

RECEIVED

By Alameda County Environmental Health 1:49 pm, Apr 28, 2017

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
Fax 916 786 0366
www.arcadis.com

Subject:

First Quarter 2017 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:

April 28, 2017

Contact:

James M. Jacobsen, P.G.

Phone:

916 865 3144

Email:

james.jacobsen@arcadis.com

Our ref:

GP16BPNA.CA01.40000

Dear Ms. Detterman:

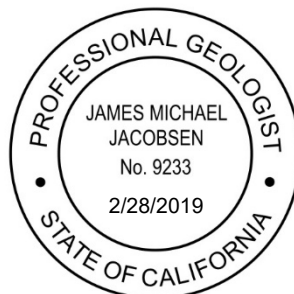
"I declare that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

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 - First Quarter 2017 Monitoring Report Submittal
Case No. RO0000078**

Arcadis U.S., Inc.
101 Creekside Ridge
Court
Suite 200
Roseville
California 95678
Tel 916 786 0320
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 First Quarter 2017. 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

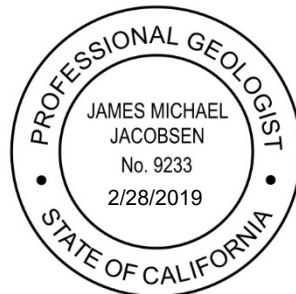
If you have any questions, please contact the undersigned.

Sincerely,

Arcadis U.S., Inc.



James M. Jacobsen, P.G.
Project Manager



ENVIRONMENT

Date:
April 28, 2017

Contact:
James M. Jacobsen, P.G.

Phone:
916.865.3144

Email:
james.jacobsen@arcadis.com

Our ref:
GP16BPNA.CA01.40000

Copies:
San Francisco Regional Water Quality Control Board - GeoTracker

SEMI-ANNUAL MONITORING AND STATUS REPORT
First Quarter 2017
April 28, 2017

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 FIRST & SECOND QUARTER 2017:

1. Conducted semi-annual groundwater sampling on March 14, 2017. The following summarizes the First Quarter 2017 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 monitoring wells MW-1 through MW-9 and sampled monitoring wells MW-1, MW-2, MW-4, MW-7, MW-8 and MW-9.
 - Monitoring wells were sampled for the analysis of Gasoline Range Organics (GRO), benzene, toluene, ethylbenzene, total xylenes (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:
 - According to the State Water Resources Control Board's GeoTracker database, the constituents of concern (COCs) include GRO, benzene, toluene, ethylbenzene, total xylenes (collectively BTEX), tert butyl alcohol (TBA), and methyl tert-butyl ether (MTBE).
 - GRO and BTEX were detected exceeding the San Francisco Regional Water Quality Control Board (SF-RWQCB) Environmental Screening Levels (ESLs) at monitoring well MW-4.
 - GRO was detected exceeding the SF-RWQCB ESLs at monitoring well MW-8.
 - Benzene was detected exceeding the SF-RWQCB ESLs at monitoring well MW-7, MW-8 and MW-9.
 - MTBE was detected exceeding the SF-RWQCB ESLs at monitoring wells MW-1, MW-2, MW-8 and MW-9.
3. Prepared the First Quarter 2017 Monitoring and Status Report.

PROPOSED WORK:

1. Conduct semi-annual groundwater monitoring and sampling in the Third Quarter 2017.
2. Prepare the Third Quarter 2017 Monitoring and Status Report.
3. Prepare Work Plan to conduct shallow soil assessment to meet Low Threat Closure Policy Direct Contact and Outdoor Air Exposure criteria.

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 First Quarter 2017 (thickness in feet):	NA
Approximate Depth to Groundwater (feet below top of casing):	Range: 1.34 (MW-6) to 6.30 (MW-8)
Groundwater Flow Direction:	South-Southwest
Groundwater Flow Magnitude (foot/foot):	0.03
Agency Directive Requirements:	Semi-annual monitoring and reporting

DISCUSSION

The First Quarter gradient magnitude and direction is generally consistent with previous monitoring events. Groundwater elevations increased an average of approximately 4-feet.

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. While concentrations of benzene exceed the ESL in MW-4, the concentration remains below the State Water Resources Control Board’s LTCP (SWRCB 2012) criteria. Also, the groundwater plume has a stable area of extent over the site.

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 Third Quarter of 2017. As part of the path to closure, Arcadis proposes to submit a work plan to assess the direct contact and outdoor air exposure pathways. The data would be used to compare benzene, ethylbenzene and MTBE in shallow soil against concentrations of petroleum constituents as listed in the LTCP for soil that will have no significant risk of adversely affecting human health.

Current groundwater monitoring and analytical data are summarized in **Table 1** and **Table 2**. Historic groundwater monitoring and analytical data are summarized in **Table 3**. A copy of the field notes for the March 14, 2017, 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 March 14, 2017

Figure 4 – Groundwater Flow Direction Rose Diagram

Figure 5 – Groundwater Analysis Concentration Map March 14, 2017

Figure 6 – GRO Concentration Map March 14, 2017

Figure 7 – Benzene Concentration Map March 14, 2017

Figure 8 – MTBE Concentration Map March 14, 2017

Attachments

Attachment 1 – Groundwater Monitoring Field Forms

Attachment 2 – Groundwater Analytical 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 (feet msl)	DTW (feet)	Measured LNAPL Thickness (feet)	GW Elev (feet msl)	GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	DO (mg/l)	Notes
MW-1	3/14/2017	164.45	4.24	--	160.21	<50	<0.50	<0.50	<0.50	<1.0	0.59	
MW-2	3/14/2017	163.49	6.24	--	157.25	<50	<0.50	<0.50	<0.50	<1.0	0.70	
MW-3	3/14/2017	166.80	2.70	--	164.10	--	--	--	--	--	--	NSP
MW-4	3/14/2017	162.48	3.75	--	158.73	6,800	770	97	650	420	0.57	
MW-5	3/14/2017	156.90	4.29	--	152.61	--	--	--	--	--	--	NSP
MW-6	3/14/2017	159.41	1.34	--	158.07	--	--	--	--	--	--	NSP
MW-7	3/14/2017	164.80	4.97	--	159.83	<50	1.8	<0.50	1.3	1.0	0.55	
MW-8	3/14/2017	164.14	6.30	--	157.84	270	10	<0.50	1.1	<1.0	0.55	
MW-9	3/14/2017	163.77	4.98	--	158.79	190	9.7	<0.50	0.88	<1.0	0.56	
SF-RWQCB ESLs						220	1.0	40	30	20	--	

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
 feet 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
 NSP = not sampled

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	98	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	
MW-2	45	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	
MW-3	--	--	--	--	--	--	--	--	NSP
MW-4	<10	<400	<10	<10	<10	<10	<10	<10,000	
MW-5	--	--	--	--	--	--	--	--	NSP
MW-6	--	--	--	--	--	--	--	--	NSP
MW-7	1.3	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	
MW-8	45	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	
MW-9	23	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	
SF-RWQCB ESLs	5.0	12	50	500	--	--	--	--	--

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
 NSP = not sampled

Well ID	Date	TOC (feet msl)	DTW (feet)	Measured LNAPL Thickness (feet)	GW Elev (feet 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	<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	<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	<10	1,500	<400	--	<10	<10	--	<10	<2,000	1.70	a2	
	2/2/2004	164.57	6.71	--	157.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.00	f
	5/14/2004	164.57	7.08	--	157.49	<2,500	<25	<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	<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	<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	<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	<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	<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	<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	--	158.13	350	<2.5	<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	<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	<5.0	180	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	0.65		
	1/11/2006	164.57	8.28	--	156.29	120	<5.0	<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	<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	<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	<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	--	156.56	170	<2.5	<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	<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	<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	<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	<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	<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	<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	<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	<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	<2.5	230	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<1,500	3.86			
12/16/2010	164.45	6.64	--	157.81	<50	<2.0	<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	<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	<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	<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	<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	<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	--	156.58	<50	<0.50	<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	<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	<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	<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	<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	<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	<0.50	<1.0	110	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	--			
3/14/2017	164.45	4.24	--	160.21	<50	<0.50	<0.50	<0.50	<0.50	<1.0	98	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	0.59			

Well ID	Date	TOC (feet msl)	DTW (feet)	Measured LNAPL Thickness (feet)	GW Elev (feet 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	<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	<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	<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	<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	<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	--	155.61	<50	<0.50	<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	<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	<0.50	25	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.90	
	1/11/2006	163.46	8.38	--	155.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2007	163.46	7.88	--	155.58	<50	0.5	<0.50	<0.50	<0.50	<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	<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	<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	<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	<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	<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	<0.50	22	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.81	
	10/8/2010	163.46	7.69	--	155.77	<50	<0.50	<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	163.49	7.12	--	156.37	<50	<0.50	<0.50	<0.50	<0.50	<0.50	17	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.69	j	
2/14/2011	163.49	7.35	--	156.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	11	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<300	0.87		
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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<0.50	<1.0	20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	--		
3/14/2017	163.49	6.24	--	157.25	<50	<0.50	<0.50	<0.50	<0.50	<1.0	45	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	0.70		

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

Well ID	Date	TOC (feet msl)	DTW (feet)	Measured LNAPL Thickness (feet)	GW Elev (feet 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	<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	<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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/8/2005	159.21	6.77	--	152.44	<50	<0.50	<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	<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	<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	<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	<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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
10/8/2010	159.21	7.12	--	152.09	<50	<0.50	<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	<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	<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	<0.50	<1.0	1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<150	4.35		
11/2/2014	159.21	5.79	--	153.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
8/15/2014	159.21	6.30	--	152.91	<50	<0.50	<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	<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	<0.50	<1.0	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	--		
3/14/2017	166.80	2.70	--	164.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

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

Well ID	Date	TOC (feet msl)	DTW (feet)	Measured LNAPL Thickness (feet)	GW Elev (feet 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	--	
	1/11/2006	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	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<3,000	0.81	--	i
	10/8/2010	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	1,800	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	--	--	
	3/14/2017	162.48	3.75	--	158.73	6,800	770	97	650	420	<10	<400	<10	<10	<10	<10	<10	<10,000	0.57	--	

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

Well ID	Date	TOC (feet msl)	DTW (feet)	Measured LNAPL Thickness (feet)	GW Elev (feet 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	8.68	--	142.65	<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	
	11/18/2005	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			
	1/11/2006	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	<0.50	<10	<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
	10/8/2010	156.90	8.05	--	148.85	<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	<0.50	<1.0	<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	<0.50	<1.0	<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	<0.50	<1.0	<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	<0.50	<1.0	<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	<0.50	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<500	--				
3/14/2017	156.90	4.29	--	152.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			

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

Well ID	Date	TOC (feet msl)	DTW (feet)	Measured LNAPL Thickness (feet)	GW Elev (feet 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
	11/18/2005	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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
10/8/2010	159.41	5.02	--	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	<0.50	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	<0.50	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	<0.50	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	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	--	--		
3/14/2017	159.41	1.34	--	158.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

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

Well ID	Date	TOC (feet msl)	DTW (feet)	Measured LNAPL Thickness (feet)	GW Elev (feet 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	<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	<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	<150	1.04	
	2/14/2013	164.80	4.38	--	160.42	310	1	<0.50	2	6	5	<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	--	
3/14/2017	164.80	4.97	--	159.83	<50	1.8	<0.50	1.3	1.0	1.3	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	0.55		
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	<2.0	110	<40	<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	<2.0	88	<40	<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	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	0.83	<150	1.93	
	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	--	
3/14/2017	164.14	6.30	--	157.84	270	10	<0.50	1.1	<1.0	45	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<500	0.55		

Table 3 - Historical Groundwater Monitoring and Analytical Data

Former BP Service Station No. 0374
6407 Telegraph Avenue
Oakland, California

Well ID	Date	TOC (feet msl)	DTW (feet)	Measured LNAPL Thickness (feet)	GW Elev (feet 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-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	<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	<4.0	280	<80	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<2,400	1.64	l (GRO)
	8/15/2011	163.77	7.09	--	156.68	<50	<2.0	<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	<0.50	<0.50	<0.50	<0.50	34	<10	<0.50	<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	<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	<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	<0.50	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	<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	6.63	--	157.14	<50	<0.50	<0.50	<0.50	<1.0	90	<10	<0.50	<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	<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	<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	<0.50	0.61	<500	--	
3/14/2017	163.77	4.98	--	158.79	190	9.7	<0.50	0.88	<1.0	23	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<500	0.56		

