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By Alameda County Environmental Health at 3:05 pm, Feb 07, 2014

January 30, 2014

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

**Subject: Quarterly Summary Report, Fourth Quarter 2013**  
**Site: 76 Station No. 5191/5043**  
**449 Hegenberger Road**  
**Oakland, California**  
**Fuel Leak Case No. RO0000219**

Dear Mr. Nowell;

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

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

Walter T. Sprague  
Pacific Convenience & Fuel  
7180 Koll Center Parkway, Suite 100  
Pleasanton, California 94566  
Tel: (925) 931-5714  
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WSprague@pcandf.com

Sincerely,

**PACIFIC CONVENIENCE & FUEL**



**WALTER SPRAGUE**  
Director of Retail Services

Attachment

# *Quarterly Summary Report, Fourth Quarter 2013*

*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*

*January 30, 2014*

*Prepared for:*  
**Mr. Keith Nowell**  
Alameda County Health Care  
Services Agency  
1131 Harbor Bay Parkway,  
Suite 250  
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## 1.0 INTRODUCTION

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Antea™ Group is pleased to submit this *Quarterly Summary Report, Fourth Quarter 2013*, for the referenced site in Oakland, California (**Figure 1**). The subject site is an operating 76 station located on the southwestern corner of Hegenberger Road and Edgewater Drive in Oakland, CA. Station facilities include three underground storage tanks (USTs), two dispenser islands, a station building, and a carwash. A total of fourteen groundwater monitoring wells are located at or near the site (**Figures 1 and 2**). Please refer to **Appendix A** for additional site information and for the history of environmental investigations and remedial actions.

This report summarizes the data obtained from the recent groundwater monitoring and sampling event conducted on December 12, 2013. Included herein are site figures, groundwater contaminant data tables, and a discussion of trends. This report has received a technical review by Mr. Dennis Dettloff, California Professional Geologist No. 7480.

### 1.1 Work Performed [Fourth Quarter 2013]

1. Antea Group submitted the *Quarterly Summary Report, Third Quarter 2013*, dated November 8, 2013 to the Alameda County Health Care Services Agency (ACHCSA).
2. Antea Group submitted the *Project Schedule*, dated November 20, 2013 to the ACHCSA.
3. Antea Group submitted the *Work Plan – Monitoring Well Installation*, dated November 21, 2013 to the ACHCSA.
4. Antea Group submitted the *Corrective Action Plan*, dated November 22, 2013 (CAP) to the ACHCSA.
5. Antea Group submitted a draft public notice fact sheet in preparation for the proposed remediation activities in December 2013.
6. Blaine Tech Services, Inc. (Blaine Tech) conducted the fourth quarter 2013 groundwater monitoring and sampling event on December 12, 2013.

### 1.2 Work Proposed [First Quarter 2014]

1. Antea Group will submit the *Quarterly Summary Report, Fourth Quarter 2013* (contained herein) to the ACHCSA.
2. Antea Group will prepare and submit a site investigation report to the ACHCSA detailing the results of soil borings advanced at the site in July 2013.
3. Antea Group will prepare a site plan showing the locations of the proposed off-site soil borings as requested by the ACHCSA.

4. Blaine Tech will conduct the first quarter 2013 monitoring and sampling event.

## 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-6 through MW-12, MW-12A, and MW-13 through MW-17
Monitoring well sampling schedule:	Quarterly: MW-6, MW-10, MW-11, MW-12, MW-12A, and MW-13 through 17 Semi-Annual (second and fourth quarters): MW-3 and MW-7 through MW-9
Total number of monitoring/remediation wells (Table 1):	Fourteen (MW-3, MW-6 through MW-12, MW-12A, and MW-13 through MW-17).
Range of well depths (total depth below ground surface, bgs) (Table 1):	Wells are set from 13 feet to 34 feet bgs.
Wells with historical measurable LNAPL (light non-aqueous phase liquid):	Former monitoring wells MW-1 and MW-2 and current monitoring well MW-6
Historical depth to water range, in feet below top of casing (BTOC):	Min: 0.07 (MW-9, Q1 2005) Max: 8.42 (MW-6, Q4 2010)
Historical groundwater elevation range (ft) for monitoring wells MW-1 through MW-17	Min: 2.77 (MW-3, Q3 1994) Max: 9.70 (MW-9, Q3 2012)
Local receptors:	See <b>Appendix A</b>
Current remediation technique	None

### 2.1 Regulatory Correspondence

Antea Group received a letter from ACHCSA dated October 8, 2013. The letter detailed ACHCSA's technical comments in response to the meeting conducted on September 13, 2013. The letter also outlined a timeline for submitting documents requested in the letter. Antea Group requested an extension for the submittal of the requested corrective action plan on November 5, 2013. Antea Group received approval of the extension from ACHCSA. Antea Group submitted a project schedule to ACHCSA on November 20, 2013. Antea Group submitted a draft public notification fact sheet to the ACHCSA in December 2013. Antea Group received an e-mail on December 23, 2013 from ACHCSA in response to the *Work Plan – Monitoring Well Installation*, dated November 21, 2013. The e-mail stated that ACHCSA believed that the installation of down-gradient monitoring wells was premature and requested that soil borings be advanced and grab-groundwater samples be collected in lieu of the monitoring wells. The e-mail also requested that additional soil borings be advanced south of on-site monitoring

well MW-13 and between MW-7 and MW-8. The e-mail requested that a revised site plan be submitted to ACHCSA showing the proposed soil boring locations by January 4, 2014.

## 2.2 Remedial Activities

No remedial activities took place during the fourth quarter 2013.

## 2.3 Groundwater Monitoring

During the fourth quarter 2013 groundwater monitoring and sampling event, fourteen monitoring wells were gauged, purged, and sampled by Blaine Tech per standard sampling protocol (**Appendix B**). Copies of Blaine Tech's field data sheets are presented as **Appendix C**. The recent gauging and sampling data are summarized below and in **Table 2**. Historical gauging and sampling data are summarized in **Tables 3, 3a, 3b, and 3c**.

Well gauging and sampling date:	December 12, 2013
Wells gauged:	MW-3, MW-6 through MW-12, MW-12A, and MW-13 through MW-17
Wells sampled:	MW-3, MW-6 through MW-12, MW-12A, and MW-13 through MW-17
Purge method:	3 well casing volumes via electric, submersible pump
Sample collection method:	Disposable bailers
Groundwater parameters measured ( <b>Attachment C</b> ):	Temperature, pH, Conductivity, Dissolved Oxygen (DO), Oxidation Reduction Potential (ORP), and Turbidity
Wells with measurable LNAPL:	None
Current depth to water range (ft BTOC):	Min: 1.78 (MW-9) Max: 5.00 (MW-17)
Current groundwater elevation range (ft):	Min: 6.52 (MW-17) Max: 9.16 (MW-9)
Change in water depths from previous event (average change for all gauged wells):	0.48 foot decrease
Groundwater flow direction and gradient in foot per foot (ft/ft):	Southeast at 0.018 ft/ft

### 2.3.1 Groundwater Flow Gradient and Directional Trends

The fourth quarter 2013 groundwater monitoring and sampling event was performed by Blaine Tech on December 12, 2013. The average groundwater elevation increased 0.48 feet from the September 2013 event. Depth to groundwater in the site monitoring wells ranged from 1.78 feet (MW-9) to 5.00 feet (MW-17) BTOC during the current event. The groundwater flow direction and gradient were interpreted to be to the southeast at 0.018 ft/ft during the current event (**Table 4**).

### 2.3.2 Groundwater Quality Data

Groundwater samples collected during the fourth quarter 2013 monitoring and sampling event were submitted with chain-of-custody (COC) documentation to Kiff Analytical LLC (Kiff), a state of California Environmental

Laboratory Accreditation Program (ELAP) certified laboratory (Certification No. 08263CA). The complete analytical report and Antea Group’s laboratory data validation checklist is presented as **Appendix D**. Groundwater samples were analyzed for one or more of the following:

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

Groundwater analytical results are presented in **Table 2** (current) and **Tables 3, 3a, 3b, and 3c** (historical). The following ranges of contaminant concentrations were reported in the specified site wells, groundwater samples collected on December 12, 2013. Only the reported contaminants are listed in the table below.

Constituents	Number of Reported Samples Above LRL of the Samples Collected	Minimum Reported Concentration, in µg/L (Sample ID)	Maximum Reported Concentration, in µg/L (Sample ID)
TPHg	5 of 14	180 (MW-12)	92,000 (MW-17)
TPHd	1 of 14	100 (MW-6)	100 (MW-6)
Benzene	5 of 14	2.4 (MW-10)	17,000 (MW-17)
Toluene	3 of 14	13 (MW-6)	9,000 (MW-17)
Ethylbenzene	4 of 14	1.6 (MW-12)	2,900 (MW-17)
Total Xylenes	3 of 14	660 (MW-6)	9,100 (MW-17)
MTBE	8 of 14	0.56 (MW-9)	940 (MW-12)
TBA	7 of 14	14J (MW-12)	530 (MW-16)

**Explanations:**

µg/L = Micrograms per liter

LRL = Laboratory reporting limit

### 2.3.3 Groundwater Contaminant Trends

During the fourth quarter 2013, analytical results from the groundwater sample collected from monitoring well MW-3 indicated that TPHg increased in concentration and MTBE and TBA decreased in concentration. Analytical results from the groundwater sample collected from monitoring well MW-6 indicated that TPHd, TPHg, BTEX, MTBE, and TBA decreased in concentration. Analytical results from the groundwater sample collected from monitoring well MW-9 indicated that MTBE decreased in concentration. Analytical results from the groundwater sample collected from monitoring well MW-10 indicated that total xylenes decreased in concentration and benzene increased in concentration. Analytical results from the groundwater sample collected from monitoring



well MW-11 indicated that MTBE decreased in concentration. Analytical results from the groundwater sample collected from monitoring well MW-12 indicated that TPHg, BTEX, and TBA decreased in concentration and MTBE increased in concentration. MTBE concentrations in monitoring well MW-12A decreased. Total xylenes, MTBE, and TBA concentrations decreased in monitoring well MW-13. Analytical results from the groundwater sample collected from monitoring well MW-14 indicated a decrease in TPHd, TPHg, and BTEX concentrations. Analytical results from the groundwater sample collected from monitoring well MW-15 indicated an increase in MTBE and TBA concentrations and a decrease in TPHg concentration. Analytical results from the groundwater sample collected from monitoring well MW-16 indicated a decrease in total xylenes and MTBE concentration and an increase in TBA concentration. Analytical results from the groundwater sample collected from monitoring well MW-17 indicated an increase in TPHg and BTEX concentrations and a decrease in TPHd and TBA concentrations. Isoconcentration maps for TPHg, benzene, MTBE, and TPHd are presented on **Figures 4 through 7** and historical groundwater flow directions are shown on **Figure 8**.

### 2.3.4 Waste Disposal Summary

Approximately 132 gallons of waste water were generated during well purging/sampling and equipment cleaning during the fourth quarter event. The waste water was transported to Blaine Tech’s bulk facility in San Jose, California. After the batching process, the wastewater will be transported to Seaport Environmental in Redwood City, California for disposal.

### 2.3.5 Quality Assurance / Quality Control

Antea Group’s QA/QC measures included use of a field duplicate and a detailed QA/QC data validation check on the Kiff laboratory analytical results for the December 2013 sampling event. Antea Group’s laboratory data validation checklist and the Kiff laboratory report are presented as **Appendix D**.

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

\*TBA results for samples MW-12 may be biased slightly high and are flagged with a ‘J’. A fraction of MTBE (typically less than 1%) converts to TBA during the analysis of water samples. We consider this conversion effect to be mathematically significant in samples that contain MTBE/TBA ratios of over 20:1.

\*The Method Reporting Limit for Ethanol has been increased due to the presence of an interfering compound for sample MW-15\_20131231.

\*Samples MW-17\_20131231 and FD\_20131231 were analyzed outside of hold time for Method EPA 8260B. The hydrochloric acid (HCl) preservation was insufficient to maintain a pH of 2.0 or less required to extend sample hold time from 7 to 14 days.

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 CONCLUSIONS AND RECOMMENDATIONS**

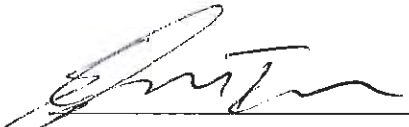
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Antea Group recommends that all monitoring wells MW-3 and MW-6 through MW-17 be purged and sampled on a semi-annual basis during the second and fourth quarters of each year. Additional groundwater sampling may be required for the work proposed in the CAP.

#### 4.0 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:



**Edward T. Weyrens, G.I.T.**  
Project Professional

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

Licensed Approver:



Date: 1/30/14

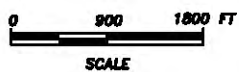
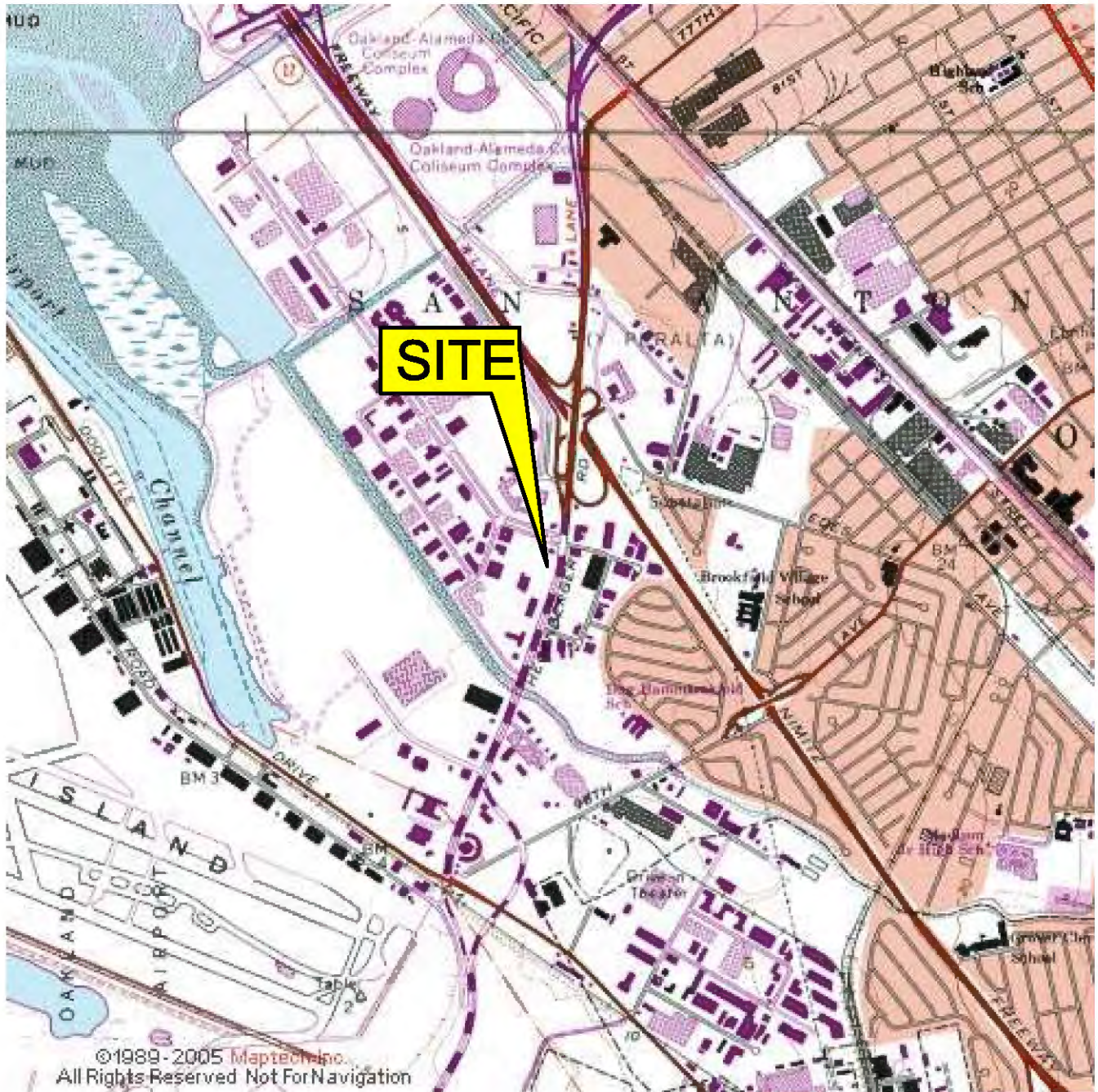
**Dennis S. Dettloff**  
Senior Project Manager  
California Registered Professional Geologist No. 7480

cc: GeoTracker (upload)

## ***Figures***


- Figure 1      Site Location Map
- Figure 2      Site Plan
- Figure 3      Groundwater Elevation Contour Map – December 12, 2013
- Figure 4      Dissolved Phase TPHg Isoconcentration Map – December 12, 2013
- Figure 5      Dissolved Phase Benzene Isoconcentration Map – December 12, 2013
- Figure 6      Dissolved Phase MTBE Isoconcentration Map – December 12, 2013
- Figure 7      Dissolved Phase TPHd Isoconcentration Map – December 12, 2013
- Figure 8      Historical Groundwater Flow Directions





**FIGURE 1**  
**SITE LOCATION MAP**

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

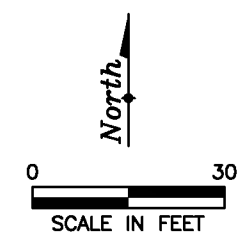
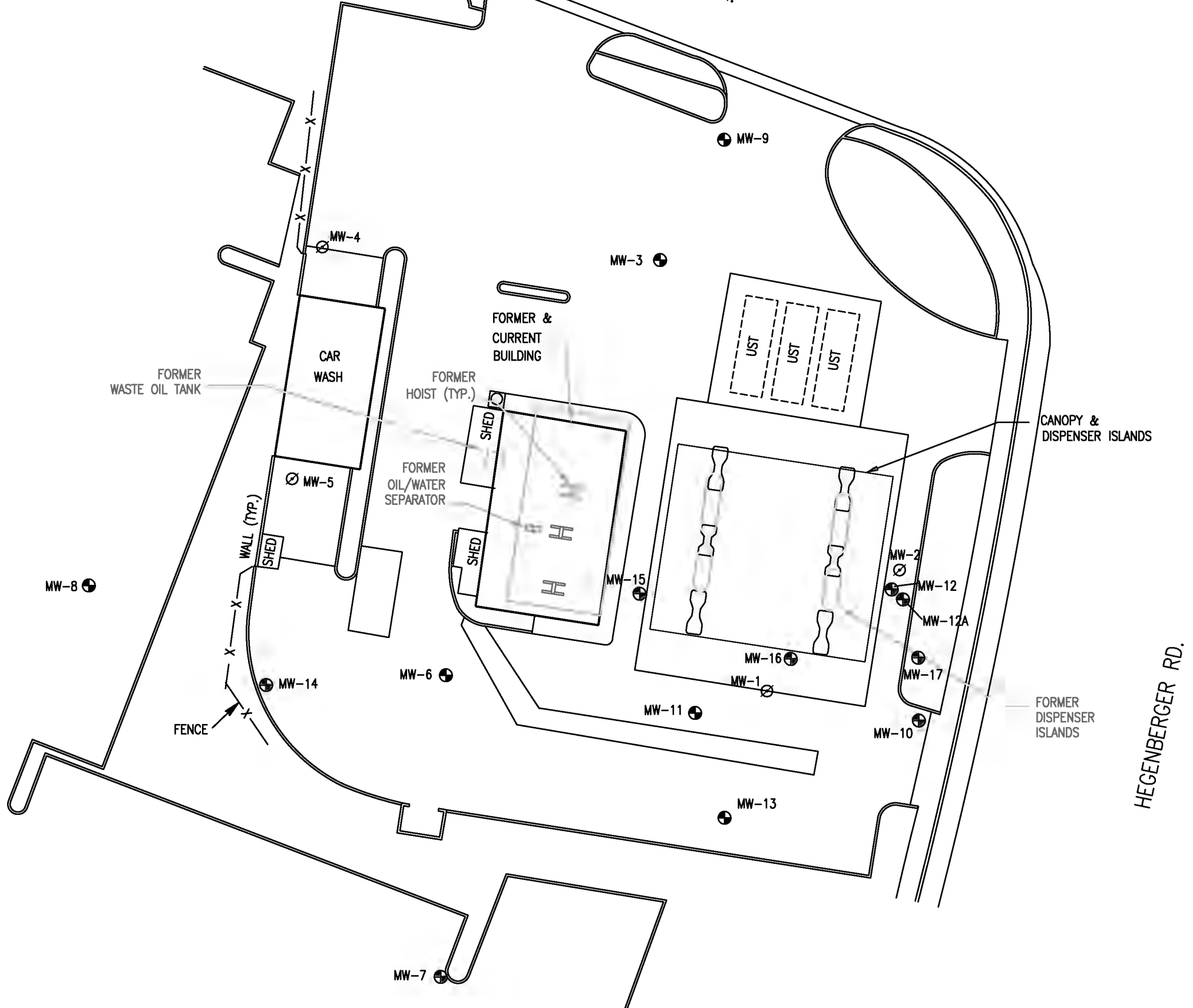
PROJECT NO. 142705191	PREPARED BY EW	DRAWN BY DR/JH	 <b>anteagroup</b>
DATE 1/31/11	REVIEWED BY DD	FILE NAME 5043-SiteLocator	

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

EDGEWATER DR.


LEGEND

- ⊕ MW- MONITORING WELL
- ⊘ MW- ABANDONED MONITORING WELL

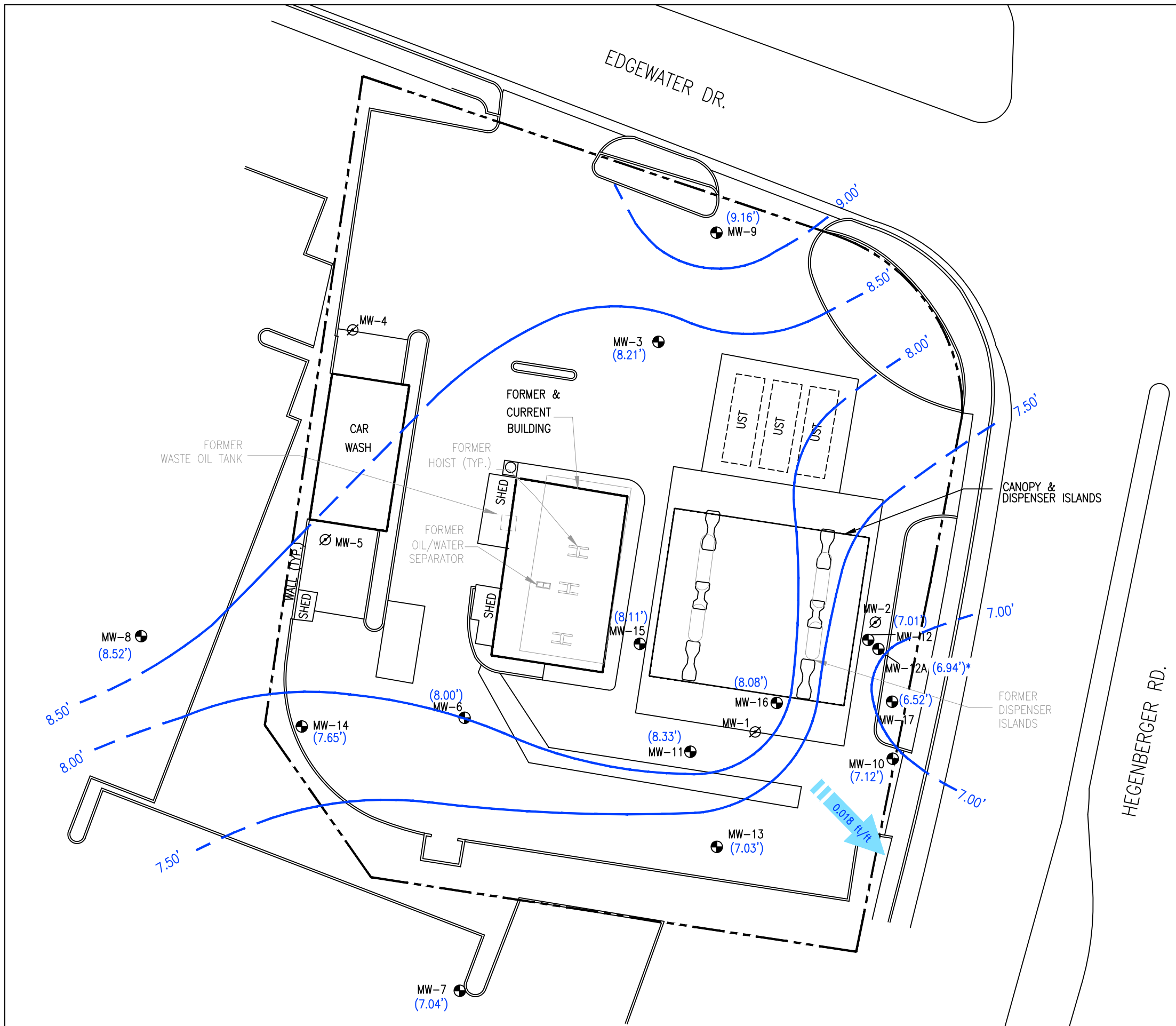


**FIGURE 2**  
**SITE PLAN**

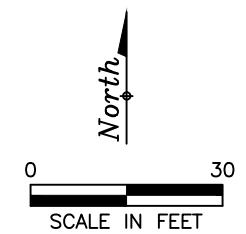
76 STATION NO. 5191/5043  
449 HEGENBERGER ROAD  
OAKLAND, CALIFORNIA

