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May 5, 2015

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

Subject: Quarterly Summary Report, First Quarter 2015
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:

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Sincerely,

PACIFIC CONVENIENCE & FUEL



WALTER SPRAGUE
Director of Retail Services

Attachment

Quarterly Summary Report, First Quarter 2015

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

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

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

GeoTracker Global ID No. T0600101476

Antea Group Project No. I42705191

May 5, 2015

Prepared for:
Mr. Keith Nowell
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Services Agency
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1.0 INTRODUCTION

Antea Group is pleased to submit this *Quarterly Summary Report, First Quarter 2015*, 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 ten groundwater monitoring wells are located at or near the site (**Figure 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 March 16, 2015. 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 [First Quarter 2015]

1. Antea Group submitted the *Quarterly Summary Report, Fourth Quarter 2014*, dated January 29, 2015 to the Alameda County Health Care Services Agency (ACHCSA).
2. Antea Group conducted the first quarter 2015 groundwater monitoring and sampling event on March 16, 2015.
3. Antea Group submitted the *Work Plan – Well Destruction and Waste Characterization*, dated March 23, 2015 to the ACHCSA.

1.2 Work Proposed [Second Quarter 2015]

1. Antea Group will submit the *Quarterly Summary Report, First Quarter 2015* (contained herein) to the ACHCSA.
2. Antea Group will continue to work towards completing the on-site soil excavation activities.
3. Antea Group will conduct the second quarter 2015 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-9, MW-11, and MW-13 through MW-16
Monitoring well sampling schedule:	Quarterly: MW-6, MW-11, and MW-13 through 16

	Semi-Annual (second and fourth quarters): MW-3, MW-6 through MW-9, MW-11, and MW-13 through MW-16
Total number of monitoring/remediation wells (Table 1):	Ten (MW-3, MW-6 through MW-9, MW-11, and MW-13 through MW-16)
Range of well depths (total depth below ground surface, bgs) (Table 1):	Wells are set from 13 feet to 20 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 Appendix A
Current remediation technique	None

2.1 Regulatory Correspondence

There has been no recent regulatory correspondence during the current reporting period.

2.2 Remedial Activities

No remedial activities took place during the first quarter 2015. However, preparations for soil excavation on-site are ongoing.

2.3 Groundwater Monitoring

During the first quarter 2015 groundwater monitoring and sampling event, eight monitoring wells were gauged and six monitoring wells were purged and sampled by Antea Group per standard sampling protocol (**Appendix B**). Monitoring wells MW-7 and MW-8 were not gauged or sampled due to the off-site property owner, Mr. Beretta, denying access to the property. Copies of Antea Group's field data sheets are presented as **Appendix C**. The recent gauging and sampling data are summarized below and in **Table 2**. Historical gauging and sampling data are summarized in **Tables 3, 3a, 3b, 3c, and 3d**.

Well gauging and sampling date:	March 16, 2015
Wells gauged:	MW-3, MW-6, MW-9, MW-11, and MW-13 through MW-16
Wells sampled:	MW-6, MW-11, and MW-13 through MW-16
Purge method:	3 well casing volumes via electric, submersible pump
Sample collection method:	Disposable bailers
Groundwater parameters measured (Attachment C):	Temperature, pH, Conductivity, Dissolved Oxygen (DO), Oxidation Reduction Potential (ORP), and Turbidity
Wells with measurable LNAPL:	None
Current depth to water range (ft BTOC):	Min: 2.40 (MW-11) Max: 4.18 (MW-14)
Current groundwater elevation range (ft):	Min: 7.11 (MW-13) Max: 8.52 (MW-9)

Change in water depths from previous event (average change for all gauged wells):	0.75 foot increase
Groundwater flow direction and gradient in foot per foot (ft/ft):	Variable

2.3.1 Groundwater Flow Gradient and Directional Trends

The first quarter 2015 groundwater monitoring and sampling event was performed by Antea Group on March 16, 2015. The average groundwater elevation decreased 0.75 feet from the December 2014 event. Depth to groundwater in the site monitoring wells ranged from 2.40 feet (MW-11) to 4.18 feet (MW-14) BTOC during the current event. The groundwater flow direction and gradient were interpreted to be variable during the current event (Table 4 and Figure 8).

2.3.2 Groundwater Quality Data

Groundwater samples collected during the first quarter 2015 monitoring and sampling event were submitted with chain-of-custody (COC) documentation to Pace Analytical (Pace), 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 are 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, 3c, and 3d (historical). The following ranges of contaminant concentrations were reported in the specified site wells, groundwater samples collected on March 16, 2015. 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	2 of 6	2,990 (MW-14)	72,800 (MW-6)
TPHd	1 of 6	160 (MW-6)	160 (MW-6)
Benzene	2 of 6	393 (MW-14)	4,070 (MW-6)
Toluene	2 of 6	1.6 (MW-14)	181 (MW-6)
Ethylbenzene	2 of 6	278 (MW-14)	3,050 (MW-6)
Total Xylenes	2 of 6	413 (MW-14)	15,900 (MW-6)
MTBE	6 of 6	0.66 (MW-14)	46.7 (MW-15)
TBA	5 of 6	15.0 (MW-14)	185 (MW-16)

Ethanol	1 of 6	71.8* (MW-6)	71.8* (MW-6)
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Explanations:

µg/L = Micrograms per liter

LRL = Laboratory reporting limit

* The detection of Ethanol is biased high likely due to the presence of interfering compounds

2.3.3 Groundwater Contaminant Trends

During the first quarter 2015, analytical results from the groundwater sample collected from monitoring well MW-6 indicated that TPHd, MTBE and TBA decreased in concentration and TPHg, BTEX, and ethanol 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-13 indicated that MTBE and TBA decreased in concentration. Analytical results from the groundwater sample collected from monitoring well MW-14 indicated that TPHg, toluene, and total xylenes decreased in concentration and benzene, ethylbenzene, and TBA increased in concentration. MTBE in monitoring well MW-14 was above the reporting limit during the first quarter 2015 but below the reporting limit during the previous quarter. Analytical results from the groundwater sample collected from monitoring well MW-15 indicated that benzene, MTBE, and TBA decreased in concentration. Analytical results from the groundwater sample collected from monitoring well MW-16 indicated that TBA increased in concentration and benzene and MTBE decreased in concentration. 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**. Concentration versus time graphs for monitoring wells MW-6, MW-13, MW-14, and MW-17 are presented as **Appendix E**. Based on the graphs, concentrations of TPHd, TPHg, benzene, and MTBE in monitoring well MW-6 are decreasing over time. Concentrations of TPHd, TPHg, and MTBE are decreasing in monitoring well MW-13 and benzene is stable. Concentrations of MTBE are stable in monitoring well MW-14 and TPHg, TPHd, and benzene are decreasing. Concentrations of TPHg, TPHd, benzene, and MTBE were stable or decreasing over time in monitoring well MW-17 when it was destroyed.

A Mann-Kendall (M-K) trend analysis was performed on monitoring well MW-6 for TPHg, benzene, TPHd, and MTBE concentration data, on monitoring well MW-13 for TPHg and MTBE concentration data, and on monitoring wells MW-14 and MW-17 for TPHg, benzene, and TPHd concentration data. The M-K analysis is a non-parametric test that is helpful in identifying trends over time. It is the result of a comparison of each value in a data set with all previous values in the data set. For this site, comparisons of contaminant data for the past 10 sampling events were used (i.e., n=10, with the most recent data being event #11).

The recent M-K trend analyses for TPHg and benzene in monitoring well MW-6 indicate a certain increasing trend. Benzene in monitoring well MW-14 indicate a probable increasing trend. M-K trend analyses for TPHd and MTBE in monitoring well MW-6, TPHg in monitoring well MW-13, TPHg and TPHd in monitoring well MW-14, and TPHg and benzene in monitoring well MW-17 indicate a no trend or stable trend. M-K trend analysis for MTBE in monitoring well MW-13 and TPHd in monitoring well MW-17 indicate a certain decreasing trend. A summary of

the results of the Mann-Kendall trend analyses and the M-K trend analyses statistical computation tables are presented as **Appendix F**.

2.3.4 Waste Disposal Summary

Approximately 60 gallons of waste water were generated during well purging/sampling and equipment cleaning during the first quarter event. Water generated during well sampling and equipment cleaning was placed into a properly labeled 55-gallon Department of Transportation (DOT) approved steel drum and temporarily stored on-site. The waste is currently being profiled using analytical results for the monitoring wells sampled during the recent sampling event. Subsequent to waste profiling, the waste will be transported off-site by Belshire Environmental Services to an approved disposal facility. Field procedures for purge water handling and disposal are included in **Appendix B**.

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 of the Pace laboratory analytical results for the March 2015 sampling event. Antea Group’s laboratory data validation checklist and the Pace 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

* Since the TPH-DRO (C10-C28) recovery was within range, no data are flagged.

* The detection of Ethanol is biased high likely due to the presence of interfering compounds.

* Surrogate recovery outside laboratory control limits.

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 LOW THREAT CLOSURE POLICY CHECKLIST

An item in the Low Threat Closure Policy (LTCP) checklist on GeoTracker need to be updated.

Media-Specific Criteria: Direct Contact and Outdoor Air Exposure:

- “Soil Concentrations of Naphthalene: Unknown”
 - Soil samples taken from soil borings in July 2013 were analyzed for Naphthalene. Concentrations ranged from 150 milligrams per kilogram (mg/kg) in SB-1d5.5 to below the laboratory’s indicated reporting limit in the majority of samples.

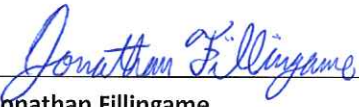
4.0 RECOMMENDATIONS

Antea Group recommends that all monitoring wells MW-3 and MW-6, MW-11, MW-13, MW-14, MW-15, and MW-16 be purged and sampled on a semi-annual basis during the second and fourth quarters of each year.

5.0 REMARKS

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


Prepared by:



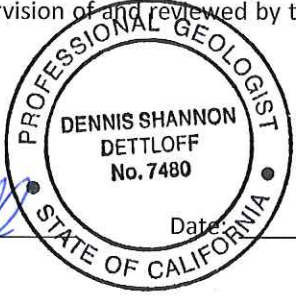
Jonathan Fillingame
Staff Geologist

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:



Dennis S. Dettloff, P.G.
Senior Project Manager
California Registered Professional Geologist No. 7480


Date: 5/5/15

cc: GeoTracker (upload)

Figures

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- Figure 2 Site Plan
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- Figure 4 Dissolved Phase TPHg Isoconcentration Map – March 16, 2015
- Figure 5 Dissolved Phase Benzene Isoconcentration Map – March 16, 2015
- Figure 6 Dissolved Phase MTBE Isoconcentration Map – March 16, 2015
- Figure 7 Dissolved Phase TPHd Isoconcentration Map – March 16, 2015
- Figure 8 Historical Groundwater Flow Directions

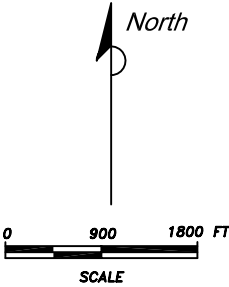
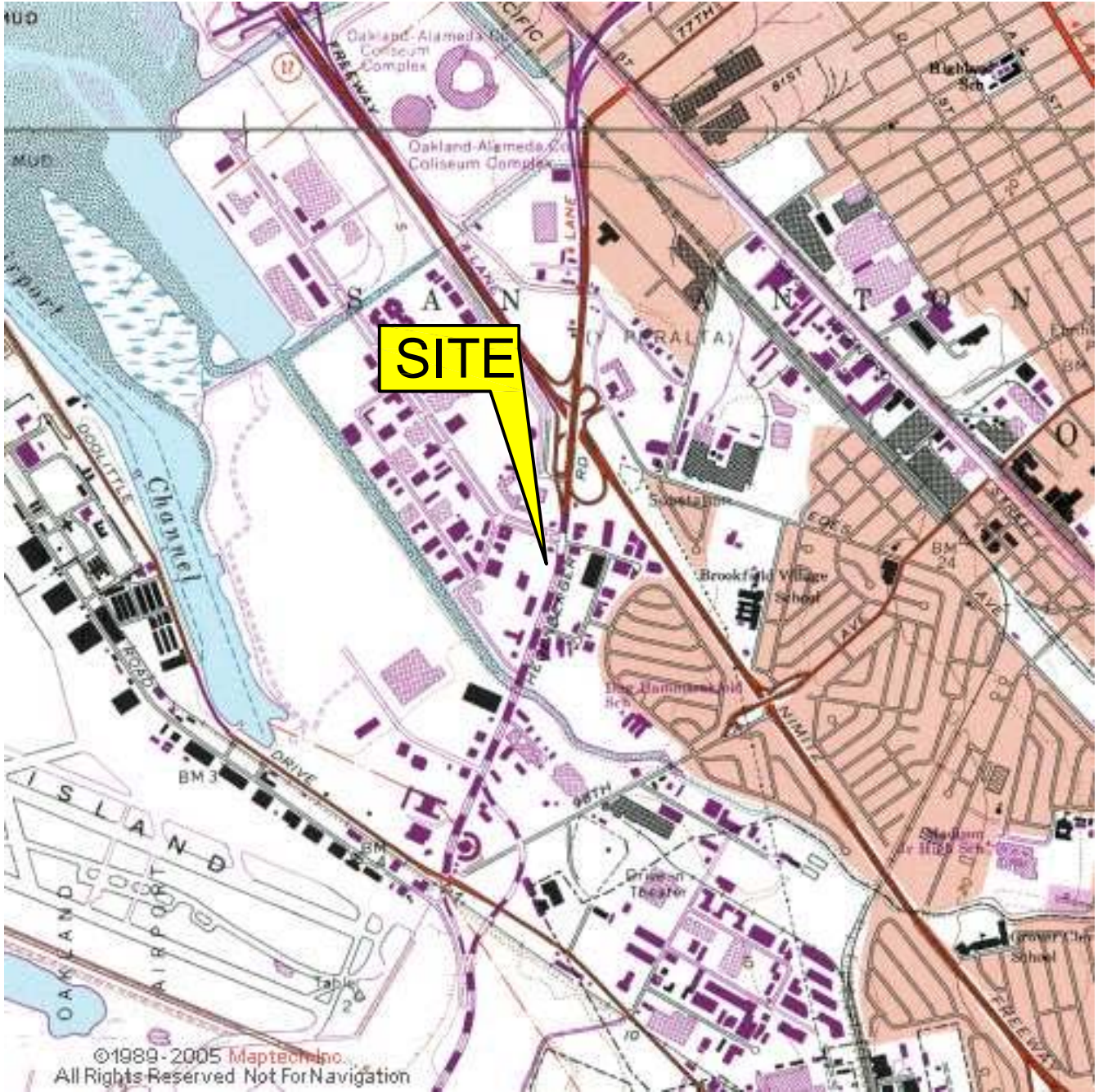

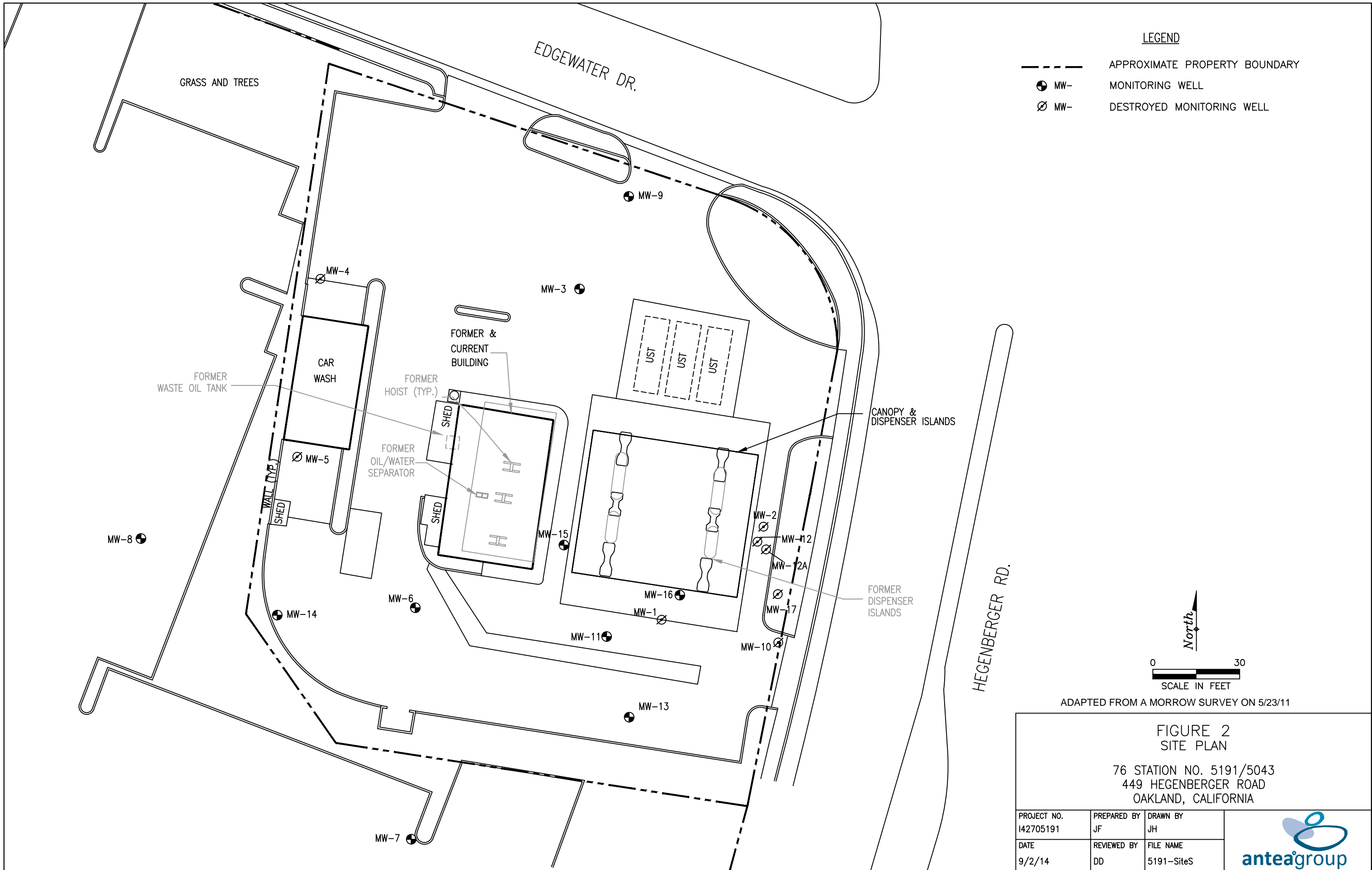


FIGURE 1
SITE LOCATION MAP
 76 STATION NO. 5191/5043
 449 HEGENBERGER ROAD
 OAKLAND, CALIFORNIA

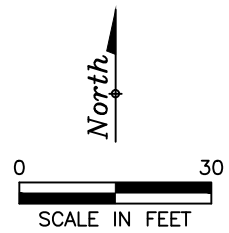
PROJECT NO. 142705191	PREPARED BY EW	DRAWN BY DR/JH	 anteagroup
DATE 1/31/11	REVIEWED BY DD	FILE NAME 5043-SiteLocator	

