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By Alameda County Environmental Health 8:20 am, Aug 01, 2016

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

Arcadis U.S., Inc.
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Birmingham
Alabama 35205
Tel 205 930 5700
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Subject:

Second Quarter 2016 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

ENVIRONMENT

Date:
July 29, 2016

Dear Mr. Nowell:

Contact:
Megan Smoley

"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."

Phone:
626.590.1502

Sincerely,

Email:
Megan.Smoley@arcadis.com

Arcadis U.S., Inc.



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

Our ref:
GP09BPNA.C112.N0000

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

Subject:

Second Quarter 2016 Groundwater Monitoring Report

Former Atlantic Richfield Company Station #11132
3201 35th Avenue, Oakland, California 94619
Alameda County LOP Case #RO0000014
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Arcadis U.S., Inc.
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Dear Mr. Nowell:

Arcadis U.S., Inc. (Arcadis) has prepared this quarterly 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; Figure 1).

1 SUMMARY

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

Work Performed – Reporting Period (Second Quarter 2016)

- Submitted the *Well Installation and Well Replacement Report* to the Alameda County LOP on April 8, 2016.
- Conducted quarterly groundwater monitoring and sampling of newly installed wells MW-10R and MW-11 on June 19, 2016.

Work Proposed – Reporting Period (Third Quarter 2016)

- Conduct semi-annual groundwater monitoring and sampling for Third Quarter 2016.
- Submit a work plan for additional plume delineation and a figure with proposed offsite soil vapor sample locations.
- Prepare and submit the Third Quarter 2016 Semi-Annual Groundwater Monitoring Report.

ENVIRONMENT

Date:
July 29, 2016

Contact:
Megan Smoley

Phone:
626.590.1502
Email:
Megan.Smoley@arcadis.com

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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 and RW-1 Semi-Annual Sampling (1/3Q): MW-1, MW-2, MW-5, MW-8, MW-9, MW-10R*, MW-11*, RW-1 Annual Sampling (1Q): MW-4 and MW-7 *Note: MW-10R and MW-11 will be sampled quarterly for one year after installation through 4Q16.
Have Liquid Phase Hydrocarbons (LPH) Been Measured Onsite, Historically?	Yes
Historical Range in Depth to Water (DTW; feet below top of casing [btoc]):	9.11 (MW-8 3Q/2007) to 32.20 (RW-1 2Q/1994)

CURRENT QUARTER MONITORING DATA

Wells Gauged:	MW-10R and MW-11
Wells Sampled:	MW-10R and MW-11
Monitoring and Sampling Date:	June 19, 2016
LPH Measured This Quarter:	No
LPH Recovered This Quarter:	None
Cumulative LPH Recovered to Date:	None
DTW Range (feet btoc):	15.71 (MW-11) to 17.51 (MW-10R)
Groundwater Flow Direction and Gradient (feet/foot):	Not Applicable (NA)

2 GROUNDWATER MONITORING AND SAMPLING

2.1 Monitoring and Sampling Procedures

During the Second Quarter 2016 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 wells MW-10R and MW-11 using an oil/water interface probe. All monitoring and sampling activities for the Site during the Second Quarter 2016 were performed by Blaine Tech Services, Inc. (Blaine Tech). The groundwater sampling data package is included as Attachment A.

2.2 Groundwater Sample Analysis

Groundwater samples collected from wells MW-10R and MW-11 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 8015B, benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX), methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), ethanol, 1,2-dichloroethane (1,2-DCA), and ethylene dibromide (EDB) by EPA Method 8260B. The certified laboratory analytical report, including chain-of-custody documentation, is included as Attachment B.

2.3 Quality Assurance/Quality Control

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.

3 RESULTS AND DISCUSSION

The depth to water measurements and analytical data presented this quarter are consistent with historical measurements. Groundwater elevations are presented in Figure 2. Groundwater elevation contours and potentiometric groundwater gradient are not presented in this report since water levels were only gauged at MW-10R and MW-11.

GRO was detected above laboratory reporting limits (LRLs) in wells MW-10R and MW-11 at concentrations of 24,800 micrograms per liter ($\mu\text{g/L}$) and 197 $\mu\text{g/L}$, respectively. No other analytes were detected above LRLs in well MW-11. BTEX were detected in well MW-10R at concentrations of 447 $\mu\text{g/L}$, 68.8 $\mu\text{g/L}$, 1,090 $\mu\text{g/L}$, and 1950 $\mu\text{g/L}$, respectively. TBA was detected above the LRL in MW-10R at a concentration of 18.9 $\mu\text{g/L}$. All other analytes were not detected above LRLs in MW-10R. Current groundwater monitoring and sampling data are summarized in Table 1, and presented on Figure 3. Historical groundwater monitoring and sampling results are summarized in Table 2. Groundwater flow direction and gradient information are presented in Table 3.

4 RECOMMENDATIONS

Arcadis recommends continuation of groundwater monitoring and sampling on a quarterly basis at MW-10R and MW-11 for at least four consecutive quarters, and on a semi-annual basis at other monitoring well locations in accordance with the approved schedule.

5 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.

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.

Licensed approver:



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



Copies:

GeoTracker upload

Ms. Shelby Lathrop, Conoco Phillips, 76 Broadway, Sacramento, California 95818

Enclosures:

Tables

- 1 Current Groundwater Monitoring and Analytical Data
- 2 Historical Groundwater Monitoring and Analytical Data
- 3 Historical Groundwater Flow Direction and Gradient

Figures

- 1 Site Location Map
- 2 Groundwater Elevation Map – June 19, 2016
- 3 Groundwater Analytical Summary Map – June 19, 2016

Attachments

- 1 Groundwater Sampling Data Packages
- 2 Certified Laboratory Analytical Report and Chain of Custody Documentation

TABLES



Table 1
 Current Groundwater Monitoring and Analytical Data
 CA 11132
 3201 35th Avenue
 Oakland, California

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-10R	6/19/2016		166.80	17.50	--	149.30	24,800	447	68.8	1,090	1,950	<1.00	18.9	<1.00	<1.00	<1.00	<1.00	<1.00	<100	0.32	
MW-11	6/19/2016		165.64	15.71	--	149.93	197	<1.00	<5.00	<1.00	<3.00(J3)	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<100	0.35	

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
 J3 = The associated batch QC was outside the established quality control range for precision.
 -- = 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 and pH were obtained through field measurements
 GRO analysis was completed by EPA method 8260B (C4-C12) for samples collected from the time period April 2006 through February 4, 2008; the analysis for GRO was changed

Table 2
 Historical Groundwater Monitoring and Analytical Data
 CA 11132
 3201 35th Avenue
 Oakland, California



Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	NAPL (µg/L)	Notes	
MW-1	3/7/1991		169.75	20.59	--	149.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	4/1/1991		169.75	16.51	0.15	153.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	7/3/1992		169.75	22.30	0.27	147.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	10/5/1992		169.75	23.98	0.24	145.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	1/13/1993		169.75	17.03	0.24	152.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	4/23/1993		169.75	18.10	0.42	151.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	7/12/1993		169.75	22.02	0.49	147.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	10/21/1993		169.75	25.12	1.09	143.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	1/21/1994		169.75	23.02	0.76	145.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	4/20/1994		169.75	24.54	1.80	143.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/1/1994		169.75	24.11	0.35	145.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/23/1994		169.75	18.19	--	151.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	1/26/1995		169.75	16.25	1.10	152.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	6/8/1995		169.75	22.92	--	146.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/22/1995		169.75	24.45	0.85	144.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	10/27/1995		169.75	25.41	--	143.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	1/25/1996		169.75	18.20	--	151.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	4/19/1996		169.75	19.06	1.22	149.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	7/23/1996		169.75	22.98	0.89	145.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/11/1996		169.75	23.99	0.89	144.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	1/21/1997		169.75	16.80	0.90	152.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	4/29/1997		169.75	21.90	0.85	147.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	4/30/1997	Dup	--	--	--	--	92,000	--	3,500	8,100	4,400	23,800	--	6,900	--	--	--	--	--	--	--	--	--	(Dup)
MW-1	4/30/1997		--	--	--	--	100,000	--	3,600	8,000	4,000	21,300	--	7,700	--	--	--	--	--	--	--	5.2	--	
MW-1	8/21/1997	Dup	169.75	23.40	--	146.35	120,000	--	3,200	8,100	3,800	19,600	--	5,200	--	--	--	--	--	--	--	--	--	(Dup)
MW-1	8/21/1997		169.75	23.40	--	146.35	140,000	--	3,000	8,500	3,900	22,100	--	5,700	--	--	--	--	--	--	--	5.3	--	
MW-1	11/5/1997	Dup	169.75	23.70	--	145.51	88,000	--	7,300	4,800	3,600	16,900	--	8,200	--	--	--	--	--	--	--	--	--	(Dup)
MW-1	11/5/1997		169.75	23.70	--	145.51	68,000	--	6,200	4,400	3,300	14,300	--	8,000	--	--	--	--	--	--	--	4.7	--	
MW-1	2/3/1998		169.75	13.63	0.32	155.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	2/4/1998	Dup	--	--	--	--	160,000	--	2,300	8,400	5,000	29,400	--	<10,000	--	--	--	--	--	--	--	--	--	(Dup)
MW-1	2/4/1998		--	--	--	--	190,000	--	2,200	10,000	5,600	32,000	--	<10,000	--	--	--	--	--	--	--	--	5.3	
MW-1	5/26/1998		169.75	18.03	0.17	151.55	87,000	--	980	3,900	3,600	19,000	--	6,900	--	--	--	--	--	--	--	--	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	2/2/1999		169.75	18.93	0.03	150.79	79,000	--	480	3,100	3,500	21,000	--	3,500	--	--	--	--	--	--	--	--	--	
MW-1	5/10/1999		169.75	18.28	0.03	151.44	110,000	--	160	1,900	3,700	24,000	--	3,000	--	--	--	--	--	--	--	--	--	
MW-1	8/24/1999		169.75	20.13	0.06	149.56	110,000	--	850	1,300	1,900	19,000	--	<50	--	--	--	--	--	--	--	--	--	
MW-1	11/3/1999		169.75	22.27	0.36	147.12	65,000	--	6,300	1,100	3,300	9,500	--	8,900	--	--	--	--	--	--	--	--	--	
MW-1	3/1/2000		169.75	14.79	0.23	154.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	4/21/2000		169.75	18.10	0.33	151.32	61,000	--	330	780	2,700	17,000	--	1,300	--	--	--	--	--	--	--	--	--	
MW-1	7/31/2000		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	2/19/2001		169.75	16.70	0.13	152.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	2/26/2001		169.75	14.38	0.15	155.22	100,000	--	658	466	4,210	15,000	--	1,890	--	--	--	--	--	--	--	--	--	
MW-1	6/7/2001		169.75	20.78	--	148.97	70,000	--	705	440	3,870	12,200	--	2,720	--	--	--	--	--	--	--	--	--	
MW-1	9/5/2001		169.75	23.36	0.35	146.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/30/2001		169.75	20.85	0.41	148.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/6/2001		169.75	18.72	0.27	150.76	39,000	--	3,500	237	2,150	4,500	--	5,400	--	--	--	--	--	--	--	--	--	
MW-1	2/20/2002		169.75	17.43	0.15	152.17	52,000	--	465	271	1,600	11,400	--	106	--	--	--	--	--	--	--	--	--	
MW-1	6/20/2002		169.75	21.18	0.34	148.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	9/11/2002		169.75	22.86	0.40	146.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/12/2002		169.75	22.65	0.37	146.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	1/29/2003		169.75	18.15	0.30	151.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	5/22/2003		169.75	18.49	0.20	151.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	6/24/2003		169.75	21.44	0.35	147.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	7/28/2003		169.75	22.72	0.35	146.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/12/2003		169.75	22.64	0.23	146.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	9/12/2003		169.75	20.70	0.24	148.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/18/2003		169.75	21.70	0.25	148.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	2/23/2004		169.75	16.34	0.09	153.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	5/4/2004		169.75	21.28	0.16	148.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/4/2004		169.75	22.54	0.10	147.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	9/22/2004		169.75	22.76	0.20	147.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/10/2004		169.75	20.19	0.14	149.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	1/13/2005		169.75	14.58	0.03	155.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	2/15/2005		169.75	16.13	0.04	153.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	3/7/2005		169.75	13.31	0.01	156.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	5/16/2005		169.75	15.74	0.02	154.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/17/2005		169.75	21.15	0.08	148.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/18/2005		169.75	20.15	--	149.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	2/7/2006		169.75	15.19	0.01	154.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	5/19/2006		169.75	17.42	--	152.33	44,000	--	73	510	3,300	5,30												

Table 2
 Historical Groundwater Monitoring and Analytical Data
 CA 11132
 3201 35th Avenue
 Oakland, California



Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	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	4/8/2009		169.75	18.18		151.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	5/28/2009		169.75	19.62	0.01	150.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	6/16/2009		169.75	20.94	0.01	148.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/6/2009		169.75	22.31	0.01	147.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	3/4/2010		169.75	14.27	--	155.48	14,000	--	45	<10	610	390	<10	<80	<10	<10	<10	<10	<10	<2,000	0.54	--	(P)	
MW-1	9/2/2010		169.75	22.32	--	147.43	8,200	--	10	<5.0	230	140	<5.0	<40	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	--	(NP)	
MW-1	3/15/2011		169.75	14.99	--	154.76	4,500	--	<5.0	<5.0	56	30	16	<40	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500	--	--	(P)	
MW-1	8/17/2011		169.75	20.41	--	149.34	1,200	--	<1.0	<1.0	24	15	8.3	<8.0	<1.0	<1.0	<1.0	<1.0	<1.0	<500	--	--	(P)	
MW-1	2/6/2012		169.75	18.69	--	151.06	710	--	<1.0	<1.0	2.9	2.2	10	100	<1.0	<1.0	<1.0	<1.0(*)	<1.0	<500	--	--	(P)	
MW-1	8/21/2012		169.75	21.77	--	147.98	5,000	--	230	7.3	230	68	77	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<1,300	--	--		
MW-1	2/4/2013		169.75	18.36	(Sheen)	151.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/1/2013		169.75	22.25	0.15	147.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LPH)
MW-1	2/27/2014		169.75	19.82	0.07	149.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/27/2014		169.75	22.03	0.15	147.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	3/27/2015		169.75	19.54	--	150.21	7,900	--	17	<2.5	110	25	13	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2,500	3.23	--	(HC odor, I)	
MW-1	8/27/2015		169.75	21.64	0.10	148.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LNAPL present)
MW-1	3/28/2016		169.75	14.78	--	154.97	8,110	--	6.67(J)	<50.0	59.6	<30.0	5.80(J)	43.5(J)	<10.0	<10.0(J3)	<10.0	<10.0	<10.0	<1,000	1.75	--		
MW-2	3/7/1991		168.14	19.18	--	148.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	4/1/1991		168.14	15.21	--	152.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	7/3/1992		168.14	20.93	--	147.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	10/5/1992		168.14	22.74	--	145.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	1/13/1993		168.14	15.55	--	152.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	4/23/1993		168.14	16.54	--	151.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	7/12/1993		168.14	20.46	--	147.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	10/21/1993		168.14	24.91	--	143.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	1/21/1994		168.14	21.20	--	146.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	4/20/1994		168.14	22.44	--	145.70	1,800	--	140	370	54	290	24	--	--	--	--	--	--	--	--	--	1.7	
MW-2	8/1/1994		168.14	22.24	--	145.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	12/23/1994		168.14	16.25	--	151.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	1/26/1995		168.14	14.55	--	153.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	6/8/1995		168.14	21.18	--	146.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	8/22/1995		168.14	22.76	--	145.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	10/27/1995		168.14	23.61	--	144.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	1/25/1996		168.14	15.95	--	152.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	4/19/1996		168.14	17.33	--	150.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	7/23/1996		168.14	21.25	--	146.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	11/11/1996		168.14	22.27	--	145.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	1/21/1997		168.14	15.19	--	152.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	4/29/1997		168.14	20.22	--	147.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	4/30/1997		--	--	--	--	130,000	--	4,600	15,000	6,000	37,000	<5,000	--	--	--	--	--	--	--	--	--	5	
MW-2	8/21/1997		168.14	21.74	--	146.40	110,000	--	6,000	16,000	4,700	28,000	<500	--	--	--	--	--	--	--	--	4.6	--	
MW-2	11/5/1997		168.14	21.61	--	146.53	120,000	--	7,800	18,000	4,900	28,100	<2,500	--	--	--	--	--	--	--	--	4.6	--	
MW-2	2/3/1998		168.14	11.51	--	156.63	75,000	--	590	1,500	1,800	12,800	<2,500	--	--	--	--	--	--	--	--	4.5	--	
MW-2	5/28/1998		168.14	16.51	--	151.63	79,000	--	3,900	3,100	3,100	18,000	900	--	--	--	--	--	--	--	--	4.3	--	
MW-2	12/30/1998		168.14	17.70	--	150.44	95,000	--	4,700	3,500	3,700	21,000	<250	--	--	--	--	--	--	--	--	--	--	
MW-2	2/2/1999		168.14	15.46	--	152.68	170,000	--	3,500	1,500	5,200	34,000	<500	--	--	--	--	--	--	--	--	--	--	
MW-2	5/10/1999		168.14	16.52	--	151.62	84,000	--	3,200	3,200	3,700	20,000	75	--	--	--	--	--	--	--	--	--	--	
MW-2	8/24/1999		168.14	20.73	--	147.41	130,000	--	9,100	9,200	4,700	27,000	<250	--	--	--	--	--	--	--	--	--	--	
MW-2	11/3/1999		168.14	20.93	--	147.21	120,000	--	10,000	21,000	4,700	30,200	2,200	--	--	--	--	--	--	--	--	--	--	
MW-2	3/1/2000		168.14	13.37	--	154.77	39,000	--	1,400	1,500	1,700	8,100	44	--	--	--	--	--	--	--	--	--	--	
MW-2	4/21/2000		168.14	16.59	--	151.55	68,000	--	3,300	2,500	3,100	20,000	260	--	--	--	--	--	--	--	--	--	--	
MW-2	7/31/2000		168.14	16.37	--	151.77	99,000	--	5,600	1,400	4,300	22,000	490	--	--	--	--	--	--	--	--	--	--	
MW-2	11/20/2000		168.14	19.71	--	148.43	37,000	--	5,100	1,500	1,300	4,800	2,800	--	--	--	--	--	--	--	--	--	--	
MW-2	2/18/2001		168.14	15.29	--	152.85	54,000	--	5,020	3,880	2,850	15,400	1,010	--	--	--	--	--	--	--	--	--	--	
MW-2	6/7/2001		168.14	19.43	--	148.71	110,000	--	7,240	4,380	4,160	22,100	567	--	--	--	--	--	--	--	--	--	--	
MW-2	9/5/2001		168.14	22.44	--	145.70	69,000	--	5,750	5,790	2,770	14,200	1,510	--	--	--	--	--	--	--	--	--	--	
MW-2	11/30/2001		168.14	19.58	--	148.58	120,000	--	7,270	6,540	4,590	23,000	794	--	--	--	--	--	--	--	--	--	--	
MW-2	2/20/2002		168.14	16.39	--	151.75	56,000	--	2,410	2,270	2,910	14,300	160	--	--	--	--	--	--	--	--	--	--	
MW-2	6/20/2002		168.14	19.77	--	148.37	86,000	--	7,310	6,490	3,080	14,600	659	--	--	--	--	--	--	--	--	--	--	
MW-2	9/11/2002		168.14	21.60	--	146.54	130,000	--	7,600	13,000	5,400	30,000	<5,000	--	--	--	--	--	--	--	--	--	--	
MW-2	11/12/2002		168.14	21.34	--	146.80	46,000	--	4,100	4,300	1,900	10,000	1,900	--	--	--	--	--	--	--	--	--	--	
MW-2	1/29/2003		168.14	16.80	--	151.34	77,000	--	4,700	2,600	2,800	13,000	820	<2,000	<50	<50	<50	<50	<50	<4,000	--	--		
MW-2	5/22/2003		168.14	17.15	--	150.99	52,000	--	6,400	2,600	1,800	7,400	1,000	<2,000	--	<50	<50	<50	<50	<10,000	--	--		
MW-2	7/28/2003		168.14	21.47	--	146.67	31,000	--	6,900	5,500	2,200	12,000	1,700	<4,000	<100	<100	<100	<100	<100	<20,000	--	--		
MW-2	11/18/2003		168.14	20.50	--	147.64	23,000	--	3,300	800	500	2,000	500	<1,000	--	<25	<25	<25	<25	<5,000	--	--		
MW-2	2/23/2004		168.14	14.77	--	153.37	84,000	--	14,000	6,200	3,100	14,000	790	<5,000	<120	<120	<120	<120	<120	<25,000	--	--		
MW-2	5/4/2004		168.14	20.59	--	148.95	120,000	--																

Table 2
Historical Groundwater Monitoring and Analytical Data
CA 11132
3201 35th Avenue
Oakland, California



Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	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	9/22/2004		168.01	21.28	0.06	146.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/10/2004		168.01	18.56	0.02	149.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/13/2005		168.01	12.51	0.01	155.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	2/15/2005		168.01	15.24	0.03	152.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	3/7/2005		168.01	11.90	0.02	156.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	5/16/2005		168.01	14.39	0.02	153.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	8/17/2005		168.01	19.91	0.03	148.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/18/2005		168.01	20.36	0.07	147.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	2/7/2006		168.01	12.87	0.01	155.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	5/19/2006		168.01	15.87	0.04	152.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	8/23/2006		168.01	20.50	0.07	147.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/15/2006		168.01	20.52	0.07	147.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	2/14/2007		168.01	15.44	0.04	152.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	5/22/2007		168.01	17.78	(Sheen)	150.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	8/15/2007		168.01	20.80	0.02	147.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/8/2007		168.01	20.32	0.01	147.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	2/20/2008		168.01	14.55	0.02	153.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	8/20/2008		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	2/25/2009		168.01	13.40	0.02	154.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	4/8/2009		168.01	16.45	--	151.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	11/15/2009		168.01	17.98	0.01	150.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	6/16/2009		168.01	19.30	0.01	148.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	8/6/2009		168.01	20.72	0.01	147.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	3/4/2010		168.01	12.33	--	155.68	8,000	--	20	<2.5	230	140	110	45	<2.5	<2.5	<2.5	<2.5	5.7	<500	1.24	--	(P)	
RW-1	9/2/2010		168.01	20.14	--	147.87	4,700	--	18	<2.5	78	46	<2.5	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	--	(NP)	
RW-1	3/15/2011		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	<1,200	--	--	(P)	
RW-1	8/17/2011		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	<1,300	--	--	(P)	
RW-1	2/6/2012		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	<1,300	--	--	(P)	
RW-1	8/21/2012		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	1.0	<250	--	--	(P)	
RW-1	2/4/2013		168.01	16.36	(Sheen)	151.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-1	8/1/2013		168.01	20.50	0.01	147.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(LPH)
RW-1	2/27/2014		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	<250	--	--		
RW-1	8/27/2014		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	<500	0.22	6.8	(HC odor, sheen)	
RW-1	3/27/2015		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	<500	2.35	--	(HC odor)	
RW-1	8/27/2015		168.01	19.90	--	148.11	2,850	--	4.57	1.14(j)	4.54	3.66	<1.00	6.22	<1.00	<1.00	<1.00	<1.00	<1.00	<100	8.36	--	(1 liter purged. Moderate hydrocarbon odor.)	
RW-1	3/28/2016		168.01	12.68	--	155.33	199	--	<1.00	<5.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00(j3)	<1.00	<1.00	<1.00	<100	1.01	--		