PROJECT NO. 142705191	PREPARED BY DD	DRAWN BY JH	
DATE 5/26/11	REVIEWED BY DD	FILE NAME 5191-SiteS	



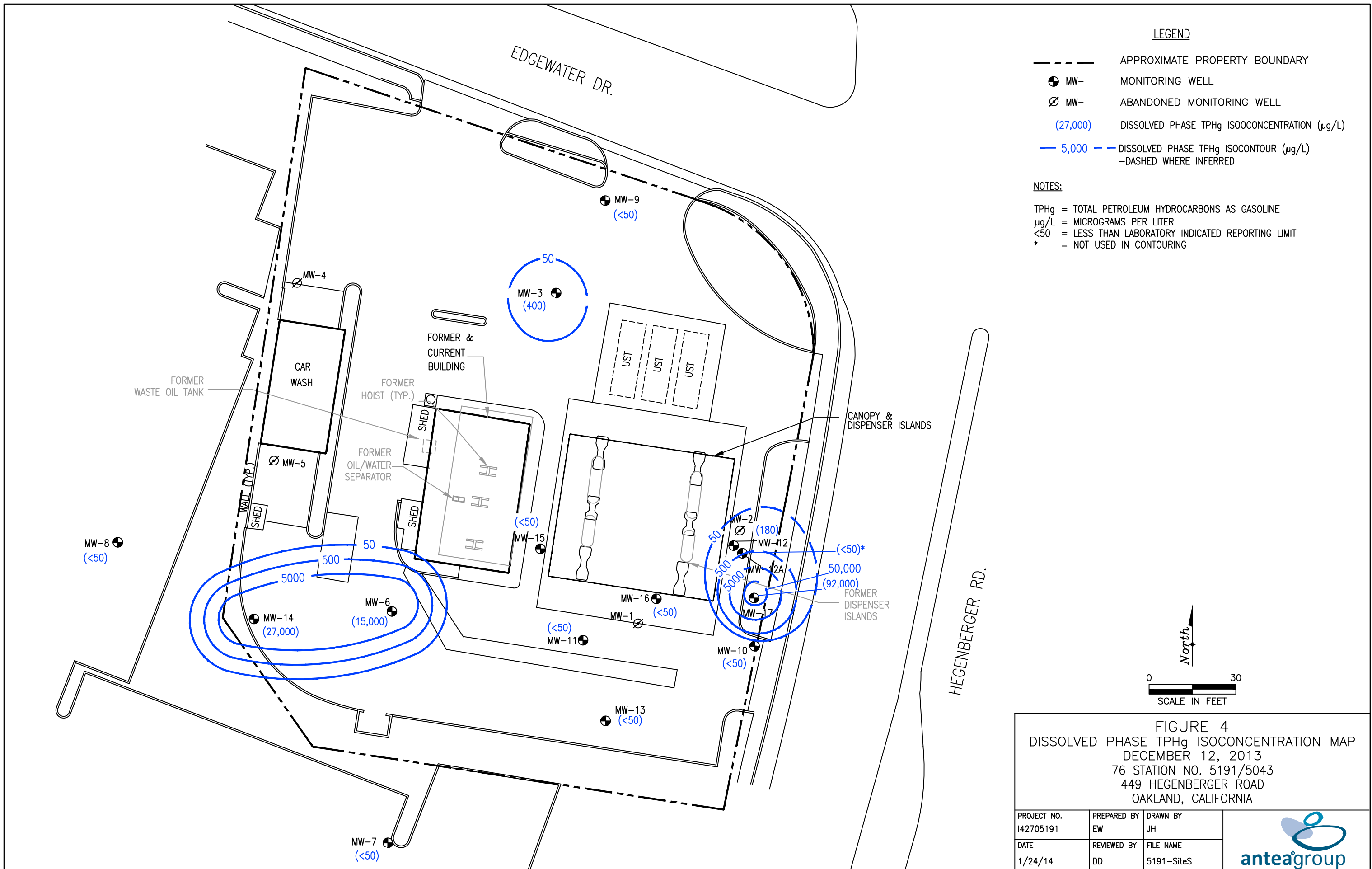


- LEGEND**
- APPROXIMATE PROPERTY BOUNDARY
  - ⊕ MW- MONITORING WELL
  - ⊘ MW- ABANDONED MONITORING WELL
  - (7.65) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (ft/msl)
  - \* NOT USED IN CONTOURING
  - 7.50' — GROUNDWATER CONTOUR LINE (ft/msl) —DASHED WHERE INFERRED (CONTOUR INTERVAL: 0.50 ft)
  - ← 0.018 ft/ft ||| GROUNDWATER FLOW DIRECTION AND HYDRAULIC GRADIENT



**FIGURE 3**  
 GROUNDWATER ELEVATION CONTOUR MAP  
 DECEMBER 12, 2013  
 76 STATION NO. 5191/5043  
 449 HEGENBERGER ROAD  
 OAKLAND, CALIFORNIA

PROJECT NO. I42705191	PREPARED BY EW	DRAWN BY JH	
DATE 1/24/14	REVIEWED BY DD	FILE NAME 5191-SiteS	

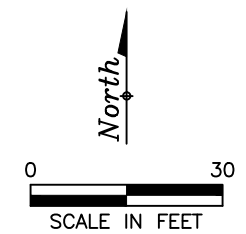


**LEGEND**

- APPROXIMATE PROPERTY BOUNDARY
- MW- MONITORING WELL
- MW- ABANDONED MONITORING WELL
- (27,000) DISSOLVED PHASE TPHg ISOCONCENTRATION (µg/L)
- 5,000 — DISSOLVED PHASE TPHg ISOCONTOUR (µg/L)  
-DASHED WHERE INFERRED

**NOTES:**

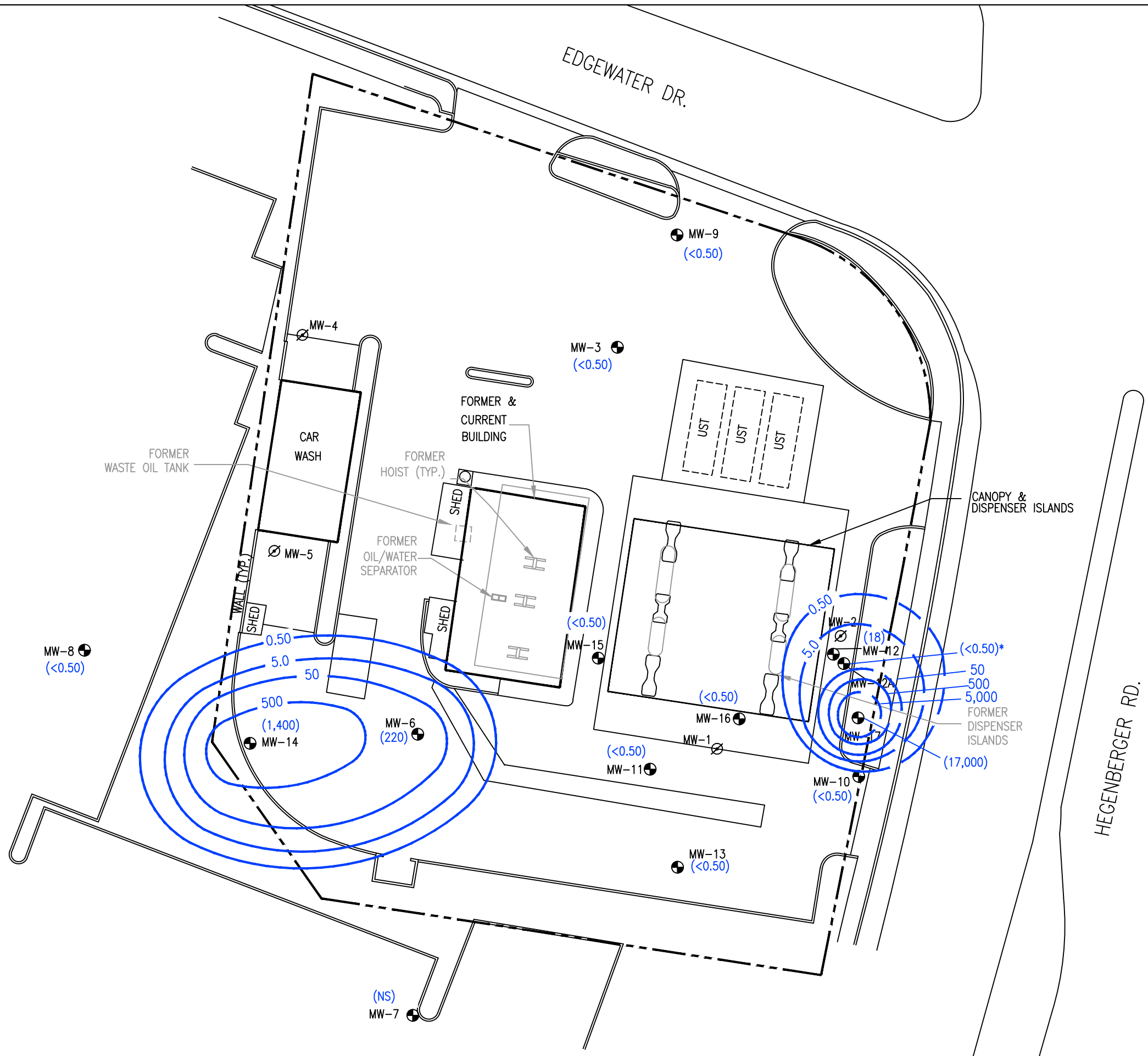
TPHg = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE  
 µg/L = MICROGRAMS PER LITER  
 <50 = LESS THAN LABORATORY INDICATED REPORTING LIMIT  
 \* = NOT USED IN CONTOURING



**FIGURE 4**  
 DISSOLVED PHASE TPHg ISOCONCENTRATION MAP  
 DECEMBER 12, 2013  
 76 STATION NO. 5191/5043  
 449 HEGENBERGER ROAD  
 OAKLAND, CALIFORNIA

PROJECT NO. I42705191	PREPARED BY EW	DRAWN BY JH	
DATE 1/24/14	REVIEWED BY DD	FILE NAME 5191-SiteS	

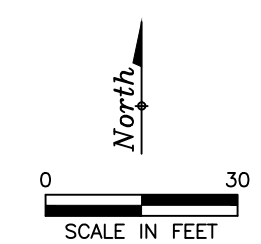




- LEGEND**
- APPROXIMATE PROPERTY BOUNDARY
  - MW- MONITORING WELL
  - ⊘ MW- ABANDONED MONITORING WELL
  - (220) DISSOLVED PHASE BENZENE ISOCONCENTRATION (µg/L)
  - 500 — DISSOLVED PHASE BENZENE ISOCONTOUR (µg/L) -DASHED WHERE INFERRED

**NOTES:**

- µg/L = MICROGRAMS PER LITER
- <0.50 = LESS THAN LABORATORY INDICATED REPORTING LIMIT
- \* = NOT USED IN CONTOURING



**FIGURE 5**  
 DISSOLVED PHASE BENZENE ISOCONCENTRATION MAP  
 DECEMBER 12, 2013  
 76 STATION NO. 5191/5043  
 449 HEGENBERGER ROAD  
 OAKLAND, CALIFORNIA

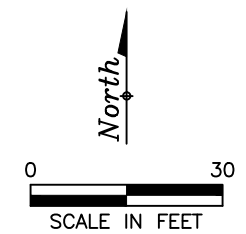
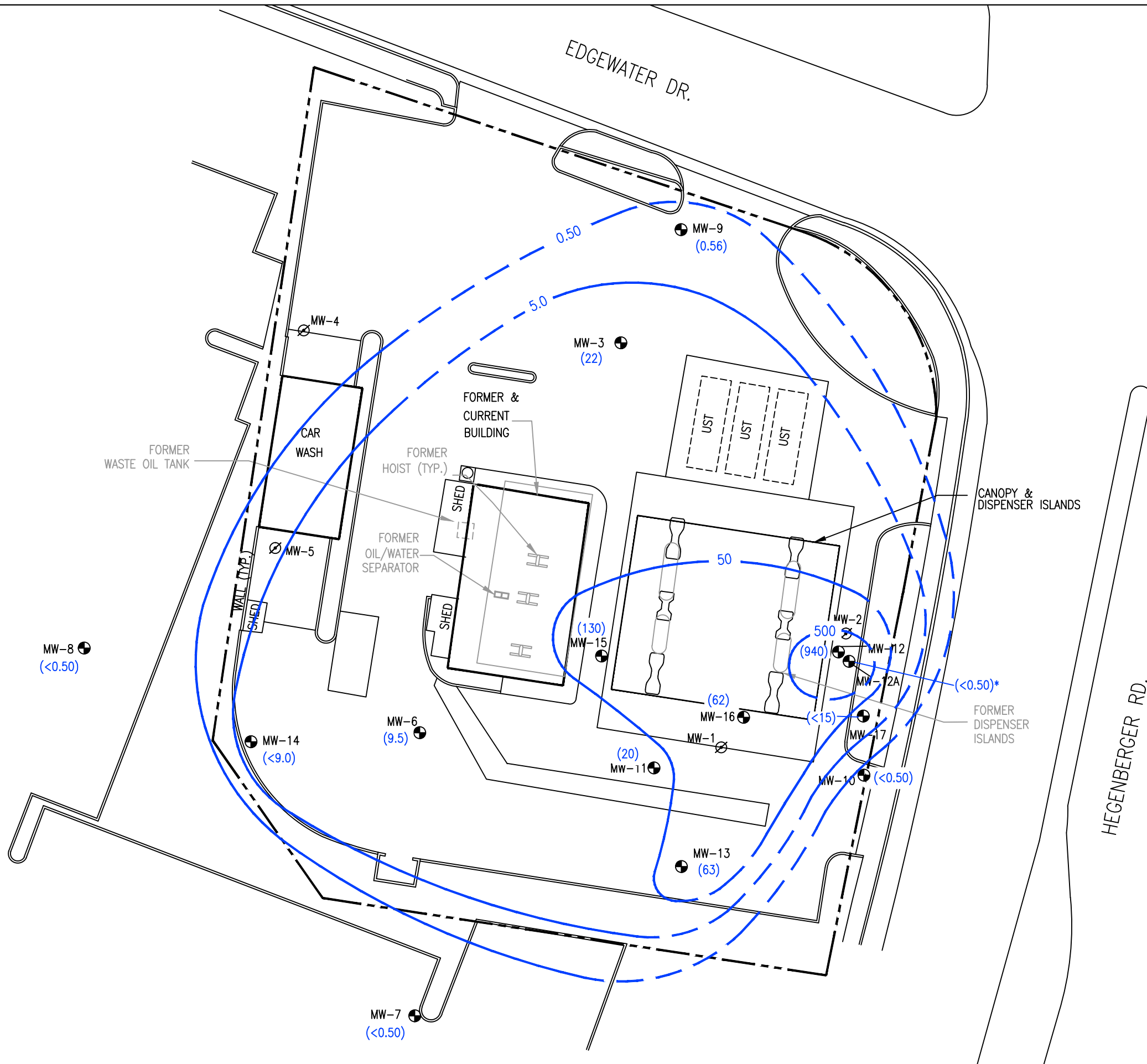
PROJECT NO. I42705191	PREPARED BY EW	DRAWN BY JH	
DATE 1/24/14	REVIEWED BY DD	FILE NAME 5191-SiteS	

**LEGEND**

- APPROXIMATE PROPERTY BOUNDARY
- ⊕ MW- MONITORING WELL
- ⊘ MW- ABANDONED MONITORING WELL
- (940) DISSOLVED PHASE MTBE ISOCONCENTRATION (µg/L)
- 500 --- DISSOLVED PHASE MTBE ISOCONTOUR (µg/L)  
-DASHED WHERE INFERRED

**NOTES:**

MTBE = METHYL TERTIARY BUTYL ETHER  
 µg/L = MICROGRAMS PER LITER  
 <0.50= LESS THAN LABORATORY INDICATED REPORTING LIMIT  
 \* = NOT USED IN CONTOURING



**FIGURE 6**  
 DISSOLVED PHASE MTBE ISOCONCENTRATION MAP  
 DECEMBER 12, 2013  
 76 STATION NO. 5191/5043  
 449 HEGENBERGER ROAD  
 OAKLAND, CALIFORNIA

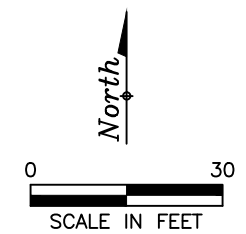
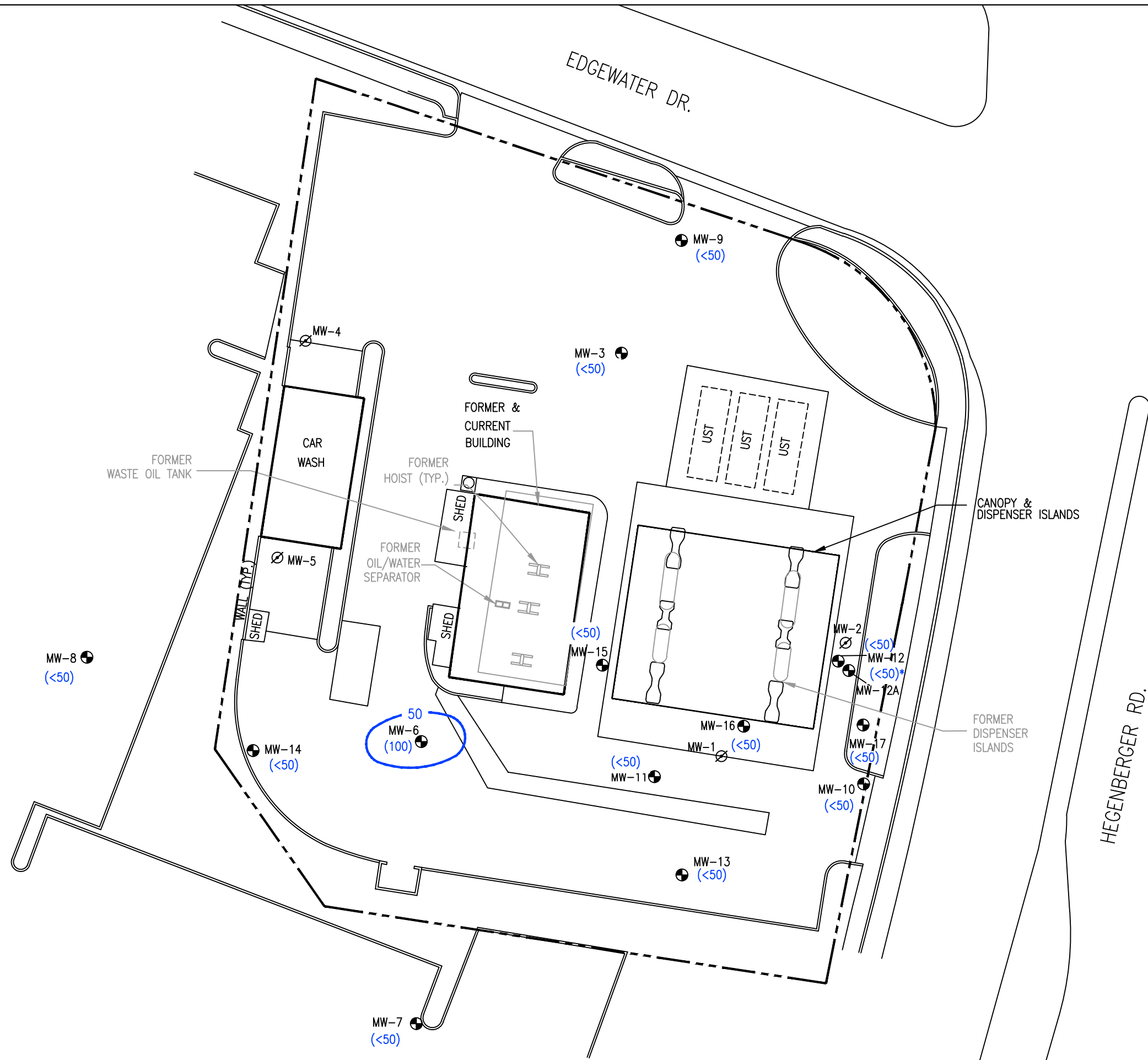
PROJECT NO. I42705191	PREPARED BY EW	DRAWN BY JH	
DATE 1/24/14	REVIEWED BY DD	FILE NAME 5191-SiteS	

**LEGEND**

- APPROXIMATE PROPERTY BOUNDARY
- MW- MONITORING WELL
- ⊘ MW- ABANDONED MONITORING WELL
- (100) DISSOLVED PHASE TPHd ISOCONCENTRATION (µg/L)
- 50 — DISSOLVED PHASE TPHd ISOCONTOUR (µg/L)  
-DASHED WHERE INFERRED

**NOTES:**

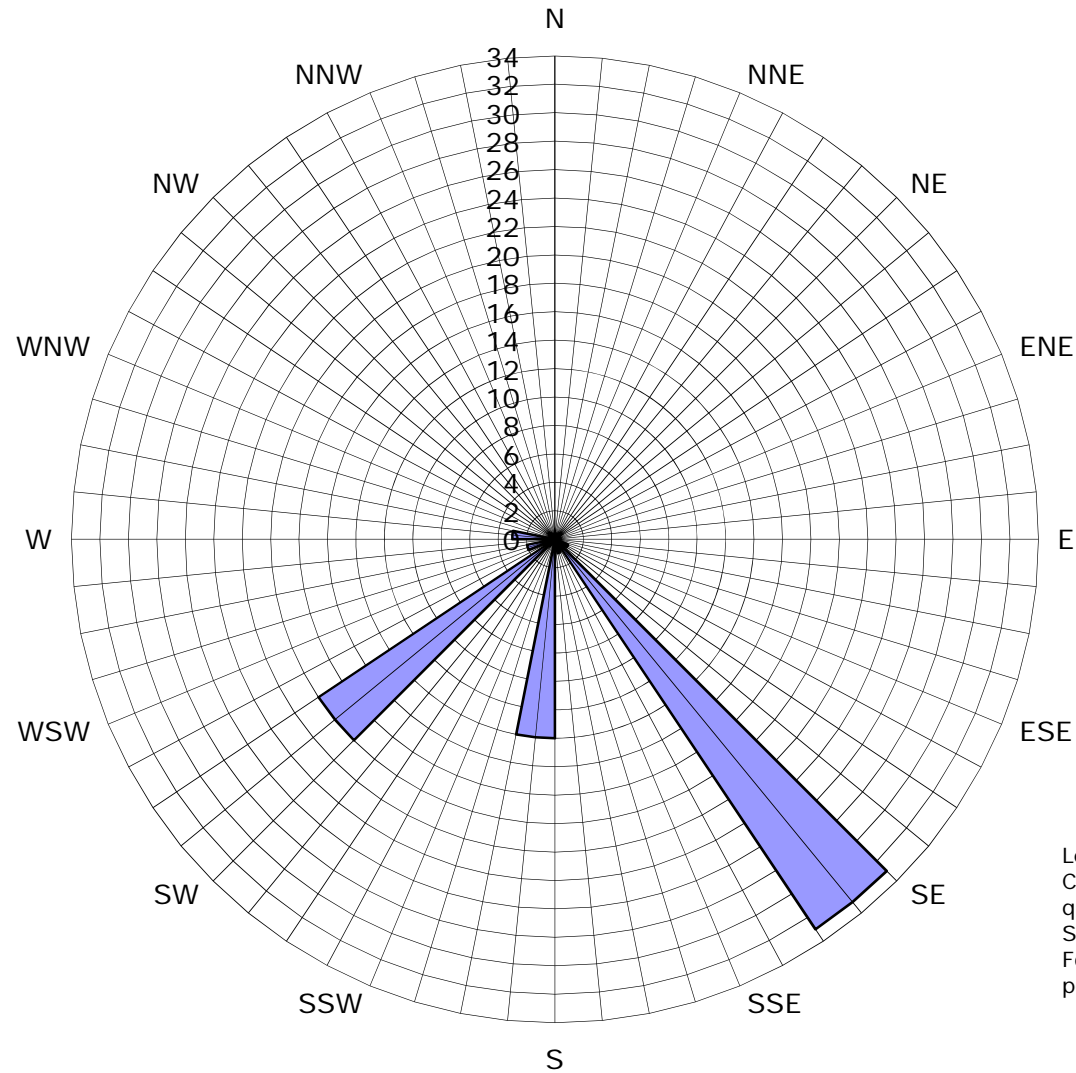
TPHd = TOTAL PETROLEUM HYDROCARBONS AS DIESEL  
 µg/L = MICROGRAMS PER LITER  
 <50 = LESS THAN LABORATORY INDICATED REPORTING LIMIT  
 \* = NOT USED IN CONTOURING



**FIGURE 7**  
 DISSOLVED PHASE TPHd ISOCONCENTRATION MAP  
 DECEMBER 12, 2013  
 76 STATION NO. 5191/5043  
 449 HEGENBERGER ROAD  
 OAKLAND, CALIFORNIA

PROJECT NO. I42705191	PREPARED BY EW	DRAWN BY JH	
DATE 1/24/14	REVIEWED BY DD	FILE NAME 5191-SiteS	

**Figure 8**  
**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  
Fourth Quarter 2013. 74 data  
points shown

■ Groundwater Flow Direction

## ***Tables***

Table 1	Well Construction Details
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**Table 1**  
**Well Construction Details**  
 76 Station No. 5191/5043  
 449 Hegenberger Road  
 Oakland, CA