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



LEGEND


- APPROXIMATE PROPERTY BOUNDARY
- MW- MONITORING WELL
- ⊘ MW- DESTROYED MONITORING WELL



ADAPTED FROM A MORROW SURVEY ON 5/23/11

**FIGURE 2
SITE PLAN**

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

PROJECT NO. I42705191	PREPARED BY JF	DRAWN BY JH	
DATE 9/2/14	REVIEWED BY DD	FILE NAME 5191-SiteS	

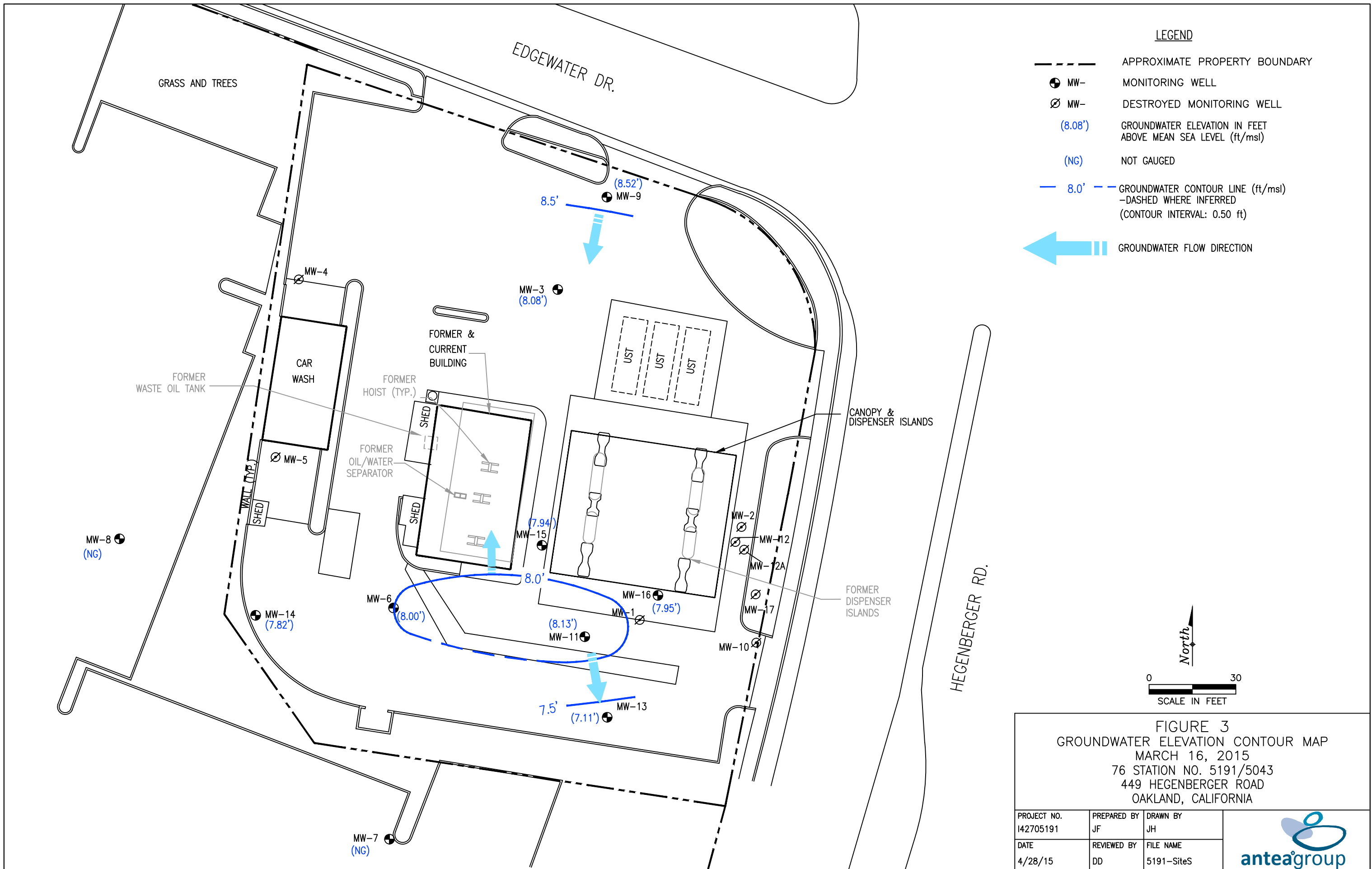
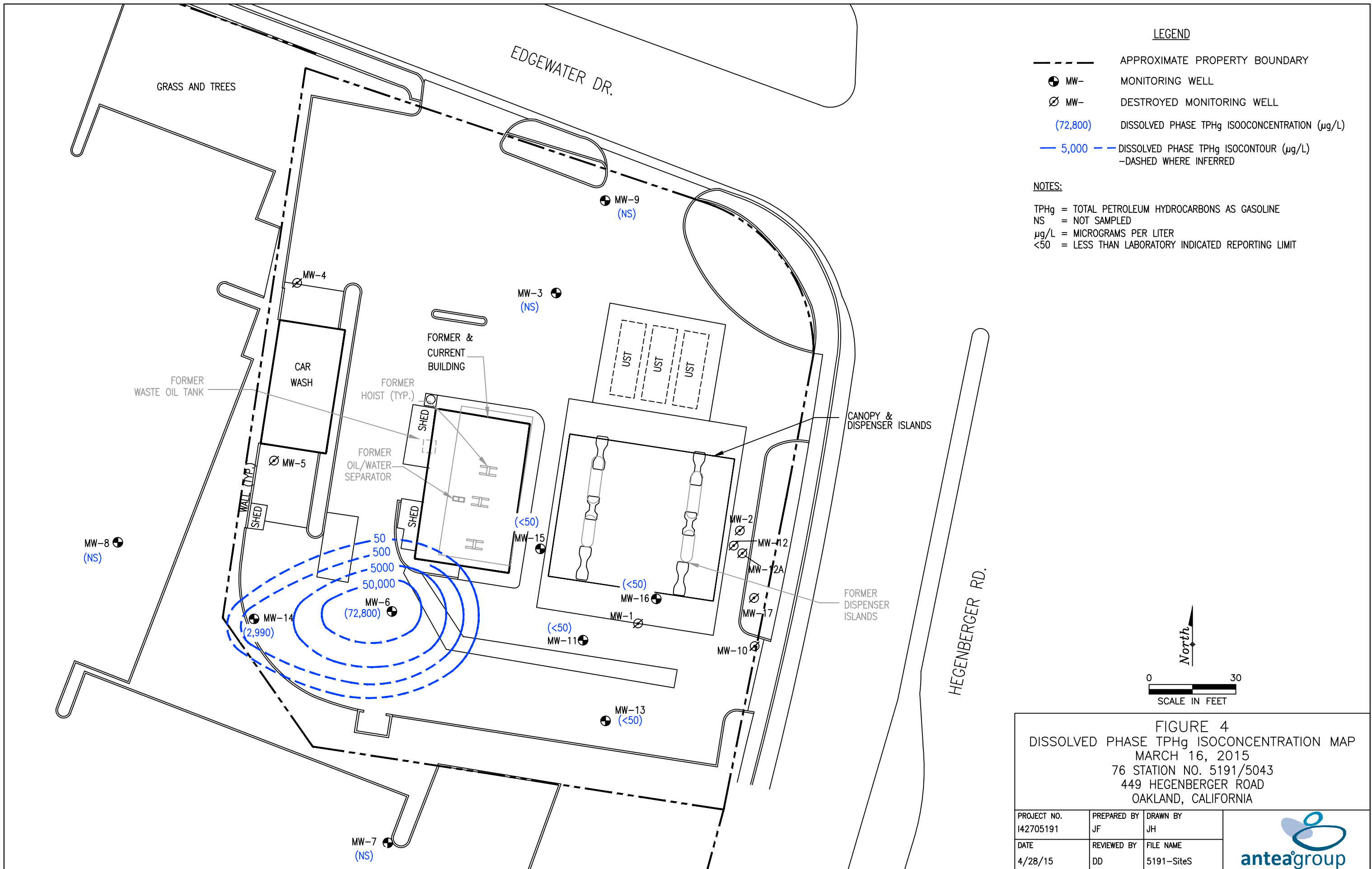


FIGURE 3
 GROUNDWATER ELEVATION CONTOUR MAP
 MARCH 16, 2015
 76 STATION NO. 5191/5043
 449 HEGENBERGER ROAD
 OAKLAND, CALIFORNIA

PROJECT NO. I42705191	PREPARED BY JF	DRAWN BY JH
DATE 4/28/15	REVIEWED BY DD	FILE NAME 5191-SiteS





LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- MW- MONITORING WELL
- ⊘ MW- DESTROYED MONITORING WELL
- (72,800) DISSOLVED PHASE TPHg ISOCONCENTRATION (µg/L)
- 5,000 — DISSOLVED PHASE TPHg ISOCONTOUR (µg/L)
-DASHED WHERE INFERRED

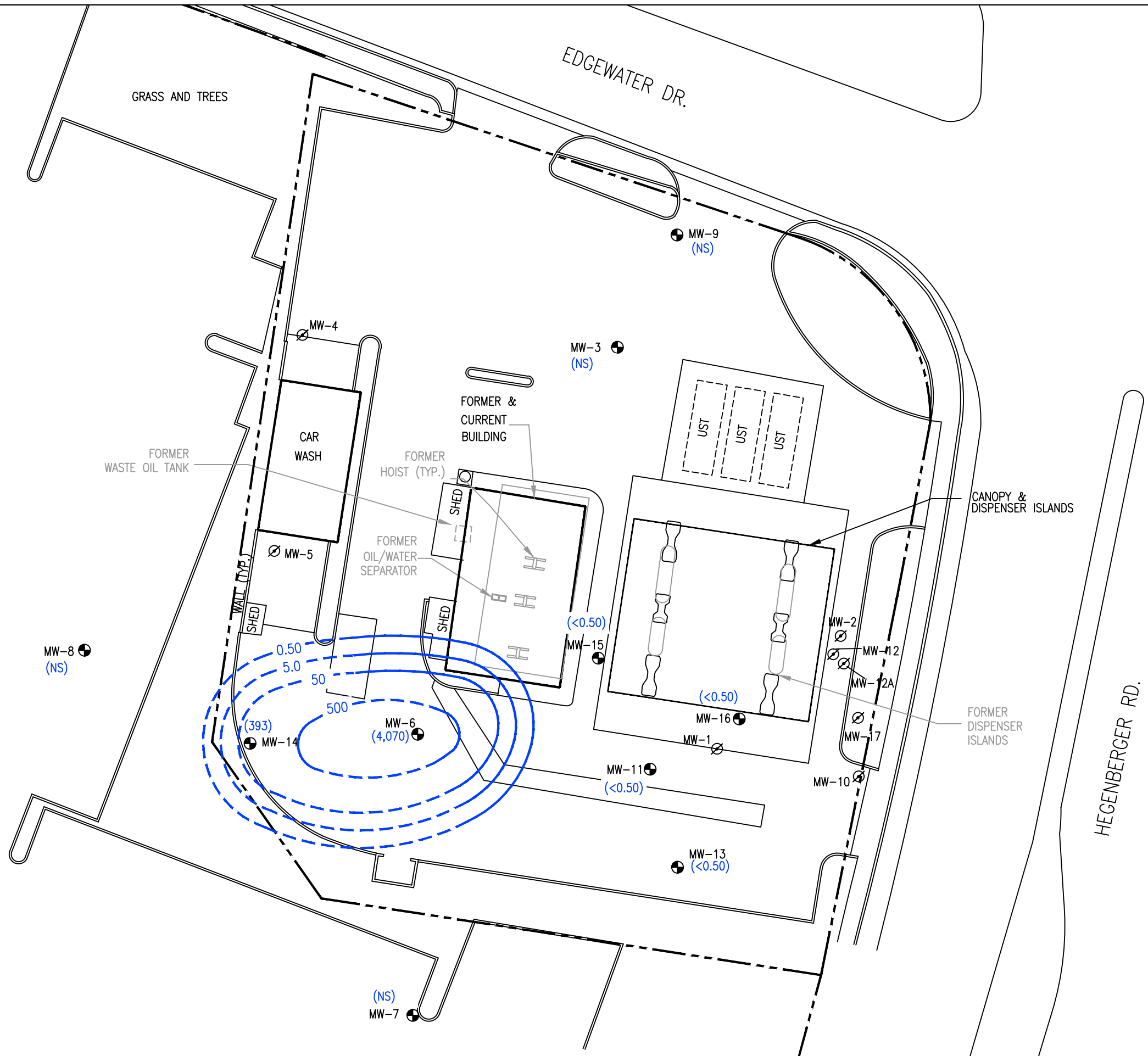
NOTES:

TPHg = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
 NS = NOT SAMPLED
 µg/L = MICROGRAMS PER LITER
 <50 = LESS THAN LABORATORY INDICATED REPORTING LIMIT

FIGURE 4
 DISSOLVED PHASE TPHg ISOCONCENTRATION MAP
 MARCH 16, 2015
 76 STATION NO. 5191/5043
 449 HEGENBERGER ROAD
 OAKLAND, CALIFORNIA

PROJECT NO. I42705191	PREPARED BY JF	DRAWN BY JH
DATE 4/28/15	REVIEWED BY DD	FILE NAME 5191-SiteS





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

- NOTES:**
- NS = NOT SAMPLED
 - µg/L = MICROGRAMS PER LITER
 - <0.50 = LESS THAN LABORATORY INDICATED REPORTING LIMIT

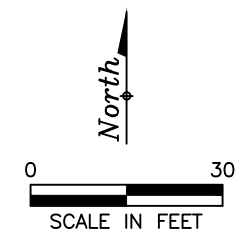
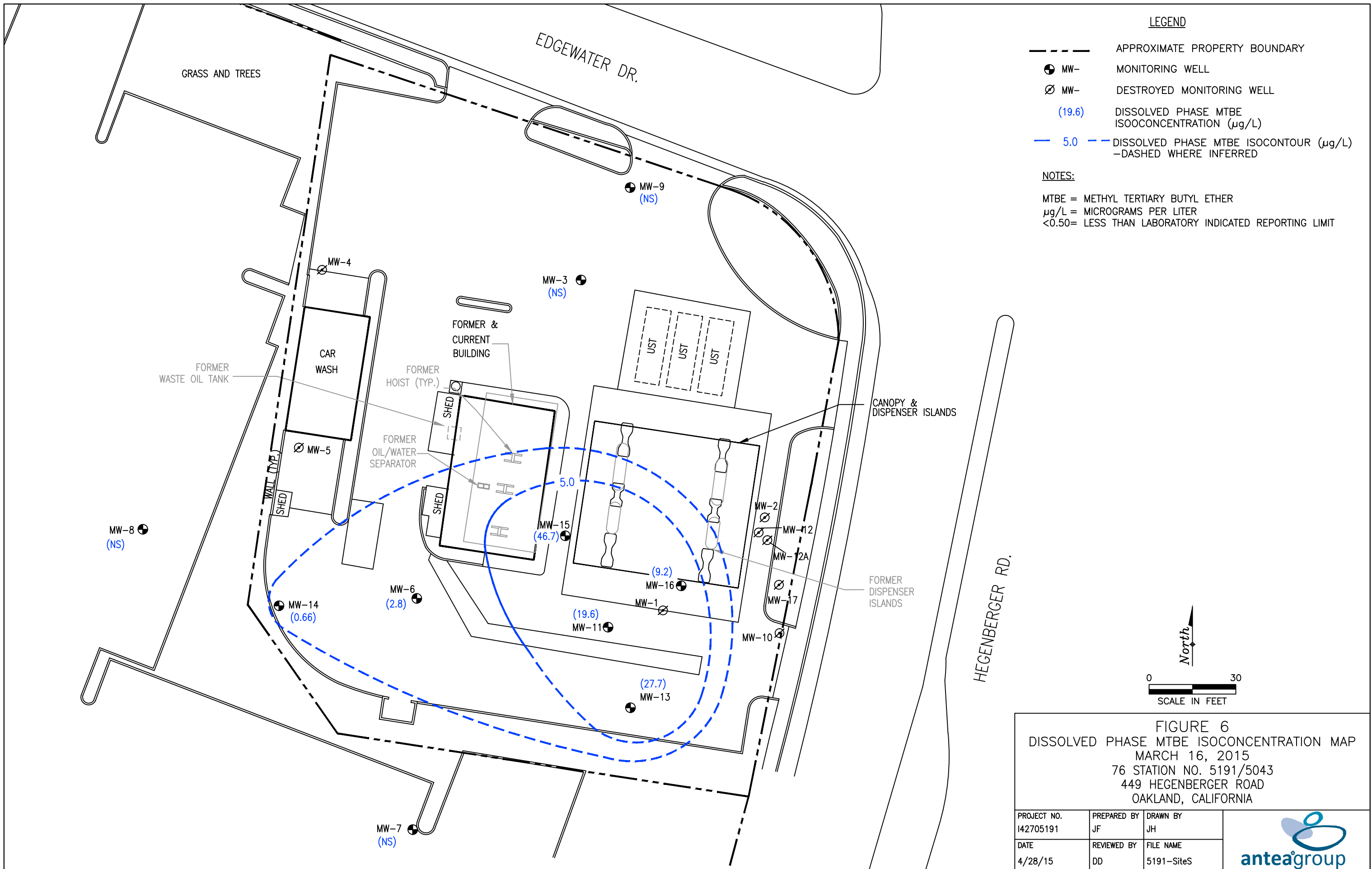


FIGURE 5
 DISSOLVED PHASE BENZENE ISOCONCENTRATION MAP
 MARCH 16, 2015
 76 STATION NO. 5191/5043
 449 HEGENBERGER ROAD
 OAKLAND, CALIFORNIA

PROJECT NO. I42705191	PREPARED BY JF	DRAWN BY JH	
DATE 4/28/15	REVIEWED BY DD	FILE NAME 5191-SiteS	



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- ⊕ MW- MONITORING WELL
- ⊘ MW- DESTROYED MONITORING WELL
- (19.6) DISSOLVED PHASE MTBE ISOCONCENTRATION (µg/L)
- 5.0 — 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

