

RECEIVED

By Alameda County Environmental Health 3:25 pm, Nov 29, 2016

November 28, 2016

Mr. Keith Nowell
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: 3Q16 Quarterly Summary Report

Site: 76 Station No. 5191/5043
449 Hegenberger Road
Oakland, California
Fuel Leak Case No. RO0000219

Dear Mr. Nowell;

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please call:

Walter T. Sprague
United Pacific
17311 S. Main Street
Gardena, CA 90248
P: (310) 808-6835
C: (206) 979-1179
Walter.Sprague@UnitedPacific.com

Sincerely,

United Pacific



WALTER SPRAGUE
Director of Retail Services

Attachment

Quarterly Summary Report, Third Quarter 2016

*76 Station No. 5191/5043
449 Hegenberger Road
Oakland, California*

*Alameda County Health Care Services
Agency Fuel Leak Case No. R00000219*

*San Francisco Bay, Regional Water Quality
Control Board Case No. 01-1601*

GeoTracker Global ID No. T0600101476

Antea Group Project No. I42705191

November 28, 2016

Prepared for:

Mr. Keith Nowell
Alameda County Health Care
Services Agency
1131 Harbor Bay Parkway,
Suite 250
Alameda, CA 94502-6577

Prepared by:

Antea®Group
11050 White Rock Road,
Suite 110
Rancho Cordova, CA 95670
+1 800 477 7411

Table of Contents

1.0	INTRODUCTION	1
1.2	Work Performed [Third Quarter 2016]	1
1.2	Work Proposed [Fourth Quarter 2016]	1
2.0	CURRENT PROJECT STATUS.....	2
2.1	Regulatory Correspondence	2
2.2	Site Remediation Activities	2
2.3	Groundwater Monitoring.....	2
2.3.1	Groundwater Flow Gradient and Directional Trends	3
2.3.2	Groundwater Quality Data	3
2.3.3	Groundwater Contaminant Trends	4
2.3.4	Waste Disposal Summary.....	4
2.3.5	Quality Assurance / Quality Control	4
4.0	DISCUSSION.....	5
5.0	CONCLUSIONS	5
6.0	REMARKS.....	6

Figures

- Figure 1 Site Location Map
- Figure 2 Site Plan
- Figure 3 Groundwater Elevation Contour Map – September 19, 2016
- Figure 4 Dissolved Phase Concentration Map – September 19, 2016
- Figure 5 Historical Groundwater Flow Directions

Tables

- Table 1 Well Construction Details
- Table 2 Current Groundwater Gauging and Analytical Data
- Table 3 Historical Groundwater Gauging and Analytical Data
- Table 3a Additional Historical Groundwater Analytical Data
- Table 3b Additional Historical Groundwater Analytical Data
- Table 3c Additional Historical Groundwater Analytical Data
- Table 3d Additional Historical Groundwater Analytical Data
- Table 4 Historical Groundwater Gradient and Flow Direction Data

Appendices

- | | |
|------------|---|
| Appendix A | Previous Investigation and Site History Summary |
| Appendix B | Regulatory Correspondence |
| Appendix C | Blaine Tech Groundwater Sampling Field Data Sheets |
| Appendix D | Certified Laboratory Analytical Report and Data Validation Form |
| Appendix E | Time Series Graphs |

Quarterly Summary Report, Third Quarter 2016

76 Station No. 5191/5043

449 Hegenberger Road

Oakland, California

1.0 INTRODUCTION

Antea®Group is submitting this *Quarterly Summary Report, Third Quarter 2016*, for the referenced site in Oakland, California (**Figure 1**). The subject site is an operating 76-branded Service Station located on the southwestern corner of Hegenberger Road and Edgewater Drive in Oakland, California. Station facilities include three underground storage tanks (USTs), two dispenser islands, a station building, and a carwash. A total of six groundwater monitoring wells are located at the site (**Figure 2**). Well construction details are included in **Table 1**. Please refer to **Appendix A** for additional site information and for the history of environmental investigations and remediation activities.

This report summarizes the data obtained from the recent groundwater monitoring and sampling event conducted on September 19, 2016. Included herein are site figures, summary groundwater data tables, and a discussion of trends. This report has received a technical review by Mr. Jeffrey Friedman, California Professional Geologist No. 5677.

1.2 Work Performed [Third Quarter 2016]

1. Antea Group submitted the *Quarterly Summary Report, Second Quarter 2016*, dated August 15, 2016 to the Alameda County Health Care Services Agency (ACHCSA).
2. Antea Group conducted the third quarter 2016 groundwater monitoring and sampling event on September 19, 2016.
3. Antea Group conducted the on-site soil excavation activities from May 2 to August 5, 2016.

1.2 Work Proposed [Fourth Quarter 2016]

1. Antea Group will submit the *Quarterly Summary Report, Third Quarter 2016* (contained herein) to the ACHCSA.
2. The *Excavation Completion Report* will be submitted to ACHCSA.
3. Antea Group will conduct the fourth quarter 2016 groundwater monitoring and sampling event.
4. Antea Group will submit a request for Low-Threat Closure.

2.0 CURRENT PROJECT STATUS

Current phase of project:	Quarterly Groundwater Monitoring
Local Oversight Program (LOP) – Lead agency for cleanup oversight:	Alameda County Health Care Services Agency Case No. RO0000219
Secondary agency(s):	San Francisco Bay Regional Water Quality Control Board Case No. 01-1601
Monitoring well gauging schedule:	Quarterly: MW-3, MW-9, MW-11, MW-13, MW-15, and MW-16
Monitoring well sampling schedule:	Quarterly: MW-11, MW-13, MW-15, and MW-16 Semi-Annual (second and fourth quarters): MW-3 and MW-9,
Total number of monitoring wells (Table 1):	Six (MW-3, MW-9, MW-11, MW-13, MW-15, and MW-16)
Range of well depths (total depth below ground surface, bgs) (Table 1):	13 feet to 20 feet bgs
Wells with historical measurable LNAPL (light non-aqueous phase liquid):	Former monitoring wells MW-1, MW-2, and MW-6
Historical depth to water range, in feet below top of casing (BTOC):	Min: 0.07 (MW-9, Q1 2005) Max: 8.42 (MW-6, Q4 2010)
Historical groundwater elevation range (ft) for monitoring wells MW-1 through MW-17	Min: 2.77 (MW-3, Q3 1994) Max: 9.70 (MW-9, Q3 2012)
Local receptors:	See Appendix A
Current remediation technique	Soil excavation

2.1 Regulatory Correspondence

On September 9, 2016, Antea Group sent an email to the ACHCSA, about the excavation report and the purpose of the upcoming meeting. The ACHCSA responded that the meeting will concern the effects of remedial activities and known distribution of potential contaminants of concern to the proposed station remodel.

Correspondence is included in **Appendix B**.

2.2 Site Remediation Activities

On-site soil excavation began on May 2, 2016. The excavation work, which removed 1665 tons of soil, was completed on August 5, 2016. Antea Group is currently writing the Excavation Completion Report and will submit it to the ACHCSA.

2.3 Groundwater Monitoring

During the third quarter 2016 groundwater monitoring and sampling event, six monitoring wells were gauged, purged and sampled by Blaine Tech Services, Inc. per standard sampling protocol. Copies of Blaine Tech's field data sheets are presented as **Appendix C**. The recent gauging and sampling data are summarized below and in **Table 2**. Historical gauging and sampling data are summarized in **Tables 3, 3a, 3b, 3c, and 3d**.

Well gauging and sampling date:	September 19, 2016
Wells gauged:	MW-3, MW-9, MW-11, MW-13, MW-15, and MW-16
Wells sampled:	MW-3, MW-9, MW-11, MW-13, MW-15, and MW-16
Purge method:	3 well casing volumes via electric, submersible pump
Sample collection method:	Disposable bailers
Groundwater parameters measured (Appendix C):	Temperature, pH, Conductivity, Dissolved Oxygen (DO), Oxidation Reduction Potential (ORP), and Turbidity
Wells with measurable LNAPL:	None
Current depth to water range (ft BTOC):	Min: 2.28 (MW-9) Max: 4.12 (MW-13)
Current groundwater elevation range (ft):	Min: 6.96 (MW-13) Max: 8.66 (MW-9)
Change in water depths from previous event (average change for all gauged wells):	0.39 ft decrease
Groundwater flow direction and gradient in foot per foot (ft/ft):	Variable (0.043 ft/ft southwest and 0.011 ft/ft southeast)

2.3.1 Groundwater Flow Gradient and Directional Trends

The third quarter 2016 groundwater monitoring and sampling event was performed by Blaine Tech on September 19, 2016. The average groundwater elevation increased approximately 0.4 feet compared to the June 2016 event. Depth to groundwater in the site monitoring wells ranged from approximately 2.28 feet (MW-9) to 4.12 feet (MW-13) BTOC during the current event. The September 19, 2016 groundwater elevation contour map is shown on **Figure 3**. Groundwater flow direction and gradient were interpreted to be variable (**Table 4**).

2.3.2 Groundwater Quality Data

Groundwater samples collected during the third quarter 2016 monitoring and sampling event were submitted with chain-of-custody (COC) documentation to Eurofins Calscience, Inc. (Calscience), a state of California Environmental Laboratory Accreditation Program (ELAP) certified laboratory (Certification No. 2944). The complete analytical report and Antea Group's laboratory data validation checklist are presented as **Appendix D**. Groundwater samples were analyzed for the following:

- Total petroleum hydrocarbons as diesel range organics (TPHd) [silica gel preparation] by US Environmental Protection Agency (EPA) Method 8015B(M);
- Total petroleum hydrocarbons as gasoline range organics (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary-butyl ether (MTBE), tert-butyl alcohol (TBA), and ethanol by EPA Method 8260B.

Groundwater analytical results are presented in **Table 2** (current) and **Tables 3, 3a, 3b, 3c, and 3d** (historical). The following ranges of contaminant concentrations were reported in the specified site wells, groundwater samples collected on September 19, 2016. Only the contaminants reported above the laboratory minimum detection limits are listed in the table below.

Constituents	Number of Reported Samples Above LRL of the Samples Collected	Minimum Reported Concentration, in µg/L (Sample ID)	Maximum Reported Concentration, in µg/L (Sample ID)
TPHd	3 of 6	93 (MW-3)	490 (MW-16)
Benzene	0 of 6	<0.50 (MW-3, MW-9, MW-11, MW-13, MW-15, MW-16)	<0.50 (MW-3, MW-9, MW-11, MW-13, MW-15, MW-16)
TPHg	1 of 6	400 (MW-3)	400 (MW-3)
MTBE	5 of 6	5.7 (MW-13)	47 (MW-15)
TBA	4 of 6	30 (MW-13)	87 (MW-16)

Explanations:

µg/L = Micrograms per liter

LRL = Laboratory reporting limit

2.3.3 Groundwater Contaminant Trends

Graphs showing changes in TPHd, TPHg, benzene, and MTBE concentrations (as applicable per well) and changes in depth to water over time for wells MW-3, MW-9, MW-11, MW-13, MW-15, and MW-16 are included as [Appendix E](#). Concentrations of TPHd were detected above the LRLs in MW-11 and MW-16 during first quarter 2016, after being below the LRLs since at least 2013 ([Table 3](#)). Concentrations increased again in these wells during second quarter 2016 and increased in wells MW-9 and MW-13. During the third quarter 2016, concentrations of TPHd dropped to below LRLs in monitoring wells MW-9 and MW-13, while concentrations of TPHd decreased by more than half in monitoring well MW-11 and concentrations of TPHd increased in monitoring wells MW-3 and MW-16. The laboratory noted that exhibited chromatograph patterns inconsistent with the standard TPHd pattern, suggesting the results may not be representative of diesel. With the exception of the spikes in TPHd, concentrations of the constituents of concern appear relatively stable to decreasing ([Appendix E](#)). However, overall, TPHd, TPHg, benzene and MTBE concentrations have been decreasing at the monitoring well locations. A dissolved phase concentration map for TPHg, benzene, and MTBE is presented on [Figures 4](#) and historical groundwater flow directions are shown on [Figure 5](#). Note that were not concentrations of benzene or MTBE above the Low-Threat Closure levels.

2.3.4 Waste Disposal Summary

Blaine Tech transported wastewater generated from purging/sampling and equipment cleaning to their bulk facility in San Jose, California. A waste manifest for this event is currently unavailable as of the date of this report. A copy of the final waste manifest will be submitted upon receipt.

2.3.5 Quality Assurance / Quality Control

Antea Group's QA/QC measures included a detailed QA/QC data validation check of the Calscience laboratory analytical results for the September 2016 sampling event. Antea Group's laboratory data validation checklist and the Calscience laboratory report are presented as [Appendix D](#).

Laboratory QA/QC Performed:	Yes (validated by Antea Group)
Laboratory Data Qualifiers:	Yes – two qualifiers*
Are the data valid for their intended purpose?	Yes, the data are valid

* HD - The chromatographic pattern was inconsistent with the profile of the reference fuel standard (noted on the TPHd results for monitoring wells MW-3, MW-9, MW-11, MW-13, and MW-16)

3 - Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control. (Noted on Benzene)

Based on a review of the laboratory's analytical report, including their QA/QC procedures and those implemented by Antea Group, we conclude that the laboratory data obtained during this groundwater sampling event are valid for their intended purpose.

4.0 DISCUSSION

Petroleum hydrocarbon impacts to the groundwater has historically been limited to the vicinities of former monitoring wells MW-6 and MW-14 in the southwest corner of the site downgradient of the source areas and former monitoring wells MW-12 and MW-17 on the east side of the site near the dispenser islands. Groundwater elevations beneath the site have ranged historically from approximately 2.77 to 9.70 feet BTOC, with an approximate 0.4 feet increase in elevation between the June and September 2016 monitoring events.

The excavation activities during the second and third quarters 2016 removed the majority of the petroleum hydrocarbon impact to the soil. Regenesis brand Oxygen Release Compound® (ORC-A®) was added to the excavation backfill to remediate the remaining COCs estimated in groundwater.

During the recent monitoring event, MTBE was reported in five of the six of the monitoring wells, and benzene was below LRLs in all of the monitoring wells. None of the reported concentrations exceeded the California Low-Threat Closure Policy thresholds of 1,000 ug/l MTBE and 3,000 ug/l benzene. **Figure 4** shows concentrations reported for TPHg, benzene, and MTBE.

5.0 CONCLUSIONS

The petroleum hydrocarbon impacts monitored and reported during the third quarter 2016, are consistent with historical data. Concentrations of constituents of concern at the site has been well defined in the soil and groundwater. Targeted areas of petroleum hydrocarbon impact based on historical soil and groundwater data, underwent excavation between May 2016 and August 2016, removing secondary source impacts to the extent practicable.

6.0 REMARKS

The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. For any reports cited that were not generated by Delta or Antea Group, the data from those reports is used "as is" and is assumed to be accurate. Antea Group does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this report. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this report.

Prepared by:

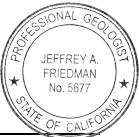
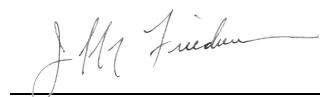


Jonathan Fillingame

Project Professional

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:



Date: November 28, 2016

Jeffrey Friedman, PG

Senior Project Manager

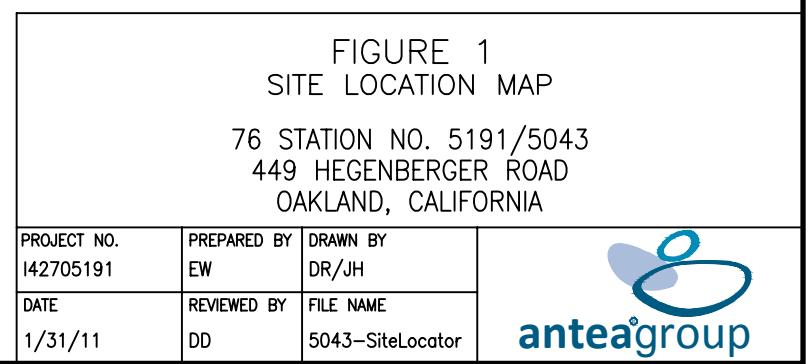
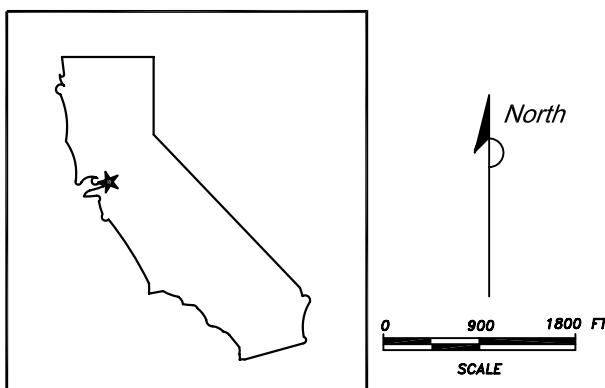
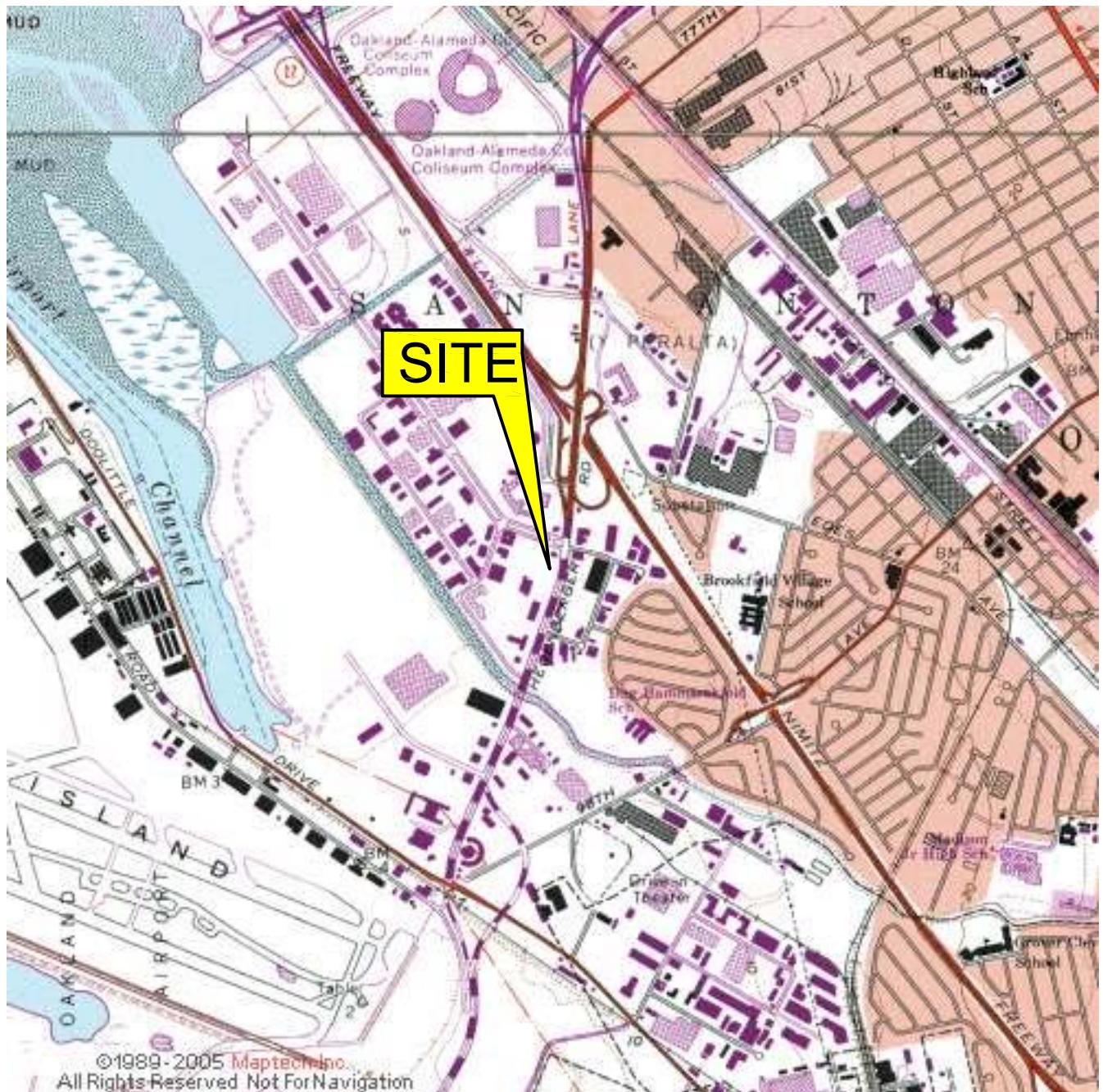
California Registered Professional Geologist No. 5677