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	Abandoned
MW-2	02/05/91	15.0	2	3.0	15.0	12.0	Abandoned
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	Abandoned
MW-5	08/21/92	13.5	2	2.5	13.5	11.0	Abandoned
MW-6	08/21/92	13.5	2	2.5	13.5	11.0	
MW-7	04/21/97	13.0	2	3.0	13.0	10.0	
MW-8	04/21/97	15.0	2	3.0	15.0	12.0	
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	
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	
MW-12A	06/23/10	34.0	2	30.0	34.0	4.0	
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	
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	
<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 GAUGING DATA				GROUNDWATER ANALYTICAL DATA								
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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	12/12/2013	10.81	2.60	NP	8.21	<50	<b>400</b>	<0.50	<0.50	<0.50	<0.50	<b>22</b>	<b>46</b>	<5.0
MW-6	12/12/2013	11.55	3.55	NP	8.00	<b>100</b>	<b>15,000</b>	<b>220</b>	<b>13</b>	<b>270</b>	<b>660</b>	<b>9.5</b>	<b>120</b>	<25
MW-7	12/12/2013	11.64	4.60	NP	7.04	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0
MW-8	12/12/2013	11.32	2.80	NP	8.52	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0
MW-9	12/12/2013	10.94	1.78	NP	9.16	<50	<50	<0.50	<0.50	<0.50	<0.50	<b>0.56</b>	<5.0	<5.0
MW-10	12/12/2013	10.97	3.85	NP	7.12	<50	<50	<b>2.4</b>	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0
MW-11	12/12/2013	10.53	2.20	NP	8.33	<50	<50	<0.50	<0.50	<0.50	<0.50	<b>20</b>	<5.0	<5.0
MW-12	12/12/2013	11.01	4.00	NP	7.01	<50	<b>180</b>	<b>18</b>	<1.5	<b>1.6</b>	<1.5	<b>940</b>	<b>14 J</b>	<15
MW-12A	12/12/2013	11.29	4.35	NP	6.94	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0
MW-13	12/12/2013	11.08	4.05	NP	7.03	<50	<50	<0.50	<0.50	<0.50	<0.50	<b>63</b>	<b>43</b>	<5.0
MW-14	12/12/2013	12.00	4.35	NP	7.65	<50	<b>27,000</b>	<b>1,400</b>	<b>32.0</b>	<b>2,200</b>	<b>4,800</b>	<9.0	<50	<90
MW-15	12/12/2013	11.11	3.00	NP	8.11	<50	<50	<0.50	<0.50	<0.50	<0.50	<b>130</b>	<b>59</b>	<10
MW-16	12/12/2013	10.98	2.90	NP	8.08	<50	<50	<0.50	<0.50	<0.50	<0.50	<b>62</b>	<b>530</b>	<5.0
MW-17	12/12/2013	11.52	5.00	NP	6.52	<50	<b>92,000</b>	<b>17,000</b>	<b>9,000</b>	<b>2,900</b>	<b>9,100</b>	<15	<b>250</b>	<150

**Gauging Notes:**

TOS - Top of Screen  
 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  
 MTBE- Methyl tertiary-butyl ether  
 TBA- Tertiary-butyl alcohol  
**Bold** - Above the laboratory's indicated reporting limit  
 J - TBA result may be biased slightly high due to MTBE converting to TBA during analysis



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



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA															
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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	NSVD	NG	NG	NG	13,000	150,000	17,000	26,000	5,200	26,000	--	--	--	--	--	--	--	--	--	
	5/20/1992	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/31/1992	NSVD	NG	NG	NG	8,900	64,000	13,000	12,000	2,500	22,000	--	--	--	--	--	--	--	--	--	
	11/30/1992	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/4/1993	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/4/1993	8.96	2.13	0.10	6.91	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/4/1993	8.96	2.92	0.03	6.06	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/3/1993	7.38	3.04	NP	4.34	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/7/1994	7.38	2.55	0.03	4.85	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/19/1994	7.38	2.23	0.01	5.16	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/25/1994	7.38	2.49	0.01	4.90	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/27/1994	7.38	3.10	NP	4.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/15/1994	7.38	2.85	0.11	4.61	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/14/1994	7.38	2.97	0.12	4.50	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
2/21/1995	7.38	1.53	0.02	5.87	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	
5/18/1995	NSVD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	
MW-2	2/18/1992	NSVD	NG	NG	NG	4,300	29,000	1,000	5,300	260	7,900	--	--	--	--	--	--	--	--	--	
	5/20/1992	NSVD	NG	NG	NG	4,300	24,000	2,200	7,600	630	11,000	--	--	--	--	--	--	--	--	--	
	8/31/1992	NSVD	NG	NG	NG	1,600	9,000	1,800	640	140	2,000	--	--	--	--	--	--	--	--	--	
	11/30/1992	NSVD	NG	NG	NG	5,700	29,000	2,000	3,400	1,200	6,900	--	--	--	--	--	--	--	--	--	
	2/4/1993	NSVD	NG	NG	NG	6,100	18,000	1,600	3,000	ND	6,900	--	--	--	--	--	--	--	--	--	
	5/4/1993	8.96	2.48	NP	6.48	7,100	63,000	3,200	17,000	470	17,000	--	--	--	--	--	--	--	--	--	
	8/4/1993	8.96	3.20	NP	5.76	1,800	45,000	2,100	6,600	1,400	12,000	--	--	--	--	--	--	--	--	--	
	11/3/1993	8.58	3.37	NP	5.21	2,600	72,000	3,700	16,000	3,700	20,000	--	--	--	--	--	--	--	--	--	
	2/7/1994	8.58	2.40	NP	6.18	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/19/1994	8.58	2.13	NP	6.45	3,000	42,000	2,500	1,300	2,300	13,000	--	--	--	--	--	--	--	--	--	
	6/25/1994	8.58	2.65	NP	5.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/27/1994	8.58	3.44	NP	5.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/15/1994	8.58	3.25	NP	5.33	2,800	35,000	2,400	850	1,700	15,000	--	--	--	--	--	--	--	--	--	--
	11/14/1994	8.58	2.13	NP	6.45	10,000	43,000	2,200	6,500	1,800	14,000	--	--	--	--	--	--	--	--	--	--
2/21/1995	8.58	1.65	NP	6.93	2,000	44,000	2,200	3,200	1,300	1,500	--	--	--	--	--	--	--	--	--	--	
5/18/1995	NSVD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	
MW-3	2/18/1992	NSVD	NG	NG	NG	ND	230	5	22	2	33	--	--	--	--	--	--	--	--	--	
	5/20/1992	NSVD	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	
	8/31/1992	NSVD	NG	NG	NG	92	210	1	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	11/30/1992	NSVD	NG	NG	NG	94	790	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	2/4/1993	NSVD	NG	NG	NG	550	3,300	320	ND	96	6	--	--	--	--	--	--	--	--	--	
	5/4/1993	7.84	4.32	NP	3.52	250	1,800	95	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	8/4/1993	7.84	4.94	NP	2.90	100	210	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	11/3/1993	7.42	4.53	NP	2.89	160	640	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	2/7/1994	7.42	2.40	NP	5.02	620	2,700	110	ND	17	ND	--	--	--	--	--	--	--	--	--	
	5/19/1994	7.42	3.60	NP	3.82	480	1,800	83	ND	6	9	--	--	--	--	--	--	--	--	--	
	6/25/1994	7.42	4.58	NP	2.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/27/1994	7.42	4.58	NP	2.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/15/1994	7.42	4.65	NP	2.77	110	130	1	1	ND	1	--	--	--	--	--	--	--	--	--	--
	11/14/1994	7.42	3.18	NP	4.24	150	1,600	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
	2/21/1995	7.42	1.81	NP	5.61	850	3,800	350	ND	130	22	--	--	--	--	--	--	--	--	--	--
	5/18/1995	7.42	4.56	NP	2.86	150	1,300	42	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
	8/17/1995	7.42	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	7/26/1996	7.42	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	10/28/1996	7.42	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO	WO
	1/29/1997	7.42	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	4/15/1997	7.42	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	5/27/1997	7.42	3.45	NP	3.97	--	670	7	ND	ND	ND	250	--	--	--	--	--	--	--	--	--
	6/1/1997	7.42	3.50	NP	3.92	610	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7/15/1997	8.04	3.71	NP	4.33	240	240	ND	ND	ND	490	--	--	--	--	--	--	--	--	--	--	
10/9/1997	8.04	3.70	NP	4.34	500	270	1	ND	2	1	910	--	--	--	--	--	--	--	--	--	
1/14/1998	8.04	2.16	NP	5.88	340	310	ND	ND	1	1	140	--	--	--	--	--	--	--	--	--	
4/1/1998	8.04	2.20	NP	5.84	320	370	6	ND	ND	ND	93	--	--	--	--	--	--	--	--	--	
7/15/1998	8.04	3.38	NP	4.66	510	460	ND	ND	ND	230	--	--	--	--	--	--	--	--	--	--	



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



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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	10/16/1998	8.04	2.30	NP	5.74	67	330	5	ND	ND	ND	60	--	--	--	--	--	--	--	--
	1/25/1999	8.04	2.42	NP	5.62	120	420	2	ND	ND	ND	180	--	--	--	--	--	--	--	--
	4/15/1999	8.04	2.16	NP	5.88	170	290	1	ND	ND	ND	160	--	--	--	--	--	--	--	--
	7/14/1999	8.04	2.35	NP	5.69	420	290	3	ND	ND	ND	160	--	--	--	--	--	--	--	--
	10/21/1999	8.04	2.49	NP	5.55	350	360	1	ND	ND	ND	82	--	--	--	--	--	--	--	--
	1/20/2000	8.04	2.38	NP	5.66	2,060	ND	1	ND	ND	ND	54	--	--	--	--	--	--	--	--
	4/13/2000	8.04	2.76	NP	5.28	200	250	1	ND	ND	ND	91	150	ND	ND	ND	ND	ND	ND	ND
	7/14/2000	8.04	3.26	NP	4.78	423	345	ND	ND	ND	ND	95	--	--	--	--	--	--	--	--
	10/26/2000	8.04	3.12	NP	4.92	330	480	6.0	ND	ND	ND	120	--	--	--	--	--	--	--	--
	1/3/2001	8.04	3.65	NP	4.39	287	364	2	ND	ND	ND	118	--	--	--	--	--	--	--	--
	4/4/2001	8.04	3.98	NP	4.06	360	417	1	ND	ND	1	237	--	--	--	--	--	--	--	--
	7/17/2001	8.04	3.12	NP	4.92	270	480	ND	ND	ND	ND	150	--	--	--	--	--	--	--	--
	10/1/2001	8.04	3.25	NP	4.79	270	310	1.0	<0.50	<0.50	<0.50	53	--	--	--	--	--	--	--	--
	1/31/2002	8.04	2.27	NP	5.77	250	250	4	<1.0	<1.0	<1.0	110	--	--	--	--	--	--	--	--
	4/18/2002	8.04	3.55	NP	4.49	320	300	<2.0	<2.0	<2.0	<2.0	--	59	--	--	--	--	--	--	--
	7/28/2002	8.04	2.55	NP	5.49	310	500	<0.50	<0.50	<0.50	<1.0	--	130	--	--	--	--	--	--	--
	10/9/2002	8.04	2.47	NP	5.57	700	690	<5	<5	<5	<10	--	120	--	--	--	--	--	--	--
	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
	4/1/2003	8.04	3.48	NP	4.56	200	250	<1.0	<1.0	<1.0	<2.0	--	210	--	--	--	--	--	--	--
	7/1/2003	8.04	2.65	NP	5.39	380	450	<2.5	<2.5	<2.5	<5.0	--	70	--	--	--	--	<2500	--	--
	10/2/2003	8.04	3.12	NP	4.92	300	<250	<2.5	<2.5	<2.5	<5.0	--	210	--	--	--	--	<2500	--	--
	1/9/2004	8.04	2.39	NP	5.65	200	300	<0.50	1	1	2	--	66	--	--	--	--	<500	--	--
	4/26/2004	8.04	3.11	NP	4.93	160	440	3	6	3	9	--	81	--	--	--	--	<50	--	--
	7/22/2004	8.04	2.51	NP	5.53	330	420	<0.5	<0.5	<0.5	<1	--	72	--	--	--	--	<1000	--	--
	10/29/2004	8.04	2.00	NP	6.04	200	460	6	15	10	46	--	48	--	--	--	--	<50	--	--
	1/10/2005	8.04	1.52	NP	6.52	250	280	<0.50	1	<0.50	2	--	64	--	--	--	--	<50	--	--
	6/15/2005	8.04	2.00	NP	6.04	360	460	<0.50	0.70	0.56	2	--	110	--	--	--	--	<50	--	--
	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	--	--
	12/13/2005	8.04	2.35	NP	5.69	230	230	<0.50	<0.50	<0.50	<1.0	--	92	--	--	--	--	<250	--	--
	3/23/2006	8.04	1.84	NP	6.20	260	290	<0.50	<0.50	<0.50	<1.0	--	88	--	--	--	--	<250	--	--
	6/23/2006	8.04	2.26	NP	5.78	330	500	<0.50	<0.50	<0.50	<1.0	--	75	--	--	--	--	<250	--	--
	9/26/2006	8.04	2.08	NP	5.96	260	270	<0.50	<0.50	<0.50	<0.50	--	73	--	--	--	--	<250	--	--
	12/22/2006	8.04	1.88	NP	6.16	250	260	<0.50	<0.50	<0.50	1	--	71	--	--	--	--	<250	--	--
	3/30/2007	8.04	2.47	NP	5.57	210	390	<0.50	<0.50	<0.50	<0.50	--	120	--	--	--	--	<250	--	--
	6/28/2007	8.04	2.54	NP	5.50	290	370	<0.50	<0.50	<0.50	<0.50	--	55	--	--	--	--	<250	--	--
	9/25/2007	8.04	2.56	NP	5.48	210	350	<0.50	<0.50	<0.50	<0.50	--	61	--	--	--	--	<250	--	--
	12/28/2007	8.04	2.29	NP	5.75	150	260	<0.50	<0.50	<0.50	<1.0	--	66	--	--	--	--	<250	--	--
	3/22/2008	8.04	3.26	NP	4.78	230	390	<0.50	<0.50	<0.50	<1.0	--	39	--	--	--	--	<250	--	--
	6/23/2008	8.04	2.60	NP	5.44	130	200	<0.50	<0.50	<0.50	<1.0	--	46	--	--	--	--	<250	--	--
	9/19/2008	8.04	3.45	NP	4.59	93	180	<0.50	<0.50	<0.50	<1.0	--	120	--	--	--	--	<250	--	--
12/31/2008	8.04	2.55	NP	5.49	110	190	<0.50	<0.50	<0.50	<1.0	--	38	--	--	--	--	<250	--	--	
3/27/2009	8.04	2.37	NP	5.67	130	150	<0.50	<0.50	<0.50	<1.0	--	50	--	--	--	--	<250	--	--	
5/28/2009	8.04	3.32	NP	4.72	120	190	<0.50	<0.50	<0.50	<1.0	--	60	--	--	--	--	<250	--	--	
9/17/2009	8.04	2.63	NP	5.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
12/17/2009	8.04	2.13	NP	5.91	338	300	<0.50	<0.50	1	<1.5	--	43	--	--	--	--	<250	--	--	
3/29/2010	8.04	2.22	NP	5.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6/30/2010	10.81	2.91	NP	7.90	90	261	<0.50	<0.50	<0.50	<1.5	--	89.0	--	--	--	--	<250	--	--	
7/6/2010	10.81	2.66	NP	8.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
9/20/2010	10.81	3.12	NP	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/8/2010	10.81	2.37	NP	8.44	137	306	<0.50	<0.50	<0.50	<1.5	--	58.8	--	--	--	--	<250	--	--	
3/14/2011	10.81	2.26	NP	8.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	
9/7/2011	10.81	2.36	NP	8.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/5/2011	10.81	2.55	NP	8.26	81.7	381	<0.50	<0.50	<0.50	<1.5	--	41.8	--	--	--	--	<250	--	--	
3/6/2012	10.81	2.63	NP	8.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	
9/6/2012	10.81	2.50	NP	8.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/13/2012	10.81	2.50	NP	8.31	<50	130	<0.50	<0.50	<0.50	<0.50	--	28	--	--	--	77	<5.0	--	--	
3/14/2013	10.81	2.63	NP	8.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6/11/2013	10.81	3.31	NP	7.50	<50	190	<0.50	<0.50	<0.50	<0.50	--	44	--	--	--	97	<5.0	--	--	
9/10/2013	10.81	3.25	NP	7.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/12/2013	10.81	2.60	NP	8.21	<50	400	<0.50	<0.50	<0.50	<0.50	--	22	--	--	--	46	<5.0	--	--	
MW-4	8/31/1992	NSVD	NG	NG	NG	90	240	ND	ND	ND	0.54	--	--	--	--	--	--	--	--	
	11/30/1992	NSVD	NG	NG	NG	61	420	ND	ND	ND	ND	--	--	--	--	--	--	--	--	

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



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA															
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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-4	2/4/1993	NSVD	NG	NG	NG	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	5/4/1993	9.00	4.09	NP	4.91	ND	110	0.95	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	8/4/1993	9.00	5.01	NP	3.99	81	250	ND	3.5	ND	4.1	--	--	--	--	--	--	--	--	--	
	11/3/1993	8.41	4.23	NP	4.18	68	130	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	2/7/1994	8.41	3.35	NP	5.06	ND	56	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	5/19/1994	8.41	3.92	NP	4.49	90	140	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	6/25/1994	8.41	4.35	NP	4.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/27/1994	8.41	4.28	NP	4.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/15/1994	8.41	4.27	NP	4.14	72	59	ND	0.6	ND	ND	--	--	--	--	--	--	--	--	--	
	11/14/1994	8.41	4.05	NP	4.36	ND	130	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
2/21/1995	NSVD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	
MW-5	8/31/1992	NSVD	NG	NG	NG	690	78	1	ND	ND	13	--	--	--	--	--	--	--	--	--	
	11/30/1992	NSVD	NG	NG	NG	470	930	70	290	1	14	--	--	--	--	--	--	--	--	--	
	2/4/1993	NSVD	NG	NG	NG	5,500	5,700	38	ND	620	170	--	--	--	--	--	--	--	--	--	
	5/4/1993	8.95	4.37	NP	4.58	4,600	7,400	41	ND	1,000	35	--	--	--	--	--	--	--	--	--	
	8/4/1993	8.95	5.81	NP	3.14	970	1,500	130	1	460	11	--	--	--	--	--	--	--	--	--	
	11/3/1993	8.95	5.68	NP	3.27	2,100	13,000	350	ND	3,500	530	--	--	--	--	--	--	--	--	--	
	2/7/1994	8.95	5.11	NP	3.84	830	2,000	87	ND	370	110	--	--	--	--	--	--	--	--	--	
	5/19/1994	8.95	5.09	NP	3.86	600	260	44	ND	32	4	--	--	--	--	--	--	--	--	--	
	6/25/1994	8.95	4.55	NP	4.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/27/1994	8.95	5.72	NP	3.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/15/1994	8.95	5.68	NP	3.27	860	1,600	110	ND	340	72	--	--	--	--	--	--	--	--	--	--
	11/14/1994	8.95	5.63	NP	3.32	290	250	40	ND	ND	5	--	--	--	--	--	--	--	--	--	--
	2/21/1995	NSVD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD	WD
MW-6	8/31/1992	NSVD	NG	NG	NG	750	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	11/30/1992	NSVD	NG	NG	NG	1,400	9,200	550	ND	740	1,600	--	--	--	--	--	--	--	--	--	
	2/4/1993	NSVD	NG	NG	NG	890	3,600	340	ND	290	550	--	--	--	--	--	--	--	--	--	
	5/4/1993	9.12	3.72	NP	5.40	1,800	4,900	360	18	450	430	--	--	--	--	--	--	--	--	--	
	8/4/1993	9.12	5.15	NP	3.97	1,100	3,400	390	ND	440	190	--	--	--	--	--	--	--	--	--	
	11/3/1993	8.87	5.25	NP	3.62	390	1,400	320	ND	200	8	--	--	--	--	--	--	--	--	--	
	2/7/1994	8.87	4.55	NP	4.32	970	4,900	650	ND	250	35	--	--	--	--	--	--	--	--	--	
	5/19/1994	8.87	4.62	NP	4.25	1,400	3,600	300	2	210	41	--	--	--	--	--	--	--	--	--	
	8/15/1994	8.87	5.08	NP	3.79	790	1,300	130	7	54	57	--	--	--	--	--	--	--	--	--	
	11/14/1994	8.87	5.30	NP	3.57	800	730	50	ND	ND	39	--	--	--	--	--	--	--	--	--	
	2/21/1995	8.87	5.37	NP	3.50	730	2,000	250	5	25	30	--	--	--	--	--	--	--	--	--	
	5/18/1995	8.87	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	8/17/1995	8.87	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	7/26/1996	8.87	6.40	3.33	4.97	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/28/1996	8.87	4.10	0.21	4.93	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/13/1996	8.87	4.02	0.25	5.04	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/25/1996	8.87	4.01	0.75	5.42	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/4/1996	8.87	3.65	0.50	5.60	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/19/1996	8.87	4.80	2.20	5.72	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/8/1997	8.87	4.84	1.75	5.34	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/14/1997	8.87	4.51	1.15	5.22	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/27/1997	8.87	4.00	1.75	6.18	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/29/1997	8.87	3.24	0.31	5.86	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/11/1997	8.87	4.65	1.20	5.12	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/24/1997	8.87	4.81	1.10	4.89	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/10/1997	8.87	4.60	0.95	4.98	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/17/1997	8.87	4.50	0.89	5.04	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/31/1997	8.87	4.65	1.00	4.97	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/15/1997	8.87	4.90	1.03	4.74	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/28/1997	8.87	4.78	0.03	4.11	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/15/1997	8.87	4.60	0.25	4.46	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/27/1997	8.87	4.50	0.25	4.56	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
6/9/1997	8.87	4.60	0.20	4.42	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	
6/24/1997	8.87	4.50	0.25	4.56	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	
7/9/1997	8.87	4.80	0.60	4.52	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	
7/15/1997	8.87	4.63	0.42	4.56	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	

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



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA																
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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	7/21/1997	8.87	4.75	0.25	4.31	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	
	8/6/1997	8.87	4.50	0.10	4.45	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	
	8/20/1997	8.87	4.55	0.10	4.40	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	
	9/2/1997	8.87	4.75	0.05	4.16	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	
	10/9/1997	8.87	4.84	0.04	4.06	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	
	1/14/1998	8.87	3.90	0.94	5.68	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/12/1998	8.87	3.35	0.64	6.00	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/3/1998	8.87	4.51	0.02	4.38	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/1/1998	8.87	3.67	1.60	6.40	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/26/1998	8.87	4.11	0.50	5.14	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/15/1998	8.87	5.03	0.30	4.07	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/15/1998	8.87	4.56	0.05	4.35	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/21/1998	8.87	4.77	0.02	4.12	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	9/30/1998	8.87	5.08	0.03	3.81	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/16/1998	8.87	4.31	2.40	6.36	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/6/1998	8.87	3.98	0.17	5.02	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/25/1998	8.87	3.92	0.10	5.03	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/28/1998	8.87	3.90	0.20	5.12	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/25/1999	8.87	4.18	0.60	5.14	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/22/1999	8.87	4.07	0.22	4.97	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/22/1999	8.87	4.32	0.15	4.66	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/15/1999	8.87	4.23	0.95	5.35	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/28/1999	8.87	4.38	0.39	4.78	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	6/29/1999	8.87	4.12	0.02	4.77	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/14/1999	8.87	4.20	0.03	4.69	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/23/1999	8.87	4.51	0.24	4.54	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	9/30/1999	8.87	4.17	0.17	4.83	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/21/1999	8.87	4.27	0.12	4.69	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/29/1999	8.87	4.18	NP	4.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/20/1999	8.87	4.26	0.01	4.62	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/20/2000	8.87	4.31	NP	4.56	67,600	130,000	2,900	8,600	2,000	16,000	ND	--	--	--	--	--	--	--	--	--	--
	2/26/2000	8.87	3.98	NP	4.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/31/2000	8.87	4.14	NP	4.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2000	8.87	4.04	NP	4.83	8,700	140,000	5,000	14,000	3,600	27,000	7,700	--	--	--	--	--	--	--	--	--	--
	5/26/2000	8.87	4.41	NP	4.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/17/2000	8.87	4.35	NP	4.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/14/2000	8.87	4.47	NP	4.40	133,000	259,000	7,670	13,700	6,860	40,700	ND	ND	--	--	--	--	--	--	--	--	--
	8/24/2000	8.87	3.71	NP	5.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/27/2000	8.87	4.33	NP	4.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/26/2000	8.87	4.32	NP	4.55	61,000	110,000	7,000	6,200	3,700	12,000	670	43	--	--	--	--	--	--	--	--	--
1/3/2001	8.87	4.52	NP	4.35	929	84,700	3,950	4,130	3,650	11,800	ND	ND	--	--	--	--	--	--	--	--	--	
4/4/2001	8.87	4.29	NP	4.58	18,000	69,800	2,060	2,840	3,650	10,900	ND	48	ND	ND	ND	ND	ND	ND	ND	ND	ND	
7/17/2001	8.87	4.37	NP	4.50	20,000	100,000	3,200	3,300	3,400	12,000	ND	--	--	--	--	--	--	--	--	--	--	
10/1/2001	8.87	4.45	NP	4.42	24,000	110,000	3,200	2,400	4,500	13,000	<1000	--	--	--	--	--	--	--	--	--	--	
1/31/2002	8.87	4.03	NP	4.84	11,000	230,000	2,400	1,800	5,400	16,000	<2500	--	--	--	--	--	--	--	--	--	--	
4/18/2002	8.87	3.45	NP	5.42	3,500	94,000	6,800	13,000	3,000	19,000	<500	--	--	--	--	--	--	--	--	--	--	
7/28/2002	8.87	2.24	NP	6.63	27,000	110,000	530	170	3,200	7,300	--	<100	--	--	--	--	--	--	--	--	--	
10/9/2002	8.87	3.53	NP	5.34	170,000	970,000	10,000	39,000	13,000	94,000	--	<2000	--	--	--	--	--	--	--	--	--	
1/2/2003	8.87	2.34	NP	6.53	66,000	270,000	6,100	15,000	5,400	37,000	--	<200	--	--	--	--	--	--	--	--	--	
4/1/2003	8.87	3.17	NP	5.70	35,000	3,000,000	8,000	39,000	37,000	260,000	--	<2000	--	--	--	--	--	--	--	--	--	
7/1/2003	8.87	3.55	NP	5.32	11,000	38,000	2,100	990	2,700	6,500	--	<100	--	--	--	--	--	--	<25000	--	--	
10/2/2003	8.87	3.82	NP	5.05	<50	100,000	5,600	6,900	4,700	18,000	--	<800	--	--	--	--	--	--	<200000	--	--	
1/9/2004	8.87	2.80	NP	6.07	20,000	170,000	2,800	3,300	4,700	16,000	--	<200	--	--	--	--	--	--	<50000	--	--	
4/26/2004	8.87	3.40	NP	5.47	13,000	97,000	5,900	9,000	5,100	23,000	--	<50	--	--	--	--	--	--	<50000	--	--	
7/22/2004	8.87	3.54	NP	5.33	33,000	110,000	4,100	5,100	4,000	16,000	--	<200	--	--	--	--	--	--	<300000	--	--	
10/29/2004	8.87	3.03	NP	5.84	78,000	100,000	5,200	6,100	4,200	15,000	--	<50	--	--	--	--	--	--	<5000	--	--	
1/10/2005	8.87	2.35	NP	6.52	12,000	71,000	1,600	3,700	2,100	9,900	--	<50	--	--	--	--	--	--	<5000	--	--	
6/15/2005	8.87	2.47	NP	6.40	16,000	130,000	800	1,800	2,200	9,300	--	<50	--	--	--	--	--	--	<5000	--	--	
9/27/2005	8.87	2.55	NP	6.32	2,500	13,000	82	120	430	990	--	1	2	<0.50	<0.50	<10	<250	--	--	--	--	
12/13/2005	8.87	3.28	NP	5.59	18,000	68,000	1,500	1,100	2,200	7,700	--	<50	--	--	--	--	--	--	<25000	--	--	

