

**RECEIVED**

By Alameda County Environmental Health 7:53 am, Jun 07, 2017

May 31, 2017

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

**Subject: 1Q17 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:

**Allen Faass**  
Facilities and Compliance Manager  
United Pacific  
17311 S. Main Street  
Gardena, CA 90248  
(949) 289-5286

Sincerely,

**United Pacific**



**Allen Faass**  
Facilities and Compliance Manager

Attachment

# Quarterly Summary Report, First Quarter 2017

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

*Alameda County Health Care Services  
Agency Fuel Leak Case No. RO0000219*

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

*GeoTracker Global ID No. T0600101476*

*Antea Group Project No. I42705191  
May 31, 2017*

*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
1.1	Work Performed [First Quarter 2017] .....	1
1.2	Work Proposed [Second Quarter 2017].....	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
3.0	DISCUSSION.....	5
4.0	CONCLUSIONS .....	5
5.0	REMARKS.....	6

## Figures

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Elevation Contour Map – March 30, 2017
Figure 4	Historical Groundwater Flow Directions
Figure 5	Dissolved Phase Concentration Map – March 30, 2017

## 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 Blaine Tech Groundwater Sampling Field Data Sheets
- Appendix C Certified Laboratory Analytical Report and Data Validation Form
- Appendix D Time Series Graphs

# Quarterly Summary Report, First Quarter 2017

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

## 1.0 INTRODUCTION

---

Antea®Group is submitting this *Quarterly Summary Report, First Quarter 2017*, 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. 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 the history of environmental investigations and remediation activities.

This report summarizes the data obtained from the recent groundwater monitoring and sampling event conducted on March 30, 2017. Included herein are site figures, summary groundwater data tables, and a discussion of trends. This report has received a technical review by Ms. Wendy Linck, California Professional Geologist No. 6934.

### 1.1 Work Performed [First Quarter 2017]

1. Antea Group submitted the *Quarterly Summary Report, Fourth Quarter 2016*, dated January 31, 2017 to the Alameda County Health Care Services Agency (ACHCSA).
2. Antea Group subcontractor Blaine Tech Services, Inc. (Blaine Tech) conducted the first quarter 2017 groundwater monitoring and sampling event on March 30, 2017.

### 1.2 Work Proposed [Second Quarter 2017]

1. Antea Group will submit the *Quarterly Summary Report, First Quarter 2017* (contained herein) to the ACHCSA.
2. Blaine Tech will conduct the second quarter 2017 groundwater monitoring and sampling event.
3. 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 ( <b>Table 1</b> ):	Six (MW-3, MW-9, MW-11, MW-13, MW-15, and MW-16)
Range of well depths (total depth below ground surface, bgs) ( <b>Table 1</b> ):	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: 9.97 (MW-9, Q4 2016)
Local receptors:	See <b>Appendix A</b>
Current remediation technique	None

### 2.1 Regulatory Correspondence

There has been no correspondence between Antea Group and the ACHCSA during the current reporting period.

### 2.2 Site Remediation Activities

On-site soil excavation occurred from May 2, 2016 through August 5, 2016. Approximately, 1,665 tons of soil were removed during excavation activities. There have been no remedial activities during the current reporting period.

### 2.3 Groundwater Monitoring

During the first quarter 2017 groundwater monitoring and sampling event, six monitoring wells were gauged, purged, and sampled by Blaine Tech per standard sampling protocol. Copies of Blaine Tech’s field data sheets are presented as **Appendix B**. 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:	March 30, 2017
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 ( <b>Appendix B</b> ):	Temperature, pH, Conductivity, Dissolved Oxygen (DO), Oxidation Reduction Potential (ORP), and Turbidity
Wells with measurable LNAPL:	None
Current depth to water range (feet BTOC):	Min: 1.94 (MW-11) Max: 4.89 (MW-13)
Current groundwater elevation range (feet):	Min: 6.19 (MW-13) Max: 8.69 (MW-9)
Change in water depths from previous event (average change for all gauged wells):	0.20 foot increase
Groundwater flow direction and gradient in foot per foot (ft/ft):	Not available. Depth to groundwater in five of the six monitored wells at the Site was measured at a height above the top of the screen interval.

### 2.3.1 Groundwater Flow Gradient and Directional Trends

The groundwater elevations calculated using the data collected during the first quarter 2017 monitoring event were not representative of groundwater conditions (due to submerged screen intervals) in five of the six well monitored at the Site. Therefore, there were insufficient points to determine groundwater flow direction and gradient (**Figure 3**). **Table 4** summarizes historical gradients and **Figure 4** shows historical groundwater flow interpretations from 1992 to the present.

### 2.3.2 Groundwater Quality Data

Groundwater samples collected during the first quarter 2017 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 C**. 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 table summarizes the frequency of detection and the range of concentrations detected during the first quarter 2017 sampling event. Only constituents detected above the laboratory reporting limit are presented 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*	6 of 6	51 (MW-13)	360 (MW-3 and MW-15)
TPHg	2 of 6	480 (MW-3)	130 (MW-15)
Benzene	1 of 6	0.91 (MW-13)	0.91 (MW-13)
MTBE	6 of 6	1.0 (MW-9)	20 (MW-13)
TBA	3 of 6	47 (MW-3)	100 (MW-13)

**Explanations:**

µg/L = Micrograms per liter

LRL = Laboratory reporting limit

\* - All results for TPHd had the following qualifier: "HD - The chromatographic pattern was inconsistent with the profile of the reference fuel standard"

### 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 D**. Overall, TPHg, TPHd, benzene, and MTBE concentrations have been stable to decreasing at the monitoring well locations. The distribution of dissolved phase TPHg, benzene, and MTBE is shown on **Figure 5**.

### 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 completing a data validation checklist for the March 2017 Calscience analytical results. Antea Group's data validation checklist is included with the Calscience laboratory report in **Appendix C**.

Laboratory QA/QC Performed:	Yes (validated by Antea Group)
Laboratory Data Qualifiers:	Yes – one qualifier*
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 all monitoring wells)

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.



### 3.0 DISCUSSION

---

Petroleum hydrocarbon impact 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. Historically, groundwater elevations beneath the site have ranged from approximately 2.77 feet to 9.97 feet above datum.

Excavation activities conducted during the second and third quarters of 2016 (shown on **Figures 2, 3 and 5**) removed the majority of the petroleum hydrocarbon impacts in soil. Regenesis brand Oxygen Release Compound® (ORC-A®) was added to the excavation backfill to remediate the remaining constituents of concern estimated in groundwater.

During the recent monitoring event, MTBE was reported in all of the six monitoring wells; however, none of the reported concentrations exceeded the California Low-Threat Underground Storage Tank Case Closure Policy (LTCP) threshold of 1,000 µg/L MTBE<sup>1</sup>. Benzene was reported in one of the six monitoring wells, however, the reported concentration did not exceed the LTCP threshold of 3,000 µg/L benzene.

### 4.0 CONCLUSIONS

---

The petroleum hydrocarbon impacts monitored and reported during the first quarter 2016, are relatively consistent with historical data. 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. Remaining impact to the soil and groundwater is below LTCP thresholds.

---

<sup>1</sup> [http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2012/rs2012\\_0016atta.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf)

## 5.0 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:



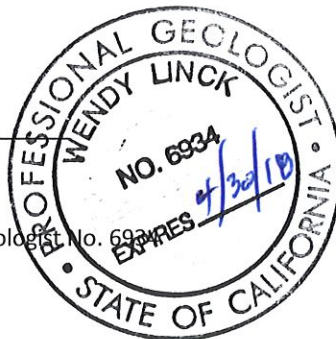
**Jonathan Fillingame**  
Project Professional

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:



**Wendy Linck, PG**  
Consultant  
California Registered Professional Geologist No. 69334  
Antea Group

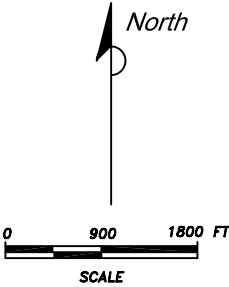
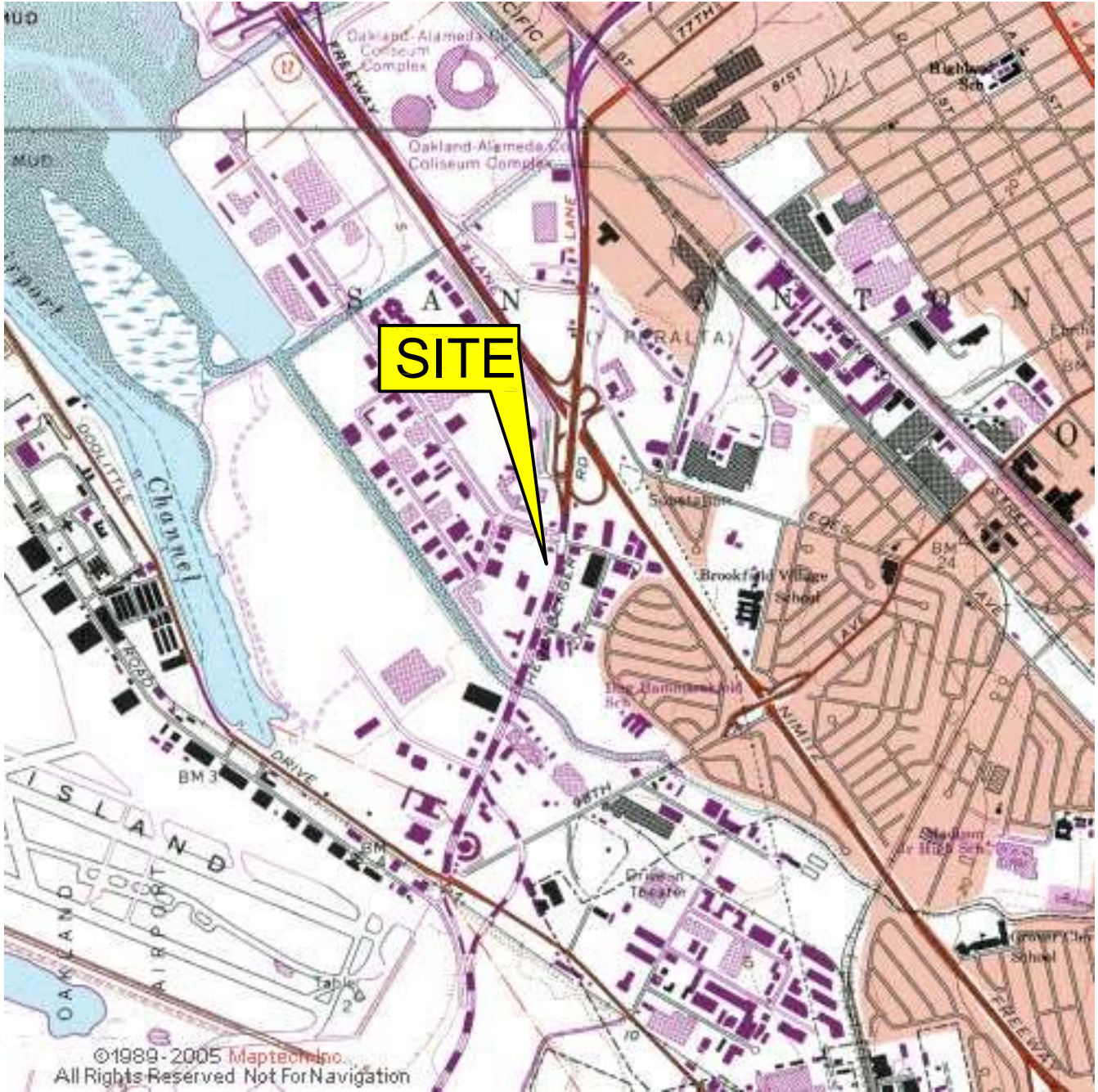


cc: GeoTracker (upload)


## ***Figures***

- Figure 1      Site Location Map
- Figure 2      Site Plan
- Figure 3      Groundwater Elevation Contour Map – March 30, 2017
- Figure 4      Historical Groundwater Flow Directions
- Figure 5      Dissolved Phase Concentration Map – March 30, 2017

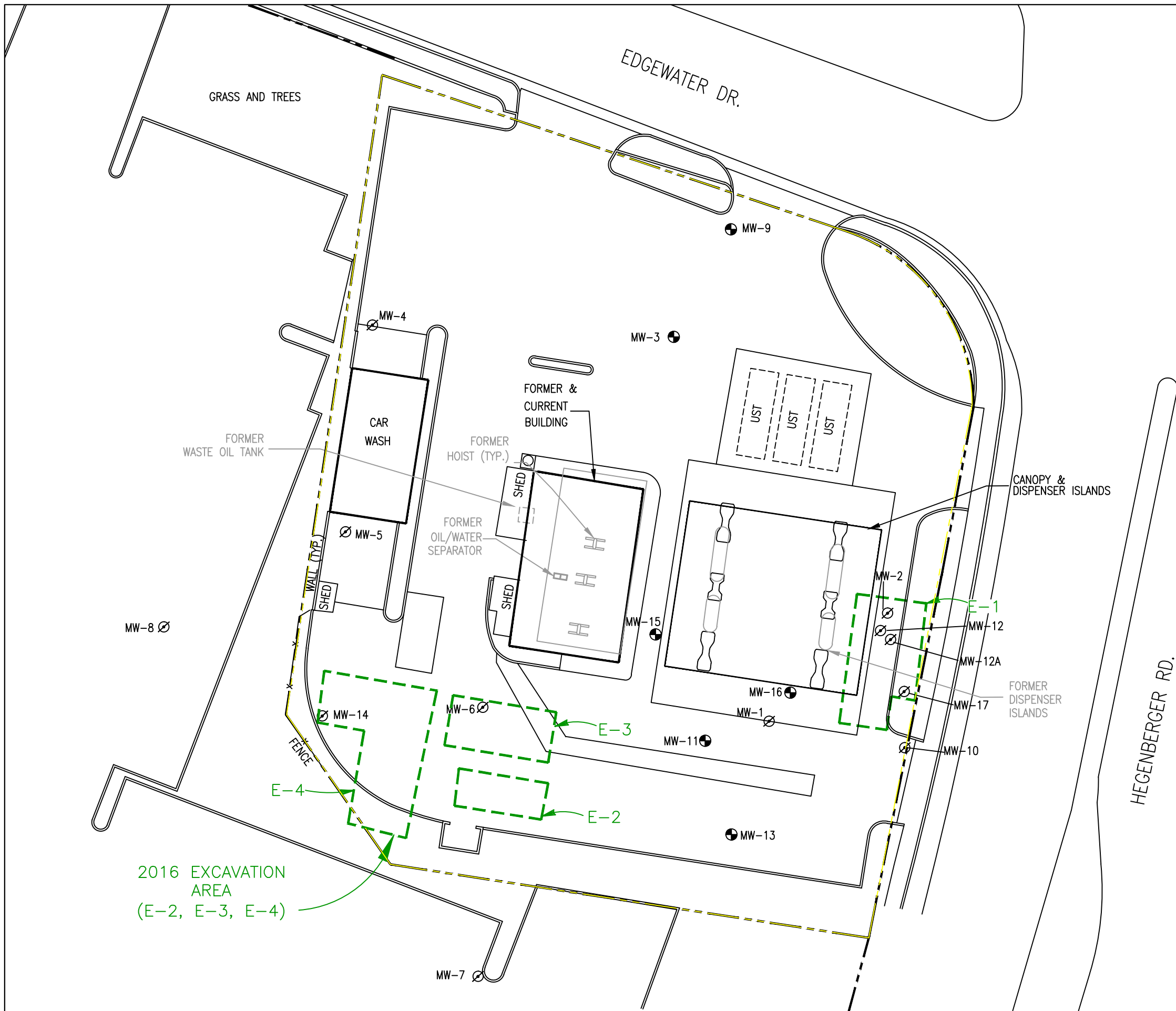




**FIGURE 1**  
**SITE LOCATION MAP**  
 76 STATION NO. 5191/5043  
 449 HEGENBERGER ROAD  
 OAKLAND, CALIFORNIA

PROJECT NO. 142705191	PREPARED BY EW	DRAWN BY DR/JH	
DATE 1/31/11	REVIEWED BY DD	FILE NAME 5043-SiteLocator	

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND EAST QUADRANGLE (1973)



