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By Alameda County Environmental Health 2:32 pm, Nov 07, 2016

Ms. Karel Detterman  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94602  
Oakland, California 94609

Arcadis U.S., Inc.  
101 Creekside Ridge Court  
Suite 200  
Roseville  
California 95678  
Tel 916 786 0320  
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[www.arcadis.com](http://www.arcadis.com)

Subject:

**Third Quarter 2016 Groundwater Monitoring Report**  
Former BP Facility No. 0374  
6407 Telegraph Avenue, Oakland, California 94609  
Alameda County LOP Case #RO0000078  
SF-RWQCB Case #01-0114

ENVIRONMENT

Date:  
November 7, 2016

Contact:  
James M. Jacobsen, P.G.

Phone:  
916 865 3144

Email:  
[james.jacobsen@arcadis.com](mailto:james.jacobsen@arcadis.com)

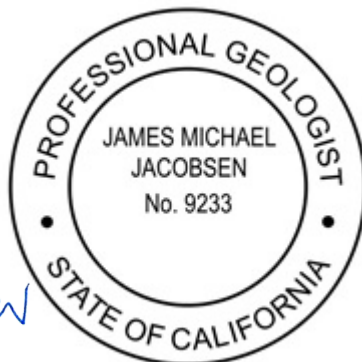
Our ref:  
GP16BPNA.CA01.40000

Dear Ms. Detterman:

"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.



James M. Jacobsen, P.G.  
Project Manager

Ms. Karel Detterman  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94602  
Oakland, California 94609

Subject:  
**CA 0374 - Third Quarter 2016 Monitoring Report Submittal  
Case No. RO0000078**

Arcadis U.S., Inc.  
101 Creekside Ridge Court  
Suite 200  
Roseville  
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Tel 916 786 0320  
[www.arcadis.com](http://www.arcadis.com)

Dear Ms. Detterman:

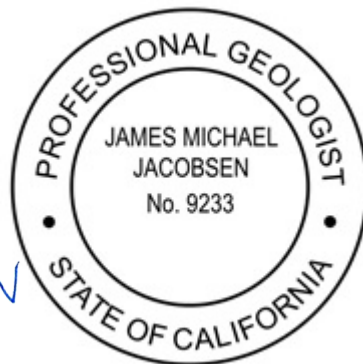
On behalf of BP West Coast Products, LLC (BP), Arcadis U.S., Inc. (Arcadis) is submitting the enclosed Semi-Annual Monitoring Report for the Third Quarter 2016. The enclosed quarterly report was prepared for the following Former BP facility (referred to herein as the "site"):

<u>Former BP Facility No.</u>	<u>Location</u>
0374	6407 Telegraph Avenue, Oakland, CA 94609

If you have any questions, please contact the undersigned.

Sincerely,

Arcadis U.S., Inc.



James M. Jacobsen, P.G.  
Project Manager

ENVIRONMENT

Date:  
November 7, 2016

Contact:  
James M. Jacobsen, P.G.

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Our ref:  
GP16BPNA.CA01.40000

Copies:  
San Francisco Regional Water Quality Control Board - GeoTracker

**SEMI-ANNUAL MONITORING AND STATUS REPORT**  
**Third Quarter 2016**  
**November 7, 2016**

Station No:	<u>0374</u>	Address:	<u>6407 Telegraph Avenue, Oakland, CA 94609</u>
Arcadis Contact/Phone No.:	<u>James Jacobsen / 916.865.3144</u>		
Arcadis Project No.:	<u>GP16BPNA.CA01.40000</u>		
Primary Agency/Regulatory ID No.:	<u>Alameda County Local Oversight Program / Karel Detterman / Case No. RO0000078</u>		
Other Agencies to Receive Copies:	<u>San Francisco Regional Water Quality Control Board / Case No. 01-0114</u>		

**WORK PERFORMED DURING THIRD QUARTER 2016:**

1. Conducted semi-annual groundwater sampling from September 8-9, 2016. The following summarizes the Third Quarter 2016 event:
  - Prior to gauging, all monitoring wells were left open for at least 15 minutes for the water column to equilibrate with atmospheric pressure.
  - Gauged and sampled monitoring wells MW-1 through MW-9.
  - Monitoring wells were sampled for the analysis of Gasoline Range Organics (GRO), benzene, toluene, ethylbenzene, xylenes (total) (BTEX), oxygenates, 1,2-Dichloroethane (1,2-DCA), ethylene dibromide (EDB), and ethanol according to United States Environmental Protection Agency (USEPA) Method 8260B.
2. A review of the analytical laboratory results, summarized in Table 1 and Table 2, indicates the following:
  - Based on the analytical results the constituents of concern (COCs) include GRO, benzene and methyl tert-butyl ether (MTBE).
  - No analytes were detected in offsite monitoring wells MW-3, MW-5 and MW-6.
  - GRO, benzene, toluene and xylenes (total) were detected exceeding the San Francisco Regional Water Quality Control Board (SF-RWQCB) Environmental Screening Levels (ESLs) at monitoring well MW-4.
  - Benzene was detected exceeding the SF-RWQCB ESLs at monitoring well MW-8.
  - MTBE was detected exceeding the SF-RWQCB ESLs at monitoring wells MW-1, MW-2, MW-7, MW-8 and MW-9.
3. Prepared the Third Quarter 2016 Monitoring and Status Report.

**PROPOSED WORK:**

1. Conduct semi-annual groundwater monitoring and sampling in the First Quarter 2017.
2. Prepare the First Quarter 2017 Monitoring and Status Report.

Current Phase of Project:	Monitoring
Frequency of Monitoring/Sampling:	Semi-annual
Is Light Non-Aqueous Phase Liquid (LNAPL) Present On-site:	No
LNAPL Detected During the Third Quarter 2016 (thickness in feet):	NA
Approximate Depth to Groundwater (feet below top of casing):	Range: 5.97 (MW-6) to 9.14 (MW-8)
Groundwater Flow Direction:	Southwest
Groundwater Flow Magnitude (feet/foot):	0.03
Agency Directive Requirements:	Semi-annual monitoring and reporting

## DISCUSSION

The Third Quarter gradient magnitude and direction is consistent with previous monitoring events. The most elevated GRO and benzene concentrations continue to be detected at monitoring well MW-4; however, concentrations are within the historical range of detections. COCs were not detected at downgradient monitoring well locations MW-3, MW-5, and MW-6, indicating a stable areal extent of the groundwater plume.

It is recommended to continue with semi-annual groundwater monitoring and sampling based on the current schedule with the next event scheduled to occur during the First Quarter of 2017. A copy of the field notes for the September 8-9, 2016, groundwater monitoring event are provided as Attachment 1. A copy of the laboratory analytical report is provided as Attachment 2. Hydrographs for select monitoring which have historically contained concentrations of COCs are presented in Attachment 3.

## **ENCLOSURES:**

### **Tables**

Table 1 – Current Groundwater Monitoring and Analytical Data – GRO/BTEX

Table 2 – Current Analytical Data - Oxygenates

Table 3 – Historical Groundwater Monitoring and Analytical Data

### **Figures**

Figure 1 – Site Location Map

Figure 2 – Site Plan

Figure 3 – Groundwater Elevation Contour Map – September 8, 2016

Figure 4 – Groundwater Flow Direction Rose Diagram

Figure 5 – Groundwater Analysis Concentration Map – September 8-9, 2016

Figure 6 – GRO Concentration Map – September 8-9, 2016

Figure 7 – Benzene Concentration Map – September 8-9, 2016

Figure 8 – MTBE Concentration Map – September 8-9, 2016

### **Attachments**

Attachment 1 – Groundwater Sampling Data Package

Attachment 2 – Laboratory Report

Attachment 3 – Hydrographs

# TABLES



Table 1  
 Current Groundwater Monitoring and Analytical Data - GRO/BTEX  
 Former BP Service Station No. 0374  
 6407 Telegraph Avenue  
 Oakland, California

Well ID	Date	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)	DO (mg/l)	Notes
MW-1	9/9/2016	164.45	8.97	--	155.48	<50	<0.50	<0.50	<0.50	<1.0	0.10	
MW-2	9/9/2016	163.49	9.02	--	154.47	<50	<0.50	<0.50	<0.50	<1.0	0.02	
MW-3	9/8/2016	166.80	7.56	--	159.24	<50	<0.50	<0.50	<0.50	<1.0	0.18	
MW-4	9/9/2016	162.48	8.80	--	153.68	<b>4,400</b>	<b>1,100</b>	<b>51</b>	<b>14</b>	<b>61</b>	<b>0.04</b>	
MW-5	9/8/2016	156.90	7.29	--	149.61	<50	<0.50	<0.50	<0.50	<1.0	0.87	
MW-6	9/8/2016	159.41	5.97	--	153.44	<50	<0.50	<0.50	<0.50	<1.0	0.80	
MW-7	9/9/2016	164.80	8.69	--	156.11	<50	<0.50	<0.50	<0.50	<1.0	0.13	
MW-8	9/9/2016	164.14	9.14	--	155.00	75	<b>37</b>	<0.50	<0.50	<1.0	0.12	
MW-9	9/9/2016	163.77	8.94	--	154.83	<50	<0.50	<0.50	<0.50	<1.0	0.03	
<b>SF-RWQCB ESLs</b>						<b>220</b>	<b>1.0</b>	<b>40</b>	<b>30</b>	<b>20</b>	--	--

**Notes:**  
 TOC = top of casing measured  
 DTW = depth to water  
 LNAPL = light non-aqueous phase liquid  
 GW Elev = groundwater elevation  
 GRO = gasoline range organics  
 B = benzene  
 T = toluene  
 E = ethylbenzene  
 X = total xylenes  
 DO = dissolved oxygen

**BOLD** = concentration exceeds SF-RWQCB ESLs  
 SF-RWQCB ESLs - San Francisco Regional Water Quality Control Board Environmental Screening Level - Direct Exposure Human Health Risk levels - MCL Priority  
 ft msl = feet above mean sea level  
 -- = not analyzed/applicable/measured/available  
 < = not detected at or above specified laboratory reporting limit  
 µg/L = micrograms per liter  
 mg/L = milligrams per liter  
 Values for DO were obtained through field measurements

Table 2  
 Current Analytical Data - Oxygenates  
 Former BP Service Station No. 0374  
 6407 Telegraph Avenue  
 Oakland, California

Well ID	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	Notes
MW-1	<b>110</b>	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	
MW-2	<b>20</b>	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	
MW-3	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	
MW-4	<10	<400	<10	<10	<10	<10	<10	<10,000	
MW-5	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	
MW-6	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	
MW-7	<b>72</b>	<20	<0.50	<0.50	<0.50	<0.50	0.52	<500	
MW-8	<b>67</b>	<20	<0.50	<0.50	<0.50	<0.50	1.2	<500	
MW-9	<b>79</b>	<20	<0.50	<0.50	<0.50	<0.50	0.61	<500	
<b>SF-RWQCB ESLs</b>	<b>5.0</b>	<b>12</b>	<b>50</b>	<b>500</b>	--	--	--	--	--

**Notes:**

MTBE = methyl tert-butyl ether  
 TBA = tert-butyl alcohol  
 1,2-DCA = 1,2-dichloroethane  
 EDB = 1,2-dibromoethane  
 DIPE = di-isopropyl ether  
 ETBE = ethyl tert-butyl ether  
 TAME = tert-Amyl methyl ether

**BOLD** = concentration exceeds SF-RWQCB ESLs  
 SF-RWQCB ESLs = San Francisco Regional Water Quality Control Board Environmental Screening Levels - Direct Exposure Human Health Risk levels - MCL  
 Priority  
 -- = not analyzed/applicable/measured/available  
 < = not detected at or above specified laboratory reporting limit  
 µg/L = micrograms per liter



Table 3  
 Historical Groundwater Monitoring and Analytical Data  
 Former BP Service Station No. 0374  
 6407 Telegraph Avenue  
 Oakland, California

Well ID	Date	TOC (µg/ml)	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	6/20/2000	158.91	6.86	--	152.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/28/2000	158.91	7.50	--	151.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/17/2000	158.91	7.49	--	151.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/23/2001	158.91	5.90	--	153.01	<50	<0.5	<0.5	<0.5	<0.5	2,710	--	--	--	--	--	--	--	--	--	
	6/21/2001	158.91	7.45	--	151.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/23/2001	158.91	8.46	--	150.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/31/2001	158.91	5.50	--	153.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/21/2002	158.91	4.71	--	154.20	<5,000	<50	<50	<50	<50	2,000	--	--	--	--	--	--	--	--	--	
	4/17/2002	158.91	5.54	--	153.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/8/2002	158.91	7.77	--	151.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2002	158.91	7.65	--	151.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	1/29/2003	158.91	5.88	--	153.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	b
	5/23/2003	158.91	5.62	--	153.29	<10,000	<100	<100	<100	<100	1,600	<4,000	--	<100	<100	--	<100	<20,000	1.30	--	
	4/9/2003	158.91	7.85	--	151.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/20/2003	158.91	8.17	--	150.74	1,600	<10	<10	<10	<10	1,500	<400	--	<10	<10	--	<10	<2,000	1.70	--	f
	2/2/2004	164.57	6.71	--	157.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.00
	5/14/2004	164.57	7.08	--	157.49	<2,500	<25	<25	<25	<25	1,200	<1,000	<25	<25	<25	<25	<25	<5,000	1.40	--	
	2/9/2004	164.57	8.12	--	156.45	580	<5.0	<5.0	<5.0	<5.0	660	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	3.80	--	
	4/11/2004	164.57	7.38	--	157.19	1,700	<10	<10	<10	<10	580	<400	<10	<10	<10	<10	<10	<2,000	6.00	--	
	8/2/2005	164.57	6.60	--	157.97	<1,000	<10	<10	<10	<10	610	<400	<10	<10	<10	<10	<10	<2,000	0.71	--	
	9/5/2005	164.57	6.84	--	157.73	540	<5.0	<5.0	<5.0	6	620	<1,000	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	3.12	--	a2
	11/8/2005	164.57	7.36	--	157.21	540	<2.5	<2.5	<2.5	4	390	250	<2.5	<2.5	<2.5	<2.5	2.60	<500	0.80	--	a2
	11/18/2005	164.57	8.02	--	156.55	350	<2.5	<2.5	<2.5	<2.5	340	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<500	2.60	--	a2, e
	2/16/2006	164.57	6.44	--	159.13	350	<2.5	<2.5	<2.5	<2.5	340	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	1.60	--	e
	5/30/2006	164.57	6.87	--	157.70	270	<2.5	<2.5	<2.5	<2.5	420	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	4.73	--	a2
	8/24/2006	164.57	7.75	--	156.82	95	<5.0	<5.0	<5.0	<5.0	180	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	0.65	--	
	11/1/2006	164.57	8.28	--	156.29	120	<5.0	<5.0	<5.0	<5.0	220	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	1.65	--	a2
	7/2/2007	164.57	7.40	--	157.17	120	<5.0	<5.0	<5.0	<5.0	190	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	1.88	--	e
	8/5/2007	164.57	6.50	--	158.07	<500	<5.0	<5.0	<5.0	<5.0	420	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	1.21	--	
	8/8/2007	164.57	8.17	--	156.40	82	<0.50	<0.50	<0.50	<0.50	110	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.16	--	e
	11/14/2007	164.57	8.01	--	156.66	170	<2.5	<2.5	<2.5	<2.5	210	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	1.92	--	
	2/22/2008	164.57	6.00	--	158.57	<50	<0.50	<0.50	<0.50	<0.50	250	<10	<0.50	<0.50	<0.50	<0.50	1.50	<300	2.57	--	
	5/24/2008	164.57	7.58	--	156.99	<50	<5.0	<5.0	<5.0	<5.0	380	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	2.28	--	
	8/21/2008	164.57	8.60	--	155.97	<50	<2.5	<2.5	<2.5	<2.5	170	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	2.16	--	
	11/19/2008	164.57	8.88	--	155.69	<50	<0.50	<0.50	<0.50	<0.50	30	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.12	--	
	2/23/2009	164.57	6.40	--	158.17	78	<2.5	<2.5	<2.5	<2.5	240	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	2.19	--	
	5/14/2009	164.57	6.67	--	157.90	53	<0.50	<0.50	<0.50	<0.50	200	<10	<0.50	<0.50	<0.50	<0.50	1.30	<300	1.75	--	
	8/20/2009	164.57	8.25	--	156.32	150	<2.0	<2.0	<2.0	<2.0	170	<40	<2.0	<2.0	<2.0	<2.0	<2.0	<1200	2.14	--	I (GRO)
	2/19/2010	164.57	6.07	--	158.50	<50	<0.50	<0.50	<0.50	<0.50	170	<10	<0.50	<0.50	<0.50	<0.50	1.20	<300	0.92	--	
	10/8/2010	164.57	7.58	--	156.99	<50	<2.5	<2.5	<2.5	<2.5	230	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	3.86	--	
	12/16/2010	164.45	6.84	--	157.81	<50	<2.0	<2.0	<2.0	<2.0	140	<40	<2.0	<2.0	<2.0	<2.0	<2.0	<1,200	1.20	--	j
	2/14/2011	164.45	7.10	--	157.35	<50	<2.5	<2.5	<2.5	<2.5	170	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	1.18	--	
	5/20/2011	164.45	6.38	--	158.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/15/2011	164.45	7.24	--	157.21	<50	<2.5	<2.5	<2.5	<2.5	130	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	2.54	--	
	2/2/2012	164.45	7.32	--	157.13	<50	<1.0	<1.0	<1.0	<1.0	66	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<600	1.01	--	
	9/8/2012	164.45	6.69	--	157.76	<50	<0.50	<0.50	<0.50	<1.0	170	<10	<0.50	<0.50	<0.50	<0.50	0.78	<150	1.65	--	
	2/14/2013	164.45	5.97	--	158.48	<50	<0.50	<0.50	<0.50	<1.0	140	<10	<0.50	<0.50	<0.50	<0.50	0.58	<150	1.74	--	
	8/22/2013	164.45	7.87	--	156.68	<50	<0.50	<0.50	<0.50	<1.0	91	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	5.69	--	
	11/2/2014	164.45	7.75	--	156.70	<50	<0.50	<0.50	<0.50	<1.0	26	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	2.02	--	
	8/15/2014	164.45	8.51	--	155.94	<50	<0.50	<0.50	<0.50	<1.0	120	<10	<0.50	<0.50	<0.50	<0.50	0.61	<150	1.82	--	
	12/2/2015	164.45	6.57	--	157.88	<50	<0.50	<0.50	<0.50	<1.0	130	<10	<0.50	<0.50	<0.50	<0.50	0.57	<150	1.00	--	
	8/31/2015	164.45	8.88	--	155.57	<50	<0.50	<0.50	<0.50	<1.0	110	<10	<0.50	<0.50	<0.50	<0.50	0.63	<150	1.32	--	
	3/17/2016	164.45	4.82	--	159.63	<50	<0.50	<0.50	<0.50	<1.0	140	<10	<0.50	<0.50	<0.50	<0.50	0.68	<150	11.94	--	
	9/9/2016	164.45	8.97	--	155.48	<50	<0.50	<0.50	<0.50	<1.0	110	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	--	--	

