	5	08/12/2017 05:41	WG1008525
(S) a,a,a-Trifluorotoluene(FID) 94.3				77.0-122		08/12/2017 05:41	WG1008525

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	17.6		0.331	1.00	1	08/08/2017 23:56	WG1007015
Toluene	7.14		0.412	1.00	1	08/08/2017 23:56	WG1007015
Ethylbenzene	161		0.384	1.00	1	08/08/2017 23:56	WG1007015
Total Xylenes	266		1.06	3.00	1	08/08/2017 23:56	WG1007015
1,2-Dichloroethane	U		0.361	1.00	1	08/08/2017 23:56	WG1007015
1,2-Dibromoethane	U		0.381	1.00	1	08/08/2017 23:56	WG1007015
Di-isopropyl ether	U		0.320	1.00	1	08/08/2017 23:56	WG1007015
Ethanol	U		42.0	100	1	08/08/2017 23:56	WG1007015
Ethyl tert-butyl ether	U		0.270	1.00	1	08/08/2017 23:56	WG1007015
Methyl tert-butyl ether	U		0.367	1.00	1	08/08/2017 23:56	WG1007015
tert-Butyl alcohol	U		2.40	5.00	1	08/08/2017 23:56	WG1007015
tert-Amyl Methyl Ether	U		0.260	1.00	1	08/08/2017 23:56	WG1007015
(S) Toluene-d8	108			80.0-120		08/08/2017 23:56	WG1007015
(S) Dibromofluoromethane	90.4			76.0-123		08/08/2017 23:56	WG1007015
(S) a,a,a-Trifluorotoluene	109			80.0-120		08/08/2017 23:56	WG1007015
(S) 4-Bromofluorobenzene	103			80.0-120		08/08/2017 23:56	WG1007015

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C5 - C12	28500		152	500	5	08/12/2017 06:03	WG1008525
(S) a,a,a-Trifluorotoluene(FID)	93.9			77.0-122		08/12/2017 06:03	WG1008525

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	1900		8.28	25.0	25	08/09/2017 00:16	WG1007015
Toluene	280		10.3	25.0	25	08/09/2017 00:16	WG1007015
Ethylbenzene	3150		9.60	25.0	25	08/09/2017 00:16	WG1007015
Total Xylenes	8100		26.5	75.0	25	08/09/2017 00:16	WG1007015
1,2-Dichloroethane	U		9.02	25.0	25	08/09/2017 00:16	WG1007015
1,2-Dibromoethane	U		9.52	25.0	25	08/09/2017 00:16	WG1007015
Di-isopropyl ether	U		8.00	25.0	25	08/09/2017 00:16	WG1007015
Ethanol	U		1050	2500	25	08/09/2017 00:16	WG1007015
Ethyl tert-butyl ether	U		6.75	25.0	25	08/09/2017 00:16	WG1007015
Methyl tert-butyl ether	U		9.18	25.0	25	08/09/2017 00:16	WG1007015
tert-Butyl alcohol	U		60.0	125	25	08/09/2017 00:16	WG1007015
tert-Amyl Methyl Ether	U		6.50	25.0	25	08/09/2017 00:16	WG1007015
(S) Toluene-d8	106			80.0-120		08/09/2017 00:16	WG1007015
(S) Dibromofluoromethane	90.5			76.0-123		08/09/2017 00:16	WG1007015
(S) a,a,a-Trifluorotoluene	110			80.0-120		08/09/2017 00:16	WG1007015
(S) 4-Bromofluorobenzene	102			80.0-120		08/09/2017 00:16	WG1007015

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C5 - C12	104		30.4	100	1	08/12/2017 06:25	WG1008525
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-122		08/12/2017 06:25	WG1008525

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.331	1.00	1	08/09/2017 00:37	WG1007015
Toluene	U		0.412	1.00	1	08/09/2017 00:37	WG1007015
Ethylbenzene	U		0.384	1.00	1	08/09/2017 00:37	WG1007015
Total Xylenes	U		1.06	3.00	1	08/09/2017 00:37	WG1007015
1,2-Dichloroethane	U		0.361	1.00	1	08/09/2017 00:37	WG1007015
1,2-Dibromoethane	U		0.381	1.00	1	08/09/2017 00:37	WG1007015
Di-isopropyl ether	U		0.320	1.00	1	08/09/2017 00:37	WG1007015
Ethanol	U		42.0	100	1	08/09/2017 00:37	WG1007015
Ethyl tert-butyl ether	U		0.270	1.00	1	08/09/2017 00:37	WG1007015
Methyl tert-butyl ether	U		0.367	1.00	1	08/09/2017 00:37	WG1007015
tert-Butyl alcohol	U		2.40	5.00	1	08/09/2017 00:37	WG1007015
tert-Amyl Methyl Ether	U		0.260	1.00	1	08/09/2017 00:37	WG1007015
(S) Toluene-d8	109			80.0-120		08/09/2017 00:37	WG1007015
(S) Dibromofluoromethane	90.7			76.0-123		08/09/2017 00:37	WG1007015
(S) a,a,a-Trifluorotoluene	109			80.0-120		08/09/2017 00:37	WG1007015
(S) 4-Bromofluorobenzene	103			80.0-120		08/09/2017 00:37	WG1007015

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C5 - C12	1120		30.4	100	1	08/12/2017 06:46	WG1008525
(S) a,a,a-Trifluorotoluene(FID)	95.1			77.0-122		08/12/2017 06:46	WG1008525

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	1.79		0.331	1.00	1	08/09/2017 00:57	WG1007015
Toluene	0.775	J	0.412	1.00	1	08/09/2017 00:57	WG1007015
Ethylbenzene	1.43		0.384	1.00	1	08/09/2017 00:57	WG1007015
Total Xylenes	1.06	J	1.06	3.00	1	08/09/2017 00:57	WG1007015
1,2-Dichloroethane	U		0.361	1.00	1	08/09/2017 00:57	WG1007015
1,2-Dibromoethane	U		0.381	1.00	1	08/09/2017 00:57	WG1007015
Di-isopropyl ether	U		0.320	1.00	1	08/09/2017 00:57	WG1007015
Ethanol	U		42.0	100	1	08/09/2017 00:57	WG1007015
Ethyl tert-butyl ether	U		0.270	1.00	1	08/09/2017 00:57	WG1007015
Methyl tert-butyl ether	2.52		0.367	1.00	1	08/09/2017 00:57	WG1007015
tert-Butyl alcohol	U		2.40	5.00	1	08/09/2017 00:57	WG1007015
tert-Amyl Methyl Ether	U		0.260	1.00	1	08/09/2017 00:57	WG1007015
(S) Toluene-d8	108			80.0-120		08/09/2017 00:57	WG1007015
(S) Dibromofluoromethane	92.3			76.0-123		08/09/2017 00:57	WG1007015
(S) a,a,a-Trifluorotoluene	111			80.0-120		08/09/2017 00:57	WG1007015
(S) 4-Bromofluorobenzene	102			80.0-120		08/09/2017 00:57	WG1007015

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C5 - C12	U		30.4	100	1	08/12/2017 02:25	WG1008525
(S) a,a,a-Trifluorotoluene(FID) 101				77.0-122		08/12/2017 02:25	WG1008525

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.331	1.00	1	08/09/2017 01:17	WG1007015
Toluene	U		0.412	1.00	1	08/09/2017 01:17	WG1007015
Ethylbenzene	U		0.384	1.00	1	08/09/2017 01:17	WG1007015
Total Xylenes	U		1.06	3.00	1	08/09/2017 01:17	WG1007015
1,2-Dichloroethane	U		0.361	1.00	1	08/09/2017 01:17	WG1007015
1,2-Dibromoethane	U		0.381	1.00	1	08/09/2017 01:17	WG1007015
Di-isopropyl ether	U		0.320	1.00	1	08/09/2017 01:17	WG1007015
Ethanol	U		42.0	100	1	08/09/2017 01:17	WG1007015
Ethyl tert-butyl ether	U		0.270	1.00	1	08/09/2017 01:17	WG1007015
Methyl tert-butyl ether	U		0.367	1.00	1	08/09/2017 01:17	WG1007015
tert-Butyl alcohol	U		2.40	5.00	1	08/09/2017 01:17	WG1007015
tert-Amyl Methyl Ether	U		0.260	1.00	1	08/09/2017 01:17	WG1007015
(S) Toluene-d8	109			80.0-120		08/09/2017 01:17	WG1007015
(S) Dibromofluoromethane	91.0			76.0-123		08/09/2017 01:17	WG1007015
(S) a,a,a-Trifluorotoluene	111			80.0-120		08/09/2017 01:17	WG1007015
(S) 4-Bromofluorobenzene	104			80.0-120		08/09/2017 01:17	WG1007015

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3240761-3 08/12/17 01:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHG C5 - C12	U		30.4	100
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-122

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3240761-1 08/12/17 00:37 • (LCSD) R3240761-2 08/12/17 00:58

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPHG C5 - C12	5500	4160	4510	75.7	82.1	71.0-130			8.09	20
(S) a,a,a-Trifluorotoluene(FID)				102	102	77.0-122				

5 Sr

6 Qc

L927363-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L927363-03 08/12/17 03:52 • (MS) R3240761-4 08/12/17 04:14 • (MSD) R3240761-5 08/12/17 04:36

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPHG C5 - C12	5500	448	3850	3890	61.9	62.7	1	18.0-158			1.13	20
(S) a,a,a-Trifluorotoluene(FID)					100	100		77.0-122				

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3239833-4 08/08/17 19:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichloroethane	U		0.361	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00
Ethanol	U		42.0	100
Methyl tert-butyl ether	U		0.367	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
tert-Amyl Methyl Ether	U		0.260	1.00
Ethyl tert-butyl ether	U		0.270	1.00
tert-Butyl alcohol	U		2.40	5.00
(S) Toluene-d8	108			80.0-120
(S) Dibromofluoromethane	90.7			76.0-123
(S) a,a,a-Trifluorotoluene	110			80.0-120
(S) 4-Bromofluorobenzene	104			80.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3239833-1 08/08/17 17:55 • (LCSD) R3239833-2 08/08/17 18:15

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Benzene	25.0	26.4	25.5	106	102	69.0-123			3.50	20
1,2-Dibromoethane	25.0	26.6	27.3	106	109	77.0-123			2.49	20
1,2-Dichloroethane	25.0	25.3	25.6	101	102	67.0-126			1.26	20
Di-isopropyl ether	25.0	25.8	25.8	103	103	59.0-133			0.000	20
Ethylbenzene	25.0	27.9	27.0	111	108	77.0-120			3.20	20
Methyl tert-butyl ether	25.0	26.9	27.3	108	109	64.0-123			1.24	20
Toluene	25.0	28.8	27.7	115	111	77.0-120			4.05	20
Xylenes, Total	75.0	84.2	82.2	112	110	77.0-120			2.40	20
(S) Toluene-d8				106	105	80.0-120				
(S) Dibromofluoromethane				94.5	94.3	76.0-123				
(S) a,a,a-Trifluorotoluene				110	109	80.0-120				
(S) 4-Bromofluorobenzene				103	103	80.0-120				



Laboratory Control Sample (LCS)

(LCS) R3239833-3 08/08/17 18:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
ethanol	1000	1230	123	50.0-150	
tert-Butyl alcohol	50.0	66.6	133	50.0-150	
<i>(S) Toluene-d8</i>			105	80.0-120	
<i>(S) Dibromofluoromethane</i>			92.1	76.0-123	
<i>(S) a,a,a-Trifluorotoluene</i>			110	80.0-120	
<i>(S) 4-Bromofluorobenzene</i>			102	80.0-120	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.
 * Not all certifications held by the laboratory are applicable to the results reported in the attached report.



State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

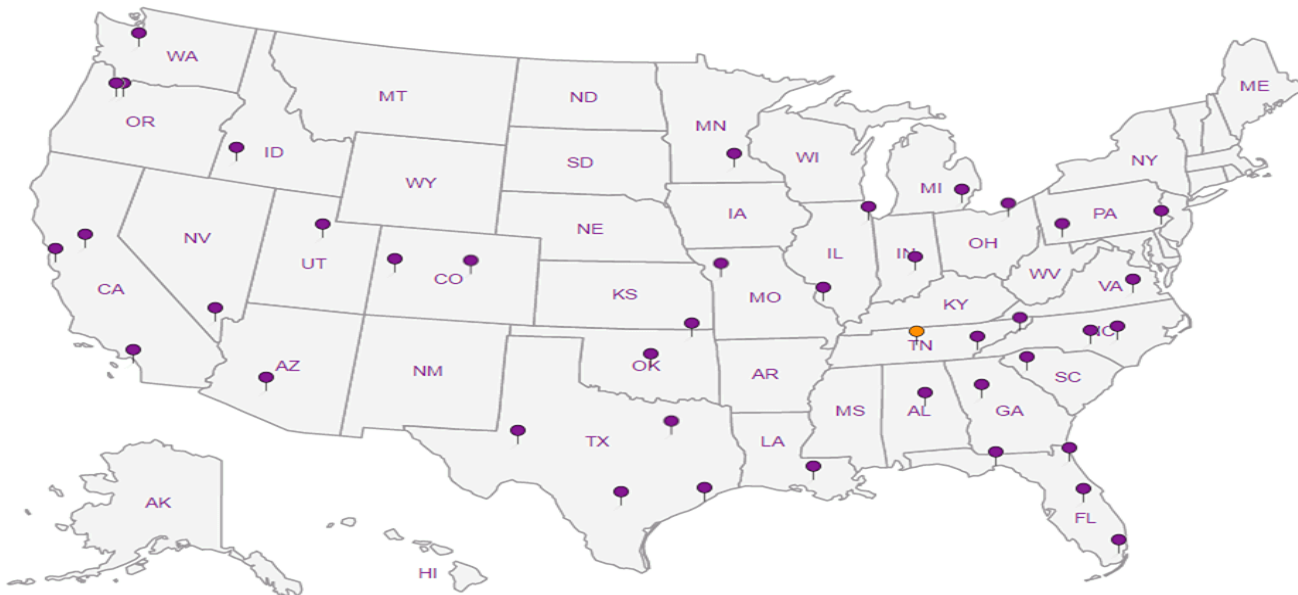
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

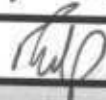
¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{n/a} Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



ESC LAB SCIENCES Cooler Receipt Form

Client: <u>ARCADIS BP</u>	SDG#	<u>L927363</u>	
Cooler Received/Opened On: <u>8/5/2017</u>	Temperature:	<u>1.2°</u>	
Received By: <u>Troy Dunlap</u>			
Signature: 			
Receipt Check List			
	NP	Yes	No
COC Seal Present / Intact?	/		
COC Signed / Accurate?		/	
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable		/	
VOA Zero headspace?			
Preservation Correct / Checked?			