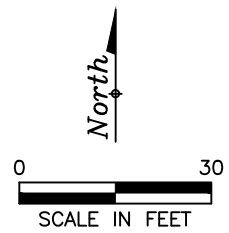
**LEGEND**

- APPROXIMATE PROPERTY BOUNDARY
- MW- MONITORING WELL
- ⊘ MW- DESTROYED MONITORING WELL
- 2016 EXCAVATION AREA

**EXCAVATION AREA CALCULATION**

E-1	=	750.5 ft <sup>2</sup>
E-2	=	293.2 ft <sup>2</sup>
E-3	=	470.3 ft <sup>2</sup>
E-4	=	1037.2 ft <sup>2</sup>

2016 EXCAVATION AREA (E-2, E-3, E-4)



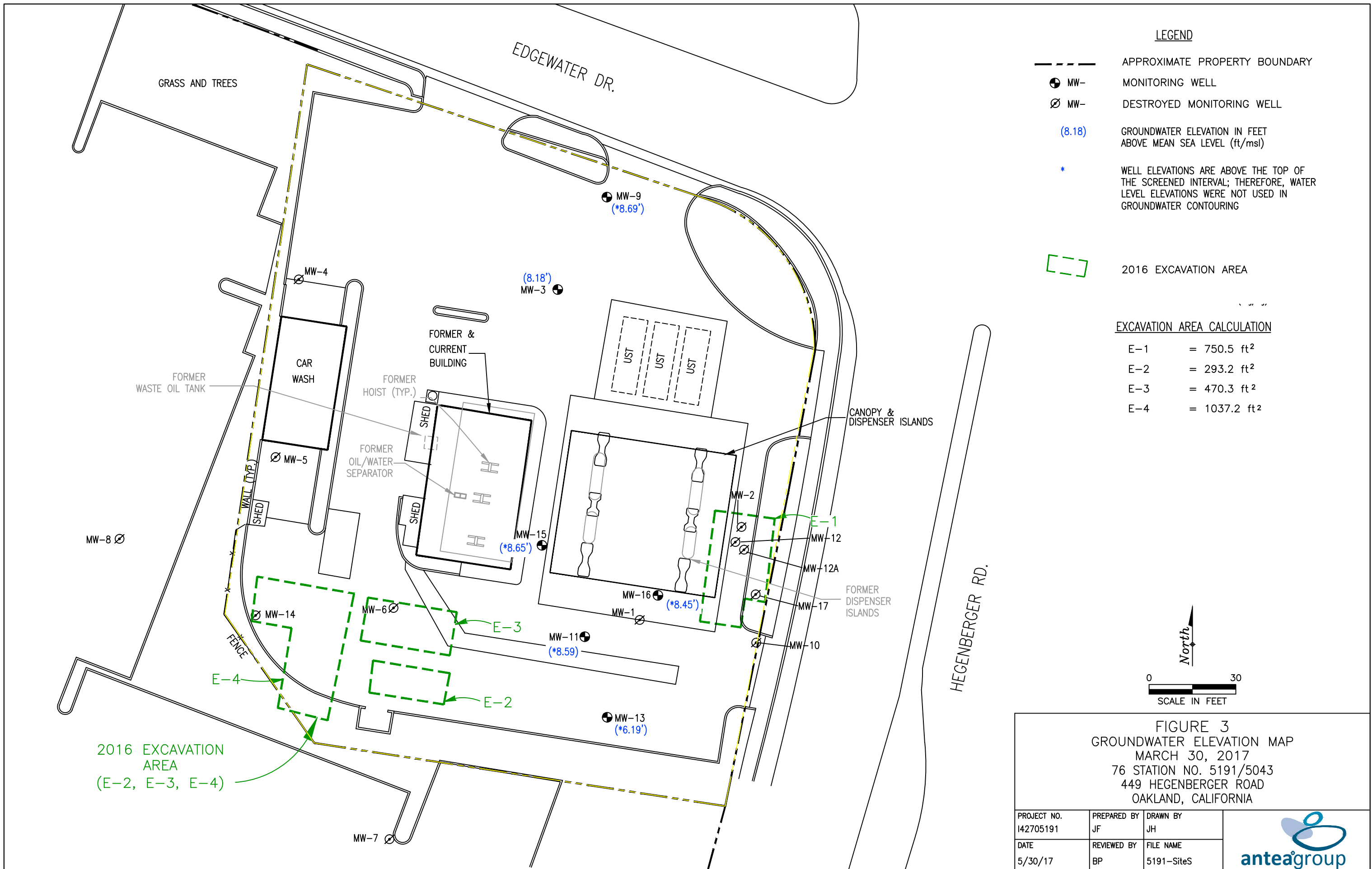
ADAPTED FROM A MORROW SURVEY ON 5/23/11

**FIGURE 2  
SITE PLAN**

76 STATION NO. 5191/5043  
449 HEGENBERGER ROAD  
OAKLAND, CALIFORNIA

PROJECT NO. I42705191	PREPARED BY JF	DRAWN BY JH	
DATE 5/30/17	REVIEWED BY DD	FILE NAME 5191-SiteS	





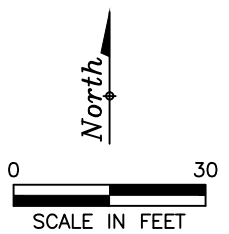
**LEGEND**

- APPROXIMATE PROPERTY BOUNDARY
- MW- MONITORING WELL
- MW- DESTROYED MONITORING WELL
- (8.18) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (ft/msl)
- \* WELL ELEVATIONS ARE ABOVE THE TOP OF THE SCREENED INTERVAL; THEREFORE, WATER LEVEL ELEVATIONS WERE NOT USED IN GROUNDWATER CONTOURING

2016 EXCAVATION AREA


**EXCAVATION AREA CALCULATION**

E-1	=	750.5 ft <sup>2</sup>
E-2	=	293.2 ft <sup>2</sup>
E-3	=	470.3 ft <sup>2</sup>
E-4	=	1037.2 ft <sup>2</sup>

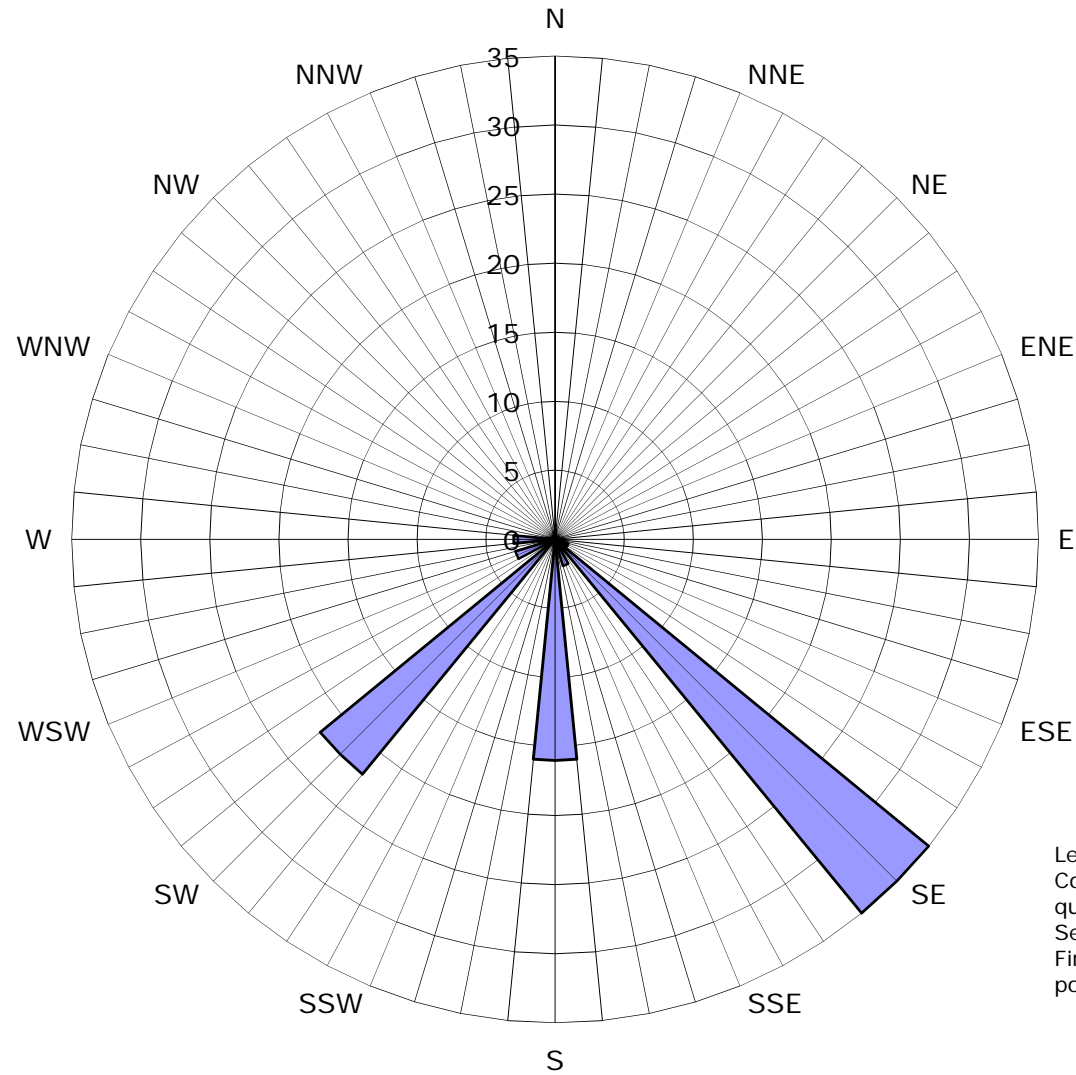


2016 EXCAVATION AREA  
(E-2, E-3, E-4)

**FIGURE 3**  
GROUNDWATER ELEVATION MAP  
MARCH 30, 2017  
76 STATION NO. 5191/5043  
449 HEGENBERGER ROAD  
OAKLAND, CALIFORNIA

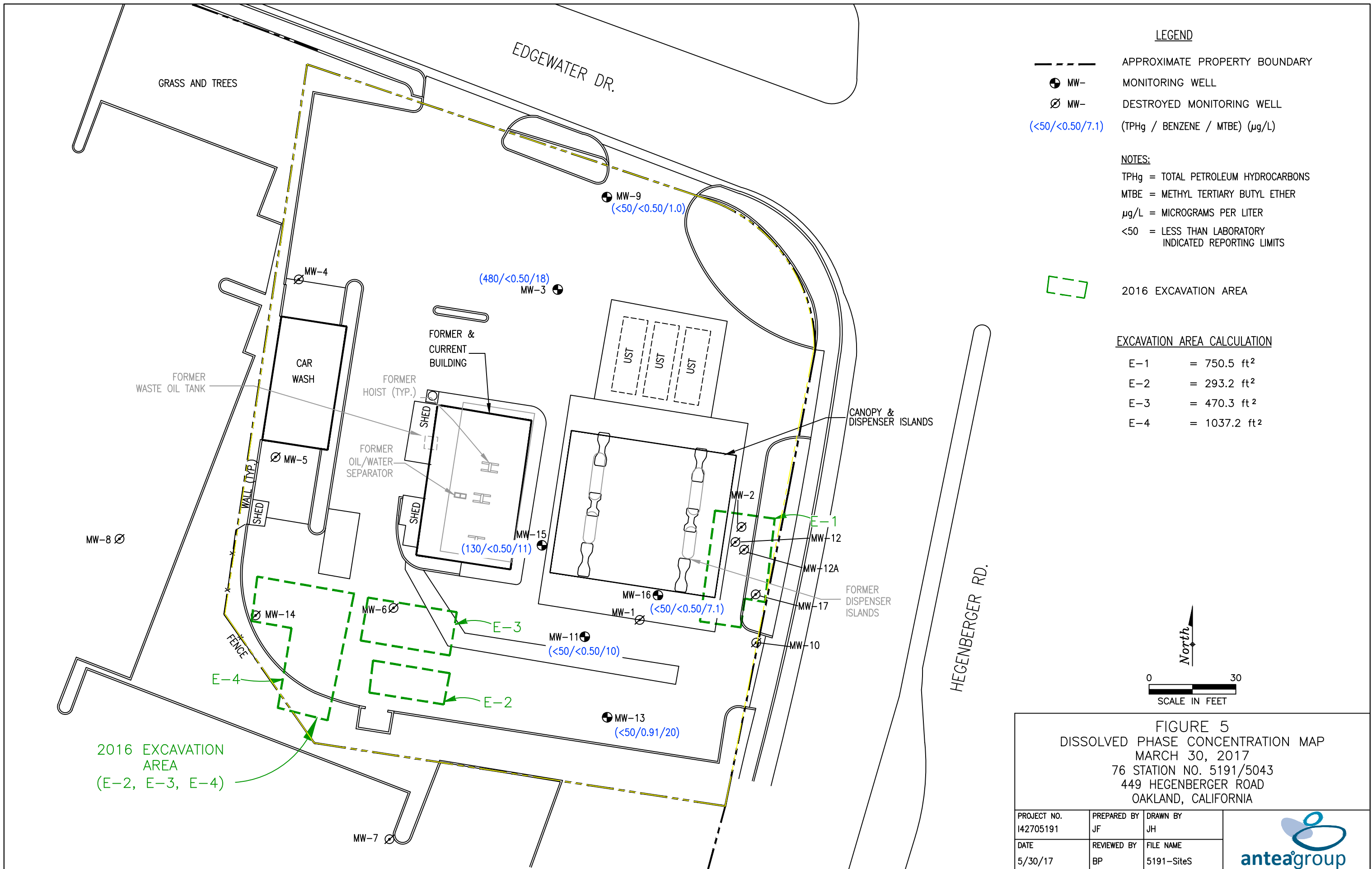
PROJECT NO. I42705191	PREPARED BY JF	DRAWN BY JH	
DATE 5/30/17	REVIEWED BY BP	FILE NAME 5191-SiteS	