Table 3  
 Historical Groundwater Monitoring and Analytical Data  
 Former BP Service Station No. 0374  
 6407 Telegraph Avenue  
 Oakland, California

Well ID	Date	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-2	6/20/2000	157.92	7.67	--	150.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/28/2000	157.92	8.51	--	149.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/17/2000	157.92	8.14	--	149.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/23/2001	157.92	7.21	--	150.71	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	--	
	6/21/2001	157.92	7.99	--	149.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/23/2001	157.92	8.52	--	149.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/31/2001	157.92	6.01	--	151.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/21/2002	157.92	5.95	--	151.97	<50	<0.5	<0.5	<0.5	<0.5	45	--	--	--	--	--	--	--	--	--	
	4/17/2002	157.92	6.45	--	151.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/8/2002	157.92	8.08	--	149.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2002	157.92	8.29	--	149.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	1/29/2003	157.92	7.22	--	150.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	b
	5/23/2003	157.92	6.85	--	151.07	<50	<0.50	<0.50	<0.50	<0.50	55	<20	--	<0.50	<0.50	--	0.53	<100	1.40		
	4/9/2003	157.92	7.94	--	149.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/20/2003	157.92	8.05	--	149.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/2/2004	163.46	7.00	--	156.46	74	<0.50	<0.50	<0.50	<0.50	37	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	1.10	f	
	5/14/2004	163.46	7.97	--	155.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/9/2004	163.46	8.19	--	155.27	<250	<2.5	<2.5	<2.5	<2.5	67	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<500	2.70		
	4/11/2004	163.46	7.54	--	155.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/2/2005	163.46	6.72	--	156.74	<50	<0.50	<0.50	<0.50	<0.50	30	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.86		
	9/5/2005	163.46	7.16	--	156.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/8/2005	163.46	7.85	--	155.51	<50	<0.50	<0.50	<0.50	<0.50	35	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	1.00	a	
	11/18/2005	163.46	8.23	--	155.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/16/2006	163.46	6.82	--	156.64	<50	<0.50	<0.50	<0.50	<0.50	39	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.30		
	5/30/2006	163.46	7.23	--	156.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/24/2006	163.46	8.00	--	155.46	60	<0.50	<0.50	<0.50	<0.50	25	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.90		
	11/1/2006	163.46	8.38	--	155.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2007	163.46	7.88	--	155.58	<50	0.5	<0.50	<0.50	<0.50	7	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.94		
	8/5/2007	163.46	7.28	--	156.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/8/2007	163.46	8.38	--	155.08	88	3.2	<0.50	<0.50	<0.50	7	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.94		
	11/14/2007	163.46	8.10	--	155.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/22/2008	163.46	6.75	--	156.71	<50	<0.50	<0.50	<0.50	<0.50	24	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.18		
	5/24/2008	163.46	7.98	--	155.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/21/2008	163.46	8.58	--	154.88	<50	2.6	<0.50	<0.50	<0.50	5	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.20		
	11/19/2008	163.46	8.66	--	154.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/23/2009	163.46	6.67	--	156.79	74	1	<0.50	<0.50	<0.50	24	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.25		
	5/14/2009	163.46	7.02	--	156.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/20/2009	163.46	8.41	--	155.05	82	2.4	<0.50	<0.50	<0.50	8	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.19		
	2/19/2010	163.46	7.36	--	156.10	<50	<0.50	<0.50	<0.50	<0.50	22	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.81		
	10/8/2010	163.46	7.89	--	155.77	<50	<0.50	<0.50	<0.50	<0.50	23	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.40		
	12/16/2010	163.46	7.12	--	156.37	<50	<0.50	<0.50	<0.50	<0.50	17	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.69		
	2/14/2011	163.49	7.35	--	156.14	<50	<0.50	<0.50	<0.50	<0.50	11	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.87	j	
	5/20/2011	163.49	7.02	--	156.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/15/2011	163.49	7.62	--	155.87	<50	<0.50	<0.50	<0.50	<0.50	2	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.45		
	2/2/2012	163.49	7.56	--	155.93	<50	<0.50	<0.50	<0.50	<0.50	2	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.85		
	9/8/2012	163.49	6.31	--	157.18	<50	<0.50	<0.50	<0.50	<1.0	73	<10	<0.50	<0.50	<0.50	<0.50	0.61	<150	1.28		
	2/14/2013	163.49	6.03	--	157.46	<50	<0.50	<0.50	<0.50	<1.0	46	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.71		
	8/22/2013	163.49	7.79	--	155.70	<50	<0.50	<0.50	<0.50	<1.0	82	<10	<0.50	<0.50	<0.50	<0.50	1.10	<150	4.16		
	11/2/2014	163.49	7.12	--	156.37	<50	<0.50	<0.50	<0.50	<1.0	8	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	2.32		
	8/15/2014	163.49	8.53	--	154.96	<50	<0.50	<0.50	<0.50	<1.0	61	<10	<0.50	<0.50	<0.50	<0.50	0.73	<150	2.90		
	12/2/2015	163.49	6.98	--	156.51	<50	<0.50	<0.50	<0.50	<1.0	57	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.78		
	8/31/2015	163.49	8.77	--	154.72	<50	<0.50	<0.50	<0.50	<1.0	40	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.90		
	3/17/2016	163.49	5.54	--	157.95	<50	<0.50	<0.50	<0.50	<1.0	49	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.00		
	9/9/2016	163.49	9.02	--	154.47	<50	<0.50	<0.50	<0.50	<1.0	20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	--		

Table 3  
 Historical Groundwater Monitoring and Analytical Data  
 Former BP Service Station No. 0374  
 6407 Telegraph Avenue  
 Oakland, California

Well ID	Date	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-3	6/20/2000	153.64	6.42	--	147.22	<50	<0.5	<0.5	<0.5	<1.0	<10	--	--	--	--	--	--	--	--	
	9/28/2000	153.64	7.31	--	146.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/17/2000	153.64	6.45	--	147.19	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
	3/23/2001	153.64	6.01	--	147.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/21/2001	153.64	6.80	--	146.84	110	5.5	<0.5	5	4	3	--	--	--	--	--	--	--	--	
	9/23/2001	153.64	7.32	--	146.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/31/2001	153.64	4.48	--	149.16	<50	<0.5	<0.5	<0.5	<0.5	5	--	--	--	--	--	--	--	--	
	3/21/2002	153.64	4.36	--	149.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	4/17/2002	153.64	5.31	--	148.33	<50	<0.5	<0.5	<0.5	<0.5	9	--	--	--	--	--	--	--	--	
	12/8/2002	153.64	7.00	--	146.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2002	153.64	7.32	--	146.32	<50	<0.5	<0.5	<0.5	<0.5	6	--	--	--	--	--	--	--	1.40	
	1/29/2003	153.64	6.07	--	147.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	b
	5/23/2003	153.64	6.45	--	147.19	<50	<0.50	<0.50	<0.50	<0.50	2	<20	--	<0.50	<0.50	--	<0.50	<100	0.90	
	4/9/2003	153.64	6.93	--	146.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	c
	11/20/2003	153.64	7.04	--	146.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	c
	2/2/2004	159.21	5.92	--	153.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
	5/14/2004	159.21	7.52	--	151.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/9/2004	159.21	7.19	--	152.02	<50	<0.50	<0.50	<0.50	<0.50	7	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	9.30	
	4/11/2004	159.21	6.40	--	152.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/2/2005	159.21	6.01	--	153.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/5/2005	159.21	6.74	--	152.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	1/18/2005	159.21	6.77	--	152.44	<50	<0.50	<0.50	<0.50	<0.50	11	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	1.90	a
	11/18/2005	159.21	7.83	--	151.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/16/2006	159.21	7.26	--	151.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/30/2006	159.21	5.82	--	153.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/24/2006	159.21	7.00	--	152.21	<50	<0.50	<0.50	<0.50	<0.50	8	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.15	
	1/11/2006	159.21	7.50	--	151.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2007	159.21	6.90	--	152.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/5/2007	159.21	5.95	--	153.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/8/2007	159.21	7.47	--	151.74	<50	<0.50	<0.50	<0.50	<0.50	1	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.21	
	11/14/2007	159.21	7.05	--	152.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/22/2008	159.21	5.50	--	153.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/24/2008	159.21	7.03	--	152.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/21/2008	159.21	7.80	--	151.41	<50	<0.50	<0.50	<0.50	<0.50	3	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.11	
	11/19/2008	159.21	7.69	--	151.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/23/2009	159.21	7.28	--	151.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/14/2009	159.21	6.17	--	153.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/20/2009	159.21	7.38	--	151.83	<50	<0.50	<0.50	<0.50	<0.50	2	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.05	
	2/19/2010	159.21	5.31	--	153.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/6/2010	159.21	7.12	--	152.99	<50	<0.50	<0.50	<0.50	<0.50	2	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.27	
	12/16/2010	159.21	5.65	--	153.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	j
	2/14/2011	159.21	6.20	--	153.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/20/2011	159.21	5.77	--	153.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/15/2011	159.21	6.41	--	152.80	<50	<0.50	<0.50	<0.50	<0.50	1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.04	
	2/2/2012	159.21	6.34	--	152.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/8/2012	159.21	6.62	--	152.59	<50	<0.50	<0.50	<0.50	<1.0	2	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.16	
	2/14/2013	159.21	6.09	--	153.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/22/2013	159.21	7.15	--	152.06	<50	<0.50	<0.50	<0.50	<1.0	1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	4.35	
	1/12/2014	159.21	5.79	--	153.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/15/2014	159.21	6.30	--	152.91	<50	<0.50	<0.50	<0.50	<1.0	1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.15	
	12/2/2015	159.21	3.41	--	155.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/31/2015	159.21	7.30	--	151.91	<50	<0.50	<0.50	<0.50	<1.0	1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.90	
	3/16/2016	159.21	2.50	--	156.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/8/2016	166.80	7.56	--	159.24	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	--	

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Well ID	Date	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-4	6/20/2000	156.53	7.50	--	149.03	20,000	5,100	440	1,000	1,700	<250	--	--	--	--	--	--	--	--	c	
	9/28/2000	156.53	8.20	--	148.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/17/2000	156.53	8.11	--	148.42	4,320	1,240	<20	27	249	<100	--	--	--	--	--	--	--	--	--	
	3/23/2001	156.53	6.69	--	149.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/21/2001	156.53	8.01	--	148.52	2,800	470	16	19	160	130	--	--	--	--	--	--	--	--	--	
	9/23/2001	156.53	8.91	--	147.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/31/2001	156.53	4.42	--	152.11	4,600	1,500	100	160	210	160	--	--	--	--	--	--	--	--	--	
	3/21/2002	156.53	4.98	--	151.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	4/17/2002	156.53	6.23	--	150.30	7,100	2,200	110	290	450	<250	--	--	--	--	--	--	--	--	--	
	12/8/2002	156.53	8.24	--	148.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2002	156.53	8.42	--	148.11	1,500	410	7	20	29	43	--	--	--	--	--	--	--	1.10	a	
	1/29/2003	156.53	7.20	--	149.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	b
	5/23/2003	156.53	7.18	--	149.35	<5,000	1,300	89	210	260	<50	<2,000	--	<50	<50	--	<50	<10,000	1.40		
	4/9/2003	156.53	8.15	--	148.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	c
	11/20/2003	156.53	8.73	--	147.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	c
	2/2/2004	163.25	6.25	--	157.00	980	280	21	29	38	29	<100	<2.5	<2.5	<2.5	<2.5	2.60	<500	1.40	c, f, g	
	5/14/2004	163.25	8.38	--	154.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
	2/9/2004	163.25	8.36	--	154.89	260	11	<1.0	6	14	28	<40	<1.0	<1.0	<1.0	<1.0	<1.0	<200	2.40	g	
	4/11/2004	163.25	7.71	--	155.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	c, g
	8/2/2005	163.25	6.27	--	156.98	7,500	1,700	320	480	920	45	<1,000	<25	<25	<25	<25	<25	<5,000	0.65	g	
	9/5/2005	163.25	5.90	--	157.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
	11/8/2005	163.25	7.96	--	155.29	3,100	1,100	41	160	110	32	<400	<10	<10	<10	<10	<10	<2,000	0.60	g	
	11/18/2005	163.25	8.57	--	154.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
	2/16/2006	163.25	6.28	--	156.97	9,400	1,800	130	600	420	35	<400	<10	<10	<10	<10	<10	<6,000	0.50	g	
	5/30/2006	162.47	7.02	--	155.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	g
	8/24/2006	162.47	8.26	--	154.21	3,600	1,400	21	110	70	39	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	1.00		
	11/1/2006	162.47	8.67	--	153.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2007	162.47	8.02	--	154.45	3,100	570	17	170	110	67	<400	<10	<10	<10	<10	<10	<6,000	0.95		
	8/5/2007	162.47	7.03	--	155.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/8/2007	162.47	8.60	--	153.87	2,900	630	22	67	57	72	<400	<10	<10	<10	<10	<10	<6,000	0.93		
	11/14/2007	162.47	8.53	--	153.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/22/2008	162.47	6.25	--	156.22	3,900	880	39	180	92	70	<200	<10	<10	<10	<10	<10	<6,000	2.31		
	5/24/2008	162.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	d
	8/21/2008	162.47	8.96	--	153.51	3,700	1,100	26	85	130	53	<400	<20	<20	<20	<20	<20	<12,000	2.26		
	11/19/2008	162.47	9.20	--	153.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/23/2009	162.47	6.35	--	156.12	3,000	220	9	23	19	39	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	2.21		
	5/14/2009	162.47	7.00	--	155.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/20/2009	162.47	8.05	--	154.42	5,700	1,100	35	110	100	23	<400	<20	<20	<20	<20	<20	<12,000	2.17		
	2/19/2010	162.47	5.71	--	156.76	12,000	1,200	120	230	390	<50	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	0.81	i	
	10/6/2010	162.47	7.59	--	154.88	9,700	1,500	120	400	400	<20	<400	<20	<20	<20	<20	<20	<12,000	3.81		
	12/16/2010	162.48	6.83	--	155.65	15,000	1,900	82	270	210	<25	<500	<25	<25	<25	<25	<25	<15,000	0.49	j	
	2/14/2011	162.48	7.33	--	155.15	260	<0.50	<0.50	3	11	13	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.80		
	5/20/2011	162.48	6.89	--	155.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/15/2011	162.48	7.59	--	154.89	8,600	2,100	86	250	210	<12	<250	<12	<12	<12	<12	<12	<7,500	1.02	i	
	2/2/2012	162.48	7.71	--	154.77	4,600	1,000	34	23	33	<12	<250	<12	<12	<12	<12	<12	<7,500	0.60		
	9/8/2012	162.48	6.57	--	155.91	3,200	660	44	53	57	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<1,500	1.09		
	2/14/2013	162.48	6.26	--	156.22	7,200	1,400	150	390	700	<10	<200	<10	<10	<10	<10	<10	<3,000	1.20		
	8/22/2013	162.48	7.59	--	154.89	6,900	1,600	100	120	330	<10	<200	<10	<10	<10	<10	<10	<3,000	4.50		
	11/2/2014	162.48	7.13	--	155.35	140	800	80	84	230	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<1,500	1.03		
	8/15/2014	162.48	8.33	--	154.15	6,300	900	45	38	92	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<1,500	0.21		
	12/2/2015	162.48	5.98	--	156.50	7,000	120	8	31	22	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<1,500	0.61		
	8/31/2015	162.48	8.66	--	153.82	6,300	570	43	27	52	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<1,500	0.88		
	3/17/2016	162.48	3.25	--	159.23	8,700	1,100	160	870	560	<10	<200	<10	--	<10	<10	<10	<3,000	0.00		
	9/9/2016	162.48	8.80	--	153.68	4,400	1,100	51	14	61	<10	<400	<10	<10	<10	<10	<10	<10,000	--		

Table 3  
 Historical Groundwater Monitoring and Analytical Data  
 Former BP Service Station No. 0374  
 6407 Telegraph Avenue  
 Oakland, California

Well ID	Date	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-5	6/20/2000	151.33	7.84	--	143.49	<50	<0.5	<0.5	<0.5	<1.0	<10	--	--	--	--	--	--	--	--	
	9/28/2000	151.33	8.37	--	142.96	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
	12/17/2000	151.33	8.36	--	142.97	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
	3/23/2001	151.33	7.55	--	143.78	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
	6/21/2001	151.33	8.20	--	143.13	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
	9/23/2001	151.33	8.88	--	142.85	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
	12/31/2001	151.33	7.57	--	143.76	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
	3/21/2002	151.33	6.12	--	145.21	<50	<0.5	<0.5	<0.5	<0.5	3	--	--	--	--	--	--	--	--	
	4/17/2002	151.33	6.61	--	144.72	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	
	12/8/2002	151.33	8.14	--	143.19	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	4.10	
	6/12/2002	151.33	8.65	--	142.68	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	1.10	
	1/29/2003	151.33	7.22	--	144.11	<50	<0.5	<0.5	<0.5	<0.5	<0.50	<20	--	<0.50	<0.50	--	<0.50	<40	1.00	b
	5/23/2003	151.33	7.31	--	144.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	--	<0.50	<0.50	--	<0.50	<100	1.10	
	4/9/2003	151.33	9.50	--	141.83	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	3.20	
	11/20/2003	151.33	8.31	--	143.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/2/2004	151.33	6.92	--	144.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	c, f, h
	5/14/2004	151.33	8.56	--	142.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	h
	2/9/2004	151.33	8.79	--	142.54	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	3.50	h
	4/11/2004	151.33	8.33	--	143.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	c, h
	8/2/2005	151.33	7.28	--	144.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	h
	9/5/2005	151.33	8.19	--	143.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	h
	11/8/2005	151.33	8.39	--	142.94	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	1.20	h
	11/8/2005	151.33	11.25	--	140.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	h
	2/16/2006	151.33	9.22	--	142.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	h
	5/30/2006	151.33	7.52	--	143.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	h
	8/24/2006	151.33	7.95	--	143.38	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.60	
	11/1/2006	151.33	8.32	--	143.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2007	151.33	8.25	--	143.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/5/2007	151.33	7.60	--	143.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/8/2007	151.33	8.12	--	143.21	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	3.26	
	11/14/2007	151.33	9.10	--	142.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/22/2008	151.33	7.48	--	143.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/24/2008	151.33	8.12	--	143.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/21/2008	151.33	8.65	--	142.68	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.14	
	11/19/2008	151.33	11.86	--	139.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/23/2009	151.33	10.20	--	141.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/14/2009	151.33	9.63	--	141.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/20/2009	151.33	8.52	--	142.81	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.01	
	2/19/2010	151.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	d
	10/6/2010	156.90	8.05	--	148.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.15	
	12/16/2010	156.90	8.10	--	148.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	j
	2/14/2011	156.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	d
	5/20/2011	156.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	d
	8/15/2011	156.90	7.91	--	148.99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.46	
	2/2/2012	156.90	8.08	--	148.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/8/2012	156.90	8.02	--	148.88	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.25	
	2/14/2013	156.90	7.54	--	149.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/22/2013	156.90	8.34	--	148.56	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	4.33	
	11/2/2014	156.90	7.61	--	149.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/15/2014	156.90	8.06	--	148.84	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	2.33	
	12/2/2015	156.90	5.32	--	151.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/31/2015	156.90	7.78	--	149.12	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.83	
	3/17/2016	156.90	3.75	--	153.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/8/2016	156.90	7.29	--	149.61	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	--	

Table 3  
 Historical Groundwater Monitoring and Analytical Data  
 Former BP Service Station No. 0374  
 6407 Telegraph Avenue  
 Oakland, California

Well ID	Date	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-6	6/20/2000	153.84	4.79	--	149.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/28/2000	153.84	5.39	--	148.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/17/2000	153.84	4.71	--	149.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/23/2001	153.84	4.69	--	149.15	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--	--	
	6/21/2001	153.84	5.22	--	148.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/23/2001	153.84	5.40	--	148.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/31/2001	153.84	3.95	--	149.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/21/2002	153.84	2.94	--	150.90	<50	<0.5	<0.5	<0.5	<0.5	5	--	--	--	--	--	--	--	--	--	
	4/17/2002	153.84	5.11	--	148.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/8/2002	153.84	5.23	--	148.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/6/2002	153.84	5.29	--	148.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	1/29/2003	153.84	4.79	--	149.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	b
	5/23/2003	153.84	4.31	--	149.53	<50	<0.50	<0.50	<0.50	<0.50	9	<20	--	<0.50	<0.50	--	<0.50	<100	1.00	--	
	4/9/2003	153.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	d
	11/20/2003	153.84	6.31	--	147.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/2/2004	159.41	4.78	--	154.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
	5/14/2004	159.41	6.29	--	153.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/9/2004	159.41	5.79	--	153.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	d
	4/11/2004	159.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	d
	8/2/2005	159.41	5.13	--	154.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/5/2005	159.41	4.52	--	154.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/8/2005	159.41	5.02	--	154.39	<50	<0.50	<0.50	<0.50	<0.50	8	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<100	2.10	--	a2
	11/8/2005	159.41	6.31	--	153.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/16/2006	159.41	4.24	--	155.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/30/2006	159.41	4.45	--	154.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/24/2006	159.41	5.18	--	154.23	<50	<0.50	<0.50	<0.50	<0.50	12	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	3.40	--	
	1/11/2006	159.41	6.05	--	153.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2007	159.41	5.00	--	154.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/5/2007	159.41	4.30	--	155.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/8/2007	159.41	5.51	--	153.90	<50	<0.50	<0.50	<0.50	<0.50	1	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	2.94	--	
	11/14/2007	159.41	5.38	--	154.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/22/2008	159.41	4.70	--	154.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/24/2008	159.41	5.25	--	154.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/21/2008	159.41	6.14	--	153.27	<50	<0.50	<0.50	<0.50	<0.50	2	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.99	--	
	11/19/2008	159.41	5.94	--	153.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/23/2009	159.41	5.00	--	154.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/14/2009	159.41	4.60	--	154.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/20/2009	159.41	5.65	--	153.76	<50	<0.50	<0.50	<0.50	<0.50	2	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.98	--	
	2/19/2010	159.41	7.28	--	152.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/6/2010	159.41	5.92	--	154.39	<50	<0.50	<0.50	<0.50	<0.50	4	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.99	--	
	12/16/2010	159.41	4.50	--	154.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	j
	2/14/2011	159.41	4.80	--	154.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/20/2011	159.41	4.29	--	155.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/15/2011	159.41	4.52	--	154.89	<50	<0.50	<0.50	<0.50	<0.50	2	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.55	--	
	2/2/2012	159.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	d
	9/8/2012	159.41	4.65	--	154.76	<50	<0.50	<0.50	<0.50	<1.0	4	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.14	--	
	2/14/2013	159.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	d
	8/22/2013	159.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	d
	11/2/2014	159.41	4.67	--	154.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/15/2014	159.41	2.84	--	156.57	<50	<0.50	<0.50	<0.50	<1.0	2	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.08	--	
	12/2/2015	159.41	1.40	--	158.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/31/2015	159.41	5.19	--	154.22	<50	<0.50	<0.50	<0.50	<1.0	1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.05	--	
	3/17/2016	159.41	1.32	--	158.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/8/2016	159.41	5.97	--	153.44	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	--	--	

Table 3  
 Historical Groundwater Monitoring and Analytical Data  
 Former BP Service Station No. 0374  
 6407 Telegraph Avenue  
 Oakland, California

Well ID	Date	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-7	12/16/2010	164.80	6.52	--	158.28	700	<0.50	<0.50	15	32	62	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<300	--	j
	2/14/2011	164.80	6.77	--	158.03	7,100	1,700	98	260	210	<20	<400	<20	<20	<20	<20	<20	<12,000	1.02		
	5/20/2011	164.80	5.84	--	158.96	570	<0.50	<0.50	37	25	5	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	1.66	I (GRO)	
	8/15/2011	164.80	6.96	--	157.84	420	<1.0	<1.0	49	7	14	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<600	0.58		
	2/2/2012	164.80	7.15	--	157.65	<50	<0.50	<0.50	<0.50	<0.50	6	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.45	
	9/8/2012	164.80	5.05	--	159.75	85	<0.50	<0.50	6	1	7	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.04	
	2/14/2013	164.80	4.38	--	160.42	310	1	<0.50	2	6	3	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.31		
	8/22/2013	164.80	7.39	--	157.41	78	<0.50	<0.50	4	<1.0	3	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	4.01		
	11/2/2014	164.80	7.37	--	157.43	<50	<0.50	<0.50	<0.50	<1.0	12	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.90		
	8/15/2014	164.80	8.39	--	156.41	<50	<0.50	<0.50	<0.50	<1.0	50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.14		
	12/2/2015	164.80	6.76	--	158.04	<50	<0.50	<0.50	<0.50	<1.0	4	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.65		
	8/31/2015	164.80	8.50	--	156.30	<50	<0.50	<0.50	<0.50	<1.0	27	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.80		
	3/17/2016	164.80	5.03	--	159.77	<50	<0.50	<0.50	<0.50	<1.0	2	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.32		
	9/9/2016	164.80	8.69	--	156.11	<50	<0.50	<0.50	<0.50	<1.0	72	<20	<0.50	<0.50	<0.50	<0.50	0.52	<500	--		
	MW-8	12/16/2010	164.14	6.85	--	157.29	520	43	<0.50	4	21	150	<10	<0.50	<0.50	<0.50	<0.50	1.70	<300	0.46	j
		2/14/2011	164.14	7.30	--	156.84	<50	<2.0	<2.0	<2.0	110	<40	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1,200	1.07	
5/20/2011		164.14	6.88	--	157.26	<50	<2.0	<2.0	<2.0	88	<40	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1,200	1.35		
8/15/2011		164.14	6.00	--	158.14	<50	5.2	<1.0	10	<1.0	57	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<600	0.51		
2/2/2012		164.14	7.57	--	156.57	<50	<0.50	<0.50	<0.50	<0.50	4	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.68		
9/8/2012		164.14	6.08	--	158.06	110	67	<0.50	<0.50	<1.0	150	31	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.16		
2/14/2013		164.14	5.70	--	158.44	720	350	<2.0	<2.0	<4.0	240	150	<2.0	<2.0	<2.0	<2.0	5.20	<600	1.23		
8/22/2013		164.14	7.95	--	156.19	<50	1.5	<0.50	<0.50	<1.0	180	39	<0.50	<0.50	<0.50	<0.50	<0.50	2.80	<150	3.96	
11/2/2014		164.14	7.56	--	156.58	<50	<0.50	<0.50	<0.50	<1.0	78	<10	<0.50	<0.50	<0.50	<0.50	<0.50	0.83	<150	1.53	
8/15/2014		164.14	8.65	--	155.49	<50	<0.50	<0.50	<0.50	<1.0	21	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.92		
12/2/2015		164.14	7.13	--	157.01	<50	<0.50	<0.50	<0.50	<1.0	47	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	6.27		
8/31/2015		164.14	8.83	--	155.31	230	57	<0.50	<0.50	<1.0	110	<10	<0.50	<0.50	<0.50	<0.50	2.30	<150	1.15		
3/17/2016		164.14	5.86	--	158.28	<50	6.1	<0.50	<0.50	<1.0	69	<10	<0.50	<0.50	<0.50	<0.50	0.52	<150	0.47		
9/9/2016		164.14	9.14	--	155.00	75	37	<0.50	<0.50	<1.0	67	<20	<0.50	<0.50	<0.50	<0.50	1.20	<500	--		
MW-9		12/16/2010	163.77	6.63	--	157.14	330	18	<0.50	11	38	390	40	<0.50	<0.50	<0.50	<0.50	4.10	<300	0.57	j
		2/14/2011	163.77	6.85	--	156.92	<50	<4.0	<4.0	<4.0	270	<80	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<2,400	0.98	
	5/20/2011	163.77	6.39	--	157.38	66	<4.0	<4.0	<4.0	280	<80	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<2,400	1.64	I (GRO)	
	8/15/2011	163.77	7.09	--	156.68	<50	<2.0	<2.0	<2.0	120	<40	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1,200	0.88		
	2/2/2012	163.77	7.18	--	156.59	<50	<2.0	<0.50	<0.50	<0.50	34	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.65		
	9/8/2012	163.77	5.68	--	158.09	82	1.9	<0.50	<0.50	<1.0	19	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.61		
	2/14/2013	163.77	5.27	--	158.50	250	5.2	<0.50	<0.50	1	25	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.23		
	8/22/2013	163.77	7.46	--	156.31	290	0.71	<0.50	<0.50	1	31	<10	<0.50	<0.50	<0.50	<0.50	0.55	<150	4.71		
	11/2/2014	163.77	7.07	--	156.70	250	<0.50	<0.50	<0.50	<1.0	39	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	1.12		
	8/15/2014	163.77	8.27	--	155.50	180	<0.50	<0.50	<0.50	<1.0	68	<10	<0.50	<0.50	<0.50	<0.50	<0.50	0.67	<150	0.10	
	12/2/2015	163.77	6.83	--	157.14	<50	<0.50	<0.50	<0.50	<1.0	90	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.61		
	8/31/2015	163.77	8.50	--	155.27	<50	<0.50	<0.50	<0.50	<1.0	62	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.78		
	3/17/2016	163.77	4.82	--	158.95	76	0.97	<0.50	<0.50	<1.0	18	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	0.00		
	9/9/2016	163.77	8.94	--	154.83	<50	<0.50	<0.50	<0.50	<1.0	79	<20	<0.50	<0.50	<0.50	<0.50	0.61	<500	--		

Notes:  
 TOC = top of casing measured  
 DTW = depth to water  
 LNAPL = light non-aqueous phase liquid  
 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  
 1,2-DCA = 1,2-dichloroethane  
 DIPE = di-isopropyl ether  
 ETBE = ethyl tert-butyl ether  
 EDB = 1,2-dibromoethane  
 TAME = tert-Amyl methyl ether  
 DO = dissolved oxygen

ft msl = feet above mean sea level  
 -- = 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 were obtained through field measurements

a = Chromatogram pattern: Gasoline C6-C10 for GRO/TPH-goxygenates  
 b = Beginning this quarter, groundwater samples were analyzed by EPA method 8260B for TPH-g, BTEX, and fuel  
 c = Wells gauged with ORC sock in well  
 d = Well inaccessible  
 e = The hydrocarbon result for GRO was partly due to individual peaks in the quantitative range  
 f = Well resurveyed on 1/27/2004 to NAVD88  
 g = Upon review of survey data (1/27/2004), TOC elevation for MW-4 is actually 162.47 ft.  
 h = Upon review of survey data (1/27/2004), MW-5 was not surveyed from the TOC. MW-5 was surveyed from the pavement due to inaccessibility to the TOC. Therefore, survey data for MW-5 from the TOC is unavailable. Historic data prior to 5/30/2006 (change in consultant) not modified

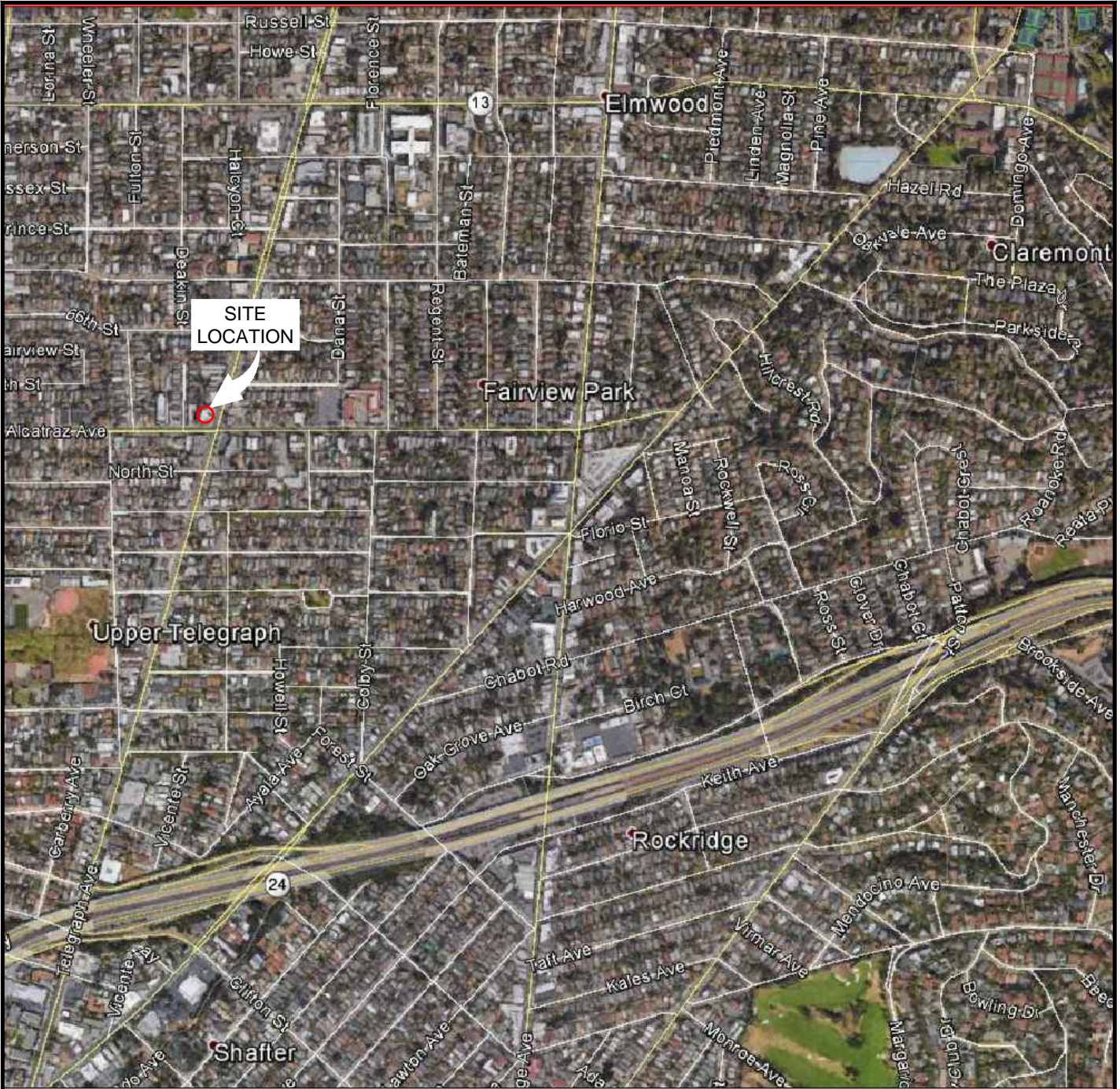
i = Quantitation of unknown hydrocarbon(s) in sample based on gasoline  
 j = Surveyed 12/9/2010  
 k = Grab groundwater sample  
 l = Quantitated against gasoline  
 a2 = The continuing calibration verification for ethanol was outside of client contractual limits, however, it was within method acceptance limits. The data should still be useful for its intended purpose

# FIGURES

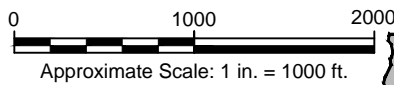




CITY:MUMBAI, INDIA DIV:GROUP:ENVCAD DB: S.DSOUZA LD: PIC: PM: TM: ES: PLOTSTYLETABLE: PLT:FULL.CTB PAGESETUP: - - - PLOT: 10/20/2016 11:01 AM BY: PRAJAKTA CHAVAN  
 C:\Users\pc00874\Desktop\BP Foxglove\0374\Fig 1\_0374\_Site Location Map.dwg LAYOUT: LAYOUT1 SAVED: 10/20/2016 10:59 AM ACADVER: 20.05 (LMS TECH)



MAP SOURCE: Google Earth 2016, 37°50'50.91"N, 122°15'21.28"W



FORMER BP SERVICE STATION NO. 0374  
 6407 TELEGRAPH AVENUE  
 OAKLAND, CALIFORNIA

**SITE LOCATION MAP**

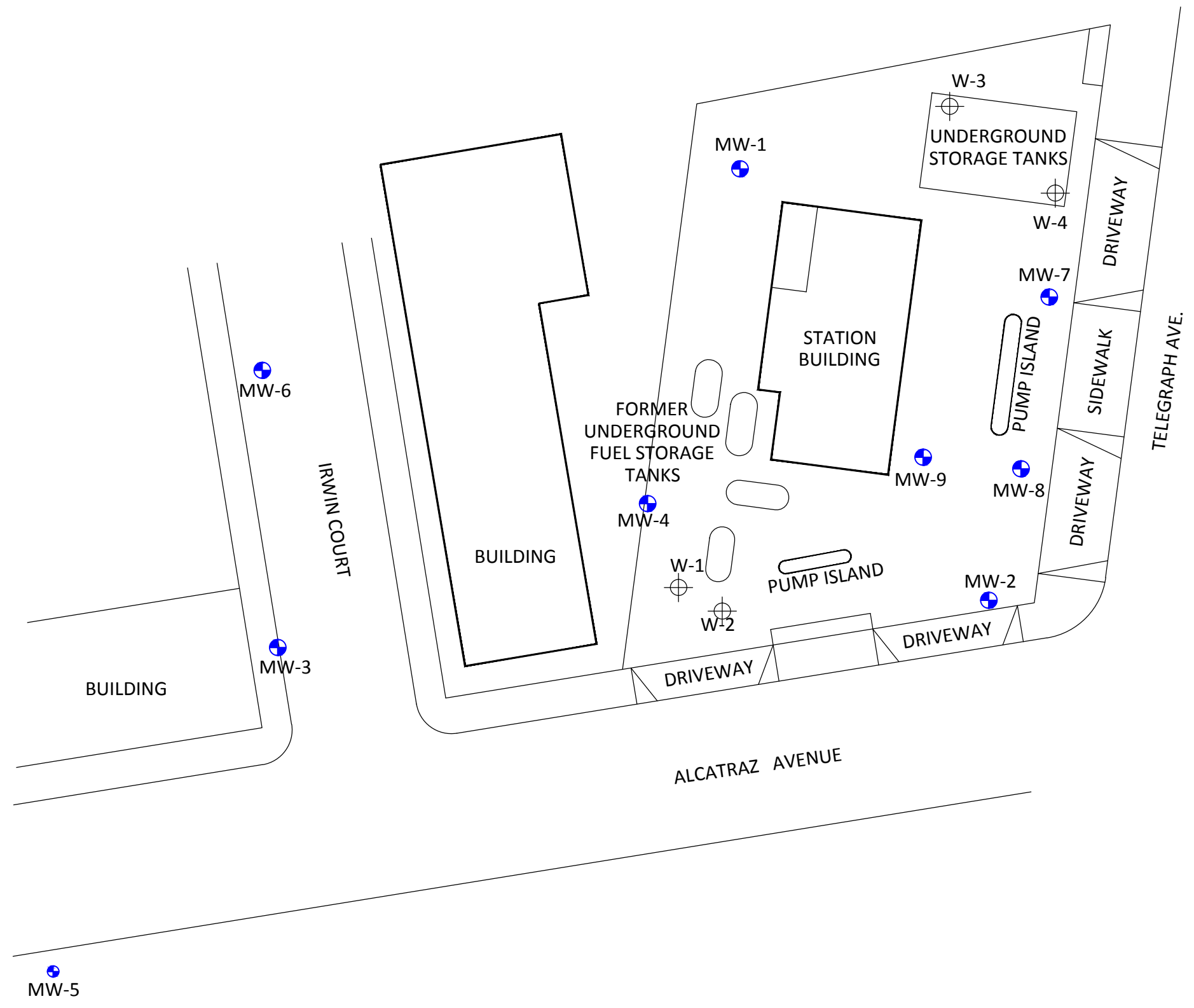


FIGURE



**1**



CITY: MUMBAI, INDIA DIV/GROUP: ENVCAD DB: S.DSOUZA LD: TM: LYR: C:\Users\p00874\Desktop\BP\_Foxgloves\0374\10\_20\_16\CAD\Fig 2 - 0374\_Site plan.dwg LAYOUT: 2 SAVED: 10/20/2016 11:51 AM ACADVER: 20.05 (LMS TECH) PAGESETUP: PLOTSTYLETABLE: PLT\FULLCTB PLOTTED: 10/20/2016 11:51 AM BY: PRAJAKTA CHAVAN

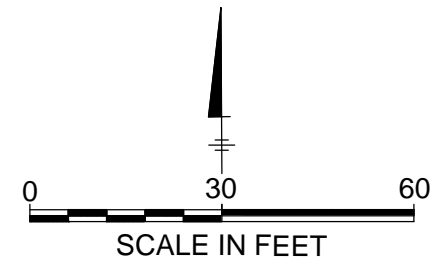


**LEGEND:**

-  MONITORING WELL LOCATION
-  TANK PIT MONITORING WELL LOCATION

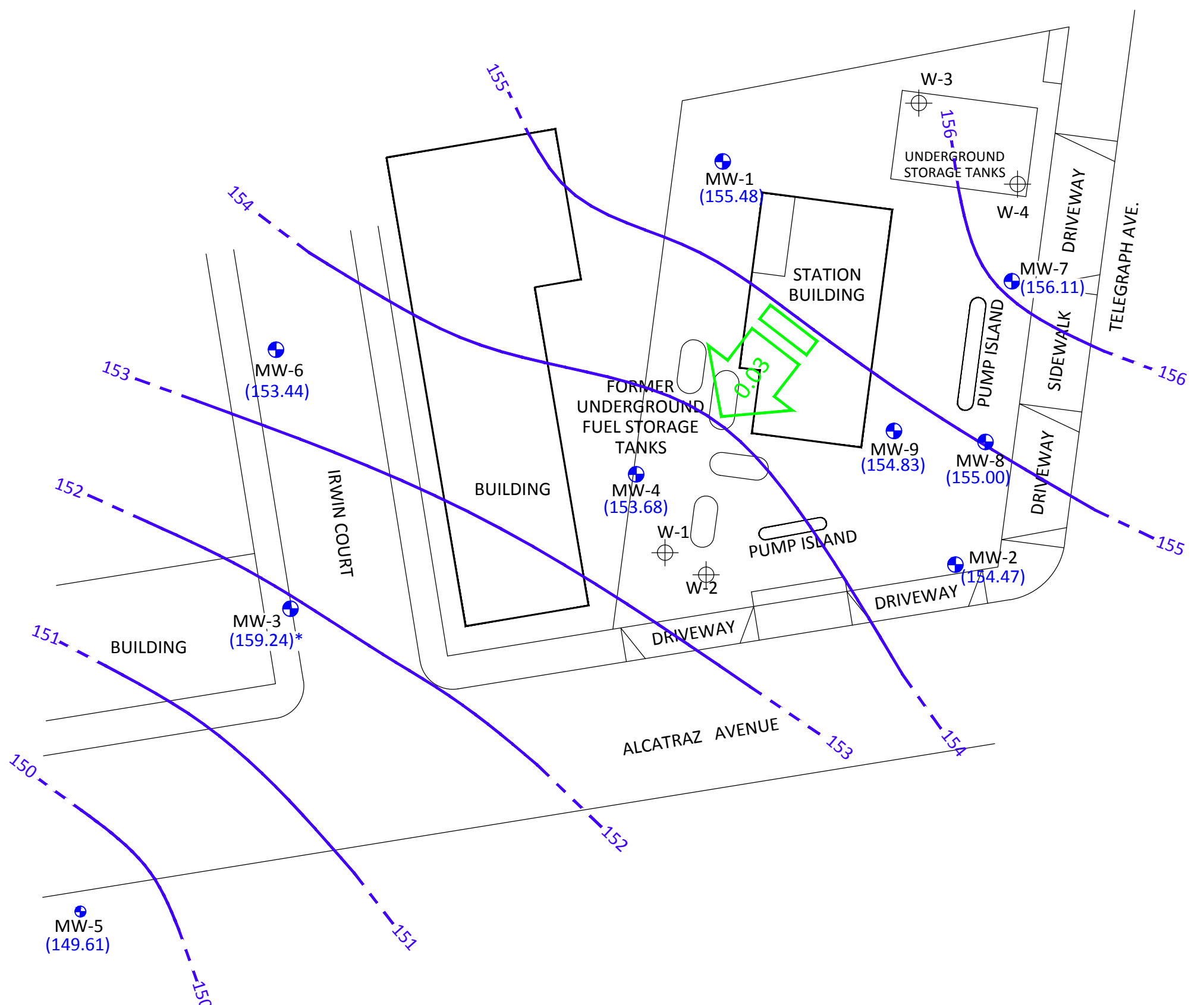
**NOTES:**

- 1) SITE MAP ADAPTED FROM FIGURES PROVIDED BY BROADBENT.
- 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.



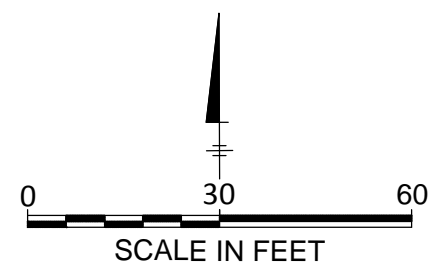
FORMER BP SERVICE STATION NO. 0374 6407 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	
<b>SITE PLAN</b>	
	FIGURE <b>2</b>

CITY: MUMBAI, INDIA DIV/GROUP: ENVCAD DB: S.DSOUZA LD: TM: LZR: C:\Users\p00874\Desktop\BP\_Foxgloves\0374\10\_20\_16\CAD\Fig 3-0374\_Groundwater Elevation Contour Map.dwg LAYOUT: 2 SAVED: 10/20/2016 1:46 PM ACADVER: 20.05 (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLT\FULL.CTB PLOTTED: 10/20/2016 1:46 PM BY: PRAJAKTA CHAVAN



- LEGEND:**
- MONITORING WELL LOCATION
  - TANK PIT MONITORING WELL LOCATION
  - GROUNDWATER ELEVATION CONTOUR (FEET ABOVE SITE DATUM; DASHED WHERE INFERRED)
  - GROUNDWATER GRADIENT (FT/FT)
  - NOT USED IN CONTOURING
  - GROUNDWATER ELEVATION (FEET RELATIVE TO DATUM)

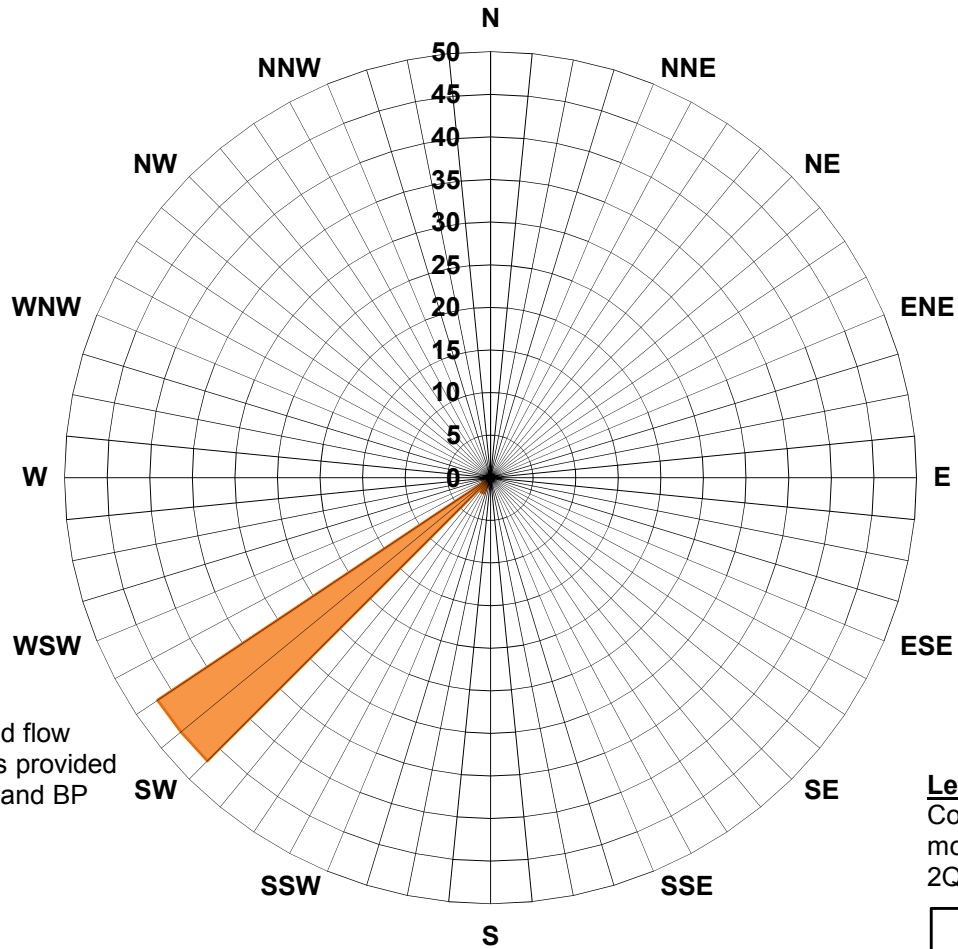
- NOTES:**
- 1) SITE MAP ADAPTED FROM FIGURES PROVIDED BY BROADBENT.
  - 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
  - 3) GROUNDWATER MONITORING WELLS GAUGED AND SAMPLED ON SEPTEMBER 8-9, 2016.



FORMER BP SERVICE STATION NO. 0374 6407 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	
<b>GROUNDWATER ELEVATION CONTOUR MAP SEPTEMBER 8, 2016</b>	
<b>ARCADIS</b> <small>Design &amp; Consultancy for natural and built assets</small>	FIGURE <b>3</b>

**Figure 4**  
**GROUNDWATER FLOW DIRECTION ROSE DIAGRAM**

CA BP-0374  
6407 Telegraph Avenue  
Oakland, California 94619



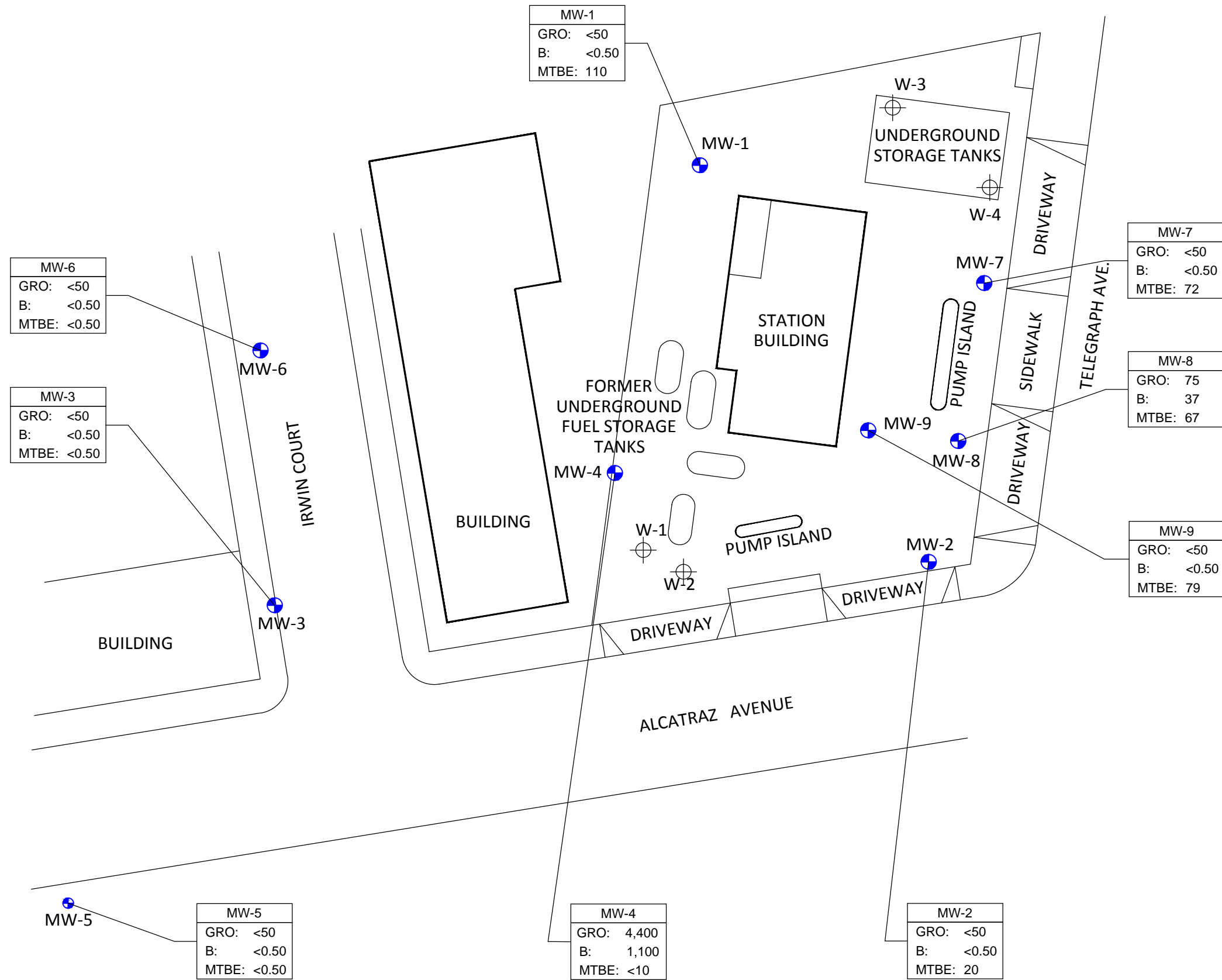
**Note**

Historic groundwater gradient and flow direction data, prior to 3Q16, was provided by Broadbent & Associates, Inc. and BP West Coast Products, LLC.



**Legend**

Concentric circles represent 50 monitoring events beginning 2Q00 through 3Q16.