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



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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	3/23/2006	8.87	2.87	NP	6.00	73,000	41,000	290	140	1,500	2,700	--	<50	--	--	--	--	<25000	--	--
	6/23/2006	8.87	3.15	NP	5.72	35,000	50,000	2,200	1,400	1,900	5,700	--	<12	--	--	--	--	<6200	--	--
	9/26/2006	8.87	3.08	NP	5.79	22,000	130,000	2,200	1,000	2,900	8,800	--	<50	--	--	--	--	<25000	--	--
	12/22/2006	8.87	2.90	NP	5.97	62,000	90,000	940	610	1,900	4,700	--	<50	--	--	--	--	<25000	--	--
	3/30/2007	8.87	3.26	NP	5.61	62,000	210,000	1,100	560	3,400	12,000	--	<10	--	--	--	--	<5000	--	--
	6/28/2007	8.87	3.46	NP	5.41	71,000	67,000	2,200	1,300	2,700	10,000	--	<25	--	--	--	--	<12000	--	--
	9/25/2007	8.87	3.52	NP	5.35	58,000	56,000	2,900	720	2,400	9,000	--	<25	--	--	--	--	<12000	--	--
	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	--	--
	3/22/2008	8.87	2.48	NP	6.39	68,000	66,000	380	150	1,500	2,400	--	<25	--	--	--	--	<12000	--	--
	6/23/2008	8.87	3.54	NP	5.33	68,000	59,000	1,600	130	1,800	4,100	--	25	--	--	--	--	<12000	--	--
	9/19/2008	8.87	4.06	NP	4.81	180,000	65,000	2,000	230	2,000	4,500	--	<12	--	--	--	--	<6200	--	--
	12/31/2008	8.87	3.45	NP	5.42	68,000	91,000	2,000	320	5,300	13,000	--	<50	--	--	--	--	<25000	--	--
	3/27/2009	8.87	3.09	NP	5.78	170,000	150,000	1,300	240	2,800	7,200	--	<50	--	--	--	--	<25000	--	--
	5/28/2009	8.87	3.49	NP	5.38	78,000	53,000	1,700	200	2,300	5,400	--	<50	--	--	--	--	<25000	--	--
	9/17/2009	8.87	3.64	NP	5.23	250,000 T4	77,000	2,100	1,400	2,600	8,500	--	<12	--	--	--	--	<6200	--	--
	12/17/2009	8.87	3.14	NP	5.73	30,300	59,100	1,730	199	2,260	5,460	--	20	--	--	--	--	<250	--	--
	3/29/2010	8.87	3.16	NP	5.71	106,000	48,400	1,980	208	3,070	8,070	--	12	--	--	--	--	<250	--	--
	6/30/2010	11.55	3.50	NP	8.05	170,000	78,700	2,130	281	2,860	8,400	--	6	--	--	--	--	<250	--	--
	7/6/2010	11.55	3.49	NP	8.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	11.55	3.75	NP	7.80	18,800	64,500	2,300	170	2,770	6,260	--	19	--	--	--	--	<250	--	--
	12/8/2010	11.55	8.42	NP	3.13	28,700	78,400	1,300	1,680	3,490	20,600	--	11	--	--	--	--	<250	--	--
	3/14/2011	11.55	3.40	NP	8.15	93,000	44,600	912	338	728	3,670	--	16	--	--	--	134	<250	--	--
	6/2/2011	11.55	2.76	NP	8.79	33,700 T4	56,200	780	262	651	3,890	--	7	--	--	--	81.0	<250	--	--
	9/7/2011	11.55	2.83	NP	8.72	6,780 T4	16,600	16	11	90	339	--	<0.50	--	--	--	--	<250	--	--
	12/5/2011	11.55	3.56	NP	7.99	20,200 T4	64,600	646	95	924	4,050	--	15	--	--	--	--	<250	--	--
	3/6/2012	11.55	3.43	NP	8.12	14,800 T4	55,000	1,020	131	1,320	4,730	--	19	--	--	--	316	<1250	--	--
	6/11/2012	11.55	3.33	NP	8.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	47,100 T4	33,400	773	61	840	3,110	--	11	--	--	--	123	<250	--	--
	9/6/2012	11.55	2.85	NP	8.70	<1000	24,000	450	51	610	1,800	--	6	<4.0	<4.0	<4.0	82	<40	<4.0	<4.0
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/13/2012	11.55	2.90	NP	8.65	470	20,000	200	16	350	1,100	--	<4.0	--	--	--	22	<40	--	--	
3/14/2013	11.55	3.69	NP	7.86	680	24,000	500	25	540	1,700	--	8	--	--	--	110	<40	--	--	
6/11/2013	11.55	3.86	NP	7.69	2,400	87,000	1,800	250	2,000	9,400	--	13	--	--	--	230	<40	--	--	
9/10/2013	11.55	4.11	NP	7.44	470	28,000	440	19	530	1,500	--	10	--	--	--	170	<40	--	--	
12/12/2013	11.55	3.55	NP	8.00	100	15,000	220	13	270	660	--	9.5	--	--	--	120	<25	--	--	
MW-7	5/27/1997	8.83	4.50	NP	4.33	--	68	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	6/1/1997	8.83	4.54	NP	4.29	69	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/15/1997	8.83	4.70	NP	4.13	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	10/9/1997	8.83	4.30	NP	4.53	190	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	1/14/1998	8.83	2.88	NP	5.95	65	ND	ND	ND	ND	ND	36	--	--	--	--	--	--	--	
	4/1/1998	8.83	3.13	NP	5.70	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	7/15/1998	8.83	4.45	NP	4.38	74	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	10/16/1998	8.83	3.45	NP	5.38	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	1/25/1999	8.83	3.22	NP	5.61	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	4/15/1999	8.83	3.11	NP	5.72	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	7/14/1999	8.83	3.34	NP	5.49	69	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	10/21/1999	8.83	3.43	NP	5.40	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	1/20/2000	8.83	3.29	NP	5.54	ND	ND	ND	ND	ND	ND	4.2	--	--	--	--	--	--	--	
	4/13/2000	8.83	3.39	NP	5.44	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	7/14/2000	8.83	4.42	NP	4.41	68.0	ND	ND	ND	ND	ND	7.83	--	--	--	--	--	--	--	
	7/17/2001	8.83	5.06	NP	3.77	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	10/1/2001	8.83	4.98	NP	3.85	<51	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--	
	1/31/2002	8.83	3.88	NP	4.95	90	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	
	4/18/2002	8.83	4.03	NP	4.80	78	<50	<0.50	<0.50	<0.50	<0.50	5.7	--	--	--	--	--	--	--	
	7/28/2002	8.83	3.59	NP	5.24	<50	<50	<0.50	<0.50	<0.50	<1.0	--	3.9	--	--	--	--	--	--	
	10/9/2002	8.83	4.53	NP	4.30	<96	<50	<0.50	<0.50	<0.50	<1.0	--	3.9	--	--	--	--	--	--	
	1/3/2003	8.83	3.36	NP	5.47	78	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	
	4/1/2003	8.83	3.94	NP	4.89	67	71	<0.50	<0.50	0.71	<1.0	--	3.4	--	--	--	--	--	--	
	7/1/2003	8.83	4.60	NP	4.23	68	64	<0.50	<0.50	0.77	2.0	--	35	--	--	--	--	<500	--	--
	10/2/2003	8.83	5.46	NP	3.37	82	<50	<0.50	<0.50	<0.50	<1.0	--	4.9	--	--	--	--	<500	--	--
	1/9/2004	8.83	3.55	NP	5.28	75	54	<0.50	<0.50	<0.50	<1.0	--	2.4	--	--	--	--	<500	--	--
4/26/2004	8.83	4.49	NP	4.34	<50	<50	<0.50	<0.50	<0.50	1.5	--	2.3	--	--	--	--	<50	--	--	
7/22/2004	8.83	4.93	NP	3.90	<200	82	0.90	2.0	3.5	9.9	--	1.4	--	--	--	--	<1000	--	--	
10/29/2004	8.83	3.71	NP	5.12	54	210	0.67	1.6	1.7	5.8	--	<0.50	--	--	--	--	<50	--	--	

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



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA															
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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	1/10/2005	8.83	2.77	NP	6.06	<50	74	0.51	2.2	1.7	7.0	--	<0.50	--	--	--	--	<50	--	--	
	6/15/2005	8.83	3.40	NP	5.43	<50	<50	<0.50	<0.50	<0.50	<1.0	--	0.88	--	--	--	--	<50	--	--	
	9/27/2005	8.83	3.44	NP	5.39	<200	<50	0.59	1.2	<0.50	<1.0	--	0.96	<0.50	<0.50	<0.50	<10	<250	--	--	
	12/13/2005	8.83	3.98	NP	4.85	<200	<50	<0.50	<0.50	<0.50	<1.0	--	0.65	--	--	--	--	<250	--	--	
	3/23/2006	8.83	3.37	NP	5.46	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	6/23/2006	8.83	5.25	NP	3.58	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	9/26/2006	8.83	4.13	NP	4.70	<50	<50	<0.50	<0.50	<0.50	<0.50	--	0.77	--	--	--	--	<250	--	--	
	12/22/2006	8.83	3.63	NP	5.20	630	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--	
	3/30/2007	8.83	4.31	NP	4.52	94	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--	
	6/28/2007	8.83	4.62	NP	4.21	<50	<50	<0.50	<0.50	<0.50	<0.50	--	0.54	--	--	--	--	<250	--	--	
	9/25/2007	8.83	4.65	NP	4.18	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--	
	12/28/2007	8.83	3.99	NP	4.84	75	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	3/22/2008	8.83	4.08	NP	4.75	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	6/23/2008	8.83	4.10	NP	4.73	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	9/19/2008	8.83	4.86	NP	3.97	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	12/31/2008	8.83	4.17	NP	4.66	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	3/27/2009	8.83	4.00	NP	4.83	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	5/28/2009	8.83	4.71	NP	4.12	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	9/17/2009	8.83	4.87	NP	3.96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/29/2010	8.83	--	WI	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	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	--	--	
	7/6/2010	11.64	4.63	NP	7.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	11.64	4.85	NP	6.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	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	--	--	
	3/14/2011	11.64	3.81	NP	7.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/2/2011	11.64	3.90	NP	7.74	63.0 T4	--	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	<5.0	<250	--	--	
	9/7/2011	11.64	3.72	NP	7.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	11.64	4.60	NP	7.04	<50.0	--	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
	3/6/2012	11.64	4.54	NP	7.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	11.64	4.93	NP	6.71	<37.9	--	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	<5.0	<250	--	--	
9/6/2012	11.64	4.03	NP	7.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/13/2012	11.64	3.43	NP	8.21	<50	--	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<5.0	<5.0	--	--	--	
3/14/2013	11.64	4.9	NP	6.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6/11/2013	11.64	6.92	NP	4.72	96	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	7	<5.0	--	--	--	
9/10/2013	11.64	6.54	NP	5.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/12/2013	11.64	4.60	NP	7.04	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<5.0	<5.0	--	--	--	
MW-8	5/27/1997	8.52	3.42	NP	5.10	--	310	0.88	0.67	15	70	ND	--	--	--	--	--	--	--	--	
	6/1/1997	8.52	3.46	NP	5.06	320	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/15/1997	8.52	3.49	NP	5.03	ND	ND	ND	ND	2.7	3.8	ND	--	--	--	--	--	--	--	--	
	10/9/1997	8.52	3.73	NP	4.79	390	590	1.4	ND	32	4.1	ND	--	--	--	--	--	--	--	--	
	1/14/1998	8.52	1.92	NP	6.60	230	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	4/1/1998	8.52	2.38	NP	6.14	510	ND	ND	ND	ND	4.7	--	--	--	--	--	--	--	--	--	
	7/15/1998	8.52	3.53	NP	4.99	140	ND	ND	ND	0.56	1.1	ND	--	--	--	--	--	--	--	--	
	10/16/1998	8.52	3.04	NP	5.48	170	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	1/25/1999	8.52	2.92	NP	5.60	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	4/15/1999	8.52	2.40	NP	6.12	91	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	7/14/1999	8.52	3.03	NP	5.49	120	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	10/21/1999	8.52	3.11	NP	5.41	110	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	1/20/2000	8.52	3.06	NP	5.46	583	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	4/13/2000	8.52	2.84	NP	5.68	80	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	7/14/2000	8.52	3.39	NP	5.13	113	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	7/17/2001	8.52	3.46	NP	5.06	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	10/1/2001	8.52	3.51	NP	5.01	<50	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--	--	
	1/31/2002	8.52	2.75	NP	5.77	260	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--	
	4/18/2002	8.52	2.98	NP	5.54	160	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--	
	7/28/2002	8.52	2.41	NP	6.11	140	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<2.0	--	--	--	--	--	--	--	
	10/9/2002	8.52	2.09	NP	6.43	120	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	--	
	1/2/2003	8.52	1.98	NP	6.54	210	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	--	
	4/1/2003	8.52	2.66	NP	5.86	220	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	--	
	7/1/2003	8.52	3.08	NP	5.44	170	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	<500	--	--	
	10/2/2003	8.52	3.89	NP	4.63	350	540	3.9	15	29	80	--	<2.0	--	--	--	--	<500	--	--	
1/9/2004	8.52	2.38	NP	6.14	180	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	<500	--	--		
4/26/2004	8.52	2.89	NP	5.63	100	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<50	--	--		
7/22/2004	8.52	3.25	NP	5.27	250	<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 GAUGING DATA				GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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	10/29/2004	8.52	3.06	NP	5.46	120	<50	<0.50	<0.50	0.82	2.5	--	<0.50	--	--	--	--	<50	--	--
	1/10/2005	8.52	1.92	NP	6.60	140	58	<0.50	0.61	1.2	4.0	--	<0.50	--	--	--	--	<50	--	--
	6/15/2005	8.52	2.22	NP	6.30	140	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<50	--	--
	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	--	--	--
	12/13/2005	8.52	2.89	NP	5.63	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	3/23/2006	8.52	2.12	NP	6.40	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	6/23/2006	8.52	2.65	NP	5.87	<230	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	9/26/2006	8.52	2.75	NP	5.77	110	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	12/22/2006	8.52	2.58	NP	5.94	100	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	3/30/2007	8.52	2.74	NP	5.78	120	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	6/28/2007	8.52	2.90	NP	5.62	140	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	9/25/2007	8.52	3.26	NP	5.26	110	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	12/28/2007	8.52	2.64	NP	5.88	110	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	3/22/2008	8.52	2.31	NP	6.21	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	6/23/2008	8.52	3.13	NP	5.39	<58	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	9/19/2008	8.52	3.72	NP	4.80	79	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	12/31/2008	8.52	2.98	NP	5.54	110	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	3/27/2009	8.52	2.49	NP	6.03	89	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	5/28/2009	8.52	3.12	NP	5.40	91	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	9/17/2009	8.52	3.63	NP	4.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/29/2010	8.52	WI	WI	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	11.32	2.60	NP	8.72	182	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--
	7/6/2010	11.32	3.03	NP	8.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	11.32	3.33	NP	7.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/8/2010	11.32	2.82	NP	8.50	116	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--
	3/14/2011	11.32	3.84	NP	7.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/2/2011	11.32	2.77	NP	8.55	--	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	<5.0	<250	--	--
	9/7/2011	11.32	2.84	NP	8.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	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	--	--
	3/6/2012	11.32	3.07	NP	8.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	
9/6/2012	11.32	2.91	NP	8.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	
3/14/2013	11.32	3.19	NP	8.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6/11/2013	11.32	3.4	NP	7.92	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<5.0	<5.0	--	--	
9/10/2013	11.32	3.54	NP	7.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/12/2013	11.32	2.80	NP	8.52	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<5.0	<5.0	--	--	
MW-9	2/21/1995	8.29	1.98	NP	6.31	71	70	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	5/18/1995	8.29	3.47	NP	4.82	ND	52	ND	1.1	ND	1.9	--	--	--	--	--	--	--	--	
	8/17/1995	8.29	1.49	NP	6.80	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	7/26/1996	8.29	0.28	NP	8.01	98	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	10/28/1996	8.29	1.15	NP	7.14	99	ND	ND	ND	ND	ND	7.6	--	--	--	--	--	--	--	
	1/29/1997	8.29	1.05	NP	7.24	54	ND	ND	ND	ND	ND	5.4	--	--	--	--	--	--	--	
	4/15/1997	8.29	1.88	NP	6.41	94	ND	ND	ND	ND	ND	5.4	--	--	--	--	--	--	--	
	5/27/1997	8.29	1.05	NP	7.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/15/1997	8.29	1.90	NP	6.39	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	10/9/1997	8.29	1.76	NP	6.53	160	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	1/14/1998	8.29	1.26	NP	7.03	110	ND	ND	ND	ND	ND	3.0	--	--	--	--	--	--	--	
	4/1/1998	8.29	0.85	NP	7.44	110	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	7/15/1998	8.29	1.52	NP	6.77	200	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	10/16/1998	8.29	0.81	NP	7.48	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	1/25/1999	8.29	0.92	NP	7.37	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	4/15/1999	8.29	0.90	NP	7.39	ND	75	21	ND	ND	1.1	680	--	--	--	--	--	--	--	
	7/14/1999	8.29	1.04	NP	7.25	140	ND	1.9	ND	ND	ND	260	--	--	--	--	--	--	--	
	10/21/1999	8.29	1.23	NP	7.06	210	ND	ND	ND	ND	ND	170	--	--	--	--	--	--	--	
	1/20/2000	8.29	1.18	NP	7.11	519	ND	1.1	ND	ND	ND	35	--	--	--	--	--	--	--	
	4/13/2000	8.29	1.08	NP	7.21	81	160	0.64	ND	ND	ND	53	--	--	--	--	--	--	--	
	7/14/2000	8.29	1.43	NP	6.86	107	ND	ND	ND	ND	ND	20.2	--	--	--	--	--	--	--	
	10/26/2000	8.29	1.38	NP	6.91	240	240	2.9	ND	ND	ND	56	--	--	--	--	--	--	--	
	1/3/2001	8.29	1.66	NP	6.63	164	166	0.763	0.776	ND	1.28	50.2	--	--	--	--	--	--	--	
	4/4/2001	8.29	1.27	NP	7.02	240	296	0.738	ND	ND	0.907	135	--	--	--	--	--	--	--	
	7/17/2001	8.29	1.38	NP	6.91	ND	ND	ND	ND	ND	ND	13	--	--	--	--	--	--	--	
	10/1/2001	8.29	1.93	NP	6.36	<52	51	<0.50	<0.50	<0.50	<0.50	5.0	--	--	--	--	--	--	--	
1/31/2002	8.29	2.08	NP	6.21	200	<50	<0.50	<0.50	<0.50	<0.50	5.8	--	--	--	--	--	--	--		

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



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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	4/18/2002	8.29	1.76	NP	6.53	<50	<50	<0.50	<0.50	<0.50	<0.50	5.1	--	--	--	--	--	--	--	--
	7/28/2002	8.29	1.57	NP	6.72	<50	<50	<0.50	<0.50	<0.50	<1.0	--	3.5	--	--	--	--	--	--	--
	10/9/2002	8.29	1.45	NP	6.84	100	<50	<0.50	<0.50	<0.50	<1.0	--	17	--	--	--	--	--	--	--
	1/2/2003	8.29	1.18	NP	7.11	<50	<50	<0.50	<0.50	<0.50	<1.0	--	8.6	--	--	--	--	--	--	--
	4/1/2003	8.29	2.04	NP	6.25	56	<50	<0.50	<0.50	<0.50	<1.0	--	9.4	--	--	--	--	--	--	--
	7/1/2003	8.29	2.80	NP	5.49	<50	<50	<0.50	<0.50	<0.50	<1.0	--	3.2	--	--	--	--	<500	--	--
	10/2/2003	8.29	2.70	NP	5.59	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	<500	--	--
	1/9/2004	8.29	1.90	NP	6.39	91	74	<0.50	0.98	2.3	6.2	74	--	<2.0	--	--	--	<500	--	--
	4/26/2004	8.29	1.62	NP	6.67	<50	51	<0.50	<0.50	<0.50	<1.0	--	0.51	--	--	--	--	<50	--	--
	7/22/2004	8.29	1.88	NP	6.41	<200	<50	<0.5	<0.5	<0.5	<1	--	0.78	--	--	--	--	<1000	--	--
	10/29/2004	8.29	1.28	NP	7.01	76	<50	<0.50	<0.50	<0.50	1.0	--	<0.50	--	--	--	--	<50	--	--
	1/10/2005	8.29	0.07	NP	8.22	77	93	0.60	2.3	2.4	9.0	--	<0.50	--	--	--	--	<50	--	--
	6/15/2005	8.29	1.70	NP	6.59	67	<50	<0.50	<0.50	<0.50	<1.0	--	6.6	--	--	--	--	<50	--	--
	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	--	--
	12/13/2005	8.29	2.26	NP	6.03	<200	<50	<0.50	<0.50	<0.50	<1.0	--	2.9	--	--	--	--	<250	--	--
	3/23/2006	8.29	1.32	NP	6.97	<200	<50	<0.50	<0.50	<0.50	<1.0	--	2.7	--	--	--	--	<250	--	--
	6/23/2006	8.29	1.98	NP	6.31	<200	<50	<0.50	<0.50	<0.50	<1.0	--	1.9	--	--	--	--	<250	--	--
	9/26/2006	8.29	2.52	NP	5.77	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	12/22/2006	8.29	1.98	NP	6.31	150	<50	<0.50	0.57	1.8	4.6	--	1.6	--	--	--	--	<250	--	--
	3/30/2007	8.29	2.01	NP	6.28	72	<50	<0.50	<0.50	<0.50	<0.50	--	3.4	--	--	--	--	<250	--	--
	6/28/2007	8.29	1.90	NP	6.39	1000	<50	<0.50	<0.50	<0.50	<0.50	--	4.9	--	--	--	--	<250	--	--
	9/25/2007	8.29	1.57	NP	6.72	100	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	12/28/2007	8.29	1.98	NP	6.31	56	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	3/22/2008	8.29	0.80	NP	7.49	<50	<50	<0.50	<0.50	<0.50	<1.0	--	0.61	--	--	--	--	<250	--	--
	6/23/2008	8.29	1.80	NP	6.49	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	9/19/2008	8.29	2.43	NP	5.86	56	<50	<0.50	<0.50	<0.50	<1.0	--	3.9	--	--	--	--	<250	--	--
	12/31/2008	8.29	2.66	NP	5.63	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	3/27/2009	8.29	2.01	NP	6.28	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	5/28/2009	8.29	2.20	NP	6.09	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	9/17/2009	8.29	1.83	NP	6.46	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/17/2009	8.29	1.52	NP	6.77	105	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--
	3/29/2010	8.29	2.21	NP	6.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	
7/6/2010	10.94	2.02	NP	8.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
9/20/2010	10.94	2.03	NP	8.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	
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	--	--	
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	--	--	
9/7/2011	10.94	2.46	NP	8.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	
3/6/2012	10.94	3.03	NP	7.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	
9/6/2012	10.94	1.24	NP	9.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	
3/14/2013	10.94	2.38	NP	8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	
9/10/2013	10.94	2.63	NP	8.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/12/2013	10.94	1.78	NP	9.16	<50	<50	<0.50	<0.50	<0.50	<0.50	--	0.56	--	--	--	<5.0	<5.0	--	--	
MW-10	2/21/1995	8.62	4.69	NP	3.93	270	1500	250	26	9.1	160	--	26	--	--	--	--	--	--	
	5/18/1995	8.62	4.92	NP	3.70	75	810	520	ND	18	23	--	--	--	--	--	--	--	--	
	8/17/1995	8.62	4.05	NP	4.57	ND	67	25	ND	2.4	ND	--	--	--	--	--	--	--	--	
	7/26/1996	8.62	4.08	NP	4.54	ND	ND	3.7	ND	ND	ND	ND	--	--	--	--	--	--	--	
	10/28/1996	8.62	4.09	NP	4.53	ND	ND	1.1	ND	ND	ND	ND	--	--	--	--	--	--	--	
	1/29/1997	8.62	2.94	NP	5.68	ND	210	41	0.67	7.2	4.8	11	--	--	--	--	--	--	--	
	4/15/1997	8.62	4.07	NP	4.55	ND	110	12	ND	0.77	ND	9.7	--	--	--	--	--	--	--	
	5/27/1997	8.62	4.40	NP	4.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/15/1997	8.62	4.19	NP	4.43	ND	ND	2.1	ND	0.67	0.73	ND	--	--	--	--	--	--	--	
	10/9/1997	8.62	4.75	NP	3.87	ND	190	38	0.92	6.6	7.6	ND	--	--	--	--	--	--	--	
	1/14/1998	8.62	2.66	NP	5.96	--	59	9.5	0.85	1.2	1.7	4.5	--	--	--	--	--	--	--	
	4/1/1998	8.62	3.45	NP	5.17	62	230	66	1.7	12	17	6.4	--	--	--	--	--	--	--	
	7/15/1998	8.62	4.21	NP	4.41	78	290	98	45	21	38	21	--	--	--	--	--	--	--	
	10/16/1998	8.62	4.11	NP	4.51	ND	160	44	0.96	2.5	10	17	--	--	--	--	--	--	--	
	1/25/1999	8.62	3.26	NP	5.36	ND	140	27	ND	2.8	6.8	23	--	--	--	--	--	--	--	
4/15/1999	8.62	3.63	NP	4.99	ND	120	18	ND	1.8	5.1	14	--	--	--	--	--	--	--		