**Figure 4**  
**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  
First Quarter 2017. 82 data  
points shown

■ Groundwater Flow Direction



**LEGEND**

- APPROXIMATE PROPERTY BOUNDARY
- MW- MONITORING WELL
- ⊘ MW- DESTROYED MONITORING WELL
- (<50/<0.50/7.1) (TPHg / BENZENE / MTBE) (µg/L)

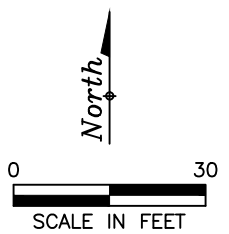
**NOTES:**

- TPHg = TOTAL PETROLEUM HYDROCARBONS
- MTBE = METHYL TERTIARY BUTYL ETHER
- µg/L = MICROGRAMS PER LITER
- <50 = LESS THAN LABORATORY INDICATED REPORTING LIMITS

**2016 EXCAVATION AREA**

**EXCAVATION AREA CALCULATION**

E-1	= 750.5 ft <sup>2</sup>
E-2	= 293.2 ft <sup>2</sup>
E-3	= 470.3 ft <sup>2</sup>
E-4	= 1037.2 ft <sup>2</sup>



**FIGURE 5**  
 DISSOLVED PHASE CONCENTRATION MAP  
 MARCH 30, 2017  
 76 STATION NO. 5191/5043  
 449 HEGENBERGER ROAD  
 OAKLAND, CALIFORNIA

PROJECT NO. I42705191	PREPARED BY JF	DRAWN BY JH
DATE 5/30/17	REVIEWED BY BP	FILE NAME 5191-SiteS





## ***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**  
 76 STATION NO. 5191/5043  
 449 HEGENBERGER ROAD  
 OAKLAND, CALIFORNIA



Well I.D.	Drill Date	Well		Screen		Screen Length (feet)	Comments
		Depth (feet bgs)	Diameter (inches)	Top (feet bgs)	Bottom (feet bgs)		
<b>Monitoring Wells</b>							
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
<b>Explanation</b>							
Wells are of poly-vinyl-chloride (PVC) construction							
bgs = Below ground surface							

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	3/30/2017	10.81	2.63	NP	--	8.18	--	<b>360 HD</b>	<b>480</b>	< 0.50	< 1.0	< 1.0	< 1.0	<b>18</b>	<b>47</b>	< 100
MW-9	3/30/2017	10.94	2.25	NP	--	8.69	--	<b>220 HD</b>	< 50	< 0.50	< 1.0	< 1.0	< 1.0	<b>1.0</b>	< 10	< 100
MW-11	3/30/2017	10.53	1.94	NP	--	8.59	--	<b>160 HD</b>	< 50	< 0.50	< 1.0	< 1.0	< 1.0	<b>10</b>	< 10	< 100
MW-13	3/30/2017	11.08	4.89	NP	--	6.19	--	<b>51 HD</b>	< 50	<b>0.91</b>	< 1.0	< 1.0	< 1.0	<b>20</b>	<b>100</b>	< 100
MW-15	3/30/2017	11.11	2.46	NP	--	8.65	--	<b>360 HD</b>	<b>130</b>	< 0.50	< 1.0	< 1.0	< 1.0	<b>11</b>	< 10	< 100
MW-16	3/30/2017	10.98	2.53	NP	--	8.45	--	<b>250 HD</b>	< 50	< 0.50	< 1.0	< 1.0	< 1.0	<b>7.1</b>	<b>58</b>	< 100

**Gauging Notes:**

TOC - Top of Casing  
ft - Feet  
NP - LNAPL not present  
LNAPL - Light non-aqueous phase liquid  
\* - 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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (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	1.1	0.54	ND	0.97	--	--	--	--	--	--	--	--	--	--
MW-3	11/14/1994	7.42	3.18	NP	--	4.24	--	150	1,600	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
MW-3	2/21/1995	7.42	1.81	NP	--	5.61	--	850	3,800	350	ND	130	22	--	--	--	--	--	--	--	--	--	--
MW-3	5/18/1995	7.42	4.56	NP	--	2.86	--	150	1,300	42	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
MW-3	8/17/1995	7.42	--	--	--	--	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	7/26/1996	7.42	--	--	--	--	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	10/28/1996	7.42	--	--	--	--	WO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	1/29/1997	7.42	--	--	--	--	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	4/15/1997	7.42	--	--	--	--	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	5/27/1997	7.42	3.45	NP	--	3.97	--	--	670	6.5	ND	ND	ND	250	--	--	--	--	--	--	--	--	--
MW-3	6/1/1997	7.42	3.50	NP	--	3.92	--	610	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	7/15/1997	8.04	3.71	NP	--	4.33	--	240	240	ND	ND	ND	ND	490	--	--	--	--	--	--	--	--	--
MW-3	10/9/1997	8.04	3.70	NP	--	4.34	--	500	270	1.1	ND	2.4	1.4	910	--	--	--	--	--	--	--	--	--
MW-3	1/14/1998	8.04	2.16	NP	--	5.88	--	340	310	ND	ND	0.62	0.65	140	--	--	--	--	--	--	--	--	--
MW-3	4/1/1998	8.04	2.20	NP	--	5.84	--	320	370	5.7	ND	ND	ND	93	--	--	--	--	--	--	--	--	--
MW-3	7/15/1998	8.04	3.38	NP	--	4.66	--	510	460	ND	ND	ND	ND	230	--	--	--	--	--	--	--	--	--
MW-3	10/16/1998	8.04	2.30	NP	--	5.74	--	67	330	4.7	ND	ND	ND	60	--	--	--	--	--	--	--	--	--

TABLE 3  
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA  
76 STATION NO. 5191/5043  
449 HEGENERBERGER 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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)	
MW-3	1/25/1999	8.04	2.42	NP	--	5.62	--	120	420	1.5	ND	ND	ND	180	--	--	--	--	--	--	--	--	--
MW-3	4/15/1999	8.04	2.16	NP	--	5.88	--	170	290	0.54	ND	ND	ND	160	--	--	--	--	--	--	--	--	--
MW-3	7/14/1999	8.04	2.35	NP	--	5.69	--	420	290	3.2	ND	ND	ND	160	--	--	--	--	--	--	--	--	--
MW-3	10/21/1999	8.04	2.49	NP	--	5.55	--	350	360	0.77	ND	ND	ND	82	--	--	--	--	--	--	--	--	--
MW-3	1/20/2000	8.04	2.38	NP	--	5.66	--	2,060	ND	0.81	ND	ND	ND	54	--	--	--	--	--	--	--	--	--
MW-3	4/13/2000	8.04	2.76	NP	--	5.28	--	200	250	0.69	ND	ND	ND	91	150	ND	ND	ND	ND	ND	ND	ND	ND
MW-3	7/14/2000	8.04	3.26	NP	--	4.78	--	423	345	ND	ND	ND	ND	94.7	--	--	--	--	--	--	--	--	--
MW-3	10/26/2000	8.04	3.12	NP	--	4.92	--	330	480	6.0	ND	ND	ND	120	--	--	--	--	--	--	--	--	--
MW-3	1/3/2001	8.04	3.65	NP	--	4.39	--	287	364	1.59	ND	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	ND	150	--	--	--	--	--	--	--	--	--
MW-3	10/1/2001	8.04	3.25	NP	--	4.79	--	270	310	1.0	< 0.50	< 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	< 1.0	110	--	--	--	--	--	--	--	--	--
MW-3	4/18/2002	8.04	3.55	NP	--	4.49	--	320	300	< 2.0	< 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	< 1.0	--	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	--	--	--
MW-3	9/19/2008	8.04	3.45	NP	--	4.59	--	93	180	< 0.50	< 0.50	< 0.50	< 1.0	--	120	--	--	--	--	< 250	--	--	--
MW-3	12/31/2008	8.04	2.55	NP	--	5.49	--	110	190	< 0.50	< 0.50	< 0.50	< 1.0	--	38	--	--	--	--	< 250	--	--	--
MW-3	3/27/2009	8.04	2.37	NP	--	5.67	--	130	150	< 0.50	< 0.50	< 0.50	< 1.0	--	50	--	--	--	--	< 250	--	--	--
MW-3	5/28/2009	8.04	3.32	NP	--	4.72	--	120	190	< 0.50	< 0.50	< 0.50	< 1.0	--	60	--	--	--	--	< 250	--	--	--
MW-3	9/17/2009	8.04	2.63	NP	--	5.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/17/2009	8.04	2.13	NP	--	5.91	--	338	300	< 0.50	< 0.50	0.78	< 1.5	--	43.1	--	--	--	--	< 250	--	--	--
MW-3	3/29/2010	8.04	2.22	NP	--	5.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	6/30/2010	10.81	2.91	NP	--	7.90	--	89.7	261	< 0.50	< 0.50	< 0.50	< 1.5	--	89.0	--	--	--	--	< 250	--	--	--
MW-3	7/6/2010	10.81	2.66	NP	--	8.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/20/2010	10.81	3.12	NP	--	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/8/2010	10.81	2.37	NP	--	8.44	--	137	306	< 0.50	< 0.50	< 0.50	< 1.5	--	58.8	--	--	--	--	< 250	--	--	--
MW-3	3/14/2011	10.81	2.26	NP	--	8.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	6/2/2011	10.81	2.43	NP	--	8.38	--	155	283	0.58	1.3	< 0.50	2.2	--	42.1	--	--	--	55.7	< 250	--	--	--
MW-3	9/7/2011	10.81	2.36	NP	--	8.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/5/2011	10.81	2.55	NP	--	8.26	--	81.7	381	< 0.50	< 0.50	< 0.50	< 1.5	--	41.8	--	--	--	--	< 250	--	--	--
MW-3	3/6/2012	10.81	2.63	NP	--	8.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	6/11/2012	10.81	2.99	NP	--	7.82	--	87.9	371	< 0.50	< 0.50	< 0.50	< 1.5	--	55.7	--	--	--	77.2	< 250	--	--	--
MW-3	9/6/2012	10.81	2.50	NP	--	8.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/13/2012	10.81	2.50	NP	--	8.31	--	< 50	130	< 0.50	< 0.50	< 0.50	< 0.50	--	28	--	--	--	77	< 5.0	--	--	--
MW-3	3/14/2013	10.81	2.63	NP	--	8.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	6/11/2013	10.81	3.31	NP	--	7.50	--	< 50	190	< 0.50	< 0.50	< 0.50	< 0.50	--	44	--	--	--	97	< 5.0	--	--	--
MW-3	9/10/2013	10.81	3.25	NP	--	7.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/12/2013	10.81	2.60	NP	--	8.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	3/4/2014	10.81	2.38	NP	--	8.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	6/12/2014	10.81	3.23	NP	--	7.58	--	< 50	310	< 0.50	< 0.50	< 0.50	< 0.50	--	28	--	--	--	74	< 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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (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 HD	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-3	12/2/2016	10.81	2.59	NP	--	8.22	--	< 48	81	< 0.50	< 1.0	< 1.0	< 1.0	8.7	--	--	--	--	24	< 100	--	--	
MW-3	3/30/2017	10.81	2.63	NP	--	8.18	--	360 HD	480	< 0.50	< 1.0	< 1.0	< 1.0	18	--	--	--	--	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	ND	--	--	--	--	--	--	--	--	--	
MW-4	5/4/1993	9.00	4.09	NP	--	4.91	--	ND	110	0.95	ND	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	ND	--	--	--	--	--	--	--	--	--	
MW-4	5/19/1994	8.41	3.92	NP	--	4.49	--	90	140	ND	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	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	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	--	790	1,300	130	6.7	54	57	--	--	--	--	--	--	--	--	--	
MW-6	11/14/1994	8.87	5.30	NP	--	3.57	--	800	730	50	ND	ND	39	--	--	--	--	--	--	--	--	--	
MW-6	2/21/1995	8.87	5.37	NP	--	3.50	--	730	2,000	250	4.6	25	30	--	--	--	--	--	--	--	--	--	
MW-6	5/18/1995	8.87	--	--	--	--	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	8/17/1995	8.87	--	--	--	--	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	7/26/1996	8.87	6.40	3.07	3.33	4.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	10/28/1996	8.87	4.10	3.89	0.21	4.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	11/13/1996	8.87	4.02	3.77	0.25	5.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	11/25/1996	8.87	4.01	3.26	0.75	5.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	12/4/1996	8.87	3.65	3.15	0.50	5.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	12/19/1996	8.87	4.80	2.60	2.20	5.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	1/8/1997	8.87	4.84	3.09	1.75	5.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	1/14/1997	8.87	4.51	3.36	1.15	5.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	1/27/1997	8.87	4.00	2.25	1.75	6.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	1/29/1997	8.87	3.24	2.93	0.31	5.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	2/11/1997	8.87	4.65	3.45	1.20	5.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)	
MW-6	2/24/1997	8.87	4.81	3.71	1.10	4.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3/10/1997	8.87	4.60	3.65	0.95	4.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	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	2.24	NP	--	6.63	--	27,000	110,000	530	170	3,200	7,300	--	< 100	--	--	--	--	--	--	--	--
MW-6	10/9/2002	8.87	3.53	NP	--	5.34	--	170,000	970,000	10,000	39,000	13,000	94,000	--	< 2000	--	--	--	--	--	--	--	--
MW-6	1/2/2003	8.87	2.34	NP	--	6.53	--	66,000	270,000	6,100	15,000	5,400	37,000	--	< 200	--	--	--	--	--	--	--	--
MW-6	4/1/2003	8.87	3.17	NP	--	5.70	--	35,000	3,000,000	8,000	39,000	37,000	260,000	--	< 2000	--	--	--	--	--	--	--	--
MW-6	7/1/2003	8.87	3.55	NP	--	5.32	--	11,000	38,000	2,100	990	2,700	6,500	--	< 100	--	--	--	--	--	< 25000	--	--