Groundwater Flow Direction




**LEGEND:**

-  MONITORING WELL LOCATION
-  TANK PIT MONITORING WELL LOCATION

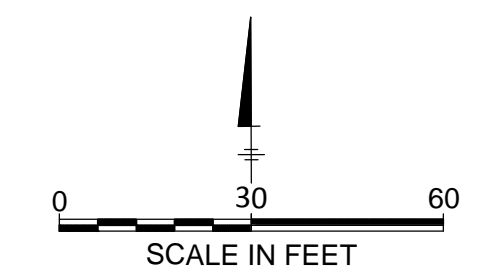
MW-4	
GRO:	4400
B:	1100
MTBE:	<10

SAMPLE LOCATION ID  
CONCENTRATIONS (µg/L)  
GRO: GASOLINE RANGE ORGANICS  
B: BENZENE  
MTBE: METHYL TERT BUTYL ETHER

 LESS THAN LABORATORY REPORTING LIMIT

**NOTES:**

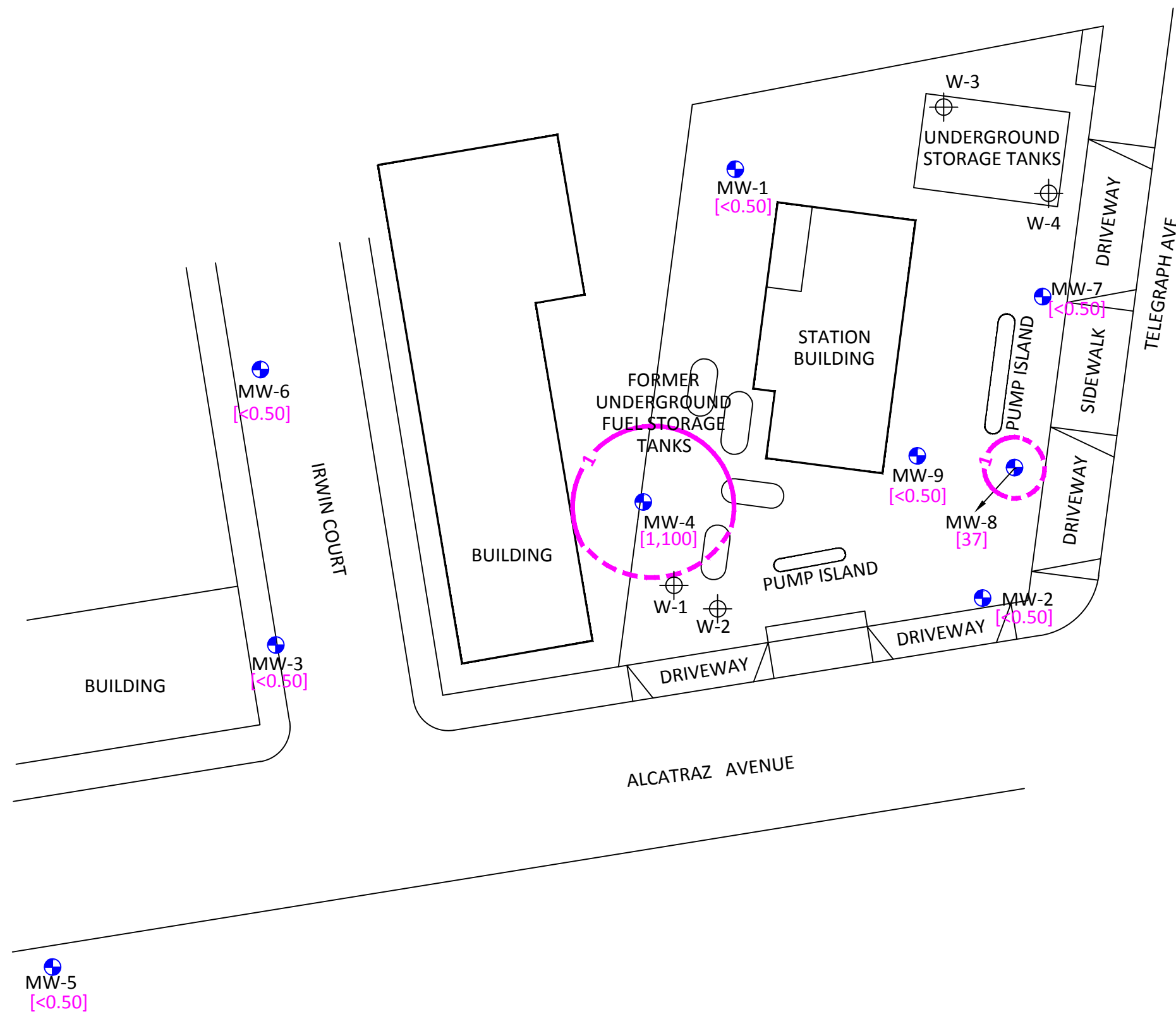
- 1) SITE MAP ADAPTED FROM FIGURES PROVIDED BY BROADBENT.
- 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
- 3) GROUNDWATER MONITORING WELLS GAUGED AND SAMPLED ON SEPTEMBER 8-9, 2016



FORMER BP SERVICE STATION NO. 0374 6407 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	
<b>GROUNDWATER ANALYSIS CONCENTRATION MAP SEPTEMBER 8-9, 2016</b>	
 <b>ARCADIS</b> <small>Design &amp; Consultancy for natural and built assets</small>	FIGURE <b>5</b>

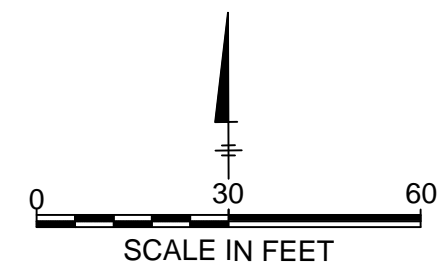


CITY: MUMBAI, INDIA DIV/GROUP: ENVCAD DE: P. JANGLI LD: TM: LJR: C:\Users\PJ00937\Desktop\10.20.16\Fig 7\_0374\_Benzene Iso Concentration Map\_11-03-2016.dwg LAYOUT: 2 SAVED: 11/3/2016 3:09 PM ACADVER: 20.05 (LMS TECH) PAGES: 2 PLOTSTYLETABLE: ... PLOTTED: 11/3/2016 3:09 PM BY: POOJA JANGLI



- LEGEND:**
- MONITORING WELL LOCATION
  - TANK PIT MONITORING WELL LOCATION
  - [1,100] BENZENE CONCENTRATION (µg/L)
  - 1 - - - BENZENE CONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
  - < LESS THAN LABORATORY REPORTING LIMIT

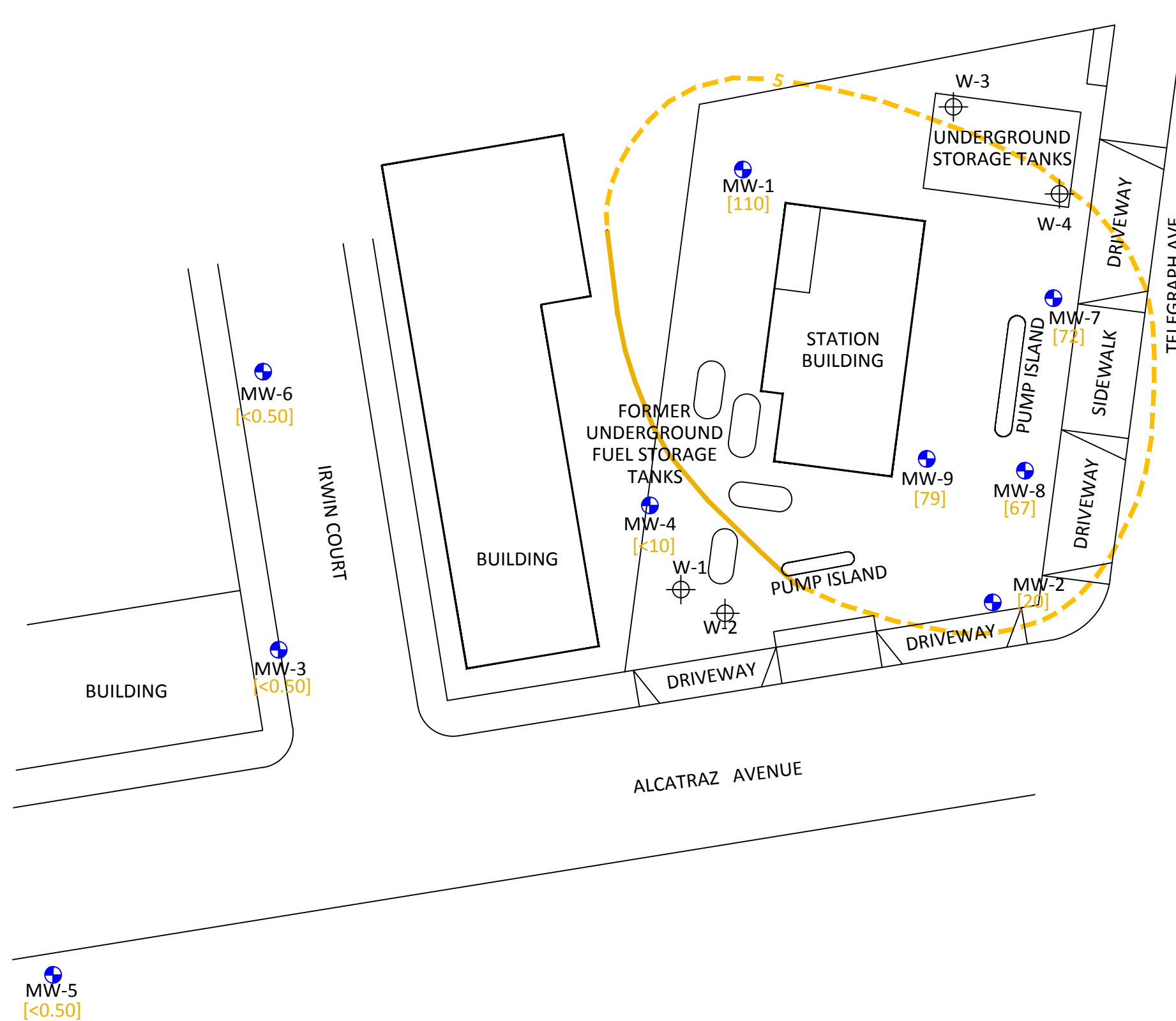
- NOTES:**
- 1) SITE MAP ADAPTED FROM FIGURES PROVIDED BY BROADBENT.
  - 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
  - 3) GROUNDWATER MONITORING WELLS GAUGED AND SAMPLED ON SEPTEMBER 8-9, 2016.





FORMER BP SERVICE STATION NO. 0374 6407 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	
<b>BENZENE CONCENTRATION MAP</b> SEPTEMBER 8-9, 2016	
<b>ARCADIS</b> <small>Design &amp; Consultancy for natural and built assets</small>	FIGURE <b>7</b>



CITY: MUMBAI, INDIA DIV/GROUP: ENVCAD DB: P. JANGLI LD: TM: LYR: C:\Users\PJ00937\Desktop\10.20.16\Fig 8-0374\_MTBE Iso Concentration Map\_11-03-2016.dwg LAYOUT: 2 SAVED: 11/3/2016 3:05 PM ACADVER: 20.0S (LMS TECH) PAGES: 2 PLOTSTYLETABLE: ... PLOTTED: 11/3/2016 3:05 PM BY: POOJA JANGLI

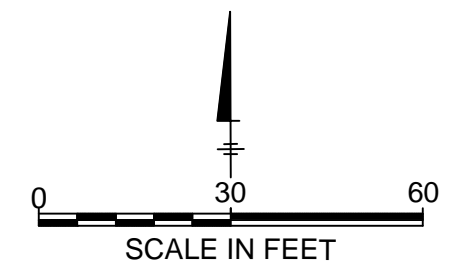


**LEGEND:**

-  MONITORING WELL LOCATION
-  TANK PIT MONITORING WELL LOCATION
- [110] MTBE CONCENTRATION (µg/L)
- 5 --- MTBE CONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
- < LESS THAN LABORATORY REPORTING LIMIT

**NOTES:**

- 1) SITE MAP ADAPTED FROM FIGURES PROVIDED BY BROADBENT.
- 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
- 3) GROUNDWATER MONITORING WELLS GAUGED AND SAMPLED ON SEPTEMBER 8,-9 2016.



FORMER BP SERVICE STATION NO. 0374 6407 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	
<b>MTBE CONCENTRATION MAP SEPTEMBER 8-9, 2016</b>	
	FIGURE <b>8</b>



# ATTACHMENT 1

## Groundwater Sampling Data Package



## WELL GAUGING DATA

Project # 160908-001 Date 09/08/16 Client Arcaadis

Site BP 374 : 6407 Telegraph 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	1130	4		—	—	—	8.97	26.66		
MW-2	1120	4		—	—	—	9.02	26.30		
MW-3	1105	4		—	—	—	7.56	26.75		
MW-4	1155	4	odor	—	—	—	8.80	26.92		
MW-5	1040	4		—	—	—	7.29	23.04		
MW-6	1100	4		—	—	—	5.97	14.58		
MW-7	1115	4		—	—	—	8.69	19.72		
MW-8	1140	4	odor	—	—	—	9.14	19.35		
MW-9	1145	4		—	—	—	8.94	19.32	✓	
*	All wells		opened & gauged	≥ 15 min prior to gauging						

## BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160908-001	Station #: 374
Sampler: 00	Start Date: 09/09/16
Well I.D.: MW-1	Well Diameter: 2 3 4 6 8
Total Well Depth: 26.66'	Depth to Water: 8.97'
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <input checked="" type="checkbox"/> Grade	DO Meter: YSI Pro Plus

Purge Method:

Sampling Method:

Instruments Used:

Peristaltic

Dedicated Tubing

Myron L Ultrameter

HACH Turbidimeter

Bladder Pump

New Tubing

Durham Geoslope Indicator

YSI 556 Flow-Thru Cell

Electric Submersible

GeoTech Interface Probe

YSI 550 DO Meter

MMC Interface Probe

Other: YSI Pro Plus

Flow Rate: 100 mL/min

Pump Depth: 15' 5 1/2 @ 6.5' = 26.5'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
11:23								
11:26	19.3	6.46	999	2	0.39	110	300	9.02
11:29	19.3	6.40	999	1	0.33	130	600	9.05
11:32	19.3	6.35	999	1	0.20	135	900	9.09
11:35	19.4	6.33	995	1	0.14	132	1200	9.12
11:38	19.4	6.33	994	1	0.11	130	1500	9.14
11:41	19.5	6.34	993	1	0.11	126	1800	9.16
11:44	19.5	6.35	992	1	0.10	122	2100	9.18

Did well dewater? Yes  No  Amount actually evacuated: 2100

Sampling Time: 1147 Sampling Date: 09/09/16

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

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

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

## BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160908-001	Station #: 374
Sampler: D0	Start Date: 09/09/16
Well I.D.: MW-2	Well Diameter: 2 3 ④ 6 8
Total Well Depth: 26.30'	Depth to Water: 9.02'
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: DC Grade	DO Meter: YSI Pro Plus

Purge Method:

Sampling Method:

Instruments Used:

Peristaltic

Bladder Pump

Electric Submersible

Dedicated Tubing

New Tubing

Myron L Ultrameter

Durham Geoslope Indicator

GeoTech Interface Probe

MMC Interface Probe

HACH Turbidimeter

YSI 556 Flow-Thru Cell

YSI 550 DO Meter

Other: YSI Pro Plus

Flow Rate: 100 mL/min

Pump Depth: 17.5'      SI: 6.5' - 26.5'

Time	Temp. (°C or °F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1033								
1036	21.6	6.80	637	1	0.23	-60	300	9.06
1039	21.7	6.76	637	1	0.14	-70	600	9.08
1042	21.9	6.74	639	1	0.14	-75	900	9.11
1045	22.0	6.73	638	1	0.13	-80	1200	9.13
1048	22.3	6.72	640	1	0.10	-86	1500	9.16
1051	22.1	6.72	640	1	0.04	-97	1800	9.18
1054	22.2	6.71	641	1	0.02	-95	2100	9.20
1057	22.3	6.71	641	1	0.02	-100	2400	9.23

Did well dewater? Yes No

Amount actually evacuated: 2400

Sampling Time: 1100

Sampling Date: 09/09/16

Sample I.D.: MW-2

Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D

Other: See COC

Equipment Blank I.D.: @ Time

Duplicate I.D.:

## BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160908-001	Station #: 374
Sampler: DP	Start Date: 09/08/16
Well I.D.: MW-3	Well Diameter: 2 3 ④ 6 8
Total Well Depth: 26.75'	Depth to Water: 7.56'
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	DO Meter: YSI Pro Plus

Purge Method:

Sampling Method:

Instruments Used:

Peristaltic

Dedicated Tubing

Myron L Ultrameter

HACH Turbidimeter

Bladder Pump

New Tubing

Durham Geoslope Indicator

YSI 556 Flow-Thru Cell

Electric Submersible

GeoTech Interface Probe

YSI 550 DO Meter

MMC Interface Probe

Other: YSI Pro Plus

Flow Rate: 100 mL/min

Pump Depth: 17.5'

SI: 6.5' - 27'

Time	Temp. (C or F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1552								
1555	20.2	5.82	658	2	0.46	-47	300	7.69
1558	20.3	5.79	658	1	0.35	-69	600	7.75
1601	20.3	5.79	659	1	0.27	-78	900	7.82
1604	20.2	5.79	659	1	0.24	-85	1200	7.85
1607	20.1	5.80	659	1	0.21	-90	1500	7.86
1610	20.3	5.81	658	1	0.19	-95	1800	7.87
1613	20.2	5.81	658	1	0.18	-99	2100	7.87

Did well dewater? Yes  No

Amount actually evacuated: 2100

Sampling Time: 1616

Sampling Date: 09/08/16

Sample I.D.: MW-3

Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D

Other: See COC

Equipment Blank I.D.: @ Time

Duplicate I.D.:

## BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160908-001	Station #: 374
Sampler: 00	Start Date: 09/09/16
Well I.D.: MW-4	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 26.92'	Depth to Water: 8.80'
Depth to Free Product: /	Thickness of Free Product (feet): /
Referenced to: <u>FVC</u> Grade	DO Meter: <u>YSI Pro Plus</u>

Purge Method: Peristaltic      Sampling Method: Dedicated Tubing      Instruments Used: Myron L Ultrameter      HACH Turbidimeter  
 Bladder Pump      Electric Submersible      Durham Scallop Indicator      YSI 556 Flow-Thru Cell  
 GeoTech Interface Probe      YSI 550 DO Meter  
 MMC Interface Probe      Other: YSI Pro Plus  
 Flow Rate: 100 mL/min      Pump Depth: 18'      SI: 6.5' - 27'

Time	Temp. (C or F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1348								
1353	18.8	6.29	1029	1	0.22	-132	300	8.51
1356	18.8	6.32	1030	1	0.15	-138	600	8.54
1359	18.8	6.32	1030	1	0.08	-142	900	8.59
1402	18.8	6.33	1030	1	0.06	-149	1200	8.63
1405	18.7	6.34	1031	1	0.05	-151	1500	8.66
1408	18.8	6.35	1030	1	0.04	-153	1800	8.69

Did well dewater? Yes <input checked="" type="checkbox"/>	Amount actually evacuated: 1800
Sampling Time: 1411	Sampling Date: 09/09/16
Sample I.D.: MW-4	Laboratory: Test America
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC
Equipment Blank I.D.: @	Duplicate I.D.:

## BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160908-001	Station #: 374
Sampler: DO	Start Date: 09/08/16
Well I.D.: MW-5	Well Diameter: 2 <del>3</del> <u>4</u> 6 8
Total Well Depth: 23.04'	Depth to Water: 7.29'
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	DO Meter: YSI Pro Plus

Purge Method:

Sampling Method:

Instruments Used:

Peristaltic

Bladder Pump

Electric Submersible

Dedicated Tubing

New Tubing

Myron L Ultrameter

HACH Turbidimeter

Durham Geoscope Indicator

YSI 556 Flow-Thru Cell

GeoTech Interface Probe

YSI 550 DO Meter

MMC Interface Probe

Other: YSI Pro Plus

Flow Rate: 100 mL/min

Pump Depth: 16.5'      SI: 10'-23'

1408 Time	Temp. (°C or °F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or $\mu$ b)	Depth to Water
1410	25.2	6.34	640	1	1.04	-16.2	300	7.69
1413	25.9	6.07	638	1	0.91	-13.1	600	7.73
1416	25.5	6.08	643	1	0.85	-21.6	900	7.77
1419	25.2	6.10	639	1	0.86	-21.1	1200	7.81
1422	25.2	6.10	640	1	0.87	-21.2	1500	7.85

Did well dewater? Yes No      Amount actually evacuated: 1500

Sampling Time: 14 25      Sampling Date: 09/08/16

Sample I.D.: MW-5      Laboratory: Test America

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

Trip Blank  
Equipment Blank I.D.: TB-374@-09082016  
Time 0930      Duplicate I.D.:

## BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160908-001	Station #: 374
Sampler: DO	Start Date: 09/08/16
Well I.D.: MW-6	Well Diameter: 2 3 <u>4</u> <del>6</del> <del>8</del>
Total Well Depth: 14.58'	Depth to Water: 5.97'
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PVE</u> Grade	DO Meter: <del>YSI</del> YSI Pro plus

Purge Method:	Sampling Method:	Instruments Used:
Peristaltic	Dedicated Tubing	Myron L Ultrameter      HACH Turbidimeter
Bladder Pump	New Tubing	Durham Geoslope Indicator      YSI 556 Flow-Thru Cell
Electric Submersible		GeoTech Interface Probe      YSI 550 DO Meter
		MMC Interface Probe      Other: <u>YSI Pro plus</u>
Flow Rate: <u>100 mL/min</u>		Pump Depth: <u>10.25' 5' - 14.5'</u>

Time	Temp. (C or °F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>ml</u> )	Depth to Water
1504								
1507	21.3	5.86	443	4	0.89	57	300	6.61
1510	21.4	5.66	441	4	0.82	67	600	6.63
1513	21.4	5.67	441	4	0.80	63	900	6.65
1516	21.4	5.72	441	4	0.80	59	1200	6.67

Did well dewater? Yes <u>No</u>	Amount actually evacuated: 1200
Sampling Time: 1519	Sampling Date: 09/08/16
Sample I.D.: MW-6	Laboratory: Test America
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>See COC</u>
Equipment Blank I.D.: @	Duplicate I.D.:



## BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160908-001	Station #: 374
Sampler: DO	Start Date: 09/09/16
Well I.D.: MW-7	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 19.72'	Depth to Water: 8.69'
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	DO Meter: <u>YSI Pro plus</u>

Purge Method: Peristaltic      Sampling Method: Dedicated Tubing      Instruments Used: Myron L Ultrameter      HACH Turbidimeter  
Bladder Pump      New Tubing      Durham Geoslope Indicator      YSI 556 Flow-Thru Cell  
Electric Submersible      GeoTech Interface Probe      YSI 550 DO Meter  
MMC Interface Probe      Other: YSI Pro plus

Flow Rate: 100 mL/min      Pump Depth: 14'      SI: 5'-20'

Time	Temp. (C or F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
0940								
0943	20.9	6.49	764	2	0.26	79	300	8.77
0946	20.8	6.63	765	1	0.32	65	600	8.78
0949	20.7	6.67	765	1	0.26	59	900	8.80
0952	20.8	6.69	766	1	0.17	53	1200	8.81
0955	20.7	6.70	766	1	0.12	50	1500	8.82
0958	21.0	6.69	767	1	0.12	48	1800	8.84
1001	21.0	6.69	767	1	0.13	45	2100	8.85

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>2100</u>
Sampling Time: <u>1004</u>	Sampling Date: <u>09/09/16</u>
Sample I.D.: <u>MW-7</u>	Laboratory: <u>Test America</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D      Other: <u>See COC</u>	
Equipment Blank I.D.:      @      Time	Duplicate I.D.:

## BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160908-001	Station #: 374
Sampler: DO	Start Date: 09/09/16
Well I.D.: MW-8	Well Diameter: 2 3 (4) 6 8
Total Well Depth: <del>4.14</del> 19.35'	Depth to Water: <del>19.35</del> 9.14'
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <input checked="" type="checkbox"/> Grade	DO Meter: YSI Pro Plus

**Purge Method:** Peristaltic  Bladder Pump  Electric Submersible   
**Sampling Method:** Dedicated Tubing  New Tubing   
**Instruments Used:** Myron L Ultrameter  HACH Turbidimeter   
 Durham Geoscope Indicator  YSI 556 Flow-Thru Cell   
 GeoTech Interface Probe  YSI 550 DO Meter   
 MMC Interface Probe  Other: YSI Pro Plus   
**Flow Rate:** 100 mL/min  **Pump Depth:** 14' SI: 5' - 19.5'

Time	Temp. (°C or °F)	pH	Cond. (mS or <del>µS</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <del>ml</del> )	Depth to Water
1210								
1213	23.5	6.36	610	1	0.68	-98	300	9.20
1216	23.7	6.32	609	1	0.39	-93	600	9.22
1219	23.5	6.31	609	1	0.30	-94	900	9.25
1222	23.6	6.29	608	1	0.20	-103	1200	9.27
1225	23.8	6.28	608	1	0.16	-101	1500	9.29
1228	23.6	6.29	607	1	0.14	-105	1800	9.30
1231	23.4	6.28	607	1	0.12	-108	2100	9.32

Did well dewater? Yes  No  Amount actually evacuated: 2100

Sampling Time: 1234 Sampling Date: 09/09/16

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

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

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

## BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>160909-001</u>	Station #: <u>374</u>
Sampler: <u>00</u>	Start Date: <u>09/09/16</u>
Well I.D.: <u>MW-9</u>	Well Diameter: <u>2 3 4 6 8</u>
Total Well Depth: <u>19.32'</u>	Depth to Water: <u>8.94'</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	DO Meter: <u>YSI ProPlus</u>

Purge Method:

Sampling Method:

Instruments Used:

Peristaltic

Dedicated Tubing

Myron L Ultrameter

HACH Turbiditymeter

Bladder Pump

New Tubing

Durham Geoscope Indicator

YSI 556 Flow-Thru Cell

Electric Submersible

GeoTech Interface Probe

YSI 550 DO Meter

MMC Interface Probe

Other: YSI ProPlus

Flow Rate: 100 mL/min

Pump Depth: 14' 5125' - 19.5'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1258	21.8	6.40	708	4	0.61	-56	300	8.40
1301	22.3	6.41	710	4	0.16	-84	600	8.43
1304	22.2	6.42	710	4	0.14	-88	900	8.45
1307	22.4	6.41	711	4	0.05	-93	1200	8.48
1310	22.3	6.41	712	3	0.03	-98	1500	8.51
1313	22.5	6.42	714	3	0.03	-101	1800	8.53

Did well dewater? Yes  No

Amount actually evacuated: 1800

Sampling Time: 1316

Sampling Date: 09/09/16

Sample I.D.: MW-9

Laboratory: Test America

Analyzed for:  TPH-G  BTEX  MTBE  TPH-D

Other: See COC

Equipment Blank I.D.: @ Time

Duplicate I.D.:





# ATTACHMENT 2

## Laboratory Report



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

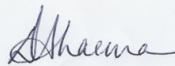
TestAmerica Laboratories, Inc.  
TestAmerica Pleasanton  
1220 Quarry Lane  
Pleasanton, CA 94566  
Tel: (925)484-1919

TestAmerica Job ID: 720-74395-1

Client Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

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

Attn: Carl Edwards



Authorized for release by:  
9/20/2016 2:09:54 PM

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

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

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

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

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Surrogate Summary . . . . .	15
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## Definitions/Glossary

Client: ARCADIS U.S., Inc.  
Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

### Glossary

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

# Case Narrative

Client: ARCADIS U.S., Inc.  
Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

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**Job ID: 720-74395-1**

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**Laboratory: TestAmerica Pleasanton**

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**Narrative**

**Job Narrative  
720-74395-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 9/12/2016 11:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.8° C.

**GC/MS VOA**

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

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# Detection Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

## Client Sample ID: MW-3

Lab Sample ID: 720-74395-1

No Detections.

## Client Sample ID: MW-5

Lab Sample ID: 720-74395-2

No Detections.

## Client Sample ID: MW-6

Lab Sample ID: 720-74395-3

No Detections.

## Client Sample ID: MW-1

Lab Sample ID: 720-74395-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	110		0.50		ug/L	1		8260B	Total/NA

## Client Sample ID: MW-2

Lab Sample ID: 720-74395-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	20		0.50		ug/L	1		8260B	Total/NA

## Client Sample ID: MW-4

Lab Sample ID: 720-74395-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1100		10		ug/L	20		8260B	Total/NA
Ethylbenzene	14		10		ug/L	20		8260B	Total/NA
Toluene	51		10		ug/L	20		8260B	Total/NA
Xylenes, Total	61		20		ug/L	20		8260B	Total/NA
Gasoline Range Organics (GRO) -C6-C12	4400		1000		ug/L	20		8260B	Total/NA

## Client Sample ID: MW-7

Lab Sample ID: 720-74395-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	72		0.50		ug/L	1		8260B	Total/NA
TAME	0.52		0.50		ug/L	1		8260B	Total/NA

## Client Sample ID: MW-8

Lab Sample ID: 720-74395-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	37		0.50		ug/L	1		8260B	Total/NA
MTBE	67		0.50		ug/L	1		8260B	Total/NA
TAME	1.2		0.50		ug/L	1		8260B	Total/NA
Gasoline Range Organics (GRO) -C6-C12	75		50		ug/L	1		8260B	Total/NA

## Client Sample ID: MW-9

Lab Sample ID: 720-74395-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	79		0.50		ug/L	1		8260B	Total/NA
TAME	0.61		0.50		ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

**Client Sample ID: MW-3**  
**Date Collected: 09/08/16 16:16**  
**Date Received: 09/12/16 11:40**

**Lab Sample ID: 720-74395-1**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/16/16 20:35	1
Ethylbenzene	ND		0.50		ug/L			09/16/16 20:35	1
Ethanol	ND		500		ug/L			09/16/16 20:35	1
MTBE	ND		0.50		ug/L			09/16/16 20:35	1
TAME	ND		0.50		ug/L			09/16/16 20:35	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/16/16 20:35	1
Toluene	ND		0.50		ug/L			09/16/16 20:35	1
EDB	ND		0.50		ug/L			09/16/16 20:35	1
Xylenes, Total	ND		1.0		ug/L			09/16/16 20:35	1
1,2-DCA	ND		0.50		ug/L			09/16/16 20:35	1
TBA	ND		20		ug/L			09/16/16 20:35	1
DIPE	ND		0.50		ug/L			09/16/16 20:35	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/16/16 20:35	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	88		67 - 130					09/16/16 20:35	1
1,2-Dichloroethane-d4 (Surr)	104		72 - 130					09/16/16 20:35	1
Toluene-d8 (Surr)	98		70 - 130					09/16/16 20:35	1

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

**Client Sample ID: MW-5**  
**Date Collected: 09/08/16 14:25**  
**Date Received: 09/12/16 11:40**

**Lab Sample ID: 720-74395-2**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/16/16 22:02	1
Ethylbenzene	ND		0.50		ug/L			09/16/16 22:02	1
Ethanol	ND		500		ug/L			09/16/16 22:02	1
MTBE	ND		0.50		ug/L			09/16/16 22:02	1
TAME	ND		0.50		ug/L			09/16/16 22:02	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/16/16 22:02	1
Toluene	ND		0.50		ug/L			09/16/16 22:02	1
EDB	ND		0.50		ug/L			09/16/16 22:02	1
Xylenes, Total	ND		1.0		ug/L			09/16/16 22:02	1
1,2-DCA	ND		0.50		ug/L			09/16/16 22:02	1
TBA	ND		20		ug/L			09/16/16 22:02	1
DIPE	ND		0.50		ug/L			09/16/16 22:02	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/16/16 22:02	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	91		67 - 130					09/16/16 22:02	1
1,2-Dichloroethane-d4 (Surr)	106		72 - 130					09/16/16 22:02	1
Toluene-d8 (Surr)	96		70 - 130					09/16/16 22:02	1

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

**Client Sample ID: MW-6**  
**Date Collected: 09/08/16 15:19**  
**Date Received: 09/12/16 11:40**

**Lab Sample ID: 720-74395-3**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/16/16 22:31	1
Ethylbenzene	ND		0.50		ug/L			09/16/16 22:31	1
Ethanol	ND		500		ug/L			09/16/16 22:31	1
MTBE	ND		0.50		ug/L			09/16/16 22:31	1
TAME	ND		0.50		ug/L			09/16/16 22:31	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/16/16 22:31	1
Toluene	ND		0.50		ug/L			09/16/16 22:31	1
EDB	ND		0.50		ug/L			09/16/16 22:31	1
Xylenes, Total	ND		1.0		ug/L			09/16/16 22:31	1
1,2-DCA	ND		0.50		ug/L			09/16/16 22:31	1
TBA	ND		20		ug/L			09/16/16 22:31	1
DIPE	ND		0.50		ug/L			09/16/16 22:31	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/16/16 22:31	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	86		67 - 130					09/16/16 22:31	1
1,2-Dichloroethane-d4 (Surr)	105		72 - 130					09/16/16 22:31	1
Toluene-d8 (Surr)	95		70 - 130					09/16/16 22:31	1

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

**Client Sample ID: MW-1**  
**Date Collected: 09/09/16 11:47**  
**Date Received: 09/12/16 11:40**

**Lab Sample ID: 720-74395-5**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/16/16 23:00	1
Ethylbenzene	ND		0.50		ug/L			09/16/16 23:00	1
Ethanol	ND		500		ug/L			09/16/16 23:00	1
<b>MTBE</b>	<b>110</b>		0.50		ug/L			09/16/16 23:00	1
TAME	ND		0.50		ug/L			09/16/16 23:00	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/16/16 23:00	1
Toluene	ND		0.50		ug/L			09/16/16 23:00	1
EDB	ND		0.50		ug/L			09/16/16 23:00	1
Xylenes, Total	ND		1.0		ug/L			09/16/16 23:00	1
1,2-DCA	ND		0.50		ug/L			09/16/16 23:00	1
TBA	ND		20		ug/L			09/16/16 23:00	1
DIPE	ND		0.50		ug/L			09/16/16 23:00	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/16/16 23:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	87		67 - 130		09/16/16 23:00	1
1,2-Dichloroethane-d4 (Surr)	104		72 - 130		09/16/16 23:00	1
Toluene-d8 (Surr)	94		70 - 130		09/16/16 23:00	1

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

**Client Sample ID: MW-2**  
**Date Collected: 09/09/16 11:00**  
**Date Received: 09/12/16 11:40**

**Lab Sample ID: 720-74395-6**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/16/16 23:29	1
Ethylbenzene	ND		0.50		ug/L			09/16/16 23:29	1
Ethanol	ND		500		ug/L			09/16/16 23:29	1
<b>MTBE</b>	<b>20</b>		0.50		ug/L			09/16/16 23:29	1
TAME	ND		0.50		ug/L			09/16/16 23:29	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/16/16 23:29	1
Toluene	ND		0.50		ug/L			09/16/16 23:29	1
EDB	ND		0.50		ug/L			09/16/16 23:29	1
Xylenes, Total	ND		1.0		ug/L			09/16/16 23:29	1
1,2-DCA	ND		0.50		ug/L			09/16/16 23:29	1
TBA	ND		20		ug/L			09/16/16 23:29	1
DIPE	ND		0.50		ug/L			09/16/16 23:29	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/16/16 23:29	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	84		67 - 130					09/16/16 23:29	1
1,2-Dichloroethane-d4 (Surr)	102		72 - 130					09/16/16 23:29	1
Toluene-d8 (Surr)	96		70 - 130					09/16/16 23:29	1



# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

**Client Sample ID: MW-4**  
**Date Collected: 09/09/16 14:11**  
**Date Received: 09/12/16 11:40**

**Lab Sample ID: 720-74395-7**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>1100</b>		10		ug/L			09/16/16 23:58	20
<b>Ethylbenzene</b>	<b>14</b>		10		ug/L			09/16/16 23:58	20
Ethanol	ND		10000		ug/L			09/16/16 23:58	20
MTBE	ND		10		ug/L			09/16/16 23:58	20
TAME	ND		10		ug/L			09/16/16 23:58	20
Ethyl t-butyl ether	ND		10		ug/L			09/16/16 23:58	20
<b>Toluene</b>	<b>51</b>		10		ug/L			09/16/16 23:58	20
EDB	ND		10		ug/L			09/16/16 23:58	20
<b>Xylenes, Total</b>	<b>61</b>		20		ug/L			09/16/16 23:58	20
1,2-DCA	ND		10		ug/L			09/16/16 23:58	20
TBA	ND		400		ug/L			09/16/16 23:58	20
DIPE	ND		10		ug/L			09/16/16 23:58	20
<b>Gasoline Range Organics (GRO) -C6-C12</b>	<b>4400</b>		1000		ug/L			09/16/16 23:58	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	88		67 - 130					09/16/16 23:58	20
1,2-Dichloroethane-d4 (Surr)	101		72 - 130					09/16/16 23:58	20
Toluene-d8 (Surr)	98		70 - 130					09/16/16 23:58	20