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



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA														
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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-10	7/14/1999	8.62	3.89	NP	4.73	180	280	55	3.2	11	31	6.1	--	--	--	--	--	--	--	--
	10/21/1999	8.62	4.09	NP	4.53	96	140	22	0.59	1.7	7.7	5.3	--	--	--	--	--	--	--	--
	1/20/2000	8.62	3.92	NP	4.70	252	ND	0.73	0.86	ND	ND	5.2	--	--	--	--	--	--	--	--
	4/13/2000	8.62	3.85	NP	4.77	69	67	54	ND	2.6	ND	3.8	--	--	--	--	--	--	--	--
	7/14/2000	8.62	4.18	NP	4.44	149	ND	0.547	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	10/26/2000	8.62	3.96	NP	4.66	83	ND	3.3	ND	0.83	1.5	ND	--	--	--	--	--	--	--	--
	1/3/2001	8.62	4.14	NP	4.48	126	52.7	5.15	ND	0.823	1.57	ND	--	--	--	--	--	--	--	--
	4/4/2001	8.62	3.88	NP	4.74	75	129	28.1	1.67	4.97	10.1	ND	--	--	--	--	--	--	--	--
	7/17/2001	8.62	4.08	NP	4.54	ND	ND	4.1	ND	1.0	1.8	ND	--	--	--	--	--	--	--	--
	10/1/2001	8.62	4.22	NP	4.40	100	140	30	0.51	4.0	12	<5.0	--	--	--	--	--	--	--	--
	1/31/2002	8.62	3.68	NP	4.94	170	110	16	<0.50	2.3	5.6	<2.5	--	--	--	--	--	--	--	--
	4/18/2002	8.62	4.01	NP	4.61	130	<50	11	<0.50	1.4	4.5	<2.5	--	--	--	--	--	--	--	--
	7/28/2002	8.62	4.11	NP	4.51	58	67	15	<0.50	0.94	7.3	--	<2.0	--	--	--	--	--	--	--
	10/9/2002	8.62	3.97	NP	4.65	<94	<50	0.67	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	--
	1/2/2003	8.62	3.03	NP	5.59	64	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	--
	4/1/2003	8.62	3.83	NP	4.79	76	<50	11	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	--
	7/1/2003	8.62	4.13	NP	4.49	87	<0.50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	<500	--	--
	10/2/2003	8.62	4.05	NP	4.57	160	77	9.9	0.78	2.3	4.9	--	<2.0	--	--	--	--	<500	--	--
	1/9/2004	8.62	3.40	NP	5.22	74	53	1.2	<0.50	0.70	1.6	--	<2.0	--	--	--	--	<500	--	--
	4/26/2004	8.62	3.89	NP	4.73	<50	<50	2.8	1.3	1.0	2.9	--	<0.50	--	--	--	--	<50	--	--
	7/22/2004	8.62	3.73	NP	4.89	<200	<50	<0.5	<0.5	<0.5	<1	--	<0.5	--	--	--	--	<1000	--	--
	10/29/2004	8.62	3.41	NP	5.21	<50	100	2.0	1.2	1.1	3.6	--	<0.50	--	--	--	--	<50	--	--
	1/10/2005	8.62	2.68	NP	5.94	94	84	7.8	2.7	2.2	8.9	--	<0.50	--	--	--	--	<50	--	--
	6/15/2005	8.62	4.63	NP	3.99	62	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<50	--	--
	9/27/2005	8.62	3.96	NP	4.66	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	<0.50	<0.50	<0.50	<10	<250	--	--
	12/13/2005	8.62	3.75	NP	4.87	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	3/23/2006	8.62	3.13	NP	5.49	<200	50	13	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	6/23/2006	8.62	3.90	NP	4.72	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	9/26/2006	8.62	3.66	NP	4.96	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	12/22/2006	8.62	3.56	NP	5.06	81	<50	<0.50	<0.50	<0.50	1.8	--	<0.50	--	--	--	--	<250	--	--
	3/30/2007	8.62	3.93	NP	4.69	82	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	6/28/2007	8.62	4.03	NP	4.59	57	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	9/25/2007	8.62	3.91	NP	4.71	82	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--
	12/28/2007	8.62	3.64	NP	4.98	62	<50	2.1	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	3/22/2008	8.62	4.00	NP	4.62	<50	64	13	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--
	6/23/2008	8.62	3.90	NP	4.72	<50	94	30	0.53	3.4	3.5	--	<0.50	--	--	--	--	<250	--	--
9/19/2008	8.62	3.85	NP	4.77	<50	130	15	1.7	5.7	11	--	<0.50	--	--	--	--	<250	--	--	
12/31/2008	8.62	3.69	NP	4.93	<50	82	11	<0.50	0.81	1.7	--	<0.50	--	--	--	--	<250	--	--	
3/27/2009	8.62	3.75	NP	4.87	730	210	28	1.4	1.2	3.9	--	<0.50	--	--	--	--	<250	--	--	
5/28/2009	8.62	3.66	NP	4.96	<50	<50	0.91	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
9/17/2009	8.62	3.85	NP	4.77	65	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
12/17/2009	8.62	3.00	NP	5.62	57.7	<50.0	1.2	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
3/29/2010	8.62	3.81	NP	4.81	82.2	<50.0	0.77	<0.50	<0.50	3.4	--	<0.50	--	--	--	--	<250	--	--	
6/30/2010	10.97	3.90	NP	7.07	53.4	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
7/6/2010	10.97	3.73	NP	7.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
9/20/2010	10.97	3.85	NP	7.12	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
12/8/2010	10.97	3.63	NP	7.34	<50.0	<50.0	1.8	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
3/14/2011	10.97	3.46	NP	7.51	63.3	<50.0	1.1	<0.50	<0.50	<1.5	--	<0.50	--	--	--	<5.0	<250	--	--	
6/2/2011	10.97	3.92	NP	7.05	<50.0	58.7	4.8	4.2	0.96	5.1	--	<0.50	--	--	--	<5.0	<250	--	--	
9/7/2011	10.97	4.06	NP	6.91	<50.0	<50.0	4.1	<0.50	0.66	2.4	--	<0.50	--	--	--	--	<250	--	--	
12/5/2011	10.97	3.82	NP	7.15	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
3/6/2012	10.97	3.74	NP	7.23	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	58.7	<250	--	--	
6/11/2012	10.97	3.99	NP	6.98	<37.9	<50.0	0.79	<0.50	<0.50	<1.5	--	0.72	--	--	--	17.2	<250	--	--	
9/6/2012	10.97	4.00	NP	6.97	110	64	6.9	0.89	1.8	3.9	--	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.50	<0.50	
9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/13/2012	10.97	3.40	NP	7.57	<50	120	15	1.1	1.7	5.2	--	<0.50	--	--	--	<5.0	<5.0	--	--	
3/14/2013	10.97	4.00	NP	6.97	<50	86	25	<0.50	0.6	0.8	--	<0.50	--	--	--	<5.0	<5.0	--	--	
6/11/2013	10.97	4.20	NP	6.77	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<5.0	<8.0	--	--	
9/10/2013	10.97	3.92	NP	7.05	<50	<50	<0.50	<0.50	<0.50	1.2	--	<0.50	--	--	--	<5.0	<5.0	--	--	
12/12/2013	10.97	3.85	NP	7.12	<50	<50	2.4	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<5.0	<5.0	--	--	
MW-11	7/6/2010	10.53	2.44	NP	8.09	226	99.2	<0.50	<0.50	<0.50	<1.5	--	165	<0.50	<0.50	<0.50	174	<250	<1.0	<1.0
	9/20/2010	10.53	2.80	NP	7.73	<50.0	76.4 1n	<0.50	<0.50	<0.50	<1.5	--	82.7	--	--	--	--	<250	--	--
	12/8/2010	10.53	1.90	NP	8.63	52.7	<50.0	<0.50	<0.50	<0.50	<1.5	--	59.1	--	--	--	--	<250	--	--
	3/14/2011	10.53	1.89	NP	8.64	67.8	<50.0	<0.50	<0.50	<0.50	<1.5	--	44.0	--	--	--	<5.0	<250	--	--



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



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA															
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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	6/2/2011	10.53	1.75	NP	8.78	69.0 T4	<50.0	<0.50	0.61	<0.50	<1.5	--	24.9	--	--	--	7.1	<250	--	--	
	9/7/2011	10.53	1.56	NP	8.97	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	3.8	--	--	--	--	<250	--	--	
	12/5/2011	10.53	2.05	NP	8.48	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	26.4	--	--	--	--	<250	--	--	
	3/6/2012	10.53	2.31	NP	8.22	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	35.3	--	--	--	5.7	<250	--	--	
	6/11/2012	10.53	2.24	NP	8.29	<37.9	<50.0	<0.50	<0.50	<0.50	<1.5	--	20.9	--	--	--	10.4	<250	--	--	
	9/6/2012	10.53	1.70	NP	8.83	64	<50	<0.50	<0.50	<0.50	<0.50	--	7.7	<0.50	<0.50	<0.50	<5.0	<5.0	<0.50	<0.50	
	12/13/2012	10.53	1.56	NP	8.97	<50	<50	<0.50	<0.50	<0.50	<0.50	--	27	--	--	--	<5.0	<5.0	--	--	
	3/14/2013	10.53	2.20	NP	8.33	<50	<50	<0.50	<0.50	<0.50	<0.50	--	20	--	--	--	<5.0	<5.0	--	--	
	6/11/2013	10.53	2.92	NP	7.61	<50	<50	<0.50	<0.50	<0.50	<0.50	--	32	--	--	--	<5.0	<5.0	--	--	
	9/10/2013	10.53	2.98	NP	7.55	<50	<50	<0.50	<0.50	<0.50	<0.50	--	22	--	--	--	<5.0	<5.0	--	--	
12/12/2013	10.53	2.20	NP	8.33	<50	<50	<0.50	<0.50	<0.50	<0.50	--	20	--	--	--	<5.0	<5.0	--	--		
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	
	9/20/2010	11.01	4.18	NP	6.83	5,220	73,700	6,020	6,390	2,970	18,300	--	894	--	--	--	--	<250	--	--	
	12/8/2010	11.01	3.92	NP	7.09	428	3,350	249	117	90	558	--	1,470	--	--	--	--	<2500	--	--	
	3/14/2011	11.01	3.70	NP	7.31	283	2,420	287	81	49	243	--	1,020	--	--	--	70	<250	--	--	
	6/2/2011	11.01	4.40	NP	6.61	1,330 T4	12,200	688	71	225	619	--	824	--	--	--	110	<250	--	--	
	9/7/2011	11.01	4.37	NP	6.64	1,270 T4	7,900	920	25	187	267	--	896	--	--	--	--	<2500	--	--	
	12/5/2011	11.01	4.32	NP	6.69	286 T4	2,240	296	38	38.0	122	--	1,040	--	--	--	--	<250	--	--	
	3/6/2012	11.01	4.01	NP	7.00	272 T4	1,260	193	23	29	81	--	835	--	--	--	78	<250	--	--	
	6/11/2012	11.01	4.20	NP	6.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2012	--	--	--	--	957 T4	1,030	178	17.0	24	69	--	993	--	--	--	448	<250	--	--	
	9/6/2012	11.01	4.15	NP	6.86	<200	580	120	10	15	37	--	840	<1.5	<1.5	<1.5	15	<15	<1.5	14	
	12/13/2012	11.01	3.35	NP	7.66	<50	480	70	4.60	7.20	19	--	820	--	--	--	19	<15	--	--	
	3/14/2013	11.01	4.11	NP	6.90	<50	370	76	3.40	12.00	18	--	810	--	--	--	21	<15	--	--	
	6/11/2013	11.01	4.30	NP	6.71	62	290	51	<1.5	4.30	6	--	840	--	--	--	19	<15	--	--	
9/10/2013	11.01	3.96	NP	7.05	<50	340	52	1.90	6.40	5	--	820	--	--	--	17	<15	--	--		
12/12/2013	11.01	4.00	NP	7.01	<50	180	18	<1.5	1.60	<1.5	--	940	--	--	--	14	<15	--	--		
MW-12A	7/6/2010	11.29	4.22	NP	7.07	89	664	18	0.78	2.30	50	--	14	<0.50	<0.50	<0.50	12	<250	<1.0	<1.0	
	9/20/2010	11.29	4.39	NP	6.90	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	8.50	--	--	--	--	<250	--	--	
	12/8/2010	11.29	4.00	NP	7.29	76	<50.0	<0.50	<0.50	<0.50	<1.5	--	9.40	--	--	--	--	<250	--	--	
	3/14/2011	11.29	3.81	NP	7.48	62	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	<5.0	<250	--	--	
	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	--	--	
	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	--	--	
	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	--	--	
	3/6/2012	11.29	4.32	NP	6.97	52.0 T4	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	<5.0	<250	--	--	
	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	--	--	
	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	
	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	--	--	
	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	--	--	
	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	--	--	
	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	--	--	
12/12/2013	11.29	4.35	NP	6.94	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<5.0	<5.0	--	--		
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	
	9/20/2010	11.08	4.81	NP	6.27	<50.0	250 1n	<0.50	<0.50	<0.50	<1.5	--	272	--	--	--	--	<250	--	--	
	12/8/2010	11.08	5.02	NP	6.06	97.0	177 1n	<0.50	<0.50	<0.50	<1.5	--	390	--	--	--	--	<250	--	--	
	3/14/2011	11.08	4.32	NP	6.76	162	127	<0.50	<0.50	<0.50	<1.5	--	241	--	--	--	125	<250	--	--	
	6/2/2011	11.08	3.98	NP	7.10	89.9 T4	260 1n	<0.50	<0.50	<0.50	<1.5	--	228	--	--	--	45	<250	--	--	
	9/7/2011	11.08	5.74	NP	5.34	<50.0	167	<0.50	<0.50	<0.50	<1.5	--	207	--	--	--	--	<250	--	--	
	12/5/2011	11.08	5.00	NP	6.08	<50.0	166 1n	<0.50	<0.50	<0.50	<1.5	--	215	--	--	--	--	<250	--	--	
	3/6/2012	11.08	5.37	NP	5.71	<50.0	63.9 1n	<0.50	<0.50	<0.50	<1.5	--	110	--	--	--	39	<250	--	--	
	6/11/2012	11.08	5.73	NP	5.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2012	--	--	--	--	<37.9	118 1n	<0.50	<0.50	<0.50	<1.5	--	220	--	--	--	82	<250	--	--	
	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	
	12/13/2012	11.08	3.80	NP	7.28	<50	<50	<0.50	<0.50	<0.50	<0.50	--	130	--	--	--	14	<5.0	--	--	
	3/14/2013	11.08	4.20	NP	6.88	<50	<50	<0.50	<0.50	<0.50	<0.50	--	110	--	--	--	24	<5.0	--	--	
	6/11/2013	11.08	4.10	NP	6.98	<50	<50	<0.50	<0.50	<0.50	<0.50	--	97	--	--	--	31	<5.0	--	--	
9/10/2013	11.08	4.20	NP	6.88	<50	<50	<0.50	<0.50	<0.50	0.62	--	64	--	--	--	47	<5.0	--	--		
12/12/2013	11.08	4.05	NP	7.03	<50	<50	<0.50	<0.50	<0.50	<0.50	--	63	--	--	--	43	<5.0	--	--		
MW-14	6/2/2011	12.00	3.58	NP	8.42	4,180 T4	51,600	2,750	67.9	1,790	13,400	--	1.9	--	--	--	27.2	<250	--	--	
	9/7/2011	12.00	3.02	NP	8.98	2,970 T4	42,600	1,050	28.1	2,990	7,300	--	<25.0	--	--	--	--	<12500	--	--	
	12/5/2011	12.00	4.05	NP	7.95	3,980 T4	14,000	709	9.1	1,420	2,530	--	0.97	--	--	--	--	<250	--	--	
	3/6/2012	12.00	3.94	NP	8.06	3,640 T4	16,600	959	15.0	2,330	3,830	--	<2.5	--	--	--	28.1	<1250	--	--	
	6/11/2012	12.00	3.91	NP	8.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2012	--	--	--	--	4,580	15,700	1,200	14.0	1,580	3,010	--	1.4	--	--	--	23.3	<250	--	--	
	9/6/2012	12.00	3.35	NP	8.65	<2000	12,000	210	9.1	1,100	1,800	--	<4.0	<4.0	<4.0	<20	<40	<4.0	<4.0	<4.0	
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/13/2012	12.00	3.26	NP	8.74	<50	10,000	72	5.8	610	780	--	<1.5	--	--	--	<7.0	<15	--	--	
	3/14/2013	12.00	4.16	NP	7.84	<50	5,700	290	11	750	960	--	<1.5	--	--	--	12	<15	--	--	
	6/11/2013	12.00	7.37	NP	7.37	<50	6,900	630	5.3	480	680	--	<1.5	--	--	--	24	<15	--	--	
9/10/2013	12.00	4.88	NP	7.12	120	31,000	1,500	39	2,300	5,200	--	<1.5	--	--	--	32	<15	--	--		
12/12/2013	12.00	4.35	NP	7.65																	

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



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA															
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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-15	9/7/2011	11.11	2.54	NP	8.57	<50.0	<b>412</b>	<b>6.2</b>	<0.50	<b>43</b>	<1.5	--	<b>128</b>	--	--	--	--	<250	--	--	
	12/5/2011	11.11	2.70	NP	8.41	<b>50.5 T4</b>	<b>201</b>	<b>6.6</b>	<0.50	<b>0.93</b>	<1.5	--	<b>142</b>	--	--	--	--	<250	--	--	
	3/6/2012	11.11	2.69	NP	8.42	<b>56.2 T4</b>	<50.0	<0.50	<0.50	<0.50	<1.5	--	<b>106</b>	--	--	--	<b>101</b>	<250	--	--	
	6/11/2012	11.11	2.84	NP	8.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	<37.9	<b>74.3 1n</b>	<0.50	<0.50	<0.50	<1.5	--	<b>114</b>	--	--	--	<b>91</b>	<250	--	--	
	9/6/2012	11.11	2.24	NP	8.87	<b>64</b>	59	<0.50	<0.50	<0.50	<0.50	--	<b>76</b>	<0.50	<0.50	<0.50	<b>45</b>	<5.0	<0.50	<0.50	
	12/13/2012	11.11	2.51	NP	8.60	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<b>33</b>	--	--	--	<b>7.4</b>	<5.0	--	--	
	3/14/2013	11.11	2.91	NP	8.20	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<b>46</b>	--	--	--	<b>21.0</b>	<5.0	--	--	
	6/11/2013	11.11	3.36	NP	7.75	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<b>73</b>	--	--	--	<b>31.0</b>	<5.0	--	--	
	9/10/2013	11.11	3.28	NP	7.83	<50	<b>68</b>	<0.50	<0.50	<0.50	<0.50	--	<b>120</b>	--	--	--	<b>39.0</b>	<5.0	--	--	
12/12/2013	11.11	3.00	NP	8.11	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<b>130</b>	--	--	--	<b>59.0</b>	<10	--	--		
MW-16	6/2/2011	10.98	3.00	NP	7.98	<b>509 T4</b>	<b>1,420 1n</b>	<b>79</b>	<0.50	<b>4</b>	<1.5	--	<b>1,200</b>	--	--	--	<b>257</b>	<250	--	--	
	9/7/2011	10.98	2.65	NP	8.33	<b>90.0 T4</b>	<b>934</b>	<0.50	<0.50	<0.50	<1.5	--	<b>1,240</b>	--	--	--	--	<250	--	--	
	12/5/2011	10.98	3.18	NP	7.80	<b>196 T4</b>	<b>948 1n</b>	<0.50	<0.50	<0.50	<1.5	--	<b>1,320</b>	--	--	--	--	<250	--	--	
	3/6/2012	10.98	2.91	NP	8.07	<b>204 T4</b>	<b>392 1n</b>	<0.50	<0.50	<0.50	<1.5	--	<b>1,090</b>	--	--	--	<b>134</b>	<250	--	--	
	6/11/2012	10.98	3.04	NP	7.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2012	--	--	--	--	<b>48.1 T4</b>	<b>430 1n</b>	<0.50	<0.50	<0.50	<1.5	--	<b>1,100</b>	--	--	--	<b>374</b>	<250	--	--	
	9/6/2012	10.98	2.61	NP	8.37	<b>390</b>	<150	<1.5	<1.5	<1.5	<1.5	--	<b>960</b>	<1.5	<1.5	<1.5	<b>70</b>	<15	<1.5	<1.5	
	12/13/2012	10.98	2.50	NP	8.48	<b>52</b>	<150	<1.5	<1.5	<1.5	<1.5	--	<b>980</b>	--	--	--	<b>55</b>	<20	--	--	
	3/14/2013	10.98	3.15	NP	7.83	<50	<200	<2.0	<2.0	<2.0	<2.0	--	<b>950</b>	--	--	--	<b>67</b>	<20	--	--	
	6/11/2013	10.98	3.19	NP	7.79	<50	<150	<1.5	<1.5	<1.5	<1.5	--	<b>820</b>	--	--	--	<b>70</b>	<15	--	--	
9/10/2013	10.98	3.44	NP	7.54	<50	<50	<0.50	<0.50	<0.50	<b>0.67</b>	--	<b>240</b>	--	--	--	<b>440</b>	<5.0	--	--		
12/12/2013	10.98	2.90	NP	8.08	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<b>62</b>	--	--	--	<b>530</b>	<5.0	--	--		
MW-17	6/2/2011	11.52	5.78	NP	5.74	<b>687 T4</b>	<b>9,130</b>	<b>2,530</b>	<b>960</b>	<b>35</b>	<b>907</b>	--	<b>1</b>	--	--	--	<b>907</b>	<250	--	--	
	9/7/2011	11.52	4.56	NP	6.96	<b>1,900 T4</b>	<b>47,200</b>	<b>9,620</b>	<b>5,510</b>	<b>1,210</b>	<b>4,510</b>	--	<25.0	--	--	--	--	<12500	--	--	
	12/5/2011	11.52	4.70	NP	6.82	<b>1,790 T4</b>	<b>17,300</b>	<b>4,720</b>	<b>511</b>	<b>238</b>	<b>747</b>	--	<2.5	--	--	--	--	<1250	--	--	
	3/6/2012	11.52	4.64	NP	6.88	<b>1,530 T4</b>	<b>1,580</b>	<b>2,090</b>	<b>24</b>	<b>39</b>	<b>166</b>	--	<b>1</b>	--	--	--	<b>481</b>	<250	--	--	
	6/11/2012	11.52	4.67	NP	6.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2012	--	--	--	--	<b>1,090 T4</b>	<b>4,950</b>	<b>2,340</b>	<b>123</b>	<b>153</b>	<b>610</b>	--	<2.5	--	--	--	<b>411</b>	<1250	--	--	
	9/6/2012	11.52	4.39	NP	7.13	<1000	<b>18,000</b>	<b>4,300</b>	<b>170</b>	<b>370</b>	<b>1,100</b>	--	<10	<10	<10	<10	<b>300</b>	<100	<10	110	
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/13/2012	11.52	4.20	NP	7.32	<100	<b>55,000</b>	<b>7,300</b>	<b>2,700</b>	<b>1,700</b>	<b>4,600</b>	--	<10	--	--	--	<b>300</b>	<100	--	--	
	3/14/2013	11.52	4.70	NP	6.82	<200	<b>63,000</b>	<b>13,000</b>	<b>5,400</b>	<b>3,100</b>	<b>8,800</b>	--	<15	--	--	--	<b>260</b>	<150	--	--	
6/11/2013	11.52	4.83	NP	6.69	<b>710</b>	<b>110,000</b>	<b>10,000</b>	<b>11,000</b>	<b>3,100</b>	<b>12,000</b>	--	<25	--	--	--	<150	<250	--	--		
9/10/2013	11.52	4.60	NP	6.92	<b>160</b>	<b>36,000</b>	<b>8,200</b>	<b>510</b>	<b>1,200</b>	<b>2,400</b>	--	<15	--	--	--	<b>320</b>	<150	--	--		
12/12/2013	11.52	5.00	NP	6.52	<50	<b>92,000</b>	<b>17,000</b>	<b>9,000</b>	<b>2,900</b>	<b>9,100</b>	--	<15	--	--	--	<b>250</b>	<150	--	--		

Gauging Notes:

TOS - Top of Screen  
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  
DRO- diesel range organics  
TPHd- Total petroleum hydrocarbons as diesel  
TPHg- Total petroleum hydrocarbons as gasoline  
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.  
T4- Result reported for the hydrocarbons within the method-specific range that do not match pattern of laboratory standard.