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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-6	10/2/2003	8.87	3.82	NP	--	5.05	--	< 50	100,000	5,600	6,900	4,700	18,000	--	< 800	--	--	--	--	< 200000	--	--
MW-6	1/9/2004	8.87	2.80	NP	--	6.07	--	20,000	170,000	2,800	3,300	16,000	--	< 200	--	--	--	--	< 50000	--	--	
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	< 4.0
MW-6	12/13/2012	11.55	2.90	NP	--	8.65	--	470	20,000	200	16	350	1,100	--	< 4.0	--	--	--	22	< 40	--	--
MW-6	3/14/2013	11.55	3.69	NP	--	7.86	--	680	24,000	500	25	540	1,700	--	8.0	--	--	--	110	< 40	--	--
MW-6	6/11/2013	11.55	3.86	NP	--	7.69	--	2,400	87,000	1,800	250	2,000	9,400	--	13	--	--	--	230	< 40	--	--
MW-6	6/11/2013	--	--	--	--	--	--	2,800	62,000	1,600	200	1,800	8,100	--	15	--	--	--	210	< 50	--	--
MW-6	9/10/2013	11.55	4.11	NP	--	7.44	--	470	28,000	440	19	530	1,500	--	10	--	--	--	170	< 40	--	--
MW-6	12/12/2013	11.55	3.55	NP	--	8.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3/4/2014	11.55	3.07	NP	--	8.48	--	580	33,000	490	19	620	1,800	--	13	--	--	--	160	< 50	< 2.5	< 2.5
MW-6	6/12/2014	11.55	3.79	NP	--	7.76	--	570	35,000	390	17	690	1,600	--	12	--	--	--	180	< 50	--	--
MW-6	9/5/2014	11.55	4.50	NP	--	7.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/22/2014	11.55	2.55	NP	--	9.00	--	250	49,000	2,000	120	1,600	7,700	--	9.7	--	--	--	150	< 150	--	--
MW-6	3/16/2015	11.55	3.55	NP	--	8.00	--	--	--	4,070	181	3,050	15,900	--	2.8	--	--	--	56.2	71.8	--	--
MW-6	6/11/2015	11.55	4.04	NP	--	7.51	--	36,000	69,000	2,300	100	1,900	--	< 50	--	--	--	< 500	< 5000	--	--	
MW-6	7/7/2015	11.55	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	5/27/1997	8.83	4.50	NP	--	4.33	--	--	68	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-7	6/1/1997	8.83	4.54	NP	--	4.29	--	69	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	7/15/1997	8.83	4.70	NP	--	4.13	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-7	10/9/1997	8.83	4.30	NP	--	4.53	--	190	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-7	1/14/1998	8.83	2.88	NP	--	5.95	--	65	ND	ND	ND	ND	ND	36	--	--	--	--	--	--	--	--
MW-7	4/1/1998	8.83	3.13	NP	--	5.70	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-7	7/15/1998	8.83	4.45	NP	--	4.38	--	74	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-7	10/16/1998	8.83	3.45	NP	--	5.38	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-7	1/25/1999	8.83	3.22	NP	--	5.61	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-7	4/15/1999	8.83	3.11	NP	--	5.72	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-7	7/14/1999	8.83	3.34	NP	--	5.49	--	69	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--



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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)	
MW-7	10/21/1999	8.83	3.43	NP	--	5.40	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
MW-7	1/20/2000	8.83	3.29	NP	--	5.54	--	ND	ND	ND	ND	ND	ND	4.2	--	--	--	--	--	--	--	--	--
MW-7	4/13/2000	8.83	3.39	NP	--	5.44	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
MW-7	7/14/2000	8.83	4.42	NP	--	4.41	--	68.0	ND	ND	ND	ND	ND	7.83	--	--	--	--	--	--	--	--	--
MW-7	7/17/2001	8.83	5.06	NP	--	3.77	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
MW-7	10/1/2001	8.83	4.98	NP	--	3.85	--	< 51	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	--	--	--	--	--	--	--	--	--
MW-7	1/31/2002	8.83	3.88	NP	--	4.95	--	90	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	--	--	--	--	--	--	--	--	--
MW-7	4/18/2002	8.83	4.03	NP	--	4.80	--	78	< 50	< 0.50	< 0.50	< 0.50	< 0.50	5.7	--	--	--	--	--	--	--	--	--
MW-7	7/28/2002	8.83	3.59	NP	--	5.24	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	3.9	--	--	--	--	--	--	--	--
MW-7	10/9/2002	8.83	4.53	NP	--	4.30	--	< 96	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	3.9	--	--	--	--	--	--	--	--
MW-7	1/3/2003	8.83	3.36	NP	--	5.47	--	78	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	--	--	--	--	--
MW-7	4/1/2003	8.83	3.94	NP	--	4.89	--	67	71	< 0.50	< 0.50	0.71	< 1.0	--	3.4	--	--	--	--	--	--	--	--
MW-7	7/1/2003	8.83	4.60	NP	--	4.23	--	68	64	< 0.50	< 0.50	0.77	2.0	--	35	--	--	--	--	--	< 500	--	--
MW-7	10/2/2003	8.83	5.46	NP	--	3.37	--	82	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	4.9	--	--	--	--	--	< 500	--	--
MW-7	1/9/2004	8.83	3.55	NP	--	5.28	--	75	54	< 0.50	< 0.50	< 0.50	< 1.0	--	2.4	--	--	--	--	--	< 500	--	--
MW-7	4/26/2004	8.83	4.49	NP	--	4.34	--	< 50	< 50	< 0.50	< 0.50	< 0.50	1.5	--	2.3	--	--	--	--	--	< 50	--	--
MW-7	7/22/2004	8.83	4.93	NP	--	3.90	--	< 200	82	0.90	2.0	3.5	9.9	--	1.4	--	--	--	--	--	< 1000	--	--
MW-7	10/29/2004	8.83	3.71	NP	--	5.12	--	54	210	0.67	1.6	1.7	5.8	--	< 0.50	--	--	--	--	--	< 50	--	--
MW-7	1/10/2005	8.83	2.77	NP	--	6.06	--	< 50	74	0.51	2.2	1.7	7.0	--	< 0.50	--	--	--	--	--	< 50	--	--
MW-7	6/15/2005	8.83	3.40	NP	--	5.43	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	0.88	--	--	--	--	--	< 50	--	--
MW-7	9/27/2005	8.83	3.44	NP	--	5.39	--	< 200	< 50	0.59	1.2	0.96	< 1.0	--	0.96	< 0.50	< 0.50	< 0.50	< 10	< 250	< 250	--	--
MW-7	12/13/2005	8.83	3.98	NP	--	4.85	--	< 200	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	0.65	--	--	--	--	--	< 250	--	--
MW-7	3/23/2006	8.83	3.37	NP	--	5.46	--	< 200	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	6/23/2006	8.83	5.25	NP	--	3.58	--	< 200	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	9/26/2006	8.83	4.13	NP	--	4.70	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	0.77	--	--	--	--	--	< 250	--	--
MW-7	12/22/2006	8.83	3.63	NP	--	5.20	--	630	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	3/30/2007	8.83	4.31	NP	--	4.52	--	94	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	6/28/2007	8.83	4.62	NP	--	4.21	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	0.54	--	--	--	--	--	< 250	--	--
MW-7	9/25/2007	8.83	4.65	NP	--	4.18	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	12/28/2007	8.83	3.99	NP	--	4.84	--	75	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	3/22/2008	8.83	4.08	NP	--	4.75	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	6/23/2008	8.83	4.10	NP	--	4.73	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	9/19/2008	8.83	4.86	NP	--	3.97	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	12/31/2008	8.83	4.17	NP	--	4.66	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	3/27/2009	8.83	4.00	NP	--	4.83	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	5/28/2009	8.83	4.71	NP	--	4.12	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	9/17/2009	8.83	4.87	NP	--	3.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	3/29/2010	8.83	--	--	--	--	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/30/2010	11.64	4.45	NP	--	7.19	--	66.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	7/6/2010	11.64	4.63	NP	--	7.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	9/20/2010	11.64	4.85	NP	--	6.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/8/2010	11.64	3.99	NP	--	7.65	--	57.7	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	3/14/2011	11.64	3.81	NP	--	7.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/2/2011	11.64	3.90	NP	--	7.74	--	63.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	< 5.0	< 250	--	--
MW-7	9/7/2011	11.64	3.72	NP	--	7.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/5/2011	11.64	4.60	NP	--	7.04	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	--	< 250	--	--
MW-7	3/6/2012	11.64	4.54	NP	--	7.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/11/2012	11.64	4.93	NP	--	6.71	--	< 37.9	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	< 5.0	< 250	--	--
MW-7	9/6/2012	11.64	4.03	NP	--	7.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/13/2012	11.64	3.43	NP	--	8.21	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	--	< 5.0	< 5.0	--	--
MW-7	3/14/2013	11.64	4.90	NP	--	6.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/11/2013	11.64	6.92	NP	--	4.72	--	96	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	--	7.0	< 5.0	--	--
MW-7	9/10/2013	11.64	6.54	NP	--	5.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/12/2013	11.64	4.60	NP	--	7.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	3/4/2014	11.64	3.42	NP	--	8.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	6/12/2014	11.64	5.76	NP	--	5.88	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	--	< 5.0	< 5.0	--	--
MW-7	1/26/2016	11.64	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	5/27/1997	8.52	3.42	NP	--	5.10	--	--	310	0.88	0.67	15	70	ND	--	--	--	--	--	--	--	--	--
MW-8	6/1/1997	8.52	3.46	NP	--	5.06	--	320	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	7/15/1997	8.52	3.49	NP	--	5.03	--	ND	ND	ND	ND	2.7	3.8	ND	--	--	--	--	--	--	--	--	--
MW-8	10/9/1997	8.52	3.73	NP	--	4.79	--	390	590	1.4	ND	32	4.1	ND	--	--	--	--	--	--	--	--	--
MW-8	1/14/1998	8.52	1.92	NP	--	6.60	--	230	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--

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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)		
MW-8	4/1/1998	8.52	2.38	NP	--	6.14	--	510	ND	ND	ND	ND	ND	ND	4.7	--	--	--	--	--	--	--	--	--
MW-8	7/15/1998	8.52	3.53	NP	--	4.99	--	140	ND	ND	ND	ND	0.56	1.1	ND	--	--	--	--	--	--	--	--	--
MW-8	10/16/1998	8.52	3.04	NP	--	5.48	--	170	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
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	< 10	< 250	--	--	< 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	--	< 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	--	--	--	--	--	--	< 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	--	--	--	--	--	--	< 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	--	--	--	--	--	--	< 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	--	--	--	--	--	--	< 250	--	--
MW-8	12/28/2007	8.52	2.64	NP	--	5.88	--	110	< 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	< 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	< 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	< 1.0	--	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-8	12/31/2008	8.52	2.98	NP	--	5.54	--	110	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-8	3/27/2009	8.52	2.49	NP	--	6.03	--	89	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-8	5/28/2009	8.52	3.12	NP	--	5.40	--	91	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-8	9/17/2009	8.52	3.63	NP	--	4.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	3/29/2010	8.52	--	--	--	--	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/30/2010	11.32	2.60	NP	--	8.72	--	182	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-8	7/6/2010	11.32	3.03	NP	--	8.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	9/20/2010	11.32	3.33	NP	--	7.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	12/8/2010	11.32	2.82	NP	--	8.50	--	116	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-8	3/14/2011	11.32	3.84	NP	--	7.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/2/2011	11.32	2.77	NP	--	8.55	--	168	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	--	< 5.0	< 250	--	--
MW-8	9/7/2011	11.32	2.84	NP	--	8.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	12/5/2011	11.32	2.68	NP	--	8.64	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-8	3/6/2012	11.32	3.07	NP	--	8.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/11/2012	11.32	3.08	NP	--	8.24	--	< 37.9	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	8.3	< 250	--	--	--
MW-8	9/6/2012	11.32	2.91	NP	--	8.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	12/13/2012	11.32	2.31	NP	--	9.01	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	--	--	< 5.0	< 5.0	--	--
MW-8	3/14/2013	11.32	3.19	NP	--	8.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/11/2013	11.32	3.40	NP	--	7.92	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	--	--	< 5.0	< 5.0	--	--
MW-8	9/10/2013	11.32	3.54	NP	--	7.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	12/12/2013	11.32	2.80	NP	--	8.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	3/4/2014	11.32	2.88	NP	--	8.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/12/2014	11.32	3.24	NP	--	8.08	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	--	--	< 5.0	< 5.0	--	--
MW-8	1/26/2016	11.32	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)	
MW-9	2/21/1995	8.29	1.98	NP	--	6.31	--	71	70	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
MW-9	5/18/1995	8.29	3.47	NP	--	4.82	--	ND	52	ND	1.1	ND	1.9	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--
MW-9	10/28/1996	8.29	1.15	NP	--	7.14	--	99	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	5.4	--	--	--	--	--	--	--	--	--
MW-9	4/15/1997	8.29	1.88	NP	--	6.41	--	94	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	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	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	< 1.0	3.5	--	--	--	--	--	--	--	--	--
MW-9	10/9/2002	8.29	1.45	NP	--	6.84	--	100	< 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	< 1.0	8.6	--	--	--	--	--	--	--	--	--
MW-9	4/1/2003	8.29	2.04	NP	--	6.25	--	56	< 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	< 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	< 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	< 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	< 1	0.78	--	--	--	--	--	--	< 1000	--	--
MW-9	10/29/2004	8.29	1.28	NP	--	7.01	--	76	< 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	< 1.0	6.6	--	--	--	--	--	--	< 50	--	--
MW-9	9/27/2005	8.29	1.98	NP	--	6.31	--	< 200	< 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	--	< 200	< 50	< 0.50	< 0.50	< 0.50	< 1.0	2.9	--	--	--	--	--	--	< 250	--	--
MW-9	3/23/2006	8.29	1.32	NP	--	6.97	--	< 200	< 50	< 0.50	< 0.50	< 0.50	< 1.0	2.7	--	--	--	--	--	--	< 250	--	--
MW-9	6/23/2006	8.29	1.98	NP	--	6.31	--	< 200	< 50	< 0.50	< 0.50	< 0.50	< 1.0	1.9	--	--	--	--	--	--	< 250	--	--
MW-9	9/26/2006	8.29	2.52	NP	--	5.77	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-9	12/22/2006	8.29	1.98	NP	--	6.31	--	150	< 50	< 0.50	0.57	1.8	4.6	1.6	--	--	--	--	--	--	< 250	--	--
MW-9	3/30/2007	8.29	2.01	NP	--	6.28	--	72	< 50	< 0.50	< 0.50	< 0.50	< 0.50	3.4	--	--	--	--	--	--	< 250	--	--
MW-9	6/28/2007	8.29	1.90	NP	--	6.39	--	1000	< 50	< 0.50	< 0.50	< 0.50	< 0.50	4.9	--	--	--	--	--	--	< 250	--	--
MW-9	9/25/2007	8.29	1.57	NP	--	6.72	--	100	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-9	12/28/2007	8.29	1.98	NP	--	6.31	--	56	< 50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-9	3/22/2008	8.29	0.80	NP	--	7.49	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	0.61	--	--	--	--	--	--	< 250	--	--
MW-9	6/23/2008	8.29	1.80	NP	--	6.49	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-9	9/19/2008	8.29	2.43	NP	--	5.86	--	56	< 50	< 0.50	< 0.50	< 0.50	< 1.0	3.9	--	--	--	--	--	--	< 250	--	--
MW-9	12/31/2008	8.29	2.66	NP	--	5.63	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-9	3/27/2009	8.29	2.01	NP	--	6.28	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-9	5/28/2009	8.29	2.20	NP	--	6.09	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-9	9/17/2009	8.29	1.83	NP	--	6.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	12/17/2009	8.29	1.52	NP	--	6.77	--	105	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	< 0.50	--	--	--	--	--	--	< 250	--	--
MW-9	3/29/2010	8.29	2.21	NP	--	6.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	6/30/2010	10.94	2.32	NP	--	8.62	--	95.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	0.85	--	--	--	--	--	--	< 250	--	--
MW-9	7/6/2010	10.94	2.02	NP	--	8.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	9/20/2010	10.94	2.03	NP	--	8.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-9	12/8/2010	10.94	1.77	NP	--	9.17	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	--	< 250	--	--
MW-9	3/14/2011	10.94	2.24	NP	--	8.70	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	< 5.0	< 250	--	--
MW-9	6/2/2011	10.94	2.24	NP	--	8.70	--	< 50.0	< 50.0	< 0.50	< 0.50	< 0.50	< 1.5	--	< 0.50	--	--	--	< 5.0	< 250	--	--
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 HD	< 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	--	< 1.0	--	--	--	< 10	< 100	--	--
MW-9	12/2/2016	10.94	0.97	NP	--	9.97	--	< 45	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	< 1.0	--	--	--	< 10	< 100	--	--
MW-9	3/30/2017	10.94	2.25	NP	--	8.69	--	220 HD	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	1.0	--	--	--	< 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	ND	--	--	--	--	--	--	--	--
MW-10	10/28/1996	8.62	4.09	NP	--	4.53	--	ND	ND	1.1	ND	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	ND	ND	5.2	--	--	--	--	--	--	--	--
MW-10	4/13/2000	8.62	3.85	NP	--	4.77	--	69	67	54	ND	2.6	ND	3.8	--	--	--	--	--	--	--	--
MW-10	7/14/2000	8.62	4.18	NP	--	4.44	--	149	ND	0.547	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-10	10/26/2000	8.62	3.96	NP	--	4.66	--	83	ND	3.3	ND	0.83	1.5	ND	--	--	--	--	--	--	--	--
MW-10	1/3/2001	8.62	4.14	NP	--	4.48	--	126	52.7	5.15	ND	0.823	1.57	ND	--	--	--	--	--	--	--	--
MW-10	4/4/2001	8.62	3.88	NP	--	4.74	--	75	129	28.1	1.67	4.97	10.1	ND	--	--	--	--	--	--	--	--
MW-10	7/17/2001	8.62	4.08	NP	--	4.54	--	ND	ND	4.1	ND	1.0	1.8	ND	--	--	--	--	--	--	--	--
MW-10	10/1/2001	8.62	4.22	NP	--	4.40	--	100	140	30	0.51	4.0	12	< 5.0	--	--	--	--	--	--	--	--
MW-10	1/31/2002	8.62	3.68	NP	--	4.94	--	170	110	16	< 0.50	2.3	5.6	< 2.5	--	--	--	--	--	--	--	--
MW-10	4/18/2002	8.62	4.01	NP	--	4.61	--	130	< 50	11	< 0.50	1.4	4.5	< 2.5	--	--	--	--	--	--	--	--
MW-10	7/28/2002	8.62	4.11	NP	--	4.51	--	58	67	15	< 0.50	0.94	7.3	--	< 2.0	--	--	--	--	--	--	--
MW-10	10/9/2002	8.62	3.97	NP	--	4.65	--	< 94	< 50	0.67	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	--	--	--	--
MW-10	1/2/2003	8.62	3.03	NP	--	5.59	--	64	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	--	--	--	--
MW-10	4/1/2003	8.62	3.83	NP	--	4.79	--	76	< 50	11	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	--	--	--	--
MW-10	7/1/2003	8.62	4.13	NP	--	4.49	--	87	< 50	< 0.50	< 0.50	< 0.50	< 1.0	--	< 2.0	--	--	--	--	< 500	--	--
MW-10	10/2/2003	8.62	4.05	NP	--	4.57	--	160	77	9.9	0.78	2.3	4.9	--	< 2.0	--	--	--	--	< 500	--	--
MW-10	1/9/2004	8.62	3.40	NP	--	5.22	--	74	53	1.2	< 0.50	0.70	1.6	--	< 2.0	--	--	--	--	< 500	--	--
MW-10	4/26/2004	8.62	3.89	NP	--	4.73	--	< 50	< 50	2.8	1.3	1.0	2.9	--	< 0.50	--	--	--	--	< 50	--	--
MW-10	7/22/2004	8.62	3.73	NP	--	4.89	--	< 200	< 50	< 0.5	< 0.5	< 0.5	< 1	--	< 0.5	--	--	--	--	< 1000	--	--