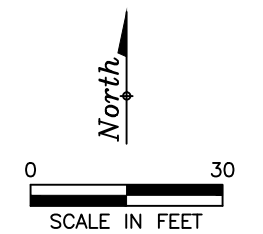
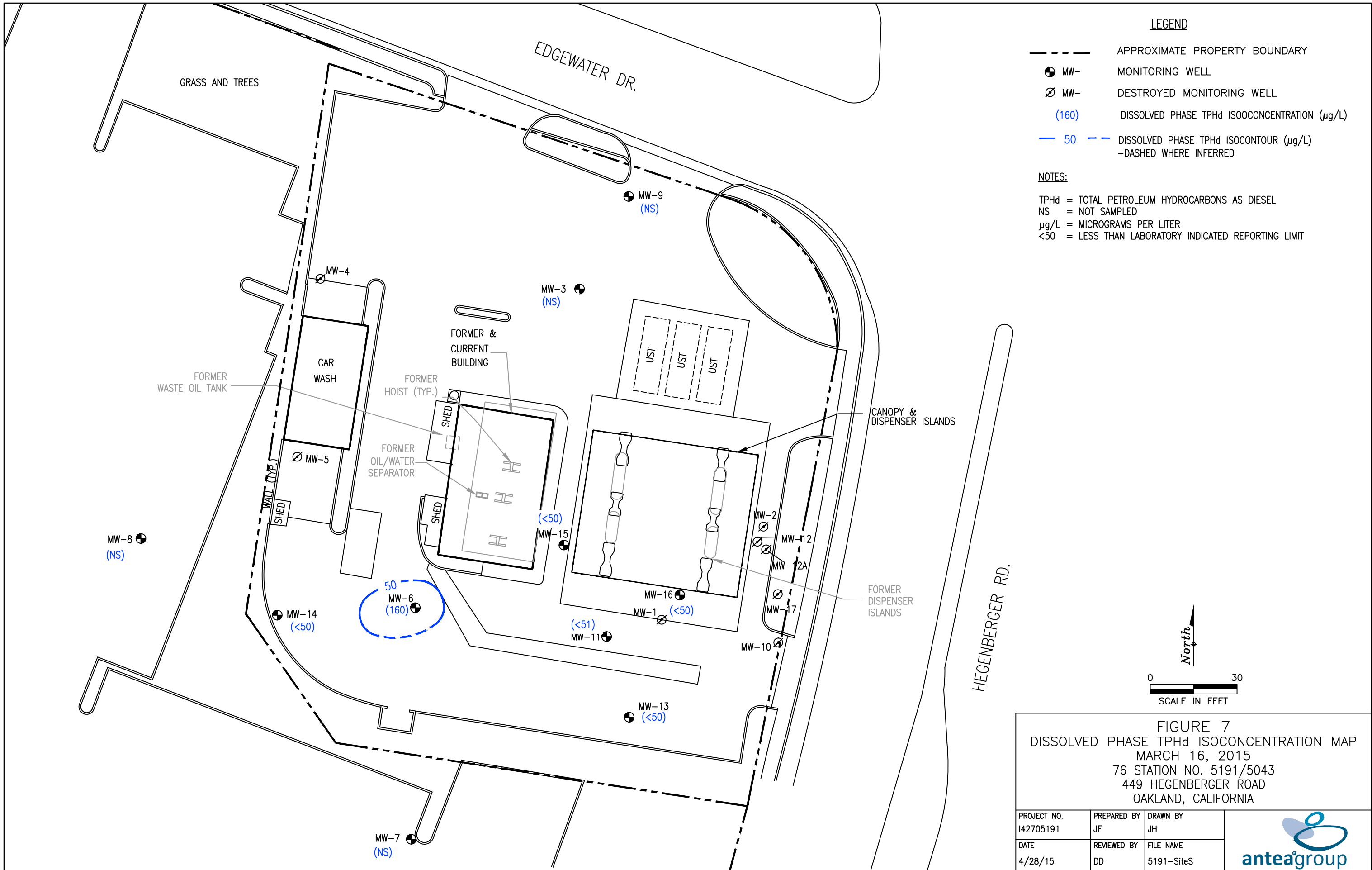


FIGURE 6
 DISSOLVED PHASE MTBE ISOCONCENTRATION MAP
 MARCH 16, 2015
 76 STATION NO. 5191/5043
 449 HEGENBERGER ROAD
 OAKLAND, CALIFORNIA

PROJECT NO. I42705191	PREPARED BY JF	DRAWN BY JH	
DATE 4/28/15	REVIEWED BY DD	FILE NAME 5191-SiteS	



LEGEND

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

NOTES:

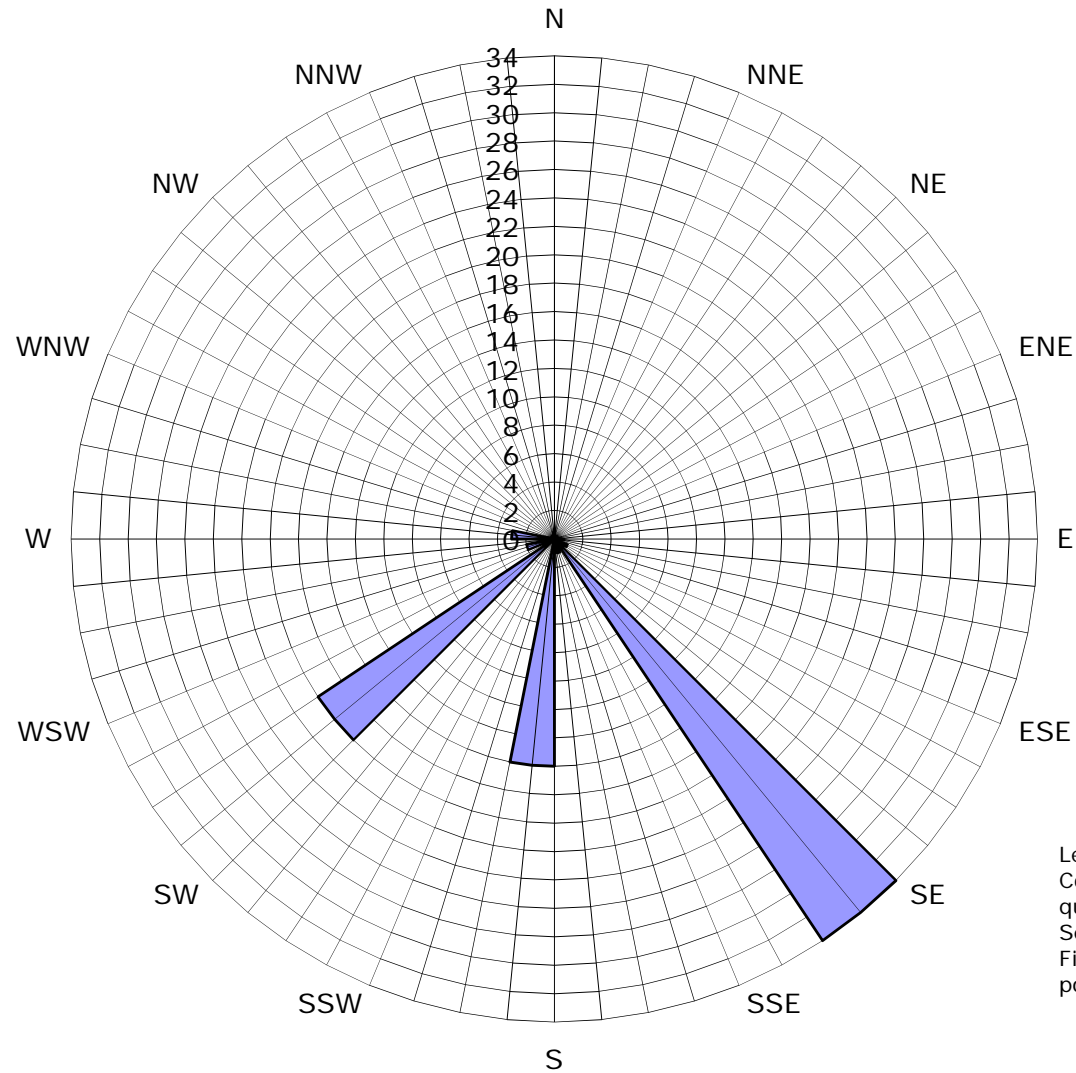
TPHd = TOTAL PETROLEUM HYDROCARBONS AS DIESEL
 NS = NOT SAMPLED
 µg/L = MICROGRAMS PER LITER
 <50 = LESS THAN LABORATORY INDICATED REPORTING LIMIT

FIGURE 7
 DISSOLVED PHASE TPHd ISOCONCENTRATION MAP
 MARCH 16, 2015
 76 STATION NO. 5191/5043
 449 HEGENBERGER ROAD
 OAKLAND, CALIFORNIA

PROJECT NO. I42705191	PREPARED BY JF	DRAWN BY JH
DATE 4/28/15	REVIEWED BY DD	FILE NAME 5191-SiteS



Figure 8
Historical Groundwater Flow Directions
76 Station No. 5191/5043
449 Hegenberger Road
Oakland, California



■ Groundwater Flow Direction

Tables

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Table 4	Historical Groundwater Gradient and Flow Direction Data

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)		
Monitoring Wells							
MW-1	02/05/91	13.5	2	2.0	13.0	11.0	Destroyed
MW-2	02/05/91	15.0	2	3.0	15.0	12.0	Destroyed
MW-3	02/05/91	14.0	2	2.0	14.0	12.0	
MW-4	08/21/92	13.5	2	2.5	13.5	11.0	Destroyed
MW-5	08/21/92	13.5	2	2.5	13.5	11.0	Destroyed
MW-6	08/21/92	13.5	2	2.5	13.5	11.0	
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	Destroyed
MW-11	06/22/10	20.0	4	5.0	20.0	15.0	
MW-12	06/22/10	20.0	4	5.0	20.0	15.0	Destroyed
MW-12A	06/23/10	34.0	2	30.0	34.0	4.0	Destroyed
MW-13	06/22/10	15.0	2	5.0	15.0	10.0	
MW-14	05/17/11	13.0	2	3.0	13.0	10.0	
MW-15	05/17/11	13.0	2	3.0	13.0	10.0	
MW-16	05/17/11	13.0	2	3.0	13.0	10.0	
MW-17	05/18/11	13.0	2	3.0	13.0	10.0	Destroyed
Explanation							
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	3/16/2015	10.81	2.73	NP	8.08	--	--	--	--	--	--	--	--	--	
MW-6	3/16/2015	11.55	3.55	NP	8.00	160	72,800	4,070	181	3,050	15,900	2.8	56.2	71.8 2V	
MW-9	3/16/2015	10.94	2.42	NP	8.52	--	--	--	--	--	--	--	--	--	
MW-11	3/16/2015	10.53	2.40	NP	8.13	<51	<50	<0.50	<0.50	<0.50	<1.0	19.6	<5.0	<5.0	
MW-13	3/16/2015	11.08	3.97	NP	7.11	<50	<50	<0.50	<0.50	<0.50	<1.0	27.7	35.5	<5.0	
MW-14	3/16/2015	12.00	4.18	NP	7.82	<50	2,990	393	1.6	278	413	0.66	15.0	<5.0	
MW-15	3/16/2015	11.11	3.17	NP	7.94	<50	<50	<0.50	<0.50	<0.50	<1.0	46.7	27.0	<5.0	
MW-16	3/16/2015	10.98	3.03	NP	7.95	<50	<50	<0.50	<0.50	<0.50	<1.0	9.2	185	<5.0	

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 (silica gel treated)
 TPHg- Total petroleum hydrocarbons as gasoline
 MTBE- Methyl tertiary-butyl ether
 TBA- Tertiary-butyl alcohol
Bold - Above the laboratory's indicated reporting limit
 2V - The detection of Ethanol is biased high likely due to the presence of interfering compounds

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	--	--	--	--	--	--	--	--	--
	8/31/1992	NSVD	NG	NG	NG	8,900	64,000	13,000	12,000	2,500	22,000	--	--	--	--	--	--	--	--	--
	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
	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
	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
	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
	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
	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
	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
	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
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	
5/18/1995	NSVD	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
	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	
MW-3	2/18/1992	NSVD	NG	NG	NG	ND	230	4.8	22	1.8	33	--	--	--	--	--	--	--	--	
	5/20/1992	NSVD	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	6.1	--	--	--	--	--	--	--	--	
	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	6.2	9.1	--	--	--	--	--	--	--	--	
	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	0.54	ND	0.97	--	--	--	--	--	--	--	--	
	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	
7/26/1996	7.42	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	
1/29/1997	7.42	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	

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-3	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	6.5	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	ND	490	--	--	--	--	--	--	--	--	--
	10/9/1997	8.04	3.70	NP	4.34	500	270	1.1	ND	2.4	1.4	910	--	--	--	--	--	--	--	--	--
	1/14/1998	8.04	2.16	NP	5.88	340	310	ND	ND	0.62	0.65	140	--	--	--	--	--	--	--	--	--
	4/1/1998	8.04	2.20	NP	5.84	320	370	5.7	ND	ND	ND	93	--	--	--	--	--	--	--	--	--
	7/15/1998	8.04	3.38	NP	4.66	510	460	ND	ND	ND	ND	230	--	--	--	--	--	--	--	--	--
	10/16/1998	8.04	2.30	NP	5.74	67	330	4.7	ND	ND	ND	60	--	--	--	--	--	--	--	--	--
	1/25/1999	8.04	2.42	NP	5.62	120	420	1.5	ND	ND	ND	180	--	--	--	--	--	--	--	--	--
	4/15/1999	8.04	2.16	NP	5.88	170	290	0.54	ND	ND	ND	160	--	--	--	--	--	--	--	--	--
	7/14/1999	8.04	2.35	NP	5.69	420	290	3.2	ND	ND	ND	160	--	--	--	--	--	--	--	--	--
	10/21/1999	8.04	2.49	NP	5.55	350	360	0.77	ND	ND	ND	82	--	--	--	--	--	--	--	--	--
	1/20/2000	8.04	2.38	NP	5.66	2,060	ND	0.81	ND	ND	ND	54	--	--	--	--	--	--	--	--	--
	4/13/2000	8.04	2.76	NP	5.28	200	250	0.69	ND	ND	ND	91	150	ND	ND	ND	ND	ND	ND	ND	ND
	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	1.59	ND	ND	ND	118	--	--	--	--	--	--	--	--	--
	4/4/2001	8.04	3.98	NP	4.06	360	417	1.24	ND	ND	0.802	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	3.5	<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	<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	0.53	0.53	1.5	--	66	--	--	--	--	<500	--	--	--
	4/26/2004	8.04	3.11	NP	4.93	160	440	2.5	5.50	2.90	9.4	--	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	5.6	15	10	46	--	48	--	--	--	--	<50	--	--	--
1/10/2005	8.04	1.52	NP	6.52	250	280	<0.50	0.62	<0.50	2.4	--	64	--	--	--	--	<50	--	--	--	
6/15/2005	8.04	2.00	NP	6.04	360	460	<0.50	0.70	0.56	1.9	--	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	1.2	--	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	--	--	--	

**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-3	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	0.78	<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	--	--	
3/4/2014	10.81	2.38	NP	8.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6/12/2014	10.81	3.23	NP	7.58	<50	310	<0.50	<0.50	<0.50	<0.50	--	28	--	--	--	--	74	<5.0	--	--	
9/5/2014	10.81	3.62	NP	7.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/22/2014	10.81	2.07	NP	8.74	<50	250	<0.50	<0.50	<0.50	<0.50	--	15	--	--	--	--	35	<5.0	--	--	
3/16/2015	10.81	2.73	NP	8.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--	--	--	--	--	--	--	--	--	
	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	0.89	ND	ND	13	--	--	--	--	--	--	--	--	--	
	11/30/1992	NSVD	NG	NG	NG	470	930	70	290	0.79	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	4.1	--	--	--	--	--	--	--	--	--	
	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	--	--	--	--	--	--	--	--	--	

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	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	7.7	--	--	--	--	--	--	--	--	--	
	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	1.7	210	41	--	--	--	--	--	--	--	--	--	
	8/15/1994	8.87	5.08	NP	3.79	790	1,300	130	6.7	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	4.6	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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	

**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	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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	--	--	--	--	--	<5000	--	--
	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	--	0.56	1.8	<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	--	--	
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	--	--	



**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	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	<4.0
	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	--	--	--	
3/4/2014	11.55	3.07	NP	8.48	580	33,000	490	19	620	1,800	--	13	--	--	--	160	<50	--	--	--	
6/12/2014	11.55	3.79	NP	7.76	570	35,000	390	17	690	1,600	--	12	--	--	--	180	<50	--	--	--	
9/5/2014	11.55	4.5	NP	7.05	3,100	28,000	720	29	920	2,400	--	12	--	--	--	200	<50	--	--	--	
12/22/2014	11.55	2.55	NP	9.00	250 A	49,000	2,000	120	1,600	7,700	--	9.7	--	--	--	150	<150	--	--	--	
3/16/2015	11.55	3.55	NP	8.00	160	72,800	4,070	181	3,050	15,900	--	2.8	--	--	--	56.2	71.8 2V	--	--	--	
MW-7	5/27/1997	8.83	4.50	NP	4.33	--	68	ND	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	ND	--	--	--	--	--	--	--	--	--
	10/9/1997	8.83	4.30	NP	4.53	190	ND	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	ND	4.2	--	--	--	--	--	--	--	--
	4/13/2000	8.83	3.39	NP	5.44	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	7/14/2000	8.83	4.42	NP	4.41	68.0	ND	ND	ND	ND	ND	ND	7.83	--	--	--	--	--	--	--	--
	7/17/2001	8.83	5.06	NP	3.77	ND	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	<5.0	--	--	--	--	--	--	--	--
	1/31/2002	8.83	3.88	NP	4.95	90	<50	<0.50	<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	<0.50	5.7	--	--	--	--	--	--	--	--	

**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	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	--
	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
	3/29/2010	8.83	WI	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	--	--	
3/4/2014	11.64	3.42	NP	8.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6/12/2014	11.64	5.76	NP	5.88	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<5.0	<5.0	--	--	
MW-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	--	--	--	--	--	--	--	

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	10/9/1997	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	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	<0.50	<5.0	--	--	--	--	--	--	--
	1/31/2002	8.52	2.75	NP	5.77	260	<50	<0.50	<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	<0.50	<2.5	--	--	--	--	--	--	--
	7/28/2002	8.52	2.41	NP	6.11	140	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--
	10/9/2002	8.52	2.09	NP	6.43	120	<50	<0.50	<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	<0.50	<1.0	--	<2.0	--	--	--	--	--	--
	4/1/2003	8.52	2.66	NP	5.86	220	<50	<0.50	<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	<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	<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	<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	--
	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	<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	<1.0	--	<0.50	<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	<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	<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	<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	--	<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	--	<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	--	<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	--	<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	--	<0.50	--	--	--	--	<250	--
	12/28/2007	8.52	2.64	NP	5.88	110	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--
	3/22/2008	8.52	2.31	NP	6.21	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--
	6/23/2008	8.52	3.13	NP	5.39	<58	<50	<0.50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--
9/19/2008	8.52	3.72	NP	4.80	79	<50	<0.50	<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	<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	<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	<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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**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	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	--	--
3/4/2014	11.32	2.88	NP	8.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6/12/2014	11.32	3.24	NP	8.08	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<5.0	<5.0	--	--	
MW-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	--	--	--	--	--	--	--	--	
	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	--	<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	--	--		

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	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	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	--	--		
3/4/2014	10.94	1.93	NP	9.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6/12/2014	10.94	2.39	NP	8.55	<50	<50	<0.50	<0.50	<0.50	<0.50	--	3.3	--	--	--	<5.0	<5.0	--	--		
9/5/2014	10.94	3.49	NP	7.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
12/22/2014	10.94	1.58	NP	9.36	<50	<50	<0.50	<0.50	<0.50	<0.50	--	5.2	--	--	--	<5.0	<5.0	--	--		
3/16/2015	10.94	2.42	NP	8.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	2/21/1995	8.62	4.69	NP	3.93	270	1500	250	26	9.1	160	--	--	--	--	--	--	--	--	--	
	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	--	--	--	--	--	--	--	--	--	



**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-10	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	--	--	--	--	--	--	--	--
	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	<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	--	--	