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



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA																			
		Acetone (ug/L)	Alkalinity, Bicarbonate (mg/L)	Alkalinity, Hydroxide (CaCO) (mg/L)	Alkalinity, Total A2320B (mg/L)	Alkalinity, Total as CaCO3 A2320B (mg/L)	Antimony (ug/L)	Arsenic (ug/L)	Barium (ug/L)	Beryllium (ug/L)	Biochemical Oxygen Demand (ug/L)	Bromate (mg/L)	Bromide (mg/L)	Cadmium S(ug/L)	Chemical Oxygen Demand (ug/L)	Chloride (ug/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	--	--	--	--	<60.0	23	216	<5.0	32,200	--	--	<5.0	173,000	204,000	--	--	<50.0	--	--
	6/2/2011	<5.0	828	<1	828	<1	<60.0	22.0	191	<5.0	45,100	<0.005	2	<5.0	121,000	149,000	4	<2	<50.0	42,000	<100
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2012	--	--	--	--	650	--	--	--	--	--	--	--	--	--	--	<5.0	<10	--	--	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	3/14/2011	<5.0	--	--	--	--	<60.0	<20.0	<100	<5.0	7,160.0	--	--	<5.0	11,500.0	34,700.0	--	--	<50.0	--	--
	6/2/2011	<5.0	226.0	<1	226.0	<1	<60.0	<20.0	<100	<5.0	4,170.0	<0.005	2.0	<5.0	15,100.0	32,400.0	2.4	<0.2	<50.0	2.0	<1
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	9/6/2012	--	--	--	--	561	--	--	--	--	--	--	--	--	--	--	17	<10	--	--	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12	3/14/2011	<5.0	--	--	--	--	<60.0	<20.0	<100	<5.0	<2000	--	--	<5.0	80,100	8,240,000	--	--	<50.0	--	--
	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	<2	<50.0	210	<1
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2012	--	--	--	--	806	--	--	--	--	--	--	--	--	--	--	<5.0	<10	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-14	9/6/2012	--	--	--	--	1,720	--	--	--	--	--	--	--	--	--	--	24	<10	--	--	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	9/6/2012	--	--	--	--	2,820	--	--	--	--	--	--	--	--	--	--	38	<10	--	--	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analytical Notes:  
 < - Below laboratory's indicated reporting limit  
 mg/L - milligrams per liter  
 MPN/100ML - most probable number per 100 ml  
 ug/L - micrograms/liter  
 Bold - Above the laboratory's indicated reporting limit

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



Well I.D.	Date	GROUND WATER ANALYTICAL DATA																		
		Inorganic Carbon (mg/L)	Iron SW6010 D (ug/L)	Iron SW6010 T (ug/L)	Iron, Ferric (ug/L)	Iron, Ferrous (ug/L)	Lead (ug/L)	Manganese (ug/L)	Mercury (ug/L)	Methane (ug/L)	Molybdenum (ug/L)	Nickel (ug/L)	Nitrate as N E300.0 (mg/L)	Nitrate as N E353/E351 (ug/L)	Nitrite as N (ug/L)	Nitrogen, Ammonia (mg/L)	Nitrogen, NO2 plus NO3 (ug/L)	Nitrogen, Total Kjeldahl (mg/L)	Oil and Grease (ug/L)	Salinity (mg/L)
MW-3	12/17/2009	--	--	12,300	--	--	--	--	--	--	--	--	--	<50.0	<50.0	--	<50.0	--	--	--
	3/29/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	--	5,550	10,700	--	--	--	--	--	--	--	--	--	<50.0	95.0	--	76	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/14/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/2/2011	--	--	13,600	--	--	--	--	--	--	--	--	--	<50.0	<10.0	--	53	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	10,900	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/17/2009	--	--	1,500	--	--	--	--	--	--	--	<0.00044	<0.44	--	--	--	--	--	--	--
	12/17/2009	--	--	2,460	--	--	--	--	--	--	--	--	<50.0	<50.0	--	<50.0	--	--	--	--
	3/29/2010	--	1,790	1,510	--	--	--	--	--	--	--	--	<50.0	41	--	55	--	--	--	--
	6/30/2010	--	946	2,310	--	--	--	--	--	--	--	--	<50.0	58	--	69	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	--	2,730	2,600	--	--	--	--	--	--	--	--	<50.0	<10.0	--	52	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/14/2011	--	--	4,900	3,900	1,000	27	1,270	<0.20	474	<20.0	<40.0	--	50	<10.0	--	54	--	--	--
	6/2/2011	870	--	4,320	2,520	1,800	23	1,510	<0.20	445	<20.0	<40.0	--	<50.0	<10.0	3	51	5	--	1,500
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6/12/2012	--	--	1,240	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--	
9/6/2012	--	--	--	1,000	--	--	--	--	2,890	--	--	--	--	--	--	--	--	--	--	
9/11/2012	--	--	--	--	--	--	--	--	--	--	--	<0.10	--	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/30/2010	--	836	7,550	--	--	--	--	--	--	--	--	<50.0	74	--	74	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/14/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/2/2011	--	--	7,800	--	--	--	--	--	--	--	--	--	233	<10.0	--	239	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	264	--	--	--	--	--	--	--	--	--	<50.0	67	--	111	--	--	--
9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	6/30/2010	--	4,710	8,000	--	--	--	--	--	--	--	--	<50.0	68	--	60	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/14/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/2/2011	--	--	24,900	--	--	--	--	--	--	--	--	--	61	<10.0	--	61	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6/11/2012	--	--	21,000	--	--	--	--	--	--	--	--	--	<50.0	48	--	<50.0	--	--	--	
9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	12/17/2009	--	--	2,270	--	--	--	--	--	--	--	--	<50.0	<50.0	--	<50.0	--	--	--	--
	3/29/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	--	3,210	8,820	--	--	--	--	--	--	--	--	<50.0	15	--	<50.0	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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



Well I.D.	Date	GROUND WATER ANALYTICAL DATA																			
		Inorganic Carbon (mg/L)	Iron SW6010 D (ug/L)	Iron SW6010 T (ug/L)	Iron, Ferric (ug/L)	Iron, Ferrous (ug/L)	Lead (ug/L)	Manganese (ug/L)	Mercury (ug/L)	Methane (ug/L)	Molybdenum (ug/L)	Nickel (ug/L)	Nitrate as N E300.0 (mg/L)	Nitrate as N E353/E351 (ug/L)	Nitrite as N (ug/L)	Nitrogen, Ammonia (mg/L)	Nitrogen, NO2 plus NO3 (ug/L)	Nitrogen, Total Kjeldahl (mg/L)	Oil and Grease (ug/L)	Salinity (mg/L)	
MW-9	12/8/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/14/2011	--	--	1,560	157	1,400	<10.0	148	<0.20	419	<20.0	<40.0	--	<50.0	<10.0	--	<50.0	--	--	--	
	6/2/2011	240	--	1,260	1,060	200	<10.0	92	<0.20	673	<20.0	<40.0	--	<50.0	<10.0	1	<50.0	1	--	405	
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	731	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	9/17/2009	--	--	9,800	--	--	--	--	--	--	--	0	12	--	--	--	--	--	--	--	
	12/17/2009	--	--	3,410	--	--	--	--	--	--	--	--	1,970	60	--	2,030	--	--	--	--	
	3/29/2010	--	365	2,410	--	--	--	--	--	--	--	--	1,960	19	--	1,970	--	--	--	--	
	6/30/2010	--	216	1,860	--	--	--	--	--	--	--	--	2,120	68	--	2,190	--	--	--	--	
	7/6/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/20/2010	--	280	3,080	--	--	--	--	--	--	--	--	--	2,690	68	--	2,750	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/14/2011	--	--	2,620	--	--	--	--	--	--	--	--	--	--	--	--	2,350	--	--	--	--
	6/2/2011	--	--	9,870	--	--	--	--	--	--	--	--	--	1,290	49	--	1,340	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	11,300	--	--	--	--	--	--	--	--	--	1,510	57	--	1,570	--	--	--	--
	9/6/2012	--	--	--	11,000	--	--	--	--	467	--	--	--	--	--	--	--	--	--	--	--
9/11/2012	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	7/6/2010	--	<100	3,510	--	--	--	--	--	--	--	--	<50.0	31.0	--	67	--	--	--	--	
	9/20/2010	--	<100	1,690	--	--	--	--	--	--	--	--	167	<10.0	--	172	--	--	--	--	
	12/8/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/14/2011	--	--	756	--	--	--	--	--	--	--	--	--	--	--	<50.0	--	--	--	--	
	6/2/2011	--	--	1,040	--	--	--	--	--	--	--	--	110	<10.0	--	115	--	--	--	--	
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	1,300	--	--	--	--	--	--	--	--	--	89	<10	--	94	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	7/6/2010	--	<100	30,200	--	--	--	--	--	--	--	--	<50.0	61	--	<50.0	--	--	--	--	
	9/20/2010	--	552	3,890	--	--	--	--	--	--	--	--	72	<10.0	--	75	--	--	--	--	
	12/8/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/14/2011	--	--	793	593	200	<10.0	12,400	<0.20	114	<20.0	151	--	<50.0	61	--	54	--	--	--	
	6/2/2011	1,100	--	9,340	8,740	600	<10.0	12,800	<0.20	287	<20.0	119	--	<50.0	<10.0	0	58.0	1	--	15,600	
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	497	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--	--
9/6/2012	--	--	--	190	--	--	--	--	64	--	--	--	--	--	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12A	7/6/2010	--	716	57,300	--	--	--	--	--	--	--	--	3,680	164	--	3,840	--	--	--	--	
	9/20/2010	--	<100	523	--	--	--	--	--	--	--	--	4,680	10	--	4,690	--	--	--	--	
	12/8/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/14/2011	--	--	523	--	--	--	--	--	--	--	--	--	--	--	--	4,790	--	--	--	
	6/2/2011	--	--	754	--	--	--	--	--	--	--	--	4,710	<10.0	--	4,720	--	--	--	--	
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	859	--	--	--	--	--	--	--	--	--	4,250	<10	--	4,260	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

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



Well I.D.	Date	GROUND WATER ANALYTICAL DATA																		
		Inorganic Carbon (mg/L)	Iron SW6010 D (ug/L)	Iron SW6010 T (ug/L)	Iron, Ferric (ug/L)	Iron, Ferrous (ug/L)	Lead (ug/L)	Manganese (ug/L)	Mercury (ug/L)	Methane (ug/L)	Molybdenum (ug/L)	Nickel (ug/L)	Nitrate as N E300.0 (mg/L)	Nitrate as N E353/E351 (ug/L)	Nitrite as N (ug/L)	Nitrogen, Ammonia (mg/L)	Nitrogen, NO2 plus NO3 (ug/L)	Nitrogen, Total Kjeldahl (mg/L)	Oil and Grease (ug/L)	Salinity (mg/L)
MW-13	7/6/2010	--	116	92,600	--	--	--	--	--	--	--	--	--	--	--	65	--	70	--	--
	9/20/2010	--	279	59,500	--	--	--	--	--	--	--	--	--	--	--	<50.0	<10.0	--	<50.0	--
	12/8/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/14/2011	--	--	44,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<50.0	--
	6/2/2011	--	--	36,700	--	--	--	--	--	--	--	--	--	72	15	--	--	86.0	--	--
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	3,760	--	--	--	--	--	--	--	--	--	--	<50.0	19	--	<50.0	--	--
	9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-14	6/2/2011	--	--	47,500	--	--	--	--	--	--	--	--	--	<50.0	10	--	50	--	--	
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2012	--	--	1,150	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	
	9/6/2012	--	--	--	8,900	--	--	--	718	--	--	--	--	--	--	--	--	--	--	
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	<0.10	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-15	6/2/2011	--	--	11,700	--	--	--	--	--	--	--	--	890	38.0	--	928	--	--	--	
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2012	--	--	2,920	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	
	9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-16	6/2/2011	--	--	34,200	--	--	--	--	--	--	--	--	<50.0	<10.0	--	<50.0	--	--	--	
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2012	--	--	1,730	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	
	9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-17	6/2/2011	--	--	109,000	--	--	--	--	--	--	--	--	<50.0	30	--	<50.0	--	--	--	
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2012	--	--	44,300	--	--	--	--	--	--	--	--	--	<50.0	39	--	<50.0	--	--	
	9/6/2012	--	--	--	21,000	--	--	--	182	--	--	--	--	--	--	--	--	--	--	
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Analytical Notes:  
 < - Below laboratory's indicated reporting limit  
 mg/L - milligrams per liter  
 ug/L - micrograms/liter  
 Bold - Above the laboratory's indicated reporting limit

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



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA							
		Selenium (ug/L)	Silver (ug/L)	Sulfate E300 (ug/L)	Sulfate E300.1 (mg/L)	Thallium (ug/L)	Total Organic Carbon (mg/L)	Vanadium (ug/L)	Zinc (ug/L)
MW-3	12/17/2009	--	--	--	<0.5	--	--	--	--
	3/29/2010	--	--	--	--	--	--	--	--
	6/30/2010	--	--	<5000	--	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--
	9/20/2010	--	--	--	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	--	--	--	--	--	--	--	--
	6/2/2011	--	--	<5000	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	<2000	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--
MW-6	9/17/2009	--	--	<1.0	<0.0010	--	--	--	--
	12/17/2009	--	--	--	<0.5	--	--	--	--
	3/29/2010	--	--	<1000	--	--	--	--	--
	6/30/2010	--	--	<5000	--	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--
	9/20/2010	--	--	<1000	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	<10.0	<10.0	<b>35,400</b>	--	<20.0	--	<50.0	<40.0
	6/2/2011	<10.0	<10.0	<b>38,900</b>	--	<20.0	<b>41</b>	<50.0	<40.0
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
	6/12/2012	--	--	<b>1,110</b>	--	--	--	--	--
9/6/2012	--	--	--	--	--	--	--	--	
9/11/2012	--	--	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	
MW-7	6/30/2010	--	--	<b>191,000</b>	--	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--
	9/20/2010	--	--	--	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	--	--	--	--	--	--	--	--
6/2/2011	--	--	<b>48,900</b>	--	--	--	--	--	

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 (ug/L)	Sulfate E300 (ug/L)	Sulfate E300.1 (mg/L)	Thallium (ug/L)	Total Organic Carbon (mg/L)	Vanadium (ug/L)	Zinc (ug/L)
MW-7	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	56,900	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--
MW-8	6/30/2010	--	--	2,360,000	--	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--
	9/20/2010	--	--	--	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	--	--	--	--	--	--	--	--
	6/2/2011	--	--	2,830,000	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	2,570,000	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	
MW-9	12/17/2009	--	--	--	11	--	--	--	--
	3/29/2010	--	--	--	--	--	--	--	--
	6/30/2010	--	--	19,000	--	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--
	9/20/2010	--	--	--	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	<10.0	<10.0	8,980	--	<20.0	--	<50.0	<40.0
	6/2/2011	<10.0	<10.0	18,600	--	<20.0	5	<50.0	<40.0
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	42,500	--	--	--	--	--
9/6/2012	--	--	--	--	--	--	--	--	
12/13/2012	--	--	--	--	--	--	--	--	
MW-10	9/17/2009	--	--	84	0	--	--	--	--
	12/17/2009	--	--	--	86	--	--	--	--
	3/29/2010	--	--	73,600	--	--	--	--	--
	6/30/2010	--	--	70,800	--	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--



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 (ug/L)	Sulfate E300 (ug/L)	Sulfate E300.1 (mg/L)	Thallium (ug/L)	Total Organic Carbon (mg/L)	Vanadium (ug/L)	Zinc (ug/L)
MW-10	9/20/2010	--	--	82,000	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	--	--	68,600	--	--	--	--	--
	6/2/2011	--	--	71,700	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	70,100	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--
MW-11	7/6/2010	--	--	82,100	--	--	--	--	--
	9/20/2010	--	--	58,300	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	--	--	59,900	--	--	--	--	--
	6/2/2011	--	--	62,900	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	79,400	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--
MW-12	7/6/2010	--	--	3,030,000	--	--	--	--	--
	9/20/2010	--	--	1,970,000	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	<10.0	<10.0	2,500,000	--	<20.0	--	<50.0	<40.0
	6/2/2011	<10.0	<10.0	2,330,000	--	<20.0	9	<50.0	<40.0
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--
MW-12A	7/6/2010	--	--	100,000	--	--	--	--	--
	9/20/2010	--	--	82,500	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--

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 (ug/L)	Sulfate E300 (ug/L)	Sulfate E300.1 (mg/L)	Thallium (ug/L)	Total Organic Carbon (mg/L)	Vanadium (ug/L)	Zinc (ug/L)
MW-12A	3/14/2011	--	--	81,000	--	--	--	--	--
	6/2/2011	--	--	101,000	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	118,000	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--
MW-13	7/6/2010	--	--	450,000	--	--	--	--	--
	9/20/2010	--	--	241,000	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	--	--	375,000	--	--	--	--	--
	6/2/2011	--	--	188,000	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
	6/12/2012	--	--	131,000	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	
MW-14	6/2/2011	--	--	56,300	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
	6/12/2012	--	--	439,000	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--
MW-15	6/2/2011	--	--	62,700	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
	6/12/2012	--	--	42,100	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	

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 (ug/L)	Sulfate E300 (ug/L)	Sulfate E300.1 (mg/L)	Thallium (ug/L)	Total Organic Carbon (mg/L)	Vanadium (ug/L)	Zinc (ug/L)
MW-16	6/2/2011	--	--	<b>8,740</b>	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
	6/12/2012	--	--	<b>19,900</b>	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
	12/13/2012	--	--	--	--	--	--	--	--
MW-17	6/2/2011	--	--	<b>3,920,000</b>	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
	6/12/2012	--	--	<b>2,520,000</b>	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
	9/11/2012	--	--	--	--	--	--	--	--
12/13/2012	--	--	--	--	--	--	--	--	

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 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
		<b>0.024 Average</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>33</b>	<b>1</b>	<b>14</b>	<b>0</b>	<b>20</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Explanation</b>																		
NA = Not available																		
Number of Events = 67																		

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*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.



## **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**

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## ***Appendix B***

Blaine Tech Services Groundwater Sampling Procedures

# BLAINE TECH SERVICES, INC. METHODS AND PROCEDURES FOR THE ROUTINE MONITORING OF GROUNDWATER WELLS

## SAMPLING PROCEDURES OVERVIEW

### SAFETY

All groundwater monitoring assignments performed for DELTA comply with safety guidelines, 29 CFR 1910.120 and SB-198 Injury and Illness Prevention Program (IIPP). All Field Technicians receive the full 40 hour 29CFR 1910.120 OSHA SARA HAZWOPER course, medical clearance and on-the-job training prior to commencing any work on any DELTA COP/ELT site.

### INSPECTION AND GAUGING

Wells are inspected prior to evacuation and sampling. The condition of the wellhead is checked and noted according to a wellhead inspection checklist.

Standard measurements include the depth to water (DTW) and the total well depth (TD) obtained with industry standard electronic sounders which are graduated in increments of hundredths of a foot.

The water in each well is inspected for the presence of Immiscibles or sheen and when free product is suspected, it is confirmed using an electronic interface probe (e.g. MMC). No samples are collected from a well containing free product.

### EVACUATION

Depth to water measurements are collected by our personnel prior to purging and minimum purge volumes are calculated anew for each well based on the height of the water column and the diameter of the well. Expected purge volumes are never less than three case volumes and are set at no less than four case volumes in some jurisdictions.

Well purging devices are selected on the basis of the well diameter and the total volume to be evacuated. In most cases the well will be purged using an electric submersible pump (i.e. Grundfos) suspended near (but not touching) the bottom of the well. Small volumes of purgewater are often removed by hand bailing with a disposable bailer.

### PARAMETER STABILIZATION

Well purging completion standards include minimum purge volumes, but additionally require stabilization of specific groundwater parameters prior to sample collection. Typical groundwater parameters used to measure stability are electrical conductivity, pH, and temperature. Instrument readings are obtained at regular intervals during the evacuation process (no less

than once per case volume).

Stabilization standards for routine quarterly monitoring of fuel sites include the following: Temperature is considered to have stabilized when successive readings do not fluctuate more than +/- 1 degree Celsius. Electrical conductivity is considered stable when successive readings are within 10%. pH is considered to be stable when successive readings remain constant or vary no more than 0.2 of a pH unit.

## DEWATERED WELLS

Normal evacuation removes no less than three case volumes of water from the well. However, less water may be removed in cases where the well dewateres and does not recharge.

Wells known to dewater are evacuated as early as possible during each site visit in order to allow for the greatest amount of recovering. Any well that does not recharge to 80% of its original volume will be sampled prior to the departure of our personnel from the site in order to eliminate the need of a return visit.

In jurisdictions where a certain percentage of recovery is included in the local completion standard, our personnel follow the regulatory expectation.

## PURGEWATER CONTAINMENT

All non-hazardous purgewater evacuated from each groundwater monitoring well is captured and contained in on-board storage tanks on the Sampling Vehicle and/or special water hauling trailers. Effluent from the decontamination of reusable apparatus (sounders, electric pumps and hoses etc.), consisting of groundwater combined with deionized water and non-phosphate soap, is also captured and pumped into effluent tanks.

Non hazardous purgewater is transported under standard Bill of Lading or Non-Hazardous manifest to a Blaine Tech Services, Inc. facility before being transported to an approved disposal facility.

## SAMPLE COLLECTION DEVICES

All samples are collected using disposable bailers.

## SAMPLE CONTAINERS

Sample material is decanted directly from the sampling bailer into sample containers provided by the laboratory which will analyze the samples. The type of sample container, material of construction, method of closure and filling requirements are specific to the intended analysis. Chemicals needed to preserve the sample material are commonly placed inside the sample containers by the laboratory or glassware vendor prior to delivery of the bottle to our personnel. The laboratory sets the number of replicate containers.

## TRIP BLANKS

Upon request, a Trip Blank is carried to each site and is kept inside the cooler for the duration of the sampling event. It is turned over to the laboratory for analysis with the samples from that site.

## DUPLICATES

Upon request, one Duplicate sample is collected at each site. It is up to the Field Technician to choose the well at which the Duplicate is collected. Typically, a duplicate is collected from one of the most contaminated wells. The Duplicate sample is labeled DUP thus rendering the sample blind.

## SAMPLE STORAGE

All sample containers are promptly placed in food grade ice chests for storage in the field and transport (direct or via our facility) to the analytical laboratory that will perform the intended analytical procedures. These ice chests contain quantities of restaurant grade ice as a refrigerant material. The samples are maintained in either an ice chest or a refrigerator until relinquished into the custody of the laboratory or laboratory courier.

## DOCUMENTATION CONVENTIONS

Each and every sample container has a label affixed to it. In most cases these labels are generated by our office personnel and are partially preprinted. Labels can also be hand written by our field personnel. The site is identified with the store number and site address, as is the particular groundwater well from which the sample is drawn (e.g. MW-1, MW-2, S-1 etc.). The time at which the sample was collected and the initials of the person collecting the sample are handwritten onto the label.

Chain of Custody records are created using client specific preprinted forms following USEPA specifications.

Bill of Lading records are contemporaneous records created in the field at the site where the non-hazardous purgewater is generated. Field Technicians use preprinted Bill of Lading forms.

## DECONTAMINATION

All equipment is brought to the site in clean and serviceable condition and is cleaned after use in each well and before subsequent use in any other well. Equipment is decontaminated before leaving the site.

The primary decontamination device is a commercial steam cleaner. The steam cleaner is de-tuned to function as a hot pressure washer which is then operated with high quality deionized water which is produced at our facility and stored onboard our sampling vehicle. Cleaning is facilitated by the use of proprietary fixtures and devices included in the patented workstation that is incorporated in each sampling vehicle. The steam cleaner is used to decon reels, pumps

and bailers.

Any sensitive equipment or parts (i.e. Dissolved Oxygen sensor membrane, sounder etc.) that cannot be washed using the hot high pressure water, will be sprayed with a non-phosphate soap and deionized water solution and rinsed with deionized water.

EXAMPLE: The sounder is cleaned between wells using the non-phosphate soap and deionized water solution followed by deionized water rinses. The sounder is then washed with the steam cleaner between sites or as necessitated by use in a particularly contaminated well.

#### DISSOLVED OXYGEN READINGS

All Dissolved Oxygen readings are taken using YSI meters (e.g. YSI Model 550 meter). These meters are equipped with membrane probe that enables them to collect accurate in-situ readings.

The probe and reel is decontaminated between wells as described above. The meter is calibrated as per the instructions in the operating manual. The probe is lowered into the water column allowed to stabilize before use.