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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-11	9/9/2015	10.53	3.58	NP	--	6.95	--	< 54	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	14	--	--	--	< 10	< 100	--	--
MW-11	12/8/2015	10.53	3.32	NP	--	7.21	--	< 52	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	24	--	--	--	< 10	< 100	--	--
MW-11	3/8/2016	10.53	1.90	NP	--	8.63	--	52 HD	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	12	--	--	--	< 10	< 100	--	--
MW-11	6/29/2016	10.53	3.39	NP	--	7.14	--	350 HD	< 50	< 0.50	< 1.0	< 1.0	--	8.6	--	--	--	< 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-11	12/2/2016	10.53	2.23	NP	--	8.30	--	< 46	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	6.9	--	--	--	< 10	< 100	--	--
MW-11	3/30/2017	10.53	1.94	NP	--	8.59	--	160 HD	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	10	--	--	--	< 10	< 100	--	--
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	6/12/2014	11.01	3.96	NP	--	7.05	--	< 50	200	30	3.3	4.2	6.1	--	920	--	--	--	8.6	< 9.0	--	--
MW-12	6/18/2014	11.01	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	< 1.5	--	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	< 1.5	--	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	< 1.5	--	< 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	< 1.5	--	< 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	< 1.5	--	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	< 1.5	--	< 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	< 1.5	--	< 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	< 1.5	--	< 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	< 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	--	--	--	< 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	--	--	--	< 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	--	0.78	--	--	--	< 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	--	6.3	--	--	--	< 5.0	< 5.0	--	--
MW-12A	12/12/2013	11.29	4.35	NP	--	6.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12A	3/4/2014	11.29	3.73	NP	--	7.56	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 5.0	< 5.0	--	--
MW-12A	6/12/2014	11.29	4.37	NP	--	6.92	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	< 0.50	--	--	--	< 5.0	< 5.0	--	--
MW-12A	6/18/2014	11.29	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-13	7/6/2010	11.08	4.26	NP	--	6.82	--	469	122	< 0.50	< 0.50	< 0.50	< 1.5	--	217	< 0.50	< 0.50	< 0.50	199	< 250	< 1.0	< 1.0
MW-13	9/20/2010	11.08	4.81	NP	--	6.27	--	< 50.0	250	< 0.50	< 0.50	< 0.50	< 1.5	--	272	--	--	--	--	< 250	--	--
MW-13	12/8/2010	11.08	5.02	NP	--	6.06	--	97.0	177	< 0.50	< 0.50	< 0.50	< 1.5	--	390	--	--	--	--	< 250	--	--
MW-13	3/14/2011	11.08	4.32	NP	--	6.76	--	162	127	< 0.50	< 0.50	< 0.50	< 1.5	--	241	--	--	--	125	< 250	--	--
MW-13	6/2/2011	11.08	3.98	NP	--	7.10	--	89.9	260	< 0.50	< 0.50	< 0.50	< 1.5	--	228	--	--	--	44.7	< 250	--	--
MW-13	9/7/2011	11.08	5.74	NP	--	5.34	--	< 50.0	167	< 0.50	< 0.50	< 0.50	< 1.5	--	207	--	--	--	--	< 250	--	--
MW-13	12/5/2011	11.08	5.00	NP	--	6.08	--	< 50.0	166	< 0.50	< 0.50	< 0.50	< 1.5	--	215	--	--	--	--	< 250	--	--
MW-13	3/6/2012	11.08	5.37	NP	--	5.71	--	< 50.0	63.9	< 0.50	< 0.50	< 0.50	< 1.5	--	110	--	--	--	38.5	< 250	--	--
MW-13	6/11/2012	11.08	5.73	NP	--	5.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-13	6/12/2012	--	--	--	--	--	--	< 37.9	118	< 0.50	< 0.50	< 0.50	< 1.5	--	220	--	--	--	81.7	< 250	--	--
MW-13	9/6/2012	11.08	4.14	NP	--	6.94	--	87	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	140	< 0.50	< 0.50	< 0.50	10	< 5.0	< 0.50	< 0.50
MW-13	12/13/2012	11.08	3.80	NP	--	7.28	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	130	--	--	--	14	< 5.0	--	--
MW-13	3/14/2013	11.08	4.20	NP	--	6.88	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	110	--	--	--	24	< 5.0	--	--
MW-13	6/11/2013	11.08	4.10	NP	--	6.98	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	97	--	--	--	31	< 5.0	--	--
MW-13	9/10/2013	11.08	4.20	NP	--	6.88	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	64	--	--	--	47	< 5.0	--	--
MW-13	12/12/2013	11.08	4.05	NP	--	7.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-13	3/4/2014	11.08	3.51	NP	--	7.57	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	54	--	--	--	30	< 5.0	--	--
MW-13	6/12/2014	11.08	4.08	NP	--	7.00	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	36	--	--	--	43	< 5.0	--	--
MW-13	9/5/2014	11.08	4.23	NP	--	6.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-13	12/22/2014	11.08	3.07	NP	--	8.01	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	28	--	--	--	39	< 5.0	--	--
MW-13	3/16/2015	11.08	3.97	NP	--	7.11	--	--	--	< 0.50	< 0.50	< 0.50	< 1.0	--	27.7	--	--	--	35.5	< 5.0	--	--
MW-13	6/11/2015	11.08	3.86	NP	--	7.22	--	< 50	< 250	< 2.5	< 5.0	< 5.0	--	--	20	--	--	--	< 50	< 500	--	--
MW-13	9/9/2015	11.08	4.48	NP	--	6.60	--	< 52	< 50	0.84	< 1.0	< 1.0	< 1.0	--	17	--	--	--	38	< 100	--	--
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 HD	< 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-13	12/2/2016	11.08	3.88	NP	--	7.20	--	< 45	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	19	--	--	--	63	< 100	--	--
MW-13	3/30/2017	11.08	4.89	NP	--	6.19	--	51 HD	< 50	0.91	< 1.0	< 1.0	< 1.0	--	20	--	--	--	100	< 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-14	7/7/2015	12.00	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--
MW-15	9/5/2014	11.11	4.00	NP	--	7.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	12/22/2014	11.11	2.38	NP	--	8.73	--	< 50	< 50	0.50	< 0.50	< 0.50	< 0.50	--	65	--	--	--	36	< 5.0	--	--
MW-15	3/16/2015	11.11	3.17	NP	--	7.94	--	--	--	< 0.50	< 0.50	< 0.50	< 1.0	--	46.7	--	--	--	27.0	< 5.0	--	--
MW-15	6/11/2015	11.11	3.47	NP	--	7.64	--	< 50	94	< 0.50	< 1.0	< 1.0	--	--	46	--	--	--	15	< 100	--	--
MW-15	9/9/2015	11.11	4.03	NP	--	7.08	--	< 52	150	< 0.50	< 1.0	< 1.0	< 1.0	--	75	--	--	--	36	< 100	--	--
MW-15	12/8/2015	11.11	3.04	NP	--	8.07	--	< 50	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	82	--	--	--	34	< 100	--	--
MW-15	3/8/2016	11.11	2.71	NP	--	8.40	--	< 48	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	38	--	--	--	31	< 100	--	--
MW-15	6/29/2016	11.11	3.64	NP	--	7.47	--	< 45	< 50	< 0.50	< 1.0	< 1.0	--	--	51	--	--	--	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-15	12/2/2016	11.11	2.62	NP	--	8.49	--	240 HD	98	< 0.50	< 1.0	< 1.0	< 1.0	--	33	--	--	--	24	< 100	--	--
MW-15	3/30/2017	11.11	2.46	NP	--	8.65	--	360 HD	130	< 0.50	< 1.0	< 1.0	< 1.0	--	11	--	--	--	< 10	< 100	--	--
MW-16	6/2/2011	10.98	3.00	NP	--	7.98	--	509	1,420	79.4	< 0.50	4.2	< 1.5	--	1,200	--	--	--	257	< 250	--	--
MW-16	9/7/2011	10.98	2.65	NP	--	8.33	--	90.0	934	< 0.50	< 0.50	< 0.50	< 1.5	--	1,240	--	--	--	--	< 250	--	--
MW-16	12/5/2011	10.98	3.18	NP	--	7.80	--	196	948	< 0.50	< 0.50	< 0.50	< 1.5	--	1,320	--	--	--	--	< 250	--	--

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)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-16	3/6/2012	10.98	2.91	NP	--	8.07	--	204	392	< 0.50	< 0.50	< 0.50	< 1.5	--	1,090	--	--	--	134	< 250	--	--
MW-16	6/11/2012	10.98	3.04	NP	--	7.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	6/12/2012	--	--	--	--	--	--	48.1	430	< 0.50	< 0.50	< 0.50	< 1.5	--	1,100	--	--	--	374	< 250	--	--
MW-16	9/6/2012	10.98	2.61	NP	--	8.37	--	390	< 150	< 1.5	< 1.5	< 1.5	< 1.5	--	960	< 1.5	< 1.5	< 1.5	70	< 15	< 1.5	< 1.5
MW-16	12/13/2012	10.98	2.50	NP	--	8.48	--	52	< 150	< 1.5	< 1.5	< 1.5	< 1.5	--	980	--	--	--	55	< 20	--	--
MW-16	3/14/2013	10.98	3.15	NP	--	7.83	--	< 50	< 200	< 2.0	< 2.0	< 2.0	< 2.0	--	950	--	--	--	67	< 20	--	--
MW-16	6/11/2013	10.98	3.18	NP	--	7.80	--	< 50	< 150	< 1.5	< 1.5	< 1.5	< 1.5	--	820	--	--	--	70	< 15	--	--
MW-16	9/10/2013	10.98	3.44	NP	--	7.54	--	< 50	< 50	< 0.50	< 0.50	< 0.50	0.67	--	240	--	--	--	440	< 5.0	--	--
MW-16	12/12/2013	10.98	2.90	NP	--	8.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	3/4/2014	10.98	3.25	NP	--	7.73	--	< 50	60	< 0.50	< 0.50	< 0.50	< 0.50	--	440	--	--	--	400	< 5.0	--	--
MW-16	6/12/2014	10.98	3.67	NP	--	7.31	--	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	--	92	--	--	--	440	< 5.0	--	--
MW-16	9/5/2014	10.98	3.70	NP	--	7.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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 HD	< 50	< 0.50	< 1.0	< 1.0	--	--	4.3	--	--	--	86	< 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	--	--
MW-16	12/2/2016	10.98	3.19	NP	--	7.79	--	230 HD	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	7.5	--	--	--	140	< 100	--	--
MW-16	3/30/2017	10.98	2.53	NP	--	8.45	--	250 HD	< 50	< 0.50	< 1.0	< 1.0	< 1.0	--	7.1	--	--	--	58	< 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	6/12/2014	11.52	4.49	NP	--	7.03	--	87	17,000	3,600	410	650	1,100	--	< 3.0	--	--	--	300	< 30	--	--
MW-17	6/18/2014	11.52	--	--	--	--	WD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Gauging Notes:**