TABLE 3
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76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
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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-14	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	<50	27,000	1,400	32	2,200	4,800	--	<9.0	--	--	--	<50	<90	--	--
	3/4/2014	12.00	3.60	NP	8.40	250	40,000	1,600	41	2,900	6,700	--	<9.0	--	--	--	<50	<90	--	--
	6/12/2014	12.00	4.51	NP	7.49	64	36,000	1,600	43	3,000	6,500	--	<9.0	--	--	--	<50	<90	--	--
	9/5/2014	12.00	5.47	NP	6.53	250	16,000	850	17	1,200	2,800	--	<4.0	--	--	--	24	<40	--	--
	12/22/2014	12.00	3.18	NP	8.82	<50	3,200	220	3.8	260	540	--	<0.90	--	--	--	12	<9.0	--	--
3/16/2015	12.00	4.18	NP	7.82	<50	2,990	393	1.6	278	413	--	0.66	--	--	--	15.0	<5.0	--	--	
MW-15	6/2/2011	11.11	2.50	NP	8.61	124 T4	357	<0.50	<0.50	<0.50	<1.5	--	15	--	--	--	6.4	<250	--	--
	9/7/2011	11.11	2.54	NP	8.57	<50.0	412	6.2	<0.50	43	<1.5	--	128	--	--	--	--	<250	--	--
	12/5/2011	11.11	2.70	NP	8.41	50.5 T4	201	6.6	<0.50	0.93	<1.5	--	142	--	--	--	--	<250	--	--
	3/6/2012	11.11	2.69	NP	8.42	56.2 T4	<50.0	<0.50	<0.50	<0.50	<1.5	--	106	--	--	--	101	<250	--	--
	6/11/2012	11.11	2.84	NP	8.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	<37.9	74.3 1n	<0.50	<0.50	<0.50	<1.5	--	114	--	--	--	91	<250	--	--
	9/6/2012	11.11	2.24	NP	8.87	64	59	<0.50	<0.50	<0.50	<0.50	--	76	<0.50	<0.50	<0.50	45	<5.0	<0.50	<0.50
	12/13/2012	11.11	2.51	NP	8.60	<50	<50	<0.50	<0.50	<0.50	<0.50	--	33	--	--	--	7.4	<5.0	--	--
	3/14/2013	11.11	2.91	NP	8.20	<50	<50	<0.50	<0.50	<0.50	<0.50	--	46	--	--	--	21	<5.0	--	--
	6/11/2013	11.11	3.36	NP	7.75	<50	<50	<0.50	<0.50	<0.50	<0.50	--	73	--	--	--	31	<5.0	--	--
	9/10/2013	11.11	3.28	NP	7.83	<50	68	<0.50	<0.50	<0.50	<0.50	--	120	--	--	--	39	<5.0	--	--
	12/12/2013	11.11	3.00	NP	8.11	<50	<50	<0.50	<0.50	<0.50	<0.50	--	130	--	--	--	59	<10	--	--
	3/4/2014	11.11	2.34	NP	8.77	<50	<50	<0.50	<0.50	<0.50	<0.50	--	96	--	--	--	45	<5.0	--	--
	6/12/2014	11.11	3.15	NP	7.96	<50	<50	<0.50	<0.50	<0.50	<0.50	--	100	--	--	--	31	<5.0	--	--
9/5/2014	11.11	4.00	NP	7.11	<50	<50	<0.50	<0.50	<0.50	<0.50	--	100	--	--	--	41	<5.0	--	--	
12/22/2014	11.11	2.38	NP	8.73	<50	<50	0.50	<0.50	<0.50	<0.50	--	65	--	--	--	36	<5.0	--	--	
3/16/2015	11.11	3.17	NP	7.94	<50	<50	<0.50	<0.50	<0.50	<1.0	--	46.7	--	--	--	27.0	<5.0	--	--	
MW-16	6/2/2011	10.98	3.00	NP	7.98	509 T4	1,420 1n	79	<0.50	4.2	<1.5	--	1,200	--	--	--	257	<250	--	--
	9/7/2011	10.98	2.65	NP	8.33	90.0 T4	934	<0.50	<0.50	<0.50	<1.5	--	1,240	--	--	--	--	<250	--	--
	12/5/2011	10.98	3.18	NP	7.80	196 T4	948 1n	<0.50	<0.50	<0.50	<1.5	--	1,320	--	--	--	--	<250	--	--
	3/6/2012	10.98	2.91	NP	8.07	204 T4	392 1n	<0.50	<0.50	<0.50	<1.5	--	1,090	--	--	--	134	<250	--	--
	6/11/2012	10.98	3.04	NP	7.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	48.1 T4	430 1n	<0.50	<0.50	<0.50	<1.5	--	1,100	--	--	--	374	<250	--	--
	9/6/2012	10.98	2.61	NP	8.37	390	<150	<1.5	<1.5	<1.5	<1.5	--	960	<1.5	<1.5	<1.5	70	<15	<1.5	<1.5
	12/13/2012	10.98	2.50	NP	8.48	52	<150	<1.5	<1.5	<1.5	<1.5	--	980	--	--	--	55	<20	--	--
	3/14/2013	10.98	3.15	NP	7.83	<50	<200	<2.0	<2.0	<2.0	<2.0	--	950	--	--	--	67	<20	--	--
	6/11/2013	10.98	3.19	NP	7.79	<50	<150	<1.5	<1.5	<1.5	<1.5	--	820	--	--	--	70	<15	--	--
	9/10/2013	10.98	3.44	NP	7.54	<50	<50	<0.50	<0.50	<0.50	0.67	--	240	--	--	--	440	<5.0	--	--
	12/12/2013	10.98	2.90	NP	8.08	<50	<50	<0.50	<0.50	<0.50	<0.50	--	62	--	--	--	530	<5.0	--	--
	3/4/2014	10.98	3.25	NP	7.73	<50	60	<0.50	<0.50	<0.50	<0.50	--	440	--	--	--	400	<5.0	--	--
	6/12/2014	10.98	3.67	NP	7.31	<50	<50	<0.50	<0.50	<0.50	<0.50	--	92	--	--	--	440	<5.0	--	--
9/5/2014	10.98	3.70	NP	7.28	<50	<50	<0.50	<0.50	<0.50	<0.50	--	28	--	--	--	220	<5.0	--	--	
12/22/2014	10.98	3.11	NP	7.87	<50	<50	0.52	<0.50	<0.50	<0.50	--	23	--	--	--	140	<5.0	--	--	
3/16/2015	10.98	3.03	NP	7.95	<50	<50	<0.50	<0.50	<0.50	<1.0	--	9.2	--	--	--	185	<5.0	--	--	

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

Well I.D.	Date	GROUNDWATER 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-17	6/2/2011	11.52	5.78	NP	5.74	687 T4	9,130	2,530	960	35	907	--	0.74	--	--	--	366	<250	--	--	
	9/7/2011	11.52	4.56	NP	6.96	1,900 T4	47,200	9,620	5,510	1,210	4,510	--	<25.0	--	--	--	--	<12500	--	--	
	12/5/2011	11.52	4.70	NP	6.82	1,790 T4	17,300	4,720	511	238	747	--	<2.5	--	--	--	--	<1250	--	--	
	3/6/2012	11.52	4.64	NP	6.88	1,530 T4	1,580	2,090	24	39	166	--	1.1	--	--	--	481	<250	--	--	
	6/11/2012	11.52	4.67	NP	6.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	1,090 T4	4,950	2,340	123	153	610	--	<2.5	--	--	--	411	<1250	--	--	
	9/6/2012	11.52	4.39	NP	7.13	<1,000	18,000	4,300	170	370	1,100	--	<10	<10	<10	<10	300	<100	<10	110	
	12/13/2012	11.52	4.20	NP	7.32	<100	55,000	7,300	2,700	1,700	4,600	--	<10	--	--	--	300	<100	--	--	
	3/14/2013	11.52	4.70	NP	6.82	<200	63,000	13,000	5,400	3,100	8,800	--	<15	--	--	--	260	<150	--	--	
	6/11/2013	11.52	4.83	NP	6.69	710	110,000	10,000	11,000	3,100	12,000	--	<25	--	--	--	<150	<250	--	--	
	9/10/2013	11.52	4.60	NP	6.92	160	36,000	8,200	510	1,200	2,400	--	<15	--	--	--	320	<150	--	--	
	12/12/2013	11.52	5.00	NP	6.52	<50	92,000	17,000	9,000	2,900	9,100	--	<15	--	--	--	250	<150	--	--	
	3/4/2014	11.52	3.99	NP	7.53	400	13,000	1,600	270	260	540	--	<3.0	--	--	--	330	48	--	--	
6/12/2014	11.52	4.49	NP	7.03	87	17,000	3,600	410	650	1,100	--	<3.0	--	--	--	300	<30	--	--		

Gauging Notes:
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
1n - The TPHg result for this sample did not match the laboratory standard for gasoline. This is likely due to the presence of MTBE in the sample.
A - Lower boiling hydrocarbons present, atypical for Diesel Fuel.
2V - The detection of Ethanol is biased high likely due to the presence of interfering compounds

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	2.1	<5.0	121,000	149,000	4.3	<2	<50.0	42,000	<100
	9/6/2012	--	--	--	--	650	--	--	--	--	--	--	--	--	--	--	<5.0	<10	--	--	--
	3/4/2014	--	--	--	--	--	--	31	--	--	--	--	--	<1.0	--	--	<5.0	--	--	--	--
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
MW-10	9/6/2012	--	--	--	--	561	--	--	--	--	--	--	--	--	--	17	<10	--	--	--	
MW-12	3/14/2011	<5.0	--	--	--	--	<60.0	<20.0	<100	<5.0	<2000	--	--	<5.0	80,100	8,240,000	--	--	<50.0	--	--
	6/2/2011	<5.0	905	<1	905	<1	<60.0	<20.0	<100	<5.0	7,240	<0.05	33	<5.0	191,000	7,260,000	3.3	<2	<50.0	210	<1
	9/6/2012	--	--	--	--	806	--	--	--	--	--	--	--	--	--	--	<5.0	<10	--	--	--
	3/4/2014	--	--	--	--	--	--	<15	--	--	--	--	--	1.8	--	--	<5.0	--	--	--	--
MW-14	9/6/2012	--	--	--	--	1,720	--	--	--	--	--	--	--	--	--	24	<10	--	--	--	
MW-17	9/6/2012	--	--	--	--	2,820	--	--	--	--	--	--	--	--	--	38	<10	--	--	--	

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

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



Well I.D.	Date	GROUND WATER ANALYTICAL DATA																			
		Copper (ug/L)	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	--	--	--
	6/30/2010	--	--	5,550	10,700	--	--	--	--	--	--	--	--	--	<50.0	95.0	--	75.7	--	--	--
	6/2/2011	--	--	--	13,600	--	--	--	--	--	--	--	--	--	<50.0	<10.0	--	52.5	--	--	--
	6/11/2012	--	--	--	10,900	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--
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	41.3	--	54.9	--	--	--
	6/30/2010	--	--	946	2,310	--	--	--	--	--	--	--	--	--	<50.0	57.9	--	69.3	--	--	--
	9/20/2010	--	--	2,730	2,600	--	--	--	--	--	--	--	--	--	<50.0	<10.0	--	52.1	--	--	--
	3/14/2011	--	--	--	4,900	3,900	1,000	27	1,270	<0.20	474	<20.0	<40.0	--	50.1	<10.0	--	54.2	--	--	--
	6/2/2011	--	870	--	4,320	2,520	1,800	23	1,510	<0.20	445	<20.0	<40.0	--	<50.0	<10.0	2.9	50.5	4.8	--	1,500
	6/12/2012	--	--	--	1,240	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--
	9/6/2012	--	--	--	--	1,000	--	--	--	--	2,890	--	--	--	--	--	--	--	--	--	--
9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.10	--	--	--	--	--	--	--
3/4/2014	<5.0	--	--	2,000	--	--	14	--	<0.5	--	--	17	--	--	--	--	--	--	--	--	--
MW-7	6/30/2010	--	--	836	7,550	--	--	--	--	--	--	--	--	--	<50.0	73.9	--	73.6	--	--	--
	6/2/2011	--	--	--	7,800	--	--	--	--	--	--	--	--	--	233	<10.0	--	239	--	--	--
	6/11/2012	--	--	--	264	--	--	--	--	--	--	--	--	--	<50.0	67	--	111	--	--	--
MW-8	6/30/2010	--	--	4,710	8,000	--	--	--	--	--	--	--	--	--	<50.0	68.2	--	59.7	--	--	--
	6/2/2011	--	--	--	24,900	--	--	--	--	--	--	--	--	--	60.9	<10.0	--	60.9	--	--	--
	6/11/2012	--	--	--	21,000	--	--	--	--	--	--	--	--	--	<50.0	48.0	--	<50.0	--	--	--
MW-9	12/17/2009	--	--	--	2,270	--	--	--	--	--	--	--	--	--	<50.0	<50.0	--	<50.0	--	--	--
	6/30/2010	--	--	3,210	8,820	--	--	--	--	--	--	--	--	--	<50.0	14.9	--	<50.0	--	--	--
	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	0.86	<50.0	0.6	--	405
	6/11/2012	--	--	--	731	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--
MW-10	9/17/2009	--	--	--	9,800	--	--	--	--	--	--	--	--	0.012	12	--	--	--	--	--	--
	12/17/2009	--	--	--	3,410	--	--	--	--	--	--	--	--	--	1,970	60.3	--	2,030	--	--	--
	3/29/2010	--	--	365	2,410	--	--	--	--	--	--	--	--	--	1,960	18.7	--	1,970	--	--	--
	6/30/2010	--	--	216	1,860	--	--	--	--	--	--	--	--	--	2,120	68.1	--	2,190	--	--	--
	9/20/2010	--	--	280	3,080	--	--	--	--	--	--	--	--	--	2,690	68.2	--	2,750	--	--	--
	3/14/2011	--	--	--	2,620	--	--	--	--	--	--	--	--	--	--	--	--	2,350	--	--	--
	6/2/2011	--	--	--	9,870	--	--	--	--	--	--	--	--	--	1,290	49.3	--	1,340	--	--	--
	6/11/2012	--	--	--	11,300	--	--	--	--	--	--	--	--	--	1,510	57.0	--	1,570	--	--	--
	9/6/2012	--	--	--	--	11,000	--	--	--	--	467	--	--	--	--	--	--	--	--	--	--
9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	0.45	--	--	--	--	--	--	--
MW-11	7/6/2010	--	--	<100	3,510	--	--	--	--	--	--	--	--	--	<50.0	31.0	--	66.9	--	--	--
	9/20/2010	--	--	<100	1,690	--	--	--	--	--	--	--	--	--	167	<10.0	--	172	--	--	--
	3/14/2011	--	--	--	756	--	--	--	--	--	--	--	--	--	--	--	--	<50.0	--	--	--
	6/2/2011	--	--	--	1,040	--	--	--	--	--	--	--	--	--	110	<10.0	--	115	--	--	--
	6/11/2012	--	--	--	1,300	--	--	--	--	--	--	--	--	--	88.8	<10	--	93.5	--	--	--
MW-12	7/6/2010	--	--	<100	30,200	--	--	--	--	--	--	--	--	--	<50.0	60.5	--	<50.0	--	--	--
	9/20/2010	--	--	552	3,890	--	--	--	--	--	--	--	--	--	72.3	<10.0	--	75.2	--	--	--
	3/14/2011	--	--	--	793	593	200	<10.0	12,400	<0.20	114	<20.0	151	--	<50.0	60.6	--	54.4	--	--	--
	6/2/2011	--	1,100	--	9,340	8,740	600	<10.0	12,800	<0.20	287	<20.0	119	--	<50.0	<10.0	0.14	58.0	0.91	--	15,600
	6/12/2012	--	--	--	497	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--
	9/6/2012	--	--	--	--	190	--	--	--	--	63.8	--	--	--	--	--	--	--	--	--	--
3/4/2014	<5.0	--	--	680	--	--	<5.0	--	<0.5	--	--	120	--	--	--	--	--	--	--	--	--
MW-12A	7/6/2010	--	--	716	57,300	--	--	--	--	--	--	--	--	--	3,680	164	--	3,840	--	--	--
	9/20/2010	--	--	<100	523	--	--	--	--	--	--	--	--	--	4,680	10.2	--	4,690	--	--	--
	3/14/2011	--	--	--	523	--	--	--	--	--	--	--	--	--	--	--	--	4,790	--	--	--
	6/2/2011	--	--	--	754	--	--	--	--	--	--	--	--	--	4,710	<10.0	--	4,720	--	--	--
	6/11/2012	--	--	--	859	--	--	--	--	--	--	--	--	--	4,250	<10	--	4,260	--	--	--

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																			
		Copper (ug/L)	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	--	--	--	--	--	--	--	--	--	<50.0	65	--	70	--	--	--
	9/20/2010	--	--	279	59,500	--	--	--	--	--	--	--	--	--	<50.0	<10.0	--	<50.0	--	--	--
	3/14/2011	--	--	--	44,600	--	--	--	--	--	--	--	--	--	--	--	--	<50.0	--	--	--
	6/2/2011	--	--	--	36,700	--	--	--	--	--	--	--	--	--	71.5	14.5	--	86.0	--	--	--
	6/12/2012	--	--	--	3,760	--	--	--	--	--	--	--	--	--	<50.0	19.0	--	<50.0	--	--	--
MW-14	6/2/2011	--	--	--	47,500	--	--	--	--	--	--	--	--	--	<50.0	10.4	--	50.1	--	--	--
	6/12/2012	--	--	--	1,150	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--
	9/6/2012	--	--	--	--	8,900	--	--	--	--	718	--	--	--	--	--	--	--	--	--	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	<0.10	--	--	--	--	--	--	--
MW-15	6/2/2011	--	--	--	11,700	--	--	--	--	--	--	--	--	--	890	38.0	--	928	--	--	--
	6/12/2012	--	--	--	2,920	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--
MW-16	6/2/2011	--	--	--	34,200	--	--	--	--	--	--	--	--	--	<50.0	<10.0	--	<50.0	--	--	--
	6/12/2012	--	--	--	1,730	--	--	--	--	--	--	--	--	--	<50.0	<10	--	<50.0	--	--	--
MW-17	6/2/2011	--	--	--	109,000	--	--	--	--	--	--	--	--	--	<50.0	29.7	--	<50.0	--	--	--
	6/12/2012	--	--	--	44,300	--	--	--	--	--	--	--	--	--	<50.0	39.0	--	<50.0	--	--	--
	9/6/2012	--	--	--	--	21,000	--	--	--	--	182	--	--	--	--	--	--	--	--	--	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--

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	--	--	--	--
	6/30/2010	--	--	<5000	--	--	--	--	--
	6/2/2011	--	--	<5000	--	--	--	--	--
	6/11/2012	--	--	<2000	--	--	--	--	--
MW-6	9/17/2009	--	--	<1.0	<0.0010	--	--	--	--
	12/17/2009	--	--	--	<0.5	--	--	--	--
	3/29/2010	--	--	<1000	--	--	--	--	--
	6/30/2010	--	--	<5000	--	--	--	--	--
	9/20/2010	--	--	<1000	--	--	--	--	--
	3/14/2011	<10.0	<10.0	35,400	--	<20.0	--	<50.0	<40.0
	6/2/2011	<10.0	<10.0	38,900	--	<20.0	41	<50.0	<40.0
	6/12/2012	--	--	1,110	--	--	--	--	--
3/4/2014	--	<5.0	--	--	--	--	--	36	
MW-7	6/30/2010	--	--	191,000	--	--	--	--	--
	6/2/2011	--	--	48,900	--	--	--	--	--
	6/11/2012	--	--	56,900	--	--	--	--	--
MW-8	6/30/2010	--	--	2,360,000	--	--	--	--	--
	6/2/2011	--	--	2,830,000	--	--	--	--	--
	6/11/2012	--	--	2,570,000	--	--	--	--	--
MW-9	12/17/2009	--	--	--	11	--	--	--	--
	6/30/2010	--	--	19,000	--	--	--	--	--
	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	4.7	<50.0	<40.0
	6/11/2012	--	--	42,500	--	--	--	--	--

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	9/17/2009	--	--	84	0.084	--	--	--	--
	12/17/2009	--	--	--	86	--	--	--	--
	3/29/2010	--	--	73,600	--	--	--	--	--
	6/30/2010	--	--	70,800	--	--	--	--	--
	9/20/2010	--	--	82,000	--	--	--	--	--
	3/14/2011	--	--	68,600	--	--	--	--	--
	6/2/2011	--	--	71,700	--	--	--	--	--
	6/11/2012	--	--	70,100	--	--	--	--	--
MW-11	7/6/2010	--	--	82,100	--	--	--	--	--
	9/20/2010	--	--	58,300	--	--	--	--	--
	3/14/2011	--	--	59,900	--	--	--	--	--
	6/2/2011	--	--	62,900	--	--	--	--	--
	6/11/2012	--	--	79,400	--	--	--	--	--
MW-12	7/6/2010	--	--	3,030,000	--	--	--	--	--
	9/20/2010	--	--	1,970,000	--	--	--	--	--
	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	9.1	<50.0	<40.0
	6/12/2012	--	--	2,130,000	--	--	--	--	--
	3/4/2014	--	<5.0	--	--	--	--	--	46
MW-12A	7/6/2010	--	--	100,000	--	--	--	--	--
	9/20/2010	--	--	82,500	--	--	--	--	--
	3/14/2011	--	--	81,000	--	--	--	--	--
	6/2/2011	--	--	101,000	--	--	--	--	--
	6/11/2012	--	--	118,000	--	--	--	--	--

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



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA							
		Selenium (ug/L)	Silver (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-13	7/6/2010	--	--	450,000	--	--	--	--	--
	9/20/2010	--	--	241,000	--	--	--	--	--
	3/14/2011	--	--	375,000	--	--	--	--	--
	6/2/2011	--	--	188,000	--	--	--	--	--
	6/12/2012	--	--	131,000	--	--	--	--	--
MW-14	6/2/2011	--	--	56,300	--	--	--	--	--
	6/12/2012	--	--	439,000	--	--	--	--	--
MW-15	6/2/2011	--	--	62,700	--	--	--	--	--
	6/12/2012	--	--	42,100	--	--	--	--	--
MW-16	6/2/2011	--	--	8,740	--	--	--	--	--
	6/12/2012	--	--	19,900	--	--	--	--	--
MW-17	6/2/2011	--	--	3,920,000	--	--	--	--	--
	6/12/2012	--	--	2,520,000	--	--	--	--	--

Analytical Notes:

< - Below laboratory's indicated reporting limit

mg/L - milligrams per liter

ug/L - micrograms/liter

Bold - Above the laboratory's indicated reporting limit

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



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA												
		1,2,4-Trimethylbenzene (ug/L)	1,3,5-Trimethylbenzene (ug/L)	Isopropyl Benzene (ug/L)	Naphthalene (ug/L)	O-Xylene (ug/L)	P,M-Xylene (ug/L)	n-Butylbenzene (ug/L)	n-Propylbenzene (ug/L)	p-Isopropyltoluene (ug/L)	sec-Butylbenzene (ug/L)	HEM:Oil and Grease (mg/L)	Phenolics, Total (mg/L)	Cyanide, Total (mg/L)
MW-6	3/4/2014	3,000	860	200	990	300	1,400	100	530	22	53	1.6	<0.1	<0.02
MW-12	3/4/2014	3.7	11	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	1.9	0.1	<0.02

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 4
Historical Groundwater Gradient and Flow Direction Data
76 Station No. 5191/5043
449 Hegenberger Road
Oakland, California

Site	Monitoring Date	Groundwater Gradient (feet per foot)	Groundwater Flow Direction															
			N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	03/06/12	0.010	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	06/11/12	0.050	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	09/06/12	Variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12/13/12	0.020	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	03/14/13	0.050	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	06/11/13	0.001	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	09/10/13	0.014	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	12/12/13	0.018	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	03/04/14	0.010	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	06/12/14	0.020	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	09/05/14	0.003	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	12/22/14	Variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03/16/15	Variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.024 Average			0	0	0	0	0	1	34	1	16	0	20	2	3	0	0	0
Explanation																		
NA = Not available																		
Number of Events = 69																		

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Oakland, CA
Antea Group Project No. I42705191



Appendix A

Previous Investigation and Site History Summary

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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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Oakland, CA
Antea Group Project No. I42705191



Appendix B

Antea Group Groundwater Sampling Procedures

FIELD METHODS AND PROCEDURES

The following section describes field procedures that are to be used by Antea Group personnel in the performance of the tasks involved with this project.

1.0 HEALTH AND SAFETY PLAN

Fieldwork performed by Antea Group and Antea Group's subcontractors at the site will be conducted according to guidelines established in a Site Health and Safety Plan (SHSP). The SHSP is a document that describes the hazards that may be encountered in the field and specifies protective equipment, work procedures and emergency information. A copy of the SHSP will be at the site and available for reference by appropriate parties during work at the site.

2.0 GROUNDWATER DEPTH ASSESSMENT

A water/product interface probe is used to assess the liquid-phase hydrocarbons (LPH) thickness, if present, and a water level indicator is used to measure the groundwater depth in monitoring wells that do not contain LPH. Depth to groundwater or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typically a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for LPH sheen.

3.0 SUBJECTIVE ANALYSIS OF GROUNDWATER

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

4.0 MONITORING WELL SAMPLING

Monitoring wells are purged using a pump or bailer until pH, temperature and conductivity of the purge water has stabilized and a minimum of three well volumes of water has been removed. The purge water is placed in 55-gallon drums and temporarily stored onsite pending evaluation of disposal options. If three well volumes cannot be removed in one-half an hour's time, the well is allowed to recharge to 80 percent of original level. After recharging, a groundwater sample is then removed from each of the wells using a pump or disposable bailer. The water sample is collected, labeled and handled according to the Quality Assurance Plan. Water generated during the monitoring event is disposed of according to the accepted regulatory method pertaining to the site.

5.0 QUALITY ASSURANCE PLAN

This section describes the field and analytical procedures to be followed by Antea Group throughout the investigation.

5.1 General Sample Collection and Handling Procedures

Proper collection and handling are essential to ensure the quality of a sample. Each sample will be collected in the appropriate container, preserved correctly for the intended analysis and stored, prior to analysis, for no longer than the maximum allowable holding time. Details on the procedures for collection and handling of soil samples from this project can be found in previous sections.

5.2 Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures ensure sample integrity and document sample possession from the time of collection to its ultimate disposal. Each sample container submitted for analysis will have a label affixed to identify the job number, sampler, date and time of sample collection and a sample number unique to that sample. During soil sampling, this information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel and any other pertinent field observations will be recorded on the borehole log or in the field records.

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Antea Group Project No. I42705191



Appendix C

Antea Group Groundwater Sampling Field Data Sheets

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Well-Head Inspection & Well Gauging Form

Antea Group Project No: I42705191

Site Address: 449 Hegenberger Oakland CA 94621

Field Technician: ED Weyers / Antea
(Print Full Name & Company*)

Date: 3/16/15

Weather: Overcast

Well Condition

Sample Order	Field Point	Bolts	Seal	Lid Secure	Lock	Expanding Cap	Water in Well Box	Well Casing Dia.	Time Gauged	Depth to Water (Feet)	Depth to Bottom (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Comments
1	MW-9	1/3	N	N	Y	Y	Y	2	11:15	2.42	12.41	—	—	
2	MW-3	1/2	N	N	Y	Y	Y	2	11:16	2.73	13.79	—	—	
3	MW-11	X	X	X	X	X	N	4	11:15	2.40	19.63	—	—	
4	MW-13	X	X	X	X	X	N	2	11:18 11:18	3.97	14.65	—	—	
5	MW-15	2/2	Y	Y	Y	Y	Y	2	11:20	3.17	12.55	—	—	
6	MW-16	X	X	X	X	X	Y	2	11:21	3.03	12.74	—	—	
7	MW-6	2/2	N	Y	Y	Y	Y	2	11:23	3.55	12.47	—	—	
8	MW-14	2/2	Y	Y	Y	Y	N	2	11:25	4.18	12.85	—	—	

Notes: 10:45 wells open, 11:00 a.m. start gauging

2 New Jans

** 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

Groundwater Sampling Form

Site Address: 449 Hegenberger, Oakland, CA 94621	
Project No: I42705191	Field Technician: JF
Field Point: MW-11	Date: 3/16/15
Depth to Water (DTW) (ft bgs): 2.40	Well Diameter (in): 2 (4) 6 8
Depth to LNAPL (ft bgs):	Thickness of LNAPL (ft):
Total Depth of Well (ft bgs): 19.63	Water Column Height (ft): 17.23

Purging Info and Calculations:

Purge Method: Low-Flow → 3 casing volumes Other: _____	Purge Equipment: Disposable Bailer → Electric Submersible Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: → Disposable Bailer Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 17.23 X Conversion Factor (gal/ft): 0.66 = Casing Volume (gal): 11.37 Casing Volume (gal): 11.37 X Specified Volumes: 3 = Calculated Purge (gal): 34.1		
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163		

Purge:	Start Time:	Stop Time:						
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge								
11:55	19.91	6.61	1829	-89.4	5.0	2.85	0.1	
12:00	19.56	6.28	1849	-125.4	3.99	0.63	11.4	
12:05	19.52	6.16	1809	-133.8	4.30	0.97	22.7	
12:11	19.56	6.15	1796	-140.3	2.74	0.92	34.1	
Post-Purge								

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

Other Comments: _____

Sample Info:

Sample ID: MW-11-20150331	Sample Date and Time: 3/16/15 12:20
Selected Analysis:	

This form was provided by Antea Group and completed by: _____

Signature: Jonathan Filizame Date: 3/16/15



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

Groundwater Sampling Form

Site Address: 449 Hegenberger, Oakland, CA 94621	
Project No: I42705191	Field Technician: JF
Field Point: MW-13	Date: 3/16/15
Depth to Water (DTW) (ft bgs): 3.97	Well Diameter (in): ② 4 6 8
Depth to LNAPL (ft bgs):	Thickness of LNAPL (ft):
Total Depth of Well (ft bgs): 14.65	Water Column Height (ft): 10.68

Purging Info and Calculations:

Purge Method: Low-Flow - 3 casing volumes Other: _____	Purge Equipment: Disposable Bailer - Electric Submersible Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: - Disposable Bailer Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 10.68	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.82
Casing Volume (gal): 1.82	X Specified Volumes: 3	= Calculated Purge (gal): 5.4
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163		

Purge:	Start Time:	Stop Time:						
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge								
12:35	18.42	6.60	3492	135.1	24.2	3.10	0.1	
12:37	16.67	6.61	3605	-208.1	4.89	1.24	1.8	
12:38	17.20	6.96	3763	-219.2	4.50	0.95	3.6	
12:39	18.01	6.50	4249	-221.4	14.4	0.74	5.4	
Post-Purge								
Did Well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Total Purge volume (gal): 6.9						

Other Comments: _____

Sample Info:	
Sample ID: MW-13_20150331	Sample Date and Time: 3/16/15 12:50
Selected Analysis: _____	

This form was provided by Antea Group and completed by: (Print Full Name) _____

Signature: *Jonathan Fillington* Date: 3/16/15



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

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

Groundwater Sampling Form

Site Address: 449 Hegenberger, Oakland, CA 94621	
Project No: I42705191	Field Technician: ETW
Field Point: MW-15	Date: 3/16/15
Depth to Water (DTW) (ft bgs): 3.17	Well Diameter (in): ② 4 6 8
Depth to LNAPL (ft bgs): —	Thickness of LNAPL (ft): —
Total Depth of Well (ft bgs): 12.55	Water Column Height (ft): 9.38

Purging Info and Calculations:

Purge Method: Low-Flow 3 casing volumes Other: _____	Purge Equipment: Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: Disposable Bailer Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 9.38	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.59
Casing Volume (gal): 1.59	X Specified Volumes: 3	= Calculated Purge (gal): 4.78
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163		

Purge:	Start Time: 11:53	Stop Time: 11:56						
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								
11:54	19.98	6.50	1552	-98.7	26.4	1.00	1.5	
11:55	19.88	6.47	1639	-106.7	19.4	0.83	3.0	
11:56	19.83	6.54	2669	-110.1	14.8	0.72	4.75	
Post-Purge								
Did Well dewater?	Yes	No	Total Purge volume (gal): 5.0					

Other Comments: _____

Sample Info:	
Sample ID: MW-15-20150331	Sample Date and Time: 3/16/15 12:00
Selected Analysis: _____	

This form was provided by Antea Group and completed by: (Print Full Name) Ed Weyens

Signature: Date: 3/16/15

Groundwater Sampling Form

Site Address: 449 Hegenberger, Oakland, CA 94621

Project No: I42705191

Field Technician: JF

Field Point: MW-16

Date: 3/16/15

Depth to Water (DTW) (ft bgs): 3.03

Well Diameter (in): ② 4 6 8

Depth to LNAPL (ft bgs):

Thickness of LNAPL (ft):

Total Depth of Well (ft bgs): 12.74

Water Column Height (ft): 9.71

Purging Info and Calculations:

Purge Method:

Purge Equipment:

Sample Collection Method:

Low-Flow
 3 casing volumes
 Other: _____

Disposable Bailer
 Electric Submersible
 Peristaltic Pump
 Bladder Pump
 Other: _____

Disposable Bailer
 Extraction Port
 Dedicated Tubing
 Disposable Tubing
 Other: _____

Water Column Height (ft): 9.71 X Conversion Factor (gal/ft): 0.17 = Casing Volume (gal): 1.65

Casing Volume (gal): 1.65 X Specified Volumes: 3 = Calculated Purge (gal): 5.0

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

Purge: Start Time: _____ Stop Time: _____

Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge								
13:00	20.87	7.11	48.9	-119.4	9.79	2.72	0.1	
13:01	20.97	6.53	136.4	-138.4	3.11	1.33	1.7	
13:02	20.63	6.39	117.1	-147.1	2.59	1.34	3.3	
13:03	20.90	6.32	3891	-143.9	15.2	2.5	5.0	
Post-Purge								

Did Well dewater? Yes No Total Purge volume (gal): 5.0

Other Comments:

Sample Info:

Sample ID: MW-16-20150331

Sample Date and Time: 3/16/15 13:20

Selected Analysis:

This form was provided by Antea Group and completed by: (Print Full Name)

Signature: *Jonathan F. Rengame*

Date: 3/16/15



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

Groundwater Sampling Form

Site Address:	449 Hegenberger, Oakland, CA 94621		
Project No:	I42705191	Field Technician:	ETW
Field Point:	MW-6	Date:	3/16/15
Depth to Water (DTW) (ft bgs):	3.55	Well Diameter (in):	② 4 6 8
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	12.47	Water Column Height (ft):	8.92

Purging Info and Calculations:

Purge Method: Low-Flow <u>3 casing volumes</u> Other: _____	Purge Equipment: Disposable Bailer <u>Electric Submersible</u> Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: <u>Disposable Bailer</u> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>8.92</u>	X Conversion Factor (gal/ft): <u>0.17</u>	= Casing Volume (gal): <u>1.52</u>
Casing Volume (gal): <u>1.52</u>	X Specified Volumes: <u>3</u>	= Calculated Purge (gal): <u>4.55</u>
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163		

Purge: Start Time: 12:16 Stop Time: 12:17

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								
12:16	18.61	6.74	2414	-122.3	12.6	1.47	1.5	
12:17	18.20	6.70	2521	-125.5	18.8	1.38	3	
							4.5	
Post-Purge								

Did Well dewater? Yes No Total Purge volume (gal): 3.0

Other Comments: _____

Sample Info:

Sample ID: <u>MW-6-20150331</u>	Sample Date and Time: <u>3/16/15 12:25</u>
Selected Analysis: _____	

This form was provided by Antea Group and completed by: (Print Full Name) Ed Weyens

Signature: Date: 3/16/15

Groundwater Sampling Form

Site Address: 449 Hegenberger, Oakland, CA 94621	
Project No: I42705191	Field Technician: ETW
Field Point: MW-14	Date: 3/16/15
Depth to Water (DTW) (ft bgs): 4.18	Well Diameter (in): (2) 4 6 8
Depth to LNAPL (ft bgs):	Thickness of LNAPL (ft):
Total Depth of Well (ft bgs): 12.85	Water Column Height (ft): 8.67

Purging Info and Calculations:

Purge Method: Low-Flow 3 casing volumes Other:	Purge Equipment: Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other:	Sample Collection Method: Disposable Bailer Extraction Port Dedicated Tubing Disposable Tubing Other:
Water Column Height (ft): 8.67	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.47
Casing Volume (gal): 1.47	X Specified Volumes: 3	= Calculated Purge (gal): 4.42
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163		

Purge: Start Time: 12:38 Stop Time: 12:41

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								
12:38	17.20	6.93	10768	-137.3	26.5	1.22	1.5	
12:39	16.00	6.88	9976	-141.2	30.4	0.30	3	
12:40	17.88	6.86	17408	-142.0	21.2	1.35	4.4	
Post-Purge								

Did Well dewater? Yes No Total Purge volume (gal): 4.5

Other Comments: Sample effervescent, unable to remove air bubbles

Sample Info:

Sample ID: MW-14-20150331	Sample Date and Time: 3/16/15 12:45
Selected Analysis:	

This form was provided by Antea Group and completed by: (Print Full Name) Ed Weyers

Signature: Date: 3/16/15



COP ELT CHAIN-OF-CUSTODY / Analytical Request Document

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

1Q15 GW Event

Required Lab Information:		Required Project Information:		Required Invoice Information:	
Lab Name: Pace	Site ID #: 2705191	Task: WG_Q_201503	Send Invoice to: Sandy Hayes		
Address: 2795 Second Street # 300	AnteaGrp proj#	Address: 11050 White Rock Road, Suite 110			
Davis, CA 95618	Site Address: 449 Hegenberger	City/State: Rancho Cordova CA 95670	Phone #: 916-638-2085	Turn around time (days) 10	
Lab PM: Scott Forbes	City: Oakland	State: CA 94621	Reimbursement project?	Non-reimbursement project? Y	Mark one
Phone/Fax: P: 530-297-4800 F: 530-297-4808	AG PM Name: Dennis Dettloff	Send EDD to: Agdataview.us@anteagroup.com	NJ Reduced Deliverable Package?		
Lab PM email: SForbes@kiffanalytical.com	Phone/Fax: P: 916-503-1261 F: 916-638-8385	CC Hardcopy report to	MA MCP Cert? CT RCP Cert? Mark One		
Applicable Lab Quote #:	AG PM Email: dennis.dettloff@anteagroup.com	CC Hardcopy report to	Lab Project ID (lab use)		

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / -) Samples IDs MUST BE UNIQUE	Valid Matrix Codes		MATRIX CODE	SAMPLE TYPE G-GRAB C-COMP	SAMPLE DATE	SAMPLE TIME	# OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives										Requested Analyses	Comments/Lab Sample I.D.					
		MATRIX								Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	8015TPH/Diesel/Wisilite	8380 CCMS/GRD			8380Bier/Mike/BA	8380Ethanol			
		DIPPING WATER	WATER																					W	W	W
1	MW-11_20150331	WP	W	WG		3/16/15	12:20	6	N																	
2	MW-13_20150331	WG		WG		3/16/15	12:50	6	N					X						X	X	X	X			
3	MW-14_20150331	WG		WG		3/16/15	12:45	6	N					X						X	X	X	X			
4	MW-15_20150331	WG		WG		3/16/15	12:00	6	N					X						X	X	X	X			
5	MW-16_20150331	WG		WG		3/16/15	13:20	6	N					X						X	X	X	X			
6	MW-6_20150331	WG		WG		3/16/15	12:25	6	N					X						X	X	X	X			
7																										
8																										
9																										
10																										
11																										
12																										

Additional Comments/Special Instructions: Global ID: T0600101476	RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	Sample Receipt Conditions						
	<i>Jonathan P. Williams</i>		3/17	16:25	<i>Scott Pace</i>		03/17/15	16:25	Y/N	Y/N	Y/N				
									Y/N	Y/N	Y/N				
									Y/N	Y/N	Y/N				
SHIPPING METHOD: (mark as appropriate) _____ SAMPLER NAME AND SIGNATURE															
UPS COURIER FEDEX		PRINT Name of SAMPLER:		<i>Ed Uyrens</i>								Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?
US MAIL		SIGNATURE OF SAMPLER:		DATE Signed		Time:									
				3/16/15		13:30									

Quarterly Summary Report, First Quarter 2015
76 Station No. 5191/5043
Oakland, CA
Antea Group Project No. I42705191



Appendix D

Certified Laboratory Analytical Report and Data Validation Form

April 09, 2015

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

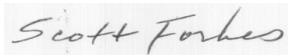
RE: Project: 2705191
Pace Project No.: 1244556

Dear Dennis Dettloff:

Enclosed are the analytical results for sample(s) received by the laboratory on March 17, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott M Forbes
scott.forbes@pacelabs.com
Project Manager

Enclosures

cc: Sandy Hayes, Antea Group
Jerilyn Thao, The Antea Group



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2705191
Pace Project No.: 1244556

Davis Certification IDs

2795 Second Street Suite 300 Davis, CA 95618
North Dakota Certification #: R-214
Oregon Certification #: CA300002

Washington Certification #: C926-14a
California Certification #: 08263CA

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2705191
Pace Project No.: 1244556

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1244556001	MW-11_20150331	Water	03/16/15 12:20	03/17/15 16:25
1244556002	MW-13_20150331	Water	03/16/15 12:50	03/17/15 16:25
1244556003	MW-14_20150331	Water	03/16/15 12:45	03/17/15 16:25
1244556004	MW-15_20150331	Water	03/16/15 12:00	03/17/15 16:25
1244556005	MW-16_20150331	Water	03/16/15 13:20	03/17/15 16:25
1244556006	MW-6_20150331	Water	03/16/15 12:25	03/17/15 16:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2705191

Pace Project No.: 1244556

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
1244556001	MW-11_20150331	EPA 8015B	DRM	2	PASI-DAV
		EPA 8260B	LM	2	PASI-DAV
		EPA 8260B	JCP	10	PASI-DAV
1244556002	MW-13_20150331	EPA 8015B	DRM	2	PASI-DAV
		EPA 8260B	LM	2	PASI-DAV
		EPA 8260B	JCP	10	PASI-DAV
1244556003	MW-14_20150331	EPA 8015B	DRM	2	PASI-DAV
		EPA 8260B	LM	2	PASI-DAV
		EPA 8260B	JCP	10	PASI-DAV
1244556004	MW-15_20150331	EPA 8015B	DRM	2	PASI-DAV
		EPA 8260B	LM	2	PASI-DAV
		EPA 8260B	JCP	10	PASI-DAV
1244556005	MW-16_20150331	EPA 8015B	DRM	2	PASI-DAV
		EPA 8260B	LM	2	PASI-DAV
		EPA 8260B	JCP	10	PASI-DAV
1244556006	MW-6_20150331	EPA 8015B	DRM	2	PASI-DAV
		EPA 8260B	LM	2	PASI-DAV
		EPA 8260B	JCP	10	PASI-DAV

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 2705191
Pace Project No.: 1244556

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
1244556001	MW-11_20150331					
EPA 8260B	Methyl-tert-butyl ether	19.6	ug/L	0.50	03/28/15 13:32	
1244556002	MW-13_20150331					
EPA 8260B	tert-Butyl Alcohol	35.5	ug/L	5.0	03/28/15 15:59	
EPA 8260B	Methyl-tert-butyl ether	27.7	ug/L	0.50	03/28/15 15:59	
1244556003	MW-14_20150331					
EPA 8260B	Benzene	393	ug/L	0.50	03/28/15 16:27	
EPA 8260B	tert-Butyl Alcohol	15.0	ug/L	5.0	03/28/15 16:27	
EPA 8260B	Ethylbenzene	278	ug/L	0.50	03/28/15 16:27	
EPA 8260B	Methyl-tert-butyl ether	0.66	ug/L	0.50	03/28/15 16:27	
EPA 8260B	Toluene	1.6	ug/L	0.50	03/28/15 16:27	
EPA 8260B	TPH as Gas	2990	ug/L	50.0	03/28/15 16:27	
EPA 8260B	Xylene (Total)	413	ug/L	1.0	03/28/15 16:27	
1244556004	MW-15_20150331					
EPA 8260B	tert-Butyl Alcohol	27.0	ug/L	5.0	03/28/15 16:54	
EPA 8260B	Methyl-tert-butyl ether	46.7	ug/L	0.50	03/28/15 16:54	
1244556005	MW-16_20150331					
EPA 8260B	tert-Butyl Alcohol	185	ug/L	5.0	03/28/15 17:21	
EPA 8260B	Methyl-tert-butyl ether	9.2	ug/L	0.50	03/28/15 17:21	
1244556006	MW-6_20150331					
EPA 8015B	TPH-DRO (C10-C28)	0.16	mg/L	0.050	04/01/15 19:31	
EPA 8260B	Ethanol	71.8	ug/L	5.0	03/30/15 23:38	2V
EPA 8260B	Benzene	4070	ug/L	25.0	03/30/15 20:27	
EPA 8260B	tert-Butyl Alcohol	56.2	ug/L	5.0	03/28/15 17:48	
EPA 8260B	Ethylbenzene	3050	ug/L	25.0	03/30/15 20:27	
EPA 8260B	Methyl-tert-butyl ether	2.8	ug/L	0.50	03/28/15 17:48	
EPA 8260B	Toluene	181	ug/L	0.50	03/28/15 17:48	
EPA 8260B	TPH as Gas	72800	ug/L	2500	03/30/15 20:27	
EPA 8260B	Xylene (Total)	15900	ug/L	50.0	03/30/15 20:27	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2705191

Pace Project No.: 1244556

Method: EPA 8015B

Description: 8015 GCS THC-Diesel Silica Gel

Client: Antea Group

Date: April 09, 2015

General Information:

6 samples were analyzed for EPA 8015B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: DAOP/1027

S0: Surrogate recovery outside laboratory control limits.

- LCS (Lab ID: 194942)
- n-Octacosane (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: DAOP/1022

- MSD (Lab ID: 194221)
- n-Octacosane (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2705191

Pace Project No.: 1244556

Method: EPA 8015B

Description: 8015 GCS THC-Diesel Silica Gel

Client: Antea Group

Date: April 09, 2015

Analyte Comments:

QC Batch: DAOP/1027

1V: Since the TPH-DRO (C10-C28) recovery was within range, no data are flagged.

- LCS (Lab ID: 194942)
- n-Octacosane (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2705191

Pace Project No.: 1244556

Method: EPA 8260B

Description: 8260 MSV

Client: Antea Group

Date: April 09, 2015

General Information:

6 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: DAVM/1099

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

- MW-6_20150331 (Lab ID: 1244556006)
 - Ethanol

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2705191

Pace Project No.: 1244556

Method: EPA 8260B

Description: 8260 MSV UST

Client: Antea Group

Date: April 09, 2015

General Information:

6 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2705191
Pace Project No.: 1244556

Sample: MW-11_20150331		Lab ID: 1244556001		Collected: 03/16/15 12:20		Received: 03/17/15 16:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8015 GCS THC-Diesel Silica Gel									
		Analytical Method: EPA 8015B Preparation Method: EPA 3510							
TPH-DRO (C10-C28)	ND	mg/L	0.051	1	03/23/15 11:00	03/27/15 02:25			
Surrogates									
n-Octacosane (S)	123	%.	70-130	1	03/23/15 11:00	03/27/15 02:25	630-02-4		
8260 MSV									
		Analytical Method: EPA 8260B							
Ethanol	ND	ug/L	5.0	1	03/28/15 05:15		64-17-5		
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	70-130	1	03/28/15 05:15		17060-07-0		
8260 MSV UST									
		Analytical Method: EPA 8260B							
Benzene	ND	ug/L	0.50	1	03/28/15 13:32		71-43-2		
tert-Butyl Alcohol	ND	ug/L	5.0	1	03/28/15 13:32		75-65-0		
Ethylbenzene	ND	ug/L	0.50	1	03/28/15 13:32		100-41-4		
Methyl-tert-butyl ether	19.6	ug/L	0.50	1	03/28/15 13:32		1634-04-4		
Toluene	ND	ug/L	0.50	1	03/28/15 13:32		108-88-3		
TPH as Gas	ND	ug/L	50.0	1	03/28/15 13:32				
Xylene (Total)	ND	ug/L	1.0	1	03/28/15 13:32		1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	70-130	1	03/28/15 13:32		17060-07-0		
Toluene-d8 (S)	99	%.	70-130	1	03/28/15 13:32		2037-26-5		
4-Bromofluorobenzene (S)	89	%.	70-130	1	03/28/15 13:32		460-00-4		

Sample: MW-13_20150331		Lab ID: 1244556002		Collected: 03/16/15 12:50		Received: 03/17/15 16:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8015 GCS THC-Diesel Silica Gel									
		Analytical Method: EPA 8015B Preparation Method: EPA 3510							
TPH-DRO (C10-C28)	ND	mg/L	0.050	1	03/23/15 11:00	04/08/15 00:35			
Surrogates									
n-Octacosane (S)	124	%.	70-130	1	03/23/15 11:00	04/08/15 00:35	630-02-4		
8260 MSV									
		Analytical Method: EPA 8260B							
Ethanol	ND	ug/L	5.0	1	03/28/15 05:52		64-17-5		
Surrogates									
1,2-Dichloroethane-d4 (S)	89	%.	70-130	1	03/28/15 05:52		17060-07-0		
8260 MSV UST									
		Analytical Method: EPA 8260B							
Benzene	ND	ug/L	0.50	1	03/28/15 15:59		71-43-2		
tert-Butyl Alcohol	35.5	ug/L	5.0	1	03/28/15 15:59		75-65-0		
Ethylbenzene	ND	ug/L	0.50	1	03/28/15 15:59		100-41-4		
Methyl-tert-butyl ether	27.7	ug/L	0.50	1	03/28/15 15:59		1634-04-4		
Toluene	ND	ug/L	0.50	1	03/28/15 15:59		108-88-3		
TPH as Gas	ND	ug/L	50.0	1	03/28/15 15:59				
Xylene (Total)	ND	ug/L	1.0	1	03/28/15 15:59		1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	70-130	1	03/28/15 15:59		17060-07-0		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2705191
Pace Project No.: 1244556

Sample: MW-13_20150331		Lab ID: 1244556002	Collected: 03/16/15 12:50	Received: 03/17/15 16:25	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

8260 MSV UST

Analytical Method: EPA 8260B

Surrogates

Toluene-d8 (S)	102	%	70-130	1		03/28/15 15:59	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130	1		03/28/15 15:59	460-00-4	

Sample: MW-14_20150331		Lab ID: 1244556003	Collected: 03/16/15 12:45	Received: 03/17/15 16:25	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

8015 GCS THC-Diesel Silica Gel

Analytical Method: EPA 8015B Preparation Method: EPA 3510

TPH-DRO (C10-C28)	ND	mg/L	0.050	1	03/23/15 11:00	03/27/15 03:35		
Surrogates								
n-Octacosane (S)	124	%	70-130	1	03/23/15 11:00	03/27/15 03:35	630-02-4	

8260 MSV

Analytical Method: EPA 8260B

Ethanol	ND	ug/L	5.0	1		03/28/15 06:28	64-17-5	
Surrogates								
1,2-Dichloroethane-d4 (S)	86	%	70-130	1		03/28/15 06:28	17060-07-0	

8260 MSV UST

Analytical Method: EPA 8260B

Benzene	393	ug/L	0.50	1		03/28/15 16:27	71-43-2	
tert-Butyl Alcohol	15.0	ug/L	5.0	1		03/28/15 16:27	75-65-0	
Ethylbenzene	278	ug/L	0.50	1		03/28/15 16:27	100-41-4	
Methyl-tert-butyl ether	0.66	ug/L	0.50	1		03/28/15 16:27	1634-04-4	
Toluene	1.6	ug/L	0.50	1		03/28/15 16:27	108-88-3	
TPH as Gas	2990	ug/L	50.0	1		03/28/15 16:27		
Xylene (Total)	413	ug/L	1.0	1		03/28/15 16:27	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		03/28/15 16:27	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		03/28/15 16:27	2037-26-5	
4-Bromofluorobenzene (S)	109	%	70-130	1		03/28/15 16:27	460-00-4	

Sample: MW-15_20150331		Lab ID: 1244556004	Collected: 03/16/15 12:00	Received: 03/17/15 16:25	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

8015 GCS THC-Diesel Silica Gel

Analytical Method: EPA 8015B Preparation Method: EPA 3510

TPH-DRO (C10-C28)	ND	mg/L	0.050	1	03/23/15 11:00	03/27/15 04:10		
Surrogates								
n-Octacosane (S)	125	%	70-130	1	03/23/15 11:00	03/27/15 04:10	630-02-4	

8260 MSV

Analytical Method: EPA 8260B

Ethanol	ND	ug/L	5.0	1		03/30/15 22:25	64-17-5	
Surrogates								
1,2-Dichloroethane-d4 (S)	95	%	70-130	1		03/30/15 22:25	17060-07-0	

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ANALYTICAL RESULTS

Project: 2705191
Pace Project No.: 1244556

Sample: MW-15_20150331		Lab ID: 1244556004		Collected: 03/16/15 12:00		Received: 03/17/15 16:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV UST		Analytical Method: EPA 8260B							
Benzene	ND	ug/L	0.50	1		03/28/15 16:54	71-43-2		
tert-Butyl Alcohol	27.0	ug/L	5.0	1		03/28/15 16:54	75-65-0		
Ethylbenzene	ND	ug/L	0.50	1		03/28/15 16:54	100-41-4		
Methyl-tert-butyl ether	46.7	ug/L	0.50	1		03/28/15 16:54	1634-04-4		
Toluene	ND	ug/L	0.50	1		03/28/15 16:54	108-88-3		
TPH as Gas	ND	ug/L	50.0	1		03/28/15 16:54			
Xylene (Total)	ND	ug/L	1.0	1		03/28/15 16:54	1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		03/28/15 16:54	17060-07-0		
Toluene-d8 (S)	103	%	70-130	1		03/28/15 16:54	2037-26-5		
4-Bromofluorobenzene (S)	105	%	70-130	1		03/28/15 16:54	460-00-4		

Sample: MW-16_20150331		Lab ID: 1244556005		Collected: 03/16/15 13:20		Received: 03/17/15 16:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8015 GCS THC-Diesel Silica Gel		Analytical Method: EPA 8015B Preparation Method: EPA 3510							
TPH-DRO (C10-C28)	ND	mg/L	0.050	1	03/24/15 20:07	04/01/15 20:06			
Surrogates									
n-Octacosane (S)	134	%	70-130	1	03/24/15 20:07	04/01/15 20:06	630-02-4		
8260 MSV		Analytical Method: EPA 8260B							
Ethanol	ND	ug/L	5.0	1		03/30/15 23:01	64-17-5		
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		03/30/15 23:01	17060-07-0		
8260 MSV UST		Analytical Method: EPA 8260B							
Benzene	ND	ug/L	0.50	1		03/28/15 17:21	71-43-2		
tert-Butyl Alcohol	185	ug/L	5.0	1		03/28/15 17:21	75-65-0		
Ethylbenzene	ND	ug/L	0.50	1		03/28/15 17:21	100-41-4		
Methyl-tert-butyl ether	9.2	ug/L	0.50	1		03/28/15 17:21	1634-04-4		
Toluene	ND	ug/L	0.50	1		03/28/15 17:21	108-88-3		
TPH as Gas	ND	ug/L	50.0	1		03/28/15 17:21			
Xylene (Total)	ND	ug/L	1.0	1		03/28/15 17:21	1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		03/28/15 17:21	17060-07-0		
Toluene-d8 (S)	102	%	70-130	1		03/28/15 17:21	2037-26-5		
4-Bromofluorobenzene (S)	101	%	70-130	1		03/28/15 17:21	460-00-4		

Sample: MW-6_20150331		Lab ID: 1244556006		Collected: 03/16/15 12:25		Received: 03/17/15 16:25		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8015 GCS THC-Diesel Silica Gel		Analytical Method: EPA 8015B Preparation Method: EPA 3510							
TPH-DRO (C10-C28)	0.16	mg/L	0.050	1	03/24/15 20:07	04/01/15 19:31			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2705191

Pace Project No.: 1244556

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-6_20150331								
Lab ID: 1244556006								
Collected: 03/16/15 12:25 Received: 03/17/15 16:25 Matrix: Water								
8015 GCS THC-Diesel Silica Gel Analytical Method: EPA 8015B Preparation Method: EPA 3510								
Surrogates								
n-Octacosane (S)	127	%	70-130	1	03/24/15 20:07	04/01/15 19:31	630-02-4	
8260 MSV Analytical Method: EPA 8260B								
Ethanol	71.8	ug/L	5.0	1		03/30/15 23:38	64-17-5	2V
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		03/30/15 23:38	17060-07-0	
8260 MSV UST Analytical Method: EPA 8260B								
Benzene	4070	ug/L	25.0	50		03/30/15 20:27	71-43-2	
tert-Butyl Alcohol	56.2	ug/L	5.0	1		03/28/15 17:48	75-65-0	
Ethylbenzene	3050	ug/L	25.0	50		03/30/15 20:27	100-41-4	
Methyl-tert-butyl ether	2.8	ug/L	0.50	1		03/28/15 17:48	1634-04-4	
Toluene	181	ug/L	0.50	1		03/28/15 17:48	108-88-3	
TPH as Gas	72800	ug/L	2500	50		03/30/15 20:27		
Xylene (Total)	15900	ug/L	50.0	50		03/30/15 20:27	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	82	%	70-130	1		03/28/15 17:48	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		03/28/15 17:48	2037-26-5	
4-Bromofluorobenzene (S)	106	%	70-130	1		03/28/15 17:48	460-00-4	

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QUALITY CONTROL DATA

Project: 2705191

Pace Project No.: 1244556

QC Batch: DAOP/1022 Analysis Method: EPA 8015B
QC Batch Method: EPA 3510 Analysis Description: 8015 GCS
Associated Lab Samples: 1244556001, 1244556002, 1244556003, 1244556004

METHOD BLANK: 194218 Matrix: Water
Associated Lab Samples: 1244556001, 1244556002, 1244556003, 1244556004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO (C10-C28)	mg/L	ND	0.050	04/08/15 15:52	
n-Octacosane (S)	%.	115	70-130	04/08/15 15:52	

LABORATORY CONTROL SAMPLE: 194219

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C28)	mg/L	1	0.83	83	70-130	
n-Octacosane (S)	%.			123	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 194220 194221

Parameter	Units	1244497001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-DRO (C10-C28)	mg/L	0.32	1	1	1.3	1.2	95	92	70-130	2	25	
n-Octacosane (S)	%.						126	128	70-130			

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QUALITY CONTROL DATA

Project: 2705191
Pace Project No.: 1244556

QC Batch: DAOP/1027 Analysis Method: EPA 8015B
QC Batch Method: EPA 3510 Analysis Description: 8015 GCS
Associated Lab Samples: 1244556005, 1244556006

METHOD BLANK: 194941 Matrix: Water
Associated Lab Samples: 1244556005, 1244556006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO (C10-C28)	mg/L	ND	0.050	04/02/15 13:37	
n-Octacosane (S)	%.	115	70-130	04/02/15 13:37	

LABORATORY CONTROL SAMPLE: 194942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C28)	mg/L	1	1.1	105	70-130	
n-Octacosane (S)	%.			136	70-130 1V,S0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 194943 194944

Parameter	Units	1244137001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-DRO (C10-C28)	mg/L	0.14	.99	1	0.87	0.86	74	72	70-130	2	25	
n-Octacosane (S)	%.						111	121	70-130			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 2705191
Pace Project No.: 1244556

QC Batch: DAVM/1099 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV
Associated Lab Samples: 1244556001, 1244556002, 1244556003, 1244556004, 1244556005, 1244556006

METHOD BLANK: 195814 Matrix: Water
Associated Lab Samples: 1244556001, 1244556002, 1244556003, 1244556004, 1244556005, 1244556006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethanol	ug/L	ND	5.0	03/28/15 02:14	
1,2-Dichloroethane-d4 (S)	%.	94	70-130	03/28/15 02:14	

LABORATORY CONTROL SAMPLE: 195815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethanol	ug/L	100	125	125	70-130	
1,2-Dichloroethane-d4 (S)	%.			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 195816 195817

Parameter	Units	1244555002		195817		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Ethanol	ug/L	ND	100	100	108	102	108	102	70-130	6	25
1,2-Dichloroethane-d4 (S)	%.					87	87	70-130			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 2705191
Pace Project No.: 1244556

QC Batch: DAVM/1102 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 1244556001

METHOD BLANK: 196011 Matrix: Water
Associated Lab Samples: 1244556001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	0.50	03/28/15 11:13	
Ethylbenzene	ug/L	ND	0.50	03/28/15 11:13	
Methyl-tert-butyl ether	ug/L	ND	0.50	03/28/15 11:13	
tert-Butyl Alcohol	ug/L	ND	5.0	03/28/15 11:13	
Toluene	ug/L	ND	0.50	03/28/15 11:13	
TPH as Gas	ug/L	ND	50.0	03/28/15 11:13	
Xylene (Total)	ug/L	ND	1.0	03/28/15 11:13	
1,2-Dichloroethane-d4 (S)	%	99	70-130	03/28/15 11:13	
4-Bromofluorobenzene (S)	%	90	70-130	03/28/15 11:13	
Toluene-d8 (S)	%	99	70-130	03/28/15 11:13	

LABORATORY CONTROL SAMPLE: 196012

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	40	40.6	101	70-130	
Ethylbenzene	ug/L	40	40.3	101	70-130	
Methyl-tert-butyl ether	ug/L	40	37.1	93	70-130	
tert-Butyl Alcohol	ug/L	400	411	103	70-130	
Toluene	ug/L	40	41.6	104	70-130	
Xylene (Total)	ug/L	120	123	102	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 196055 196056

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		1244555001 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Benzene	ug/L	ND	40	40	39.9	39.7	99	99	70-130	0	25	
Ethylbenzene	ug/L	ND	40	40	39.6	40.0	99	100	70-130	1	25	
Methyl-tert-butyl ether	ug/L	1.3	40	40	38.4	38.4	93	93	70-130	0	25	
tert-Butyl Alcohol	ug/L	ND	400	400	392	373	98	93	70-130	5	25	
Toluene	ug/L	ND	40	40	40.6	40.2	101	101	70-130	1	25	
Xylene (Total)	ug/L	ND	120	120	120	122	100	102	70-130	1	25	
1,2-Dichloroethane-d4 (S)	%						100	98	70-130			
4-Bromofluorobenzene (S)	%						102	104	70-130			
Toluene-d8 (S)	%						102	100	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 2705191
Pace Project No.: 1244556

QC Batch: DAVM/1106 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 1244556002, 1244556003, 1244556004, 1244556005, 1244556006

METHOD BLANK: 196059 Matrix: Water
Associated Lab Samples: 1244556002, 1244556003, 1244556004, 1244556005, 1244556006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	0.50	03/28/15 15:05	
Ethylbenzene	ug/L	ND	0.50	03/28/15 15:05	
Methyl-tert-butyl ether	ug/L	ND	0.50	03/28/15 15:05	
tert-Butyl Alcohol	ug/L	ND	5.0	03/28/15 15:05	
Toluene	ug/L	ND	0.50	03/28/15 15:05	
TPH as Gas	ug/L	ND	50.0	03/28/15 15:05	
Xylene (Total)	ug/L	ND	1.0	03/28/15 15:05	
1,2-Dichloroethane-d4 (S)	%	97	70-130	03/28/15 15:05	
4-Bromofluorobenzene (S)	%	105	70-130	03/28/15 15:05	
Toluene-d8 (S)	%	104	70-130	03/28/15 15:05	

LABORATORY CONTROL SAMPLE: 196060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	40	40.0	100	70-130	
Ethylbenzene	ug/L	40	39.9	100	70-130	
Methyl-tert-butyl ether	ug/L	40	38.2	96	70-130	
tert-Butyl Alcohol	ug/L	400	388	97	70-130	
Toluene	ug/L	40	40.3	101	70-130	
Xylene (Total)	ug/L	120	121	100	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 196061 196062

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		1244555003 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Benzene	ug/L	ND	40	40	39.9	41.0	100	102	70-130	3	25	
Ethylbenzene	ug/L	ND	40	40	39.4	40.2	98	101	70-130	2	25	
Methyl-tert-butyl ether	ug/L	ND	40	40	37.2	40.7	92	101	70-130	9	25	
tert-Butyl Alcohol	ug/L	ND	400	400	372	389	93	97	70-130	4	25	
Toluene	ug/L	ND	40	40	40.9	41.0	102	102	70-130	0	25	
Xylene (Total)	ug/L	ND	120	120	120	121	100	101	70-130	1	25	
1,2-Dichloroethane-d4 (S)	%						95	99	70-130			
4-Bromofluorobenzene (S)	%						106	106	70-130			
Toluene-d8 (S)	%						103	102	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 2705191

Pace Project No.: 1244556

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-DAV Pace Analytical Services - Davis

ANALYTE QUALIFIERS

1V Since the TPH-DRO (C10-C28) recovery was within range, no data are flagged.

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

S0 Surrogate recovery outside laboratory control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: 2705191

Pace Project No.: 1244556

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1244556001	MW-11_20150331	EPA 3510	DAOP/1022	EPA 8015B	DASG/1021
1244556002	MW-13_20150331	EPA 3510	DAOP/1022	EPA 8015B	DASG/1021
1244556003	MW-14_20150331	EPA 3510	DAOP/1022	EPA 8015B	DASG/1021
1244556004	MW-15_20150331	EPA 3510	DAOP/1022	EPA 8015B	DASG/1021
1244556005	MW-16_20150331	EPA 3510	DAOP/1027	EPA 8015B	DASG/1026
1244556006	MW-6_20150331	EPA 3510	DAOP/1027	EPA 8015B	DASG/1026
1244556001	MW-11_20150331	EPA 8260B	DAVM/1099		
1244556002	MW-13_20150331	EPA 8260B	DAVM/1099		
1244556003	MW-14_20150331	EPA 8260B	DAVM/1099		
1244556004	MW-15_20150331	EPA 8260B	DAVM/1099		
1244556005	MW-16_20150331	EPA 8260B	DAVM/1099		
1244556006	MW-6_20150331	EPA 8260B	DAVM/1099		
1244556001	MW-11_20150331	EPA 8260B	DAVM/1102		
1244556002	MW-13_20150331	EPA 8260B	DAVM/1106		
1244556003	MW-14_20150331	EPA 8260B	DAVM/1106		
1244556004	MW-15_20150331	EPA 8260B	DAVM/1106		
1244556005	MW-16_20150331	EPA 8260B	DAVM/1106		
1244556006	MW-6_20150331	EPA 8260B	DAVM/1106		

REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt Form	Document Revised: 25Feb2015 Page 1 of 1
	Document No.: F-DAV-C-002-rev.02	Issuing Authority: Pace Davis, CA Quality Office


Sample Condition Upon Receipt

Client Name:

Artea

Project #:

WO# : 1244556



1244556

Courier: Fed Ex UPS USPS Client
 Commercial Pace OnTrac Other: _____
 Tracking Number: _____

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No **Optional:** Proj. Due Date: _____ Proj. Name: _____

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermom. Used: DA1434 BA2285 Type of Ice: Wet Blue Dry Ice None Samples on ice, cooling process has begun

Cooler Temp Read(°C): 0.4 Cooler Temp Corrected(°C): 0.4 Biological Tissue Frozen? Yes No N/A
 Temp should be above freezing to 6°C Correction Factor: 0.0 Date and Initials of Person Examining Contents: 03/15 TJB

		Comments:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>		
All containers needing acid/base preservation have been checked?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>Lab to check</u>
Initial when completed:		Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Scott F. [Signature]

Date: 3/18/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Is the Data Valid?

(circle)

Yes / No

Preservation Temperature
(if Known): 0.4 °C

Antea Group Lab Validation Sheet

Project/Client: COP/ELT

Project #: 142705191

Date of Validation: 1/29/15 Date of Analysis: 3/28/15 Sample Date: 3/16/15

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

Analytical Lab Used and Report # (if any): Pace Analytical 1244556

1. Was the analysis the one requested?

Yes / No

2. Do the sample number(s) on the chain-of-custody (COC) match the one(s) that appear on the laboratory data sheet?

Yes / No

3. Were samples prepared (extracted, filtered, etc.) within EPA holding times?

Yes / No

4. Once prepared/extracted, were the samples analyzed within the EPA holding times?

Yes / No

5. Were Laboratory blanks performed, if so, were they below non-detect?

Yes / No

6. Are the units correct? (i.e., soil samples in mg/kg or ug/g, water samples mg/L, ug/L, and air samples in volume mg/m³, etc.)

Yes / No

7. Were appropriate Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples included in the laboratory batch sample?

Yes / No

8. In lieu of MS/ MSD, were surrogate spike (SS) or surrogate spike duplicate (SSD) samples included in the laboratory batch samples?