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 = Diisopropyl 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 = Well not sampled due to presence of LPH and nature of the product
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
Beginning in the Second Quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12
Values for DO and pH were obtained through field measurements
GRO analysis was completed by EPA method 8260B (C4-C12) for samples collected from the time period April 2006 through February 4, 2008; the analysis for GRO was changed to EPA method
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

Table 3
Historical Groundwater Flow Direction and Gradient
CA 11132
3201 35th Avenue
Oakland, California



Design & Consultancy
for natural and
built assets

Date Measured	Approximate Gradient Direction	Approximate Gradient Magnitude (ft/ft)
5/19/2006	South	0.003 to 0.005
8/23/2006	Southwest	0.01
11/15/2006	South	0.004
2/14/2007	Southeast	0.01
5/22/2007	South	0.005
8/15/2007	South-Southwest	0.008
11/8/2007	Southwest	0.006
2/20/2008	Southeast	0.008
5/7/2008	South-Southwest	0.003
8/20/2008	South-Southwest	0.007
11/17/2008	South-Southwest	0.005
2/25/2009	Southeast	0.01
5/28/2009	South	0.004
8/6/2009	South-Southwest	0.005
3/4/2010	East-Southeast	0.02
9/2/2010	Southwest	0.01
3/15/2011	Southeast	0.01
8/17/2011	Southwest	0.003
2/6/2012	Southeast	0.005
8/21/2012	Southwest	0.007
2/4/2013	Southwest	0.01
8/1/2013	Southwest	0.007
2/27/2014	South-Southwest	0.007
8/27/2014	West-Northwest	0.01
3/27/2015	West	0.004
8/27/2015	West-Northwest	0.01
3/28/2016	South	0.007

Notes:

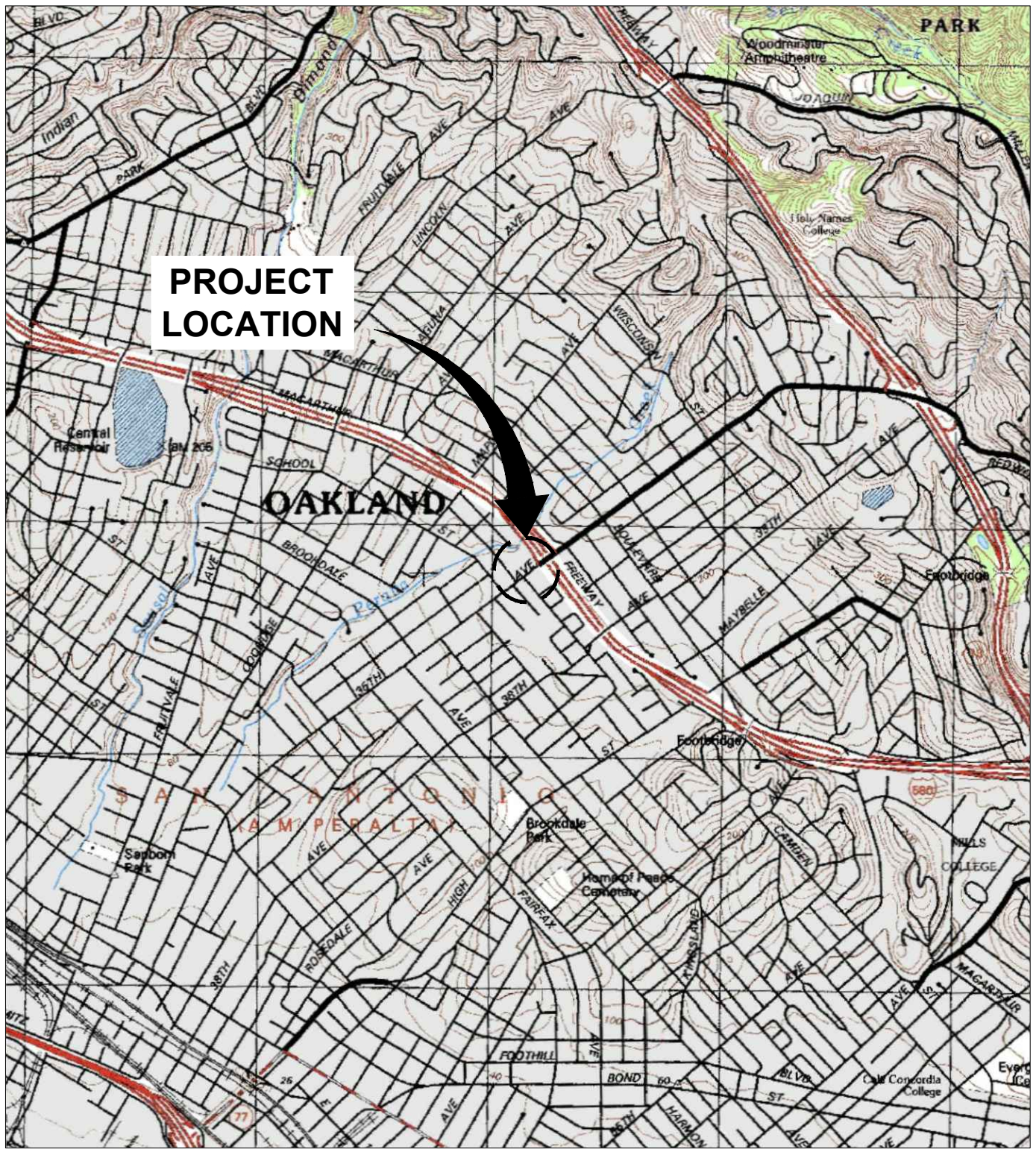
The data within this table collected prior to April 2006 were provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

ft/ft = feet per foot

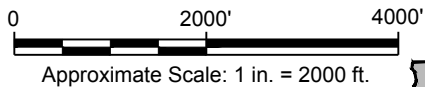
FIGURES



CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS ID: PIC: PM: H. PHILLIPS TM: J. PETERSON L YR: 01/01/01 OFF: REF.
 C:\ENV\CAD\emery\11132\112\00000\DWG\098\NACT12-N01.dwg LAYOUT: 1 SAVED: 2/19/2016 1:56 PM ACADVER: 19.1 S (LMS TECH) PAGESETUP: PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 2/19/2016 1:58 PM BY: REYES.ALEC
 XREFS: IMAGES: PROJECTNAME: USGS TOPO 11132.jpg

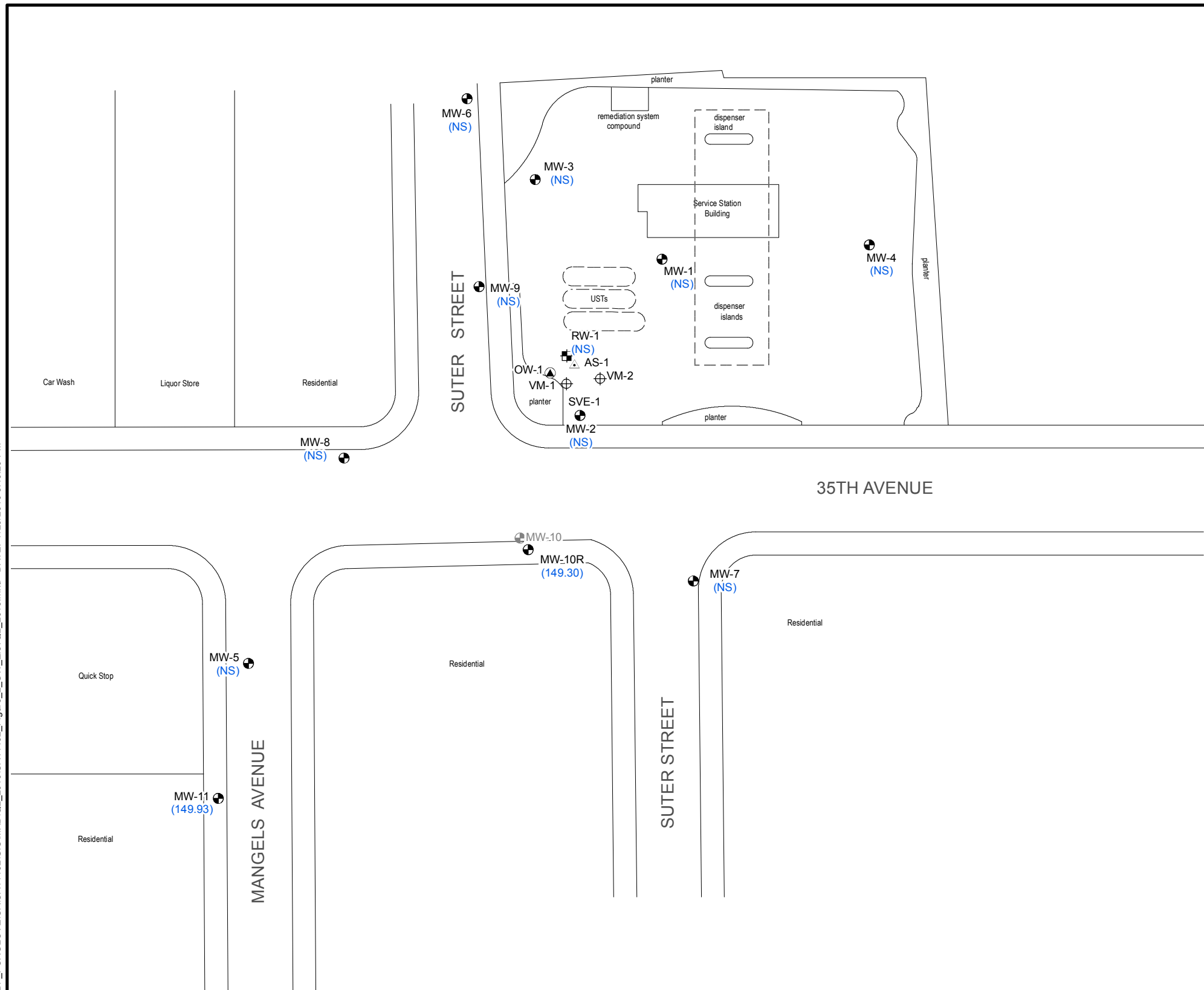


REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., OAKLAND EAST, CALIFORNIA, 1997.



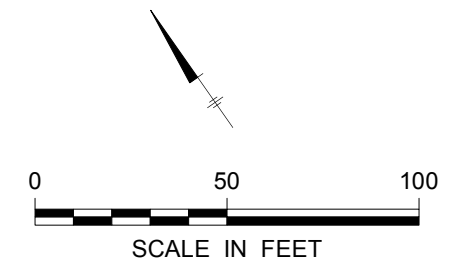
FORMER BP STATION No. 11132 3201 35TH AVENUE OAKLAND, CALIFORNIA	
SITE LOCATION MAP	
	Design & Consultancy for natural and built assets
FIGURE	1

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: kgpieters LD: PIC: PM: TM:
 PROJECT: Z:\GIS\PROJECTS\ENWBP_FOXGLOVE\CACA11132\GIS\MXD\Q2_2016\CA11132_Figure_2_GW_ElevQ2_2016.mxd DATE: 7/29/2016 3:49:29 PM



- LEGEND:**
- MW-1 GROUNDWATER MONITORING WELL
 - RW-1 GROUNDWATER RECOVERY WELL
 - OW-1 OBSERVATION WELL
 - SVE-1 SOIL VAPOR EXTRACTION WELL
 - VM-1 SOIL VAPOR MONITORING WELL
 - AS-1 AIR SPARGE WELL
 - MW-10 ABANDONED MONITORING WELL
- 149.30** GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- NS** NOT SAMPLED

- NOTES:**
1. SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.
 2. WELL MW-7 AND SUTER STREET LOCATIONS HAVE BEEN CORRECTED FROM PREVIOUS MAPS.