TOC - Top of Casing  
ft - Feet  
NP - LNAPL not present  
LNAPL - Light non-aqueous phase liquid  
\* - 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  
**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 <sub>3</sub> ) (mg/L)	Alkalinity, Total A2320B (mg/L)	Alkalinity, Total as CaCO <sub>3</sub> 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 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	--	--	--	--	<b>56,300</b>	--	--	--	--	--	--	--
MW-14	6/12/2012	--	--	--	--	<b>439,000</b>	--	--	--	--	--	--	--
MW-15	6/2/2011	--	--	--	--	<b>62,700</b>	--	--	--	--	--	--	--
MW-15	6/12/2012	--	--	--	--	<b>42,100</b>	--	--	--	--	--	--	--
MW-16	6/2/2011	--	--	--	--	<b>8,740</b>	--	--	--	--	--	--	--
MW-16	6/12/2012	--	--	--	--	<b>19,900</b>	--	--	--	--	--	--	--
MW-17	6/2/2011	--	--	--	--	<b>3,920,000</b>	--	--	--	--	--	--	--
MW-17	6/12/2012	--	--	--	--	<b>2,520,000</b>	--	--	--	--	--	--	--

**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**  
 76 STATION NO. 5191/5043  
 449 HEGENBERGER ROAD  
 OAKLAND, CALIFORNIA



Site	Monitoring Date	Groundwater Gradient (feet per foot)	Groundwater Flow Direction															
			N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	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
	09/19/16	Variable	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	12/02/16	Variable	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
	03/30/17	Not available	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>0.024 Average</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>35</b>	<b>2</b>	<b>16</b>	<b>0</b>	<b>22</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Explanation</b>																		
NA = Not available																		
Number of Events = 85																		

*Quarterly Summary Report, First Quarter 2017*  
*76 Station No. 5191/5043*  
*449 Hegenberger Road, 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, First Quarter 2017*  
*76 Station No. 5191/5043*  
*449 Hegenberger Road, Oakland, CA*  
*Antea Group Project No. I42705191*



## ***Appendix B***

Blaine Tech Groundwater Sampling Field Data Sheets

## Well-Head Inspection & Well Gauging Form

Antea Group Project No: 2705191 Site Address: 449 HEGENBERGER OAKLAND  
 Field Technician: KEVIN THOMPSON BTS Date: 3-30-17 Weather: SUNNY, WINDY  
(Print Full Name & Company\*)

Well Condition														
Sample Order	Field Point	Bolts	Seal	Lid Secure	Lock	Expanding Cap	Water In Well Box	Well Casing Dia.	Time Gauged	Depth to Water (Feet)	Depth to Bottom (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Comments
1	MW-9	G	G	G	B	G	X	2	0800	2.25	12.69			1 out of 3 bolts missing
2	MW-13	↓	↓	↓	↓	↓		2	0810	4.89	14.71			
3	MW-16	↓	↓	↓	↓	↓	X	2	0816	2.53	12.75			Bolts STRIPPED
4	MW-3	↓	↓	↓	↓	↓	X	2	0829	2.63	14.00			1 out of 3 bolts missing 1 of 2 Bolt missing
5	MW-11	↓	↓	↓	↓	↓	X	4	0837	1.94	19.62			
6	MW-15	↓	↓	↓	↓	↓		2	0845	2.46	12.77			

Notes: \_\_\_\_\_

\*\* All well caps opened at least 15 minutes or longer before gauging wells:  
**CIRCLE ONE: YES or NO\*\*** NO



\*Form provided by Antea Group

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

## Groundwater Sampling Form

Site Address:	449 HEIGENBERGER		
Project No:	2705191	Field Technician:	KT
Field Point:	MW-3	Date:	3-30-17
Depth to Water (DTW) (ft bgs):	2.63	Well Diameter (in):	② 4 6 8
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	14.00	Water Column Height (ft):	11.37

### Purging Info and Calculations:

<b>Purge Method:</b>  Low-Flow 3 casing volumes Other: _____	<b>Purge Equipment:</b>  Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b>  Disposable Bailer <span style="font-size: small;">(SEE)</span> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>11.37</u> X Conversion Factor (gal/ft): <u>.17</u> = Casing Volume (gal): _____ Casing Volume (gal): <u>1.9</u> X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>5.7</u>		
Conversion Factors (gal/ft):    2" = 0.17    4" = 0.66    6" = 1.5    8" = 2.6    Other = radius <sup>2</sup> * 0.163		

<b>Purge:</b>	<b>Start Time:</b> 1020	<b>Stop Time:</b>						
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
<b>Pre-Purge</b>				/				
1021	21.9	7.28	2364	-160	122	1.56	1	
1022	21.5	7.20	2392	-162	103	1.91	2	
1023	21.6	7.14	2423	-156	81	1.19	3	
1024	21.5	7.09	2439	-158	68	1.22	4	
1025	21.5	7.08	2452	-155	60	1.17	5	
1026	21.4	7.08	2460	-153	55	1.13	6	
<b>Post-Purge</b>				/				

Did Well dewater?	Yes	No <input checked="" type="checkbox"/>	Total Purge volume (gal):
<b>Other Comments:</b>	80% = 4.90 DTW = 7.62 (2 HRS) PURGED THROUGH 1 FLOWCELL		

<b>Sample Info:</b>	
Sample ID: MW-3-20170331	Sample Date and Time: 3/30/17 1240
Selected Analysis: SEE COC	

This form was provided by Antea Group and completed by: (Print Full Name) Kevin Thompson, an employee of Blaine Tech Services, Inc.

Signature: \_\_\_\_\_ Date: 3-30-17



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:	449 HEGERBERGER RD OAKLAND		
Project No:	2705191	Field Technician:	KT
Field Point:	MW-9	Date:	3-30-17
Depth to Water (DTW) (ft bgs):	2.25	Well Diameter (in):	(2) 4 6 8
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	12.09	Water Column Height (ft):	10.44

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow 3 casing volumes Other: _____	<b>Purge Equipment:</b> <del>Disposable</del> Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> Disposable Bailer <i>w/bed</i> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>10.44</u> X Conversion Factor (gal/ft): <u>0.17</u> = Casing Volume (gal): <u>1.7</u> Casing Volume (gal): <u>1.7</u> X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>5.3</u>		
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius <sup>2</sup> * 0.163		

**Purge:** Start Time: 0912 Stop Time: 0918

Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
<b>Pre-Purge</b>								
0913	21.8	8.02	2469	-114	56	1.39	1	
0914	22.0	7.79	2644	-128	52	2.09	2	
0915	22.2	7.76	2694	-122	39	2.40	3	
0916	22.4	7.70	2909	-120	38	2.32	4	
0917	22.4	7.59	2923	-120	36	2.24	5	
0917	22.3	7.58	2919	-130	30	2.18	5.5	
<b>Post-Purge</b>								

Did Well dewater? Yes  No  Total Purge volume (gal): 5.5

**Other Comments:** 80% = ~~4.33~~ 4.33  
 DTW = 6.19 (2 HRS) PURGED THROUGH FLOWCELL

### Sample Info:

Sample ID: MW-9-20170331	Sample Date and Time: 3/30/17 1135
Selected Analysis: SEE COC	

This form was provided by Antea Group and completed by: (Print Full Name) Kevin Thompson, an employee of Blaine Tech Services, Inc.

Signature: \_\_\_\_\_ Date: 3/30/17



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:	449 HEGENBERGER RD OAKLAND		
Project No:	2705191	Field Technician:	KT
Field Point:	MW-11	Date:	3-30-17
Depth to Water (DTW) (ft bgs):	1.94	Well Diameter (in):	2 ④ 6 8
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	19.62	Water Column Height (ft):	17.60

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow 3 casing volumes Other: _____	<b>Purge Equipment:</b> Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> Disposable Bailer <u>BED</u> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>17.60</u> X Conversion Factor (gal/ft): <u>0.66</u> = Casing Volume (gal): <u>11.6</u> Casing Volume (gal): <u>11.6</u> X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>35</u>		
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius <sup>2</sup> * 0.163		

**Purge:** Start Time: 1044 Stop Time: 1101

Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
<b>Pre-Purge</b>								
1047	21.0	7.56	1519	-189	39	1.63	6	
1050	22.1	7.50	1526	-180	30	1.49	12	
1053	22.3	7.44	1589	-169	24	1.30	18	
1056	22.4	7.41	1603	-170	17	1.20	24	
1059	22.2	7.39	1596	-168	10	1.17	30	
1101	22.3	7.36	1590	-165	7	1.21	35	
<b>Post-Purge</b>								

Did Well dewater? Yes  No  Total Purge volume (gal): 35

**Other Comments:** 80% = 5.47 PURGED THROUGH Flowcell  
DTW 4.26

### Sample Info:

Sample ID: <u>MW-11-20170331</u>	Sample Date and Time: <u>3/30/17 @ 1105</u>
Selected Analysis: <u>SEE COC</u>	

This form was provided by Antea Group and completed by: (Print Full Name) Kevin Thompson, an employee of Blaine Tech Services, Inc.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



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: <u>449 HEGERBERGER RD. DAKOTA</u>	
Project No: <u>2705191</u>	Field Technician: <u>KT</u>
Field Point: <u>MW-15</u>	Date: <u>3-30-17</u>
Depth to Water (DTW) (ft bgs): <u>2.46</u>	Well Diameter (in): <u>(2) 4 6 8</u>
Depth to LNAPL (ft bgs): <u>—</u>	Thickness of LNAPL (ft): <u>—</u>
Total Depth of Well (ft bgs): <u>12.77</u>	Water Column Height (ft): <u>10.31</u>

### Purging Info and Calculations:

<b>Purge Method:</b>  Low-Flow 3 casing volumes Other: _____	<b>Purge Equipment:</b>  Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b>  Disposable Bailer <sup>W/350</sup> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>10.31</u> X Conversion Factor (gal/ft): <u>.17</u> = Casing Volume (gal): <u>5.5</u> Casing Volume (gal): <u>1.7</u> X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>5.2</u>		
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius <sup>2</sup> * 0.163		

**Purge:** Start Time: 1113 Stop Time: 1119

Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
<b>Pre-Purge</b>								
1114	20.2	7.21	1496	-126	33	1.33	1	
1115	20.0	7.13	1403	-129	24	1.26	2	
1116	19.8	7.09	1404	-130	20	1.13	3	
1117	19.8	7.07	1369	-127	14	1.09	4	
1118	19.8	7.05	1344	-125	15	1.11	5	
1118	19.7	7.04	1340	-120	12	1.13	5.5	
<b>Post-Purge</b>								

Did Well dewater? Yes  No  Total Purge volume (gal): 5.5

**Other Comments:** 80% = 4.52  
DTW = 8.10 (2 HRS)  
Purged Through Flow cell

### Sample Info:

Sample ID: <u>MW-15-20170331</u>	Sample Date and Time: <u>3/30/17 1330</u>
Selected Analysis: <u>See C/C</u>	

This form was provided by Antea Group and completed by: (Print Full Name) Kevin Thompson, an employee of Blaine Tech Services, Inc.

Signature: \_\_\_\_\_ Date: 3/30/17



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:	449 HEBENBERGER RD. OAKLAND		
Project No:	2705191	Field Technician:	KT
Field Point:	MW-16	Date:	3-30-17
Depth to Water (DTW) (ft bgs):	2.53	Well Diameter (in):	(2) 4 6 8
Depth to LNAPL (ft bgs):	✓	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	12.75	Water Column Height (ft):	10.22

### Purging Info and Calculations:

<b>Purge Method:</b>  Low-Flow 3 casing volumes Other: _____	<b>Purge Equipment:</b>  Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b>  Disposable Bailer <b>BED</b> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>10.22</u> X Conversion Factor (gal/ft): <u>.17</u> = Casing Volume (gal): _____ Casing Volume (gal): <u>1.7</u> X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>5.2</u>		
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius <sup>2</sup> * 0.163		

<b>Purge:</b>		Start Time: <u>1002</u>		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)	
<b>Pre-Purge</b>									
1003	21.6	7.30	3240	-141	83	1.83	1		
1004	21.7	7.32	3319	-138	72	1.44	2		
1005	21.9	7.37	3330	-134	51	1.29	3		
1006	21.4	7.40	3324	-129	39	1.13	4		
1007	21.5	7.39	3310	-128	26	0.99	5		
1007	21.6	7.39	3320	-126	19	0.93	5.5		
<b>Post-Purge</b>									
Did Well dewater?		Yes	(No)	Total Purge volume (gal): <u>5.5</u>					

<b>Other Comments:</b>	80% = 4.57 DTW - 5.12 (2HRS) <div style="text-align: right; margin-top: 10px;"><b>PURGED THROUGH Flowcell</b></div>
------------------------	---

<b>Sample Info:</b>	
Sample ID: <u>MW16-20170331</u>	Sample Date and Time: <u>3-30-17 1215</u>
Selected Analysis: <u>see COC</u>	

This form was provided by Antea Group and completed by: (Print Full Name) Kevin Thompson, an employee of Blaine Tech Services, Inc.

Signature: \_\_\_\_\_ Date: 3-30-17



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





*Quarterly Summary Report, First Quarter 2017*  
*76 Station No. 5191/5043*  
*449 Hegenberger Road, Oakland, CA*  
*Antea Group Project No. I42705191*

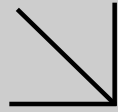


## ***Appendix C***

Certified Laboratory Analytical Report and Data Validation Form



Calscience



**WORK ORDER NUMBER: 17-04-0016**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For**

**Client:** Antea Group

**Client Project Name:** 2705191

**Attention:** 2705191

11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Approved for release on 04/10/2017 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.