Yes / No N/a

9. Were MS/ MSD (or SS/SSD) within the acceptable range of % recovery (i.e., approx 80-120% depending on analyte)?

Yes / No

10. Were MS/MSD (or SS/SSD) values used to calculate Relative Percent Difference (RPD)?

Yes / No

11. Were Relative Percent Difference values within the acceptable range (i.e. ± 25%)?

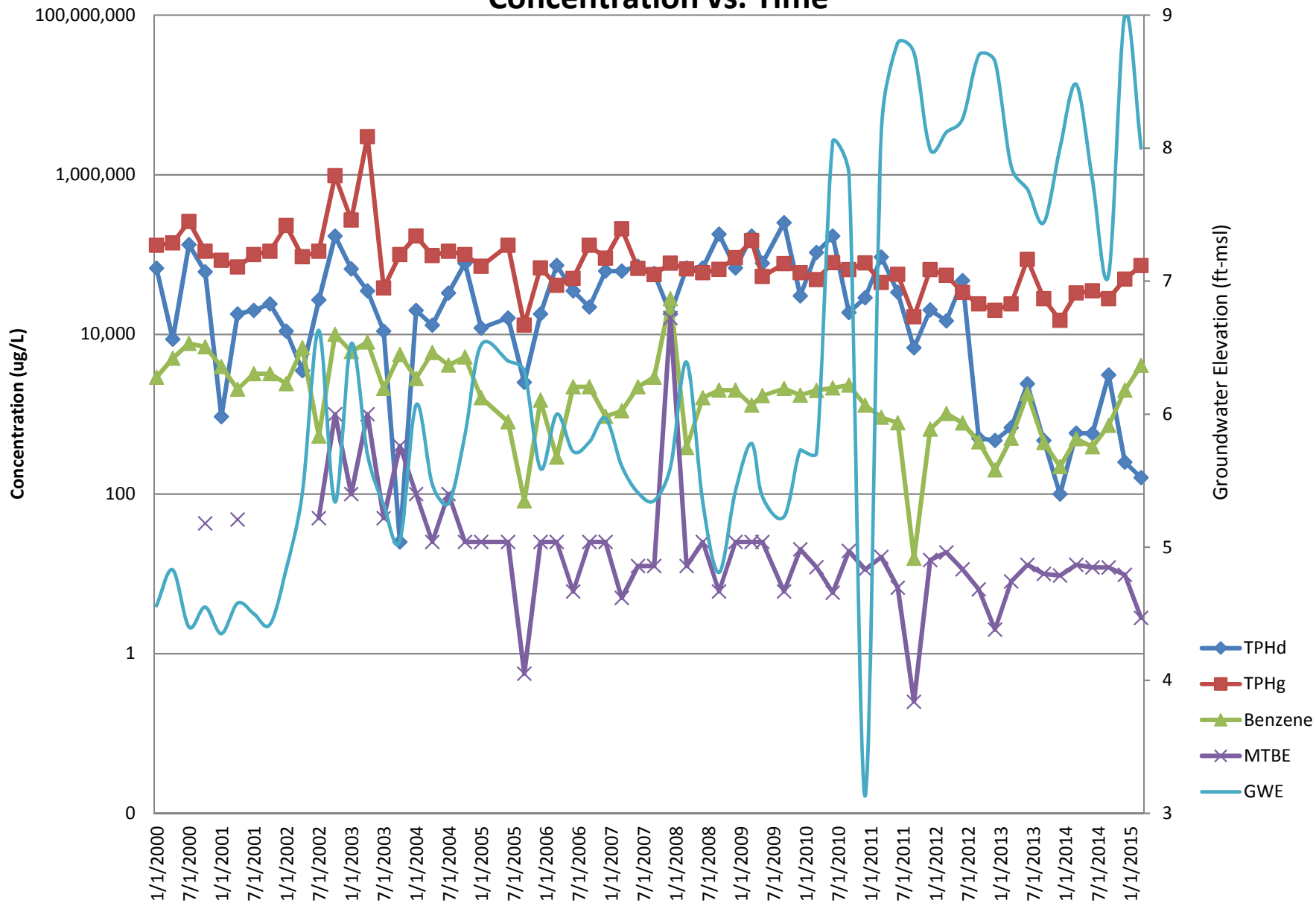
Yes / No

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

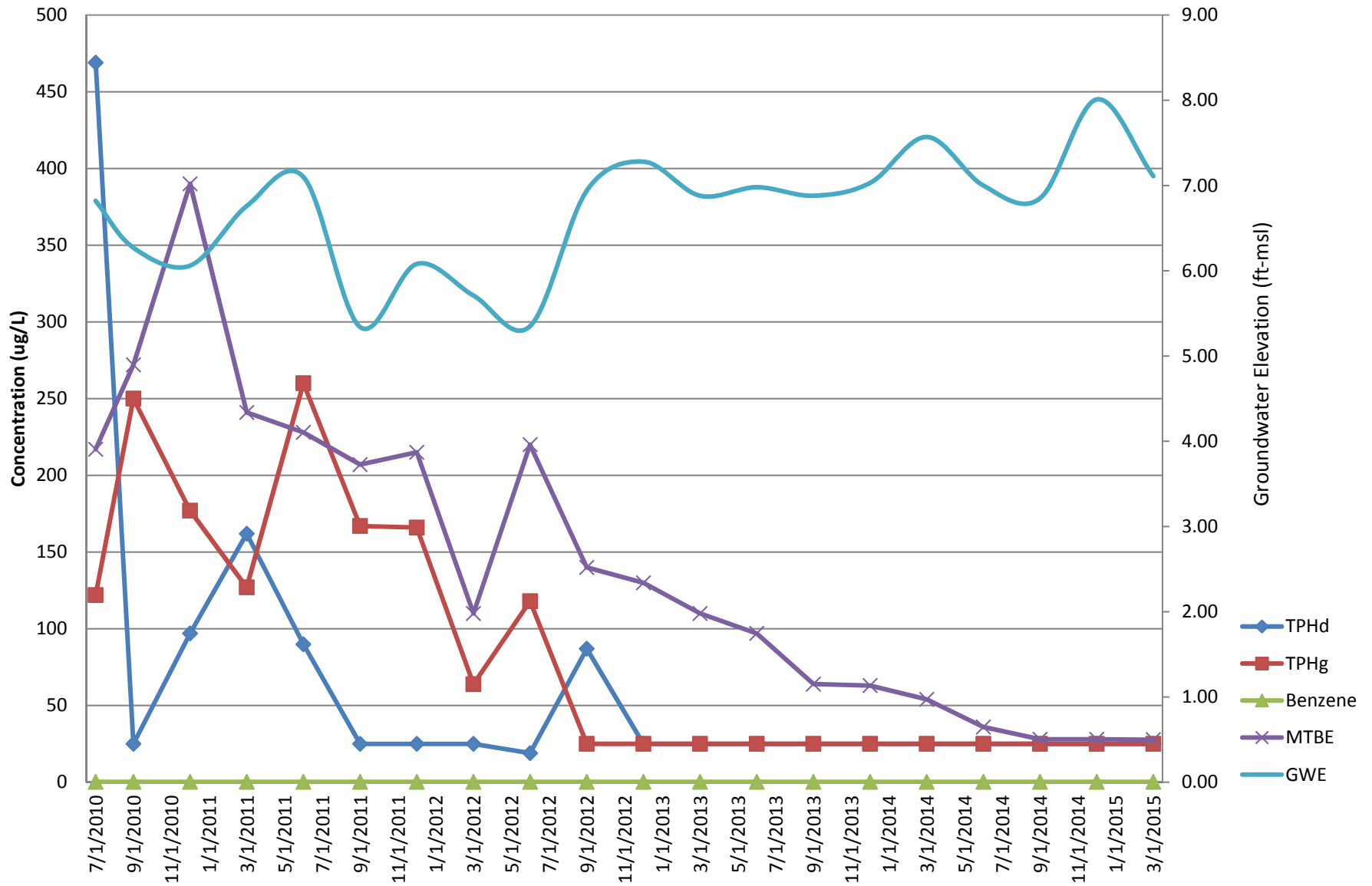
Appendix E

Concentration vs. Time Graphs

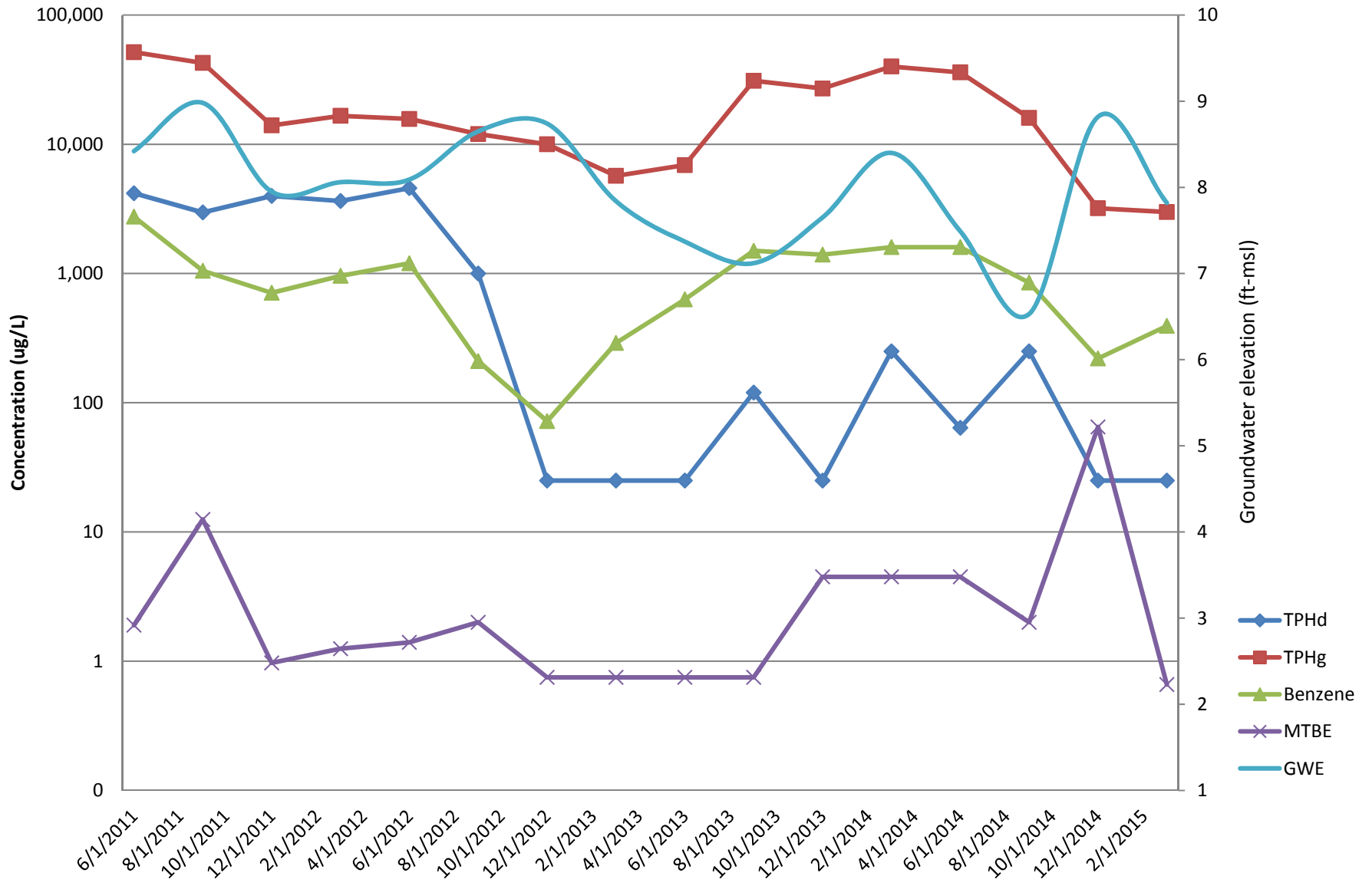
MW-6 Concentration vs. Time



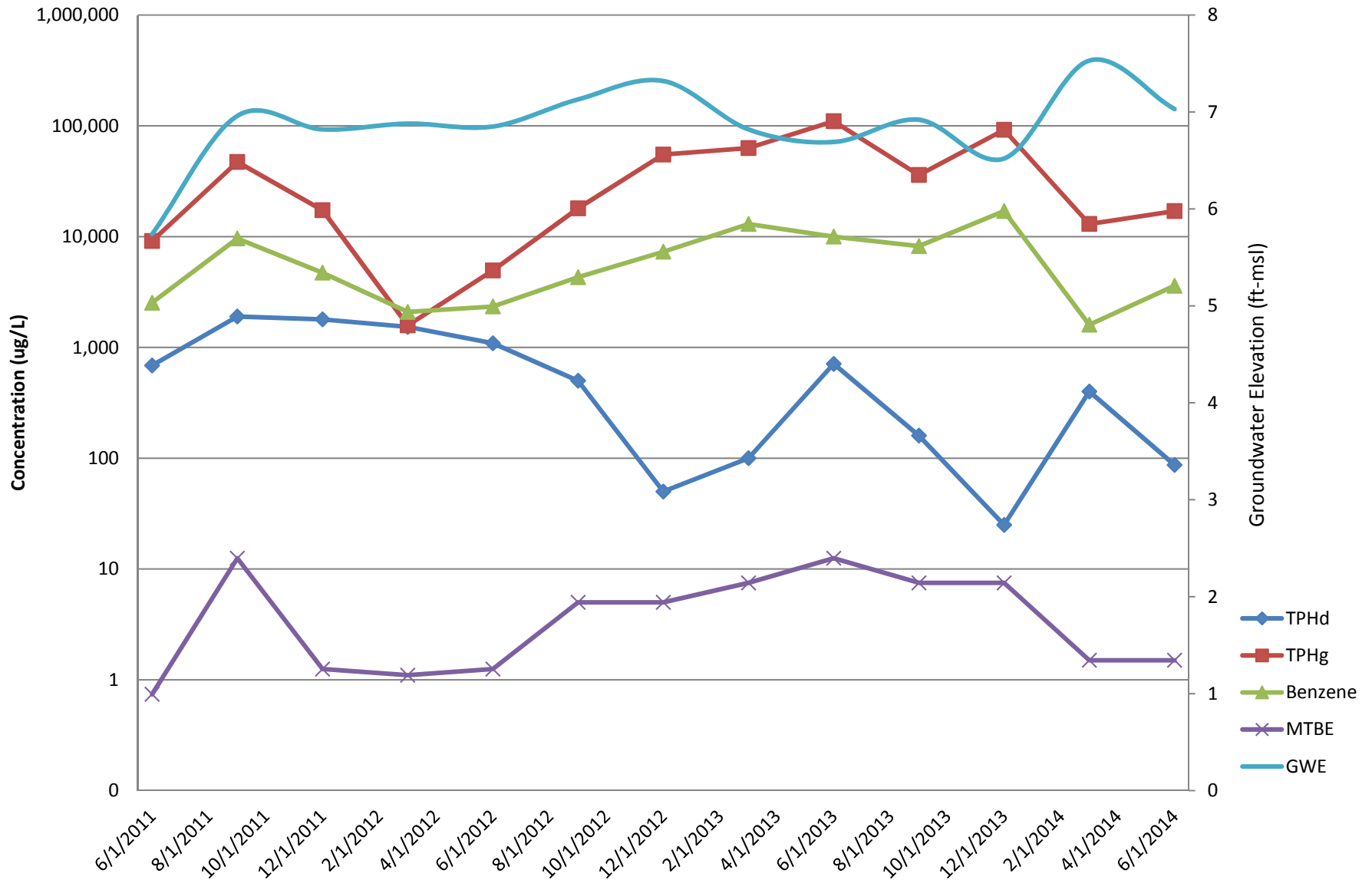
MW-13 Concentration vs. Time



MW-14 Concentration vs. Time



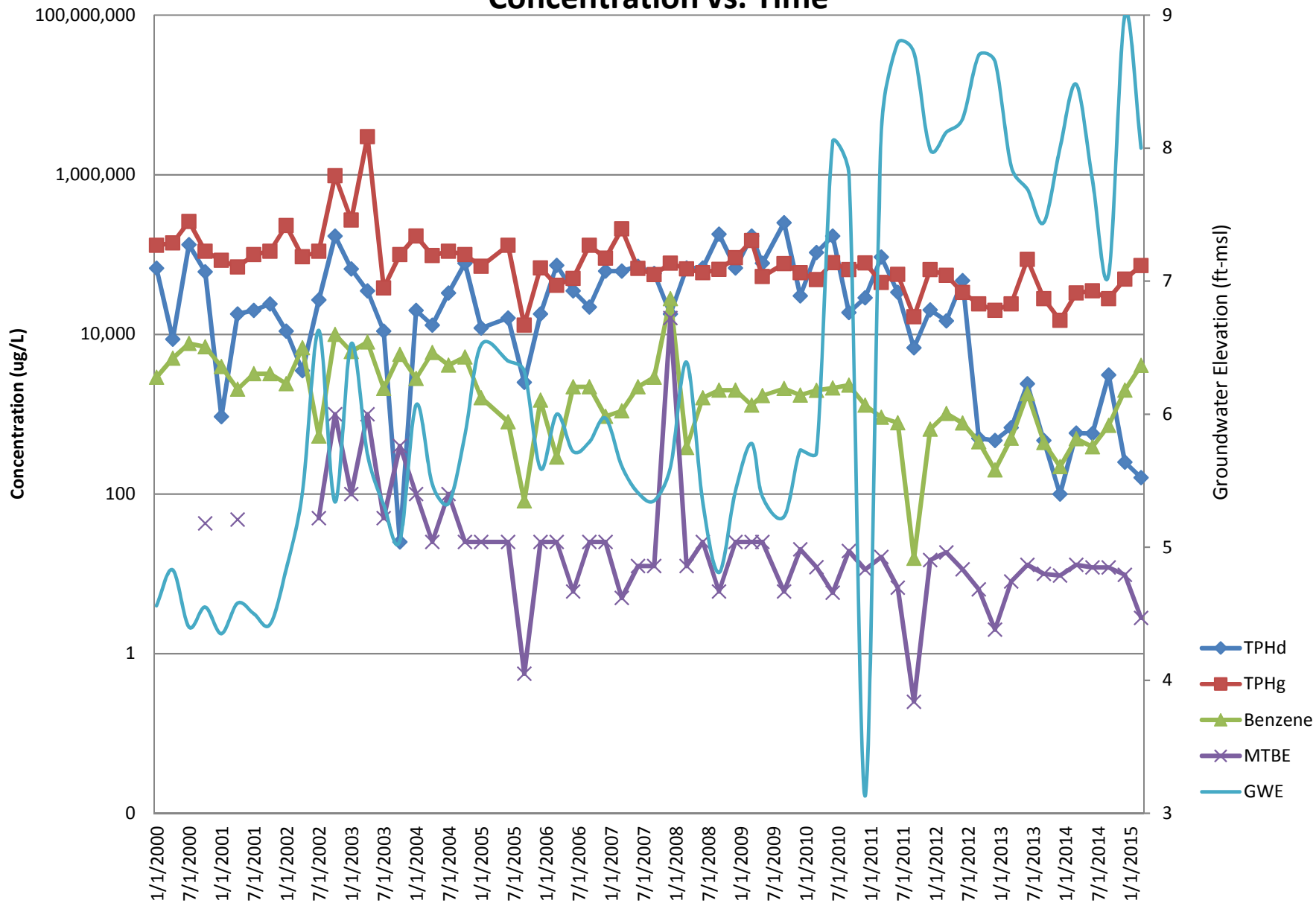
MW-17 Concentration Vs. Time



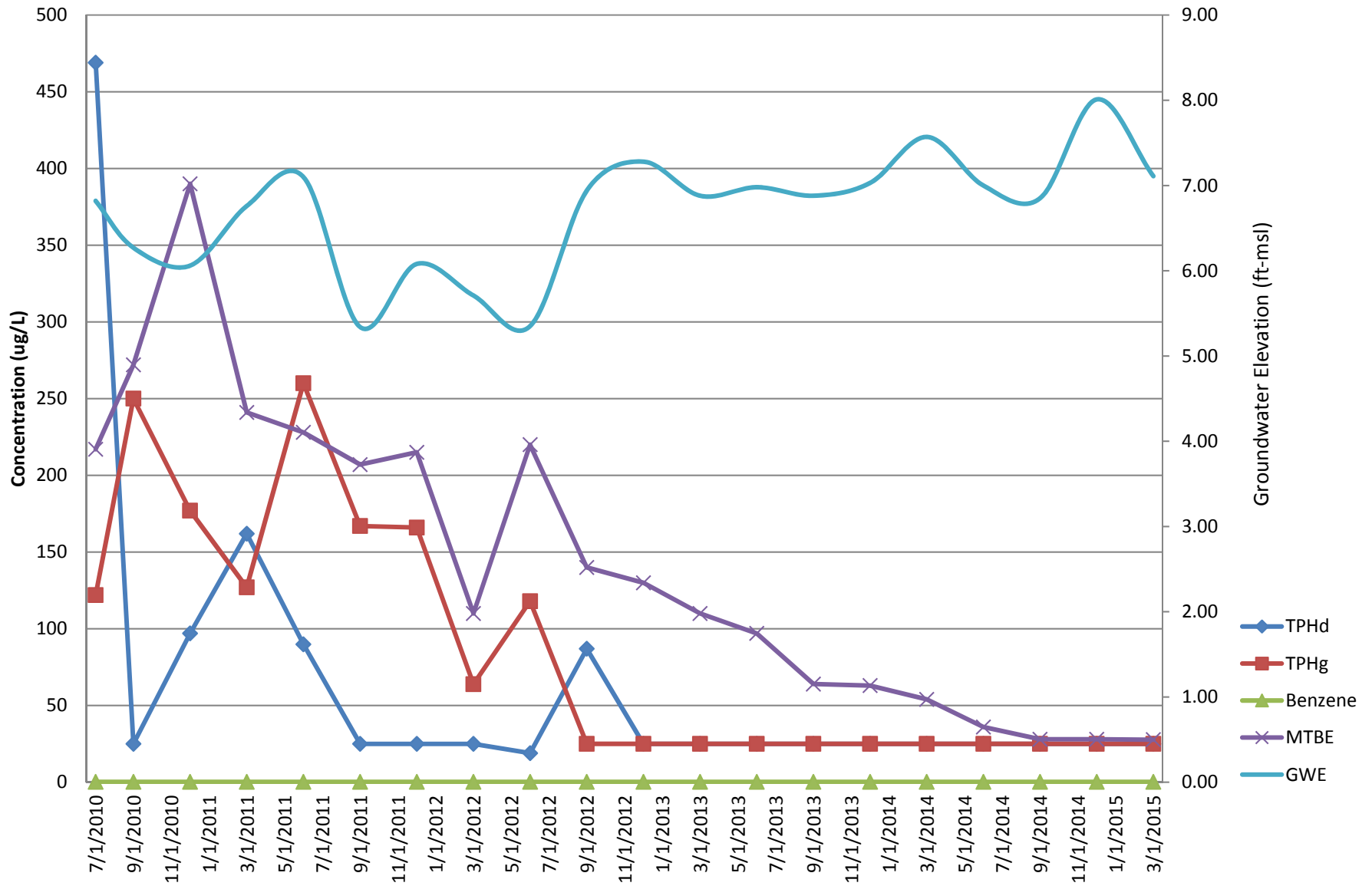
Appendix F

Mann-Kendall Statistical Analysis

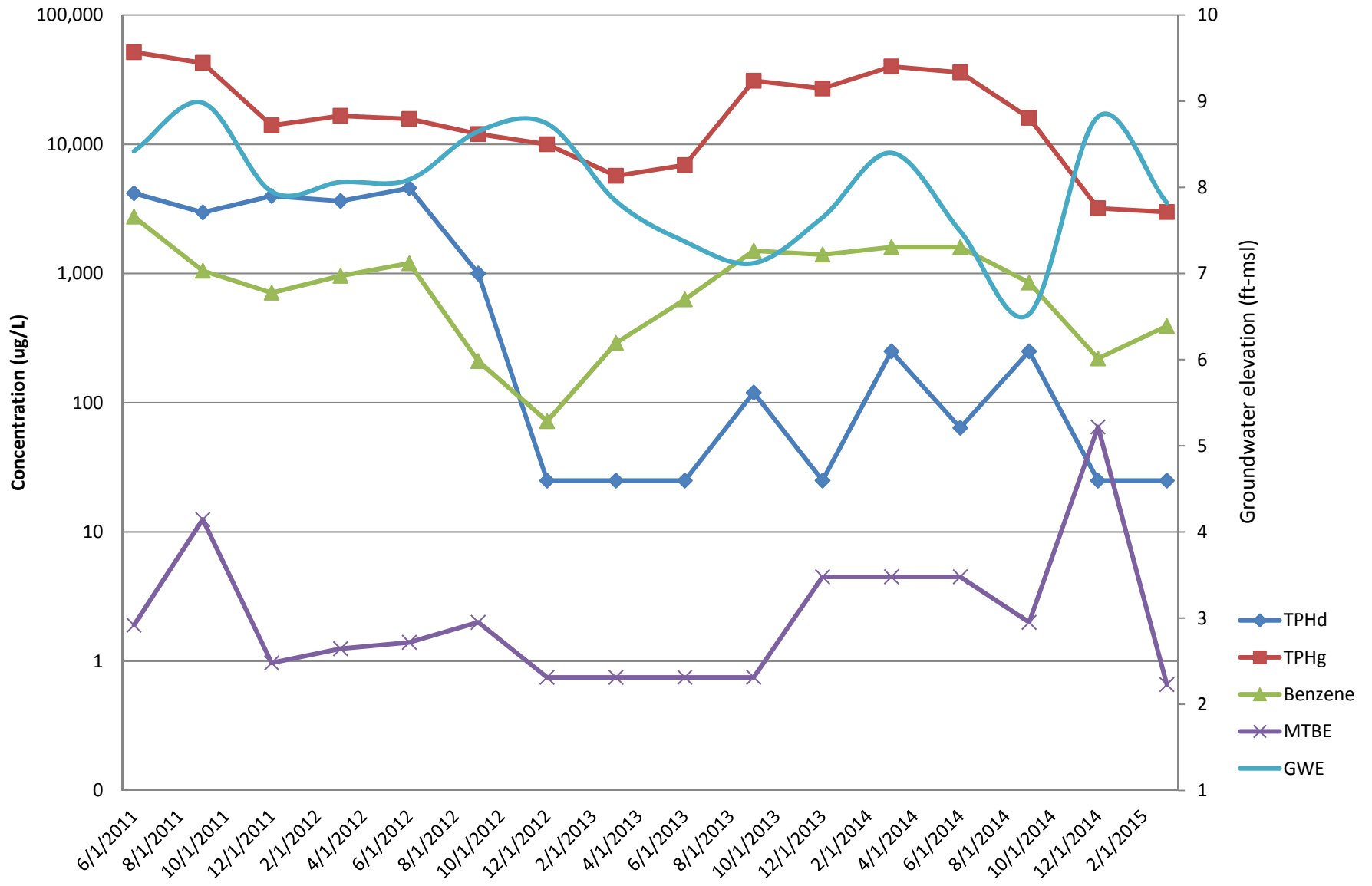
MW-6 Concentration vs. Time



MW-13 Concentration vs. Time



MW-14 Concentration vs. Time



MW-17 Concentration Vs. Time