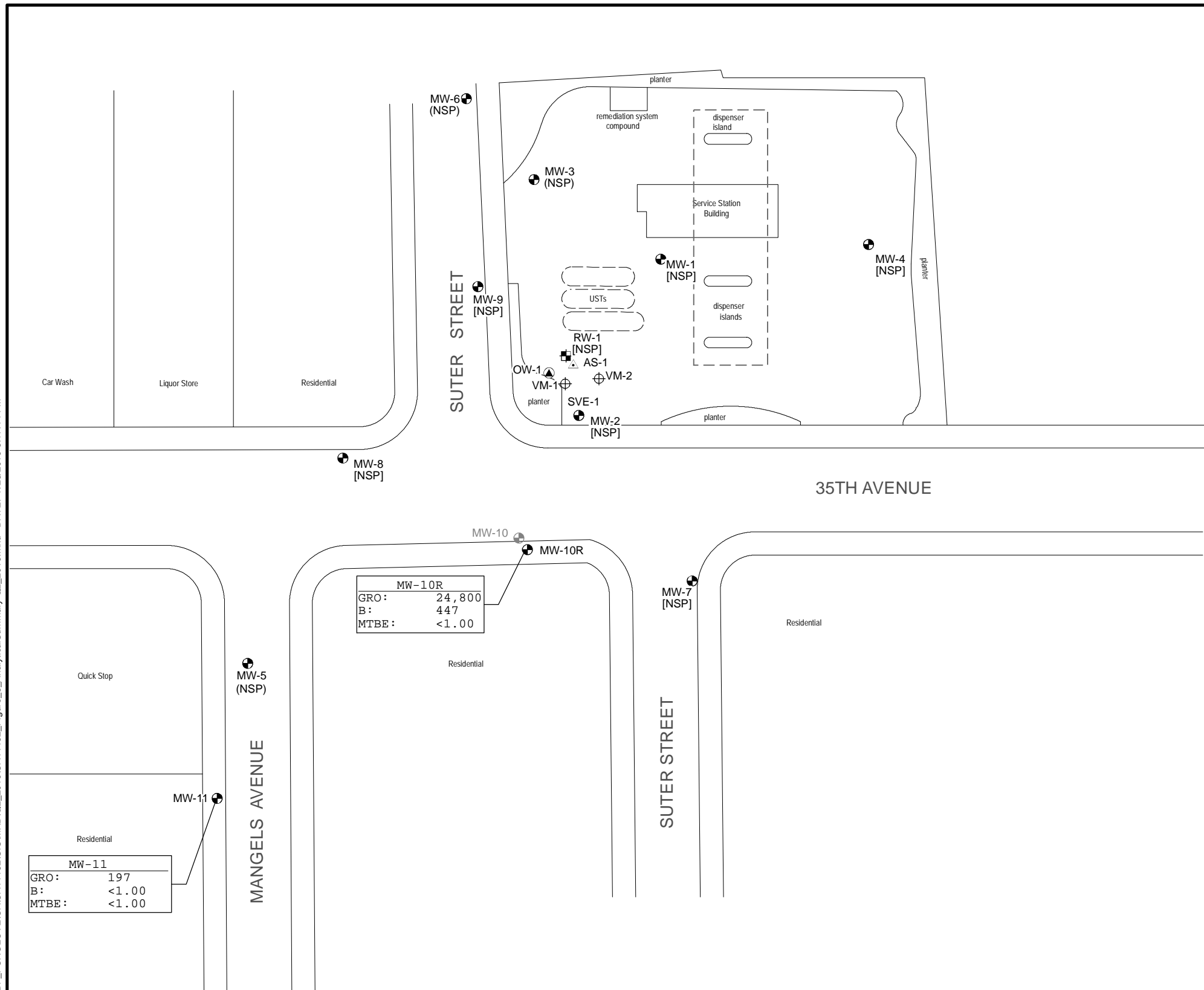


FORMER BP SERVICE STATION #11132
 3201 35TH AVENUE
 OAKLAND, CALIFORNIA

**GROUNDWATER ELEVATION MAP
 JUNE 19, 2016**

ARCADIS Design & Consultancy
 for natural and built assets

FIGURE
2



LEGEND:

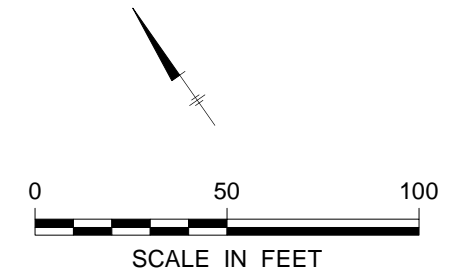
- MW-1 GROUNDWATER MONITORING WELL
- RW-1 GROUNDWATER RECOVERY WELL
- OW-1 OBSERVATION WELL
- SVE-1 SOIL VAPOR EXTRACTION WELL
- VM-1 SOIL VAPOR MONITORING WELL
- AS-1 AIR SPARGE WELL
- MW-10 ABANDONED MONITORING WELL
- CANOPY

MW-10R		SAMPLE LOCATION ID
GRO:	24,800	CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
B:	447	
MTBE:	<1.00	
		ANALYTE

- GRO GASOLINE RANGE ORGANICS
- B BENZENE
- MTBE METHYL TERT-BUTYL ETHER
- < NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT
- NSP WELL NOT SAMPLED IN ACCORDANCE WITH GROUNDWATER SAMPLING SCHEDULE

MW-10R	
GRO:	24,800
B:	447
MTBE:	<1.00

MW-11	
GRO:	197
B:	<1.00
MTBE:	<1.00



NOTES:

1. SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.
2. WELL MW-7 AND SUTER STREET LOCATIONS HAVE BEEN CORRECTED FROM PREVIOUS MAPS.

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

GROUNDWATER ANALYTICAL SUMMARY MAP
 JUNE 19, 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

ATTACHMENT 1

Groundwater Sampling Data Package



WELL GAUGING DATA

Project # 160619-MMZ Date 6-19-16 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-10R	0956	2					17.51	25.80	TOC	
MW-11	0950	2					15.71	25.87	TOC	
<i>ALL CAPS OPENED 15 MINUTES PRIOR TO GAUGING</i>										

BP WELL MONITORING DATA SHEET

Project #: <u>160619-MMZ</u>	Station #: <u>11132</u>
Sampler: <u>MM</u>	Date: <u>6-19-16</u>
Well I.D.: <u>MIN-10R</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>25.80</u>	Depth to Water: <u>17.51</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> 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: _____	

_____ (Gals.) X _____ 1 Case Volume Specified Volumes	= _____ Gals. 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 <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations/ DTW
<u>1030</u>	<u>69.0</u>	<u>6.74</u>	<u>1540</u>	<u>—</u>	<u>—</u>	<u>odor, cloudy</u>

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 6-19-16 Sampling Time: 1030 Depth to Water: 17.51

Sample I.D.: MIN-10R Laboratory: Calscience Other: ESC LAB Sciences

Analyzed for: GRO BTEX OXYS ETHANOL Other: see col

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

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	<u>0.32</u>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	<u>-102</u>	mV

BP WELL MONITORING DATA SHEET

Project #: 160619-MM2	Station #: 11132
Sampler: MM	Date: 6-19-16
Well I.D.: MW-11	Well Diameter: (2) 3 4 6 8
Total Well Depth: 25.87	Depth to Water: 15.71
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:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: Hydrastore

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: _____

— (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
1010	68.4	6.34	987	—	—	Brown

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 6-19-16 Sampling Time: 1010 Depth to Water: 15.71

Sample I.D.: MW-11 Laboratory: Calscience Other: ESC LAB Sciences

Analyzed for: GRO BTEX OXYS ETHANOL Other: JOE COE

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

D.O. (if req'd):	Pre-purge:	mg/L	(Post-purge):	0.35	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	(Post-purge):	153	mV

TB-11132-06/19/2016 @ 0925

WELLHEAD INSPECTION CHECKLIST

Client Arcadis Date 6-19-16

Site Address 3201 35th Ave Oakland CA

Job Number 160619-MM2 Technician MM

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-10R	✓				NL			
MW-11	✓				NL			

NOTES: _____

ATTACHMENT 2

Certified Laboratory Analytical Report and Chain of Custody Documentation



June 30, 2016

ARCADIS US - San Francisco, CA

Sample Delivery Group: L843262
Samples Received: 06/23/2016
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:



Jarred Willis
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.



¹Cp: Cover Page	1	
²Tc: Table of Contents	2	
³Ss: Sample Summary	3	
⁴Cn: Case Narrative	4	
⁵Sr: Sample Results	5	
MW-11 L843262-01	5	
MW-10R L843262-02	6	
⁶Qc: Quality Control Summary	7	
Volatile Organic Compounds (GC) by Method 8015B	7	
Volatile Organic Compounds (GC/MS) by Method 8260B	8	
⁷Gl: Glossary of Terms	11	
⁸Al: Accreditations & Locations	12	
⁹Sc: Chain of Custody	13	

SAMPLE SUMMARY



MW-11 L843262-01 GW

Collected by
Mark M. Collected date/time
06/19/16 10:10 Received date/time
06/23/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015B	WG884201	1	06/29/16 15:27	06/29/16 15:27	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG883284	1	06/26/16 19:07	06/26/16 19:07	JHH

1
Cp

2
Tc

3
Ss

MW-10R L843262-02 GW

Collected by
Mark M. Collected date/time
06/19/16 10:30 Received date/time
06/23/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015B	WG884201	20	06/29/16 15:56	06/29/16 15:56	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG883284	1	06/27/16 00:57	06/27/16 00:57	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG883916	20	06/27/16 23:42	06/27/16 23:42	DAH

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jarred Willis
Technical Service Representative

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



Volatile Organic Compounds (GC) by Method 8015B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C6 - C12	197		31.6	100	1	06/29/2016 15:27	WG884201
(S) a,a,a-Trifluorotoluene(FID)	95.6			62.0-128		06/29/2016 15:27	WG884201

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	06/26/2016 19:07	WG883284
Toluene	U		0.780	5.00	1	06/26/2016 19:07	WG883284
Ethylbenzene	U		0.384	1.00	1	06/26/2016 19:07	WG883284
Total Xylenes	U	<u>J3</u>	1.06	3.00	1	06/26/2016 19:07	WG883284
1,2-Dichloroethane	U		0.361	1.00	1	06/26/2016 19:07	WG883284
1,2-Dibromoethane	U		0.381	1.00	1	06/26/2016 19:07	WG883284
Di-isopropyl ether	U		0.320	1.00	1	06/26/2016 19:07	WG883284
Ethanol	U		42.0	100	1	06/26/2016 19:07	WG883284
Ethyl tert-butyl ether	U		0.270	1.00	1	06/26/2016 19:07	WG883284
Methyl tert-butyl ether	U		0.367	1.00	1	06/26/2016 19:07	WG883284
tert-Butyl alcohol	U		2.40	5.00	1	06/26/2016 19:07	WG883284
tert-Amyl Methyl Ether	U		0.260	1.00	1	06/26/2016 19:07	WG883284
(S) Toluene-d8	120	<u>J1</u>		90.0-115		06/26/2016 19:07	WG883284
(S) Dibromofluoromethane	99.6			79.0-121		06/26/2016 19:07	WG883284
(S) a,a,a-Trifluorotoluene	113			90.4-116		06/26/2016 19:07	WG883284
(S) 4-Bromofluorobenzene	99.0			80.1-120		06/26/2016 19:07	WG883284

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHG C6 - C12	24800		632	2000	20	06/29/2016 15:56	WG884201
(S) a,a,a-Trifluorotoluene(FID) 96.3				62.0-128		06/29/2016 15:56	WG884201

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	447		6.62	20.0	20	06/27/2016 23:42	WG883916
Toluene	68.8		0.780	5.00	1	06/27/2016 00:57	WG883284
Ethylbenzene	1090		7.68	20.0	20	06/27/2016 23:42	WG883916
Total Xylenes	1950		21.2	60.0	20	06/27/2016 23:42	WG883916
1,2-Dichloroethane	U		0.361	1.00	1	06/27/2016 00:57	WG883284
1,2-Dibromoethane	U		0.381	1.00	1	06/27/2016 00:57	WG883284
Di-isopropyl ether	U		0.320	1.00	1	06/27/2016 00:57	WG883284
Ethanol	U		42.0	100	1	06/27/2016 00:57	WG883284
Ethyl tert-butyl ether	U		0.270	1.00	1	06/27/2016 00:57	WG883284
Methyl tert-butyl ether	U		0.367	1.00	1	06/27/2016 00:57	WG883284
tert-Butyl alcohol	18.9		2.40	5.00	1	06/27/2016 00:57	WG883284
tert-Amyl Methyl Ether	U		0.260	1.00	1	06/27/2016 00:57	WG883284
(S) Toluene-d8	106			90.0-115		06/27/2016 00:57	WG883284
(S) Toluene-d8	103			90.0-115		06/27/2016 23:42	WG883916
(S) Dibromofluoromethane	101			79.0-121		06/27/2016 23:42	WG883916
(S) Dibromofluoromethane	96.2			79.0-121		06/27/2016 00:57	WG883284
(S) a,a,a-Trifluorotoluene	109			90.4-116		06/27/2016 00:57	WG883284
(S) a,a,a-Trifluorotoluene	103			90.4-116		06/27/2016 23:42	WG883916
(S) 4-Bromofluorobenzene	105			80.1-120		06/27/2016 23:42	WG883916
(S) 4-Bromofluorobenzene	92.1			80.1-120		06/27/2016 00:57	WG883284

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3146579-3 06/29/16 13:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHG C6 - C12	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	100			62.0-128

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) R3146579-1 06/29/16 11:36 • (LCSD) R3146579-2 06/29/16 12:05

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5500	5960	6470	108	118	66.0-123			8.23	20
(S) a,a,a-Trifluorotoluene(FID)				99.3	100	62.0-128				

L843262-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L843262-01 06/29/16 15:27 • (MS) R3146579-4 06/29/16 14:00 • (MSD) R3146579-5 06/29/16 14:29

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5500	197	6390	7040	113	124	1	47.5-136			9.76	20
(S) a,a,a-Trifluorotoluene(FID)					98.2	98.9		62.0-128				



Method Blank (MB)

(MB) R3146111-3 06/26/16 17:25

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		0.780	5.00
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
<i>(S) Toluene-d8</i>	106			90.0-115
<i>(S) Dibromofluoromethane</i>	96.7			79.0-121
<i>(S) a,a,a-Trifluorotoluene</i>	107			90.4-116
<i>(S) 4-Bromofluorobenzene</i>	99.5			80.1-120

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) R3146111-1 06/26/16 15:28 • (LCSD) R3146111-2 06/26/16 15:48

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	21.8	20.8	87.3	83.4	73.0-122			4.55	20
1,2-Dibromoethane	25.0	25.6	25.2	102	101	79.8-122			1.64	20
1,2-Dichloroethane	25.0	26.6	22.0	106	87.9	65.3-126			18.9	20
Di-isopropyl ether	25.0	24.5	21.3	98.1	85.2	65.1-135			14.1	20
Ethylbenzene	25.0	22.9	25.3	91.7	101	80.9-121			9.93	20
Methyl tert-butyl ether	25.0	22.7	21.2	90.8	84.6	70.1-125			7.00	20
Toluene	25.0	24.2	23.2	96.6	92.8	77.9-116			4.04	20
Xylenes, Total	75.0	71.4	78.1	95.2	104	79.2-122			8.87	20
<i>(S) Toluene-d8</i>				105	104	90.0-115				
<i>(S) Dibromofluoromethane</i>				104	96.6	79.0-121				
<i>(S) a,a,a-Trifluorotoluene</i>				100	109	90.4-116				
<i>(S) 4-Bromofluorobenzene</i>				89.3	102	80.1-120				



L843262-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L843262-01 06/26/16 19:07 • (MS) R3146111-4 06/26/16 17:49 • (MSD) R3146111-5 06/26/16 18:09

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	U	19.9	21.2	79.5	84.7	1	58.6-133			6.43	20
1,2-Dibromoethane	25.0	U	24.3	22.8	97.2	91.2	1	73.8-131			6.40	20
1,2-Dichloroethane	25.0	U	21.5	24.0	86.0	95.9	1	60.7-132			10.9	20
Di-isopropyl ether	25.0	U	21.2	19.2	84.6	76.8	1	59.9-140			9.69	20
Ethylbenzene	25.0	U	24.2	22.5	96.8	89.9	1	62.7-136			7.41	20
Methyl tert-butyl ether	25.0	U	20.8	18.2	83.2	73.0	1	61.4-136			13.0	20
Toluene	25.0	U	22.2	21.6	88.9	86.2	1	67.8-124			3.05	20
Xylenes, Total	75.0	U	73.6	61.0	98.2	81.3	1	65.6-133		J3	18.7	20
<i>(S) Toluene-d8</i>					104	106		90.0-115				
<i>(S) Dibromofluoromethane</i>					97.7	108		79.0-121				
<i>(S) a,a,a-Trifluorotoluene</i>					109	103		90.4-116				
<i>(S) 4-Bromofluorobenzene</i>					101	78.7		80.1-120		J2		

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3146207-3 06/27/16 20:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	106			90.0-115
(S) Dibromofluoromethane	104			79.0-121
(S) a,a,a-Trifluorotoluene	106			90.4-116
(S) 4-Bromofluorobenzene	105			80.1-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3146207-1 06/27/16 18:45 • (LCSD) R3146207-2 06/27/16 19:02