# Contents

Client Project Name: 2705191  
 Work Order Number: 17-04-0016

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



**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 04/01/17. They were assigned to Work Order 17-04-0016.

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  $\leq 15$  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	Work Order:	17-04-0016
11010 White Rock Road, Suite 140	Project Name:	2705191
Rancho Cordova, CA 95670-6001	PO Number:	
	Date/Time Received:	04/01/17 10:25
	Number of Containers:	30

Attn: 2705191

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
MW-11_20170331	17-04-0016-1	03/30/17 11:05	5	Aqueous
MW-13_20170331	17-04-0016-2	03/30/17 09:50	5	Aqueous
MW-15_20170331	17-04-0016-3	03/30/17 13:30	5	Aqueous
MW-16_20170331	17-04-0016-4	03/30/17 12:15	5	Aqueous
MW-3_20170331	17-04-0016-5	03/30/17 12:40	5	Aqueous
MW-9_20170331	17-04-0016-6	03/30/17 11:35	5	Aqueous

## Analytical Report

Antea Group  
11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
Work Order: 17-04-0016  
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_20170331	17-04-0016-1-D	03/30/17 11:05	Aqueous	GC 47	04/04/17	04/05/17 05:47	170404B02B

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	160	50	1.00	SG,HD

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	102	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-13_20170331	17-04-0016-2-D	03/30/17 09:50	Aqueous	GC 47	04/04/17	04/05/17 06:08	170404B02B

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	51	50	1.00	SG,HD

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	98	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-15_20170331	17-04-0016-3-D	03/30/17 13:30	Aqueous	GC 47	04/04/17	04/05/17 07:10	170404B02B

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	360	50	1.00	SG,HD

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	105	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-16_20170331	17-04-0016-4-D	03/30/17 12:15	Aqueous	GC 47	04/04/17	04/05/17 07:31	170404B02B

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	250	50	1.00	SG,HD

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	112	68-140	

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

## Analytical Report

Antea Group  
 11010 White Rock Road, Suite 140  
 Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
 Work Order: 17-04-0016  
 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_20170331	17-04-0016-5-D	03/30/17 12:40	Aqueous	GC 47	04/04/17	04/05/17 07:52	170404B02B

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	360	50	1.00	SG,HD

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	100	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-9_20170331	17-04-0016-6-D	03/30/17 11:35	Aqueous	GC 47	04/04/17	04/05/17 08:13	170404B02B

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	220	50	1.00	SG,HD

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	109	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-304-1698	N/A	Aqueous	GC 47	04/04/17	04/05/17 01:57	170404B02B

<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	90	68-140	

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

## Analytical Report

Antea Group  
 11010 White Rock Road, Suite 140  
 Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
 Work Order: 17-04-0016  
 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_20170331	17-04-0016-1-A	03/30/17 11:05	Aqueous	GC/MS W	04/03/17	04/03/17 18:12	170403L004

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)	10	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	97	78-126	
1,2-Dichloroethane-d4	101	75-135	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	92	88-112	
1,4-Bromofluorobenzene	100	80-120	

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

## Analytical Report

Antea Group  
11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
Work Order: 17-04-0016  
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_20170331	17-04-0016-2-A	03/30/17 09:50	Aqueous	GC/MS W	04/03/17	04/03/17 18:41	170403L004

Parameter	Result	RL	DF	Qualifiers
Benzene	0.91	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)	100	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	100	78-126	
1,2-Dichloroethane-d4	102	75-135	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	92	88-112	
1,4-Bromofluorobenzene	100	80-120	

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



Calscience

## Analytical Report

Antea Group  
11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
Work Order: 17-04-0016  
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_20170331	17-04-0016-3-A	03/30/17 13:30	Aqueous	GC/MS W	04/03/17	04/03/17 19:11	170403L004

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)	11	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	130	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	100	78-126	
1,2-Dichloroethane-d4	103	75-135	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	93	88-112	
1,4-Bromofluorobenzene	101	80-120	

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



## Analytical Report

Antea Group  
11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
Work Order: 17-04-0016  
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_20170331	17-04-0016-4-A	03/30/17 12:15	Aqueous	GC/MS W	04/03/17	04/03/17 19:40	170403L004

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)	7.1	1.0	1.00	
Tert-Butyl Alcohol (TBA)	58	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	100	78-126	
1,2-Dichloroethane-d4	101	75-135	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	93	88-112	
1,4-Bromofluorobenzene	101	80-120	

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



Calscience

## Analytical Report

Antea Group  
11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
Work Order: 17-04-0016  
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_20170331	17-04-0016-5-A	03/30/17 12:40	Aqueous	GC/MS W	04/03/17	04/03/17 20:10	170403L004

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)	18	1.0	1.00	
Tert-Butyl Alcohol (TBA)	47	10	1.00	
Ethanol	ND	100	1.00	
Gasoline Range Organics (C6-C12)	480	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Dibromofluoromethane	100	78-126	
1,2-Dichloroethane-d4	102	75-135	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	94	88-112	
1,4-Bromofluorobenzene	100	80-120	

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



Calscience

## Analytical Report

Antea Group  
11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
Work Order: 17-04-0016  
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_20170331	17-04-0016-6-A	03/30/17 11:35	Aqueous	GC/MS W	04/03/17	04/03/17 20:39	170403L004

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)	1.0	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	99	78-126	
1,2-Dichloroethane-d4	104	75-135	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	94	88-112	
1,4-Bromofluorobenzene	100	80-120	

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

## Analytical Report

Antea Group  
11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
Work Order: 17-04-0016  
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
<b>Method Blank</b>	<b>099-12-767-7744</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC/MS W</b>	<b>04/03/17</b>	<b>04/03/17 12:16</b>	<b>170403L004</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
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	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	78-126	
1,2-Dichloroethane-d4	99	75-135	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	92	88-112	
1,4-Bromofluorobenzene	100	80-120	

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



Calscience

## Quality Control - Spike/Spike Duplicate

Antea Group  
11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
Work Order: 17-04-0016  
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
17-03-2085-13	Sample	Aqueous	GC/MS W	04/03/17	04/03/17 14:15	170403S002
17-03-2085-13	Matrix Spike	Aqueous	GC/MS W	04/03/17	04/03/17 13:15	170403S002
17-03-2085-13	Matrix Spike Duplicate	Aqueous	GC/MS W	04/03/17	04/03/17 13:45	170403S002

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	49.86	100	49.42	99	75-125	1	0-20	
Ethylbenzene	ND	50.00	51.58	103	51.44	103	75-129	0	0-20	
Toluene	ND	50.00	51.56	103	51.60	103	75-125	0	0-20	
p/m-Xylene	ND	100.0	102.5	103	101.7	102	75-133	1	0-20	
o-Xylene	ND	50.00	50.99	102	50.70	101	75-134	1	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	51.32	103	50.28	101	64-136	2	0-20	
Tert-Butyl Alcohol (TBA)	ND	250.0	298.3	119	280.3	112	75-136	6	0-20	
Ethanol	ND	500.0	639.7	128	505.7	101	29-179	23	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - LCS/LCSD

Antea Group  
11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
Work Order: 17-04-0016  
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			
099-15-304-1698	LCS	Aqueous	GC 47	04/04/17	04/05/17 02:18	170404B02B			
099-15-304-1698	LCSD	Aqueous	GC 47	04/04/17	04/05/17 02:39	170404B02B			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	2000	1847	92	1871	94	69-123	1	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - LCS/LCSD

Antea Group  
11010 White Rock Road, Suite 140  
Rancho Cordova, CA 95670-6001

Date Received: 04/01/17  
Work Order: 17-04-0016  
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		
099-12-767-7744	LCS	Aqueous		GC/MS W	04/03/17	04/03/17 10:47	170403L004		
099-12-767-7744	LCSD	Aqueous		GC/MS W	04/03/17	04/03/17 11:17	170403L004		
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	50.00	47.01	94	N/A	N/A	80-120	N/A	0-20	
Ethylbenzene	50.00	48.26	97	N/A	N/A	80-123	N/A	0-20	
Toluene	50.00	48.28	97	N/A	N/A	80-120	N/A	0-20	
p/m-Xylene	100.0	95.33	95	N/A	N/A	75-123	N/A	0-25	
o-Xylene	50.00	48.20	96	N/A	N/A	74-122	N/A	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	50.13	100	N/A	N/A	69-129	N/A	0-22	
Tert-Butyl Alcohol (TBA)	250.0	239.5	96	N/A	N/A	69-129	N/A	0-25	
Ethanol	500.0	512.9	103	N/A	N/A	42-168	N/A	0-20	
Gasoline Range Organics (C6-C12)	1000	851.1	85	832.5	83	65-135	2	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Sample Analysis Summary Report

Work Order: 17-04-0016

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 W	2

## Glossary of Terms and Qualifiers

Work Order: 17-04-0016

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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.



0016



800-322-5555 www.gso.com

**Ship From**

BLAINE TECH SERVICES, INC  
MICHAEL NINOTAKA  
1680 ROGERS AVE  
SAN JOSE, CA 95112

Tracking #: 535586978

**SDS**



**Ship To**

CALSCIENCE  
SAMPLE RECEIVING  
7440 LINCOLN WAY  
GARDEN GROVE, CA 92841

**ORC**

**A**

**GARDEN GROVE**

COD: \$0.00

Weight: 0 lb(s)

Reference:

BTSSJ

**Delivery Instructions:**

FRAGILE, NON HAZARDOUS

**Signature Type: REQUIRED**

**D92845A**



64871799

Print Date: 3/31/2017 2:28 PM

PRINT LABEL

Print All

FINISH

1 of 1

**LABEL INSTRUCTIONS:**

**Do not copy or reprint this label for additional shipments - each package must have a unique barcode.**

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

Return to Contents

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Antea Group

DATE: 04/01/2017

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

Thermometer ID: SC3B (CF: 0.0°C); Temperature (w/o CF): 1.9 °C (w/ CF): 1.9 °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  Filter

Checked by: 1017

CUSTODY SEAL:

Cooler  Present and Intact  Present but Not Intact  Not Present  N/A

Checked by: 1017

Sample(s)  Present and Intact  Present but Not Intact  Not Present  N/A

Checked by: 1017

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples .....  Yes  No  N/A

COC document(s) received complete .....  Yes  No  N/A

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 .....  Yes  No  N/A

Sample container label(s) consistent with COC .....  Yes  No  N/A

Sample container(s) intact and in good condition .....  Yes  No  N/A

Proper containers for analyses requested .....  Yes  No  N/A

Sufficient volume/mass for analyses requested .....  Yes  No  N/A

Samples received within holding time .....  Yes  No  N/A

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

pH  Residual Chlorine  Dissolved Sulfide  Dissolved Oxygen .....  Yes  No  N/A

Proper preservation chemical(s) noted on COC and/or sample container .....  Yes  No  N/A

Unpreserved aqueous sample(s) received for certain analyses

Volatile Organics  Total Metals  Dissolved Metals

Container(s) for certain analysis free of headspace .....  Yes  No  N/A

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 .....  Yes  No  N/A

CONTAINER TYPE:

(Trip Blank Lot Number: \_\_\_\_\_)

Aqueous:  VOA  VOA<sup>(3)</sup>h  VOAna<sub>2</sub>  100PJ  100PJna<sub>2</sub>  125AGB  125AGBh  125AGBp  125PB

125PBz<sub>2</sub>na  250AGB  250CGB  250CGBs  250PB  250PBn  500AGB  500AGJ  500AGJs

500PB  1AGB  1AGBna<sub>2</sub>  1AGBs  1PB  1PBna  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

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 = HNO<sub>3</sub>, na = NaOH, na<sub>2</sub> = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, p = H<sub>3</sub>PO<sub>4</sub>, Labeled/Checked by: 1017

s = H<sub>2</sub>SO<sub>4</sub>, u = ultra-pure, x = Na<sub>2</sub>SO<sub>3</sub>+NaHSO<sub>4</sub>.H<sub>2</sub>O, z<sub>2</sub>na = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH

Reviewed by: 802

Return to Contents



Is the Data Valid?

(circle)

Yes / No

Preservation Temperature

(if Known): 1.9 °C

## Antea Group Lab Validation Sheet

Project/Client: COP/ELT

Project #: 142705191

Date of Validation: 5/3/17 Date of Analysis: 4/5/17 Sample Date: 3/30/17

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

Analytical Lab Used and Report # (if any): Eurofins Calscience 17-04-0016

Circle or  
Highlight  
Yes/No  
below

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/m<sup>3</sup>, 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

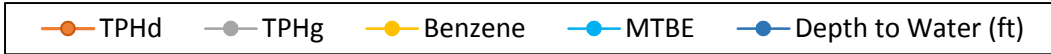
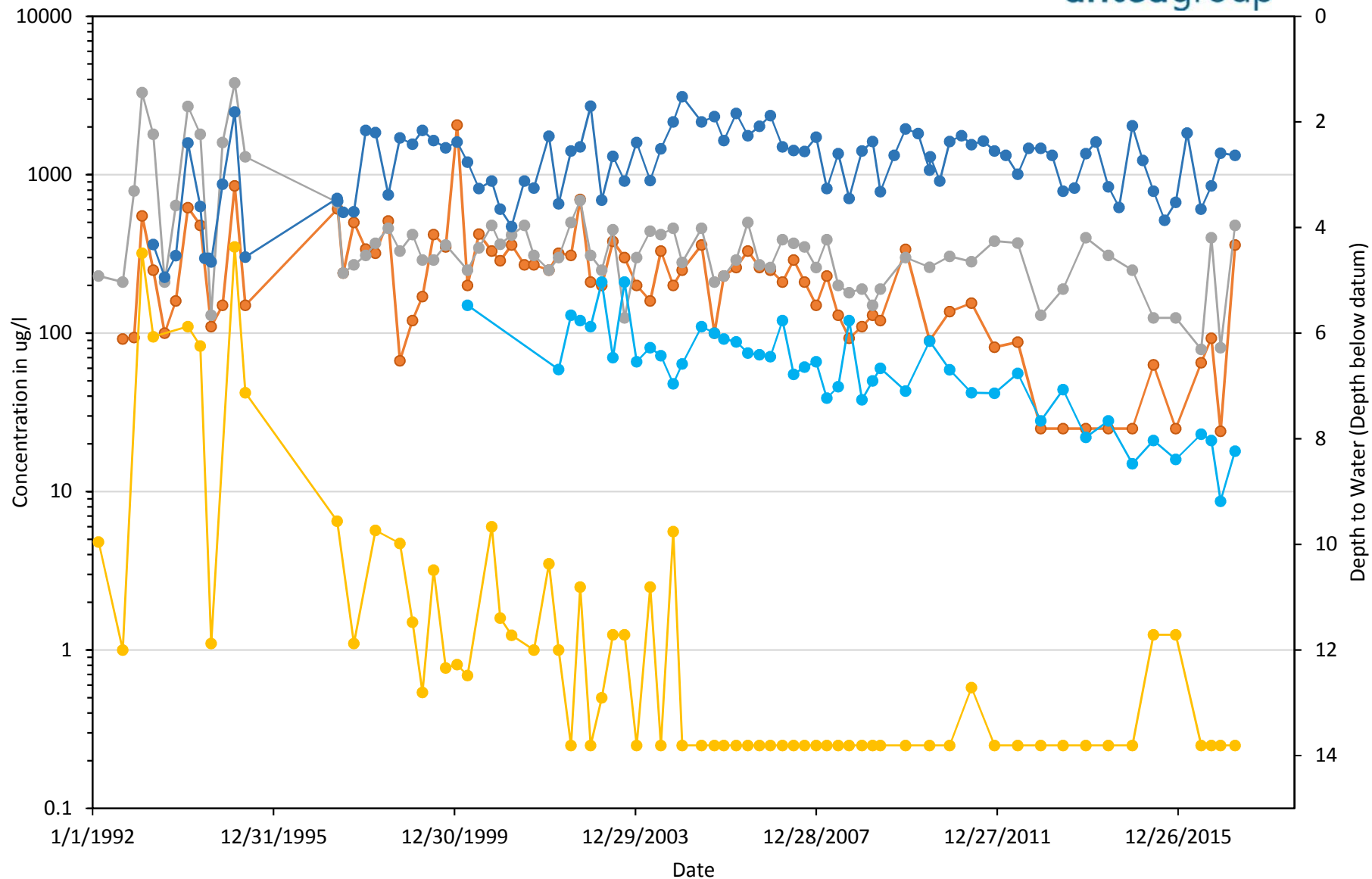
If any answer is no, explain why and what corrective action was taken:

## ***Appendix D***

Time Series Graphs

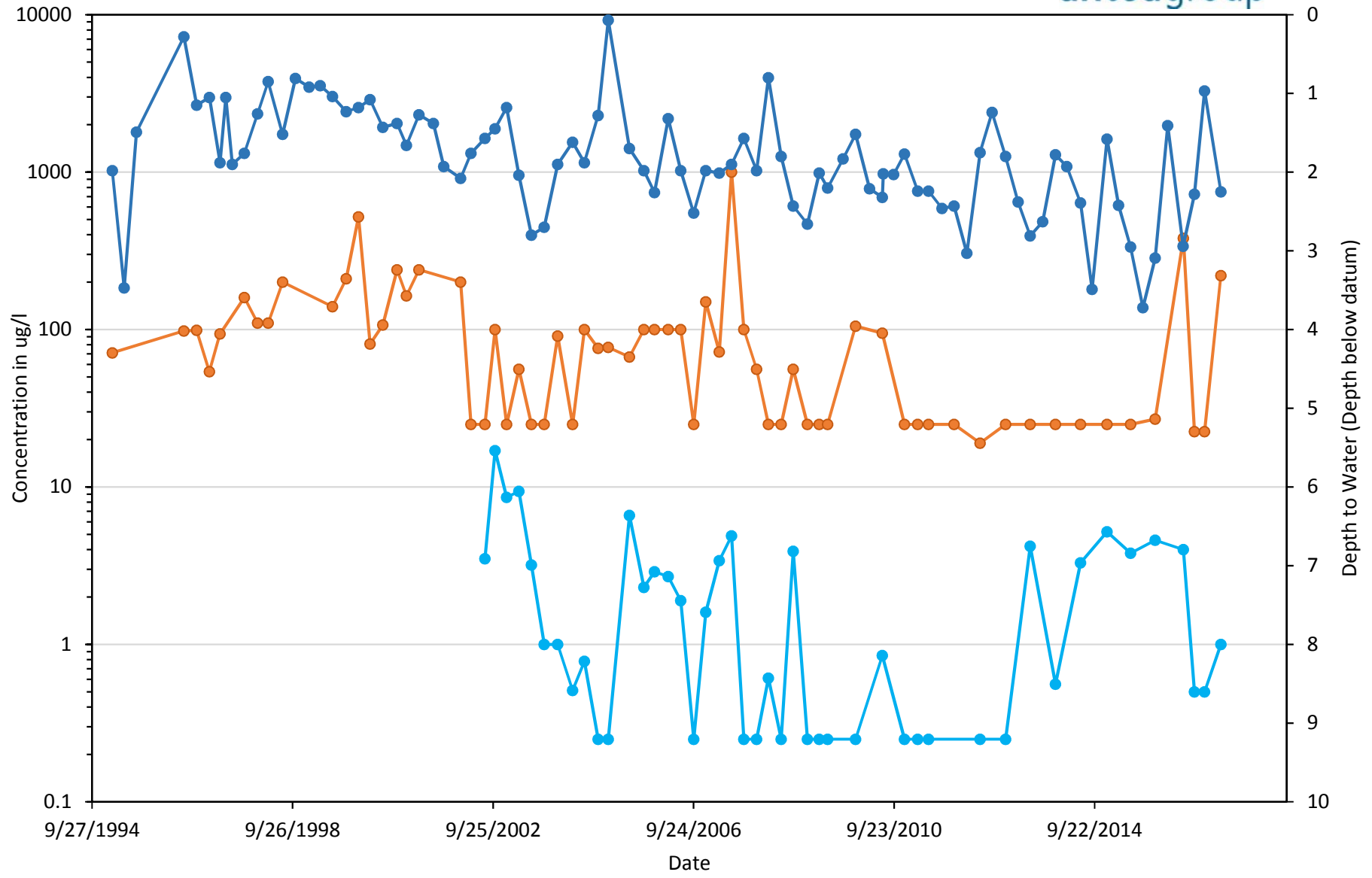


MW-3  
TPHd, TPHg, Benzene, & MTBE Concentrations  
and Depth to Water Versus Time



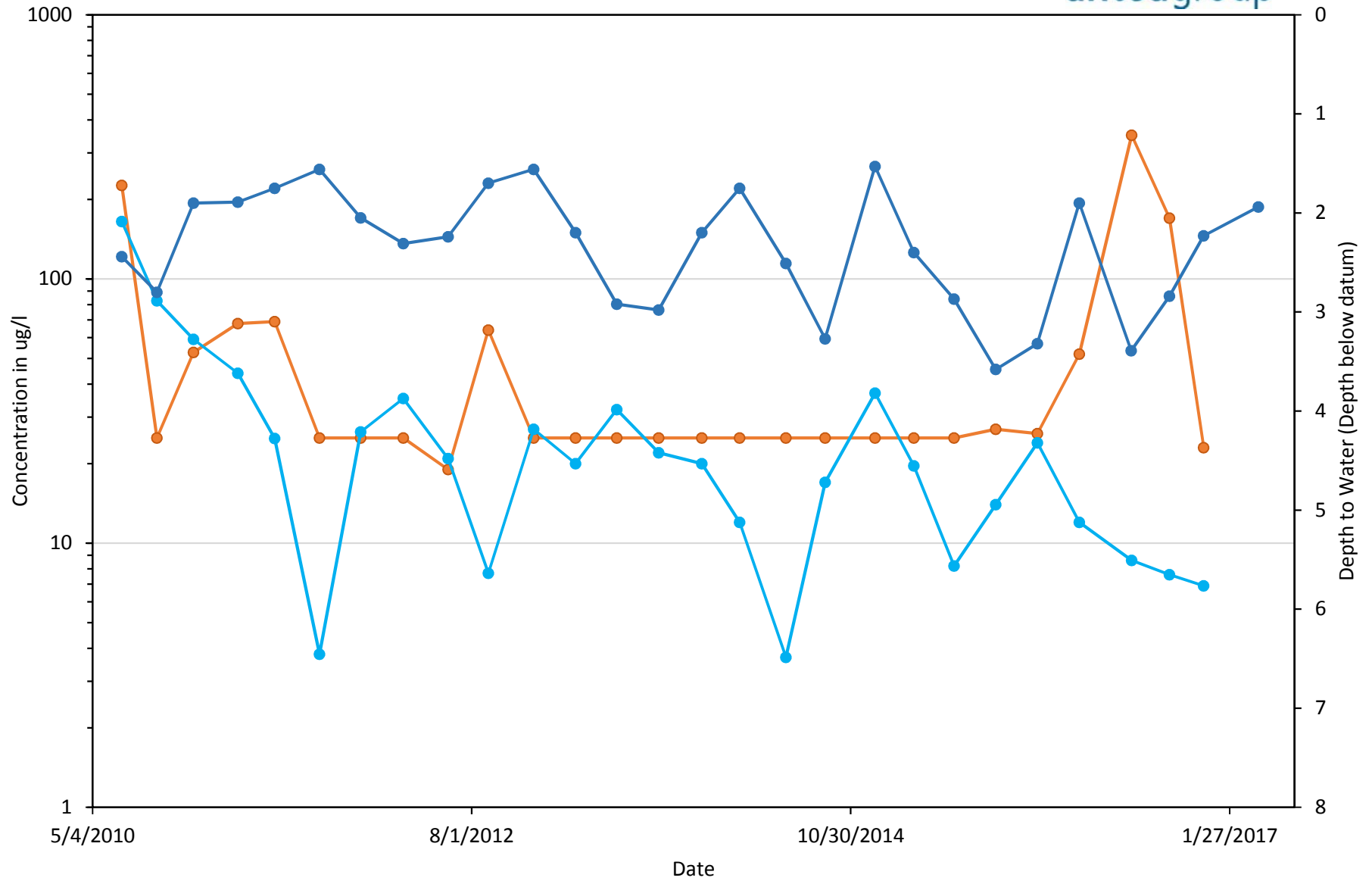


### MW-9 TPHd & MTBE Concentrations and Depth to Water Versus Time



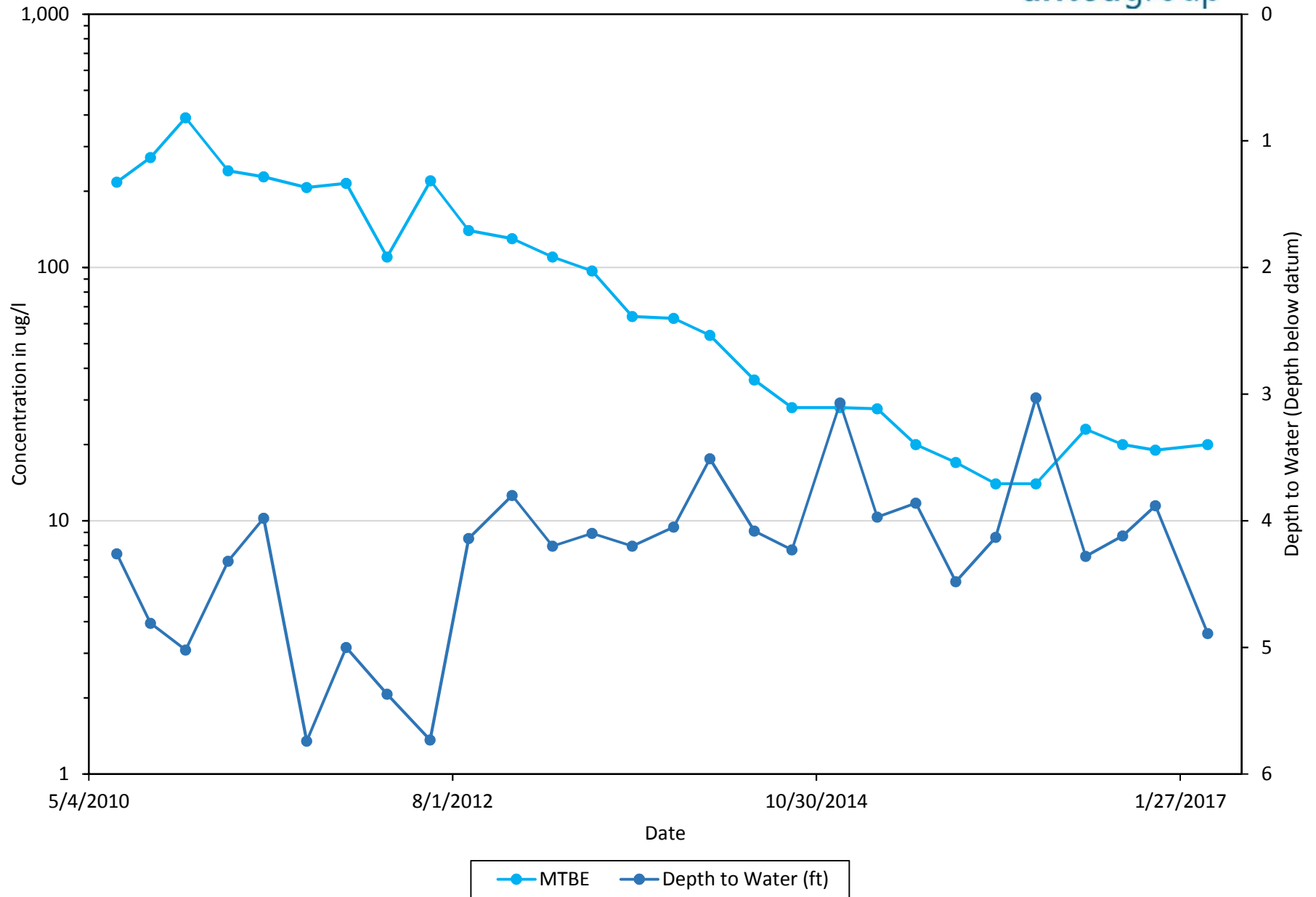
—●— TPHd    —●— MTBE    —●— Depth to Water (ft)

MW-11  
MTBE Concentrations  
and Depth to Water Versus Time

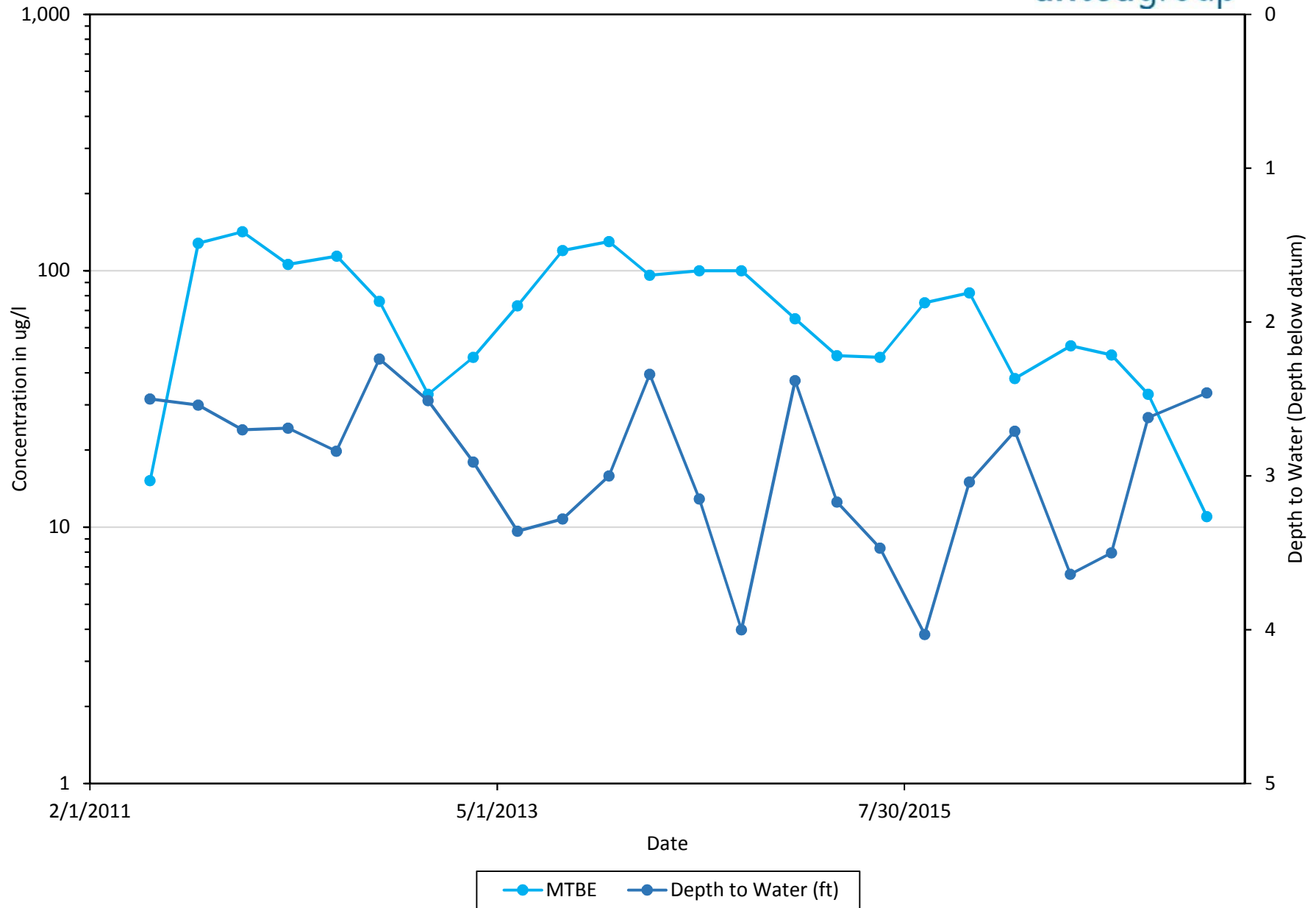


—●— TPHd    —●— MTBE    —●— Depth to Water (ft)

MW-13  
MTBE Concentrations  
and Depth to Water Versus Time



MW-15  
MTBE Concentrations  
and Depth to Water Versus Time



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