#### OXYIDATON REDUCTION POTENTIAL READINGS

All readings are obtained with either Corning or Myron-L meters (e.g. Corning ORP-65 or a Myron-L Ultrameter GP). The meter is cleaned between wells as described above. The meter is calibrated at the start of each day according to the instruction manual. In use the probe is placed in a cup of freshly obtained monitoring well water and allowed to stabilize.

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*Oakland, CA*  
*Antea Group Project No. I42705191*



## ***Appendix C***

Blaine Tech Services Groundwater Sampling Field Data Sheets

## Well-Head Inspection & Well Gauging Form

Antea Group Project No: 2705791 Site Address: 449 Hegenbergere Rd, Oakland  
 Field Technician: Daniel Allen, Blaine Tech Date: 12/12/13 Weather: Clear  
(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
5	MW-3	G	G	G	G	G	Y	2	0858	2.60	13.90			
12	MW-6	G	G	G	G	G	N	2	0926	3.55	12.60			
2	MW-7	G	G	G	G	G	N	2	0844	4.60	12.95			
1	MW-8	G	G	G	G	G	N	2	0840	2.80	14.65			
4	MW-9	P	G	G	G	G	Y	2	0856	1.78	12.60			1/2 bolts missing, 1/3 tabs broken
7	MW-10	G	G	G	G	G	N	2	0906	3.85	12.60			
6	MW-11	G	G	G	G	G	N	4	0902	2.20	19.55			
11	MW-12	G	G	G	G	G	N	4	0922	4.00	19.40			
3	MW-12A	G	G	G	G	G	N	2	0850	4.35	32.65			
8	MW-13	G	G	G	G	G	N	2	0910	4.05	14.55			
13	MW-14	G	G	G	G	G	N	2	0930	4.35	12.75			
9	MW-15	G	G	G	G	G	N	2	0914	3.00	12.65			
10	MW-16	G	G	G	G	G	N	2	0918	2.90	12.60			
14	MW-17	G	G	G	G	G	N	2	0935	5.00	12.60			

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

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



\*Form provided by Antea Group

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

Page \_\_\_\_ of \_\_\_\_



## Groundwater Sampling Form

Site Address:	449 Hegenberger, Oakland CA		
Project No:	2705191	Field Technician:	DW
Field Point:	MW-3	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	2.60	Well Diameter (in):	② 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	13.90	Water Column Height (ft):	11.30

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow <u>3 casing volumes</u> Other: _____	<b>Purge Equipment:</b> Disposable Bailer <u>Electric Submersible</u> Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> <u>Disposable Bailer</u> w/ BFO Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>11.30</u>	X Conversion Factor (gal/ft): <u>0.17</u>	= Casing Volume (gal): <u>2.0</u>
Casing Volume (gal): <u>2.0</u>	X Specified Volumes: <u>3</u>	= Calculated Purge (gal): <u>6.0</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:	Stop Time:	Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge											
			1122	19.6	6.94	5840	-71.1	55	0.93	1.0	
			1122	20.5	6.90	2476	-78.0	30	0.23	2.0	
			1123	20.1	6.91	2437	-81.3	25	0.25	3.0	
			1123	19.4	6.90	2487	-85.2	19	0.31	4.0	
			1124	19.5	6.88	2505	-87.6	16	0.32	5.0	
			1124	19.5	6.87	2521	-89.2	13	0.32	6.0	
Post-Purge											

Did Well dewater?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Total Purge volume (gal):	6.0
Other Comments:	80% = 4.86                      *purge through flow cell DTW = 6.49 (2 Hr)		

<b>Sample Info:</b>	
Sample ID: MW-3-20131231	Sample Date and Time: 12/12/13 @ 1535
Selected Analysis: SEE COC	

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

Signature: [Signature] Date: 12/12/13

Antea Group  
 Antea™ Group, 1-800-477-7411

LNAPL = light non-aqueous phase liquids      gal = gallon/s  
 bgs = below ground surface                      temp = temperature  
 ORP = Oxidation-Reduction Potential          NTU = Nephelometric Turbidity Units  
 D.O. = dissolved oxygen                              mV = millivolts



## Groundwater Sampling Form

Site Address:	449 Hegenberger, Oakland CA		
Project No:	2705191	Field Technician:	DW
Field Point:	MW-7	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	4.60	Well Diameter (in):	② 4 6 8 —
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	12.95	Water Column Height (ft):	8.35

### 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 W/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>8.35</u> X Conversion Factor (gal/ft): <u>0.17</u> = Casing Volume (gal): <u>1.4</u> Casing Volume (gal): <u>1.4</u> X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>4.2</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:	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>									
	1021	15.6	6.65	7630	-81.7	65	1.50	0.7	
	1021	14.7	6.80	5419	-76.7	31	1.00	1.4	
	1022	18.6	6.53	3481	-42.0	17	0.85	2.1	
	1022	18.8	6.50	3427	-36.5	11	0.76	2.8	
	1023	18.8	6.48	3416	-35.1	11	0.74	3.5	
	1023	18.9	6.48	3408	-33.2	10	0.74	4.2	
<b>Post-Purge</b>									

Did Well dewater? Yes  No  Total Purge volume (gal): 4.2

**Other Comments:** 80% = 6.27 DTW = 4.86 \*purse through flow cell

**Sample Info:**

Sample ID: MW-7-20131231	Sample Date and Time: 12/12/13 @ 1507
Selected Analysis: SEE COL	

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

Signature: [Signature] Date: 12/12/13



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 Hegenberger, Oakland CA</u>	
Project No: <u>2765191</u>	Field Technician: <u>DW</u>
Field Point: <u>MW-8</u>	Date: <u>12/12/13</u>
Depth to Water (DTW) (ft bgs): <u>2.80</u>	Well Diameter (in): <u>2</u> 4 6 8
Depth to LNAPL (ft bgs):	Thickness of LNAPL (ft):
Total Depth of Well (ft bgs): <u>14.65</u>	Water Column Height (ft): <u>11.85</u>

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow <u>3 casing volumes</u> Other: _____	<b>Purge Equipment:</b> Disposable Bailer <u>Electric-Submersible</u> Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> <u>Disposable Bailer w/BED</u> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>11.85</u>	X Conversion Factor (gal/ft): <u>0.17</u>	= Casing Volume (gal): <u>2.0</u>
Casing Volume (gal): <u>2.0</u>	X Specified Volumes: <u>3</u>	= Calculated Purge (gal): <u>6.0</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:		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>									
1002	13.2	6.72	7161	-51.5	56	2.58	1.0		
1002	16.4	6.48	6848	-58.4	20	1.21	2.0		
1003	17.6	6.40	7250	-66.9	16	0.93	3.0		
1003	18.3	6.40	9851	-75.2	18	0.84	4.0		
1004	18.4	6.39	9886	-78.8	15	0.83	5.0		
1004	18.6	6.39	9913	-79.2	15	0.81	6.0		
<b>Post-Purge</b>									

Did Well dewater? Yes  No  Total Purge volume (gal): 6.0

**Other Comments:** 80% = 5.17 \*purge through flow cell  
DTW = 3.47'

**Sample Info:**

Sample ID: <u>MW-8-20131231</u>	Sample Date and Time: <u>12/12/13 @ 1456</u>
Selected Analysis: <u>SEE COC</u>	

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

Signature: [Signature] Date: 12/12/13

## Groundwater Sampling Form

Site Address:	449 Hegenberger, Oakland CA		
Project No:	2705191	Field Technician:	Diw
Field Point:	MW-9	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	<del>1100</del> 1.78	Well Diameter (in):	② 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	<del>1100</del> 12.60	Water Column Height (ft):	10.82

### Purging Info and Calculations:

<b>Purge Method:</b> <u>Low-Flow</u> <u>3 casing volumes</u>	<b>Purge Equipment:</b> <u>Disposable Bailer</u> <u>Electric Submersible</u> Peristaltic Pump Bladder Pump	<b>Sample Collection Method:</b> <u>Disposable Bailer w/ BED</u> Extraction Port Dedicated Tubing Disposable Tubing
Other: _____	Other: _____	Other: _____
Water Column Height (ft): <u>10.82</u>	X Conversion Factor (gal/ft): <u>0.17</u>	= Casing Volume (gal): <u>1.8</u>
Casing Volume (gal): <u>1.8</u>	X Specified Volumes: <u>3</u>	= Calculated Purge (gal): <u>5.4</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:	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>								
1103	15.8	6.91	2833	-59.0	29	0.87	1.0	
1103	18.9	6.86	4396	-65.2	21	0.20	2.0	
1164	18.7	6.78	4457	-68.5	19	0.20	3.0	
1104	18.9	6.77	4473	-72.0	16	0.30	4.0	
1105	Well Dewatered @ 4.5 gals							
1515	14.5	7.33	2114	-46.5	32	-46.5 1.80		
<b>Post-Purge</b>								
Did Well dewater? <input checked="" type="checkbox"/> Yes    No			Total Purge volume (gal): <u>4.5</u>					

**Other Comments:** 80% = 3.94    \*purge through flow cell  
DTW = 6.8i (2 Hr.)

<b>Sample Info:</b>	
Sample ID: MW-9-20131231	Sample Date and Time: 12/12/13 @ 1518
Selected Analysis: SEE COC	

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

Signature: [Signature]    Date: 12/12/13



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 Hegenbayer, Oakland CA		
Project No:	2705191	Field Technician:	DW
Field Point:	MW-10	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	3.85	Well Diameter (in):	3 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	12.60	Water Column Height (ft):	8.75

### 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 w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 8.75	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.5
Casing Volume (gal): 1.5	X Specified Volumes: 3	= Calculated Purge (gal): 4.5
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:	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>											
			1237	16.6	7.37	1899	23.8	21	2.74	0.8	
			1238	18.1	6.90	3021	17.5	17	0.51	1.6	
			1238	18.5	6.92	2867	11.5	15	0.46	2.4	
			1239	18.8	6.95	2590	2.5	14	0.41	3.2	
			1239	18.9	6.95	2531	-2.6	11	0.39	4.0	
			1240	19.0	6.95	2504	-5.4	10	0.38	4.8	
<b>Post-Purge</b>											
Did Well dewater?				Yes	<input checked="" type="radio"/> No	Total Purge volume (gal): 4.8					

**Other Comments:** 80% = 5.60      \*purge through flow cell  
 ATW = 5.26

<b>Sample Info:</b>	
Sample ID: MW-10-20131231	Sample Date and Time: 12/12/13 @ 1250
Selected Analysis: SEE COC	

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

Signature: [Signature] Date: 12/12/13

## Groundwater Sampling Form

Site Address:	449 Hegenberger, Oakland CA		
Project No:	2705191	Field Technician:	DW
Field Point:	MW-11	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	2.20	Well Diameter (in):	4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	19.55	Water Column Height (ft):	17.35

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow 3 casing volumes Other: _____	<b>Purge Equipment:</b> Disposable Bailor Electric Submersible Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> Disposable Bailor w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 17.35 X Conversion Factor (gal/ft): 0.66 = Casing Volume (gal): 11.5 Casing Volume (gal): 11.5 X Specified Volumes: 3 = Calculated Purge (gal): 34.5		
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:	Stop Time:	Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge											
			1143	19.7	7.42	1167	-76.3	17	0.15	5.8	
			1145	20.0	7.46	1229	-72.1	14	0.21	11.6	
			1147	20.2	7.45	1248	-69.4	13	0.23	17.4	
			1149	20.4	7.43	1265	-63.4	11	0.25	23.2	
			1151	20.4	7.43	1269	-60.0	11	0.25	29.0	
			1153	20.4	7.43	1277	-59.2	13	0.24	34.8	
Post-Purge											

Did Well dewater?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Total Purge volume (gal):	34.8
Other Comments:	80% = 5.67 *purse through flow cell DTW = 4.21		

<b>Sample Info:</b>	
Sample ID: MW-11-20131231	Sample Date and Time: 12/12/13 @ 1155
Selected Analysis: SEE COC	

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

Signature: [Signature] Date: 12/12/13

## Groundwater Sampling Form

Site Address:	449 Hegenberger, Oakland CA		
Project No:	2705191	Field Technician:	DW
Field Point:	MW-12	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	4.00	Well Diameter (in):	2 <u>4</u> 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	19.40	Water Column Height (ft):	15.40

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow <del>3 casing volumes</del> Other: _____	<b>Purge Equipment:</b> Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> <del>Disposable Bailer w/BED</del> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>15.40</u> X Conversion Factor (gal/ft): <u>0.66</u> = Casing Volume (gal): <u>10.1</u> Casing Volume (gal): <u>10.1</u> X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>30.3</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:	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>								
1423	18.8	6.40	14994	10.6	15	0.70	5.1	
1425	19.0	6.59	15561	9.8	8	0.32	10.2	
1427	18.8	6.81	14783	-21.1	5	0.27	15.3	
1429	18.8	6.72	16152	-27.4	5	0.23	20.4	
1431	18.9	6.68	16271	-31.5	6	0.23	25.5	
1433	18.9	6.67	16295	-34.2	5	0.23	30.6	
<b>Post-Purge</b>								

Did Well dewater?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Total Purge volume (gal):	30.6
Other Comments:	80% = 7.08 DTW = 5.65 *purge through flow cell		

<b>Sample Info:</b>	
Sample ID:	MW-12-20131231
Sample Date and Time:	12/12/13 @ 15:35
Selected Analysis:	SEE COC

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

Signature: [Signature] Date: 12/12/13

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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 Hegenberg Oakland CA		
Project No:	2705191	Field Technician:	DW
Field Point:	MW-12A	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	4.35	Well Diameter (in):	3 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	32.65	Water Column Height (ft):	28.30

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow <u>3 casing volumes</u> Other: _____	<b>Purge Equipment:</b> Disposable Bailor <u>Electric Submersible</u> Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> <u>Disposable Bailor W/ISED</u> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>28.30</u>	X Conversion Factor (gal/ft): <u>0.17</u>	= Casing Volume (gal): <u>4.8</u>
Casing Volume (gal): <u>4.8</u>	X Specified Volumes: <u>3</u>	= Calculated Purge (gal): <u>14.4</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: \_\_\_\_\_ 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>								
1038	17.3	6.86	2481	14.4	71000	0.82	2.4	
1039	18.1	6.92	2781	19.9	71000	0.45	2.8	
1040	18.3	6.93	2934	28.1	71000	0.24	7.2	
1041	18.3	6.93	2910	29.5	71000	0.19	9.6	
1042	18.3	6.93	2909	31.3	481	0.18	12.0	
1043	18.3	6.93	2904	32.7	275	0.18	14.4	
<b>Post-Purge</b>								

Did Well dewater? Yes  No  Total Purge volume (gal): 14.4

**Other Comments:** 8090 = 10:01 \* purge through flow cell  
DTW = 4.68

<b>Sample Info:</b>	
Sample ID: MW-12A-20131231	Sample Date and Time: 12/12/13 @ 1050
Selected Analysis: SEE COC	

This form was provided by Antea Group and completed by: (Print Full Name) Daniel Allen, an employee of Blaine Tech Services, Inc.  
 Signature: [Signature] Date: 12/12/13

## Groundwater Sampling Form

Site Address:	449 Hegenbeyer, Oakland CA		
Project No:	2705191	Field Technician:	DW
Field Point:	MW-13	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	4.05	Well Diameter (in):	2 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	14.55	Water Column Height (ft):	10.50

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow <u>3 casing volumes</u> Other: _____	<b>Purge Equipment:</b> Disposable Bailor <del>Electric Submersible</del> Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> <del>Disposable Bailor</del> <u>W/BED</u> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>10.50</u> X Conversion Factor (gal/ft): <u>0.17</u> = Casing Volume (gal): <u>1.8</u> Casing Volume (gal): <u>1.8</u> X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>5.4</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:	Stop Time:	Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge											
			1303	18.0	7.02	2186	18.7	251	0.97	1.0	
			1303	17.7	7.62	3070	6.0	132	0.52	2.0	
			1304	17.5	7.63	3075	-24.1	85	0.47	3.0	
			1304	17.6	7.63	3107	-41.5	76	0.43	4.0	
			1305	17.7	7.63	3125	-44.2	74	0.42	5.0	
			1305	17.7	7.63	3139	-48.7	70	0.40	6.0	
Post-Purge											

Did Well dewater?	Yes	No <input checked="" type="checkbox"/>	Total Purge volume (gal): <u>6.0</u>
Other Comments:	80% = 6.15 DTW = 6.08 * purge through flow cell		

<b>Sample Info:</b>	
Sample ID: <u>MW-13-20131231</u>	Sample Date and Time: <u>12/12/13 @ 1310</u>
Selected Analysis: <u>SEE COL</u>	

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

Signature: [Signature] Date: 12/12/13

## Groundwater Sampling Form

Site Address:	449 Heegenberges Rd, Oakland		
Project No:	2705191	Field Technician:	PC
Field Point:	MW-14	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	4.35	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):	8.4

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow 3 casing volumes Other: _____	<b>Purge Equipment:</b> Disposable Bailor Electric Submersible Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> Disposable Bailor w/BFO Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 8.4 X Conversion Factor (gal/ft): 0.17 = Casing Volume (gal): 1.3 Casing Volume (gal): 1.3 X Specified Volumes: 3 = Calculated Purge (gal): 3.9		
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: 1421 Stop Time: 1448

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>								
1426	12.0	7.06	4265	5.1	54	2.42	0.7	6.18'
1431	11.7	6.95	5449	-14.3	44	2.40	1.3	7.11
1435	12.1	6.96	6768	-26.6	18	2.31	2.0	7.59
1439	12.8	7.03	6727	-27.7	14	2.13	2.7	8.61
1443	12.9	6.91	6701	-32.0	11	2.20	3.3	9.40
1447	12.9	6.90	6692	-33.1	8	2.21	3.9	9.86
<b>Post-Purge</b>								

Did Well dewater? Yes  No  Total Purge volume (gal): 3.9

**Other Comments:** \* Purge thru flowcell  
 80% = 6.03' DTW: 7.92 (2 HR)

**Sample Info:**

Sample ID:	MW-14-20131231	Sample Date and Time:	12/12/13 @ 1648
Selected Analysis:	see COC		

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

Signature: Pete Lomish Date: 12/12/13

## Groundwater Sampling Form

Site Address:	449 Hegenberger, Oakland CA		
Project No:	2705191	Field Technician:	DW
Field Point:	MW-15	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	3.00	Well Diameter (in):	② 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	12.65	Water Column Height (ft):	9.65

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow casing volumes Other: _____	<b>Purge Equipment:</b> Disposable Bailor Electric Submersible Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> Disposable Bailor w/BEP Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 9.65	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.6
Casing Volume (gal): 1.6	X Specified Volumes: 3	= Calculated Purge (gal): 4.8
Conversion Factors (gal/ft): 2" = 0.17    4" = 0.66    6" = 1.5    8" = 2.6    Other = radius <sup>2</sup> * 0.163		


Purge:	Start Time:	Stop Time:	Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge											
			1341	13.4	6.94	6495	-10.7	22	0.67	0.8	
			1341	17.1	6.78	4299	-25.1	18	0.58	1.6	
			1342	17.1	6.61	2084	-41.7	16	0.51	2.4	
			1342	17.2	6.59	2016	-45.6	15	0.47	3.2	
			1343	17.3	6.57	2045	-48.7	15	0.45	4.0	
			1343	17.3	6.56	2067	-53.2	13	0.44	4.8	
Post-Purge											

Did Well dewater?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Total Purge volume (gal):	4.8
Other Comments:	80% = 4.93 DTW = 4.8'6 * purge through flow cell		

<b>Sample Info:</b>	
Sample ID: MW-15-20131231	Sample Date and Time: 12/12/13 @ 1515
Selected Analysis: SEE COC	

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

Signature: [Signature] Date: 12/12/13



**Antea™ Group**, 1-800-477-7411

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

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





## Groundwater Sampling Form

Site Address:	449 Hegenbaser, Oakland CA		
Project No:	2705191	Field Technician:	DW
Field Point:	MW-17	Date:	12/12/13
Depth to Water (DTW) (ft bgs):	5.00	Well Diameter (in):	② 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	12.60	Water Column Height (ft):	7.60

### 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 w/BFO Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 7.60	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.3
Casing Volume (gal): 1.3	X Specified Volumes: 3	= Calculated Purge (gal): 3.9
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>	<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>								
1440	18.8	7.17	22751	-152.3	62	0.59	0.7	
1440	19.5	7.00	23524	-150.5	55	0.37	1.4	
1441	19.6	6.99	23717	-157.2	51	0.36	2.1	
1441	19.6	6.97	23850	-160.3	50	0.36	2.8	
1442	19.7	6.95	23889	-163.2	53	0.35	3.5	
1442	19.7	6.95	23917	-166.0	51	0.35	4.2	
<b>Post-Purge</b>								
Did Well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Total Purge volume (gal): 4.2						

**Other Comments:** 80% = 6.52      \*purge through flow cell  
DTW = 6.46      FDI-20131231 @ 1645

<b>Sample Info:</b>	
Sample ID: MW-17-20131231	Sample Date and Time: 12/12/13 @ 1640
Selected Analysis: SEE COC	

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

Signature: [Signature] Date: 12/12/13









*Quarterly Summary Report, Fourth Quarter 2013*  
*76 Station No. 5191/5043*  
*Oakland, CA*  
*Antea Group Project No. I42705191*



## ***Appendix D***

Certified Laboratory Analytical Report and Data Validation Form

**Is the Data Set Valid?**

(circle)  
**Yes** / No

**Preservation Temperature**

(if Known): 4.4 °C

**Antea™ Group Laboratory Data Validation Sheet**

**Project/Client:** 76 Station No. 5191 / COP-ELT

**Project #:** I42705191

**Date of Validation:** 1/2/14      **Date of Analysis:** 12/18/13 - 12/23/13

**Sample Date:** 12/12/13      **Completed By:** ETW

**Signature:** *[Signature]*

Circle  
or  
Highlight  
**Yes** / No  
(below)

**Analytical Lab Used and Report # (if any):** Riff # 86927

1. Were the analyses the ones requested?
2. Do the sample number(s) on the chain-of-custody (COC) match the one(s) that appear on the laboratory data sheet?
3. Were samples prepared (extracted, filtered, etc.) within EPA holding times?
4. Once prepared/extracted, were the samples analyzed within the EPA holding times?
5. Were Laboratory blanks performed, if so, were they non-detect?
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.)
7. Were appropriate Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples included in the laboratory batch sample?
8. In lieu of MS/ MSD, were surrogate spike (SS) or surrogate spike duplicate (SSD) samples included in the laboratory batch samples?
9. Were MS/ MSD (or SS/SSD) within the acceptable range of % recovery (i.e., approximately 80-120%, depending on the analyte)?
10. Were MS/MSD (or SS/SSD) values used to calculate Relative Percent Difference (RPD)?
11. Were Relative Percent Difference values within the acceptable range (i.e. ±25%)?

**Yes** / No  
**Yes** / No  
**Yes** / No  
~~Yes~~ / ~~No~~  
**Yes** / No  
**Yes** / No  
**Yes** / No  
**Yes** / No  
**Yes** / No  
**Yes** / No  
**Yes** / No

**If any answer is no, explain why and what corrective action was taken (use additional sheet(s), as necessary):**

#4 MW-17 and FD outside of Hold time for Method EPA 8260D. The HCl preservation was insufficient to maintain a pH of 2.0 or less required to extend sample hold time from 7 to 14 days.



## Laboratory Results

Dennis Dettloff  
Antea Group  
11050 White Rock Rd. Suite 110  
Rancho Cordova, CA 95670

Subject : 15 Water Samples  
Project Name : 2705191  
Project Number :

Dear Mr. Dettloff,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC and TNI 2009 standards. Laboratory results relate only to the samples tested. This report may be freely reproduced in full, but may only be reproduced in part with the express permission of Kiff Analytical, LLC. Kiff Analytical, LLC is certified by the State of California under the National Environmental Laboratory Accreditation Program (NELAP), lab # 08263CA. If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink that reads "Troy G. Turpen". The signature is written in a cursive style with a large, prominent "T" and "G".

Troy Turpen

Subject : 15 Water Samples  
Project Name : 2705191  
Project Number :

## Case Narrative

The Method Reporting Limit for Ethanol has been increased due to the presence of an interfering compound for sample MW-15\_20131231.

Tert-Butanol results for sample MW-12\_20131231 may be biased slightly high and are flagged with a 'J'. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples. We consider this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 20:1.

Samples MW17\_20131231 and FD\_20131231 were analyzed outside of hold time for Method EPA 8260B. The hydrochloric acid (HCl) preservation was insufficient to maintain a pH of 2.0 or less required to extend sample hold time from 7 to 14 days.