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

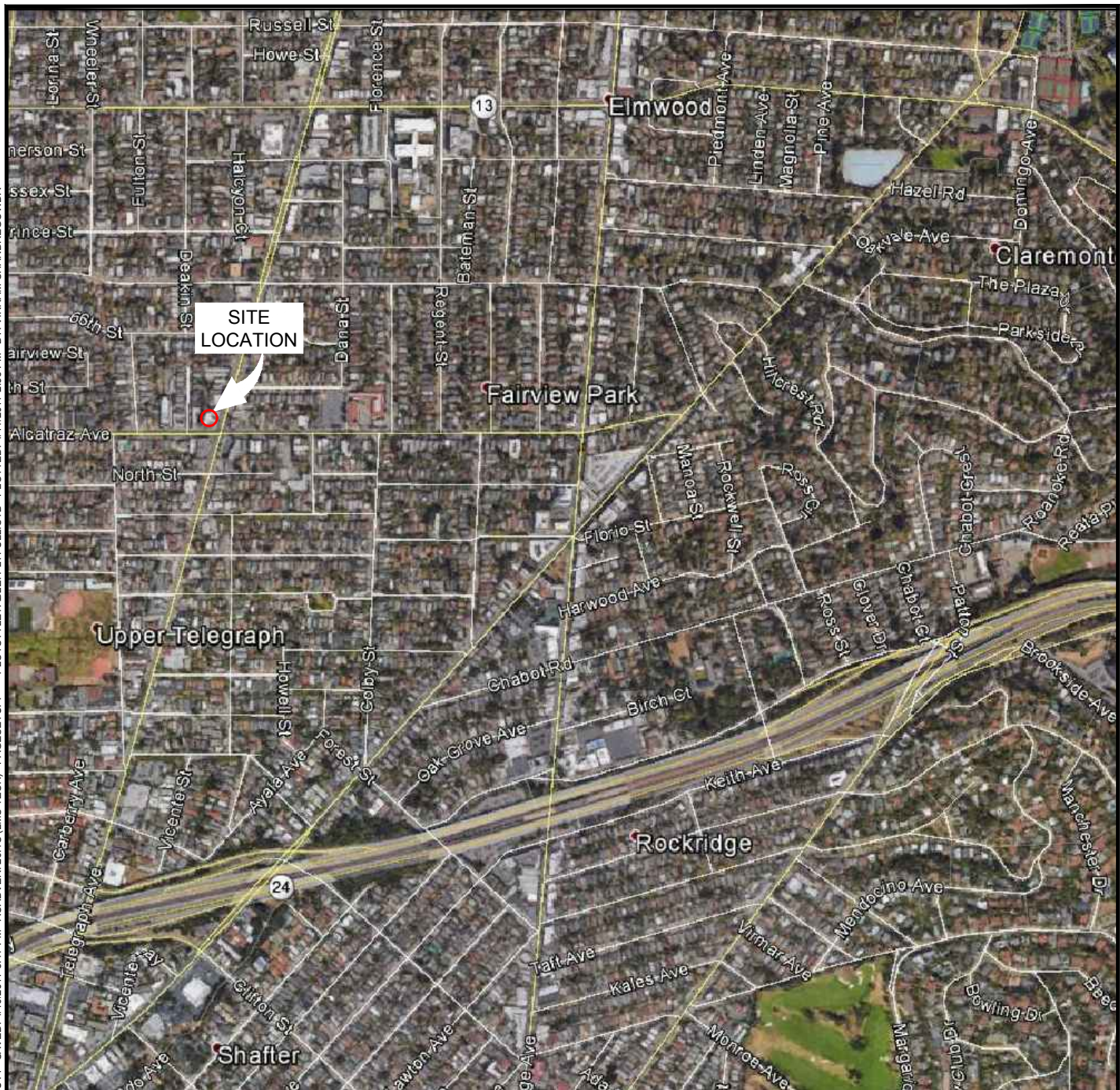
feet msl = feet above mean sea level
-- = not analyzed/applicable/measured/available
< = not detected at or above specified laboratory reporting limit
mg/L = milligrams per liter
µg/L = micrograms per liter
Values for DO were obtained through field measurements

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

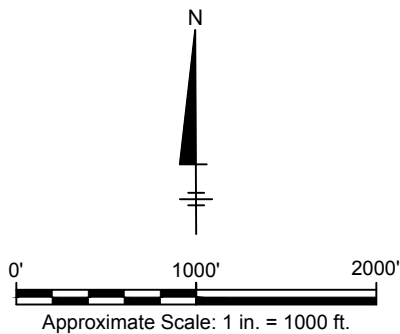
FIGURES



CITY:MUMBAI, INDIA DIV:GROUP:ENVCAD DB: S.DSOUZA LD: PIC: PM: TM: ES: SAVED: 4/10/2017 5:47 PM ACADVER: 20.1S (LMS TECH) PAGES: 20 PLOT: PLT: FULL: CTB PLOT: 4/11/2017 2:33 PM BY: VIKRAM CHANDREGOWDA



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

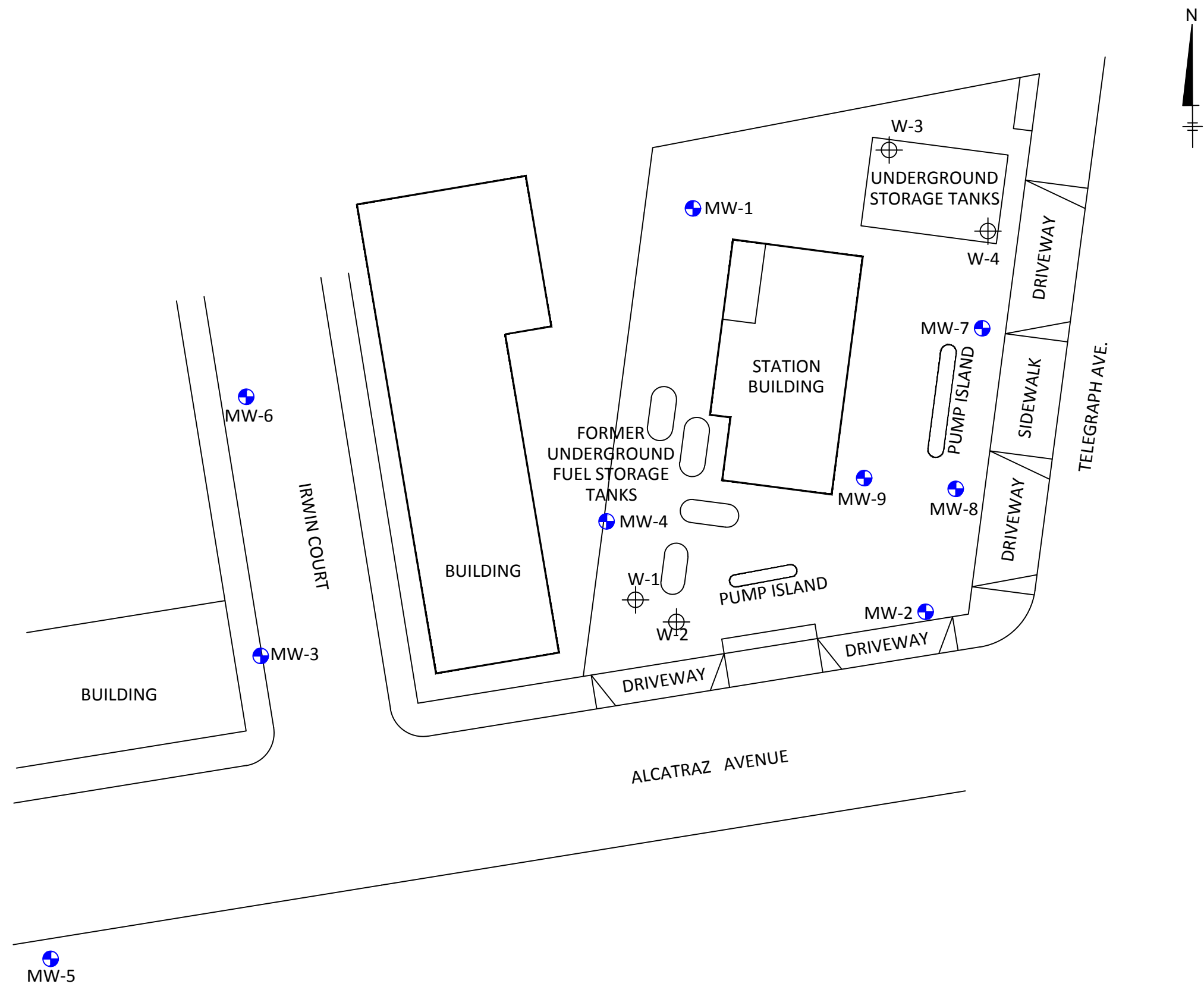




FORMER BP SERVICE STATION NO. 0374
 6407 TELEGRAPH AVENUE
 OAKLAND, CALIFORNIA

SITE LOCATION MAP

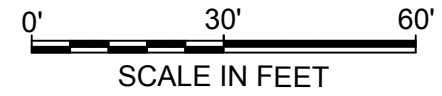
	<p>Design & Consultancy for natural and built assets</p>	<p>FIGURE</p>	<p>1</p>
--	---	---------------	-----------------

CITY: MUMBAI INDIA, DIV: GROUP: ENVCAD, DE: S.D.SOUZA, LD: TM: LYR, E:\PROJECTS\19_#0374_Oakland CL\Fig 2-0374_Site plan.dwg, LAYOUT: 2, SAVED: 4/11/2017 2:34 PM, ACADVER: 2015 (LMS TECH), PAGES: 2, PLOTSTYLETABLE: PLOTFULL.CTB, PLOTTED: 4/11/2017 2:35 PM, BY: VIKRAM CHANDREGOWDA



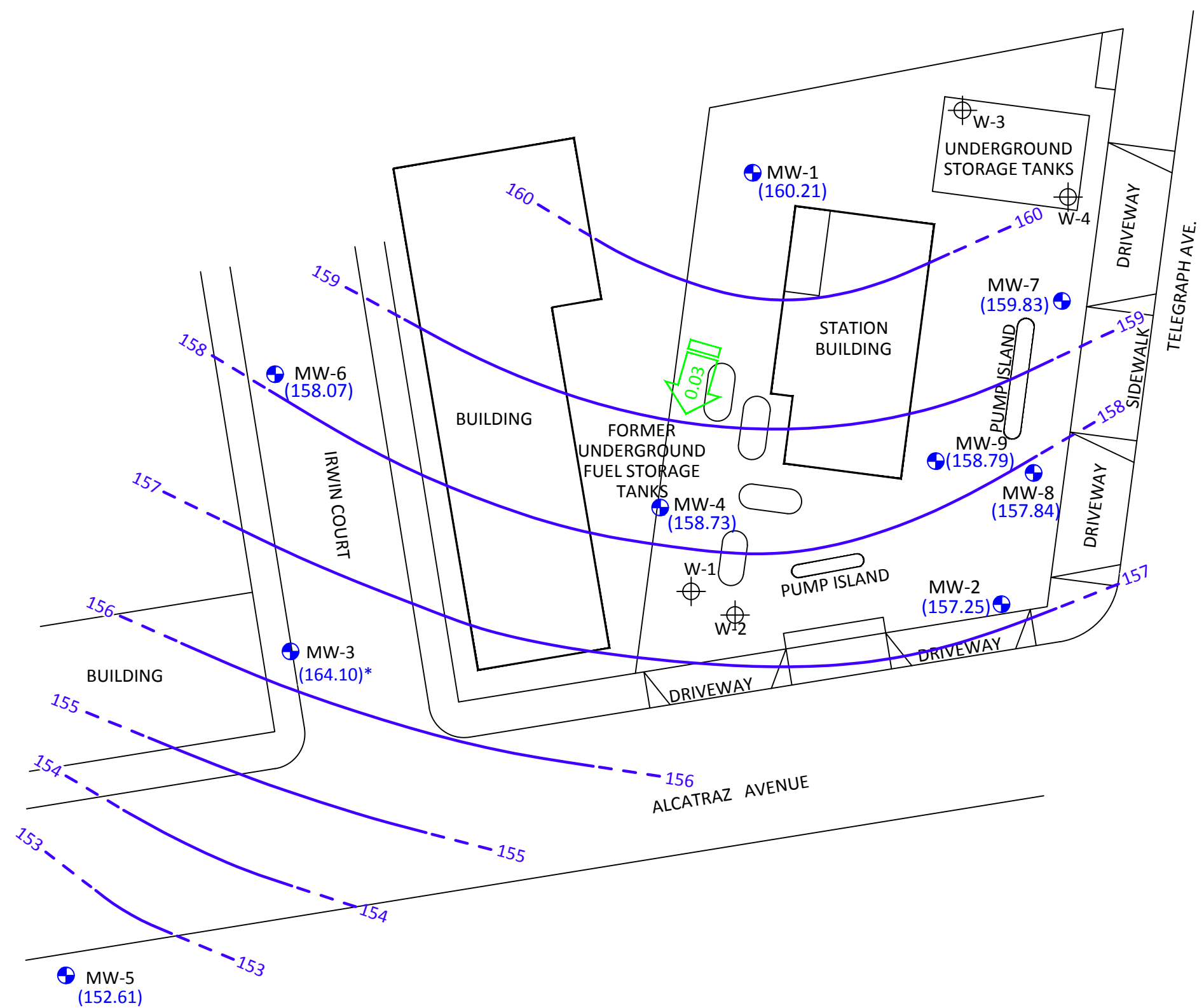
- LEGEND:**
-  MONITORING WELL LOCATION
 -  TANK PIT MONITORING WELL LOCATION

- NOTES:**
- 1) SITE MAP ADAPTED FROM IT CORPORATION FIGURES.
 - 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.







FORMER BP SERVICE STATION NO. 0374 6407 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	
SITE PLAN	
	<small>Design & Consultancy for natural and built assets</small>
FIGURE	2

CITY: MUMBAI INDIA DIV/GROUP: ENVCAD DB: SDSOUIZA LD: TM: LXR: ACADVER: 20.1S (LMS TECH) PAGES: 3 SAVED: 4/11/2017 5:08 PM LAYOUT: 3 SAVER: 4/11/2017 5:13 PM BY: VIKRAM CHANDREGOMDA



LEGEND:

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

NOTES:

- 1) SITE MAP ADAPTED FROM IT CORPORATION FIGURES.
- 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
- 3) GROUNDWATER MONITORING WELLS GAUGED AND SAMPLED ON MARCH 14, 2017.




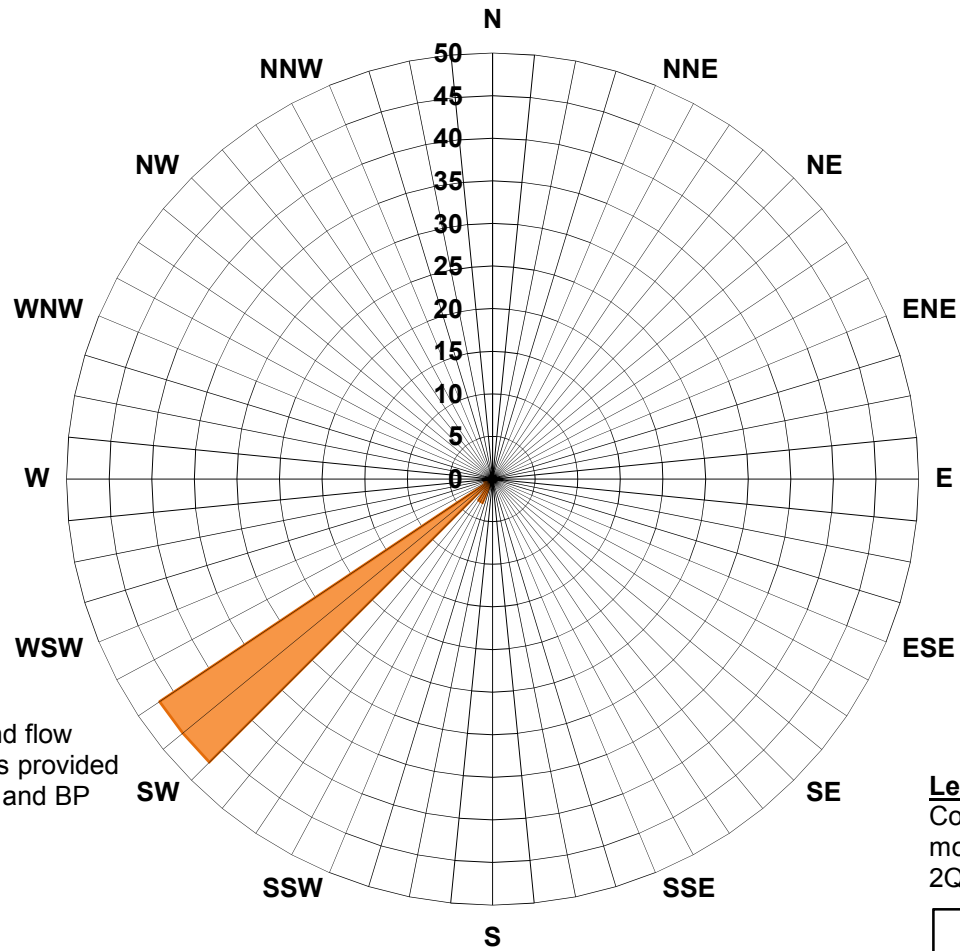
FORMER BP SERVICE STATION NO. 0374 6407 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	
GROUNDWATER ELEVATION CONTOUR MAP MARCH 14, 2017	
 ARCADIS	<small>Design & Consultancy for natural and built assets</small>
FIGURE	3

Figure 4
GROUNDWATER FLOW DIRECTION ROSE DIAGRAM

CA Former BP Service Station No. 0374
6407 Telegraph Avenue
Oakland, California 94619



Note

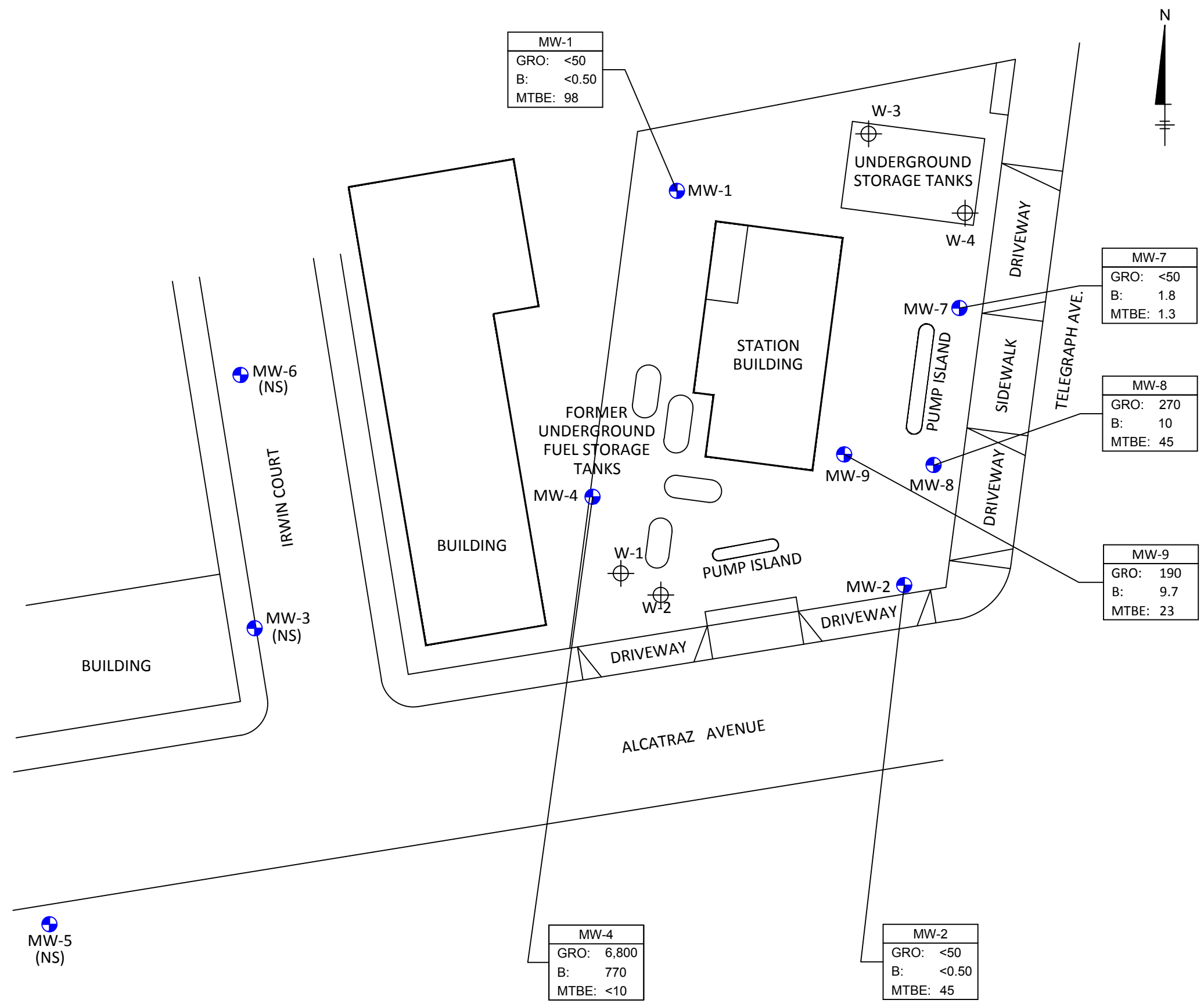
Historic groundwater gradient and flow direction data, prior to 3Q16, was provided by Broadbent & Associates, Inc. and BP West Coast Products, LLC.

Legend

Concentric circles represent 51 monitoring events beginning 2Q00 through 1Q17.

Groundwater Flow Direction

CITY: MUMBAI DIV/GROUP: ENVCAD DB: PCHAVAN LD: TM: LYR: E:\PROJECTS\19_#0374 Oakland CLE\Fig 5-0374_GW Analysis Concentration Map_0374.dwg LAYOUT: 5 SAVED: 4/11/2017 1:09 PM ACADVER: 2015 (LMS TECH) PAGES: 5 PLOTTED: 4/11/2017 2:25 PM BY: VIKRAM CHANDREGOWDA



LEGEND:

- MONITORING WELL LOCATION
- TANK PIT MONITORING WELL LOCATION
- < LESS THAN LABORATORY REPORTING LIMIT
- (NS) WELL NOT SAMPLED

MW-4	SAMPLE LOCATION ID
GRO: 6,800	CONCENTRATIONS (µg/L)
B: 770	GRO: GASOLINE RANGE ORGANICS
MTBE: <10	B: BENZENE
	MTBE: METHYL TERT BUTYL ETHER

- NOTES:**
- 1) SITE MAP ADAPTED FROM IT CORPORATION FIGURES.
 - 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
 - 3) GROUNDWATER MONITORING WELLS GAUGED AND SAMPLED ON MARCH 14, 2017.



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

**GROUNDWATER ANALYSIS
CONCENTRATION MAP
MARCH 14, 2017**


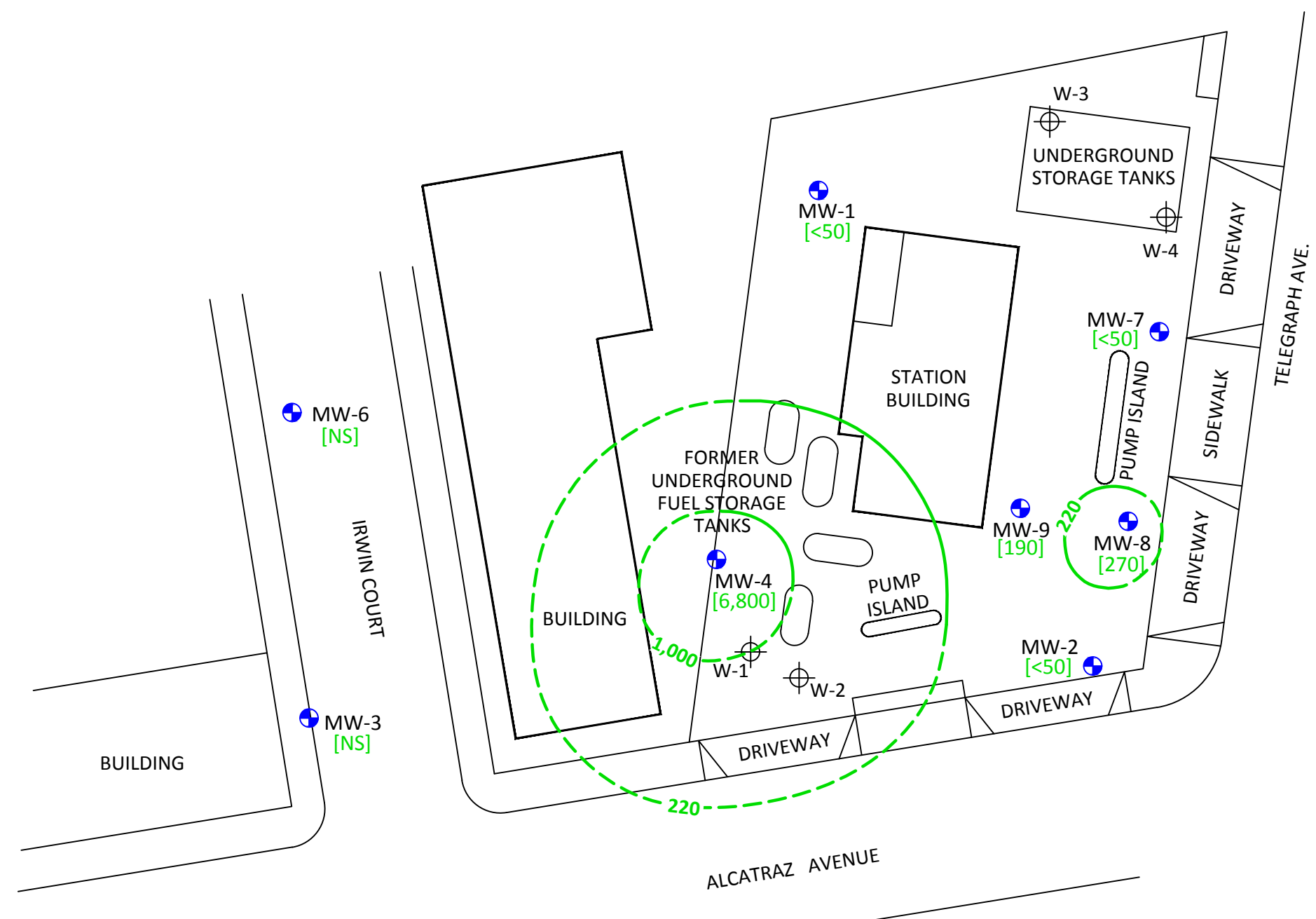




FIGURE **5**

CITY: MUMBAI INDIA . DIV: GROUP: ENVCAD . DB: P. JANGLI . LD: TM . LYP: E:\PROJECTS\19_#0374_Oakland CL\Fig 6-0374_GRO Iso Con-Map_14-03-2017.dwg LAYOUT: 6 . SAVED: 4/11/2017 2:31 PM . ACADVER: 2015 (LWS TECH) . PAGES: 1 . PLOTSTYLETABLE: PLT\FULL.CTB . PLOTTED: 4/11/2017 3:05 PM . BY: VIKRAM CHANDREGOWDA

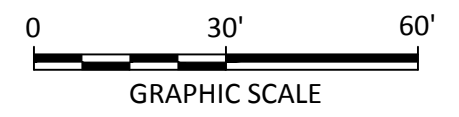



LEGEND:

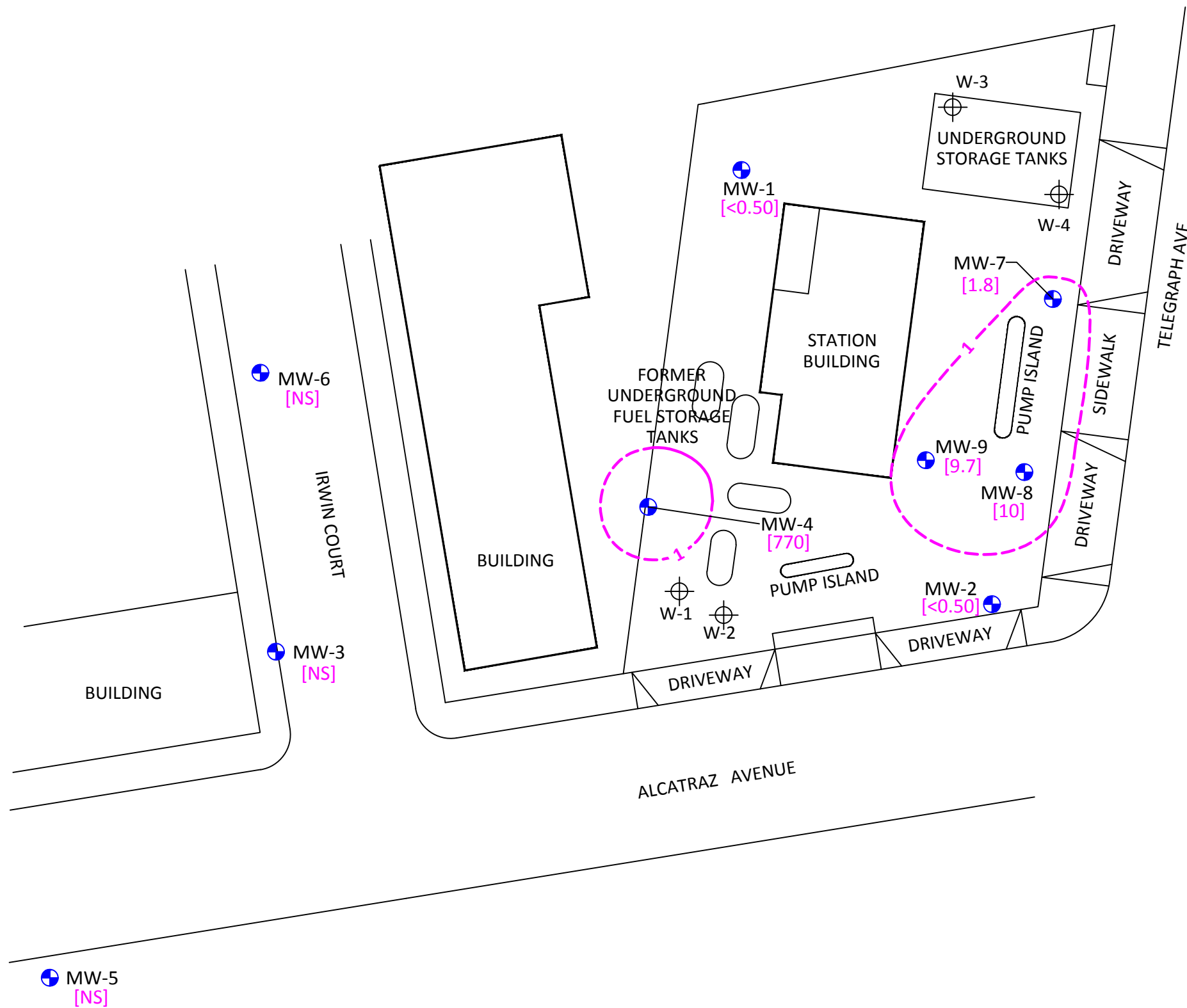
-  MONITORING WELL LOCATION
-  TANK PIT MONITORING WELL LOCATION
- [6,800] GASOLINE RANGE ORGANICS CONCENTRATION (µg/L)
- 1,000 --- GRO CONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
- < LESS THAN LABORATORY REPORTING LIMIT
- [NS] WELL NOT SAMPLED

NOTES:



- 1) SITE MAP ADAPTED FROM IT CORPORATION FIGURES.
- 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
- 3) GROUNDWATER MONITORING WELLS GAUGED AND SAMPLED ON MARCH 14, 2017.



FORMER BP SERVICE STATION NO. 0374 6407 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	
GRO CONCENTRATION MAP MARCH 14, 2017	
	FIGURE 6

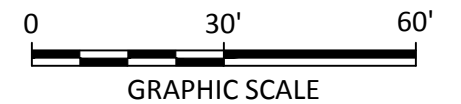


LEGEND:

-  MONITORING WELL LOCATION
-  TANK PIT MONITORING WELL LOCATION
- [770] BENZENE CONCENTRATION (µg/L)
- BENZENE CONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
- < LESS THAN LABORATORY REPORTING LIMIT
- [NS] WELL NOT SAMPLED

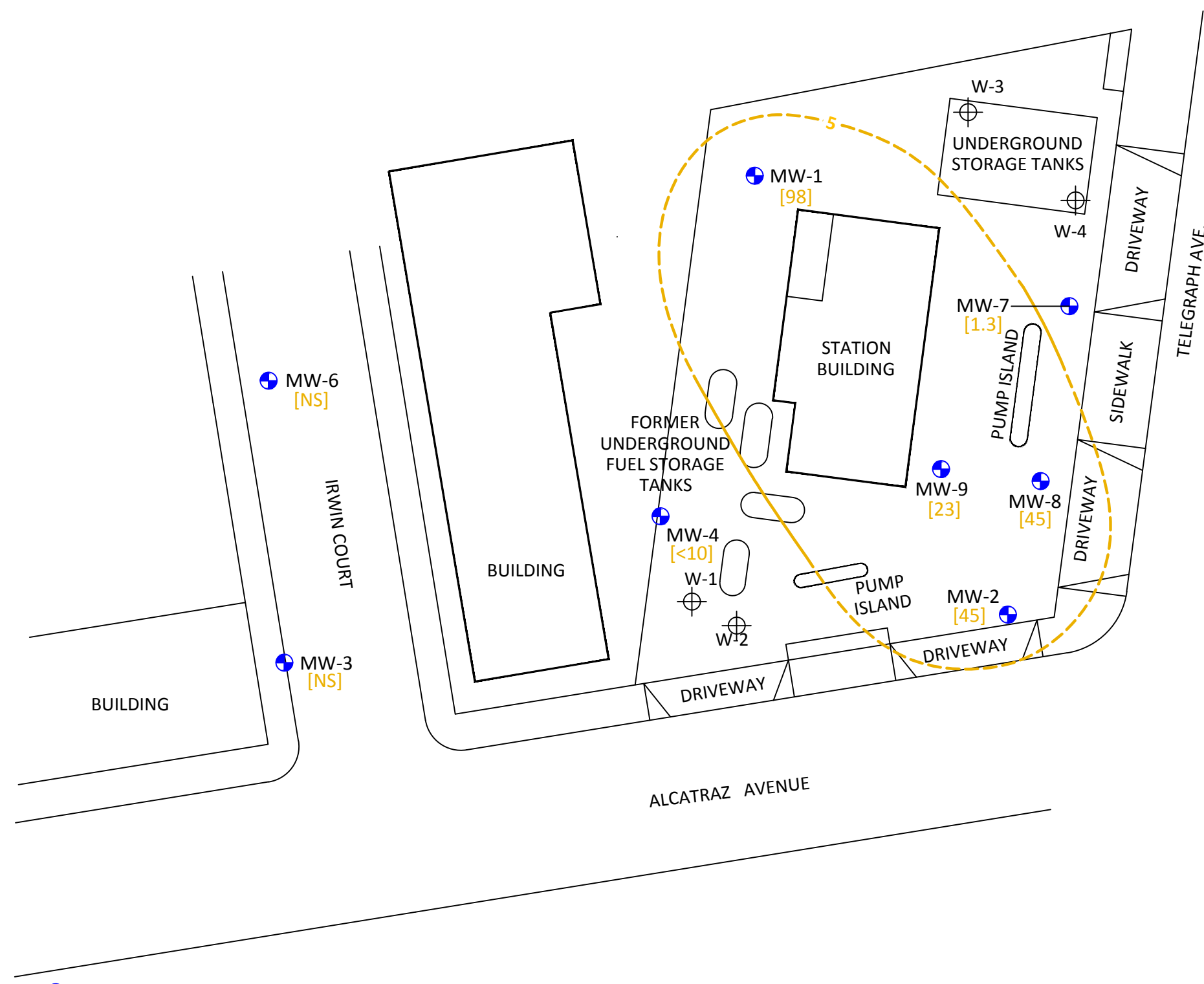
NOTES:

- 1) SITE MAP ADAPTED FROM IT CORPORATION FIGURES.
- 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
- 3) GROUNDWATER MONITORING WELLS GAUGED AND SAMPLED ON MARCH 14, 2017.





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

**BENZENE CONCENTRATION MAP
MARCH 14, 2017**

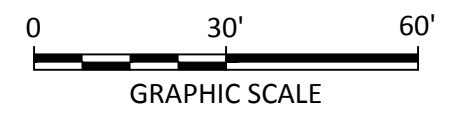



LEGEND:

-  MONITORING WELL LOCATION
-  TANK PIT MONITORING WELL LOCATION
- [98] MTBE CONCENTRATION ($\mu\text{g/L}$)
- 5 - - - - - MTBE CONCENTRATION CONTOUR ($\mu\text{g/L}$; DASHED WHERE INFERRED)
- < LESS THAN LABORATORY REPORTING LIMIT
- [NS] WELL NOT SAMPLED

NOTES:

- 1) SITE MAP ADAPTED FROM IT CORPORATION FIGURES.
- 2) SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.
- 3) GROUNDWATER MONITORING WELLS GAUGED AND SAMPLED ON MARCH 14, 2017.



FORMER BP SERVICE STATION NO. 0374 6407 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	
MTBE CONCENTRATION MAP MARCH 14, 2017	
	
FIGURE	8

ATTACHMENT 1

Groundwater Monitoring Field Forms



Water Level Measurements



Design & Consultancy
for natural and
built assets

Project Number: GP09BPNA.CA01.40000

Page 1 of 1

Project Name: BP # 374

Date: 3-14-2017

Project Location: 6407 Telegraph Ave., Oakland CA

Day: M(T)W Th F S S

Site Conditions/Weather: Active ARCO Station / Sunny, 70's

Staff: K. Corrigan

Comments: All well caps removed ≥ 15 min. prior to gauging.

Well No.	Time	Casing ^{Diam.} Depth	Depth to Water	Depth to Product Bottom	Comments
MW-1	0922	4"	4.24	26.77	Secure
MW-2	0917	4"	6.24	26.34	Secure
MW-3	1540	4"	2.70	26.82	Secure
MW-4	0937	4"	3.75	26.95	Secure
MW-5	0913 ¹⁵⁰²	4"	4.29	23.09	Secure
MW-6	1552	4"	1.34	14.64	Secure
MW-7	0913	4"	4.97	19.79	Secure
MW-8	0925	4"	6.30	19.40	Secure
MW-9	0929	4"	4.98	14.38	Secure

Reviewed by: K. Corrigan

Signed:

Date: 3-14-2017

Groundwater Sampling Form

Project Number: GP16BPNA.CA01 Task: 40000 Well ID: MW-1
 Date: 3-14-2017 Sampled By: B. Corrigan
 Weather: Sunny, 70's Recorded By: " "
 Location: 6407 Telegraph Ave, Oakland C. Coded Duplicate No.: —

Instrument Identification

	PID	Water Quality Meter(s)
Model	—	YSI Pro DSS
Serial #:	—	FA02580

Purging Information

Casing Material: PVC
 Casing Diameter: 4"
 Total Depth: 26.77
 Depth to Water: 4.24
 Water Column: 22.53
 Gallons/Foot: 0.65
 Gallons in Well: 14.64

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry
 Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailor
 Screen Interval: From: _____ To: _____
 Pump Intake Setting: 16'
 Volumes to be Purged: _____
 Total Volume Purged: 3200 mL
 Pump on: 1154 Off: 1211

Well Casing Volumes (gal/ft):	2" = 0.16	3" = 0.37
	3 1/2" = 0.50	<u>4" = 0.65</u>
	6" = 1.46	

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Flow Rate (mL/Min)	Volume Purged (mL)	DTW (ft btoc)	Temp (C)	DO (mg/L)	Spec Cond (µmhos/cm)	pH (SI Units)	ORP (mV)	Turbidity (NTU)	Comments
1159	0	0	0	4.24	—	—	—	—	—	—	Start
1200	6	200	1200	4.66	17.8	0.79	966	6.42	160.1	8.4	
1203	9	200	1800	4.81	17.6	0.66	965	6.44	171.8	9.2	
1206	12	200	2400	4.88	17.7	0.62	964	6.43	177.1	5.8	
1209	15	200	3000	4.96	17.7	0.59	965	6.43	182.1	5.4	END

Observations During Sampling
 Well Condition: Secure
 Color: Clear
 Odor: None Observed

Purge Water Disposal: Drums (on-site)
 Turbidity(qualitative): low
 Other (OVA, HNU, etc.): —

Sample ID: MW-1
 Samples Analyzed For: See the COC

Sample Date & Time: 3-14-2017 @ 1210

Groundwater Sampling Form

Project Number: GP16BPNA.CA01 Task: 40000 Well ID: MW-2
 Date: 3-14-2017 Sampled By: H. Corrigan
 Weather: Sunny, 70's Recorded By: H. Corrigan
 Location: 6407 Telegraph Ave, Oakland C. Coded Duplicate No.:

Instrument Identification

	PID	Water Quality Meter(s)
Model	<u>-</u>	<u>YSI Pro DSS</u>
Serial #:	<u>-</u>	<u>FA02580</u>

Purging Information

Casing Material: PVC
 Casing Diameter: 4"
 Total Depth: 26.34
 Depth to Water: 6.24
 Water Column: 20.10
 Gallons/Foot: 0.65
 Gallons in Well: 13.07

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry
 Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailor
 Screen Interval: From: To:
 Pump Intake Setting: 17' (Tubing already installed)
 Volumes to be Purged:
 Total Volume Purged: 3200 mL
 Pump on: 1123 Off: 1141

Well Casing Volumes (gal/ft):	2" = 0.16	3" = 0.37
	3 1/2" = 0.50	<u>4" = 0.65</u>
	6" = 1.46	

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Flow Rate (mL/min)	Volume Purged (mL)	DTW (ft btoc)	Temp (C)	DO (mg/L)	Spec Cond (µmhos/cm)	pH (SI Units)	ORP (mV)	Turbidity (NTU)	Comments
1123	0	0	0	6.24							Start
1129	6	200	1200	6.41	21.0	0.68	625	6.63	184.9	7.1	
1132	9	200	1800	6.50	21.0	0.66	625	6.66	192.6	9.3	
1135	12	200	2400	6.55	21.0	0.65	625	6.67	195.1	8.2	
1138	15	200	3000	6.59	21.1	0.70	625	6.66	197.4	9.1	END

Observations During Sampling
 Well Condition: Secure
 Color: Clear
 Odor: None Observed

Purge Water Disposal: Drums (on-site)
 Turbidity(qualitative): Low
 Other (OVA, HNU, etc.):

Sample ID: MW-2 Sample Date & Time: 3-14-2017 @ 1140
 Samples Analyzed For: See the COC

I:\Active\Compoc\QAPP\Field Forms\Low-Flow GW Sampling Form 3/6/2017

Groundwater Sampling Form

Project Number: GP16BPNA.CA01 Task: 40000 Well ID: MW-4
 Date: 3-14-2017 Sampled By: K. Corrigan
 Weather: Sunny, 70.5 Recorded By: " "
 Location: 6407 Telegraph Ave, Oakland, C. Coded Duplicate No.: -

Instrument Identification

	PID	Water Quality Meter(s)
Model	-	751 Pro DSS
Serial #:	-	FA02580

Purging Information

Casing Material: PVC
 Casing Diameter: 4"
 Total Depth: 26.95
 Depth to Water: 3.75
 Water Column: 23.20
 Gallons/Foot: 0.65
 Gallons in Well: 15.08

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry
 Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailor
 Screen Interval: From: _____ To: _____
 Pump Intake Setting: 12'
 Volumes to be Purged: -
 Total Volume Purged: 3400 mL
 Pump on: 1421 Off: 1442

Well Casing Volumes (gal/ft):	2" = 0.16	3" = 0.37
	3 1/2" = 0.50	<u>4" = 0.65</u>
	6" = 1.46	

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Flow Rate (mL/min)	Volume Purged (mL)	DTW (ft btoc)	Temp (C)	DO (mg/L)	Spec Cond (µmhos/cm)	pH (SI Units)	ORP (mV)	Turbidity (NTU)	Comments
1421	0	0	0	3.75							Start
1427	6	200	1200	4.19	18.3	0.74	918	6.48	-73.8	6.2	
1430	9	200	1800	4.30	18.2	0.63	917	6.48	-72.5	6.9	
1433	12	200	2400	4.41	18.2	0.58	918	6.47	-74.4	8.3	
1436	15	200	3000	4.48	18.2	0.57	918	6.48	-76.1	7.4	END

Observations During Sampling
 Well Condition: Secure (In Vault)
 Color: Clear
 Odor: None observed (HC?)

Purge Water Disposal: Drums (on-site)
 Turbidity(qualitative): Low
 Other (OVA, HNU, etc.): -

Sample ID: MW-4 Sample Date & Time: 3-14-2017 @ 1440
 Samples Analyzed For: See the COC

Groundwater Sampling Form

Project Number: GP16BPNA.CA01 Task: 40000 Well ID: MW-7
 Date: 3-14-2017 Sampled By: K. Corrigan
 Weather: Sunny, 70's Recorded By: K. Corrigan
 Location: 6407 Telegraph Ave, Oakland C. Coded Duplicate No.:

Instrument Identification

	PID	Water Quality Meter(s)
Model	<u> </u>	<u>YSI Pro DSS</u>
Serial #:	<u> </u>	<u>FA02580</u>

Purging Information

Casing Material: PVC
 Casing Diameter: 4"
 Total Depth: 19.79
 Depth to Water: 4.97
 Water Column: 14.82
 Gallons/Foot: 0.65
 Gallons in Well: 9.63

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry
 Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bail
 Screen Interval: From: To:
 Pump Intake Setting: 12'
 Volumes to be Purged:
 Total Volume Purged: 3200 mL
 Pump on: 1045 Off: 1105

Well Casing Volumes (gal/ft):	2" = 0.16	3" = 0.37
	3 1/2" = 0.50	<u>4" = 0.65</u>
	6" = 1.46	

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Flow Rate (ML/min)	Volume Purged (ML)	DTW (ft btoc)	Temp (C)	DO (mg/L)	Spec Cond (µmhos/cm)	pH (SI Units)	ORP (mV)	Turbidity (NTU)	Comments
1045	0	0	0	4.97							Start
1051	6	3200	1200	4.98	18.4	0.71	651	6.74	129.2	3.3	
1054	9	200	1800	4.98	18.4	0.61	652	6.74	127.3	3.8	
1057	12	200	2400	5.01	18.5	0.58	651	6.75	125.1	4.9	
1100	15	200	3000	5.02	18.5	0.55	652	6.74	124.1	4.7	END

Observations During Sampling
 Well Condition: Secure
 Color: clear
 Odor: None observed

Purge Water Disposal: Drum (on-site)
 Turbidity(qualitative): Low
 Other (OVA, HNU, etc.):

Sample ID: MW-7 Sample Date & Time: 3-14-2017 @ 1105
 Samples Analyzed For: See the COC

Groundwater Sampling Form

Project Number: GP16BPNA.CA01 Task: 40000 Well ID: MW-8
 Date: 3-14-2017 Sampled By: K. Corrigan
 Weather: Sunny, 70's Recorded By: " "
 Location: 6407 Telegraph Ave, Oakland C. Coded Duplicate No.: -

Instrument Identification

	PID	Water Quality Meter(s)
Model	-	YSI Pro DSS
Serial #:	-	FA02580

Purging Information

Casing Material: PVC
 Casing Diameter: 4"
 Total Depth: 19.40
 Depth to Water: 6.30
 Water Column: 13.1
 Gallons/Foot: 0.65
 Gallons in Well: 8.52

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry
 Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailor
 Screen Interval: From: _____ To: _____
 Pump Intake Setting: 13'
 Volumes to be Purged: -
 Total Volume Purged: 3200 mL
 Pump on: 1316 Off: 1336

Well Casing Volumes (gal/ft):	2" = 0.16	3" = 0.37
	3 1/2" = 0.50	<u>4" = 0.65</u>
	6" = 1.46	

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Flow Rate (mL/min)	Volume Purged (mL)	DTW (ft btoc)	Temp (C)	DO (mg/L)	Spec Cond (µmhos/cm)	pH (SI Units)	ORP (mV)	Turbidity (NTU)	Comments
1316	0	0	0	6.30	-	-	-	-	-	-	Start
1322	6	200	1200	6.42	21.1	0.62	586	6.38	116.7	5.2	
1325	9	200	1800	6.47	21.1	0.57	586	6.38	130.1	8.1	
1328	12	200	2400	6.50	21.0	0.61	586	6.39	142.1	6.9	
1331	15	200	3000	6.55	21.1	0.55	586	6.39	143.9	9.1	END

Observations During Sampling

Well Condition: Secure Purge Water Disposal: Drums (on-site)
 Color: (KC) # clear Turbidity(qualitative): Low
 Odor: None Observed Hydrocarbon Other (OVA, HNU, etc.): -

Sample ID: MW-8 Sample Date & Time: 3-14-2017 @ 1335
 Samples Analyzed For: See the COC

I:\Active\Lompoc\QAPP\Field Forms\Low-Flow GW Sampling Form 3/6/2017

Groundwater Sampling Form

Project Number: GP16BPNA.CA01 Task: 40000 Well ID: MW-9
 Date: 3-14-2017 Sampled By: K. Corrigan (RC)
 Weather: Sunny, 70's Recorded By: " "
 Location: 6407 Telegraph Ave, Oakland C. Coded Duplicate No.: —

Instrument Identification

Model	PID	Water Quality Meter(s)
	<u>-</u>	<u>YSI Pro DSS</u>
Serial #:	<u>-</u>	<u>FA02580</u>

Purging Information

Casing Material: PVC
 Casing Diameter: 4"
 Total Depth: 19.36
 Depth to Water: 4.98
 Water Column: 14.38
 Gallons/Foot: 0.65
 Gallons in Well: 9.35

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry
 Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailor
 Screen Interval: From: _____ To: _____
 Pump Intake Setting: 12'
 Volumes to be Purged: —
 Total Volume Purged: 3200 mL
 Pump on: 1239 Off: _____

Well Casing Volumes (gal/ft):	2" = 0.16	3" = 0.37
	3 1/2" = 0.50	<u>4" = 0.65</u>
	6" = 1.46	

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Flow Rate (mL/min)	Volume Purged (mL)	DTW (ft btoc)	Temp (C)	DO (mg/L)	Spec Cond (µmhos/cm)	pH (SI Units)	ORP (mV)	Turbidity (NTU)	Comments
<u>1239</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>4.98</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>Start</u>
<u>1245</u>	<u>6</u>	<u>200</u>	<u>1200</u>	<u>5.12</u>	<u>21.2</u>	<u>0.71</u>	<u>891</u>	<u>6.60</u>	<u>16.5</u>	<u>4.3</u>	
<u>1248</u>	<u>9</u>	<u>200</u>	<u>1800</u>	<u>5.19</u>	<u>21.2</u>	<u>0.60</u>	<u>891</u>	<u>6.59</u>	<u>22.4</u>	<u>6.2</u>	
<u>1251</u>	<u>12</u>	<u>200</u>	<u>2400</u>	<u>5.21</u>	<u>21.2</u>	<u>0.58</u>	<u>890</u>	<u>6.60</u>	<u>25.8</u>	<u>6.3</u>	
<u>1254</u>	<u>15</u>	<u>200</u>	<u>3000</u>	<u>5.25</u>	<u>21.1</u>	<u>0.56</u>	<u>890</u>	<u>6.61</u>	<u>28.4</u>	<u>7.1</u>	<u>END</u>

Observations During Sampling
 Well Condition: Secure
 Color: Clear
 Odor: None Observed

Purge Water Disposal: Drums (on-site)
 Turbidity(qualitative): Low
 Other (OVA, HNU, etc.): _____

Sample ID: MW-9
 Samples Analyzed For: See the COC

Sample Date & Time: 3-14-2017 @ 1255

I:\Active\lompoc\QAPP\field forms\Low-Flow GW Sampling Form 3/6/2017

ATTACHMENT 2

Groundwater Analytical Laboratory Report



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

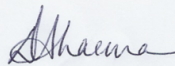
TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-78293-1

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:
3/29/2017 4:56:59 PM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	12
QC Sample Results	13
QC Association Summary	15
Lab Chronicle	16
Certification Summary	17
Method Summary	18
Sample Summary	19
Chain of Custody	20
Receipt Checklists	21

Definitions/Glossary

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

TestAmerica Job ID: 720-78293-1

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: 720-78293-1

Job ID: 720-78293-1

Laboratory: TestAmerica Pleasanton

Narrative

**Job Narrative
720-78293-1**

Comments

No additional comments.

Receipt

The samples were received on 3/17/2017 1:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.8° C.

Receipt Exceptions

The following sample was listed on the Chain of Custody (COC); however, no sample was received: TB-374-03142017

GC/MS VOA

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Detection Summary

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

TestAmerica Job ID: 720-78293-1

Client Sample ID: MW-1

Lab Sample ID: 720-78293-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	98		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-2

Lab Sample ID: 720-78293-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	45		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-4

Lab Sample ID: 720-78293-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	770		10		ug/L	20		8260B	Total/NA
Ethylbenzene	650		10		ug/L	20		8260B	Total/NA
Toluene	97		10		ug/L	20		8260B	Total/NA
Xylenes, Total	420		20		ug/L	20		8260B	Total/NA
Gasoline Range Organics (GRO) -C6-C12	6800		1000		ug/L	20		8260B	Total/NA

Client Sample ID: MW-7

Lab Sample ID: 720-78293-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.8		0.50		ug/L	1		8260B	Total/NA
Ethylbenzene	1.3		0.50		ug/L	1		8260B	Total/NA
MTBE	1.3		0.50		ug/L	1		8260B	Total/NA
Xylenes, Total	1.0		1.0		ug/L	1		8260B	Total/NA

Client Sample ID: MW-8

Lab Sample ID: 720-78293-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	10		0.50		ug/L	1		8260B	Total/NA
Ethylbenzene	1.1		0.50		ug/L	1		8260B	Total/NA
MTBE	45		0.50		ug/L	1		8260B	Total/NA
Gasoline Range Organics (GRO) -C6-C12	270		50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-9

Lab Sample ID: 720-78293-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	9.7		0.50		ug/L	1		8260B	Total/NA
Ethylbenzene	0.88		0.50		ug/L	1		8260B	Total/NA
MTBE	23		0.50		ug/L	1		8260B	Total/NA
Gasoline Range Organics (GRO) -C6-C12	190		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: 720-78293-1

Client Sample ID: MW-1
Date Collected: 03/14/17 12:10
Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-1
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			03/28/17 17:11	1
Ethylbenzene	ND		0.50		ug/L			03/28/17 17:11	1
Ethanol	ND		500		ug/L			03/28/17 17:11	1
MTBE	98		0.50		ug/L			03/28/17 17:11	1
TAME	ND		0.50		ug/L			03/28/17 17:11	1
Ethyl t-butyl ether	ND		0.50		ug/L			03/28/17 17:11	1
Toluene	ND		0.50		ug/L			03/28/17 17:11	1
EDB	ND		0.50		ug/L			03/28/17 17:11	1
Xylenes, Total	ND		1.0		ug/L			03/28/17 17:11	1
1,2-DCA	ND		0.50		ug/L			03/28/17 17:11	1
TBA	ND		20		ug/L			03/28/17 17:11	1
DIPE	ND		0.50		ug/L			03/28/17 17:11	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			03/28/17 17:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		67 - 130					03/28/17 17:11	1
1,2-Dichloroethane-d4 (Surr)	96		72 - 130					03/28/17 17:11	1
Toluene-d8 (Surr)	98		70 - 130					03/28/17 17:11	1

Client Sample Results

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

TestAmerica Job ID: 720-78293-1

Client Sample ID: MW-2
Date Collected: 03/14/17 11:40
Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-2
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			03/28/17 17:39	1
Ethylbenzene	ND		0.50		ug/L			03/28/17 17:39	1
Ethanol	ND		500		ug/L			03/28/17 17:39	1
MTBE	45		0.50		ug/L			03/28/17 17:39	1
TAME	ND		0.50		ug/L			03/28/17 17:39	1
Ethyl t-butyl ether	ND		0.50		ug/L			03/28/17 17:39	1
Toluene	ND		0.50		ug/L			03/28/17 17:39	1
EDB	ND		0.50		ug/L			03/28/17 17:39	1
Xylenes, Total	ND		1.0		ug/L			03/28/17 17:39	1
1,2-DCA	ND		0.50		ug/L			03/28/17 17:39	1
TBA	ND		20		ug/L			03/28/17 17:39	1
DIPE	ND		0.50		ug/L			03/28/17 17:39	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			03/28/17 17:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		67 - 130					03/28/17 17:39	1
1,2-Dichloroethane-d4 (Surr)	99		72 - 130					03/28/17 17:39	1
Toluene-d8 (Surr)	98		70 - 130					03/28/17 17:39	1

Client Sample Results

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

TestAmerica Job ID: 720-78293-1

Client Sample ID: MW-4
Date Collected: 03/14/17 14:40
Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	770		10		ug/L			03/28/17 18:08	20
Ethylbenzene	650		10		ug/L			03/28/17 18:08	20
Ethanol	ND		10000		ug/L			03/28/17 18:08	20
MTBE	ND		10		ug/L			03/28/17 18:08	20
TAME	ND		10		ug/L			03/28/17 18:08	20
Ethyl t-butyl ether	ND		10		ug/L			03/28/17 18:08	20
Toluene	97		10		ug/L			03/28/17 18:08	20
EDB	ND		10		ug/L			03/28/17 18:08	20
Xylenes, Total	420		20		ug/L			03/28/17 18:08	20
1,2-DCA	ND		10		ug/L			03/28/17 18:08	20
TBA	ND		400		ug/L			03/28/17 18:08	20
DIPE	ND		10		ug/L			03/28/17 18:08	20
Gasoline Range Organics (GRO) -C6-C12	6800		1000		ug/L			03/28/17 18:08	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		67 - 130		03/28/17 18:08	20
1,2-Dichloroethane-d4 (Surr)	96		72 - 130		03/28/17 18:08	20
Toluene-d8 (Surr)	97		70 - 130		03/28/17 18:08	20

Client Sample Results

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

TestAmerica Job ID: 720-78293-1

Client Sample ID: MW-7
Date Collected: 03/14/17 11:05
Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.8		0.50		ug/L			03/28/17 18:36	1
Ethylbenzene	1.3		0.50		ug/L			03/28/17 18:36	1
Ethanol	ND		500		ug/L			03/28/17 18:36	1
MTBE	1.3		0.50		ug/L			03/28/17 18:36	1
TAME	ND		0.50		ug/L			03/28/17 18:36	1
Ethyl t-butyl ether	ND		0.50		ug/L			03/28/17 18:36	1
Toluene	ND		0.50		ug/L			03/28/17 18:36	1
EDB	ND		0.50		ug/L			03/28/17 18:36	1
Xylenes, Total	1.0		1.0		ug/L			03/28/17 18:36	1
1,2-DCA	ND		0.50		ug/L			03/28/17 18:36	1
TBA	ND		20		ug/L			03/28/17 18:36	1
DIPE	ND		0.50		ug/L			03/28/17 18:36	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			03/28/17 18:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		67 - 130					03/28/17 18:36	1
1,2-Dichloroethane-d4 (Surr)	97		72 - 130					03/28/17 18:36	1
Toluene-d8 (Surr)	98		70 - 130					03/28/17 18:36	1

Client Sample Results

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

TestAmerica Job ID: 720-78293-1

Client Sample ID: MW-8
Date Collected: 03/14/17 13:35
Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	10		0.50		ug/L			03/28/17 19:05	1
Ethylbenzene	1.1		0.50		ug/L			03/28/17 19:05	1
Ethanol	ND		500		ug/L			03/28/17 19:05	1
MTBE	45		0.50		ug/L			03/28/17 19:05	1
TAME	ND		0.50		ug/L			03/28/17 19:05	1
Ethyl t-butyl ether	ND		0.50		ug/L			03/28/17 19:05	1
Toluene	ND		0.50		ug/L			03/28/17 19:05	1
EDB	ND		0.50		ug/L			03/28/17 19:05	1
Xylenes, Total	ND		1.0		ug/L			03/28/17 19:05	1
1,2-DCA	ND		0.50		ug/L			03/28/17 19:05	1
TBA	ND		20		ug/L			03/28/17 19:05	1
DIPE	ND		0.50		ug/L			03/28/17 19:05	1
Gasoline Range Organics (GRO)	270		50		ug/L			03/28/17 19:05	1

-C6-C12

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		67 - 130		03/28/17 19:05	1
1,2-Dichloroethane-d4 (Surr)	97		72 - 130		03/28/17 19:05	1
Toluene-d8 (Surr)	98		70 - 130		03/28/17 19:05	1

Client Sample Results

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

TestAmerica Job ID: 720-78293-1

Client Sample ID: MW-9
Date Collected: 03/14/17 12:25
Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	9.7		0.50		ug/L			03/28/17 19:33	1
Ethylbenzene	0.88		0.50		ug/L			03/28/17 19:33	1
Ethanol	ND		500		ug/L			03/28/17 19:33	1
MTBE	23		0.50		ug/L			03/28/17 19:33	1
TAME	ND		0.50		ug/L			03/28/17 19:33	1
Ethyl t-butyl ether	ND		0.50		ug/L			03/28/17 19:33	1
Toluene	ND		0.50		ug/L			03/28/17 19:33	1
EDB	ND		0.50		ug/L			03/28/17 19:33	1
Xylenes, Total	ND		1.0		ug/L			03/28/17 19:33	1
1,2-DCA	ND		0.50		ug/L			03/28/17 19:33	1
TBA	ND		20		ug/L			03/28/17 19:33	1
DIPE	ND		0.50		ug/L			03/28/17 19:33	1
Gasoline Range Organics (GRO) -C6-C12	190		50		ug/L			03/28/17 19:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		67 - 130		03/28/17 19:33	1
1,2-Dichloroethane-d4 (Surr)	101		72 - 130		03/28/17 19:33	1
Toluene-d8 (Surr)	99		70 - 130		03/28/17 19:33	1

Surrogate Summary

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

TestAmerica Job ID: 720-78293-1

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)
720-78293-1	MW-1	97	96	98
720-78293-2	MW-2	95	99	98
720-78293-3	MW-4	95	96	97
720-78293-4	MW-7	96	97	98
720-78293-5	MW-8	98	97	98
720-78293-6	MW-9	102	101	99
LCS 720-220087/5	Lab Control Sample	93	94	98
LCS 720-220087/7	Lab Control Sample	95	100	98
LCSD 720-220087/6	Lab Control Sample Dup	93	97	97
LCSD 720-220087/8	Lab Control Sample Dup	94	96	98
MB 720-220087/4	Method Blank	95	98	97

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: 720-78293-1

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

Lab Sample ID: MB 720-220087/4

Matrix: Water

Analysis Batch: 220087

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			03/28/17 14:49	1
Ethylbenzene	ND		0.50		ug/L			03/28/17 14:49	1
Ethanol	ND		500		ug/L			03/28/17 14:49	1
MTBE	ND		0.50		ug/L			03/28/17 14:49	1
TAME	ND		0.50		ug/L			03/28/17 14:49	1
Ethyl t-butyl ether	ND		0.50		ug/L			03/28/17 14:49	1
Toluene	ND		0.50		ug/L			03/28/17 14:49	1
EDB	ND		0.50		ug/L			03/28/17 14:49	1
Xylenes, Total	ND		1.0		ug/L			03/28/17 14:49	1
1,2-DCA	ND		0.50		ug/L			03/28/17 14:49	1
TBA	ND		20		ug/L			03/28/17 14:49	1
DIPE	ND		0.50		ug/L			03/28/17 14:49	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			03/28/17 14:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		67 - 130		03/28/17 14:49	1
1,2-Dichloroethane-d4 (Surr)	98		72 - 130		03/28/17 14:49	1
Toluene-d8 (Surr)	97		70 - 130		03/28/17 14:49	1

Lab Sample ID: LCS 720-220087/5

Matrix: Water

Analysis Batch: 220087

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	22.9		ug/L		92	79 - 130
Ethylbenzene	25.0	22.9		ug/L		91	80 - 120
Ethanol	1000	615		ug/L		62	31 - 216
m-Xylene & p-Xylene	25.0	23.3		ug/L		93	70 - 142
MTBE	25.0	23.1		ug/L		92	62 - 130
TAME	25.0	25.9		ug/L		103	79 - 130
Ethyl t-butyl ether	25.0	25.3		ug/L		101	70 - 130
Toluene	25.0	22.4		ug/L		90	78 - 120
EDB	25.0	24.5		ug/L		98	70 - 130
1,2-DCA	25.0	23.0		ug/L		92	61 - 132
TBA	250	239		ug/L		96	70 - 130
DIPE	25.0	25.2		ug/L		101	69 - 134
o-Xylene	25.0	22.5		ug/L		90	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	93		67 - 130
1,2-Dichloroethane-d4 (Surr)	94		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: 720-78293-1

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

Lab Sample ID: LCS 720-220087/7

Matrix: Water

Analysis Batch: 220087

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	468		ug/L		94	58 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	100		72 - 130
Toluene-d8 (Surr)	98		70 - 130

Lab Sample ID: LCSD 720-220087/6

Matrix: Water

Analysis Batch: 220087

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	22.9		ug/L		91	79 - 130	0	20
Ethylbenzene	25.0	22.8		ug/L		91	80 - 120	0	20
Ethanol	1000	795		ug/L		79	31 - 216	25	30
m-Xylene & p-Xylene	25.0	23.0		ug/L		92	70 - 142	1	20
MTBE	25.0	24.4		ug/L		97	62 - 130	5	20
TAME	25.0	25.9		ug/L		103	79 - 130	0	20
Ethyl t-butyl ether	25.0	25.9		ug/L		104	70 - 130	3	20
Toluene	25.0	22.6		ug/L		90	78 - 120	1	20
EDB	25.0	25.4		ug/L		102	70 - 130	4	20
1,2-DCA	25.0	23.5		ug/L		94	61 - 132	2	20
TBA	250	237		ug/L		95	70 - 130	1	20
DIPE	25.0	25.8		ug/L		103	69 - 134	2	20
o-Xylene	25.0	22.5		ug/L		90	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	93		67 - 130
1,2-Dichloroethane-d4 (Surr)	97		72 - 130
Toluene-d8 (Surr)	97		70 - 130

Lab Sample ID: LCSD 720-220087/8

Matrix: Water

Analysis Batch: 220087

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	459		ug/L		92	58 - 120	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	94		67 - 130
1,2-Dichloroethane-d4 (Surr)	96		72 - 130
Toluene-d8 (Surr)	98		70 - 130

TestAmerica Pleasanton

QC Association Summary

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

TestAmerica Job ID: 720-78293-1

GC/MS VOA

Analysis Batch: 220087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-78293-1	MW-1	Total/NA	Water	8260B	
720-78293-2	MW-2	Total/NA	Water	8260B	
720-78293-3	MW-4	Total/NA	Water	8260B	
720-78293-4	MW-7	Total/NA	Water	8260B	
720-78293-5	MW-8	Total/NA	Water	8260B	
720-78293-6	MW-9	Total/NA	Water	8260B	
MB 720-220087/4	Method Blank	Total/NA	Water	8260B	
LCS 720-220087/5	Lab Control Sample	Total/NA	Water	8260B	
LCS 720-220087/7	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-220087/6	Lab Control Sample Dup	Total/NA	Water	8260B	
LCSD 720-220087/8	Lab Control Sample Dup	Total/NA	Water	8260B	

Lab Chronicle

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

TestAmerica Job ID: 720-78293-1

Client Sample ID: MW-1

Date Collected: 03/14/17 12:10

Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	03/28/17 17:11	JRM	TAL PLS

Client Sample ID: MW-2

Date Collected: 03/14/17 11:40

Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	03/28/17 17:39	JRM	TAL PLS

Client Sample ID: MW-4

Date Collected: 03/14/17 14:40

Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	220087	03/28/17 18:08	JRM	TAL PLS

Client Sample ID: MW-7

Date Collected: 03/14/17 11:05

Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	03/28/17 18:36	JRM	TAL PLS

Client Sample ID: MW-8

Date Collected: 03/14/17 13:35

Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	03/28/17 19:05	JRM	TAL PLS

Client Sample ID: MW-9

Date Collected: 03/14/17 12:25

Date Received: 03/17/17 13:20

Lab Sample ID: 720-78293-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	03/28/17 19:33	JRM	TAL PLS

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 720-78293-1

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

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Method Summary

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

TestAmerica Job ID: 720-78293-1

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 720-78293-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-78293-1	MW-1	Water	03/14/17 12:10	03/17/17 13:20
720-78293-2	MW-2	Water	03/14/17 11:40	03/17/17 13:20
720-78293-3	MW-4	Water	03/14/17 14:40	03/17/17 13:20
720-78293-4	MW-7	Water	03/14/17 11:05	03/17/17 13:20
720-78293-5	MW-8	Water	03/14/17 13:35	03/17/17 13:20
720-78293-6	MW-9	Water	03/14/17 12:25	03/17/17 13:20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA Pleasanton Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

720-78293

Reference #: **171725**

Date **3-14-2017** Page **1** of **1**

3/29/2017

Report To

Attn: **Carl Edwards**

Company: **Arcadis**

Address: **100 Montgomery St Suite 310 San Fran**

Email: **Carl.edwards@arcadis.com**

Bill To: **Hevin Corrigan**

Attn: **Hevin Corrigan**

Phone: **720-78293**

Analysis Request

Volatile Organics GC/MS (VOCs)
 EPA 8260B

HVOCs by EPA 8260B

EPA 8260B: Gas BTEX
 5 Oxygenates DCA, EDB Ethanol

TEPH EPA 8015B Silica Gel
 Diesel Motor Oil Other

SemiVolatile Organics GC/MS
 EPA 8270C

PNA/PAH's by 8270C
 8270C SIM

Oil and Grease Petroleum (EPA 1664/9071) Total

Pesticides EPA 8081
 PCBs EPA 8082

CAM17 Metals (EPA 6010/7470/7471)

Metals: 6010B 200.7
 Lead LUFT RCRA Other:

Metals: 6020 200.8 (ICP-MS):

W.E.T (STLC)
 W.E.T (Dt) TCLP

Hex. Chrom by EPA 7196
 or EPA 7199

pH 9040
 SM4500

Spec. Cond. Alkalinity
 TSS SS TDS

Anions: Cl SO₄ NO₃ F
 Br NO₂ PO₄

Perchlorate by EPA 314.0

COD EPA 410.4 SM5220D
 Turbidity

GR0, BTEX, MTBE, TBA, 1-2, DCA, EDB, ETBE, DIPE, TAME, Ethanol by 8260B



Sample ID	Date	Time	Mat	Preserv
MW-1	3-14-17	1210	W	HCl
MW-2		1140		
MW-4		1440		
MW-7		1105		
MW-8		1335		
MW-9		1255		
TB-374-03142017		0600		

Project Info

Project Name: **GR16BPNH.CAQ1.4000**

PO#: **BR374**

Head Space:

Temp: **5.8°C**

Credit Card VIN: **1** If yes, please call with payment information ASAP

T	10	5	4	3	2	1	Other
A	Day	Day	Day	Day	Day	Day	Day
T							Standard

Report: Routine Level 3 Level 4 EDD EDF
Special Instructions / Comments: Global ID

*** Trip Blanks ON HOLD**
See Terms and Conditions on reverse

Sample Receipt

1) Relinquished by: **Hevin Corrigan** **BR-17-17**

Signature: **Hevin Corrigan** Time: **10:50**

Printed Name: **Hevin Corrigan** Date: **3/14/17**

Company: **Arcadis**

2) Relinquished by: **Hevin Corrigan** **1320**

Signature: **Hevin Corrigan** Time: **5/13/17**

Printed Name: **Hevin Corrigan** Date: **3/14/17**

Company: **Arcadis**

3) Relinquished by:

Signature:

Printed Name:

Company:

3) Received by:

Signature:

Printed Name:

Company:

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-78293-1

Login Number: 78293

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Arauz, Dennis

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

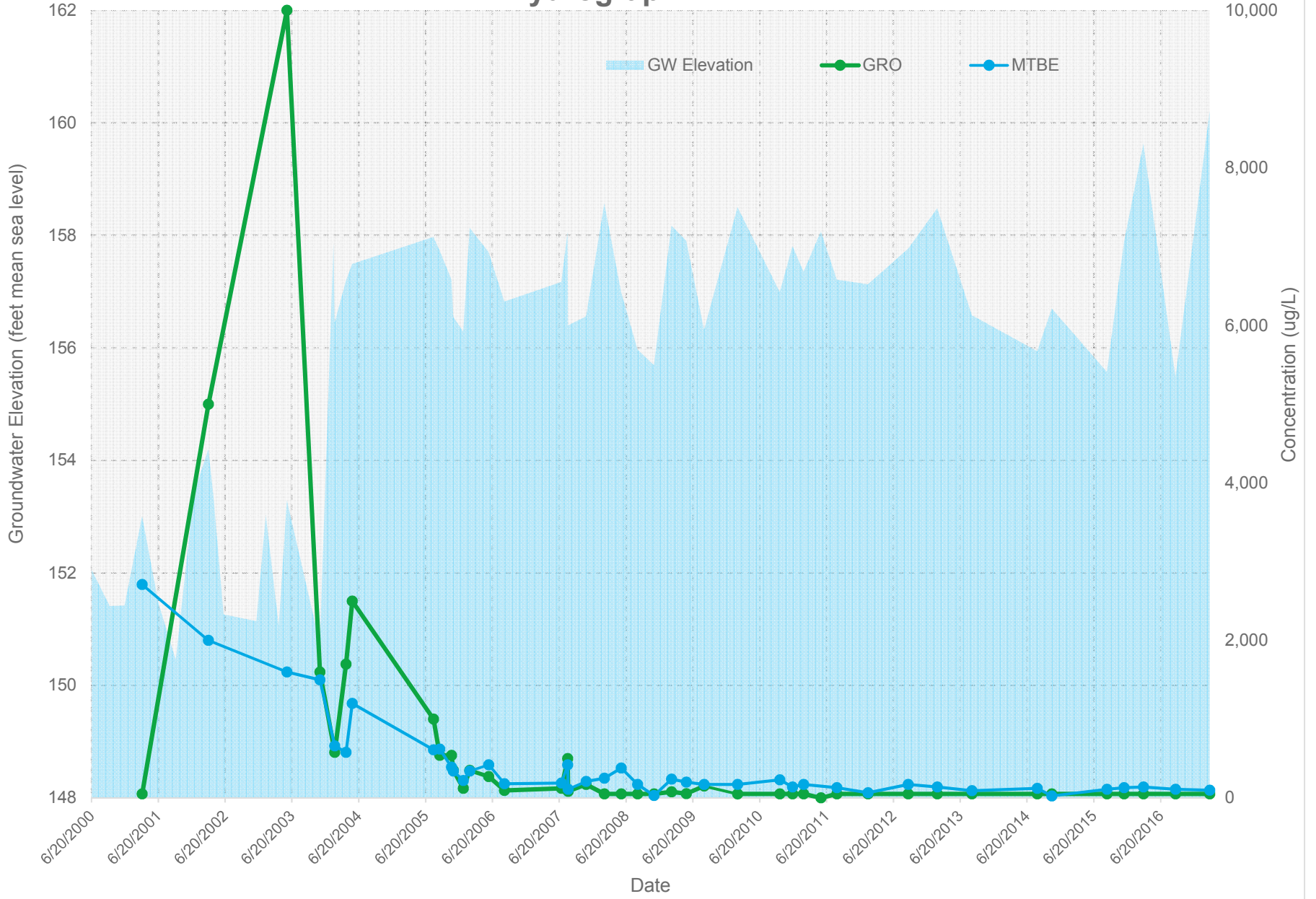


ATTACHMENT 3

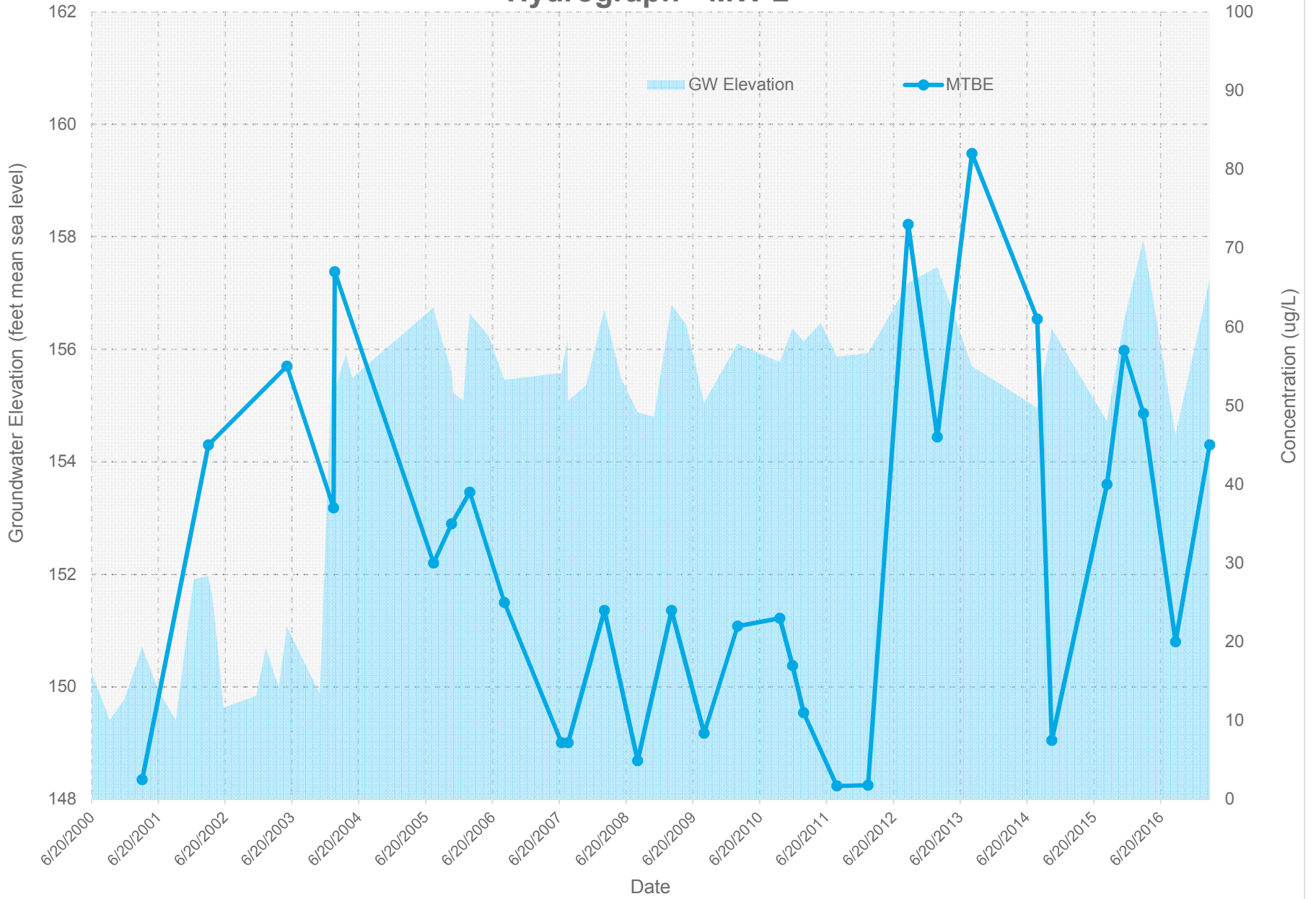
Hydrographs



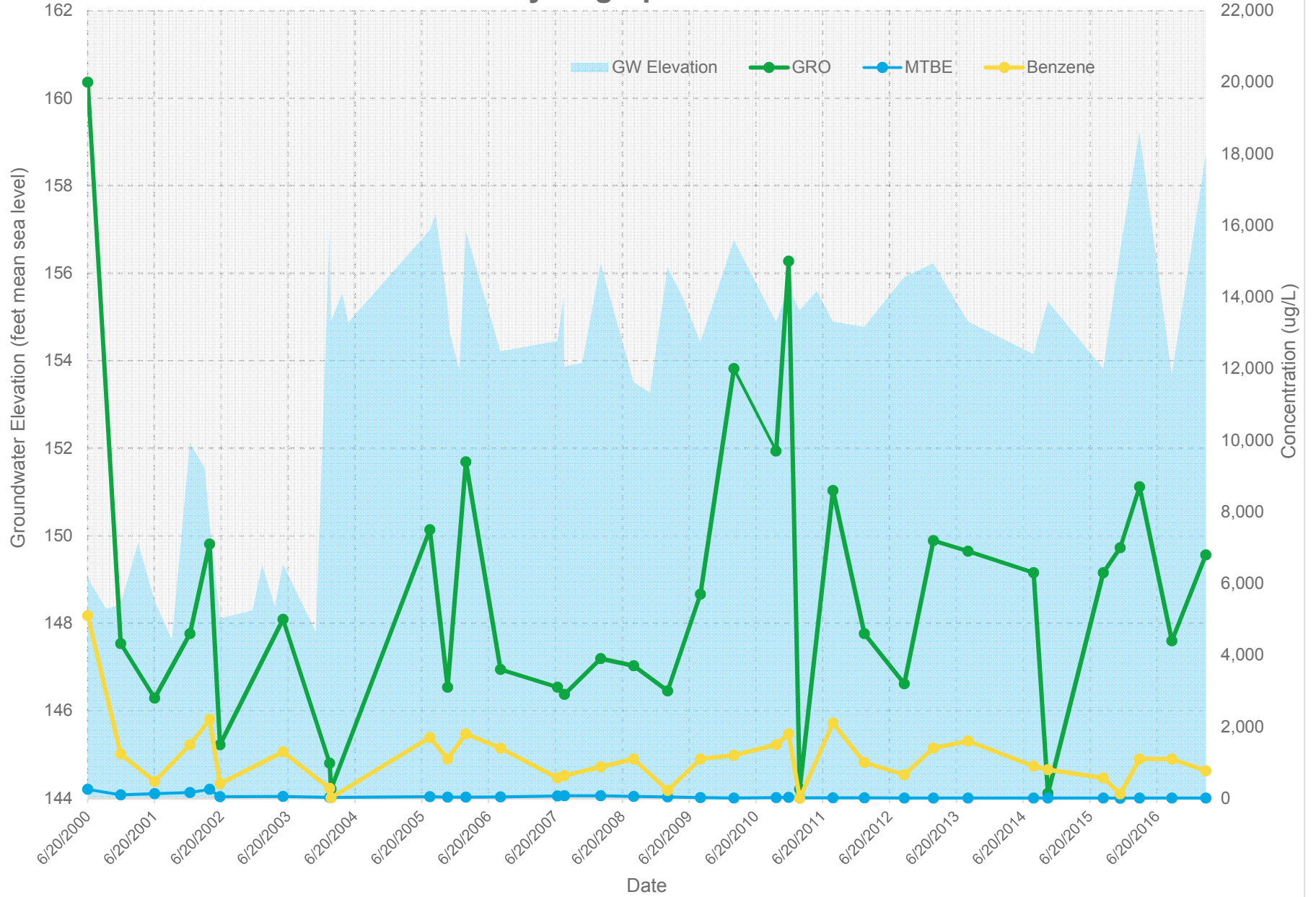
Hydrograph - MW-1



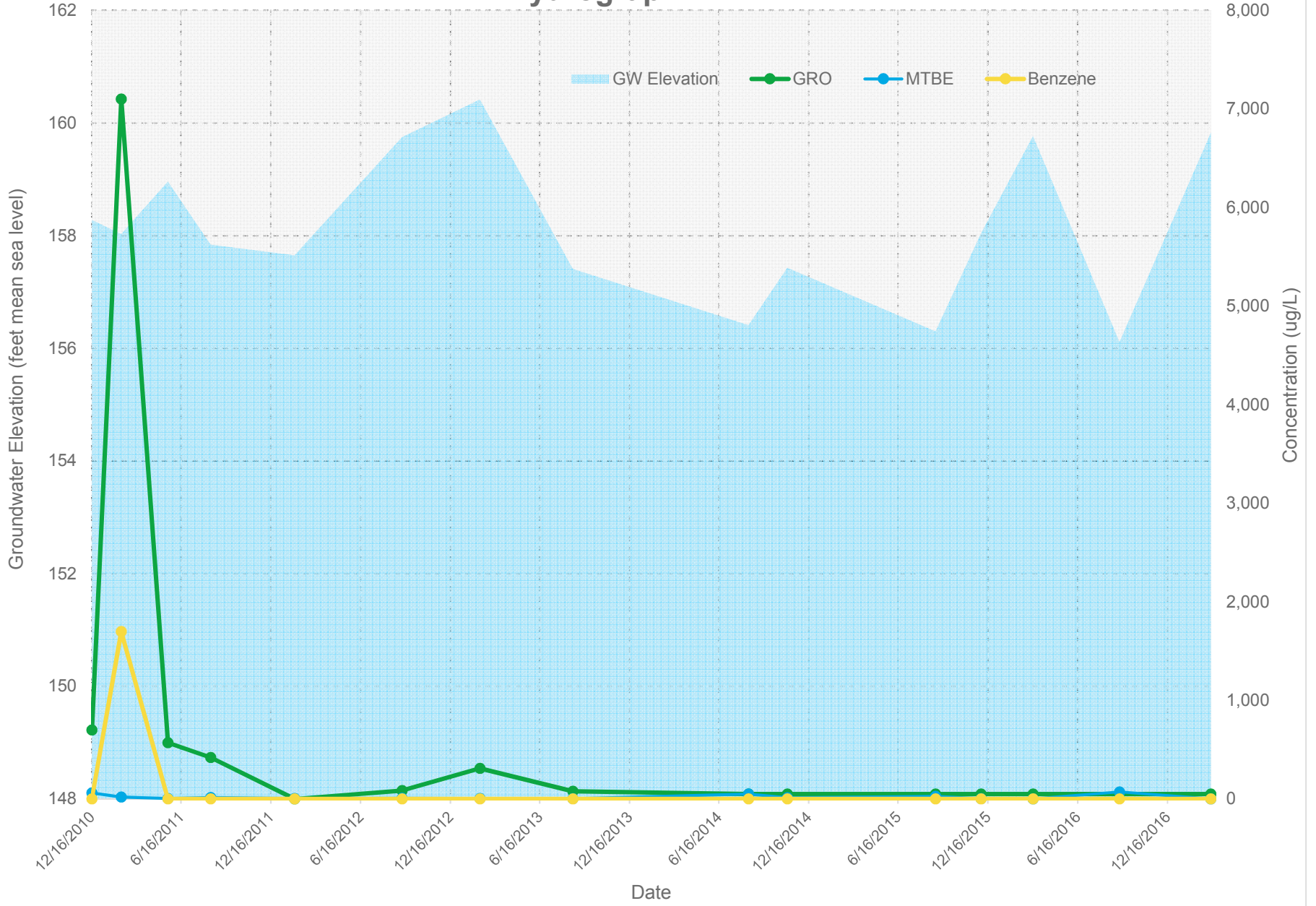
Hydrograph - MW-2



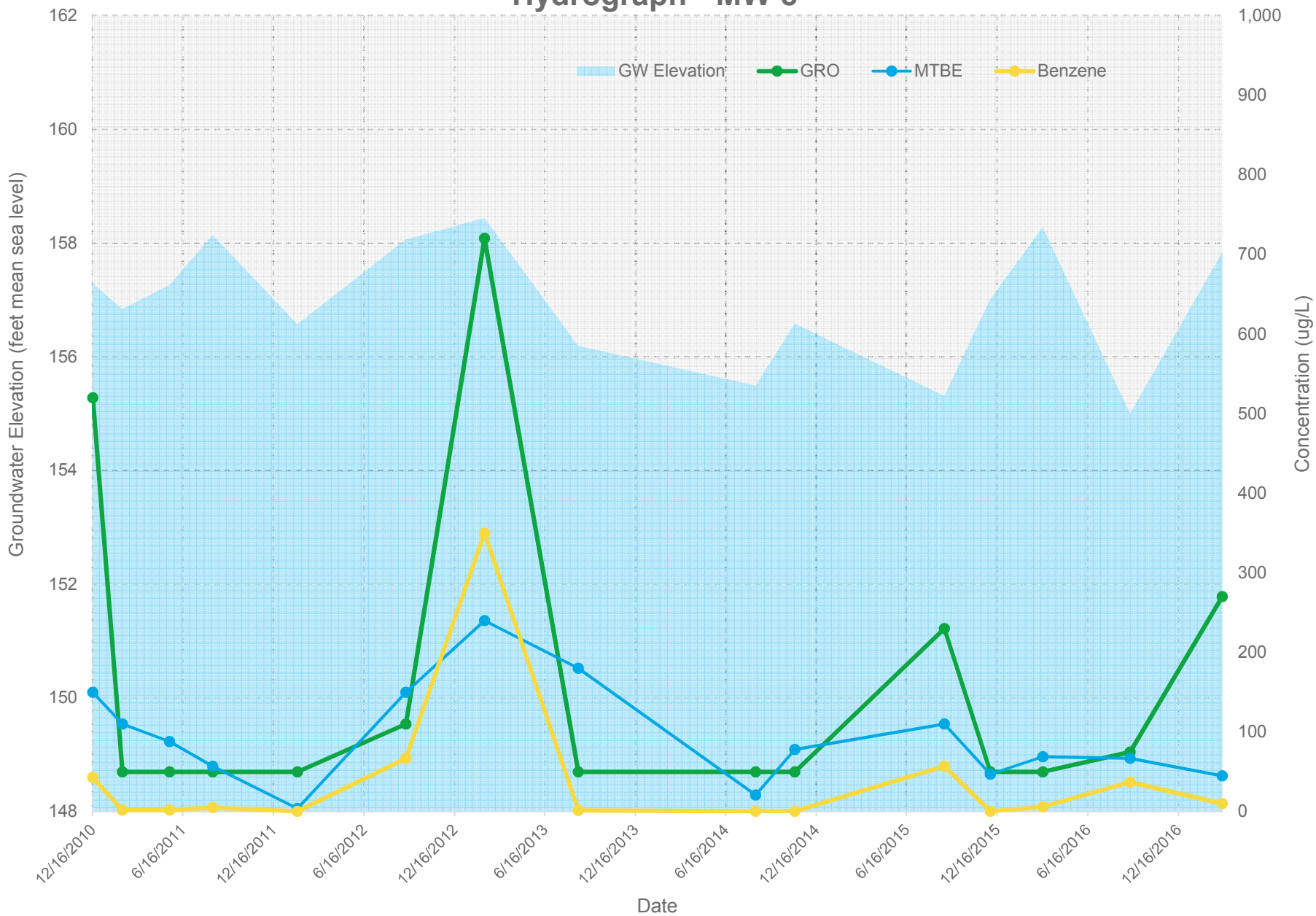
Hydrograph - MW-4



Hydrograph - MW-7



Hydrograph - MW-8



Hydrograph - MW-9