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	22.0	21.6	88.1	86.5	73.0-122			1.88	20
Ethylbenzene	25.0	24.4	24.2	97.6	96.7	80.9-121			0.960	20
Xylenes, Total	75.0	73.8	74.3	98.3	99.1	79.2-122			0.750	20
(S) Toluene-d8				104	108	90.0-115				
(S) Dibromofluoromethane				102	106	79.0-121				
(S) a,a,a-Trifluorotoluene				102	107	90.4-116				
(S) 4-Bromofluorobenzene				101	108	80.1-120				

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L843483-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L843483-01 06/28/16 00:16 • (MS) R3146207-4 06/27/16 21:41 • (MSD) R3146207-5 06/27/16 21:58

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Benzene	25.0	U	22.2	19.5	88.9	77.9	1	58.6-133			13.2	20
Ethylbenzene	25.0	U	25.7	22.3	103	89.3	1	62.7-136			14.1	20
Xylenes, Total	75.0	U	79.3	68.1	106	90.7	1	65.6-133			15.2	20
(S) Toluene-d8					105	105		90.0-115				
(S) Dibromofluoromethane					101	101		79.0-121				
(S) a,a,a-Trifluorotoluene					105	104		90.4-116				
(S) 4-Bromofluorobenzene					104	103		80.1-120				



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
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.

- 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.

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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		

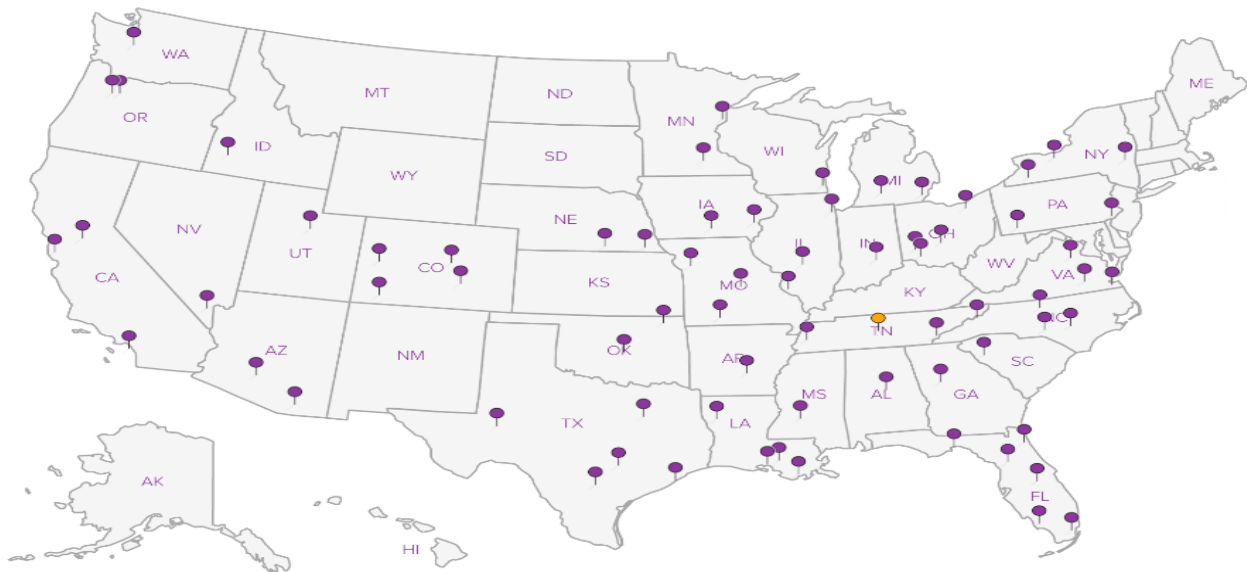
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	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.**



ARCADIS Project Name: CA 11132

Req Due Date (mm/dd/yy): Standard TAT

Rush TAT: Yes ___ No x

Lab Work Order Number: _____

Lab Name: <u>ESC Labs</u>	Facility Address: <u>3201 35th Ave.</u>	Consultant/Contractor: <u>Blaine Tech Services, Inc.</u>
Lab Address: <u>12065 Lebanon Rd., Mt. Juliet, TN 37122</u>	City, State, ZIP Code: <u>Oakland, CA</u>	Blaine Tech Project No: <u>ARCADIS/BP- 11132</u>
Lab PM: <u>Jarred Willis</u>	Lead Regulatory Agency: <u>Alameda County EHS / SF RWQCB</u>	Consultant/Contractor Address: <u>1680 Rogers Ave., San Jose, CA 95112</u>
Lab Phone: <u>615.758.5858</u>	California Global ID No.: <u>T0600100213</u>	Consultant/Contractor PM: <u>Michael Ninokata</u>
Lab Shipping Acct#: _____	ARCADIS Project No: <u>GP09BPNA.C112</u>	Phone: <u>408.573.0555 x202</u> <u>1843262</u>
Lab Bottle Order No: _____	ARCADIS PM/ Phone: <u>Megan Smoley</u>	Email EDD To: <u>megan.smoley@arcadis.com</u>
Other Info: _____	Email: <u>megan.smoley@arcadis.com</u>	Invoice To: <u>ARCADIS</u> <u>X</u> Contractor _____

Lab No.	Sample Description	Date	Time	Matrix			No. Containers / Preservative										Requested Analyses				Report Type & QC Level		Comments
				Soil / Solid	Water / Liquid	Air / Vapor	Total Number of Containers	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	GRO 8015M)	BTEX, (5) Oxygenates (8260)	1,2-DCA, EDB, Ethanol (8260)							Standard	
	<u>TB-11132-06192016</u>	<u>6-19-16</u>	<u>0925</u>		<input checked="" type="checkbox"/>			<u>2</u>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<u>ON HOLD</u>
	<u>MW-11</u>	<u>↓</u>	<u>1010</u>		<input checked="" type="checkbox"/>			<u>5</u>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<u>-01</u>
	<u>MW-10R</u>	<u>↓</u>	<u>1030</u>		<input checked="" type="checkbox"/>			<u>5</u>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<u>-02</u>

Sampler's Name: <u>Mark McCalloch</u>	Relinquished By / Affiliation: <u>Mark McCalloch / BTS</u>	Date: <u>6-19-16</u>	Time: <u>1200</u>	Accepted By / Affiliation: <u>Mark McCalloch / BTS (Sample Custody)</u>	Date: <u>6-19-16</u>	Time: <u>1200</u>
Shipment Method: <u>6/22/16 FedEx</u>	Ship Date: _____	Date: <u>6/22/16</u>	Time: <u>1500</u>	Date: <u>6-23-16</u>	Time: <u>9:00</u>	
Shipment Tracking No: _____						

Special Instructions: (5) Oxygenates = MTBE, TBA, DIPE, ETBE, TAME

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

8088 648 & 2997 Total = 12 TP x 2 + TP x 5

ARCADIS COC Rev. 06282012 36 500

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER ESI

UPLOADING A GEO_REPORT FILE

SUCCESS

Your GEO_REPORT file has been successfully submitted!

<u>Submittal Type:</u>	GEO_REPORT
<u>Report Title:</u>	Second Quarter 2016 Groundwater Monitoring Report
<u>Report Type:</u>	Monitoring Report - Quarterly
<u>Report Date:</u>	7/29/2016
<u>Facility Global ID:</u>	T0600100213
<u>Facility Name:</u>	BP #11132
<u>File Name:</u>	CA 11132 160729 BP - 2Q16 GMR.pdf
<u>Organization Name:</u>	ARCADIS
<u>Username:</u>	ARCADISBP
<u>IP Address:</u>	199.19.248.25
<u>Submittal Date/Time:</u>	7/29/2016 4:07:05 PM
<u>Confirmation Number:</u>	5247854650

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