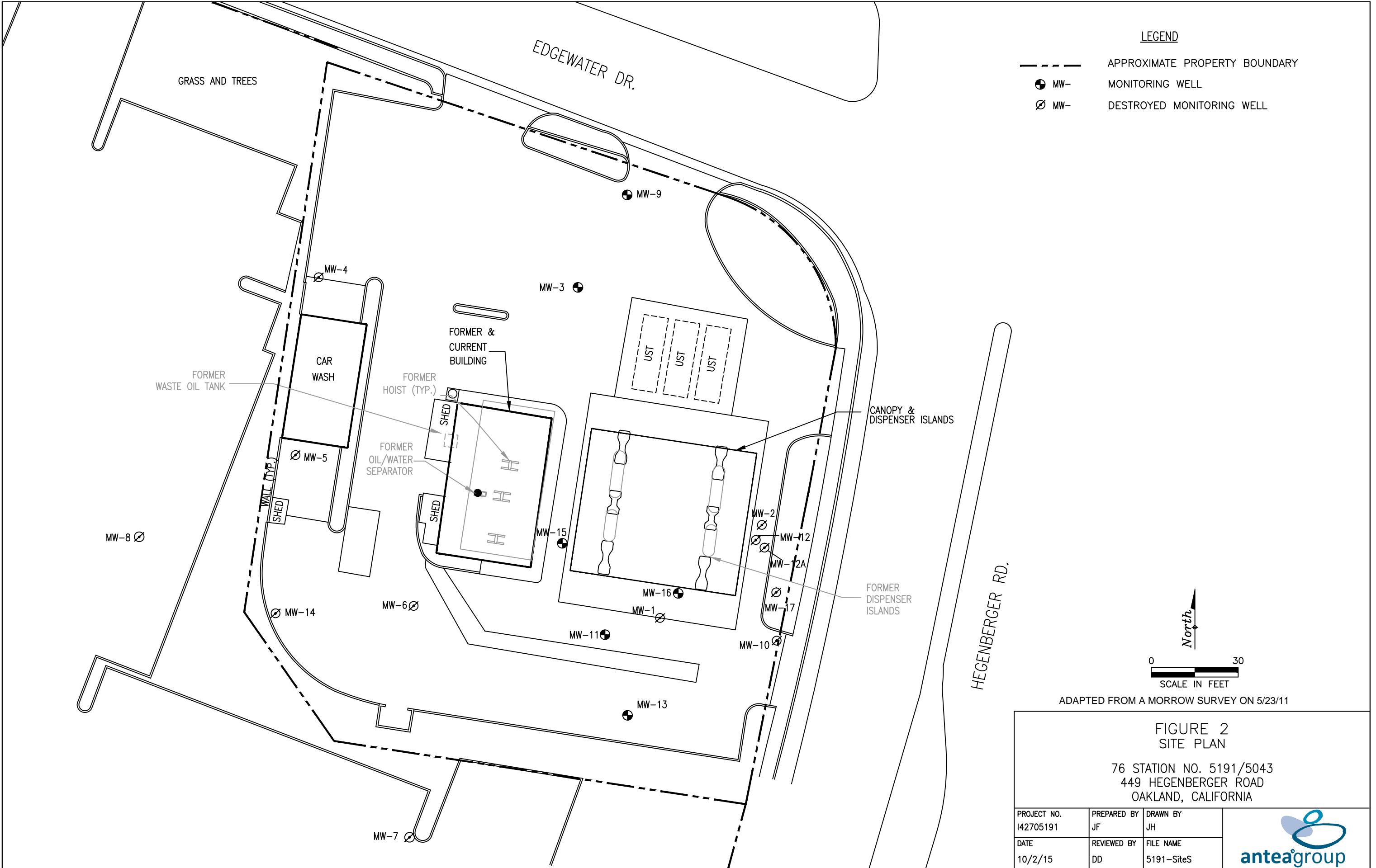
Antea Group

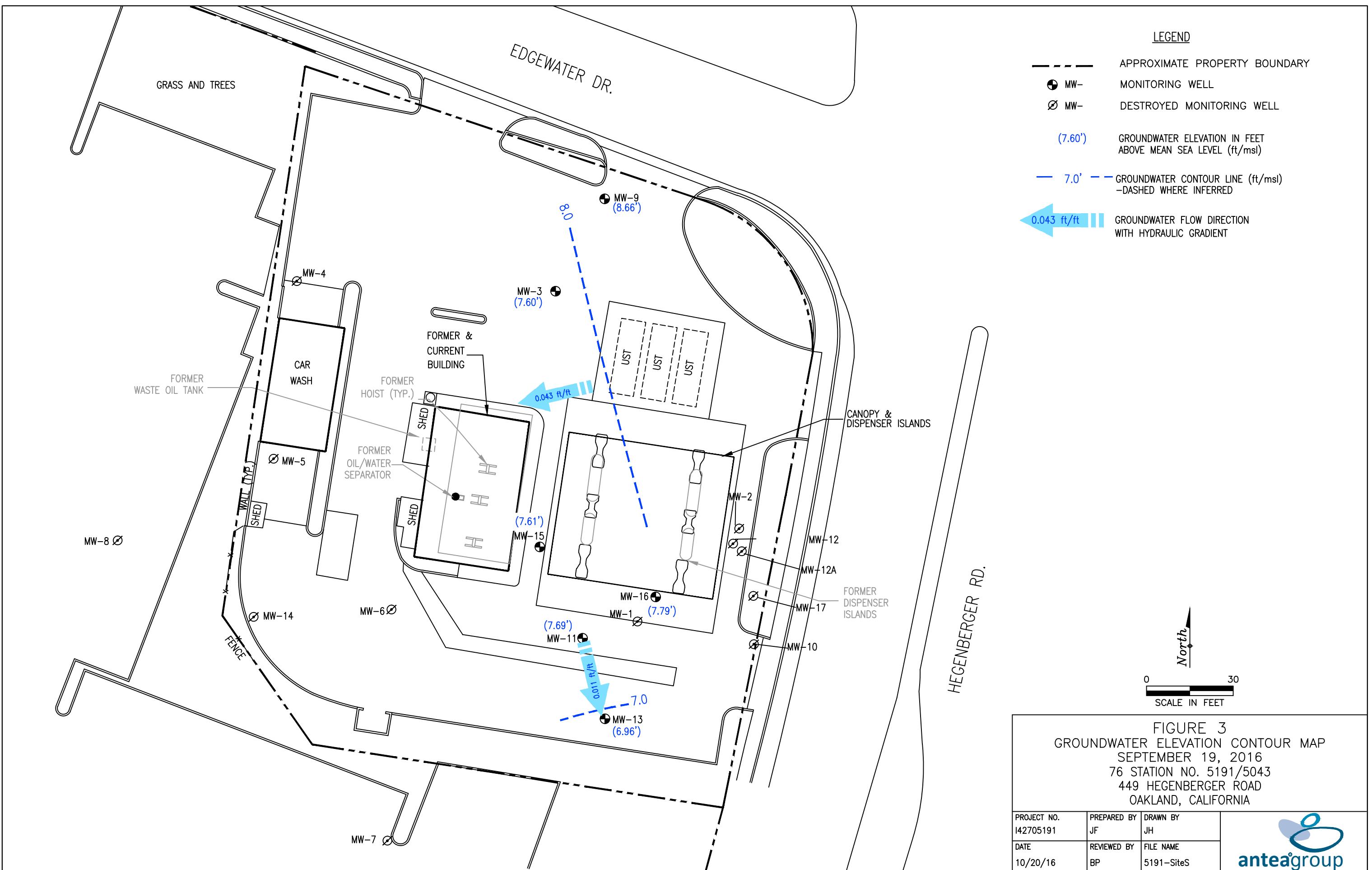
cc: GeoTracker (upload)

Figures

- Figure 1 Site Location Map
- Figure 2 Site Plan
- Figure 3 Groundwater Elevation Contour Map – September 19, 2016
- Figure 4 Dissolved Phase Concentration Map – September 19, 2016
- Figure 5 Historical Groundwater Flow Directions







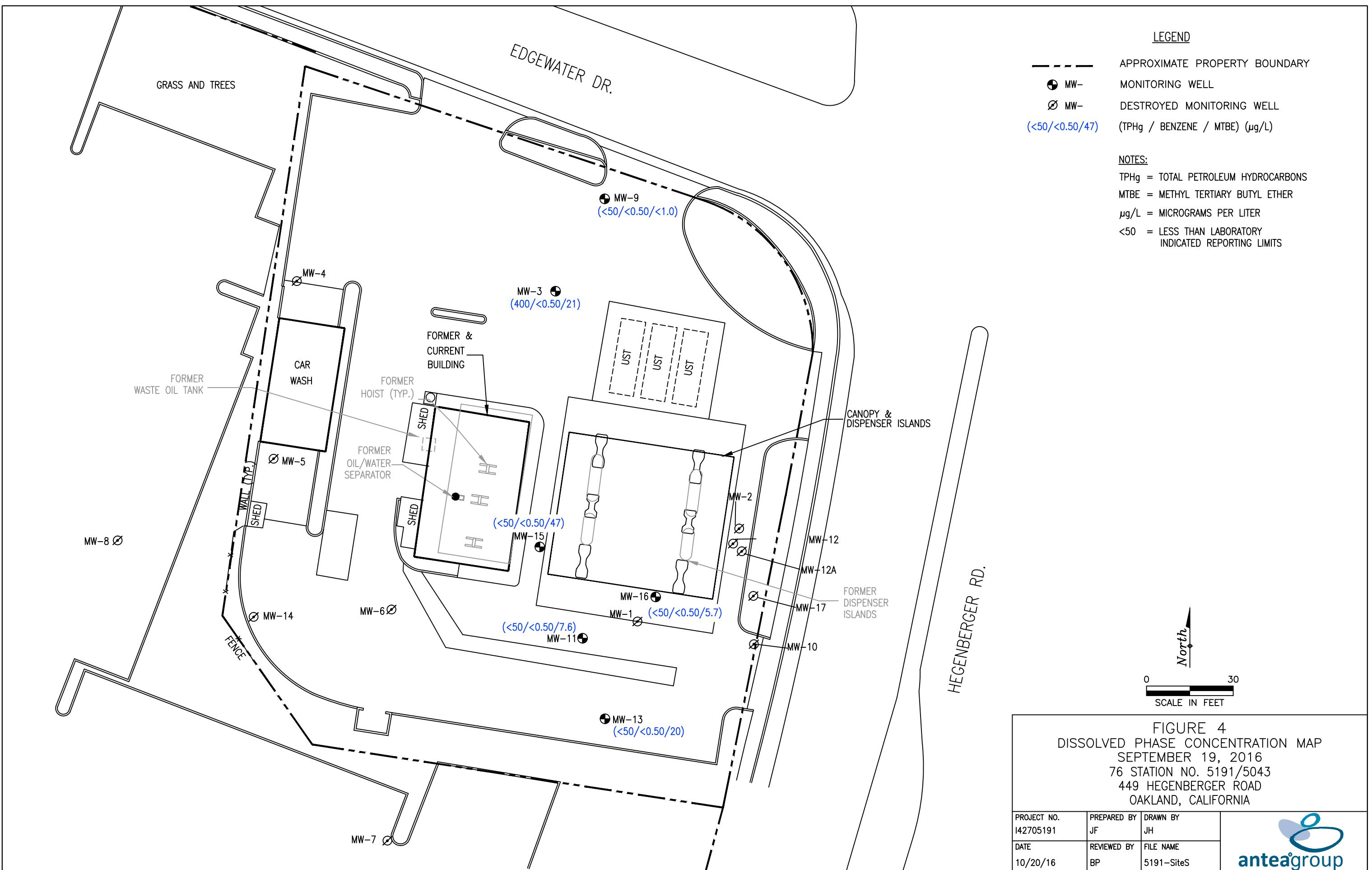
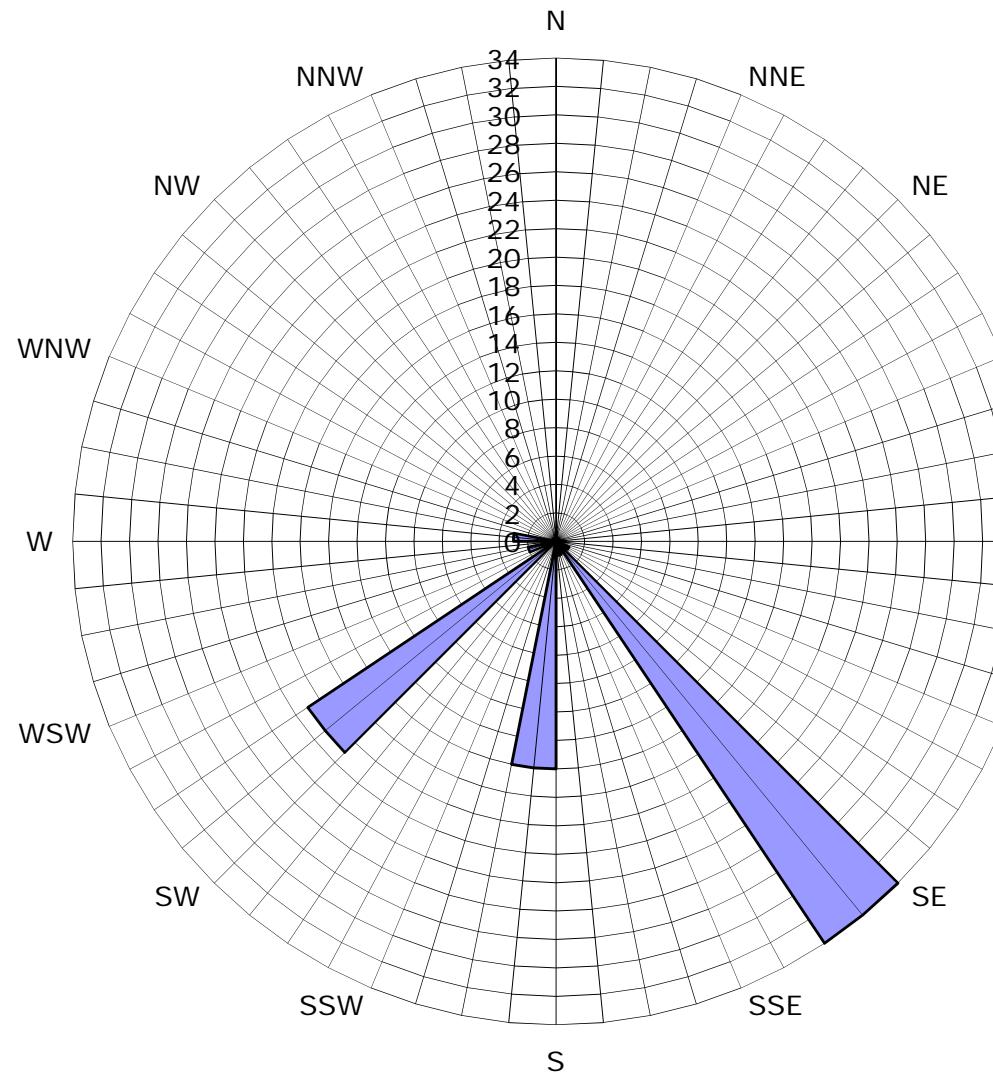


Figure 5
Historical Groundwater Flow Directions
76 Station No. 5191/5043
449 Hegenberger Road
Oakland, California



Legend
Concentric circles represent quarterly monitoring events
Second Quarter 1992 through Third Quarter 2016. 80 data points shown

Tables

Table 1	Well Construction Details
Table 2	Current Groundwater Gauging and Analytical Data
Table 3	Historical Groundwater Gauging and Analytical Data
Table 3a	Additional Historical Groundwater Analytical Data
Table 3b	Additional Historical Groundwater Analytical Data
Table 3c	Additional Historical Groundwater Analytical Data
Table 3d	Additional Historical Groundwater Analytical Data
Table 4	Historical Groundwater Gradient and Flow Direction Data

TABLE 1
WELL CONSTRUCTION DETAILS



Well I.D.	Drill Date	Well		Screen		Screen Length (feet)	Comments
		Depth (feet bgs)	Diameter (inches)	Top (feet bgs)	Bottom (feet bgs)		
Monitoring Wells							
MW-1	02/05/91	13.5	2	2.0	13.0	11.0	Destroyed
MW-2	02/05/91	15.0	2	3.0	15.0	12.0	Destroyed
MW-3	02/05/91	14.0	2	2.0	14.0	12.0	
MW-4	08/21/92	13.5	2	2.5	13.5	11.0	Destroyed
MW-5	08/21/92	13.5	2	2.5	13.5	11.0	Destroyed
MW-6	08/21/92	13.5	2	2.5	13.5	11.0	Destroyed
MW-7	04/21/97	13.0	2	3.0	13.0	10.0	Destroyed
MW-8	04/21/97	15.0	2	3.0	15.0	12.0	Destroyed
MW-9	01/25/95	13.0	2	3.0	13.0	10.0	
MW-10	01/25/95	13.0	2	3.0	13.0	10.0	Destroyed
MW-11	06/22/10	20.0	4	5.0	20.0	15.0	
MW-12	06/22/10	20.0	4	5.0	20.0	15.0	Destroyed
MW-12A	06/23/10	34.0	2	30.0	34.0	4.0	Destroyed
MW-13	06/22/10	15.0	2	5.0	15.0	10.0	
MW-14	05/17/11	13.0	2	3.0	13.0	10.0	Destroyed
MW-15	05/17/11	13.0	2	3.0	13.0	10.0	
MW-16	05/17/11	13.0	2	3.0	13.0	10.0	
MW-17	05/18/11	13.0	2	3.0	13.0	10.0	Destroyed

TABLE 2
CURRENT GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA								
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	TBA (ug/L)	Ethanol (ug/L)
MW-3	9/19/2016	10.81	3.21	NP	--	7.60	--	93 HD	400	< 0.50	< 1.0	< 1.0	<1.0	21	47	< 100
MW-9	9/19/2016	10.94	2.28	NP	--	8.66	--	< 45	< 50	< 0.50	< 1.0	< 1.0	<1.0	< 1.0	< 10	< 100
MW-11	9/19/2016	10.53	2.84	NP	--	7.69	--	170 HD	< 50	< 0.50	< 1.0	< 1.0	<1.0	7.6	< 10	< 100
MW-13	9/19/2016	11.08	4.12	NP	--	6.96	--	< 45	< 50	< 0.50	< 1.0	< 1.0	<1.0	20	30	< 100
MW-15	9/19/2016	11.11	3.50	NP	--	7.61	--	< 45	< 50	< 0.50	< 1.0	< 1.0	<1.0	47	35	< 100
MW-16	9/19/2016	10.98	3.19	NP	--	7.79	--	490 HD	< 50	< 0.50	< 1.0	< 1.0	<1.0	5.7	87	< 100

Gauging Notes:

TOC - Top of Casing

ft - Feet

LNAPL - Light non-aqueous phase liquid

NP - Not present

* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)

-- No information available

Analytical Notes:

< - Below laboratory's indicated reporting limit

ug/L - micrograms/liter

TPHd- Total petroleum hydrocarbons as diesel (silica gel treated)

TPHg- Total petroleum hydrocarbons as gasoline, also known as Gasoline Range Organics (GRO)

MTBE- Methyl tertiary-butyl ether

TBA- Tertiary-butyl alcohol

Bold - Above the laboratory's indicated reporting limit

HD - The chromatographic pattern was inconsistent with the profile of the reference fuel standard

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER ELEVATION DATA					GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)
MW-1	2/18/1992	--	--	--	--	--	NG	13,000	150,000	17,000	26,000	5,200	26,000	--	--	--	--	--	--	--	--
MW-1	5/20/1992	--	--	--	--	--	NG	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	8/31/1992	--	--	--	--	--	NG	8,900	64,000	13,000	12,000	2,500	22,000	--	--	--	--	--	--	--	--
MW-1	11/30/1992	--	--	--	--	--	NG	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	2/4/1993	--	--	--	--	--	NG	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	5/4/1993	8.96	2.13	2.03	0.10	6.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	8/4/1993	8.96	2.92	2.89	0.03	6.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	11/3/1993	7.38	3.04	NP	--	4.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	2/7/1994	7.38	2.55	2.52	0.03	4.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	5/19/1994	7.38	2.23	2.22	0.01	5.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	6/25/1994	7.38	2.49	2.48	0.01	4.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	7/27/1994	7.38	3.10	NP	--	4.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	8/15/1994	7.38	2.85	2.74	0.11	4.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	11/14/1994	7.38	2.97	2.85	0.12	4.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	2/21/1995	7.38	1.53	1.51	0.02	5.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	5/18/1995	7.38	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	2/18/1992	--	--	--	--	--	NG	4,300	29,000	1,000	5,300	260	7,900	--	--	--	--	--	--	--	--
MW-2	5/20/1992	--	--	--	--	--	NG	4,300	24,000	2,200	7,600	630	11,000	--	--	--	--	--	--	--	--
MW-2	8/31/1992	--	--	--	--	--	NG	1,600	9,000	1,800	640	140	2,000	--	--	--	--	--	--	--	--
MW-2	11/30/1992	--	--	--	--	--	NG	5,700	29,000	2,000	3,400	1,200	6,900	--	--	--	--	--	--	--	--
MW-2	2/4/1993	--	--	--	--	--	NG	6,100	18,000	1,600	3,000	ND	6,900	--	--	--	--	--	--	--	--
MW-2	5/4/1993	8.96	2.48	NP	--	6.48	--	7,100	63,000	3,200	17,000	470	17,000	--	--	--	--	--	--	--	--
MW-2	8/4/1993	8.96	3.20	NP	--	5.76	--	1,800	45,000	2,100	6,600	1,400	12,000	--	--	--	--	--	--	--	--
MW-2	11/3/1993	8.58	3.37	NP	--	5.21	--	2,600	72,000	3,700	16,000	3,700	20,000	--	--	--	--	--	--	--	--
MW-2	2/7/1994	8.58	2.40	NP	--	6.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	5/19/1994	8.58	2.13	NP	--	6.45	--	3,000	42,000	2,500	1,300	2,300	13,000	--	--	--	--	--	--	--	--
MW-2	6/25/1994	8.58	2.65	NP	--	5.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	7/27/1994	8.58	3.44	NP	--	5.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	8/15/1994	8.58	3.25	NP	--	5.33	--	2,800	35,000	2,400	850	1,700	15,000	--	--	--	--	--	--	--	--
MW-2	11/14/1994	8.58	2.13	NP	--	6.45	--	10,000	43,000	2,200	6,500	1,800	14,000	--	--	--	--	--	--	--	--
MW-2	2/21/1995	8.58	1.65	NP	--	6.93	--	2,000	44,000	2,200	3,200	1,300	1,500	--	--	--	--	--	--	--	--
MW-2	5/18/1995	8.58	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	2/18/1992	--	--	--	--	--	NG	ND	230	4.8	22	1.8	33	--	--	--	--	--	--	--	--
MW-3	5/20/1992	--	--	--	--	--	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	8/31/1992	--	--	--	--	--	NG	92	210	1	ND	ND	ND	--	--	--	--	--	--	--	--
MW-3	11/30/1992	--	--	--	--	--	NG	94	790	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-3	2/4/1993	--	--	--	--	--	NG	550	3,300	320	ND	96	6.1	--	--	--	--	--	--	--	--
MW-3	5/4/1993	7.84	4.32	NP	--	3.52	--	250	1,800	95	ND	ND	ND	--	--	--	--	--	--	--	--
MW-3	8/4/1993	7.84	4.94	NP	--	2.90	--	100	210	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-3	11/3/1993	7.42	4.53	NP	--	2.89	--	160	640	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-3	2/7/1994	7.42	2.40	NP	--	5.02	--	620	2,700	110	ND	17	ND	--	--	--	--	--	--	--	--
MW-3	5/19/1994	7.42	3.60	NP	--	3.82	--	480	1,800	83	ND	6.2	9.1	--	--	--	--	--	--	--	--
MW-3	6/25/1994	7.42	4.58	NP	--	2.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	7/27/1994	7.42	4.58	NP	--	2.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	8/15/1994	7.42	4.65	NP	--	2.77	--	110	130												

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)
MW-3	1/25/1999	8.04	2.42	NP	--	5.62	--	120	420	1.5	ND	ND	180	--	--	--	--	--	--	--	--	
MW-3	4/15/1999	8.04	2.16	NP	--	5.88	--	170	290	0.54	ND	ND	160	--	--	--	--	--	--	--	--	
MW-3	7/14/1999	8.04	2.35	NP	--	5.69	--	420	290	3.2	ND	ND	160	--	--	--	--	--	--	--	--	
MW-3	10/21/1999	8.04	2.49	NP	--	5.55	--	350	360	0.77	ND	ND	82	--	--	--	--	--	--	--	--	
MW-3	1/20/2000	8.04	2.38	NP	--	5.66	--	2,060	ND	0.81	ND	ND	54	--	--	--	--	--	--	--	--	
MW-3	4/13/2000	8.04	2.76	NP	--	5.28	--	200	250	0.69	ND	ND	91	150	ND	ND	ND	ND	ND	ND	ND	
MW-3	7/14/2000	8.04	3.26	NP	--	4.78	--	423	345	ND	ND	ND	94.7	--	--	--	--	--	--	--	--	--
MW-3	10/26/2000	8.04	3.12	NP	--	4.92	--	330	480	6.0	ND	ND	120	--	--	--	--	--	--	--	--	--
MW-3	1/3/2001	8.04	3.65	NP	--	4.39	--	287	364	1.59	ND	ND	118	--	--	--	--	--	--	--	--	--
MW-3	4/4/2001	8.04	3.98	NP	--	4.06	--	360	417	1.24	ND	ND	0.802	237	--	--	--	--	--	--	--	--
MW-3	7/17/2001	8.04	3.12	NP	--	4.92	--	270	480	ND	ND	ND	150	--	--	--	--	--	--	--	--	--
MW-3	10/1/2001	8.04	3.25	NP	--	4.79	--	270	310	1.0	< 0.50	< 0.50	53	--	--	--	--	--	--	--	--	--
MW-3	1/31/2002	8.04	2.27	NP	--	5.77	--	250	250	3.5	< 1.0	< 1.0	110	--	--	--	--	--	--	--	--	--
MW-3	4/18/2002	8.04	3.55	NP	--	4.49	--	320	300	< 2.0	< 2.0	< 2.0	--	59	--	--	--	--	--	--	--	--
MW-3	7/28/2002	8.04	2.55	NP	--	5.49	--	310	500	< 0.50	< 0.50	< 0.50	< 1.0	--	130	--	--	--	--	--	--	--
MW-3	10/9/2002	8.04	2.47	NP	--	5.57	--	700	690	< 5	< 5	< 5	< 10	--	120	--	--	--	--	--	--	--
MW-3	1/2/2003	8.04	1.70	NP	--	6.34	--	210	310	< 0.50	< 0.50	< 0.50	< 1.0	--	110	< 2.0	< 2.0	< 2.0	< 100	< 500	< 2.0	< 2.0
MW-3	4/1/2003	8.04	3.48	NP	--	4.56	--	200	250	< 1.0	< 1.0	< 1.0	< 2.0	--	210	--	--	--	--	--	--	--
MW-3	7/1/2003	8.04	2.65	NP	--	5.39	--	380	450	< 2.5	< 2.5	< 2.5	< 5.0	--	70	--	--	--	--	< 2500	--	--
MW-3	10/2/2003	8.04	3.12	NP	--	4.92	--	300	< 250	< 2.5	< 2.5	< 2.5	< 5.0	--	210	--	--	--	--	< 2500	--	--
MW-3	1/9/2004	8.04	2.39	NP	--	5.65	--	200	300	< 0.50	0.53	0.53	1.5	--	66	--	--	--	< 500	--	--	--
MW-3	4/26/2004	8.04	3.11	NP	--	4.93	--	160	440	2.5	5.5	2.9	9.4	--	81	--	--	--	< 50	--	--	--
MW-3	7/22/2004	8.04	2.51	NP	--	5.53	--	330	420	< 0.5	< 0.5	< 0.5	< 1	--	72	--	--	--	< 1000	--	--	--
MW-3	10/29/2004	8.04	2.00	NP	--	6.04	--	200	460	5.6	15	10	46	--	48	--	--	--	< 50	--	--	--
MW-3	1/10/2005	8.04	1.52	NP	--	6.52	--	250	280	< 0.50	0.62	< 0.50	2.4	--	64	--	--	--	< 50	--	--	--
MW-3	6/15/2005	8.04	2.00	NP	--	6.04	--	360	460	< 0.50	0.70	0.56	1.9	--	110	--	--	--	< 50	--	--	--
MW-3	9/27/2005	8.04	1.90	NP	--	6.14	--	< 200	210	< 0.50	0.60	< 0.50	< 1.0	--	100	< 0.50	< 0.50	< 0.50	79	< 250	--	--
MW-3	12/13/2005	8.04	2.35	NP	--	5.69	--	230	230	< 0.50	< 0.50	< 0.50	< 1.0	--	92	--	--	--	< 250	--	--	--
MW-3	3/23/2006	8.04	1.84	NP	--	6.20	--	260	290	< 0.50	< 0.50	< 0.50	< 1.0	--	88	--	--	--	< 250	--	--	--
MW-3	6/23/2006	8.04	2.26	NP	--	5.78	--	330	500	< 0.50	< 0.50	< 0.50	< 1.0	--	75	--	--	--	< 250	--	--	--
MW-3	9/26/2006	8.04	2.08	NP	--	5.96	--	260	270	< 0.50	< 0.50	< 0.50	< 0.50	--	73	--	--	--	< 250	--	--	--
MW-3	12/22/2006	8.04	1.88	NP	--	6.16	--	250	260	< 0.50	< 0.50	< 0.50	1.2	--	71	--	--	--	< 250	--	--	--
MW-3	3/30/2007	8.04	2.47	NP	--	5.57	--	210	390	< 0.50	< 0.50	< 0.50	< 0.50	--	120	--	--	--	< 250	--	--	--
MW-3	6/28/2007	8.04	2.54	NP	--	5.50	--	290	370	< 0.50	< 0.50	< 0.50	< 0.50	--	55	--	--	--	< 250	--	--	--
MW-3	9/25/2007	8.04	2.56	NP	--	5.48	--	210	350	< 0.50	< 0.50	< 0.50	< 0.50	--	61	--	--	--	< 250	--	--	--
MW-3	12/28/2007	8.04	2.29	NP	--	5.75	--	150	260	< 0.50	< 0.50	< 0.50	< 1.0	--	66	--	--	--	< 250	--	--	--
MW-3	3/22/2008	8.04	3.26	NP	--	4.78	--	230	390	< 0.50	< 0.50	< 0.50	< 1.0	--	39	--	--	--	< 250	--	--	--
MW-3	6/23/2008	8.04	2.60	NP	--	5.44	--	130	200	< 0.50	< 0.50	< 0.50	< 1.0	--	46	--	--	--	< 250</td			

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)
MW-3	9/5/2014	10.81	3.62	NP	--	7.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/22/2014	10.81	2.07	NP	--	8.74	--	< 50	250	< 0.50	< 0.50	< 0.50	< 0.50	--	15	--	--	--	35	< 5.0	--	--
MW-3	3/16/2015	10.81	2.73	NP	--	8.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	6/11/2015	10.81	3.31	NP	--	7.50	--	63	< 250	< 2.5	< 5.0	< 5.0	--	--	21	--	--	--	85	< 500	--	--
MW-3	12/8/2015	10.81	3.52	NP	--	7.29	--	< 50	< 250	< 2.5	< 5.0	< 5.0	< 5.0	--	16	--	--	--	160	< 500	--	--
MW-3	3/8/2016	10.81	2.21	NP	--	8.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	6/29/2016	10.81	3.65	NP	--	7.16	--	65	79	< 0.50	< 1.0	< 1.0	--	--	23	--	--	--	120	< 100	--	--
MW-3	9/19/2016	10.81	3.21	NP	--	7.60	--	93 HD	400	< 0.50	< 1.0	< 1.0	< 1.0	--	21	--	--	--	47	< 100	--	--
MW-4	8/31/1992	--	--	--	--	--	NG	90	240	ND	ND	ND	0.54	--	--	--	--	--	--	--	--	--
MW-4	11/30/1992	--	--	--	--	--	NG	61	420	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
MW-4	2/4/1993	--	--	--	--	--	NG	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
MW-4	5/4/1993	9.00	4.09	NP	--	4.91	--	ND	110	0.95	ND	ND	--	--	--	--	--	--	--	--	--	--
MW-4	8/4/1993	9.00	5.01	NP	--	3.99	--	81	250	ND	3.5	ND	4.1	--	--	--	--	--	--	--	--	--
MW-4	11/3/1993	8.41	4.23	NP	--	4.18	--	68	130	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
MW-4	2/7/1994	8.41	3.35	NP	--	5.06	--	ND	56	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
MW-4	5/19/1994	8.41	3.92	NP	--	4.49	--	90	140	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
MW-4	6/25/1994	8.41	4.35	NP	--	4.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	7/27/1994	8.41	4.28	NP	--	4.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	8/15/1994	8.41	4.27	NP	--	4.14	--	72	59	ND	0.6	ND	ND	--	--	--	--	--	--	--	--	--
MW-4	11/14/1994	8.41	4.05	NP	--	4.36	--	ND	130	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
MW-4	2/21/1995	8.41	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	8/31/1992	--	--	--	--	--	NG	690	78	0.89	ND	ND	13	--	--	--	--	--	--	--	--	--
MW-5	11/30/1992	--	--	--	--	--	NG	470	930	70	290	0.79	14	--	--	--	--	--	--	--	--	--
MW-5	2/4/1993	--	--	--	--	--	NG	5,500	5,700	38	ND	620	170	--	--	--	--	--	--	--	--	--
MW-5	5/4/1993	8.95	4.37	NP	--	4.58	--	4,600	7,400	41	ND	1,000	35	--	--	--	--	--	--	--	--	--
MW-5	8/4/1993	8.95	5.81	NP	--	3.14	--	970	1,500	130	1	460	11	--	--	--	--	--	--	--	--	--
MW-5	11/3/1993	8.95	5.68	NP	--	3.27	--	2,100	13,000	350	ND	3,500	530	--	--	--	--	--	--	--	--	--
MW-5	2/7/1994	8.95	5.11	NP	--	3.84	--	830	2,000	87	ND	370	110	--	--	--	--	--	--	--	--	--
MW-5	5/19/1994	8.95	5.09	NP	--	3.86	--	600	260	44	ND	32	4.1	--	--	--	--	--	--	--	--	--
MW-5	6/25/1994	8.95	4.55	NP	--	4.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/27/1994	8.95	5.72	NP	--	3.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	8/15/1994	8.95	5.68	NP	--	3.27	--	860	1,600	110	ND	340	72	--	--	--	--	--	--	--	--	--
MW-5	11/14/1994	8.95	5.63	NP	--	3.32	--	290	250	40	ND	5	--	--	--	--	--	--	--	--	--	--
MW-5	2/21/1995	8.95	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	8/31/1992	--	--	--	--	--	NG	750	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
MW-6	11/30/1992	--	--	--	--	--	NG	1,400	9,200	550	ND	740	1,600	--	--	--	--	--	--	--	--	--
MW-6	2/4/1993	--	--	--	--	--	NG	890	3,600	340	ND	290	550	--	--	--	--	--	--	--	--	--
MW-6	5/4/1993	9.12	3.72	NP	--	5.40	--	1,800	4,900	360	18	450	430	--	--	--	--	--	--	--	--	--
MW-6	8/4/1993	9.12	5.15	NP	--	3.97	--	1,100	3,400	390	ND	440	190	--	--	--	--	--	--	--	--	--
MW-6	11/3/1993	8.87	5.25	NP	--	3.62	--	390	1,400	320	ND	200	7.7	--	--	--	--	--	--	--	--	--
MW-6	2/7/1994	8.87	4.55	NP	--	4.32	--	970	4,900	650	ND	250	35	--	--	--	--	--	--	--	--	--
MW-6	5/19/1994	8.87	4.62	NP	--	4.25	--	1,400	3,600	300	1.7	210	41	--	--	--	--	--	--	--	--	--
MW-6	8/15/1994	8.87	5.08	NP	--	3.79	--</td															

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ELEVATION DATA							GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)
MW-6	3/17/1997	8.87	4.50	3.61	0.89	5.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3/31/1997	8.87	4.65	3.65	1.00	4.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	4/15/1997	8.87	4.90	3.87	1.03	4.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	4/28/1997	8.87	4.78	4.75	0.03	4.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	5/15/1997	8.87	4.60	4.35	0.25	4.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	5/27/1997	8.87	4.50	4.25	0.25	4.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/9/1997	8.87	4.60	4.40	0.20	4.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/24/1997	8.87	4.50	4.25	0.25	4.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/9/1997	8.87	4.80	4.20	0.60	4.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/15/1997	8.87	4.63	4.21	0.42	4.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/21/1997	8.87	4.75	4.50	0.25	4.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	8/6/1997	8.87	4.50	4.40	0.10	4.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	8/20/1997	8.87	4.55	4.45	0.10	4.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/2/1997	8.87	4.75	4.70	0.05	4.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	10/9/1997	8.87	4.84	4.80	0.04	4.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	1/14/1998	8.87	3.90	2.96	0.94	5.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	2/12/1998	8.87	3.35	2.71	0.64	6.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3/3/1998	8.87	4.51	4.49	0.02	4.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	4/1/1998	8.87	3.67	2.07	1.60	6.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	5/26/1998	8.87	4.11	3.61	0.50	5.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/15/1998	8.87	5.03	4.73	0.30	4.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/15/1998	8.87	4.56	4.51	0.05	4.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	8/21/1998	8.87	4.77	4.75	0.02	4.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/30/1998	8.87	5.08	5.05	0.03	3.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	10/16/1998	8.87	4.31	1.91	2.40	6.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	11/6/1998	8.87	3.98	3.81	0.17	5.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	11/25/1998	8.87	3.92	3.82	0.10	5.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/28/1998	8.87	3.90	3.70	0.20	5.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	1/25/1999	8.87	4.18	3.58	0.60	5.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	2/22/1999	8.87	4.07	3.85	0.22	4.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3/22/1999	8.87	4.32	4.17	0.15	4.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	4/15/1999	8.87	4.23	3.28	0.95	5.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	5/28/1999	8.87	4.38	3.99	0.39	4.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/29/1999	8.87	4.12	4.10	0.02	4.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/14/1999	8.87	4.20	4.17	0.03	4.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	8/23/1999	8.87	4.51	4.27	0.24	4.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/30/1999	8.87	4.17	4.00	0.17	4.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	10/21/1999	8.87	4.27	4.15	0.12	4.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	11/29/1999	8.87	4.18	NP	--	4.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/20/1999	8.87	4.26	4.25	0.01	4.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	1/20/2000	8.87	4.31	NP	--	4.56	--	67,600	130,000	2,900	8,600	2,000	16,000	ND	--	--	--	--	--	--	--	--
MW-6	2/26/2000	8.87	3.98	NP	--	4.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3/31/2000	8.87	4.14	NP	--	4.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	4/13/2000	8.87	4.04	NP	--	4.83	--	8,700	140,000	5,000	14,000	3,600	27,000	7,700	--	--	--	--	--	--	--	--
MW-6	5/26/2000	8.87	4.41	NP	--	4.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	6/17/2000	8.87	4.35	NP	--	4.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/14/2000	8.87	4.47	NP	--	4.40	--	133,000	259,000	7,670	13,700	6,860	40,700	ND	ND	--	--	--	--	--	--	--
MW-6	8/24/2000	8.87	3.71	NP	--	5.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/27/2000	8.87	4.33	NP	--	4.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	10/26/2000	8.87	4.32	NP	--	4.55	--	61,000	110,000	7,000	6,200	3,700	12,000	670	43	--	--	--	--	--	--	--
MW-6	1/3/2001	8.87	4.52	NP	--	4.35	--	929	84,700	3,950	4,130	3,650	11,800	ND	ND	--	--	--	--	--	--	--
MW-6	4/4/2001	8.87	4.29	NP	--	4.58	--	18,000	69,800	2,060	2,840	3,650	10,900	ND	47.8	ND	ND	ND	ND	ND	ND	ND
MW-6	7/17/2001	8.87	4.37	NP	--	4.50	--	20,000	100,000	3,200	3,300	3,400	12,000	ND	--	--	--	--	--	--	--	--
MW-6	10/1/2001	8.87	4.45	NP	--	4.42	--	24,000	110,000	3,200	2,400	4,500	13,000	< 1000	--	--	--	--	--	--	--	--
MW-6	1/31/2002	8.87	4.03	NP	--	4.84	--	11,000	230,000	2,400	1,800	5,400	16,000	< 2500	--	--	--	--	--	--	--	--
MW-6	4/18/2002	8.87	3.45	NP	--	5.42	--	3,500	94,000	6,800	13,000	3,000	19,000	< 500	--	--	--	--	--	--	--	--
MW-6	7/28/2002	8.87	2																			

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)
MW-6	4/26/2004	8.87	3.40	NP	--	5.47	--	13,000	97,000	5,900	9,000	5,100	23,000	--	< 50	--	--	--	< 5000	--	--	
MW-6	7/22/2004	8.87	3.54	NP	--	5.33	--	33,000	110,000	4,100	5,100	4,000	16,000	--	< 200	--	--	--	< 300000	--	--	
MW-6	10/29/2004	8.87	3.03	NP	--	5.84	--	78,000	100,000	5,200	6,100	4,200	15,000	--	< 50	--	--	--	< 5000	--	--	
MW-6	1/10/2005	8.87	2.35	NP	--	6.52	--	12,000	71,000	1,600	3,700	2,100	9,900	--	< 50	--	--	--	< 5000	--	--	
MW-6	6/15/2005	8.87	2.47	NP	--	6.40	--	16,000	130,000	800	1,800	2,200	9,300	--	< 50	--	--	--	< 5000	--	--	
MW-6	9/27/2005	8.87	2.55	NP	--	6.32	--	2,500	13,000	82	120	430	990	--	0.56	1.8	< 0.50	< 0.50	< 10	< 250	--	--
MW-6	12/13/2005	8.87	3.28	NP	--	5.59	--	18,000	68,000	1,500	1,100	2,200	7,700	--	< 50	--	--	--	< 25000	--	--	
MW-6	3/23/2006	8.87	2.87	NP	--	6.00	--	73,000	41,000	290	140	1,500	2,700	--	< 50	--	--	--	< 25000	--	--	
MW-6	6/23/2006	8.87	3.15	NP	--	5.72	--	35,000	50,000	2,200	1,400	1,900	5,700	--	< 12	--	--	--	< 6200	--	--	
MW-6	9/26/2006	8.87	3.08	NP	--	5.79	--	22,000	130,000	2,200	1,000	2,900	8,800	--	< 50	--	--	--	< 25000	--	--	
MW-6	12/22/2006	8.87	2.90	NP	--	5.97	--	62,000	90,000	940	610	1,900	4,700	--	< 50	--	--	--	< 25000	--	--	
MW-6	3/30/2007	8.87	3.26	NP	--	5.61	--	62,000	210,000	1,100	560	3,400	12,000	--	< 10	--	--	--	< 5000	--	--	
MW-6	6/28/2007	8.87	3.46	NP	--	5.41	--	71,000	67,000	2,200	1,300	2,700	10,000	--	< 25	--	--	--	< 12000	--	--	
MW-6	9/25/2007	8.87	3.52	NP	--	5.35	--	58,000	56,000	2,900	720	2,400	9,000	--	< 25	--	--	--	< 12000	--	--	
MW-6	12/28/2007	8.87	3.27	NP	--	5.60	--	18,000	78,000	28,000	2,700	4,000	8,100	--	16,000	--	--	--	< 12000	--	--	
MW-6	3/22/2008	8.87	2.48	NP	--	6.39	--	68,000	66,000	380	150	1,500	2,400	--	< 25	--	--	--	< 12000	--	--	
MW-6	6/23/2008	8.87	3.54	NP	--	5.33	--	68,000	59,000	1,600	130	1,800	4,100	--	25	--	--	--	< 12000	--	--	
MW-6	9/19/2008	8.87	4.06	NP	--	4.81	--	180,000	65,000	2,000	230	2,000	4,500	--	< 12	--	--	--	< 6200	--	--	
MW-6	12/31/2008	8.87	3.45	NP	--	5.42	--	68,000	91,000	2,000	320	5,300	13,000	--	< 50	--	--	--	< 25000	--	--	
MW-6	3/27/2009	8.87	3.09	NP	--	5.78	--	170,000	150,000	1,300	240	2,800	7,200	--	< 50	--	--	--	< 25000	--	--	
MW-6	5/28/2009	8.87	3.49	NP	--	5.38	--	78,000	53,000	1,700	200	2,300	5,400	--	< 50	--	--	--	< 25000	--	--	
MW-6	9/17/2009	8.87	3.64	NP	--	5.23	--	250,000	77,000	2,100	1,400	2,600	8,500	--	< 12	--	--	--	< 6200	--	--	
MW-6	12/17/2009	8.87	3.14	NP	--	5.73	--	30,300	59,100	1,730	199	2,260	5,460	--	20.3	--	--	--	< 250	--	--	
MW-6	3/29/2010	8.87	3.16	NP	--	5.71	--	106,000	48,400	1,980	208	3,070	8,070	--	12.1	--	--	--	< 250	--	--	
MW-6	6/30/2010	11.55	3.50	NP	--	8.05	--	170,000	78,700	2,130	281	2,860	8,400	--	5.8	--	--	--	< 250	--	--	
MW-6	7/6/2010	11.55	3.49	NP	--	8.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/20/2010	11.55	3.75	NP	--	7.80	--	18800	64,500	2,300	170	2,770	6,260	--	19.3	--	--	--	< 250	--	--	
MW-6	12/8/2010	11.55	8.42	NP	--	3.13	--	28700	78,400	1,300	1,680	3,490	20,600	--	11.3	--	--	--	< 250	--	--	
MW-6	3/14/2011	11.55	3.40	NP	--	8.15	--	93000	44,600	912	338	728	3,670	--	16.3	--	--	--	134	< 250	--	
MW-6	6/2/2011	11.55	2.76	NP	--	8.79	--	33700	56,200	780	262	651	3,890	--	6.7	--	--	--	81.0	< 250	--	
MW-6	9/7/2011	11.55	2.83	NP	--	8.72	--	6780	16,600	15.6	10.6	89.6	339	--	< 0.50	--	--	--	< 250	--	--	
MW-6	12/5/2011	11.55	3.56	NP	--	7.99	--	20200	64,600	646	95.4	924	4,050	--	14.9	--	--	--	< 250	--	--	
MW-6	3/6/2012	11.55	3.43	NP	--	8.12	--	14800	55,000	1,020	131	1,320	4,730	--	18.5	--	--	--	316	< 1250	--	
MW-6	6/11/2012	11.55	3.33	NP	--	8.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	6/12/2012	--	--	--	--	--	--	47,100	33,400	773	60.8	840	3,110	--	11.4	--	--	--	123	< 250	--	
MW-6	9/6/2012	11.55	2.85	NP	--	8.70	--	< 1000	24,000	450	51	610	1,800	--	6.4	< 4.0	< 4.0	< 4.0	82	< 40	< 4.0	
MW-6	12/13/2012	11.55	2.90	NP	--	8.65	--	470	20,000	200	16	350	1,100	--	< 4.0	--</td						

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA															
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)	
MW-8	1/25/1999	8.52	2.92	NP	--	5.60	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-8	4/15/1999	8.52	2.40	NP	--	6.12	--	91	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-8	7/14/1999	8.52	3.03	NP	--	5.49	--	120	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-8	10/21/1999	8.52	3.11	NP	--	5.41	--	110	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-8	1/20/2000	8.52	3.06	NP	--	5.46	--	583	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-8	4/13/2000	8.52	2.84	NP	--	5.68	--	80	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-8	7/14/2000	8.52	3.39	NP	--	5.13	--	113	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-8	7/17/2001	8.52	3.46	NP	--	5.06	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-8	10/1/2001	8.52	3.51	NP	--	5.01	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	--	--	--	--	--	--	--	--	
MW-8	1/31/2002	8.52	2.75	NP	--	5.77	--	260	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	--	--	--	--	--	--	--	--	
MW-8	4/18/2002	8.52	2.98	NP	--	5.54	--	160	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	--	--	--	--	--	--	--	--	
MW-8	7/28/2002	8.52	2.41	NP	--	6.11	--	140	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	--	--	--	--	
MW-8	10/9/2002	8.52	2.09	NP	--	6.43	--	120	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	--	--	--	--	
MW-8	1/2/2003	8.52	1.98	NP	--	6.54	--	210	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	--	--	--	--	
MW-8	4/1/2003	8.52	2.66	NP	--	5.86	--	220	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	--	--	--	--	
MW-8	7/1/2003	8.52	3.08	NP	--	5.44	--	170	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	< 500	--	--	--	
MW-8	10/2/2003	8.52	3.89	NP	--	4.63	--	350	540	3.9	15	29	80	--	< 2.0	--	--	--	< 500	--	--	--	
MW-8	1/9/2004	8.52	2.38	NP	--	6.14	--	180	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	< 500	--	--	--	
MW-8	4/26/2004	8.52	2.89	NP	--	5.63	--	100	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 50	--	--	--	
MW-8	7/22/2004	8.52	3.25	NP	--	5.27	--	250	< 50	< 0.5	< 0.5	< 0.5	< 1	--	< 0.5	--	--	--	< 1000	--	--	--	
MW-8	10/29/2004	8.52	3.06	NP	--	5.46	--	120	< 50	< 0.50	< 0.50	0.82	2.5	--	< 0.50	--	--	--	< 50	--	--	--	
MW-8	1/10/2005	8.52	1.92	NP	--	6.60	--	140	58	< 0.50	0.61	1.2	4.0	--	< 0.50	--	--	--	< 50	--	--	--	
MW-8	6/15/2005	8.52	2.22	NP	--	6.30	--	140	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 50	--	--	--	
MW-8	9/27/2005	8.52	2.43	NP	--	6.09	--	< 200	< 50	< 0.50	< 0.50	1.2	< 1.0	--	< 0.50	< 0.50	< 0.50	< 0.50	< 10	< 250	--	--	
MW-8	12/13/2005	8.52	2.89	NP	--	5.63	--	< 200	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	--	
MW-8	3/23/2006	8.52	2.12	NP	--	6.40	--	< 200	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	--	
MW-8	6/23/2006	8.52	2.65	NP	--	5.87	--	< 230	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	--	
MW-8	9/26/2006	8.52	2.75	NP	--	5.77	--	110	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	--
MW-8	12/22/2006	8.52	2.58	NP	--	5.94	--	100	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 250	--	--	--
MW-8	3/30/2007	8.52	2.74	NP	--	5.78	--	120	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 250	--	--	--
MW-8	6/28/2007	8.52	2.90	NP	--	5.62	--	140	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 250	--	--	--
MW-8	9/25/2007	8.52	3.26	NP	--	5.26	--	110	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 250	--	--	--
MW-8	12/28/2007	8.52	2.64	NP	--	5.88	--	110	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	--
MW-8	3/22/2008	8.52	2.31	NP	--	6.21	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	--
MW-8	6/23/2008	8.52	3.13	NP	--	5.39	--	< 58	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	--
MW-8	9/19/2008	8.52	3.72	NP	--	4.80	--	79	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	--</td								

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA															
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)	
MW-9	8/17/1995	8.29	1.49	NP	--	6.80	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
MW-9	7/26/1996	8.29	0.28	NP	--	8.01	--	98	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-9	10/28/1996	8.29	1.15	NP	--	7.14	--	99	ND	ND	ND	ND	ND	ND	7.6	--	--	--	--	--	--	--	
MW-9	1/29/1997	8.29	1.05	NP	--	7.24	--	54	ND	ND	ND	ND	ND	ND	5.4	--	--	--	--	--	--	--	
MW-9	4/15/1997	8.29	1.88	NP	--	6.41	--	94	ND	ND	ND	ND	ND	ND	5.4	--	--	--	--	--	--	--	
MW-9	5/27/1997	8.29	1.05	NP	--	7.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/15/1997	8.29	1.90	NP	--	6.39	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-9	10/9/1997	8.29	1.76	NP	--	6.53	--	160	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-9	1/14/1998	8.29	1.26	NP	--	7.03	--	110	ND	ND	ND	ND	ND	ND	3.0	--	--	--	--	--	--	--	
MW-9	4/1/1998	8.29	0.85	NP	--	7.44	--	110	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-9	7/15/1998	8.29	1.52	NP	--	6.77	--	200	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-9	10/16/1998	8.29	0.81	NP	--	7.48	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-9	1/25/1999	8.29	0.92	NP	--	7.37	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-9	4/15/1999	8.29	0.90	NP	--	7.39	--	ND	75	21	ND	ND	1.1	680	--	--	--	--	--	--	--	--	
MW-9	7/14/1999	8.29	1.04	NP	--	7.25	--	140	ND	1.9	ND	ND	ND	260	--	--	--	--	--	--	--	--	
MW-9	10/21/1999	8.29	1.23	NP	--	7.06	--	210	ND	ND	ND	ND	ND	170	--	--	--	--	--	--	--	--	
MW-9	1/20/2000	8.29	1.18	NP	--	7.11	--	519	ND	1.1	ND	ND	ND	35	--	--	--	--	--	--	--	--	
MW-9	4/13/2000	8.29	1.08	NP	--	7.21	--	81	160	0.64	ND	ND	ND	53	--	--	--	--	--	--	--	--	
MW-9	7/14/2000	8.29	1.43	NP	--	6.86	--	107	ND	ND	ND	ND	ND	20.2	--	--	--	--	--	--	--	--	
MW-9	10/26/2000	8.29	1.38	NP	--	6.91	--	240	240	2.9	ND	ND	ND	56	--	--	--	--	--	--	--	--	
MW-9	1/3/2001	8.29	1.66	NP	--	6.63	--	164	166	0.763	0.776	ND	1.28	50.2	--	--	--	--	--	--	--	--	
MW-9	4/4/2001	8.29	1.27	NP	--	7.02	--	240	296	0.738	ND	ND	0.907	135	--	--	--	--	--	--	--	--	
MW-9	7/17/2001	8.29	1.38	NP	--	6.91	--	ND	ND	ND	ND	ND	ND	13	--	--	--	--	--	--	--	--	
MW-9	10/1/2001	8.29	1.93	NP	--	6.36	--	<52	51	<0.50	<0.50	<0.50	<0.50	5.0	--	--	--	--	--	--	--	--	
MW-9	1/31/2002	8.29	2.08	NP	--	6.21	--	200	<50	<0.50	<0.50	<0.50	<0.50	5.8	--	--	--	--	--	--	--	--	
MW-9	4/18/2002	8.29	1.76	NP	--	6.53	--	<50	<50	<0.50	<0.50	<0.50	<0.50	5.1	--	--	--	--	--	--	--	--	
MW-9	7/28/2002	8.29	1.57	NP	--	6.72	--	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	3.5	--	--	--	--	--	--	
MW-9	10/9/2002	8.29	1.45	NP	--	6.84	--	100	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	17	--	--	--	--	--	--	
MW-9	1/2/2003	8.29	1.18	NP	--	7.11	--	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	8.6	--	--	--	--	--	--	
MW-9	4/1/2003	8.29	2.04	NP	--	6.25	--	56	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	9.4	--	--	--	--	--	--	--
MW-9	7/1/2003	8.29	2.80	NP	--	5.49	--	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	3.2	--	--	--	--	<500	--	--
MW-9	10/2/2003	8.29	2.70	NP	--	5.59	--	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	<500	--	--
MW-9	1/9/2004	8.29	1.90	NP	--	6.39	--	91	74	<0.50	0.98	2.3	6.2	--	<2.0	--	--	--	--	--	<500	--	--
MW-9	4/26/2004	8.29	1.62	NP	--	6.67	--	<50	51	<0.50	<0.50	<0.50	<0.50	<1.0	--	0.51	--	--	--	--	<50	--	--
MW-9	7/22/2004	8.29	1.88	NP	--	6.41	--	<200	<50	<0.5	<0.5	<0.5	<0.5	<1	--	0.78	--	--	--	--	<1000	--	--
MW-9	10/29/2004	8.29	1.28	NP	--	7.01	--	76	<50	<0.50	<0.50	<0.50	<0.50	1.0	--	<0.50	--	--	--	--	<50	--	--
MW-9	1/10/2005	8.29	0.07	NP	--	8.22	--	77	93	0.60	2.3	2.4	9.0	--	<0.50	--	--	--	--	--	<50	--	--
MW-9	6/15/2005	8.29	1.70	NP	--	6.59	--	67	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	6.6	--	--	--	--	<50	--	--
MW-9	9/27/2005	8.29	1.98	NP	--	6.31	--	<200	<50	<0.50	<0.50	0.73	<0.50	<1.0	--	2.3	<0.50	<0.50	<0.50	<10	<250	--	--
MW-9	12/13/2005	8.29	2.26	NP	--	6.03																	

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)
MW-9	9/7/2011	10.94	2.46	NP	--	8.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	12/5/2011	10.94	2.43	NP	--	8.51	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	4.0	--	--	--	< 250	--	--	
MW-9	3/6/2012	10.94	3.03	NP	--	7.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/11/2012	10.94	1.75	NP	--	9.19	--	< 37.9	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	< 5.0	< 250	--	--	
MW-9	9/6/2012	10.94	1.24	NP	--	9.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/13/2012	10.94	1.80	NP	--	9.14	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	< 5.0	< 5.0	--	--	
MW-9	3/14/2013	10.94	2.38	NP	--	8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/11/2013	10.94	2.81	NP	--	8.13	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	4.2	--	--	< 5.0	< 5.0	--	--	
MW-9	9/10/2013	10.94	2.63	NP	--	8.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/12/2013	10.94	1.78	NP	--	9.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	3/4/2014	10.94	1.93	NP	--	9.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/12/2014	10.94	2.39	NP	--	8.55	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	3.3	--	--	< 5.0	< 5.0	--	--	
MW-9	9/5/2014	10.94	3.49	NP	--	7.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/22/2014	10.94	1.58	NP	--	9.36	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	5.2	--	--	< 5.0	< 5.0	--	--	
MW-9	3/16/2015	10.94	2.42	NP	--	8.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/11/2015	10.94	2.95	NP	--	7.99	--	< 50	< 100	< 1.0	< 2.0	< 2.0	--	--	3.8	--	--	< 20	< 200	--	--	
MW-9	12/8/2015	10.94	3.09	NP	--	7.85	--	< 54	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	4.6	--	--	< 10	< 100	--	--	
MW-9	3/8/2016	10.94	1.41	NP	--	9.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/28/2016	10.94	2.94	NP	--	8.00	--	380	< 50	< 0.50	< 1.0	< 1.0	--	--	4.0	--	--	< 10	< 100	--	--	
MW-9	9/19/2016	10.94	2.28	NP	--	8.66	--	< 45	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	< 2.0	--	--	< 10	< 100	--	--	
MW-10	2/21/1995	8.62	4.69	NP	--	3.93	--	270	1,500	250	26	9.1	160	--	--	--	--	--	--	--	--	
MW-10	5/18/1995	8.62	4.92	NP	--	3.70	--	75	810	520	ND	18	23	--	--	--	--	--	--	--	--	
MW-10	8/17/1995	8.62	4.05	NP	--	4.57	--	ND	67	25	ND	2.4	ND	--	--	--	--	--	--	--	--	
MW-10	7/26/1996	8.62	4.08	NP	--	4.54	--	ND	ND	3.7	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-10	10/28/1996	8.62	4.09	NP	--	4.53	--	ND	ND	1.1	ND	ND	ND	--	--	--	--	--	--	--	--	
MW-10	1/29/1997	8.62	2.94	NP	--	5.68	--	ND	210	41	0.67	7.2	4.8	11	--	--	--	--	--	--	--	
MW-10	4/15/1997	8.62	4.07	NP	--	4.55	--	ND	110	12	ND	0.77	ND	9.7	--	--	--	--	--	--	--	
MW-10	5/27/1997	8.62	4.40	NP	--	4.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	7/15/1997	8.62	4.19	NP	--	4.43	--	ND	ND	2.1	ND	0.67	0.73	ND	--	--	--	--	--	--	--	
MW-10	10/9/1997	8.62	4.75	NP	--	3.87	--	ND	190	38	0.92	6.6	7.6	ND	--	--	--	--	--	--	--	
MW-10	1/14/1998	8.62	2.66	NP	--	5.96	--	--	59	9.5	0.85	1.2	1.7	4.5	--	--	--	--	--	--	--	
MW-10	4/1/1998	8.62	3.45	NP	--	5.17	--	62	230	66	1.7	12	17	6.4	--	--	--	--	--	--	--	
MW-10	7/15/1998	8.62	4.21	NP	--	4.41	--	78	290	98	45	21	38	21	--	--	--	--	--	--	--	
MW-10	10/16/1998	8.62	4.11	NP	--	4.51	--	ND	160	44	0.96	2.5	10	17	--	--	--	--	--	--	--	
MW-10	1/25/1999	8.62	3.26	NP	--	5.36	--	ND	140	27	ND	2.8	6.8	23	--	--	--	--	--	--	--	
MW-10	4/15/1999	8.62	3.63	NP	--	4.99	--	ND	120	18	ND	1.8	5.1	14	--	--	--	--	--	--	--	
MW-10	7/14/1999	8.62	3.89	NP	--	4.73	--	180	280	55	3.2	11	31	6.1	--	--	--	--	--	--	--	
MW-10	10/21/1999	8.62	4.09	NP	--	4.53	--	96	140	22	0.59	1.7	7.7	5.3	--	--	--	--	--	--	--	
MW-10	1/20/2000	8.62	3.92	NP	--	4.70	--	252	ND	0.73	0.86 </td											

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)
MW-10	3/23/2006	8.62	3.13	NP	--	5.49	--	< 200	50	13	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	< 250	--	--
MW-10	6/23/2006	8.62	3.90	NP	--	4.72	--	< 200	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 250	--	--	
MW-10	9/26/2006	8.62	3.66	NP	--	4.96	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 250	--	--	
MW-10	12/22/2006	8.62	3.56	NP	--	5.06	--	81	< 50	< 0.50	< 0.50	< 0.50	1.8	--	< 0.50	--	--	--	< 250	--	--	
MW-10	3/30/2007	8.62	3.93	NP	--	4.69	--	82	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 250	--	--	
MW-10	6/28/2007	8.62	4.03	NP	--	4.59	--	57	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 250	--	--	
MW-10	9/25/2007	8.62	3.91	NP	--	4.71	--	82	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 250	--	--	
MW-10	12/28/2007	8.62	3.64	NP	--	4.98	--	62	< 50	2.1	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	
MW-10	3/22/2008	8.62	4.00	NP	--	4.62	--	< 50	64	13	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	
MW-10	6/23/2008	8.62	3.90	NP	--	4.72	--	< 50	94	30	0.53	3.4	3.5	--	< 0.50	--	--	--	< 250	--	--	
MW-10	9/19/2008	8.62	3.85	NP	--	4.77	--	< 50	130	15	1.7	5.7	11	--	< 0.50	--	--	--	< 250	--	--	
MW-10	12/31/2008	8.62	3.69	NP	--	4.93	--	< 50	82	11	< 0.50	0.81	1.7	--	< 0.50	--	--	--	< 250	--	--	
MW-10	3/27/2009	8.62	3.75	NP	--	4.87	--	730	210	28	1.4	1.2	3.9	--	< 0.50	--	--	--	< 250	--	--	
MW-10	5/28/2009	8.62	3.66	NP	--	4.96	--	< 50	< 50	0.91	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	
MW-10	9/17/2009	8.62	3.85	NP	--	4.77	--	65	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	< 250	--	--	
MW-10	12/17/2009	8.62	3.00	NP	--	5.62	--	57.7	< 50.0	1.2	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	< 250	--	--	
MW-10	3/29/2010	8.62	3.81	NP	--	4.81	--	82.2	< 50.0	0.77	< 0.50	< 0.50	3.4	--	< 0.50	--	--	--	< 250	--	--	
MW-10	6/30/2010	10.97	3.90	NP	--	7.07	--	53.4	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	< 250	--	--	
MW-10	7/6/2010	10.97	3.73	NP	--	7.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	9/20/2010	10.97	3.85	NP	--	7.12	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	< 250	--	--	
MW-10	12/8/2010	10.97	3.63	NP	--	7.34	--	< 50.0	< 50.0	1.8	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	< 250	--	--	
MW-10	3/14/2011	10.97	3.46	NP	--	7.51	--	63.3	< 50.0	1.1	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	< 5.0	< 250	--	
MW-10	6/2/2011	10.97	3.92	NP	--	7.05	--	< 50.0	58.7	4.8	4.2	0.96	5.1	--	< 0.50	--	--	--	< 5.0	< 250	--	
MW-10	9/7/2011	10.97	4.06	NP	--	6.91	--	< 50.0	< 50.0	4.1	< 0.50	0.66	2.4	--	< 0.50	--	--	--	< 250	--	--	
MW-10	12/5/2011	10.97	3.82	NP	--	7.15	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	< 250	--	--	
MW-10	3/6/2012	10.97	3.74	NP	--	7.23	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	58.7	< 250	--	
MW-10	6/11/2012	10.97	3.99	NP	--	6.98	--	< 37.9	< 50.0	0.79	< 0.50	< 0.50	< 1.5	--	0.72	--	--	--	17.2	< 250	--	
MW-10	9/6/2012	10.97	4.00	NP	--	6.97	--	110	64	6.9	0.89	1.8	3.9	--	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 5.0	< 0.50	
MW-10	12/13/2012	10.97	3.40	NP	--	7.57	--	< 50	120	15	1.1	1.7	5.2	--	< 0.50	--	--	--	< 5.0	< 5.0	--	
MW-10	3/14/2013	10.97	4.00	NP	--	6.97	--	< 50	86	25	< 0.50	0.56	0.80	--	< 0.50	--	--	--	< 5.0	< 5.0	--	
MW-10	6/11/2013	10.97	4.20	NP	--	6.77	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 8.0	--	--	
MW-10	9/10/2013	10.97	3.92	NP	--	7.05	--	< 50	< 50	< 0.50	< 0.50	< 0.50	1.2	--	< 0.50	--	--	--	< 5.0	< 5.0	--	
MW-10	12/12/2013	10.97	3.85	NP	--	7.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	3/4/2014	10.97	3.38	NP	--	7.59	--	< 50	< 50	1.5	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 5.0	< 5.0	--	
MW-10	6/1/2014	10.97																				

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA															
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)	
MW-12	7/6/2010	11.01	4.00	NP	--	7.01	--	990	20,300	1,030	955	311	2,450	--	1,650	< 0.50	< 0.50	1.0	1,430	< 250	< 1.0	< 1.0	
MW-12	9/20/2010	11.01	4.18	NP	--	6.83	--	5,220	73,700	6,020	6,390	2,970	18,300	--	894	--	--	--	< 250	--	--	--	
MW-12	12/8/2010	11.01	3.92	NP	--	7.09	--	428	3,350	249	117	89.8	558	--	1,470	--	--	--	< 2500	--	--	--	
MW-12	3/14/2011	11.01	3.70	NP	--	7.31	--	283	2,420	287	80.9	49.1	243	--	1,020	--	--	--	69.6	< 250	--	--	
MW-12	6/2/2011	11.01	4.40	NP	--	6.61	--	1,330	12,200	688	70.5	225	619	--	824	--	--	--	110	< 250	--	--	
MW-12	9/7/2011	11.01	4.37	NP	--	6.64	--	1,270	7,900	920	25.4	187	267	--	896	--	--	--	< 2500	--	--	--	
MW-12	12/5/2011	11.01	4.32	NP	--	6.69	--	286	2,240	296	38.3	38.0	122	--	1,040	--	--	--	< 250	--	--	--	
MW-12	3/6/2012	11.01	4.01	NP	--	7.00	--	272	1,260	193	22.6	28.8	80.5	--	835	--	--	--	78.4	< 250	--	--	
MW-12	6/11/2012	11.01	4.20	NP	--	6.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	6/12/2012	--	--	--	--	--	--	957	1,030	178	17.0	24.1	68.8	--	993	--	--	--	448	< 250	--	--	
MW-12	9/6/2012	11.01	4.15	NP	--	6.86	--	< 200	580	120	9.6	15	37	--	840	< 1.5	< 1.5	< 1.5	15	< 15	< 1.5	14	
MW-12	12/13/2012	11.01	3.35	NP	--	7.66	--	< 50	480	70	4.6	7.2	19	--	820	--	--	--	19	< 15	--	--	
MW-12	3/14/2013	11.01	4.11	NP	--	6.90	--	< 50	370	76	3.4	12	18	--	810	--	--	--	21	< 15	--	--	
MW-12	6/11/2013	11.01	4.30	NP	--	6.71	--	62	290	51	< 1.5	4.3	6.4	--	840	--	--	--	19	< 15	--	--	
MW-12	9/10/2013	11.01	3.96	NP	--	7.05	--	< 50	340	52	1.9	6.4	4.5	--	820	--	--	--	17	< 15	--	--	
MW-12	12/12/2013	11.01	4.00	NP	--	7.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	3/4/2014	11.01	3.46	NP	--	7.55	--	< 50	< 200	19	< 2.0	< 2.0	< 2.0	--	990	--	--	--	< 9.0	< 20	< 2.0	11	
MW-12	6/1/2014	11.01	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	6/12/2014	11.01	3.96	NP	--	7.05	--	< 50	200	30	3.3	4.2	6.1	--	920	--	--	--	8.6	< 9.0	--	--	
MW-12A	7/6/2010	11.29	4.22	NP	--	7.07	--	89.3	664	18.3 M0	0.78	2.3	50.2 M0	--	14.3 M0	< 0.50	< 0.50	< 0.50	11.9 M0	< 250	< 1.0	< 1.0	
MW-12A	9/20/2010	11.29	4.39	NP	--	6.90	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.5	--	--	--	< 250	--	--	--	
MW-12A	12/8/2010	11.29	4.00	NP	--	7.29	--	76.4	< 50.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.4	--	--	--	< 250	--	--	--	
MW-12A	3/14/2011	11.29	3.81	NP	--	7.48	--	61.5	< 50.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 250	--	--	
MW-12A	6/2/2011	11.29	4.20	NP	--	7.09	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 250	--	--	
MW-12A	9/7/2011	11.29	4.42	NP	--	6.87	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.74	--	--	--	< 250	--	--	--	
MW-12A	12/5/2011	11.29	4.30	NP	--	6.99	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 250	--	--	--	
MW-12A	3/6/2012	11.29	4.32	NP	--	6.97	--	52.0	< 50.0	< 0.50	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	< 0.50	< 0.50	< 5.0	< 250	--	--	
MW-12A	6/11/2012	11.29	4.36	NP	--	6.93	--	< 37.9	< 50.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 250	--	--	
MW-12A	9/6/2012	11.29	4.45	NP	--	6.84	--	300	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 5.0	< 0.50	< 0.50	
MW-12A	12/13/2012	11.29	3.80	NP	--	7.49	--	62	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 5.0	--	--	
MW-12A	3/14/2013	11.29	4.36	NP	--	6.93	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 5.0	--	--	
MW-12A	6/11/2013	11.29	4.53	NP	--	6.76	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 5.0	--	--	
MW-12A	9/10/2013	11.29	4.40	NP	--	6.89	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.3	--	--	--	< 5.0	< 5.0	--	--
MW-12A	12/12/2013	11.29	4.35	NP	--	6.94	--	--	--	--	--												

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)
MW-13	12/8/2015	11.08	4.13	NP	--	6.95	--	< 52	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	14	--	--	--	< 10	< 100	--	--
MW-13	3/8/2016	11.08	3.03	NP	--	8.05	--	< 46	70	< 0.50	< 1.0	< 1.0	< 1.0	--	14	--	--	--	54	< 100	--	--
MW-13	6/28/2016	11.08	4.28	NP	--	6.80	--	190	< 50	0.62	< 1.0	< 1.0	--	--	23	--	--	--	85	< 100	--	--
MW-13	9/19/2016	11.08	4.12	NP	--	6.96	--	< 45	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	20	--	--	--	30	< 100	--	--
MW-14	6/2/2011	12.00	3.58	NP	--	8.42	--	4,180	51,600	2,750	67.9	1,790	13,400	--	1.9	--	--	--	27.2	< 250	--	--
MW-14	9/7/2011	12.00	3.02	NP	--	8.98	--	2,970	42,600	1,050	28.1	2,990	7,300	--	< 25.0	--	--	--	< 12500	--	--	--
MW-14	12/5/2011	12.00	4.05	NP	--	7.95	--	3,980	14,000	709	9.1	1,420	2,530	--	0.97	--	--	--	< 250	--	--	--
MW-14	3/6/2012	12.00	3.94	NP	--	8.06	--	3,640	16,600	959	15.0	2,330	3,830	--	< 2.5	--	--	--	28.1	< 1250	--	--
MW-14	6/11/2012	12.00	3.91	NP	--	8.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	6/12/2012	--	--	--	--	--	--	4580	15,700	1,200	14.0	1,580	3,010	--	1.4	--	--	--	23.3	< 250	--	--
MW-14	9/6/2012	12.00	3.35	NP	--	8.65	--	< 2,000	12,000	210	9.1	1,100	1,800	--	< 4.0	< 4.0	< 4.0	< 4.0	< 20	< 40	< 4.0	< 4.0
MW-14	12/13/2012	12.00	3.26	NP	--	8.74	--	< 50	10,000	72	5.8	610	780	--	< 1.5	--	--	--	< 7.0	< 15	--	--
MW-14	3/14/2013	12.00	4.16	NP	--	7.84	--	< 50	5,700	290	11	750	960	--	< 1.5	--	--	--	12	< 15	--	--
MW-14	6/11/2013	12.00	4.63	NP	--	7.37	--	< 50	6,900	630	5.3	480	680	--	< 1.5	--	--	--	24	< 15	--	--
MW-14	9/10/2013	12.00	4.88	NP	--	7.12	--	120	31,000	1,500	39	2,300	5,200	--	< 1.5	--	--	--	32	< 15	--	--
MW-14	12/12/2013	12.00	4.35	NP	--	7.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	3/4/2014	12.00	3.60	NP	--	8.40	--	250	40,000	1,600	41	2,900	6,700	--	< 9.0	--	--	--	< 50	< 90	--	--
MW-14	6/12/2014	12.00	4.51	NP	--	7.49	--	64	36,000	1,600	43	3,000	6,500	--	< 9.0	--	--	--	< 50	< 90	--	--
MW-14	9/5/2014	12.00	5.47	NP	--	6.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	12/22/2014	12.00	3.18	NP	--	8.82	--	< 50	3,200	220	3.8	260	540	--	< 0.90	--	--	--	12	< 9.0	--	--
MW-14	3/16/2015	12.00	4.18	NP	--	7.82	--	--	--	393	1.6	278	413	--	0.66	--	--	--	15.0	< 5.0	--	--
MW-14	6/11/2015	12.00	4.74	NP	--	7.26	--	1,800	3,900	510	< 5.0	340	--	--	< 5.0	--	--	--	< 50	< 500	--	--
MW-15	6/2/2011	11.11	2.50	NP	--	8.61	--	124	357	< 0.50	< 0.50	< 0.50	< 1.5	--	15.2	--	--	--	6.4	< 250	--	--
MW-15	9/7/2011	11.11	2.54	NP	--	8.57	--	< 50.0	412	6.2	< 0.50	42.8	< 1.5	--	128	--	--	--	< 250	--	--	--
MW-15	12/5/2011	11.11	2.70	NP	--	8.41	--	50.5	201	6.6	< 0.50	0.93	< 1.5	--	142	--	--	--	< 250	--	--	--
MW-15	3/6/2012	11.11	2.69	NP	--	8.42	--	56.2	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	106	--	--	--	101	< 250	--	--
MW-15	6/11/2012	11.11	2.84	NP	--	8.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	6/12/2012	--	--	--	--	--	--	< 37.9	74.3	< 0.50	< 0.50	< 0.50	< 1.5	--	114	--	--	--	90.9	< 250	--	--
MW-15	9/6/2012	11.11	2.24	NP	--	8.87	--	64	59	< 0.50	< 0.50	< 0.50	< 0.50	--	76	< 0.50	< 0.50	< 0.50	45	< 5.0	< 0.50	< 0.50
MW-15	12/13/2012	11.11	2.51	NP	--	8.60	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	33	--	--	--	7.4	< 5.0	--	--
MW-15	3/14/2013	11.11	2.91	NP	--	8.20	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	46	--	--	--	21	< 5.0	--	--
MW-15	6/11/2013	11.11	3.36	NP	--	7.75	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	73	--	--	--	31	< 5.0	--	--
MW-15	9/10/2013	11.11	3.28	NP	--	7.83	--	< 50	68	< 0.50	< 0.50	< 0.50	< 0.50	--	120	--	--	--	39	< 5.0	--	--
MW-15	12/12/2013	11.11	3.00	NP	--	8.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	3/4/2014	11.11	2.34	NP	--	8.77	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	96	--	--	--	45	< 5.0	--	--
MW-15	6/12/2014	11.11	3.15	NP	--	7.96	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	100	--	--	--	31	< 5.0	--	--</

TABLE 3
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ELEVATION DATA						GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)
MW-16	12/22/2014	10.98	3.11	NP	--	7.87	--	< 50	< 50	0.52	< 0.50	< 0.50	< 0.50	--	23	--	--	--	140	< 5.0	--	--
MW-16	3/16/2015	10.98	3.03	NP	--	7.95	--	--	--	< 0.50	< 0.50	< 0.50	< 1.0	--	9.2	--	--	--	185	< 5.0	--	--
MW-16	6/11/2015	10.98	3.62	NP	--	7.36	--	< 50	< 250	< 2.5	< 5.0	< 5.0	--	--	5.1	--	--	--	130	< 500	--	--
MW-16	9/9/2015	10.98	3.98	NP	--	7.00	--	< 50	< 50	< 0.5	< 1.0	< 1.0	< 1.0	--	12	--	--	--	100	< 501	--	--
MW-16	12/8/2015	10.98	3.86	NP	--	7.12	--	< 50	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	15	--	--	--	140	< 100	--	--
MW-16	3/8/2016	10.98	3.23	NP	--	7.75	--	140 HD	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	8.3	--	--	--	130	< 100	--	--
MW-16	6/28/2016	10.98	3.57	NP	--	7.41	--	330	< 50	< 0.50	< 1.0	< 1.0	--	--	4.3	--	--	--	86	< 100	--	--
MW-16	9/19/2016	10.98	3.19	NP	--	7.79	--	490	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	5.7	--	--	--	87	< 100	--	--
MW-17	6/2/2011	11.52	5.78	NP	--	5.74	--	687	9,130	2,530	960	35.1	907	--	0.74	--	--	--	366	< 250	--	--
MW-17	9/7/2011	11.52	4.56	NP	--	6.96	--	1,900	47,200	9,620	5,510	1,210	4,510	--	< 25.0	--	--	--	< 12500	--	--	--
MW-17	12/5/2011	11.52	4.70	NP	--	6.82	--	1,790	17,300	4,720	511	238	747	--	< 2.5	--	--	--	< 1250	--	--	--
MW-17	3/6/2012	11.52	4.64	NP	--	6.88	--	1,530	1,580	2,090	23.8	39.3	166	--	1.1	--	--	--	481	< 250	--	--
MW-17	6/11/2012	11.52	4.67	NP	--	6.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	6/12/2012	--	--	--	--	--	--	1,090	4,950	2,340	123	153	610	--	< 2.5	--	--	--	411	< 1250	--	--
MW-17	9/6/2012	11.52	4.39	NP	--	7.13	--	< 1,000	18,000	4,300	170	370	1,100	--	< 10	< 10	< 10	< 10	300	< 100	< 10	110
MW-17	12/13/2012	11.52	4.20	NP	--	7.32	--	< 100	55,000	7,300	2,700	1,700	4,600	--	< 10	--	--	--	300	< 100	--	--
MW-17	3/14/2013	11.52	4.70	NP	--	6.82	--	< 200	63,000	13,000	5,400	3,100	8,800	--	< 15	--	--	--	260	< 150	--	--
MW-17	6/11/2013	11.52	4.83	NP	--	6.69	--	710	110,000	10,000	11,000	3,100	12,000	--	< 25	--	--	--	< 150	< 250	--	--
MW-17	9/10/2013	11.52	4.60	NP	--	6.92	--	160	36,000	8,200	510	1,200	2,400	--	< 15	--	--	--	320	< 150	--	--
MW-17	12/12/2013	11.52	5.00	NP	--	6.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	3/4/2014	11.52	3.99	NP	--	7.53	--	400	13,000	1,600	270	260	540	--	< 3.0	--	--	--	330	48	--	--
MW-17	6/1/2014	11.52	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	6/12/2014	11.52	4.49	NP	--	7.03	--	87	17,000	3,600	410	650	1,100	--	< 3.0	--	--	--	300	< 30	--	--

Gauging Notes:

TOC - Top of Casing

ft - Feet

LNAPL - Light non-aqueous phase liquid

NP - Not present

* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)

-- No information available

Analytical Notes:

< - Below laboratory's indicated reporting limit

ug/L - micrograms/liter

TPHd- Total petroleum hydrocarbons as diesel

TPHg- Total petroleum hydrocarbons as gasoline, also known as Gasoline Range Organics (GRO)

MTBE- Methyl tertiary-butyl ether

TBA- Tertiary-butyl alcohol

EDB - 1,2-Dichloroethane

1,2-DCA - 1,2-Dichloroethane

Bold - Above the laboratory's indicated reporting limit

1n - The TPHg result for this sample did not match the laboratory standard for gasoline. This is likely due to the presence of MTBE in the sample.

A - Lower boiling hydrocarbons present, atypical for Diesel Fuel.

2V - The detection of Ethanol is biased high likely due to the presence of interfering compounds

HD - The chromatographic pattern was inconsistent with the profile of the reference fuel standard

TABLE 3a
ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER ANALYTICAL DATA																						
		Acetone (ug/L)	Alkalinity, Bicarbonate (mg/L)	Alkalinity, Hydroxide (CaCO) (mg/L)	Alkalinity, Total A2320B (mg/L)	Alkalinity, Total as CaCO3 A2320B (mg/L)	Antimony (ug/L)	Arsenic (mg/L)	Arsenic (ug/L)	Barium (ug/L)	Beryllium (ug/L)	Biochemical Oxygen Demand (ug/L)	Bromate (mg/L)	Bromide (mg/L)	Cadmium (mg/L)	Cadmium (ug/L)	Chemical Oxygen Demand (ug/L)	Chloride (ug/L)	Chromium (mg/L)	Chromium (ug/L)	Chromium, Hexavalent (ug/L)	Cobalt (ug/L)	Coliform, Total MPN/100ML	E. Coli MPN/100ML
MW-6	3/14/2011	18.4	--	--	--	--	< 60.0	--	22.7	216	< 5.0	32,200	--	--	--	< 5.0	173,000	204,000	--	--	--	< 50.0	--	--
MW-6	6/2/2011	< 5.0	828	< 1	828	< 1	< 60.0	--	22.0	191	< 5.0	45,100	< 0.005	2.1	--	< 5.0	121,000	149,000	--	4.3	< 2	< 50.0	42,000	< 100
MW-6	9/6/2012	--	--	--	--	650	--	--	--	--	--	--	--	--	--	--	--	< 0.0050	--	< 10	--	--	--	
MW-6	3/4/2014	--	--	--	--	--	--	0.031	--	--	--	--	--	< 0.0010	--	--	--	< 0.0050	--	--	--	--	--	
MW-9	3/14/2011	< 5.0	--	--	--	--	< 60.0	--	< 20.0	< 100	< 5.0	7,160	--	--	--	< 5.0	11,500	34,700	--	--	--	< 50.0	--	--
MW-9	6/2/2011	< 5.0	226	< 1	226	< 1	< 60.0	--	< 20.0	< 100	< 5.0	4,170	< 0.005	2	--	< 5.0	15,100	32,400	--	2.4	< 0.2	< 50.0	2	< 1
MW-10	9/6/2012	--	--	--	--	561	--	--	--	--	--	--	--	--	--	--	--	0.017	--	< 10	--	--	--	
MW-12	3/14/2011	< 5.0	--	--	--	--	< 60.0	--	< 20.0	< 100	< 5.0	< 2000	--	--	--	< 5.0	80,100	8,240,000	--	--	--	< 50.0	--	--
MW-12	6/2/2011	< 5.0	905	< 1	905	< 1	< 60.0	--	< 20.0	< 100	< 5.0	7,240	< 0.05	33	--	< 5.0	191,000	7,260,000	--	3.3	< 2	< 50.0	210	< 1
MW-12	9/6/2012	--	--	--	--	806	--	--	--	--	--	--	--	--	--	--	--	< 0.0050	--	< 10	--	--	--	
MW-12	3/4/2014	--	--	--	--	--	--	< 0.015	--	--	--	--	--	0.0018	--	--	--	< 0.0050	--	--	--	--	--	
MW-14	9/6/2012	--	--	--	--	1,720	--	--	--	--	--	--	--	--	--	--	--	0.024	--	< 10	--	--	--	
MW-17	9/6/2012	--	--	--	--	2,820	--	--	--	--	--	--	--	--	--	--	--	0.038	--	< 10	--	--	--	

Analytical Notes:

< - Below laboratory's indicated reporting limit

mg/L - milligrams per liter

MPN/100ML - most probable number per 100 ml

ug/L - micrograms/liter

Bold - Above the laboratory's indicated reporting limit

TABLE 3b
ADITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
76 STATION NO. 5191/504
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA																							
		Copper (mg/L)	Inorganic Carbon (mg/L)	Iron SW6010 D (ug/L)	Iron SW6010 T (ug/L)	Iron, Ferric (mg/L)	Iron, Ferric (ug/L)	Iron, Ferrous (ug/L)	Lead (mg/L)	Manganese (T) (mg/L)	Manganese (D) (mg/L)	Manganese (D) (ug/L)	Mercury (mg/L)	Mercury (ug/L)	Methane (ug/L)	MoLybdenum (ug/L)	Nickel (mg/L)	Nickel (ug/L)	Nitrate as N E353/E351 (ug/L)	Nitrite as N (mg/L)	Nitrite as N (ug/L)	Nitrogen, Ammonia (mg/L)	Nitrogen, NO2 plus NO3 (ug/L)	Nitrogen, Total Kjeldahl (mg/L)	Oil and Grease (ug/L)
MW-3	12/17/2009	--	--	--	12,300	--	--	--	--	--	--	--	--	--	--	--	< 50.0	--	< 50.0	--	< 50.0	--	--	--	
MW-3	6/30/2010	--	--	5,550	10,700	--	--	--	--	--	--	--	--	--	--	--	< 50.0	95.0	--	75.7	--	--	--		
MW-3	6/2/2011	--	--	--	13,600	--	--	--	--	--	--	--	--	--	--	--	< 50.0	--	< 10.0	--	52.5	--	--	--	
MW-3	6/11/2012	--	--	--	10,900	--	--	--	--	--	--	--	--	--	--	< 50.0	< 0.010	--	< 50.0	--	--	--	--		
MW-5	11/30/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	
MW-5	2/4/1993	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	
MW-5	5/4/1993	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	
MW-5	8/4/1993	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	
MW-6	9/17/2009	--	--	--	1,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	12/17/2009	--	--	2,460	--	--	--	--	--	--	--	--	--	--	--	< 50.0	--	< 50.0	--	< 50.0	--	--	--	--	
MW-6	3/29/2010	--	--	1,790	1,510	--	--	--	--	--	--	--	--	--	--	--	< 50.0	41.3	--	54.9	--	--	--	--	
MW-6	6/30/2010	--	--	946	2,310	--	--	--	--	--	--	--	--	--	--	< 50.0	57.9	--	69.3	--	--	--	--		
MW-6	9/20/2010	--	--	2,730	2,600	--	--	--	--	--	--	--	--	--	--	< 50.0	--	< 10.0	--	52.1	--	--	--	--	
MW-6	3/14/2011	--	--	4,900	--	3,900	1,000	--	26.8	--	--	1,270	--	< 0.20	474	< 20.0	--	< 40.0	50.1	--	< 10.0	--	54.2	--	
MW-6	6/2/2011	--	870	--	4,320	--	2,520	1,800	--	22.6	--	1,510	--	< 0.20	445	< 20.0	--	< 40.0	< 50.0	< 10.0	2.9	50.5	4.8	--	
MW-6	6/12/2012	--	--	--	1,240	--	--	--	--	--	--	--	--	--	--	--	< 50.0	< 0.010	--	< 50.0	--	--	--	1,500	
MW-6	9/6/2012	--	--	--	1.0	--	--	--	--	--	1.4	1.2	--	--	2,890	--	--	--	--	--	--	--	--	--	
MW-6	3/4/2014	--	--	--	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	3/4/2014	< 0.0050	--	--	--	--	--	0.014	--	--	< 0.0050	--	--	--	--	0.017	--	--	--	--	--	--	--	--	
MW-7	6/30/2010	--	--	836	7,550	--	--	--	--	--	--	--	--	--	--	--	< 50.0	--	73.9	--	73.6	--	--	--	
MW-7	6/2/2011	--	--	7,800	--	--	--	--	--	--	--	--	--	--	--	233	--	< 10.0	--	239	--	--	--	--	
MW-7	6/11/2012	--	--	264	--	--	--	--	--	--	--	--	--	--	--	< 50.0	0.067	--	--	111	--	--	--	--	
MW-8	6/30/2010	--	--	4,710	8,000	--	--	--	--	--	--	--	--	--	--	--	< 50.0	--	68.2	--	59.7	--	--	--	
MW-8	6/2/2011	--	--	24,900	--	--	--	--	--	--	--	--	--	--	--	60.9	--	< 10.0	--	60.9	--	--	--	--	
MW-8	6/11/2012	--	--	21,000	--	--	--	--	--	--	--	--	--	--	--	< 50.0	0.048	--	< 50.0	--	--	--	--	--	
MW-9	12/17/2009	--	--	2,270	--	--	--	--	--	--	--	--	--	--	--	< 50.0	--	< 50.0	--	< 50.0	--	--	--	--	
MW-9	6/30/2010	--	--	3,210	8,820	--	--	--	--	--	--	--	--	--	--	< 50.0	14.9	--	< 50.0	--	--	--	--	--	
MW-9	3/14/2011	--	--	1,560	--	157	1,400	--	< 10.0	--	--	148	--	< 0.20	419	< 20.0	--	< 40.0	< 50.0	--	< 10.0	--	--	--	--
MW-9	6/2/2011	--	240	--	1,260	--	1,060	200	--	< 10.0	--	91.5	--	< 0.20	673	< 20.0	--	< 40.0	< 50.0	< 10.0	0.86	< 50.0	0.6	--	405
MW-9	6/11/2012	--	--	731	--	--	--	--	--	--	--	--	--	--	--	< 50.0	< 0.010	--	< 50.0	--	< 50.0	--	--	--	
MW-10	9/17/2009	--	--	9,800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	12/17/2009	--	--	3,410	--	--	--	--	--	--	--	--	--	--	--	1,970	--	60.3	2,030	--	--	--	--	--	
MW-10	3/29/2010	--	--	365	2,410	--	--	--	--	--	--	--	--	--	--	1,960	--	18.7	1,970	--	--	--	--	--	
MW-10	6/30/2010	--	--	216	1,860	--	--	--	--	--	--	--	--	--	--	2,120	--	68.1	2,190	--	--	--	--	--	
MW-10	9/20/2010	--	--	280	3,080	--	--	--	--	--	--	--	--	--	--	2,690	--	68.2	2,750	--	--	--	--	--	
MW-10	3/14/2011	--	--	2,620	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2,350	--	--	--	--	
MW-10	6/2/2011	--	--	9,870	--	--	--	--	--	--	--	--	--	--	--	1,290	--	49.3	1,340	--	--	--	--	--	
MW-10	6/11/2012	--	--	11,300	--	--	--	--	--	--	--	--	--	--	--	1,510	0.057	--	< 50.0	1,570	--	--	--	--	
MW-10	9/6/2012	--	--	11	--	--	0.70	0.49	--	--	--	--	--	--	467	--	--	--	--	--	--	--	--	--	
MW-11	7/6/2010	--	--	< 100	3,510	--	--	--	--	--	--	--	--	--	--	< 50.0	--	31.0	--	66.9	--	--	--	--	
MW-11	9/20/2010	--	--	< 100	1,690	--	--	--	--	--	--	--	--	--	--	167	--	< 10.0	--	172	--	--	--	--	
MW-11	3/14/2011	--	--	756	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 50.0	--	--	--	--	--	
MW-11	6/2/2011	--	--	1,040	--	--	--	--	--	--	--	--	--	--	--	110	--	< 10.0	--	115	--	--	--	--	
MW-11	6/11/2012	--	--	1,300	--	--	--	--	--	--	--	--	--	--	--	88.8	< 0.010	--	< 50.0	93.5	--	--	--	--	
MW-12	7/6/2010	--	--	< 100	30,200	--	--	--	--	--	--	--	--	--	--	< 50.0	--	60.5	--	< 50.0	--	--	--	--	
MW-12	9/20/2010	--	--	552	3,890	--	--	--	--	--	--	--	--	--	--	72.3	--	< 10.0	--	75.2	--	--	--	--	
MW-12	3/14/2011	--	--	793	--	593	200	--	< 10.0	--	--	12,400	--	< 0.20	114	< 20.0	--	151	< 50.0	--	60.6	--	54.4	--	
MW-12	6/2/2011	--	1,100	--	9,340	--	8,740	600	--	< 10.0	--	12,800	--	< 0.20	287	< 20.0	--	119	< 50.0	--	< 10.0	0.14	58.0	0.91	--
MW-12	6/12/2012	--	--	497	--	--	0.19	--	--	--	--	10	10	--	--	63.8	--	--	--	--	< 50.0	< 0.010	--	< 50.0	--
MW-12	9/6/2012	--	--	--	--	--	< 0.0050	--	--	--	< 0.0050	--	--	--	--	0.12	--	--	--	--	--	--	--	--	
MW-12A	7/6/2010	--	--	716	57,300	--	--	--	--	--	--	--	--	--	--	--	3,680	--	164	--	3,840	--	--	--	
MW-12A	9/20/2010	--	--	< 100	523	--	--	--	--	--	--	--	--	--	--	4,680	--	10.2	--	4,690	--	--	--	--	
MW-12A	3/14/2011	--	--	523	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4,790	--	--	--	--	
MW-12A	6/2/2011	--	--	754	--	--	--	--	--	--	--	--	--	--	--	4,710	--	< 10.0	--	4,720	--	--	--	--	
MW-12A	6/11/2012	--	--	859	--	--	--	--	--	--	--	--	--	--	--	4,250	< 0.010	--	< 50.0	4,260	--	--	--	--	
MW-13	7																								

Analytical Notes:

< - Below laboratory's indicated reporting limit

mg/L - milligrams per liter

ug/L - micrograms/liter

Bold - Above the laboratory's indicated reporting limit

TABLE 3c
ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
76 STATION NO. 5191/5041
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA											
		Selenium (ug/L)	Silver (mg/L)	Silver (ug/L)	Sulfate E300 (mg/L)	Sulfate E300 (ug/L)	Sulfate E300.1 (mg/L)	Sulfate E300.1 (ug/L)	Thallium (ug/L)	Total Organic Carbon (mg/L)	Vanadium (ug/L)	Zinc (mg/L)	Zinc (ug/L)
MW-3	12/17/2009	--	--	--	--	--	< 0.5	--	--	--	--	--	--
MW-3	6/30/2010	--	--	--	--	< 5000	--	--	--	--	--	--	--
MW-3	6/2/2011	--	--	--	--	< 5000	--	--	--	--	--	--	--
MW-3	6/11/2012	--	--	--	--	< 2000	--	--	--	--	--	--	--
MW-6	9/17/2009	--	--	--	--	< 0.0010	--	--	--	--	--	--	--
MW-6	12/17/2009	--	--	--	--	--	< 0.5	--	--	--	--	--	--
MW-6	3/29/2010	--	--	--	< 1.0	--	--	--	--	--	--	--	--
MW-6	6/30/2010	--	--	--	--	< 5000	--	--	--	--	--	--	--
MW-6	9/20/2010	--	--	--	--	< 1000	--	--	--	--	--	--	--
MW-6	3/14/2011	< 10.0	--	< 10.0	--	35,400	--	--	< 20.0	--	< 50.0	--	< 40.0
MW-6	6/2/2011	< 10.0	--	< 10.0	--	38,900	--	--	< 20.0	41	< 50.0	--	< 40.0
MW-6	6/12/2012	--	--	--	--	1,110	--	--	--	--	--	--	--
MW-6	3/4/2014	--	< 0.0050	--	--	--	--	--	--	--	--	0.036	--
MW-7	6/30/2010	--	--	--	--	191,000	--	--	--	--	--	--	--
MW-7	6/2/2011	--	--	--	--	48,900	--	--	--	--	--	--	--
MW-7	6/11/2012	--	--	--	--	56,900	--	--	--	--	--	--	--
MW-8	6/30/2010	--	--	--	--	2,360,000	--	--	--	--	--	--	--
MW-8	6/2/2011	--	--	--	--	2,830,000	--	--	--	--	--	--	--
MW-8	6/11/2012	--	--	--	--	2,570,000	--	--	--	--	--	--	--
MW-9	12/17/2009	--	--	--	--	--	11	--	--	--	--	--	--
MW-9	6/30/2010	--	--	--	--	19,000	--	--	--	--	--	--	--
MW-9	3/14/2011	< 10.0	--	< 10.0	--	8,980	--	--	< 20.0	--	< 50.0	--	< 40.0
MW-9	6/2/2011	< 10.0	--	< 10.0	--	18,600	--	--	< 20.0	4.7	< 50.0	--	< 40.0
MW-9	6/11/2012	--	--	--	--	42,500	--	--	--	--	--	--	--
MW-10	9/17/2009	--	--	--	--	84	--	0.084	--	--	--	--	--
MW-10	12/17/2009	--	--	--	--	86	--	--	--	--	--	--	--
MW-10	12/17/2009	--	--	--	--	--	86	--	--	--	--	--	--
MW-10	3/29/2010	--	--	--	--	73,600	--	--	--	--	--	--	--
MW-10	3/29/2010	--	--	--	--	73.6	--	--	--	--	--	--	--
MW-10	6/30/2010	--	--	--	--	70,800	--	--	--	--	--	--	--
MW-10	9/20/2010	--	--	--	--	82,000	--	--	--	--	--	--	--
MW-10	3/14/2011	--	--	--	--	68,600	--	--	--	--	--	--	--
MW-10	6/2/2011	--	--	--	--	71,700	--	--	--	--	--	--	--
MW-10	6/11/2012	--	--	--	--	70,100	--	--	--	--	--	--	--
MW-11	7/6/2010	--	--	--	--	82,100	--	--	--	--	--	--	--
MW-11	9/20/2010	--	--	--	--	58,300	--	--	--	--	--	--	--
MW-11	3/14/2011	--	--	--	--	59,900	--	--	--	--	--	--	--
MW-11	6/2/2011	--	--	--	--	62,900	--	--	--	--	--	--	--
MW-11	6/11/2012	--	--	--	--	79,400	--	--	--	--	--	--	--
MW-12	7/6/2010	--	--	--	--	3,030,000	--	--	--	--	--	--	--
MW-12	9/20/2010	--	--	--	--	1,970,000	--	--	--	--	--	--	--
MW-12	3/14/2011	< 10.0	--	< 10.0	--	2,500,000	--	--	< 20.0	--	< 50.0	--	< 40.0
MW-12	6/2/2011	< 10.0	--	< 10.0	--	2,330,000	--	--	< 20.0	9.1	< 50.0	--	< 40.0
MW-12	6/12/2012	--	--	--	--	2,130,000	--	--	--	--	--	--	--
MW-12	3/4/2014	--	< 0.0050	--	--	--	--	--	--	--	--	0.046	--
MW-12A	7/6/2010	--	--	--	--	100,000	--	--	--	--	--	--	--
MW-12A	9/20/2010	--	--	--	--	82,500	--	--	--	--	--	--	--
MW-12A	3/14/2011	--	--	--	--	81,000	--	--	--	--	--	--	--
MW-12A	6/2/2011	--	--	--	--	101,000	--	--	--	--	--	--	--
MW-12A	6/11/2012	--	--	--	--	118,000	--	--	--	--	--	--	--
MW-13	7/6/2010	--	--	--	--	450,000	--	--	--	--	--	--	--
MW-13	9/20/2010	--	--	--	--	241,000	--	--	--	--	--	--	--
MW-13	3/14/2011	--	--	--	--	375,000	--	--	--	--	--	--	--
MW-13	6/2/2011	--	--	--	--	188,000	--	--	--	--	--	--	--
MW-13	6/12/2012	--	--	--	--	131,000	--	--	--	--	--	--	--

TABLE 3c
 ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
 76 STATION NO. 5191/5041
 449 HEGENBERGER ROAD
 OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA											
		Selenium (ug/L)	Silver (mg/L)	Silver (ug/L)	Sulfate E300 (mg/L)	Sulfate E300 (ug/L)	Sulfate E300.1 (mg/L)	Sulfate E300.1 (ug/L)	Thallium (ug/L)	Total Organic Carbon (mg/L)	Vanadium (ug/L)	Zinc (mg/L)	Zinc (ug/L)
MW-3	12/17/2009	--	--	--	--	--	< 0.5	--	--	--	--	--	--
MW-14	6/2/2011	--	--	--	--	56,300	--	--	--	--	--	--	--
MW-14	6/12/2012	--	--	--	--	439,000	--	--	--	--	--	--	--
MW-15	6/2/2011	--	--	--	--	62,700	--	--	--	--	--	--	--
MW-15	6/12/2012	--	--	--	--	42,100	--	--	--	--	--	--	--
MW-16	6/2/2011	--	--	--	--	8,740	--	--	--	--	--	--	--
MW-16	6/12/2012	--	--	--	--	19,900	--	--	--	--	--	--	--
MW-17	6/2/2011	--	--	--	--	3,920,000	--	--	--	--	--	--	--
MW-17	6/12/2012	--	--	--	--	2,520,000	--	--	--	--	--	--	--

Analytical Notes:

< - Below laboratory's indicated reporting limit

mg/L - milligrams per liter

ug/L - micrograms/liter

Bold - Above the laboratory's indicated reporting limit

TABLE 3d
ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA												
		1,2,4-Trimethylbenzene (ug/L)	1,3,5-Trimethylbenzene (ug/L)	Isopropylbenzene (ug/L)	Naphthalene (ug/L)	o-Xylene (ug/L)	m,p-Xylenes (ug/L)	n-Butylbenzene (ug/L)	n-Propylbenzene (ug/L)	p-Isopropyltoluene (ug/L)	sec-Butylbenzene (ug/L)	Oil & Grease (HEM) (ug/L)	Phenolics (ug/L)	Cyanide (ug/L)
MW-3	6/11/2015	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	--
MW-6	3/4/2014	--	--	--	--	--	1,400	--	--	--	--	1.6	< 0.1	< 0.02
MW-6	3/4/2014	3000	860	200	990	300	--	100	530	22	53	--	--	--
MW-6	6/11/2015	--	--	--	--	2,000	5,800	--	--	--	--	--	--	--
MW-9	6/11/2015	--	--	--	--	< 2.0	< 2.0	--	--	--	--	--	--	--
MW-11	6/11/2015	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--
MW-12	3/4/2014	--	11	--	--	--	< 2.0	--	--	--	--	1.9	0.1	< 0.02
MW-12	3/4/2014	3.7	< 2.0	< 2.0	< 2.0	< 2.0	--	< 2.0	< 2.0	< 2.0	< 2.0	--	--	--
MW-13	6/11/2015	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	--
MW-14	6/11/2015	--	--	--	--	< 5.0	470	--	--	--	--	--	--	--
MW-15	6/11/2015	--	--	--	--	< 1.0	< 1.0	--	--	--	--	--	--	--
MW-16	6/11/2015	--	--	--	--	< 5.0	< 5.0	--	--	--	--	--	--	--

Analytical Notes:

< - Below laboratory's indicated reporting limit

mg/L - milligrams per liter

MPN/100ML - most probable number per 100 ml

ug/L - micrograms/liter

Bold - Above the laboratory's indicated reporting limit

A full list of volatile organic compounds by EPA Method 624 was analyzed for monitoring wells MW-6 and MW-12, only constituents reported above the laboratory's indicated reporting limits are included in the table.

TABLE 4
HISTORICAL GROUNDWATER GRADIENT AND FLOW DIRECTION DATA



TABLE 4
HISTORICAL GROUNDWATER GRADIENT AND FLOW DIRECTION DATA
 76 STATION NO. 5191/5043
 449 HEGENBERGER ROAD
 OAKLAND, CALIFORNIA



Site	Monitoring Date	Groundwater Gradient (feet per feet)	Groundwater Flow Direction															
			N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	03/06/12	0.010	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	06/11/12	0.050	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	09/06/12	Variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12/13/12	0.020	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	03/14/13	0.050	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	06/11/13	0.001	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	09/10/13	0.014	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	12/12/13	0.018	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	03/04/14	0.010	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	06/12/14	0.020	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	09/05/14	0.003	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	12/22/14	Variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03/16/15	Variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	06/11/15	Variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	09/09/15	Variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12/08/15	Variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03/08/16	Variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	06/28/16	0.0067	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	06/19/16	Variable	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
0.024 Average			0	0	0	0	0	1	34	1	16	0	21	2	3	0	0	0

Explanation

NA = Not available

Number of Events = 84

Quarterly Summary Report, Third Quarter 2016

76 Station No. 5191/5043

Oakland, CA

Antea Group Project No. I42705191



Appendix A

Previous Investigation and Site History Summary

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

October 1991 - Four soil samples were collected from the product pipe trenches at depths of approximately 3 feet below ground surface (bgs) during a dispenser island modification. The product pipe trenches were subsequently excavated to the groundwater depth at 4 to 4.5 feet bgs.

February 1992 - Three monitoring wells, MW-1 through MW-3, were installed at the site to depths ranging from 13.5 to 15 feet bgs.

August 1992 - Three additional monitoring wells, MW-4 through MW-6, were installed at the site to a depth of 13.5 feet bgs.

September 1994 - One 280-gallon waste-oil UST was removed from the site. The UST was made of steel, and no apparent holes or cracks were observed in the UST. One soil sample was collected from beneath the former UST at a depth of approximately 9 feet bgs. No petroleum hydrocarbons were reported.

January 1995 - Two additional monitoring wells, MW-9 and MW-10, were installed to depths of 13 and 15 feet bgs. In addition, monitoring wells MW-4 and MW-5 were destroyed by over-drilling the wells and backfilling with neat cement.

March 1995 - Two 10,000-gallon gasoline USTs and one 10,000-gallon diesel UST were removed from the site. Groundwater was encountered in the tank cavity at a depth of approximately 8.5 feet bgs. Soil samples contained total petroleum hydrocarbons as diesel (TPHd) and benzene, and TPH as gasoline (TPHg). Approximately 125,000 gallons of groundwater were pumped from the site for remediation and properly disposed off-site. Four fuel dispenser islands and associated product piping were also removed. Based on the results of the confirmation samples, the product dispenser islands were over excavated to approximately 6 feet bgs.

March-April 1995 - During demolition activities of the former station building, soil samples were collected from two excavations, which were subsequently over excavated. Confirmation samples contained petroleum hydrocarbons. An additional area on the south side of the former station building was excavated based on photo-ionization detector (PID) readings. Two monitoring wells, MW-1 and MW-2, were destroyed in order to allow for over excavation activities to extend to an area adjacent to the dispenser islands in the southeastern quadrant of the site. The excavated areas were subsequently backfilled with clean-engineered fill.

April 1997 - Two additional monitoring wells, MW-7 and MW-8, were installed off-site to the south and east on the neighboring property to a depth of 13 feet bgs. In addition, monitoring well MW-3, which was damaged during site renovation activities, was fully drilled out and reconstructed in the same borehole.

October 2003 - Site environmental consulting responsibilities were transferred to TRC.

April 8-9, 2005 - TRC conducted a 24-hour dual phase extraction (DPE) test at the site using monitoring well MW-6. The 24-hour DPE test was only moderately successful at removing vapor-phase petroleum hydrocarbons from the subsurface; therefore, TRC recommended DPE no longer be considered a viable remedial alternative for the site.

October 2007 - Site environmental consulting responsibilities were transferred to Delta Consultants.

December 2009 - Delta advanced two borings, B-4 and B-5, to depths of 20 feet bgs and 32 feet bgs, respectively. Analytical results from the soil and groundwater samples collected from these two borings indicated that the soil and the groundwater were impacted by petroleum hydrocarbons at these locations.

June 2010 – Delta installed two 4-inch diameter monitoring/extraction wells, MW-11 and MW-12, and two 2-inch diameter monitoring wells, MW-12A and MW-13, at the site. Analytical results from the soil and groundwater samples collected from the MW-12 and MW-12A boring locations indicated that the soil and the groundwater were impacted by petroleum hydrocarbons at these locations.

May 2011 – Antea Group (formally Delta Consultants) installed four 2-inch diameter monitoring wells, MW-14 through MW-17, and advanced one soil boring, B-6, at the site. All four monitoring wells were installed with ten feet of screen from 3 feet bgs to 13 feet bgs. Analytical results of soil samples collected during the monitoring well installation reported TPHg concentrations ranging from 1.0 milligrams per kilogram (mg/kg) (MW-14d13) to 2,490 mg/kg (B-6d9), benzene concentrations ranging from 0.67 mg/kg (B-6d21) to 26.4 mg/kg (B-6d9), toluene concentrations ranging from 0.2 mg/kg (MW-14d10) to 73.9 mg/kg (B-6d9), ethylbenzene concentrations ranging from 0.037 mg/kg (MW-14d13) to 58.1 mg/kg (B-6d9), total xylenes concentrations ranging from 0.066 mg/kg (MW-14d13) to 230 mg/kg (B-6d9), methyl tertiary-butyl ether (MTBE) concentrations ranging from 0.015 mg/kg (MW-15d13) to 0.19 mg/kg (MW-15d8), tertiary-butyl alcohol (TBA) concentrations ranging from 0.014 mg/kg (MW-16d8 and B-6d21) to 0.16 mg/kg (MW-15d8), and lead concentrations ranging from 5.5 mg/kg (MW-16d13) to 16.3 mg/kg (MW-17d9). Diesel range organics (DRO) and DRO with silica gel concentrations were reported; however, all of the results did not match the laboratory standard for diesel. Concentrations of DRO ranged from 2.9 mg/kg (MW-17d13) to 258 mg/kg (B-6d14) and DRO with silica gel concentrations ranged from 2.5 mg/kg (MW-17d13) to 250 mg/kg (B-6d14).

March 2012 – Antea Group advanced five soil borings (HPB-1 through HPB-5) at the site. The borings were advanced using direct push technology. The borings were used to obtain a hydraulic profile of the substrate beneath the site. The data obtained during the investigation will be used to determine the best path forward in terms of remediation.

July 2013 – Antea Group advanced ten soil borings (SB-1 through SB-10) at the site. The borings were advanced using direct push technology. The borings were used to delineate petroleum hydrocarbon impacted soil around

monitoring well MW-6. Results of the investigation can be found in the *Site Investigation Report*, dated January 9, 2014.

June 2014 – Antea Group destroyed monitoring wells MW-10, MW-12, MW-12A, and MW-17 by pressure grouting. The wells were destroyed in preparation for on-site soil excavation activities.

September 2014 – Antea Group advanced two (2) cone penetration test (CPT) borings CPT-1 and CPT-2 in preparation for soil excavations on site. Soil and groundwater samples were not collected. Data from the CPT borings was used to help design shoring for excavations. Antea Group advanced three (3) off-site soil borings, SB-13 through SB-15. Soil and grab-groundwater samples were collected from the borings.

July 2015 – Antea Group destroyed on-site monitoring wells MW-6 and MW-14 in preparation for on-site soil excavation activities. On-site soil borings were advanced for waste characterization (WC-1 to WC-3) and delineate soil (SB-16 to SB-18) concentrations in the vicinity of the proposed soil excavation. Two off-site soil borings were advanced (SB-11 and SB-12) for delineation down-gradient.

January 2015 – Antea Group destroyed off-site monitoring wells MW-7 and MW-8 by drill-out.

May through July 2016 – Antea Group performed a series of remedial excavations on-site. The excavation focused on removing soil from two areas of hydrocarbon impact to the soil (secondary source areas) identified during previous investigations, one on the east side of the site between the dispensers and Hegenberger Road, and the other in the southwest corner of the site. A total of 1665 tons of soil were removed from the site during excavation activities. Approximately 1,400 pounds of OCR-A was spread throughout the entire excavation area to facilitate in-situ aerobic biodegradation.

SENSITIVE RECEPTORS

April 24, 2006, TRC completed a sensitive receptor survey for the site. According to the Department of Water Resources (DWR) records, three water supply wells are located within one-half mile of the site. The closest well is an irrigation well, reported to be, approximately 1,080 feet southeast of the site. In addition, two surface water bodies were observed within a one-half mile radius of the site. San Leandro Creek is located approximately 1,400 feet southwest of the site and flows into the San Leandro Bay. Elmhurst Creek is located approximately 2,220 feet north of the site and also flows into the San Leandro Bay.

Current Consultant: **Antea Group**

Quarterly Summary Report, Third Quarter 2016

76 Station No. 5191/5043

Oakland, CA

Antea Group Project No. I42705191



Appendix B

Regulatory Correspondence

Nowell, Keith, Env. Health

From: Nowell, Keith, Env. Health
Sent: Friday, September 09, 2016 10:11 AM
To: 'Dacre Bush'
Cc: 'Colleen Liang (CLiang@PortOakland.com)'; 'AC Atherton'; 'Walter.sprague@unitedpacific.com'; Roe, Dilan, Env. Health
Subject: RE: FW: RO219 - Tentative meeting- UNOCAL #5043 on 449 HEGENBERGER RD

Dacre,

The purpose of the meeting is to discuss station remodel, distribution of PCOCs, and possibly coordinate remaining remedial activities.

Specifically, the current station owner has questions regarding the effects of remedial activities and known distribution of PCOCs to the proposed station remodel. It seems prudent to invite all stakeholders to the meeting to discuss the proposed future activities.

Regards,
Keith Nowell

-----Original Appointment-----

From: Dacre Bush [mailto:Dacre.Bush@anteagroup.com]
Sent: Friday, September 09, 2016 9:51 AM
To: Nowell, Keith, Env. Health
Cc: Lisa Ehlers; Mike Martinson
Subject: Accepted: FW: RO219 - Tentative meeting- UNOCAL #5043 on 449 HEGENBERGER RD
When: Friday, September 30, 2016 2:30 PM-3:30 PM (UTC-08:00) Pacific Time (US & Canada).
Where: 1131 Harbor Bay Parkway, Alameda

Keith – I am finalizing the excavation report, and hope to have it to you next week. Lisa Ehlers is the RG reviewing and stamping the final report, and Mike Martinson is providing technical review.

Please note that there was only one sidewall sample above the LTC goals, and the split of that sampling location was below all the LTC goals.

Is the purpose of the meeting to determine the applicability for closure?

Thanks,

Dacre Bush
Antea Group
805-295-9071
Dacre.bush@anteagroup.com

Quarterly Summary Report, Third Quarter 2016

76 Station No. 5191/5043

Oakland, CA

Antea Group Project No. I42705191



Appendix C

Blaine Tech Groundwater Sampling Field Data Sheets

Well-Head Inspection & Well Gauging Form

Antea Group Project No: 27051A1

Site Address: 444 Hegenberger, Oakland

Field Technician: Justin Beeler
(Print Full Name & Company*)

Date: 9/19/14

Weather: Sunny

Well Condition

Notes:

- ** All well caps opened at least 15 minutes or longer before gauging wells:

CIRCLE ONE: YES or NO**



anteagroup

**Form provided by Antea Group*

Note: Use G=good and P=poor for well condition

Page _____ of _____

Groundwater Sampling Form

Site Address:	449 Hegenberger Rd., Oakland							
Project No:	27051A1	Field Technician:	DS					
Field Point:	MW-3	Date:	9/19/16					
Depth to Water (DTW) (ft bgs):	3.21	Well Diameter (in):	(2) 4 6 8					
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):						
Total Depth of Well (ft bgs):	13.92	Water Column Height (ft):	10.71					
Purging Info and Calculations:								
Purge Method: Low-Flow 3 casing volumes Other: _____	Purge Equipment: Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____			Sample Collection Method: Disposable Bailer Extraction Port Dedicated Tubing Disposable Tubing Other: _____				
Water Column Height (ft): 10.71	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.82						
Casing Volume (gal): 1.9	X Specified Volumes: 3	= Calculated Purge (gal): 5.7						
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163								
Purge:	Start Time:	Stop Time:						
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge				-293.4		4.11		
1131	24.9	6.97	3208	-306.2	44	3.45	1	8.49
1132	26.0	6.78	3176	-307.7	40	2.68	2	
1133	26.3	6.71	3149	-309.4	36	2.60	3	
1134	26.5	6.68	3141	-311.1	34	2.53	4	
1135	26.6	6.66	3137	-312.2	31	2.50	5	
1136	26.7	6.64	3131	-313.6	29	2.47	6	
					49			
Post-Purge								
Did Well dewater?	Yes	No	Total Purge volume (gal): 6					
Other Comments:	80% = 5.35 DTW = 9.66 (> 2 hours) Purged through flow cell							
Sample Info:								
Sample ID:	MW-3 - 20160930			Sample Date and Time:	9/19/16 / 1325			
Selected Analysis:								
This form was provided by Antea Group and completed by: (Print Full Name)				Dustin Becker, an employee of Blaine Tech Services, Inc.				
Signature:				Date:	9/19/16			

Groundwater Sampling Form

Site Address:	444 Hegenberger Rd., Oakland							
Project No.:	160919-AB1	Field Technician:	DS					
Field Point:	MW - 9	Date:	9/19/16					
Depth to Water (DTW) (ft bgs):	2.28	Well Diameter (in):	(2) 4 6 8					
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):						
Total Depth of Well (ft bgs):	12.57	Water Column Height (ft):	10.29					
Purging Info and Calculations:								
Purge Method: Low-Flow 3 casing volumes Other: _____		Purge Equipment: Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____			Sample Collection Method: Disposable Bailer Extraction Port Dedicated Tubing Disposable Tubing Other: _____			
Water Column Height (ft): 10.29		X Conversion Factor (gal/ft): 0.17			= Casing Volume (gal): 1.75			
Casing Volume (gal): 1.8		X Specified Volumes: 3			= Calculated Purge (gal): 5.4			
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163								
Purge:	Start Time:		Stop Time:					
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge				-274.1		7.41		
1017	26.4	6.79	2500	-324.0	16	3.24	1	
1018	26.6	6.62	2567	-328.3	15	2.91	2	
1019	26.4	6.38	2518	-327.1	14	2.73	3	
1020	26.0	6.41	2520	-299.7	13	2.56	4	
1021		- well dewatered	C	4 gallons				
1022							5	
1315					6			
Post-Purge								
Did Well dewater?	Yes	No	Total Purge volume (gal): 4					
Other Comments:	80% = 4.33 DW = 6.51 (\rightarrow 2 hours)							Purged through flow cell
Sample Info:								
Sample ID:	MW-9-2016			Sample Date and Time: 9/19/16 1315				
Selected Analysis:								
This form was provided by Antea Group and completed by: (Print Full Name) <u>Dustin Becker</u> , an employee of Blaine Tech Services, Inc.								
Signature:	<u>DS</u>							
Date: 9/19/16								

Groundwater Sampling Form

Site Address:	449 Hogenburger Rd., Belcland							
Project No.:	2705191	Field Technician:	LB					
Field Point:	MW-11	Date:	9/19/16					
Depth to Water (DTW) (ft bgs):	2.84	Well Diameter (in):	2 4 6 8 —					
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):						
Total Depth of Well (ft bgs):	19.53	Water Column Height (ft):	16.69					
Purging Info and Calculations:								
Purge Method:	Purge Equipment:				Sample Collection Method:			
Low-Flow 3 casing volumes	Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump				Disposable Bailer Extraction Port Dedicated Tubing Disposable Tubing			
Other: _____	Other: _____				Other: _____			
Water Column Height (ft): 16.69	X Conversion Factor (gal/ft): 0.66	= Casing Volume (gal): 11.02						
Casing Volume (gal): 11.1	X Specified Volumes: 3	= Calculated Purge (gal): 33.3						
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163								
Purge:	Start Time:	Stop Time:						
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge								
1159	24.07	7.38	3324	-293.7	56	5.38	5.75	
1202	24.14	7.34	3149	-290.7	41	4.59	11.25	
1205	24.10	7.24	3118	-287.7	37	3.97	16.75	
1208	24.06	7.21	3106	-285.4	31	3.91	22.25	
1211	24.04	7.19	3091	-283.1	29	3.84	28	
1214	24.03	7.16	3080	-279.6	25	3.76	33.5	
Post-Purge								
Did Well dewater?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Total Purge volume (gal): 34						
Other Comments:	80% = 6.17 DPN = 3.88 <i># Purged through fw cell</i>							
Sample Info:								
Sample ID:	MW-11_20160930			Sample Date and Time: 9/19/16				
Selected Analysis:	SPE C0C							
This form was provided by Antea Group and completed by: (Print Full Name)				Justin Becker, an employee of Blaine Tech Services, Inc.				
Signature:	 Date: 9/19/16							

Groundwater Sampling Form

Site Address:	449 Hegenberger Rd., Oakland		
Project No.:	2705111	Field Technician:	<i>D.B.</i>
Field Point:	MW-13	Date:	9/19/16
Depth to Water (DTW) (ft bgs):	4.12	Well Diameter (in):	2 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	14.58	Water Column Height (ft):	10.46

Purging Info and Calculations:

Purge Method:	Purge Equipment:	Sample Collection Method:
<input checked="" type="checkbox"/> Low-Flow <input checked="" type="checkbox"/> casing volumes Other: _____	<input checked="" type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Electric Submersible <input checked="" type="checkbox"/> Peristaltic Pump <input checked="" type="checkbox"/> Bladder Pump Other: _____	<input checked="" type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Extraction Port <input checked="" type="checkbox"/> Dedicated Tubing <input checked="" type="checkbox"/> Disposable Tubing Other: _____

Water Column Height (ft): 10.46 X Conversion Factor (gal/ft): 0.17 = Casing Volume (gal): 1.78
 Casing Volume (gal): 1.8 X Specified Volumes: 3 = Calculated Purge (gal): 5.4

Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius² * 0.163

Purge:	Start Time:	Stop Time:						
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge				-281.0		4.17		
1042	22.27	7.28	6638	-320.1	71	2.89	1	7.97
1043	22.28	7.29	6620	-328.1	61	2.86	2	8.10
1044	21.91	7.11	9402	-320.4	48	2.85	3	8.56
1045	21.88	7.16	9411	-320.7	41	2.71	4	9.13
1046	21.85	7.09	9424	-320.1	39	2.66	5	9.41
1047	21.84	7.08	9671	-320.4	37	2.61	6	9.99
Post-Purge				-320.8		2.59		

Did Well dewater? Yes No Total Purge volume (gal): 6

Other Comments:

$80\% = 6.21$ ** Purged through flow cell*
 $DN = 6.20$ *Short wait*

Sample Info:

Sample ID:	MW-13_20160930	Sample Date and Time:	9/19/16 / 1100
Selected Analysis:	<i>SEE COL</i>		
This form was provided by Antea Group and completed by: (Print Full Name)		<i>Dustin Becker</i> , an employee of Blaine Tech Services, Inc.	
Signature:	<i>[Signature]</i>		Date: <u>9/19/16</u>



Antea™ Group, 1-800-477-7411

LNAPL = light non-aqueous phase liquids
 bgs = below ground surface
 ORP = Oxidation-Reduction Potential
 D.O. = dissolved oxygen

gal = gallon/s
 temp = temperature
 NTU = Nephelometric Turbidity Units
 mV = millivolts

Groundwater Sampling Form

Site Address:	444 Henningsen Rd., Odehul							
Project No.:	2705191	Field Technician:	DB					
Field Point:	MW-15	Date:	9/19/16					
Depth to Water (DTW) (ft bgs):	3.50	Well Diameter (in):	(2) 4 6 8					
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):						
Total Depth of Well (ft bgs):	12.68	Water Column Height (ft):	9.18					
Purging Info and Calculations:								
Purge Method:	Purge Equipment:				Sample Collection Method:			
Low-Flow 3 Casing volumes Other: _____	Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____				Disposable Bailer Extraction Port Dedicated Tubing Disposable Tubing Other: _____			
Water Column Height (ft): 9.18	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.56						
Casing Volume (gal): 1.6	X Specified Volumes: 3	= Calculated Purge (gal): 4.8						
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163								
Purge:	Start Time:	Stop Time:						
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge								
1231	25.1	7.41	1916	-329.6	24	4.34	0.8	
1232	24.8	7.13	1503	-334.6	21	4.31	1.6	
1233	24.5	7.04	1544	-331.4	19	3.63	2.4	
1234	24.3	6.97	1551	-333.2	17	3.40	3.2	
	- Dewatered	2 3.5 gallons					4.8	
i447								
Post-Purge								
Did Well dewater?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Total Purge volume (gal): 3.5						
Other Comments:	80% = 5.33 DTW = 9.27 (> 2 hours) Purged through float cell i447							
Sample Info:								
Sample ID:	MW-15 - Z0160930			Sample Date and Time:	9/19/16 1347 MDT			
Selected Analysis:								
This form was provided by Antea Group and completed by: (Print Full Name)		Rustin Becker, an employee of Blaine Tech Services, Inc.						
Signature:	Date: 9/19/16							

Groundwater Sampling Form

Site Address:	449 Hegenberger Rd., Oakland								
Project No:	2705191	Field Technician:	DB						
Field Point:	MW-16	Date:	9/19/16						
Depth to Water (DTW) (ft bgs):	3.19	Well Diameter (in):	(2) 4 6 8						
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):							
Total Depth of Well (ft bgs):	12.64	Water Column Height (ft):	9.45						
Purging Info and Calculations:									
Purge Method:	Purge Equipment:			Sample Collection Method:					
Low-Flow 2 casing volumes	Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump			Disposable Bailer Extraction Port Dedicated Tubing Disposable Tubing					
Other: _____	Other: _____			Other: _____					
Water Column Height (ft): 9.45	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.6							
Casing Volume (gal): 1.6	X Specified Volumes: 3	= Calculated Purge (gal): 4.8							
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163									
Purge:	Start Time:	Stop Time:							
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)	
Pre-Purge				-321.1		3.99			
1113	24.01	7.39	3167	-305.9	31	3.61	0.80	6.41	
1114	25.2	7.10	3162	-305.5	27	3.22	1.60	6.59	
1115	25.8	7.04	3204	-306.3	21	2.74	3.4	6.81	
1116	26.0	7.00	3211	-307.4	18	2.69	3.20		
1117	26.2	6.99	3244	-310.1	16	2.61	4.06		
	Well dewatered	Q 4	gallons				4.8		
Post-Purge									
Did Well dewater?	Yes	No	Total Purge volume (gal): 4						
Other Comments:	80% = 5.08 DTW = 7.20 (7.2 hours)							Purged through flow cell	
Sample Info:									
Sample ID:	MW-16-20160930			Sample Date and Time:	9/19/16 13:36				
Selected Analysis:	SIEP loc								
This form was provided by Antea Group and completed by: (Print Full Name)		Justin Becker, an employee of Blaine Tech Services, Inc.							
Signature:				Date:	9/19/16				

TEST EQUIPMENT CALIBRATION LOG



COP ELT CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

Page:
Cooler #1 of
of

3Q16 GW Event

Required Lab Information:

Required Project Information:

Required Invoice Information:

Lab Name:	Calscience		Site ID #:	2705191	Task:	WG_Q_201609	Send Invoice to:	Sandy Hayes						
Address:	7440 Lincoln Way		AnteaGrp proj#			Address: 11050 White Rock Road, Suite 110				Turn around time (days)	10			
Garden Grove, CA 92841			Site Address 449 Hegenberger			City/State		Rancho Cordova CA 95670	Phone #:	916-638-2085				
Lab PM:	City		Oakland	State	CA 94621	Reimbursement project?		Non-reimbursement project?		Y	Mark one			
Phone/Fax:	714-895-5494		AG PM Name: Dacre Bush			Send EDD to		agdataview.us@anteagroup.com				QC level Required: Standard	Special	Mark one
Lab PM email			Phone/Fax: 805-295-9071			CC Hardcopy report to		jenilyn.thao@anteagroup.com				MA MCP Cert?	CT RCP Cert?	Mark One
Applicable Lab Quote #:		AG PM Email: Dacre.bush@anteagroup.com			CC Hardcopy report to						Lab Project ID (lab use)			

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9, -) Samples IDs MUST BE UNIQUE</small>	Valid Matrix Codes		MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	# OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives						Comments/Lab Sample I.D.	
		MATRIX	MATRIX							H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ SO ₄	Methanol	Other	
1	MW-11_20160930	WG	G	9/19/16	1726	5	N	X	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ SO ₄	Methanol		80515P-Diesel/Wastewater	
2	MW-13_20160930	WG	G	9/19/16	1100	5	N	X		X							8280 TCAMS GRO
3	MW-15_20160930	WG	G	9/19/16	1447	5	N	X		X							8280 TCAMS GRO
4	MW-16_20160930	WG	G	9/19/16	1336	5	N	X		X							8280 TCAMS GRO
5	MW-17_20160930	WG	G	9/19/16	1325	5	N	X		X							8280 TCAMS GRO
6	MW-18_20160930	WG	G	9/19/16	1315	5	N	X		X							8280 TCAMS GRO
7																	
8																	
9																	
10																	
11																	
12																	

Additional Comments/Special Instructions:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Sample Receipt Conditions		
	9/19/16	1630		9/19/16	1630	Y/N	Y/N	Y/N
						Y/N	Y/N	Y/N
						Y/N	Y/N	Y/N
						Y/N	Y/N	Y/N
SHIPPING METHOD: (mark as appropriate)						SAMPLER NAME AND SIGNATURE		
UPS COURIER FEDEX	PRINT Name of SAMPLER:					Temp in °C	Y/N	Y/N
US MAIL	SIGNATURE of SAMPLER:					Samples on Ice?	Y/N	Y/N
						Sample intact?	Y/N	Y/N
						Trip Blank?	Y/N	Y/N

Quarterly Summary Report, Third Quarter 2016

76 Station No. 5191/5043

Oakland, CA

Antea Group Project No. I42705191

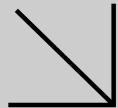


Appendix D

Certified Laboratory Analytical Report and Data Validation Form



Calscience



WORK ORDER NUMBER: 16-09-1698



The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Antea Group

Client Project Name: 2705191

Attention: Dacre Bush

11050 White Rock Rd.

Suite 110

Rancho Cordova, CA 95670-6001

Approved for release on 09/30/2016 by:
Terri Chang
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



Calscience

Contents

Client Project Name: 2705191
Work Order Number: 16-09-1698

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 EPA 8015B (M) TPH Diesel (Aqueous)	5
	3.2 GC/MS GRO/EPA 8260B Volatile Organics (Aqueous)	7
4	Quality Control Sample Data.	14
	4.1 MS/MSD.	14
	4.2 LCS/LCSD.	15
5	Sample Analysis Summary.	17
6	Glossary of Terms and Qualifiers.	18
7	Chain-of-Custody/Sample Receipt Form.	19

Work Order Narrative

Work Order: 16-09-1698

Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/23/16. They were assigned to Work Order 16-09-1698.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Sample Summary

Client: Antea Group 11050 White Rock Rd., Suite 110 Rancho Cordova, CA 95670-6001	Work Order: Project Name: PO Number: Date/Time Received: Number of Containers:	16-09-1698 2705191 09/23/16 08:40 30
---	--	---

Attn: Dacre Bush

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
MW-11_20160930	16-09-1698-1	09/19/16 12:20	5	Aqueous
MW-13_20160930	16-09-1698-2	09/19/16 11:00	5	Aqueous
MW-15_20160930	16-09-1698-3	09/19/16 14:47	5	Aqueous
MW-16_20160930	16-09-1698-4	09/19/16 13:36	5	Aqueous
MW-3_20160930	16-09-1698-5	09/19/16 13:25	5	Aqueous
MW-9_20160930	16-09-1698-6	09/19/16 13:15	5	Aqueous

Analytical Report

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 3510C
 Method: EPA 8015B (M)
 Units: ug/L

Project: 2705191

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11_20160930	16-09-1698-1-D	09/19/16 12:20	Aqueous	GC 47	09/23/16	09/27/16 16:16	160923B12S

Comment(s): - The sample extract was subjected to Silica Gel treatment prior to analysis.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel	170	45	1.00	HD,SG

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	76	68-140	

MW-13_20160930	16-09-1698-2-D	09/19/16 11:00	Aqueous	GC 47	09/23/16	09/27/16 16:32	160923B12S
-----------------------	-----------------------	-----------------------	----------------	--------------	-----------------	-----------------------	-------------------

Comment(s): - The sample extract was subjected to Silica Gel treatment prior to analysis.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel	ND	45	1.00	SG

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	74	68-140	

MW-15_20160930	16-09-1698-3-D	09/19/16 14:47	Aqueous	GC 47	09/23/16	09/27/16 16:49	160923B12S
-----------------------	-----------------------	-----------------------	----------------	--------------	-----------------	-----------------------	-------------------

Comment(s): - The sample extract was subjected to Silica Gel treatment prior to analysis.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel	ND	45	1.00	SG

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	85	68-140	

MW-16_20160930	16-09-1698-4-D	09/19/16 13:36	Aqueous	GC 47	09/23/16	09/27/16 17:06	160923B12S
-----------------------	-----------------------	-----------------------	----------------	--------------	-----------------	-----------------------	-------------------

Comment(s): - The sample extract was subjected to Silica Gel treatment prior to analysis.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel	490	45	1.00	HD,SG

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	85	68-140	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 3510C
 Method: EPA 8015B (M)
 Units: ug/L

Project: 2705191

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3_20160930	16-09-1698-5-D	09/19/16 13:25	Aqueous	GC 47	09/23/16	09/27/16 17:22	160923B12S

Comment(s): - The sample extract was subjected to Silica Gel treatment prior to analysis.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel	93	45	1.00	HD,SG

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	69	68-140	

MW-9_20160930	16-09-1698-6-D	09/19/16 13:15	Aqueous	GC 47	09/23/16	09/27/16 17:39	160923B12S
----------------------	-----------------------	---------------------------	----------------	--------------	-----------------	---------------------------	-------------------

Comment(s): - The sample extract was subjected to Silica Gel treatment prior to analysis.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel	ND	45	1.00	SG

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	78	68-140	

Method Blank	099-15-304-1520	N/A	Aqueous	GC 47	09/23/16	09/27/16 12:23	160923B12S
---------------------	------------------------	------------	----------------	--------------	-----------------	---------------------------	-------------------

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel	ND	50	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	96	68-140	

Analytical Report

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: 2705191

Page 1 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11_20160930	16-09-1698-1-B	09/19/16 12:20	Aqueous	GC/MS LL	09/27/16	09/27/16 18:34	160927L012

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Xylenes (total)	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	7.6	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	ND	50	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
Dibromofluoromethane	105	78-126		
1,2-Dichloroethane-d4	128	75-135		
Toluene-d8	100	80-120		
Toluene-d8-TPPH	97	88-112		
1,4-Bromofluorobenzene	91	80-120		

 RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: 2705191

Page 2 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-13_20160930	16-09-1698-2-B	09/19/16 11:00	Aqueous	GC/MS LL	09/27/16	09/27/16 19:05	160927L012

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Xylenes (total)	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	20	1.0	1.00	
Tert-Butyl Alcohol (TBA)	30	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	ND	50	1.00	
<hr/>				
Surrogate	Rec. (%)	Control Limits	Qualifiers	
Dibromofluoromethane	113	78-126		
1,2-Dichloroethane-d4	130	75-135		
Toluene-d8	101	80-120		
Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	91	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: 2705191

Page 3 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-15_20160930	16-09-1698-3-B	09/19/16 14:47	Aqueous	GC/MS LL	09/27/16	09/27/16 19:36	160927L012

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Xylenes (total)	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	47	1.0	1.00	
Tert-Butyl Alcohol (TBA)	35	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	ND	50	1.00	
<hr/>				
Surrogate	Rec. (%)	Control Limits	Qualifiers	
Dibromofluoromethane	105	78-126		
1,2-Dichloroethane-d4	130	75-135		
Toluene-d8	99	80-120		
Toluene-d8-TPPH	96	88-112		
1,4-Bromofluorobenzene	92	80-120		

 RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: 2705191

Page 4 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-16_20160930	16-09-1698-4-B	09/19/16 13:36	Aqueous	GC/MS LL	09/27/16	09/27/16 20:08	160927L012

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Xylenes (total)	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	5.7	1.0	1.00	
Tert-Butyl Alcohol (TBA)	87	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	ND	50	1.00	
<hr/>				
Surrogate	Rec. (%)	Control Limits	Qualifiers	
Dibromofluoromethane	116	78-126		
1,2-Dichloroethane-d4	131	75-135		
Toluene-d8	101	80-120		
Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	92	80-120		

 RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: 2705191

Page 5 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3_20160930	16-09-1698-5-B	09/19/16 13:25	Aqueous	GC/MS LL	09/27/16	09/27/16 20:39	160927L012

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Xylenes (total)	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	21	1.0	1.00	
Tert-Butyl Alcohol (TBA)	47	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	400	50	1.00	
<hr/>				
Surrogate	Rec. (%)	Control Limits	Qualifiers	
Dibromofluoromethane	115	78-126		
1,2-Dichloroethane-d4	130	75-135		
Toluene-d8	101	80-120		
Toluene-d8-TPPH	99	88-112		
1,4-Bromofluorobenzene	104	80-120		

 RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: 2705191

Page 6 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-9_20160930	16-09-1698-6-B	09/19/16 13:15	Aqueous	GC/MS LL	09/27/16	09/27/16 21:10	160927L012

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Xylenes (total)	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	ND	50	1.00	
<hr/>				
Surrogate	Rec. (%)	Control Limits	Qualifiers	
Dibromofluoromethane	103	78-126		
1,2-Dichloroethane-d4	126	75-135		
Toluene-d8	98	80-120		
Toluene-d8-TPPH	97	88-112		
1,4-Bromofluorobenzene	91	80-120		

 RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: 2705191

Page 7 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-7524	N/A	Aqueous	GC/MS LL	09/27/16	09/27/16 13:23	160927L012

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Xylenes (total)	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	ND	50	1.00	
<hr/>				
Surrogate	Rec. (%)	Control Limits	Qualifiers	
Dibromofluoromethane	106	78-126		
1,2-Dichloroethane-d4	127	75-135		
Toluene-d8	101	80-120		
Toluene-d8-TPPH	98	88-112		
1,4-Bromofluorobenzene	92	80-120		

 RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Quality Control - Spike/Spike Duplicate

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Project: 2705191 Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
16-09-1480-7	Sample	Aqueous	GC/MS LL	09/27/16	09/27/16 13:55	160927S002				
16-09-1480-7	Matrix Spike	Aqueous	GC/MS LL	09/27/16	09/27/16 14:26	160927S002				
16-09-1480-7	Matrix Spike Duplicate	Aqueous	GC/MS LL	09/27/16	09/27/16 14:57	160927S002				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	1216	500.0	1522	61	1531	63	74-122	1	0-21	3
Ethylbenzene	512.0	500.0	1025	103	1021	102	77-125	0	0-24	
Toluene	42.82	500.0	575.1	106	587.9	109	72-126	2	0-23	
p/m-Xylene	103.7	1000	1221	112	1227	112	63-129	1	0-25	
o-Xylene	13.50	500.0	574.8	112	579.6	113	62-128	1	0-24	
Methyl-t-Butyl Ether (MTBE)	ND	500.0	499.6	100	505.4	101	68-134	1	0-21	
Tert-Butyl Alcohol (TBA)	ND	2500	2472	99	2414	97	65-143	2	0-30	
Ethanol	ND	5000	4379	88	4973	99	34-178	13	0-58	

[Return to Contents](#)

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 3510C
 Method: EPA 8015B (M)

Project: 2705191 Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-304-1520	LCS	Aqueous	GC 47	09/23/16	09/27/16 12:39	160923B12S			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	2000	1780	89	1810	91	75-117	2	0-13	

Quality Control - LCS/LCSD

Antea Group Date Received: 09/23/16
 11050 White Rock Rd., Suite 110 Work Order: 16-09-1698
 Rancho Cordova, CA 95670-6001 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Project: 2705191 Page 2 of 2

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-767-7524	LCS	Aqueous		GC/MS LL	09/27/16	09/27/16 11:50	160927L012			
099-12-767-7524	LCSD	Aqueous		GC/MS LL	09/27/16	09/27/16 12:21	160927L012			
Parameter	Spike Added	LCS	Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.00	96	N/A	N/A	80-120	N/A	0-20		
Ethylbenzene	50.00	52.56	105	N/A	N/A	80-123	N/A	0-20		
Toluene	50.00	51.72	103	N/A	N/A	80-120	N/A	0-20		
p/m-Xylene	100.0	108.0	108	N/A	N/A	75-123	N/A	0-25		
o-Xylene	50.00	53.62	107	N/A	N/A	74-122	N/A	0-25		
Methyl-t-Butyl Ether (MTBE)	50.00	48.54	97	N/A	N/A	69-129	N/A	0-22		
Tert-Butyl Alcohol (TBA)	250.0	263.3	105	N/A	N/A	69-129	N/A	0-25		
Ethanol	500.0	440.3	88	N/A	N/A	42-168	N/A	0-20		
Gasoline Range Organics (C6-C12)	1000	1028	103	990.3	99	65-135	4	0-20		

Sample Analysis Summary Report

Work Order: 16-09-1698

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8015B (M)	EPA 3510C	972	GC 47	1
GC/MS / EPA 8260B	EPA 5030C	867	GC/MS LL	2



Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 16-09-1698

Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



COP ELT CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

Page: 1 of
Cooler #: _____ of _____

16-09-1698

3Q16 GW Event

Required Lab Information:

Required Project Information:

Required Invoice Information:

Lab Name: Calscience	Site ID #: 2705191	Task: WG_Q_201609	Send Invoice to: Sandy Hayes	Turn around time (days) 10
Address: 7440 Lincoln Way	AnteaGrp proj#		Address: 11050 White Rock Road, Suite 110	QC level Required: Standard
Garden Grove, CA 92841	Site Address 449 Hegenberger		City/State Rancho Cordova CA 95670	Non-reimbursement project? Y
Lab PM:	City Oakland	State CA 94621	Reimbursement project?	Mark one
Phone/Fax: 714-895-5494	AG PM Name: Dacre Bush	Send EDD to agdataview.us@anteagroup.com	MA MCP Cert?	CT RCP Cert?
Lab PM email	Phone/Fax: 805-295-9071	CC Hardcopy report to jerilyn.thao@anteagroup.com	Mark One	Lab Project ID (lab use)
Applicable Lab Quote #:	AG PM Email: Dacre.bush@anteagroup.com	CC Hardcopy report to	Comments/Lab Sample I.D.	

SAMPLE ID
 One Character per box.
 (A-Z, 0-9, -,)
 Samples IDs MUST BE UNIQUE

Valid Matrix Codes:

MATRIX	MATRIX		
DRINKING WATER	WP	WATER	W
DRINKING WATER	WG	WATER/ICE/WATER	WS
WASTE WATER	WW	WATER OC	WO
FREE PRODUCT	LF	SLUDGE	SL
SOIL	SO	RINSEATE	WN
OIL	OL	OTHER	OT
WIPES	SW	ANIMAL TISSUE	TA
WEIGHT AIR	AA		
SVE AIR	AE		
SOIL GAS	GS		

MATRIX CODE

SAMPLE TYPE
G=GRAB C=COMP

SAMPLE DATE

SAMPLE TIME

#OF CONTAINERS

FIELD FILTERED? (Y/N)

Preservatives

Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other
-------------	--------------------------------	------------------	-----	------	---	----------	-------

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives							Comments/Lab Sample I.D.	
							Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol		
1	MW-11_20160930	WG	6	9/19/16	1226	S	N	X		X					x x x x
2	MW-13_20160930	WG	6	9/19/16	1100	S	N	X		X					x x x x
3	MW-15_20160930	WG	6	9/19/16	1447	S	N	X		X					x x x x
4	MW-16_20160930	WG	6	9/19/16	1336	S	N	X		X					x x x x
5	MW-3_20160930	WG	6	9/19/16	1325	S	N	X		X					x x x x
6	MW-9_20160930	WG	6	9/19/16	1315	S	N	X		X					x x x x
7															
8															
9															
10															
11															
12															

Additional Comments/Special Instructions:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Sample Receipt Conditions
	9/19/16	1630		9/19/16	1630	Y/N Y/N Y/N
	9/19/16	1014	ECL	9/22/16	1014	Y/N Y/N Y/N
GSO	9/22/16	1730	J. P. Davis	9/23/16	0810	Y/N Y/N Y/N
						Y/N Y/N Y/N

SHIPPING METHOD: (mark as appropriate) SAMPLER NAME AND SIGNATURE

UPS COURIER FEDEX	PRINT Name of SAMPLER:				Temp in °C
US MAIL	SIGNATURE of SAMPLER:	DATE Signed	Time:		Samples on Ice?
					Sample intact?
					Blank? 10/02/2016

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1CLIENT: AnteaDATE: 09 / 23 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 2-1 °C (w/ CF): 2-1 °C; Blank Sample

- Sample(s) outside temperature criteria (PM/APM contacted by: _____)
- Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling
- Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air FilterChecked by: 15

CUSTODY SEAL:

Cooler	<input checked="" type="checkbox"/> Present and Intact	<input type="checkbox"/> Present but Not Intact	<input type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Checked by: <u>15</u>
Sample(s)	<input type="checkbox"/> Present and Intact	<input type="checkbox"/> Present but Not Intact	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Checked by: <u>778</u>

SAMPLE CONDITION:

Yes No N/A

Chain-of-Custody (COC) document(s) received with samples COC document(s) received complete

- Sampling date Sampling time Matrix Number of containers
- No analysis requested Not relinquished No relinquished date No relinquished time

Sampler's name indicated on COC Sample container label(s) consistent with COC Sample container(s) intact and in good condition Proper containers for analyses requested Sufficient volume/mass for analyses requested Samples received within holding time

Aqueous samples for certain analyses received within 15-minute holding time

 pH Residual Chlorine Dissolved Sulfide Dissolved Oxygen Proper preservation chemical(s) noted on COC and/or sample container

Unpreserved aqueous sample(s) received for certain analyses

 Volatile Organics Total Metals Dissolved MetalsContainer(s) for certain analysis free of headspace Volatile Organics Dissolved Gases (RSK-175) Dissolved Oxygen (SM 4500) Carbon Dioxide (SM 4500) Ferrous Iron (SM 3500) Hydrogen Sulfide (Hach)Tedlar™ bag(s) free of condensation

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB 125PBznna 250AGB 250CGB 250CGBs 250PB 250PBn 500AGB 500AGJ 500AGJs 500PB 1AGB 1AGBna₂ 1AGBs 1PB 1PBn _____ _____ _____ _____Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (_____) : _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 778s = H₂SO₄, u = ultra-pure, znnna = Zn (CH₃COO)₂ + NaOHReviewed by: 1057

Is the Data Valid?
(circle)
 Yes / No

Preservation Temperature
(if Known): 2.1 °C

Antea Group Lab Validation Sheet

Project/Client: COP/ELT

Project #: I42705191

Date of Validation: 10/19/16 Date of Analysis: 9/27/16 Sample Date: 9/19/16

Completed By: Jon F. Signature: *Jonathan F. Williams*

Analytical Lab Used and Report # (if any): Eurofins Calscience 16-09-1698

1. Was the analysis the one requested? Yes / No
2. Do the sample number(s) on the chain-of-custody (COC) match the one(s) that appear on the laboratory data sheet? Yes / No
3. Were samples prepared (extracted, filtered, etc.) within EPA holding times? Yes / No
4. Once prepared/extracted, were the samples analyzed within the EPA holding times? Yes / No
5. Were Laboratory blanks performed, if so, were they below non-detect? Yes / No
6. Are the units correct? (i.e., soil samples in mg/kg or ug/g, water samples mg/L, ug/L, and air samples in volume mg/m³,etc.) Yes / No
7. Were appropriate Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples included in the laboratory batch sample? Yes / No
8. In lieu of MS/ MSD, were surrogate spike (SS) or surrogate spike duplicate (SSD) samples included in the laboratory batch samples? Yes / No N/A
9. Were MS/ MSD (or SS/SSD) within the acceptable range of % recovery (i.e., approx 80-120% depending on analyte)? Yes / No
10. Were MS/MSD (or SS/SSD) values used to calculate Relative Percent Difference (RPD)? Yes / No
11. Were Relative Percent Difference values within the acceptable range (i.e. ± 25%)? Yes / No

If any answer is no, explain why and what corrective action was taken:

9. Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control. (Noted on Benzene)

Quarterly Summary Report, Third Quarter 2016

76 Station No. 5191/5043

Oakland, CA

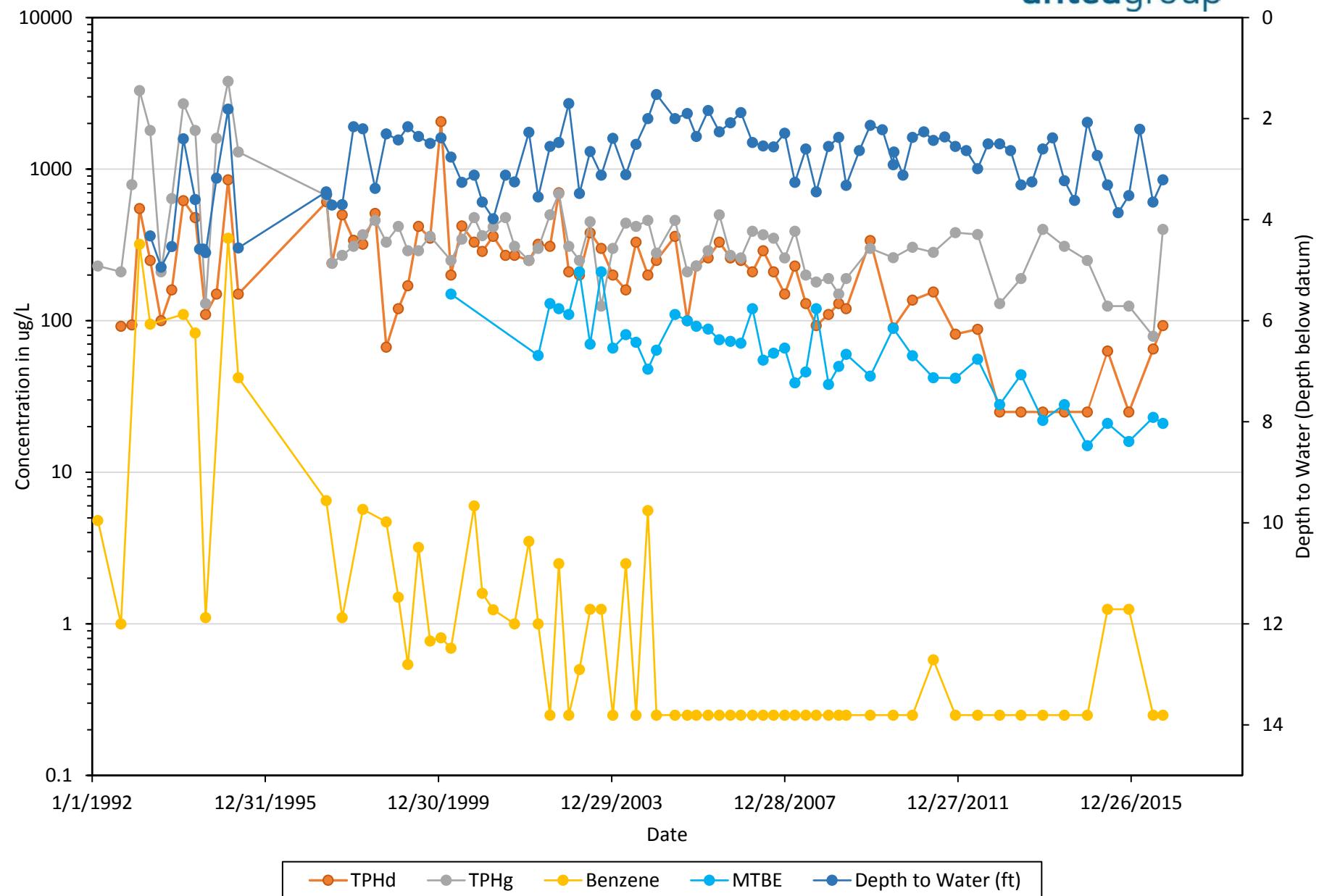
Antea Group Project No. I42705191



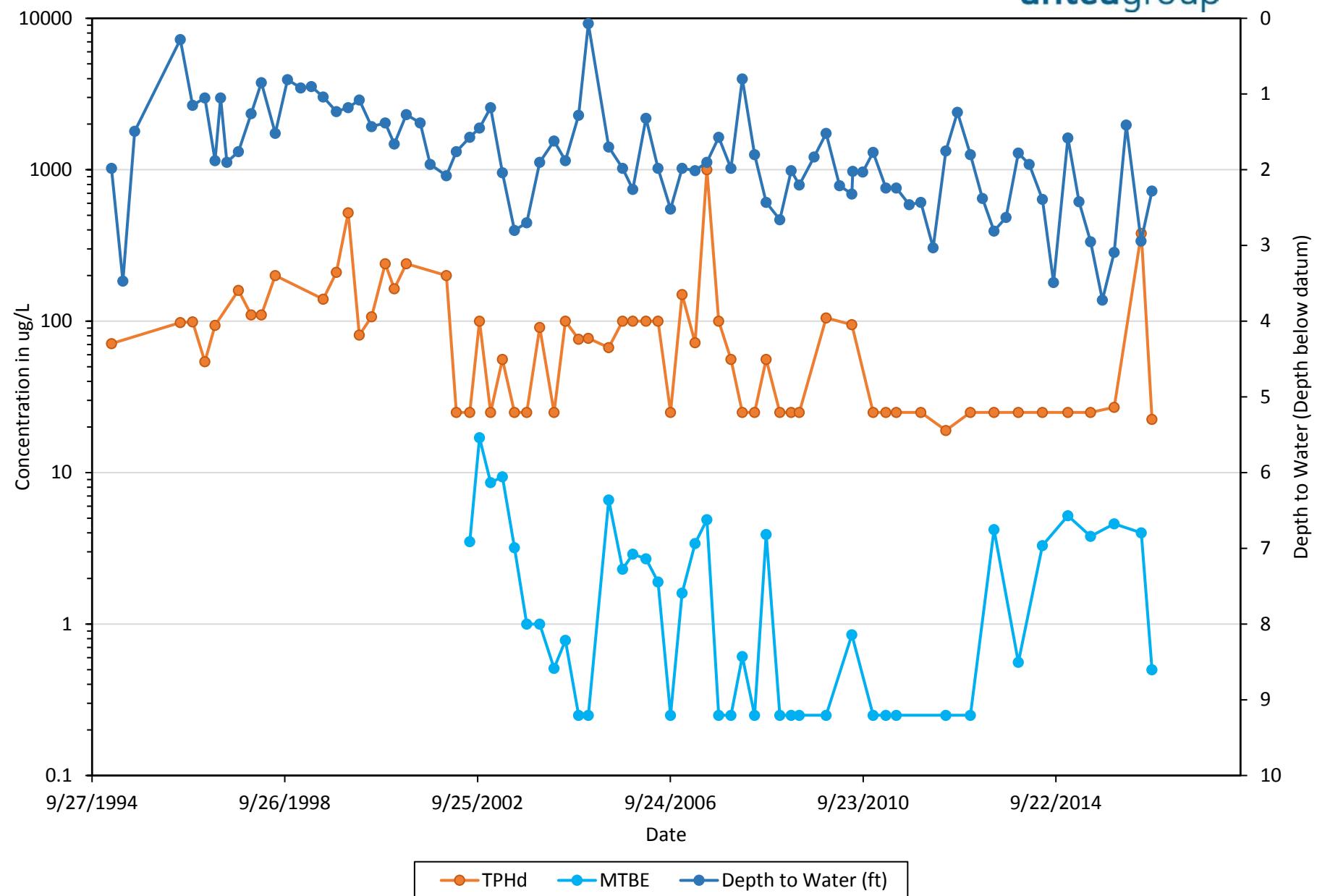
Appendix E

Time Series Graphs

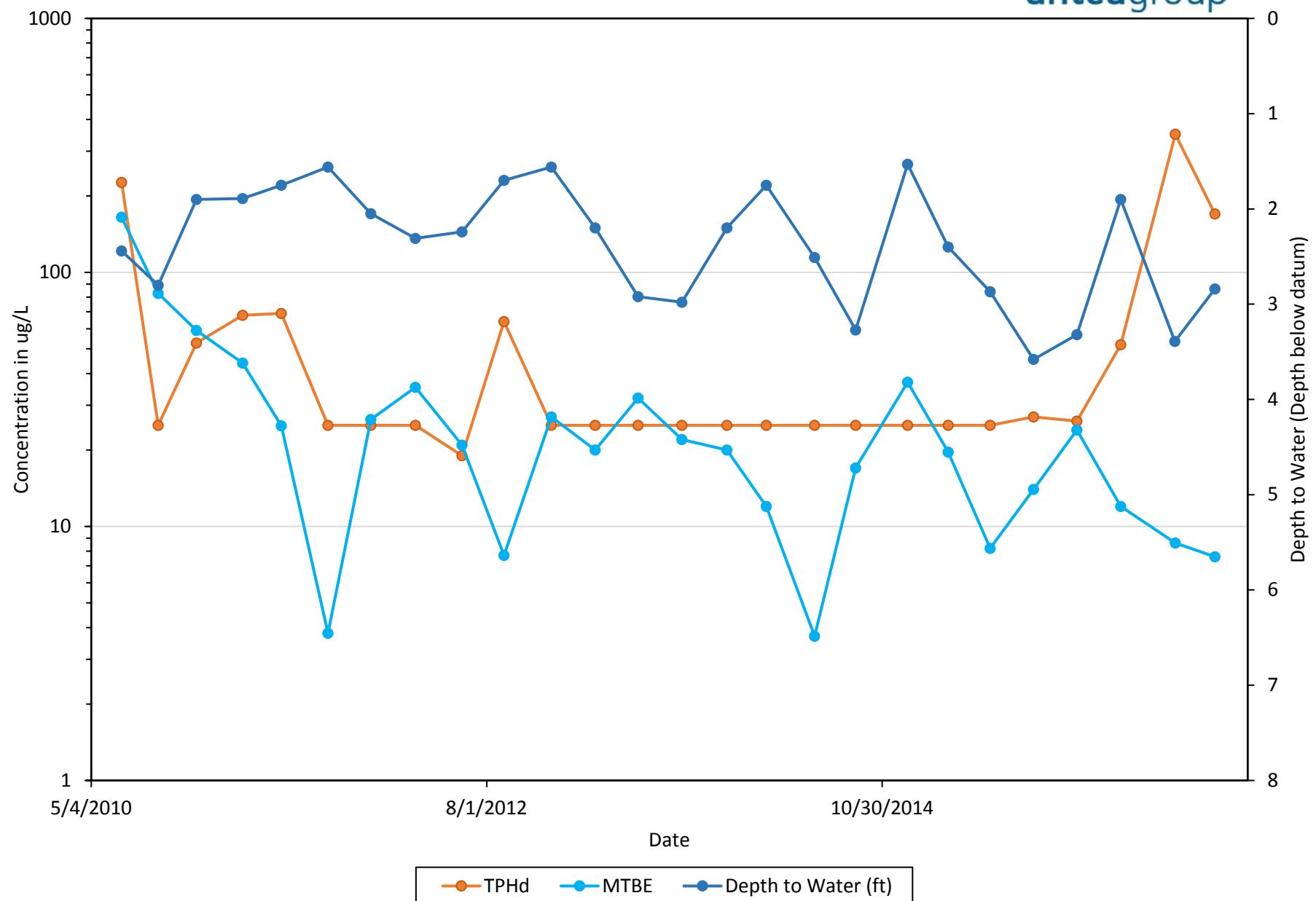
MW-3
 TPHd, TPHg, Benzene, & MTBE Concentrations
 and Depth to Water Versus Time



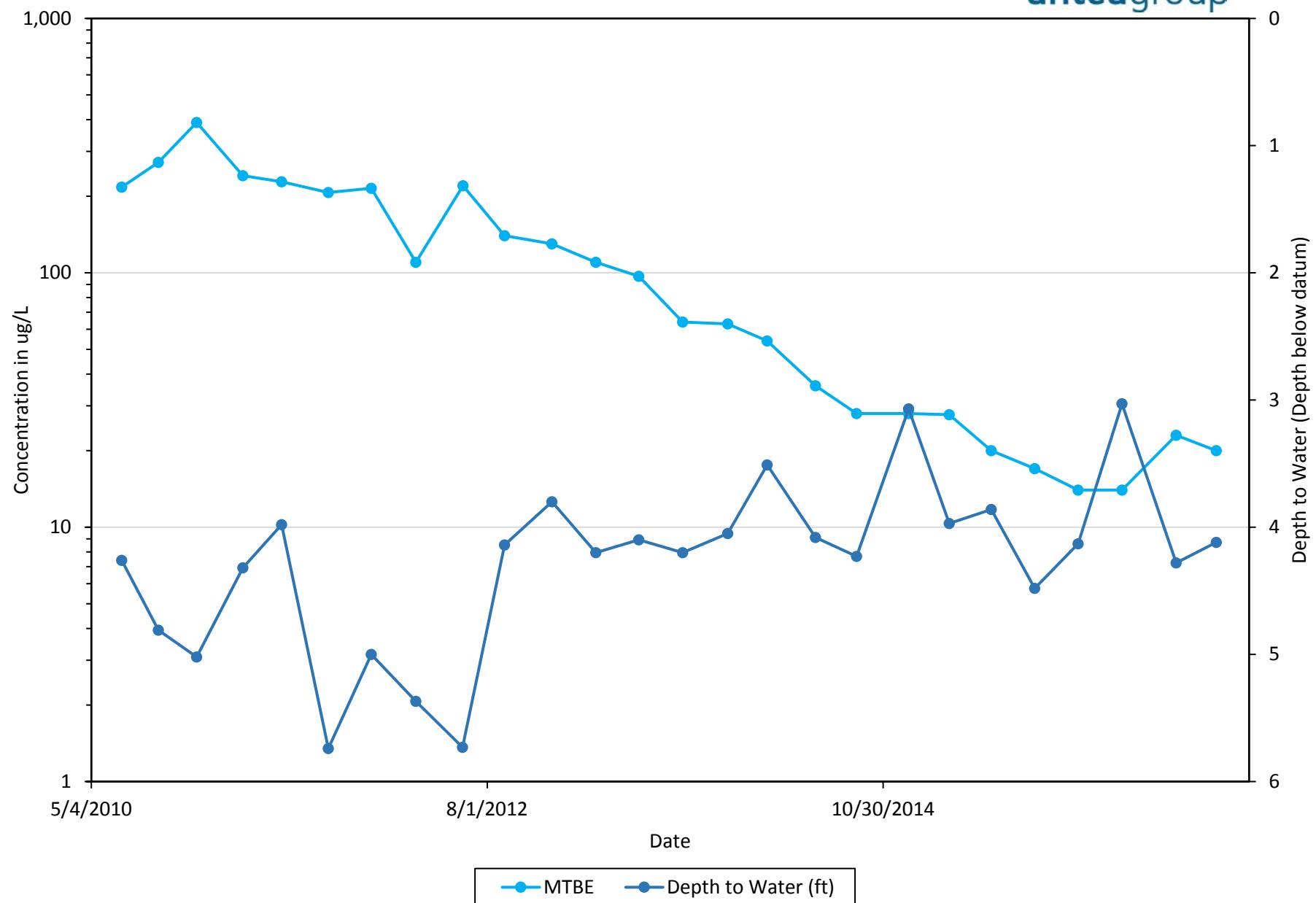
MW-9
TPHd & MTBE Concentrations
and Depth to Water Versus Time



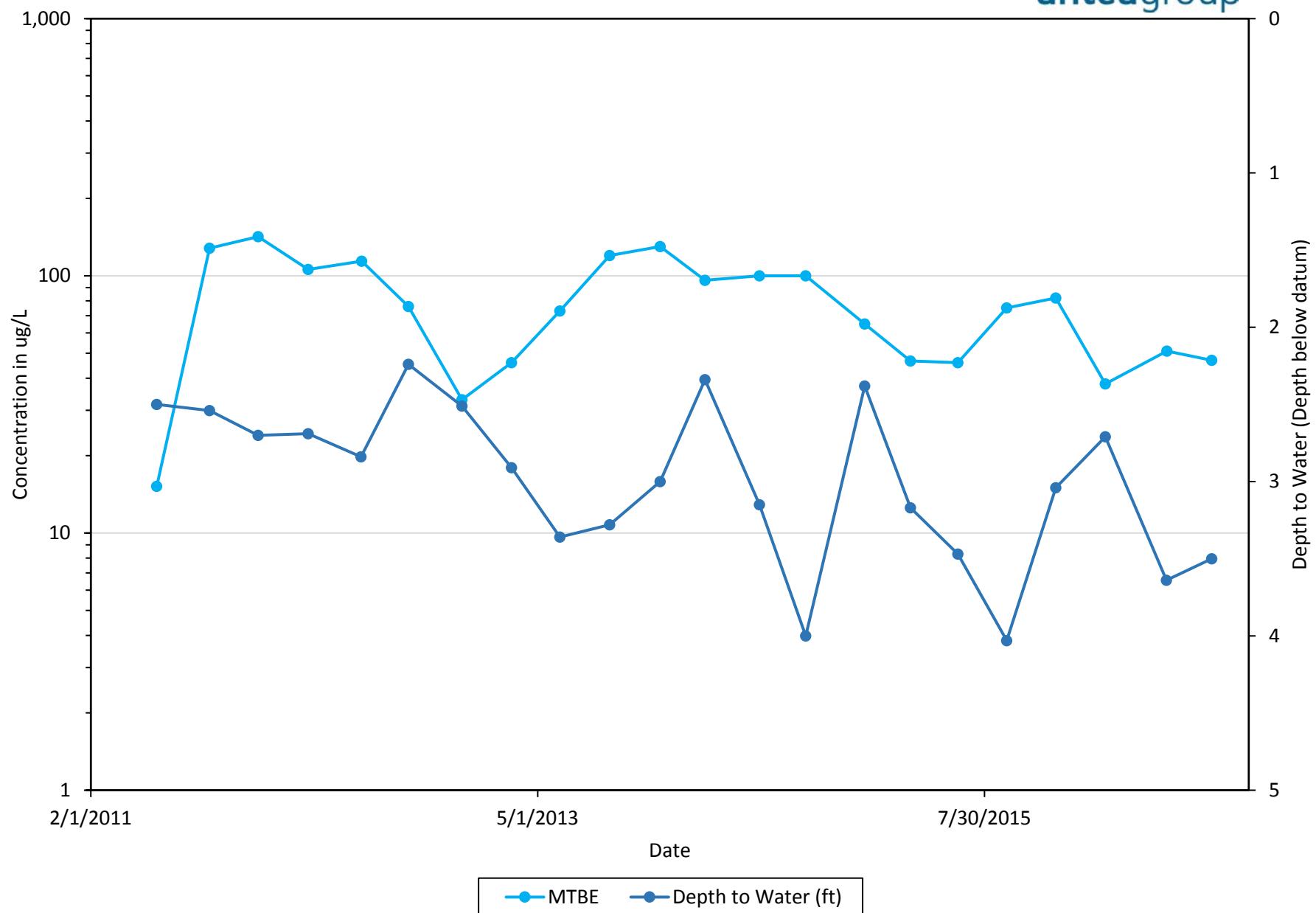
MW-11
TPHd & MTBE Concentrations
and Depth to Water Versus Time



MW-13
MTBE Concentrations
and Depth to Water Versus Time



MW-15
MTBE Concentrations
and Depth to Water Versus Time



MW-16
TPHd & MTBE Concentrations
and Depth to Water Versus Time