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

**Client Sample ID: MW-7**  
**Date Collected: 09/09/16 10:04**  
**Date Received: 09/12/16 11:40**

**Lab Sample ID: 720-74395-8**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/17/16 00:27	1
Ethylbenzene	ND		0.50		ug/L			09/17/16 00:27	1
Ethanol	ND		500		ug/L			09/17/16 00:27	1
<b>MTBE</b>	<b>72</b>		0.50		ug/L			09/17/16 00:27	1
<b>TAME</b>	<b>0.52</b>		0.50		ug/L			09/17/16 00:27	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/17/16 00:27	1
Toluene	ND		0.50		ug/L			09/17/16 00:27	1
EDB	ND		0.50		ug/L			09/17/16 00:27	1
Xylenes, Total	ND		1.0		ug/L			09/17/16 00:27	1
1,2-DCA	ND		0.50		ug/L			09/17/16 00:27	1
TBA	ND		20		ug/L			09/17/16 00:27	1
DIPE	ND		0.50		ug/L			09/17/16 00:27	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/17/16 00:27	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	85		67 - 130					09/17/16 00:27	1
1,2-Dichloroethane-d4 (Surr)	100		72 - 130					09/17/16 00:27	1
Toluene-d8 (Surr)	96		70 - 130					09/17/16 00:27	1

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

**Client Sample ID: MW-8**  
**Date Collected: 09/09/16 12:34**  
**Date Received: 09/12/16 11:40**

**Lab Sample ID: 720-74395-9**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>37</b>		0.50		ug/L			09/17/16 00:56	1
Ethylbenzene	ND		0.50		ug/L			09/17/16 00:56	1
Ethanol	ND		500		ug/L			09/17/16 00:56	1
<b>MTBE</b>	<b>67</b>		0.50		ug/L			09/17/16 00:56	1
<b>TAME</b>	<b>1.2</b>		0.50		ug/L			09/17/16 00:56	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/17/16 00:56	1
Toluene	ND		0.50		ug/L			09/17/16 00:56	1
EDB	ND		0.50		ug/L			09/17/16 00:56	1
Xylenes, Total	ND		1.0		ug/L			09/17/16 00:56	1
1,2-DCA	ND		0.50		ug/L			09/17/16 00:56	1
TBA	ND		20		ug/L			09/17/16 00:56	1
DIPE	ND		0.50		ug/L			09/17/16 00:56	1
<b>Gasoline Range Organics (GRO)</b>	<b>75</b>		50		ug/L			09/17/16 00:56	1

**-C6-C12**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	85		67 - 130		09/17/16 00:56	1
1,2-Dichloroethane-d4 (Surr)	100		72 - 130		09/17/16 00:56	1
Toluene-d8 (Surr)	94		70 - 130		09/17/16 00:56	1

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

**Client Sample ID: MW-9**  
**Date Collected: 09/09/16 13:16**  
**Date Received: 09/12/16 11:40**

**Lab Sample ID: 720-74395-10**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/17/16 01:25	1
Ethylbenzene	ND		0.50		ug/L			09/17/16 01:25	1
Ethanol	ND		500		ug/L			09/17/16 01:25	1
<b>MTBE</b>	<b>79</b>		0.50		ug/L			09/17/16 01:25	1
<b>TAME</b>	<b>0.61</b>		0.50		ug/L			09/17/16 01:25	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/17/16 01:25	1
Toluene	ND		0.50		ug/L			09/17/16 01:25	1
EDB	ND		0.50		ug/L			09/17/16 01:25	1
Xylenes, Total	ND		1.0		ug/L			09/17/16 01:25	1
1,2-DCA	ND		0.50		ug/L			09/17/16 01:25	1
TBA	ND		20		ug/L			09/17/16 01:25	1
DIPE	ND		0.50		ug/L			09/17/16 01:25	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/17/16 01:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	84		67 - 130		09/17/16 01:25	1
1,2-Dichloroethane-d4 (Surr)	104		72 - 130		09/17/16 01:25	1
Toluene-d8 (Surr)	95		70 - 130		09/17/16 01:25	1

# Surrogate Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	12DCE	TOL
		(67-130)	(72-130)	(70-130)
720-74395-1	MW-3	88	104	98
720-74395-1 MS	MW-3	97	102	99
720-74395-1 MSD	MW-3	98	103	99
720-74395-2	MW-5	91	106	96
720-74395-3	MW-6	86	105	95
720-74395-5	MW-1	87	104	94
720-74395-6	MW-2	84	102	96
720-74395-7	MW-4	88	101	98
720-74395-8	MW-7	85	100	96
720-74395-9	MW-8	85	100	94
720-74395-10	MW-9	84	104	95
LCS 720-209438/5	Lab Control Sample	95	102	98
LCS 720-209438/7	Lab Control Sample	95	102	99
LCSD 720-209438/6	Lab Control Sample Dup	98	101	98
LCSD 720-209438/8	Lab Control Sample Dup	95	96	99
MB 720-209438/4	Method Blank	87	104	96

#### Surrogate Legend

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

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 720-209438/4**

**Matrix: Water**

**Analysis Batch: 209438**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/16/16 17:40	1
Ethylbenzene	ND		0.50		ug/L			09/16/16 17:40	1
Ethanol	ND		500		ug/L			09/16/16 17:40	1
MTBE	ND		0.50		ug/L			09/16/16 17:40	1
TAME	ND		0.50		ug/L			09/16/16 17:40	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/16/16 17:40	1
Toluene	ND		0.50		ug/L			09/16/16 17:40	1
EDB	ND		0.50		ug/L			09/16/16 17:40	1
Xylenes, Total	ND		1.0		ug/L			09/16/16 17:40	1
1,2-DCA	ND		0.50		ug/L			09/16/16 17:40	1
TBA	ND		20		ug/L			09/16/16 17:40	1
DIPE	ND		0.50		ug/L			09/16/16 17:40	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/16/16 17:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	87		67 - 130		09/16/16 17:40	1
1,2-Dichloroethane-d4 (Surr)	104		72 - 130		09/16/16 17:40	1
Toluene-d8 (Surr)	96		70 - 130		09/16/16 17:40	1

**Lab Sample ID: LCS 720-209438/5**

**Matrix: Water**

**Analysis Batch: 209438**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	27.1		ug/L		108	79 - 130
Ethylbenzene	25.0	25.2		ug/L		101	80 - 120
Ethanol	1000	1100		ug/L		110	31 - 216
m-Xylene & p-Xylene	25.0	24.8		ug/L		99	70 - 142
MTBE	25.0	24.7		ug/L		99	62 - 130
TAME	25.0	26.0		ug/L		104	79 - 130
Ethyl t-butyl ether	25.0	27.0		ug/L		108	70 - 130
Toluene	25.0	26.0		ug/L		104	78 - 120
EDB	25.0	27.0		ug/L		108	70 - 130
1,2-DCA	25.0	25.4		ug/L		102	61 - 132
TBA	250	252		ug/L		101	70 - 130
DIPE	25.0	30.2		ug/L		121	69 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	102		72 - 130
Toluene-d8 (Surr)	98		70 - 130

TestAmerica Pleasanton

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 720-209438/7**

**Matrix: Water**

**Analysis Batch: 209438**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	463		ug/L		93	58 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	102		72 - 130
Toluene-d8 (Surr)	99		70 - 130

**Lab Sample ID: LCSD 720-209438/6**

**Matrix: Water**

**Analysis Batch: 209438**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	25.0	26.3		ug/L		105	79 - 130	3	20
Ethylbenzene	25.0	25.5		ug/L		102	80 - 120	1	20
Ethanol	1000	1180		ug/L		118	31 - 216	7	30
m-Xylene & p-Xylene	25.0	24.8		ug/L		99	70 - 142	0	20
MTBE	25.0	23.4		ug/L		94	62 - 130	5	20
TAME	25.0	24.4		ug/L		98	79 - 130	6	20
Ethyl t-butyl ether	25.0	26.0		ug/L		104	70 - 130	4	20
Toluene	25.0	26.0		ug/L		104	78 - 120	0	20
EDB	25.0	25.3		ug/L		101	70 - 130	6	20
1,2-DCA	25.0	24.6		ug/L		99	61 - 132	3	20
TBA	250	251		ug/L		100	70 - 130	0	20
DIPE	25.0	29.1		ug/L		116	69 - 134	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	98		67 - 130
1,2-Dichloroethane-d4 (Surr)	101		72 - 130
Toluene-d8 (Surr)	98		70 - 130

**Lab Sample ID: LCSD 720-209438/8**

**Matrix: Water**

**Analysis Batch: 209438**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12	500	476		ug/L		95	58 - 120	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	96		72 - 130
Toluene-d8 (Surr)	99		70 - 130

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 720-74395-1 MS**

**Matrix: Water**

**Analysis Batch: 209438**

**Client Sample ID: MW-3**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Benzene	ND		25.0	26.3		ug/L		105	60 - 140	
Ethylbenzene	ND		25.0	24.8		ug/L		99	60 - 140	
Ethanol	ND		1000	1120		ug/L		112	60 - 140	
m-Xylene & p-Xylene	ND		25.0	24.3		ug/L		97	60 - 140	
MTBE	ND		25.0	24.9		ug/L		99	60 - 138	
TAME	ND		25.0	25.3		ug/L		101	60 - 140	
Ethyl t-butyl ether	ND		25.0	26.8		ug/L		107	60 - 140	
Toluene	ND		25.0	25.5		ug/L		102	60 - 140	
EDB	ND		25.0	26.3		ug/L		105	60 - 140	
1,2-DCA	ND		25.0	25.4		ug/L		102	60 - 140	
TBA	ND		250	243		ug/L		97	60 - 140	
DIPE	ND		25.0	29.4		ug/L		118	60 - 140	

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	97		67 - 130
1,2-Dichloroethane-d4 (Surr)	102		72 - 130
Toluene-d8 (Surr)	99		70 - 130

**Lab Sample ID: 720-74395-1 MSD**

**Matrix: Water**

**Analysis Batch: 209438**

**Client Sample ID: MW-3**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.	Limits	RPD	
	Result	Qualifier		Result	Qualifier						RPD	Limit
Benzene	ND		25.0	26.3		ug/L		105	60 - 140	0	20	
Ethylbenzene	ND		25.0	24.4		ug/L		98	60 - 140	2	20	
Ethanol	ND		1000	1130		ug/L		113	60 - 140	1	20	
m-Xylene & p-Xylene	ND		25.0	24.1		ug/L		96	60 - 140	1	20	
MTBE	ND		25.0	25.5		ug/L		101	60 - 138	2	20	
TAME	ND		25.0	26.3		ug/L		105	60 - 140	4	20	
Ethyl t-butyl ether	ND		25.0	27.2		ug/L		109	60 - 140	2	20	
Toluene	ND		25.0	25.1		ug/L		100	60 - 140	2	20	
EDB	ND		25.0	26.4		ug/L		105	60 - 140	0	20	
1,2-DCA	ND		25.0	25.9		ug/L		103	60 - 140	2	20	
TBA	ND		250	242		ug/L		97	60 - 140	1	20	
DIPE	ND		25.0	29.6		ug/L		118	60 - 140	0	20	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	98		67 - 130
1,2-Dichloroethane-d4 (Surr)	103		72 - 130
Toluene-d8 (Surr)	99		70 - 130

TestAmerica Pleasanton



# QC Association Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

## GC/MS VOA

### Analysis Batch: 209438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-74395-1	MW-3	Total/NA	Water	8260B	
720-74395-2	MW-5	Total/NA	Water	8260B	
720-74395-3	MW-6	Total/NA	Water	8260B	
720-74395-5	MW-1	Total/NA	Water	8260B	
720-74395-6	MW-2	Total/NA	Water	8260B	
720-74395-7	MW-4	Total/NA	Water	8260B	
720-74395-8	MW-7	Total/NA	Water	8260B	
720-74395-9	MW-8	Total/NA	Water	8260B	
720-74395-10	MW-9	Total/NA	Water	8260B	
MB 720-209438/4	Method Blank	Total/NA	Water	8260B	
LCS 720-209438/5	Lab Control Sample	Total/NA	Water	8260B	
LCS 720-209438/7	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-209438/6	Lab Control Sample Dup	Total/NA	Water	8260B	
LCSD 720-209438/8	Lab Control Sample Dup	Total/NA	Water	8260B	
720-74395-1 MS	MW-3	Total/NA	Water	8260B	
720-74395-1 MSD	MW-3	Total/NA	Water	8260B	

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

## Client Sample ID: MW-3

Date Collected: 09/08/16 16:16

Date Received: 09/12/16 11:40

## Lab Sample ID: 720-74395-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	209438	09/16/16 20:35	LPL	TAL PLS

## Client Sample ID: MW-5

Date Collected: 09/08/16 14:25

Date Received: 09/12/16 11:40

## Lab Sample ID: 720-74395-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	209438	09/16/16 22:02	LPL	TAL PLS

## Client Sample ID: MW-6

Date Collected: 09/08/16 15:19

Date Received: 09/12/16 11:40

## Lab Sample ID: 720-74395-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	209438	09/16/16 22:31	LPL	TAL PLS

## Client Sample ID: MW-1

Date Collected: 09/09/16 11:47

Date Received: 09/12/16 11:40

## Lab Sample ID: 720-74395-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	209438	09/16/16 23:00	LPL	TAL PLS

## Client Sample ID: MW-2

Date Collected: 09/09/16 11:00

Date Received: 09/12/16 11:40

## Lab Sample ID: 720-74395-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	209438	09/16/16 23:29	LPL	TAL PLS

## Client Sample ID: MW-4

Date Collected: 09/09/16 14:11

Date Received: 09/12/16 11:40

## Lab Sample ID: 720-74395-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	209438	09/16/16 23:58	LPL	TAL PLS

TestAmerica Pleasanton

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

## Client Sample ID: MW-7

Date Collected: 09/09/16 10:04

Date Received: 09/12/16 11:40

## Lab Sample ID: 720-74395-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	209438	09/17/16 00:27	LPL	TAL PLS

## Client Sample ID: MW-8

Date Collected: 09/09/16 12:34

Date Received: 09/12/16 11:40

## Lab Sample ID: 720-74395-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	209438	09/17/16 00:56	LPL	TAL PLS

## Client Sample ID: MW-9

Date Collected: 09/09/16 13:16

Date Received: 09/12/16 11:40

## Lab Sample ID: 720-74395-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	209438	09/17/16 01:25	LPL	TAL PLS

### Laboratory References:

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

# Certification Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

## Laboratory: TestAmerica Pleasanton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-18

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# Method Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

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Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PLS

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**Protocol References:**

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

**Laboratory References:**

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



# Sample Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP-0374 – 6407 Telegraph Ave., Oakland,

TestAmerica Job ID: 720-74395-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-74395-1	MW-3	Water	09/08/16 16:16	09/12/16 11:40
720-74395-2	MW-5	Water	09/08/16 14:25	09/12/16 11:40
720-74395-3	MW-6	Water	09/08/16 15:19	09/12/16 11:40
720-74395-5	MW-1	Water	09/09/16 11:47	09/12/16 11:40
720-74395-6	MW-2	Water	09/09/16 11:00	09/12/16 11:40
720-74395-7	MW-4	Water	09/09/16 14:11	09/12/16 11:40
720-74395-8	MW-7	Water	09/09/16 10:04	09/12/16 11:40
720-74395-9	MW-8	Water	09/09/16 12:34	09/12/16 11:40
720-74395-10	MW-9	Water	09/09/16 13:16	09/12/16 11:40





# 720-74395

## Chain of Custody Record

ref# 170890

ARCADIS Project Name: CA 374

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

Lab Work Order Number: \_\_\_\_\_

Lab Name: <u>Test America</u>	Facility Address: <u>6407 Telegraph Ave.</u>	Consultant/Contractor: <u>Blaine Tech Services, Inc.</u>
Lab Address: <u>1220 Quarry Lane, Pleasanton, CA, 94566</u>	City, State, ZIP Code: <u>Oakland, CA</u>	Blaine Tech Project No: <u>ARCADIS/BP-374</u>
Lab PM: <u>Dimple Sharma</u>	Lead Regulatory Agency: <u>Alameda County Env. Health Svcs</u>	Consultant/Contractor Address: <u>1680 Rogers Ave., San Jose, CA 95112</u>
Lab Phone: <u>925 484.1919</u>	California Global ID No.: <u>T0600100106</u>	Consultant/Contractor PM: <u>Michael Ninokata</u>
Lab Shipping Acct:	ARCADIS Project No: <u>GP09BPNA.CA01</u>	Phone: <u>408 573.0555 x202</u>
Lab Bottle Order No:	ARCADIS PM/ Phone: <u>Carl Edwards</u>	Email EDD To: <u>carl.edwards@arcadis.com</u>
Other Info:	Email: <u>carl.edwards@arcadis.com</u>	Invoice To: <u>ARCADIS</u> <input checked="" type="checkbox"/> Contractor <input type="checkbox"/>

Lab No.	Sample Description	Date	Time	Matrix			Total Number of Containers	No. Containers / Preservative							Requested Analyses					Report Type & QC Level		Comments		
				Soil / Solid	Water / Liquid	Air / Vapor		Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	GRO 8280B	BTEX 8260B	(5) Oxygenates 8260B	1,2-DCA, EDB 8280B	Ethanol 8260B	Standard	Full Data Package					
	MW-3	9/8/16	1616		X		3										X	X	X	X	X			
	MW-5	9/8/16	1519 <sup>25</sup>		X		3										X	X	X	X	X			
	MW-6	9/8/16	1519		X		3										X	X	X	X	X			
	TB-374-09082016	9/8/16	0930		X		2										X	X	X	X	X			On Hold



720-74395 Chain of Custody

Sampler's Name:	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
<u>David Osotsky</u>	<u>Carl Edwards / BTS</u>	<u>9/8/16</u>	<u>1945</u>	<u>Carl Edwards / Sample Custodian</u>	<u>9/8/16</u>	<u>1945</u>
Sampler's Company: <u>BTS</u>	<u>(BTS/SL)</u>	<u>9-12-16</u>	<u>10:15</u>	<u>[Signature]</u>	<u>9/12/16</u>	<u>10:15</u>
Shipment Method: _____ Ship Date: _____	<u>[Signature]</u>	<u>9-12-16</u>	<u>11:40</u>	<u>[Signature]</u>	<u>9/12/16</u>	<u>11:40</u>

Special Instructions:

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

5.8°C

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## Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-74395-1

**Login Number: 74395**

**List Source: TestAmerica Pleasanton**

**List Number: 1**

**Creator: Arauz, Dennis**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

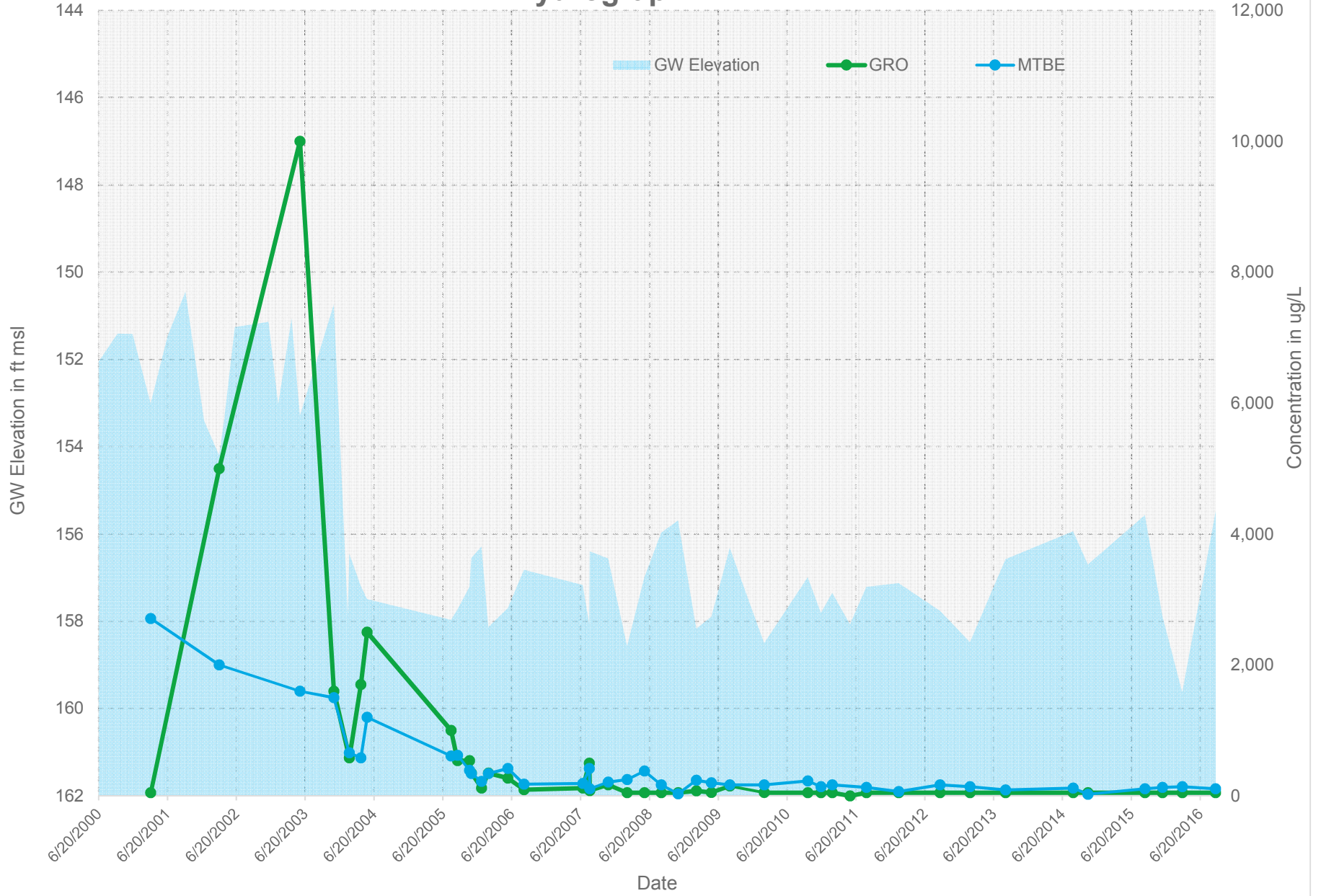


# ATTACHMENT 3

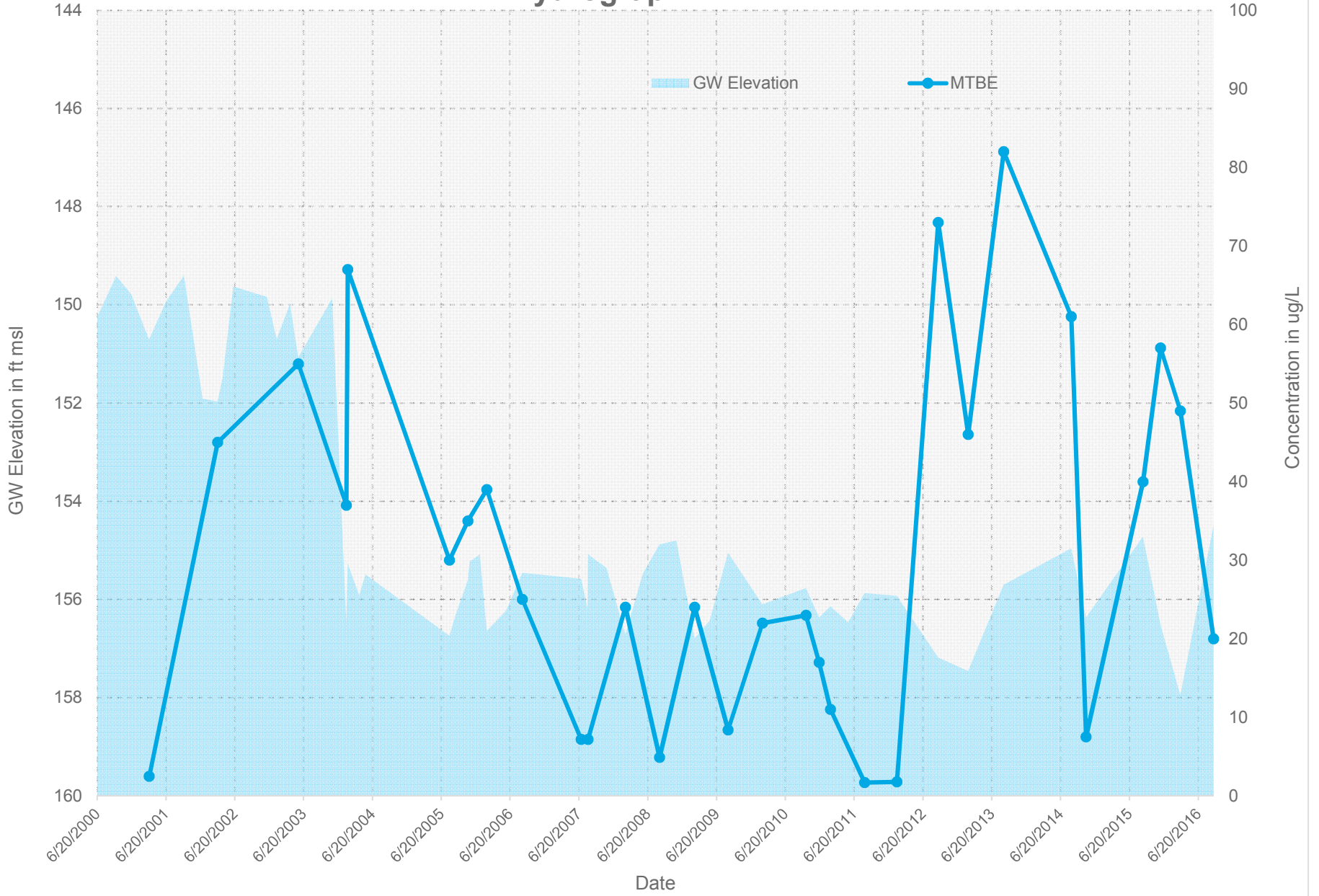
## Hydrographs



# Hydrograph - MW-1

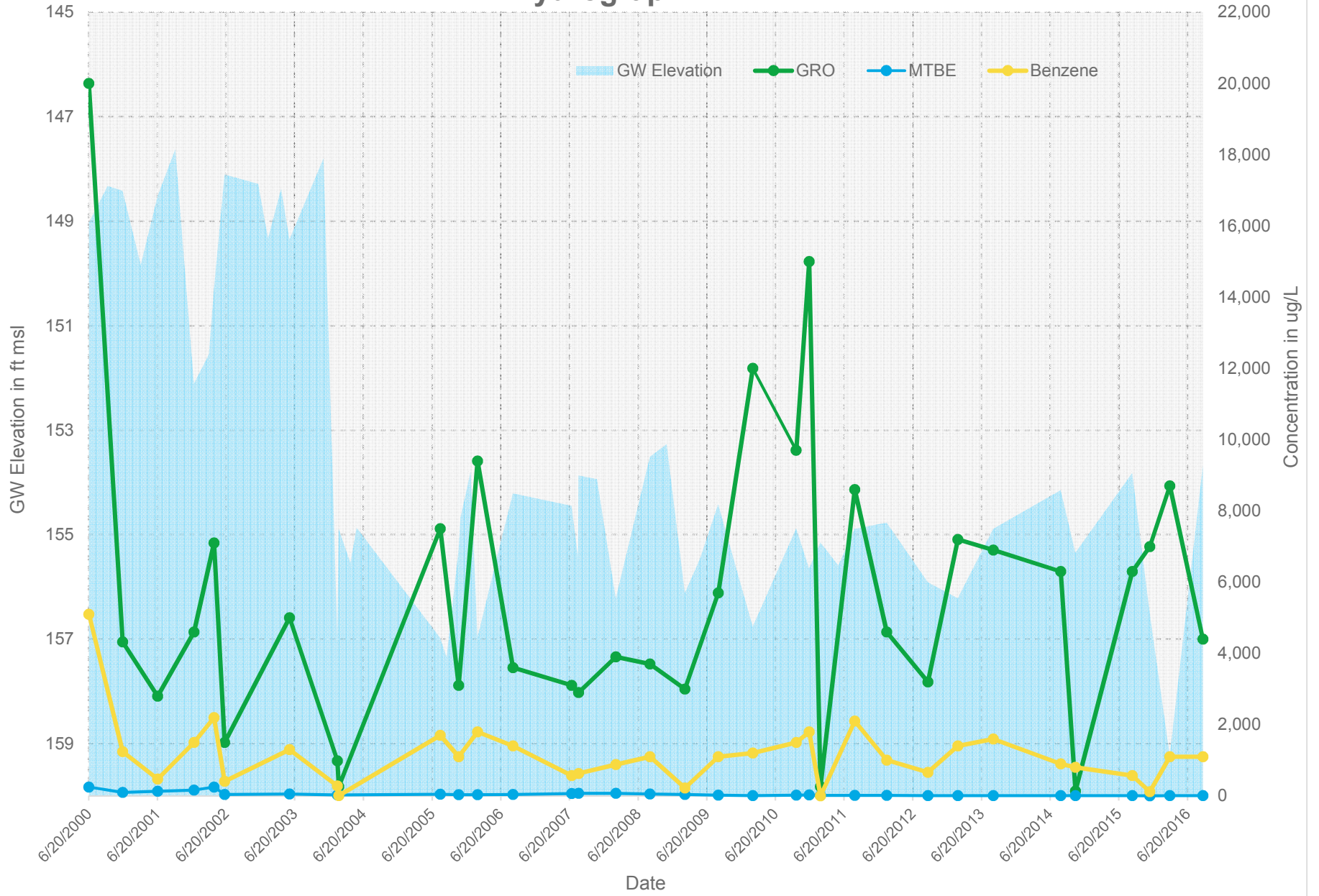


# Hydrograph - MW-2

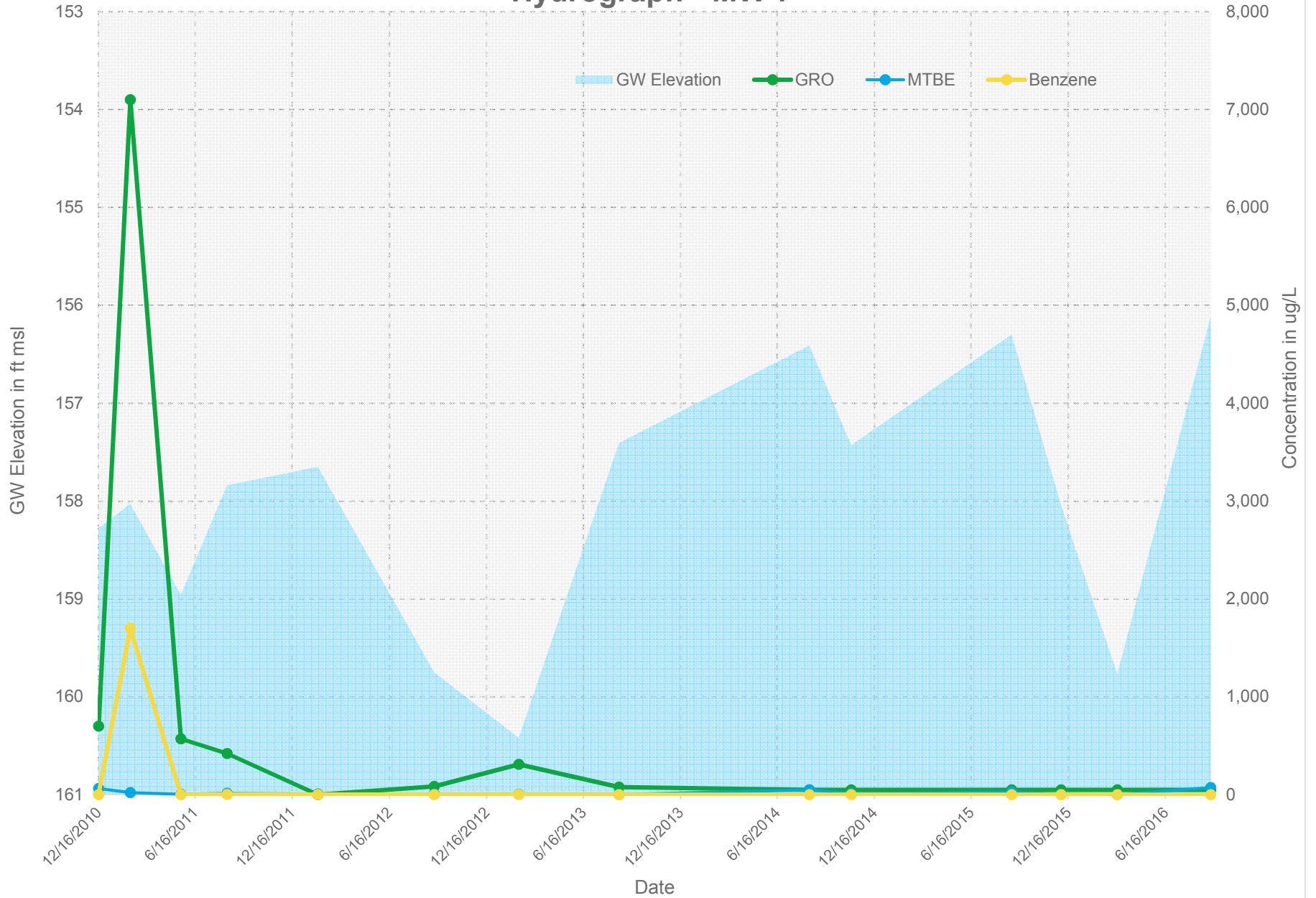




# Hydrograph - MW-4

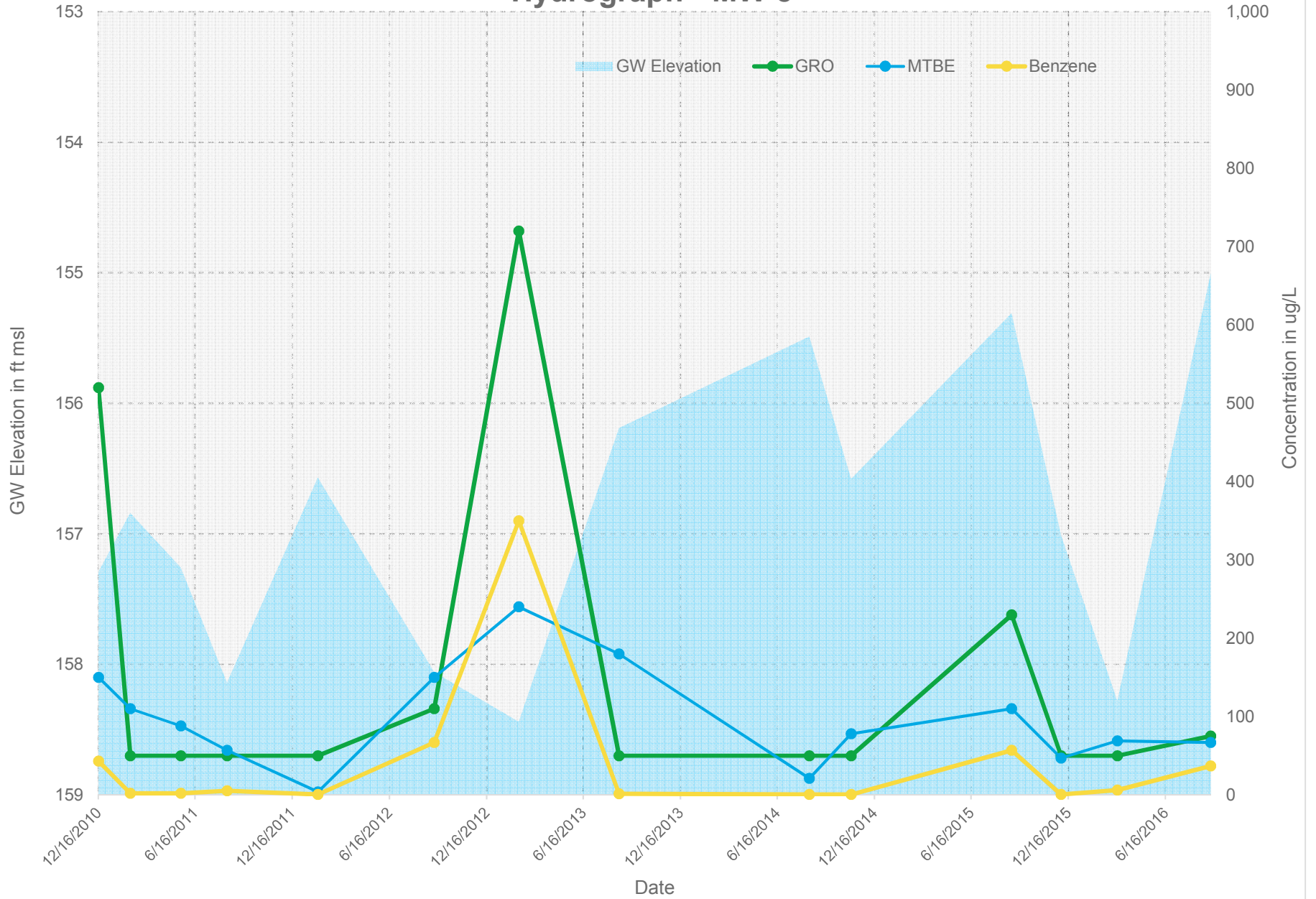


# Hydrograph - MW-7





# Hydrograph - MW-8



# Hydrograph - MW-9