# Analysis Summary

Report Number : 86927

Date : 12/23/13

Attention : Dennis Dettloff  
 Antea Group  
 11050 White Rock Rd. Suite 110  
 Rancho Cordova, CA 95670

Project Name :2705191

Project Number :

Sample Name			MW-10_20131231	MW-11_20131231	MW-12_20131231	MW-12A_2013123	MW-13_20131231	MW-14_20131231	MW-15_20131231							
Sample Date			12/12/13		12/12/13		12/12/13		12/12/13							
Analyte	Method	Units	MRL	Results	MRL	Results	MRL	Results	MRL	Results	MRL	Results	MRL	Results		
Benzene	EPA 8260B	ug/L	0.50	<b>2.4</b>	0.50	ND	1.5	<b>18</b>	0.50	ND	0.50	ND	9.0	<b>1400</b>	0.50	ND
Ethylbenzene	EPA 8260B	ug/L	0.50	ND	0.50	ND	1.5	<b>1.6</b>	0.50	ND	0.50	ND	9.0	<b>2200</b>	0.50	ND
Toluene	EPA 8260B	ug/L	0.50	ND	0.50	ND	1.5	ND	0.50	ND	0.50	ND	9.0	<b>32</b>	0.50	ND
Total Xylenes	EPA 8260B	ug/L	0.50	ND	0.50	ND	1.5	ND	0.50	ND	0.50	ND	9.0	<b>4800</b>	0.50	ND
Ethanol	EPA 8260B	ug/L	5.0	ND	5.0	ND	15	ND	5.0	ND	5.0	ND	90	ND	10	ND
Methyl-t-butyl ether (MTBE)	EPA 8260B	ug/L	0.50	ND	0.50	<b>20</b>	1.5	<b>940</b>	0.50	ND	0.50	<b>63</b>	9.0	ND	0.50	<b>130</b>
Tert-Butanol	EPA 8260B	ug/L	5.0	ND	5.0	ND	9.0	<b>14 J</b>	5.0	ND	5.0	<b>43</b>	50	ND	5.0	<b>59</b>
TPH as Gasoline	EPA 8260B	ug/L	50	ND	50	ND	150	<b>180</b>	50	ND	50	ND	900	<b>27000</b>	50	ND
1,2-Dichloroethane-d4 (Surr)	EPA 8260B	%		97.5		99.3		102		97.7		97.0		101		98.9
Toluene - d8 (Surr)	EPA 8260B	%		100		101		100		101		101		100		101
TPH as Diesel (Silica Gel)	M EPA 8015	ug/L	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND
Octacosane (Silica Gel Surr)	M EPA 8015	%		110		110		111		113		112		107		112

MRL = Method Reporting Limit

ND = Not Detected



# Analysis Summary

Report Number : 86927

Date : 12/23/13

Attention : Dennis Dettloff  
 Antea Group  
 11050 White Rock Rd. Suite 110  
 Rancho Cordova, CA 95670

Project Name :2705191

Project Number :

Sample Name		MW-16_20131231	MW-17_20131231		MW-3_20131231		MW-6_20131231		MW-7_20131231		MW-8_20131231		MW-9_20131231	
Sample Date		12/12/13		12/12/13		12/12/13		12/12/13		12/12/13		12/12/13		
Analyte	Method	Units	MRL	Results	MRL	Results	MRL	Results	MRL	Results	MRL	Results	MRL	Results
Benzene	EPA 8260B	ug/L	0.50	ND	25	<b>17000</b>	0.50	ND	2.5	<b>220</b>	0.50	ND	0.50	ND
Ethylbenzene	EPA 8260B	ug/L	0.50	ND	15	<b>2900</b>	0.50	ND	2.5	<b>270</b>	0.50	ND	0.50	ND
Toluene	EPA 8260B	ug/L	0.50	ND	15	<b>9000</b>	0.50	ND	2.5	<b>13</b>	0.50	ND	0.50	ND
Total Xylenes	EPA 8260B	ug/L	0.50	ND	15	<b>9100</b>	0.50	ND	2.5	<b>660</b>	0.50	ND	0.50	ND
Ethanol	EPA 8260B	ug/L	5.0	ND	150	ND	5.0	ND	25	ND	5.0	ND	5.0	ND
Methyl-t-butyl ether (MTBE)	EPA 8260B	ug/L	0.50	<b>62</b>	15	ND	0.50	<b>22</b>	2.5	<b>9.5</b>	0.50	ND	0.50	ND
Tert-Butanol	EPA 8260B	ug/L	5.0	<b>530</b>	70	<b>250</b>	5.0	<b>46</b>	15	<b>120</b>	5.0	ND	5.0	ND
TPH as Gasoline	EPA 8260B	ug/L	50	ND	1500	<b>92000</b>	50	<b>400</b>	250	<b>15000</b>	50	ND	50	ND
1,2-Dichloroethane-d4 (Surr)	EPA 8260B	%		96.9		97.3		98.3		98.6		99.8		97.1
Toluene - d8 (Surr)	EPA 8260B	%		101		100		102		98.8		100		100
TPH as Diesel (Silica Gel)	M EPA 8015	ug/L	50	ND	50	ND	50	ND	50	<b>100</b>	50	ND	50	ND
Octacosane (Silica Gel Surr)	M EPA 8015	%		112		110		109		112		113		113

MRL = Method Reporting Limit

ND = Not Detected





# Analysis Summary

Report Number : 86927

Date : 12/23/13

Attention : Dennis Dettloff  
 Antea Group  
 11050 White Rock Rd. Suite 110  
 Rancho Cordova, CA 95670

Project Name :2705191

Project Number :

Sample Name		FD1_20131231		
Sample Date		12/12/13		
Analyte	Method	Units	MRL	Results
Benzene	EPA 8260B	ug/L	25	<b>17000</b>
Ethylbenzene	EPA 8260B	ug/L	9.0	<b>2700</b>
Toluene	EPA 8260B	ug/L	9.0	<b>4800</b>
Total Xylenes	EPA 8260B	ug/L	9.0	<b>6000</b>
Ethanol	EPA 8260B	ug/L	90	ND
Methyl-t-butyl ether (MTBE)	EPA 8260B	ug/L	9.0	ND
Tert-Butanol	EPA 8260B	ug/L	50	<b>250</b>
TPH as Gasoline	EPA 8260B	ug/L	900	<b>71000</b>
1,2-Dichloroethane-d4 (Surr)	EPA 8260B	%		96.6
Toluene - d8 (Surr)	EPA 8260B	%		100
TPH as Diesel (Silica Gel)	M EPA 8015	ug/L	50	ND
Octacosane (Silica Gel Surr)	M EPA 8015	%		83.5

MRL = Method Reporting Limit

ND = Not Detected

Project Name : **2705191**

Project Number :

Sample : **MW-10\_20131231**

Matrix : Water

Lab Number : 86927-01

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
<b>Benzene</b>	<b>2.4</b>	0.50	ug/L	EPA 8260B	12/18/13 14:00
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 14:00
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 14:00
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 14:00
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 14:00
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 14:00
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 14:00
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/13 14:00
1,2-Dichloroethane-d4 (Surr)	97.5		% Recovery	EPA 8260B	12/18/13 14:00
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/18/13 14:00
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 14:59
Octacosane (Silica Gel Surr)	110		% Recovery	M EPA 8015	12/19/13 14:59

Project Name : **2705191**

Project Number :

Sample : **MW-11\_20131231**

Matrix : Water

Lab Number : 86927-02

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 18:45
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 18:45
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 18:45
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 18:45
<b>Methyl-t-butyl ether (MTBE)</b>	<b>20</b>	0.50	ug/L	EPA 8260B	12/18/13 18:45
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 18:45
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 18:45
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/13 18:45
1,2-Dichloroethane-d4 (Surr)	99.3		% Recovery	EPA 8260B	12/18/13 18:45
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/18/13 18:45
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 15:34
Octacosane (Silica Gel Surr)	110		% Recovery	M EPA 8015	12/19/13 15:34

Project Name : **2705191**

Project Number :

Sample : **MW-12\_20131231**

Matrix : Water

Lab Number : 86927-03

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
<b>Benzene</b>	<b>18</b>	1.5	ug/L	EPA 8260B	12/19/13 00:02
Toluene	< 1.5	1.5	ug/L	EPA 8260B	12/19/13 00:02
<b>Ethylbenzene</b>	<b>1.6</b>	1.5	ug/L	EPA 8260B	12/19/13 00:02
Total Xylenes	< 1.5	1.5	ug/L	EPA 8260B	12/19/13 00:02
<b>Methyl-t-butyl ether (MTBE)</b>	<b>940</b>	1.5	ug/L	EPA 8260B	12/19/13 00:02
<b>Tert-Butanol</b>	<b>14 J</b>	9.0	ug/L	EPA 8260B	12/23/13 14:04
Ethanol	< 15	15	ug/L	EPA 8260B	12/19/13 00:02
<b>TPH as Gasoline</b>	<b>180</b>	150	ug/L	EPA 8260B	12/19/13 00:02
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	12/19/13 00:02
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/19/13 00:02
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 20:49
Octacosane (Silica Gel Surr)	111		% Recovery	M EPA 8015	12/19/13 20:49

Project Name : **2705191**

Project Number :

Sample : **MW-12A\_20131231**

Matrix : Water

Lab Number : 86927-04

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 19:20
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 19:20
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 19:20
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 19:20
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 19:20
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 19:20
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 19:20
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/13 19:20
1,2-Dichloroethane-d4 (Surr)	97.7		% Recovery	EPA 8260B	12/18/13 19:20
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/18/13 19:20
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 21:24
Octacosane (Silica Gel Surr)	113		% Recovery	M EPA 8015	12/19/13 21:24

Project Name : **2705191**

Project Number :

Sample : **MW-13\_20131231**

Matrix : Water

Lab Number : 86927-05

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 19:55
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 19:55
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 19:55
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 19:55
<b>Methyl-t-butyl ether (MTBE)</b>	<b>63</b>	0.50	ug/L	EPA 8260B	12/18/13 19:55
<b>Tert-Butanol</b>	<b>43</b>	5.0	ug/L	EPA 8260B	12/18/13 19:55
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 19:55
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/13 19:55
1,2-Dichloroethane-d4 (Surr)	97.0		% Recovery	EPA 8260B	12/18/13 19:55
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/18/13 19:55
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 21:59
Octacosane (Silica Gel Surr)	112		% Recovery	M EPA 8015	12/19/13 21:59

Project Name : **2705191**

Project Number :

Sample : **MW-14\_20131231**

Matrix : Water

Lab Number : 86927-06

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
<b>Benzene</b>	<b>1400</b>	9.0	ug/L	EPA 8260B	12/19/13 01:13
<b>Toluene</b>	<b>32</b>	9.0	ug/L	EPA 8260B	12/19/13 01:13
<b>Ethylbenzene</b>	<b>2200</b>	9.0	ug/L	EPA 8260B	12/19/13 01:13
<b>Total Xylenes</b>	<b>4800</b>	9.0	ug/L	EPA 8260B	12/19/13 01:13
Methyl-t-butyl ether (MTBE)	< 9.0	9.0	ug/L	EPA 8260B	12/19/13 01:13
Tert-Butanol	< 50	50	ug/L	EPA 8260B	12/19/13 01:13
Ethanol	< 90	90	ug/L	EPA 8260B	12/19/13 01:13
<b>TPH as Gasoline</b>	<b>27000</b>	900	ug/L	EPA 8260B	12/19/13 01:13
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	12/19/13 01:13
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/19/13 01:13
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 16:09
Octacosane (Silica Gel Surr)	107		% Recovery	M EPA 8015	12/19/13 16:09

Project Name : **2705191**

Project Number :

Sample : **MW-15\_20131231**

Matrix : Water

Lab Number : 86927-07

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 20:30
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 20:30
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 20:30
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 20:30
<b>Methyl-t-butyl ether (MTBE)</b>	<b>130</b>	0.50	ug/L	EPA 8260B	12/18/13 20:30
<b>Tert-Butanol</b>	<b>59</b>	5.0	ug/L	EPA 8260B	12/18/13 20:30
Ethanol	< 10	10	ug/L	EPA 8260B	12/18/13 20:30
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/13 20:30
1,2-Dichloroethane-d4 (Surr)	98.9		% Recovery	EPA 8260B	12/18/13 20:30
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/18/13 20:30
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 16:44
Octacosane (Silica Gel Surr)	112		% Recovery	M EPA 8015	12/19/13 16:44



Project Name : **2705191**

Project Number :

Sample : **MW-16\_20131231**

Matrix : Water

Lab Number : 86927-08

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 21:05
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 21:05
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 21:05
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 21:05
<b>Methyl-t-butyl ether (MTBE)</b>	<b>62</b>	0.50	ug/L	EPA 8260B	12/18/13 21:05
<b>Tert-Butanol</b>	<b>530</b>	5.0	ug/L	EPA 8260B	12/18/13 21:05
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 21:05
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/13 21:05
1,2-Dichloroethane-d4 (Surr)	96.9		% Recovery	EPA 8260B	12/18/13 21:05
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/18/13 21:05
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 17:20
Octacosane (Silica Gel Surr)	112		% Recovery	M EPA 8015	12/19/13 17:20

Project Name : **2705191**

Project Number :

Sample : **MW-17\_20131231**

Matrix : Water

Lab Number : 86927-09

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
<b>Benzene</b>	<b>17000</b>	25	ug/L	EPA 8260B	12/20/13 14:01
<b>Toluene</b>	<b>9000</b>	15	ug/L	EPA 8260B	12/19/13 02:23
<b>Ethylbenzene</b>	<b>2900</b>	15	ug/L	EPA 8260B	12/19/13 02:23
<b>Total Xylenes</b>	<b>9100</b>	15	ug/L	EPA 8260B	12/19/13 02:23
Methyl-t-butyl ether (MTBE)	< 15	15	ug/L	EPA 8260B	12/19/13 02:23
<b>Tert-Butanol</b>	<b>250</b>	70	ug/L	EPA 8260B	12/19/13 02:23
Ethanol	< 150	150	ug/L	EPA 8260B	12/19/13 02:23
<b>TPH as Gasoline</b>	<b>92000</b>	1500	ug/L	EPA 8260B	12/19/13 02:23
1,2-Dichloroethane-d4 (Surr)	97.3		% Recovery	EPA 8260B	12/19/13 02:23
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/19/13 02:23
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 17:55
Octacosane (Silica Gel Surr)	110		% Recovery	M EPA 8015	12/19/13 17:55

Project Name : **2705191**

Project Number :

Sample : **MW-3\_20131231**

Matrix : Water

Lab Number : 86927-10

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 21:40
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 21:40
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 21:40
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 21:40
<b>Methyl-t-butyl ether (MTBE)</b>	<b>22</b>	0.50	ug/L	EPA 8260B	12/18/13 21:40
<b>Tert-Butanol</b>	<b>46</b>	5.0	ug/L	EPA 8260B	12/18/13 21:40
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 21:40
<b>TPH as Gasoline</b>	<b>400</b>	50	ug/L	EPA 8260B	12/18/13 21:40
1,2-Dichloroethane-d4 (Surr)	98.3		% Recovery	EPA 8260B	12/18/13 21:40
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	12/18/13 21:40
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 18:30
Octacosane (Silica Gel Surr)	109		% Recovery	M EPA 8015	12/19/13 18:30

Project Name : **2705191**

Project Number :

Sample : **MW-6\_20131231**

Matrix : Water

Lab Number : 86927-11

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
<b>Benzene</b>	<b>220</b>	2.5	ug/L	EPA 8260B	12/23/13 14:17
<b>Toluene</b>	<b>13</b>	2.5	ug/L	EPA 8260B	12/23/13 14:17
<b>Ethylbenzene</b>	<b>270</b>	2.5	ug/L	EPA 8260B	12/23/13 14:17
<b>Total Xylenes</b>	<b>660</b>	2.5	ug/L	EPA 8260B	12/23/13 14:17
<b>Methyl-t-butyl ether (MTBE)</b>	<b>9.5</b>	2.5	ug/L	EPA 8260B	12/23/13 14:17
<b>Tert-Butanol</b>	<b>120</b>	15	ug/L	EPA 8260B	12/23/13 14:17
Ethanol	< 25	25	ug/L	EPA 8260B	12/23/13 14:17
<b>TPH as Gasoline</b>	<b>15000</b>	250	ug/L	EPA 8260B	12/23/13 14:17
1,2-Dichloroethane-d4 (Surr)	98.6		% Recovery	EPA 8260B	12/23/13 14:17
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	12/23/13 14:17
<b>TPH as Diesel (Silica Gel)</b>	<b>100</b>	50	ug/L	M EPA 8015	12/19/13 19:04
(Note: Some hydrocarbons lower-boiling, some higher-boiling than Diesel.)					
Octacosane (Silica Gel Surr)	112		% Recovery	M EPA 8015	12/19/13 19:04

Project Name : **2705191**

Project Number :

Sample : **MW-7\_20131231**

Matrix : Water

Lab Number : 86927-12

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 22:15
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 22:15
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 22:15
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 22:15
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 22:15
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 22:15
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 22:15
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/13 22:15
1,2-Dichloroethane-d4 (Surr)	99.8		% Recovery	EPA 8260B	12/18/13 22:15
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/18/13 22:15
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 19:40
Octacosane (Silica Gel Surr)	113		% Recovery	M EPA 8015	12/19/13 19:40

Project Name : **2705191**

Project Number :

Sample : **MW-8\_20131231**

Matrix : Water

Lab Number : 86927-13

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 22:50
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 22:50
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 22:50
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 22:50
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 22:50
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 22:50
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 22:50
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/13 22:50
1,2-Dichloroethane-d4 (Surr)	97.1		% Recovery	EPA 8260B	12/18/13 22:50
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/18/13 22:50
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13 20:14
Octacosane (Silica Gel Surr)	113		% Recovery	M EPA 8015	12/19/13 20:14

Project Name : **2705191**

Project Number :

Sample : **MW-9\_20131231**

Matrix : Water

Lab Number : 86927-14

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 23:24
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 23:24
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 23:24
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13 23:24
<b>Methyl-t-butyl ether (MTBE)</b>	<b>0.56</b>	0.50	ug/L	EPA 8260B	12/18/13 23:24
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 23:24
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13 23:24
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/13 23:24
1,2-Dichloroethane-d4 (Surr)	99.1		% Recovery	EPA 8260B	12/18/13 23:24
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/18/13 23:24
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/20/13 12:40
Octacosane (Silica Gel Surr)	94.9		% Recovery	M EPA 8015	12/20/13 12:40

Project Name : **2705191**

Project Number :

Sample : **FD1\_20131231**

Matrix : Water

Lab Number : 86927-15

Sample Date :12/12/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
<b>Benzene</b>	<b>17000</b>	25	ug/L	EPA 8260B	12/20/13 14:37
<b>Toluene</b>	<b>4800</b>	9.0	ug/L	EPA 8260B	12/19/13 01:48
<b>Ethylbenzene</b>	<b>2700</b>	9.0	ug/L	EPA 8260B	12/19/13 01:48
<b>Total Xylenes</b>	<b>6000</b>	9.0	ug/L	EPA 8260B	12/19/13 01:48
Methyl-t-butyl ether (MTBE)	< 9.0	9.0	ug/L	EPA 8260B	12/19/13 01:48
<b>Tert-Butanol</b>	<b>250</b>	50	ug/L	EPA 8260B	12/19/13 01:48
Ethanol	< 90	90	ug/L	EPA 8260B	12/19/13 01:48
<b>TPH as Gasoline</b>	<b>71000</b>	900	ug/L	EPA 8260B	12/19/13 01:48
1,2-Dichloroethane-d4 (Surr)	96.6		% Recovery	EPA 8260B	12/19/13 01:48
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/19/13 01:48
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/20/13 13:10
Octacosane (Silica Gel Surr)	83.5		% Recovery	M EPA 8015	12/20/13 13:10



**QC Report : Method Blank Data**

Project Name : **2705191**

Project Number :

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/13
Octacosane (Silica Gel Surr)	112		%	M EPA 8015	12/19/13
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/13
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/13
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/13
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/13
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/13
1,2-Dichloroethane-d4 (Surr)	96.6		%	EPA 8260B	12/18/13
Toluene - d8 (Surr)	101		%	EPA 8260B	12/18/13
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/19/13
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/13
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/13
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/23/13
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/23/13
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/23/13
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/13
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/23/13
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/23/13
1,2-Dichloroethane-d4 (Surr)	98.9		%	EPA 8260B	12/23/13
Toluene - d8 (Surr)	99.6		%	EPA 8260B	12/23/13

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/23/13

## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 2705191

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH-D (Si Gel)	BLANK	<50	1000	1000	895	900	ug/L	M EPA 8015	12/19/13	89.5	90.0	0.622	70-130	25
Benzene	86927-01	2.4	40.0	39.8	41.2	41.4	ug/L	EPA 8260B	12/18/13	96.8	98.1	1.28	70.0-130	25
Ethanol	86927-01	<5.0	100	99.4	103	108	ug/L	EPA 8260B	12/18/13	103	109	5.07	55.0-150	25
Ethylbenzene	86927-01	<0.50	40.0	39.8	39.6	39.1	ug/L	EPA 8260B	12/18/13	99.0	98.2	0.704	70.0-130	25
Methyl-t-butyl ether	86927-01	<0.50	39.9	39.6	41.2	39.3	ug/L	EPA 8260B	12/18/13	103	99.2	4.09	70.0-130	25
P + M Xylene	86927-01	<0.50	40.0	39.8	39.2	38.4	ug/L	EPA 8260B	12/18/13	98.0	96.5	1.61	70.0-130	25
Tert-Butanol	86927-01	<5.0	200	199	196	198	ug/L	EPA 8260B	12/18/13	97.8	99.4	1.64	70.0-130	25
Toluene	86927-01	<0.50	40.0	39.8	39.5	39.6	ug/L	EPA 8260B	12/18/13	98.8	99.6	0.815	70.0-130	25
Benzene	86939-01	<0.50	39.8	40.0	39.6	39.6	ug/L	EPA 8260B	12/19/13	99.5	99.0	0.495	70.0-130	25

## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 2705191

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	86957-03	<0.50	40.0	40.0	42.1	40.8	ug/L	EPA 8260B	12/23/13	105	102	2.95	70.0-130	25
Ethanol	86957-03	<5.0	100	100	97.4	98.3	ug/L	EPA 8260B	12/23/13	97.4	98.3	0.845	55.0-150	25
Ethylbenzene	86957-03	<0.50	40.0	40.0	41.9	40.8	ug/L	EPA 8260B	12/23/13	105	102	2.79	70.0-130	25
Methyl-t-butyl ether	86957-03	<0.50	39.9	39.9	41.5	41.1	ug/L	EPA 8260B	12/23/13	104	103	0.938	70.0-130	25
P + M Xylene	86957-03	<0.50	40.0	40.0	37.8	36.8	ug/L	EPA 8260B	12/23/13	94.6	92.1	2.69	70.0-130	25
Tert-Butanol	86957-03	<5.0	200	200	208	207	ug/L	EPA 8260B	12/23/13	104	103	0.715	70.0-130	25
Toluene	86957-03	<0.50	40.0	40.0	41.4	40.1	ug/L	EPA 8260B	12/23/13	104	100	3.32	70.0-130	25
Tert-Butanol	86925-25	<5.0	200	200	212	210	ug/L	EPA 8260B	12/23/13	106	105	0.920	70.0-130	25

**QC Report : Laboratory Control Sample (LCS)**Project Name : **2705191**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	12/18/13	97.1	70.0-130
Ethanol	100	ug/L	EPA 8260B	12/18/13	100	55.0-150
Ethylbenzene	40.0	ug/L	EPA 8260B	12/18/13	98.6	70.0-130
Methyl-t-butyl ether	39.9	ug/L	EPA 8260B	12/18/13	108	70.0-130
P + M Xylene	40.0	ug/L	EPA 8260B	12/18/13	96.8	70.0-130
Tert-Butanol	200	ug/L	EPA 8260B	12/18/13	96.8	70.0-130
Toluene	40.0	ug/L	EPA 8260B	12/18/13	99.2	70.0-130
Benzene	40.0	ug/L	EPA 8260B	12/19/13	99.1	70.0-130
Benzene	39.9	ug/L	EPA 8260B	12/23/13	104	70.0-130
Ethanol	99.8	ug/L	EPA 8260B	12/23/13	102	55.0-150
Ethylbenzene	39.9	ug/L	EPA 8260B	12/23/13	107	70.0-130
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	12/23/13	102	70.0-130
P + M Xylene	39.9	ug/L	EPA 8260B	12/23/13	101	70.0-130
TPH as Gasoline	488	ug/L	EPA 8260B	12/23/13	83.1	70.0-130
Tert-Butanol	200	ug/L	EPA 8260B	12/23/13	100	70.0-130
Toluene	39.9	ug/L	EPA 8260B	12/23/13	104	70.0-130
Tert-Butanol	199	ug/L	EPA 8260B	12/23/13	100	70.0-130





**SAMPLE RECEIPT CHECKLIST**

SRG #: 86927

Sample Receipt	Initials/Date: TJB 12/7/13	Storage Time: 1443	Sample Login	Initials/Date: [Signature] 12/8/13
TAT: <input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Rush	<input type="checkbox"/> Split	<input type="checkbox"/> None	Method of Receipt: <input type="checkbox"/> Courier <input type="checkbox"/> Over-the-counter <input checked="" type="checkbox"/> Shipped
Temp °C 4.4	<input type="checkbox"/> N/A	Therm ID IR-3	Time 0953	Coolant present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Water <input type="checkbox"/> Temp Excursion
For Shipments Only:	Cooler Receipt Initials/Date/Time: MAS 12/7/13 0953		Custody Seals <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Intact <input type="checkbox"/> Broken

Chain-of-Custody:	Yes	No
Is COC present?	X	
Is COC signed by relinquisher?	X	
Is COC dated by relinquisher?	X	
Is the sampler's name on the COC?	X	
Are there analyses or hold for all samples?	X	

Documented on	COC	Labels	Discrepancies:
Sample ID	/	/	
Project ID	/	/	
Sample Date	/	/	Sample -11 has one container dated 12/6/13
Sample Time	/	/	Sample -15 has 3 containers with a time of 1640.
Does COC match project history?	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Samples:	N/A	Yes	No
Are sample custody seals intact?	X		
Are sample containers intact?		X	
Is preservation documented?			X*
In-house Analysis:	N/A	Yes	No
Are preservatives acceptable?		X*	
Are samples within holding time?		X	
Are sample container types correct?		X	
Is there adequate sample volume?		X	

Comments: \* Preservation is not indicated for samples -02 through -12. Per client history, Sample Receiving will log in the preservative as HCl. TJB 12/7/13 1449

Matrix	Container Type	# of Containers
WA	VOA	75

CS Required:

Proceed With Analysis:  YES  NO      Init/Date: SDF 12/8/13

Client Communication: