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October 31, 2012

Ms. Keith Nowell
Alameda County Health Care Services Agency
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Alameda, CA 94502-6577

RECEIVED

4:44 pm, Nov 01, 2012

Alameda County
Environmental Health

Subject: Quarterly Summary Report, Third Quarter 2012

**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

LIZ BERMUDEZ
Senior Paralegal
Division, Unit, or Group

Attachment

Quarterly Summary Report, Third Quarter 2012

*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

October 31, 2012

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, Third Quarter 2012*, 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, California. Station facilities include three underground storage tanks (USTs), two dispenser islands, a station building, and a carwash. A total of fourteen groundwater monitoring wells are located at or near the site (**Figures 1 and 2**). Please refer to **Appendix A** for additional site information and for the history of environmental investigations and remedial actions.

This report summarizes the data obtained from the recent groundwater monitoring and sampling event conducted on September 6, 2012. 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 [Third Quarter 2012]

1. Antea Group submitted the *Quarterly Summary Report, Second Quarter 2011*, dated July 30, 2012 to the Alameda County Health Care Services Agency (ACHCSA).
2. Blaine Tech Services, Inc. (Blaine Tech) conducted the third quarter 2012 groundwater monitoring and sampling event on September 6, 2012.
3. Blaine Tech re-sampled four monitoring wells on September 11, 2012

1.2 Work Proposed [Third Quarter 2012]

1. Antea Group will submit the *Quarterly Summary Report, Third Quarter 2012* (contained herein) to the ACHCSA.
2. Blaine Tech will conduct the fourth quarter 2012 monitoring and sampling event.
3. Antea Group will conduct the pilot test for in-situ remediation detailed in the work plan submitted to the ACHCSA on May 15, 2012.

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
Monitoring well gauging schedule:	Quarterly: MW-3, MW-6 through MW-12, MW-12A, and MW-13 through MW-17
Monitoring well sampling schedule:	Quarterly: MW-6, MW-10, MW-11, MW-12, MW-12A, and MW-13

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

2.1 Regulatory Correspondence

No regulatory correspondence were sent to or received from the ACHCSA during the third quarter 2012.

2.2 Remedial Activities

No remedial activities took place during the third quarter 2012.

2.3 Groundwater Monitoring

During the third quarter 2012 groundwater monitoring and sampling event, fourteen wells were gauged and ten wells were purged and sampled by Blaine Tech per standard sampling protocol (**Appendix B**). Copies of Blaine Tech's field data sheets are presented as **Appendix C**. The recent gauging and sampling data are summarized below and in **Table 2**. Historical gauging and sampling data are summarized in **Tables 3, 3a, 3b, and 3c**.

Well gauging and sampling date:	September 6 and 11, 2012
Wells gauged:	MW-3, MW-6 through MW-12, MW-12A, and MW-13 through MW-17
Wells sampled:	MW-6, MW-10 through MW-12, MW-12A, and MW-13 through 17
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: 1.24 (MW-9) Max: 4.45 (MW-12A)
Current groundwater elevation range (ft):	Min: 6.84 (MW-12A) Max: 9.70 (MW-9)
Change in water depths from previous event (average change for all gauged wells):	0.46 foot decrease

Groundwater flow direction and gradient in foot per foot (ft/ft):	Variable
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2.3.1 Groundwater Flow Gradient and Directional Trends

The third quarter 2012 groundwater monitoring and sampling event was performed by Blaine Tech on September 6 and 11, 2012. The average groundwater elevation increased 0.46 feet from the June 2012 event. Depth to groundwater in the site monitoring wells ranged from 1.24 feet (MW-9) to 4.45 feet (MW-12A) BTOC during the current event. The groundwater flow direction and gradient were interpreted to be to the variable during the current event (Table 4).

2.3.2 Groundwater Quality Data

Groundwater samples collected during the third quarter 2012 were submitted with chain-of-custody (COC) documentation to Kiff Analytical LLC (Kiff), a state of California Environmental Laboratory Accreditation Program (ELAP) certified laboratory (Certification No. 08263CA). The complete analytical report and Antea Group's laboratory data validation checklist is presented as **Appendix D**. Groundwater samples were analyzed for one or more of the following:

- Total petroleum hydrocarbons as diesel (TPHd) [silica gel treated] by Environmental Protection Agency (EPA) Method 8015;
- Total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary-butyl ether (MTBE), tertiary-butyl alcohol (TBA), ethyl tertiary-butyl ether (ETBE), diisopropyl ether (DIPE), tertiary-amyl methyl ether (TAME), 1,2-dichloroethane (1,2-DCA), 1,2-dibromoethane (EDB), and ethanol by EPA Method 8260B;

Groundwater analytical results are presented in **Table 2** (current) and **Tables 3, 3a, 3b, and 3c** (historical). The following ranges of contaminant concentrations were reported in the specified site well's groundwater samples collected on September 6 and 11, 2012. 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	6 of 10	59 (MW-15)	24,000 (MW-6)
TPHd	6 of 10	64 (MW-11 and MW-15)	390 (MW-16)
Benzene	5 of 10	6.9 (MW-10)	4,300 (MW-17)
Toluene	5 of 10	0.89 (MW-10)	170 (MW-17)
Ethylbenzene	5 of 10	1.8 (MW-10)	1,100 (MW-14)
Total Xylenes	5 of 10	3.9 (MW-10)	1,800 (MW-6 and MW-14)
MTBE	6 of 10	6.4 (MW-6)	960 (MW-16)
TBA	6 of 10	10 (MW-13)	300 (MW-17)

1,2-DCA	2 of 10	14 (MW-12)	110 (MW-17)
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Explanations:

µg/L = Micrograms per liter

LRL = Laboratory reporting limit

In addition, groundwater samples collected from monitoring wells MW-6, MW-10, MW-12, MW-14, and MW-17 were also analyzed for the following in preparation for the upcoming ISCO pilot test.

- Methane by Method RSK-175M;
- Chromium, total iron, and manganese (total and dissolved) by EPA Method 6010;
- Hexavalent chromium by EPA Method 7196;
- Trivalent chromium and ferric iron (calculation);
- Sulfate by EPA Method 300;
- Sulfide by SM4500-S2 D;
- Total dissolved solids by SM2540 C;
- Total Alkalinity as CaCO₃ by Method SM 2320; and
- Nitrate and nitrite as N by EPA Method 300.

2.2.3 Groundwater Contaminant Trends

During the third quarter 2012, analytical results from the sample collected from monitoring well MW-6 indicated that TPHd, TPHg, BTEX, MTBE, and TBA decreased in concentration. Analytical results from the sample collected from monitoring well MW-10 indicated that MTBE, and TBA decreased in concentration and TPHd, TPHg, and BTEX increased in concentration. TBA and MTBE concentrations in monitoring well MW-11 decreased while TPHd concentrations increased. TPHd, TPHg, BTEX, MTBE, and TBA concentrations decreased in monitoring well MW-12. TPHd concentrations in monitoring well MW-12A increased. Analytical results from the groundwater sample collected from monitoring well MW-13 indicated a decrease in TPHg, MTBE, and TBA concentrations and an increase in TPHd concentrations. Analytical results from the groundwater sample collected from monitoring well MW-14 indicated a decrease in TPHd, TPHg, BTEX, and TBA concentrations. Analytical results from the groundwater sample collected from monitoring well MW-15 and MW-16 indicated an increase in TPHd concentrations and a decrease in TPHg, benzene, MTBE, and TBA concentrations. Analytical results from the groundwater sample collected from monitoring well MW-17 indicated a decrease in TPHd and TBA concentrations and an increase in TPHg and BTEX concentrations. Isoconcentration maps for TPHg, benzene, MTBE, and TPHd are presented on **Figures 4** through **7** and historical groundwater flow directions are shown on **Figure 8**.

2.3.4 Waste Disposal Summary

Approximately 125 gallons of waste water were generated during well purging/sampling and equipment cleaning during the third quarter event. The waste water was transported to Blaine Tech’s bulk facility in San Jose, California. After the batching process, the wastewater will be transported to Seaport Environmental in Redwood City, California for disposal.



2.3.5 Quality Assurance / Quality Control

Antea Group’s QA/QC measures included use of a field duplicate and a detailed QA/QC data validation check on the Pace Laboratory analytical results for the September 2012 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 – eight qualifiers*
Are the data valid for their intended purpose?	Yes, the data are valid

*MS/MSD results associated with samples from MW-6, MW-10, MW-12, MW-14, MW-17, and FD-1 for the analyte Iron were affected by the analyte concentrations already present in the un-spiked sample.

*Trivalent chromium results for samples MW-6, MW-10, MW-12, MW-14, MW-17, and FD-1 were calculated assuming no hexavalent chromium was present in the samples. No hexavalent chromium was detected by EPA Method 7196 above the method detection limit of 4.3 µg/L. Trivalent chromium was calculated as the difference between total chromium and hexavalent chromium.

*The method reporting limit for Nitrate as N by EPA Method 300.0 was raised due to high concentrations of other analytes for samples MW-12, MW-14, MW-17, and FD-1.

*The method reporting limit for Nitrite as N by EPA Method 300.0 was raised due to high concentrations of other analytes for samples MW-12, MW-17, and FD-1.

*TBA results for sample MW-12 may be biased slightly high and are flagged with a ‘J’. A fraction of MTBE (typically less than 1%) converts to TBA during the analysis of water samples. We consider this conversion effect to be mathematically significant in samples that contain MTBE/TBA ratios of over 2:1.

*The recommended hold time was exceeded for the analyte Nitrate as N associated with samples from MW-10 and MW-14. Wells were resampled for Nitrate as N on September 11, 2012.

*MS/MSD results associated with the analyte Nitrate as N were outside control limits. This may indicate a bias for the sample that was spiked. Since LCS recoveries were within control limits, no data are flagged.

*MD/MSD results associated with samples MW-10, MW-12, MW-14, MW-17, and FD-1 for the analyte Sulfate were affected by the analyte concentration present in the un-spiked sample.

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

3.0 CONCLUSIONS AND RECOMMENDATIONS

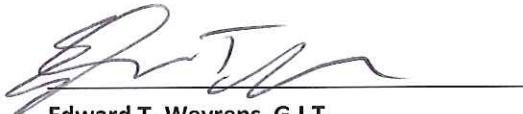
Antea Group recommends that all monitoring wells MW-3 and MW-6 through MW-17 be purged and sampled on a semi-annual basis during the second and fourth quarters of each year. Additional groundwater sampling maybe required for the ISCO pilot test discussed below; however, these additional sampling events will be conducted as necessary.

Based on the data from recent groundwater monitoring at this site, the petroleum hydrocarbon and fuel oxygenate impact to the groundwater appears to be stabilizing and slightly decreasing. Antea Group is currently working towards implementing the ISCO work plan that was submitted to the ACHCSA in May of 2012. Further recommendations regarding additional remediation and site monitoring will be made after the completion of the ISCO pilot test.

4.0 REMARKS

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

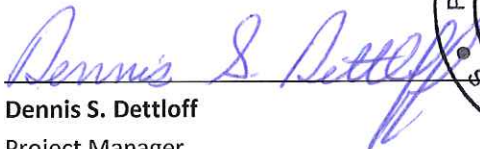
Prepared by:



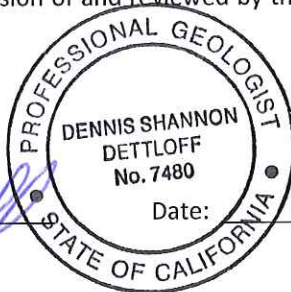
Edward T. Weyrens, G.I.T.
Staff Geologist

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
Project Manager
California Registered Professional Geologist No. 7480



cc: GeoTracker (upload)

Figures

- Figure 1 Site Location Map
- Figure 2 Site Plan
- Figure 3 Groundwater Elevation Contour Map – September 6, 2012
- Figure 4 Dissolved Phase TPHg Isoconcentration Map – September 6, 2012
- Figure 5 Dissolved Phase Benzene Isoconcentration Map – September 6, 2012
- Figure 6 Dissolved Phase MTBE Isoconcentration Map – September 6, 2012
- Figure 7 Dissolved Phase TPHd Isoconcentration Map – September 6, 2012
- Figure 8 Historical Groundwater Flow Directions

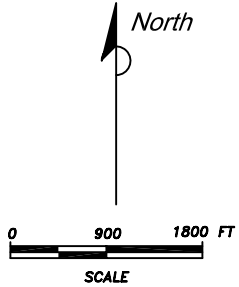
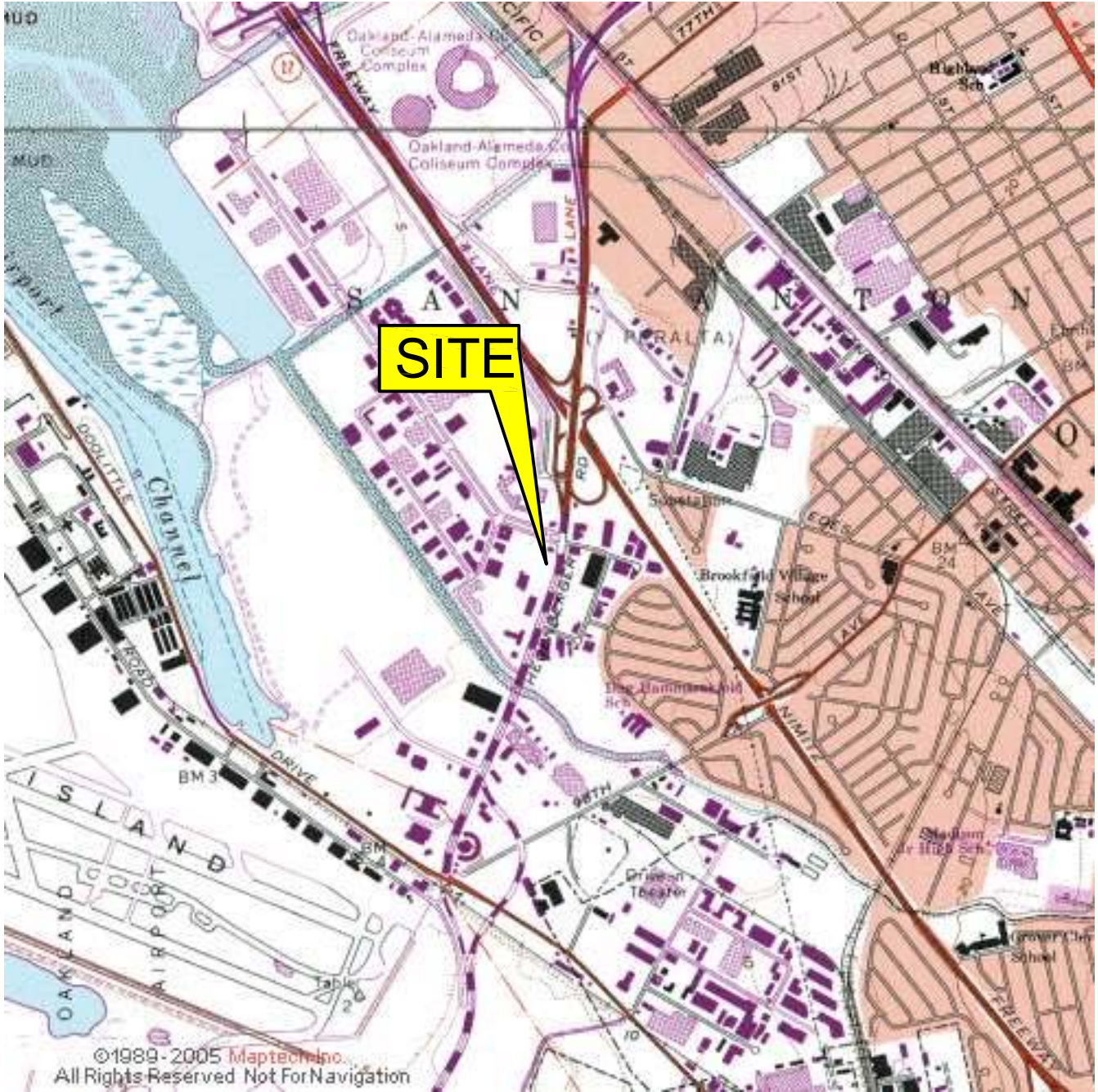



FIGURE 1
SITE LOCATION MAP
 76 STATION NO. 5191/5043
 449 HEGENBERGER ROAD
 OAKLAND, CALIFORNIA

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)

EDGEWATER DR.

LEGEND

- ⊕ MW- MONITORING WELL
- ⊗ MW- ABANDONED MONITORING WELL

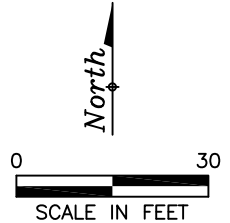
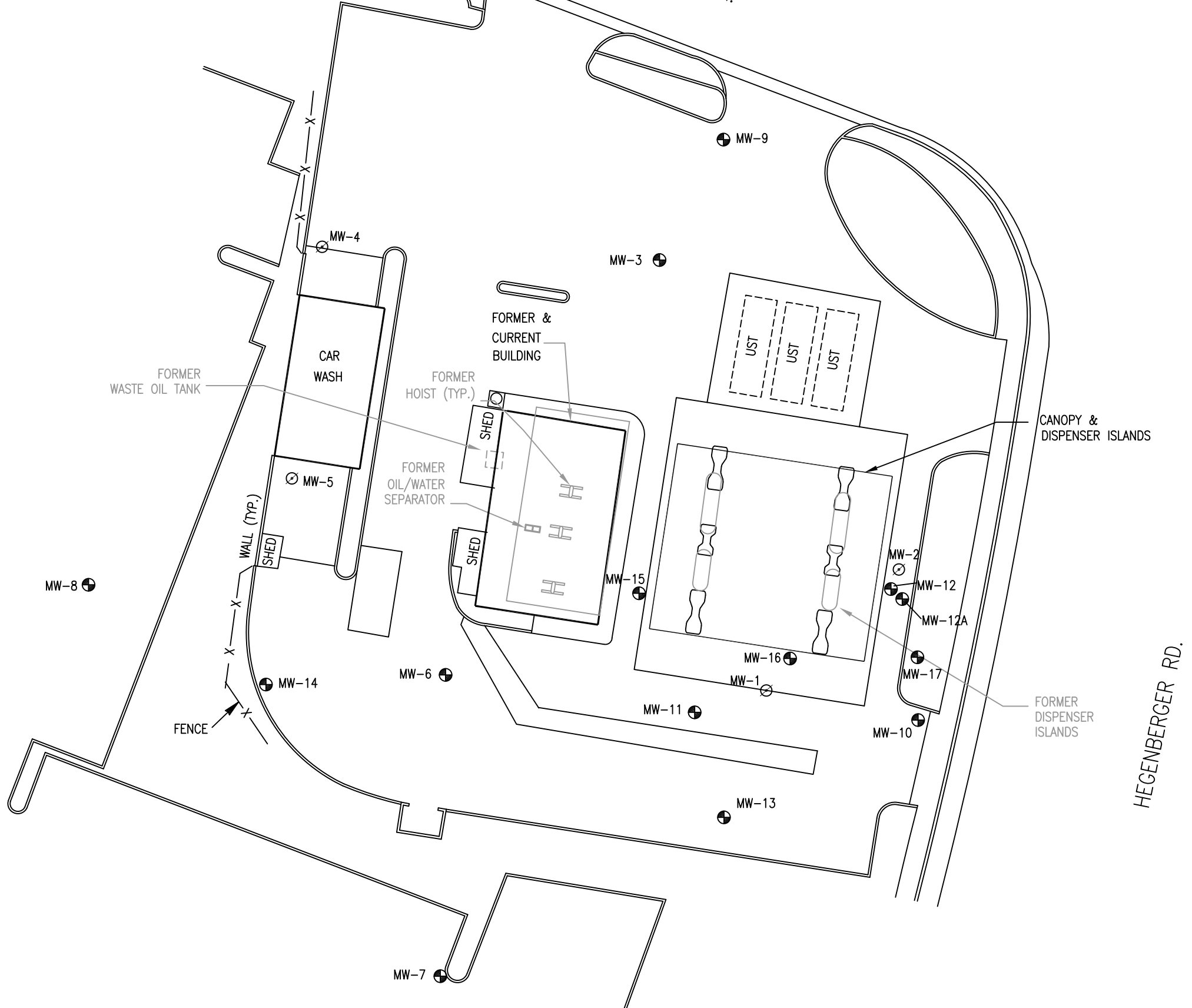

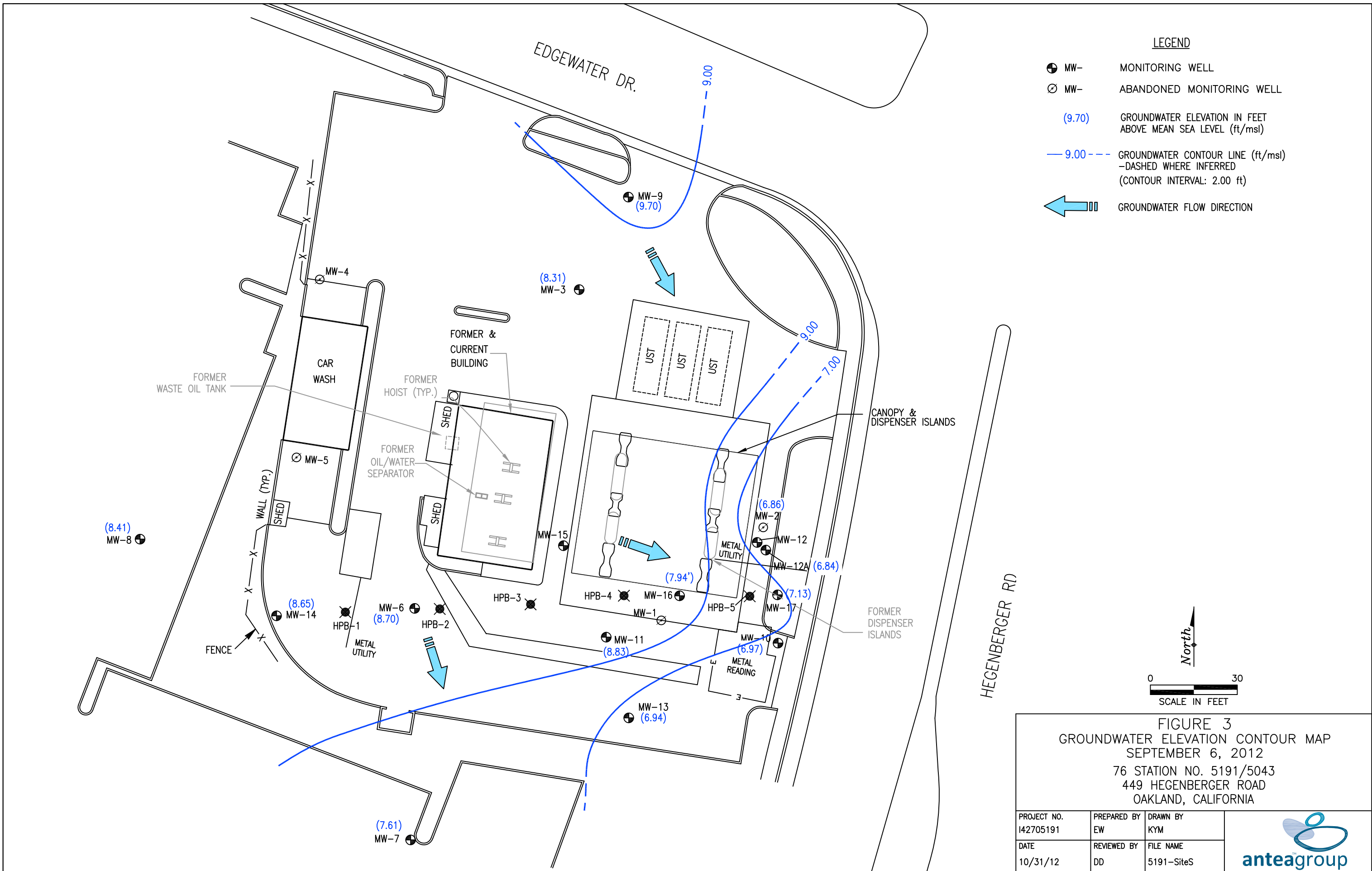


FIGURE 2
SITE PLAN

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

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



Tables

Table 1	Well Construction Details
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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	Abandoned
MW-2	02/05/91	15.0	2	3.0	15.0	12.0	Abandoned
MW-3	02/05/91	14.0	2	2.0	14.0	12.0	
MW-4	08/21/92	13.5	2	2.5	13.5	11.0	Abandoned
MW-5	08/21/92	13.5	2	2.5	13.5	11.0	Abandoned
MW-6	08/21/92	13.5	2	2.5	13.5	11.0	
MW-7	04/21/97	13.0	2	3.0	13.0	10.0	
MW-8	04/21/97	15.0	2	3.0	15.0	12.0	
MW-9	01/25/95	13.0	2	3.0	13.0	10.0	
MW-10	01/25/95	13.0	2	3.0	13.0	10.0	
MW-11	06/22/10	20.0	4	5.0	20.0	15.0	
MW-12	06/22/10	20.0	4	5.0	20.0	15.0	
MW-12A	06/23/10	34.0	2	30.0	34.0	4.0	
MW-13	06/22/10	15.0	2	5.0	15.0	10.0	
MW-14	05/17/11	13.0	2	3.0	13.0	10.0	
MW-15	05/17/11	13.0	2	3.0	13.0	10.0	
MW-16	05/17/11	13.0	2	3.0	13.0	10.0	
MW-17	05/18/11	13.0	2	3.0	13.0	10.0	
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)	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	9/6/2012	10.81	2.50	NP	8.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/6/2012	11.55	2.85	NP	8.70	<1000	24,000	450	51	610	1,800	6.4	<4.0	<4.0	<4.0	82	<40	<4.0	<4.0
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	9/6/2012	11.64	4.03	NP	7.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	9/6/2012	11.32	2.91	NP	8.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	9/6/2012	10.94	1.24	NP	9.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	9/6/2012	10.97	4.00	NP	6.97	110	64	6.9	0.89	1.8	3.9	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.50	<0.50
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-11	9/6/2012	10.53	1.70	NP	8.83	64	<50	<0.50	<0.50	<0.50	<0.50	7.7	<0.50	<0.50	<0.50	<5.0	<5.0	<0.50	<0.50
MW-12	9/6/2012	11.01	4.15	NP	6.86	<200	580	120	9.6	15	37	840	<1.5	<1.5	<1.5	15	<15	<1.5	14
MW-12A	9/6/2012	11.29	4.45	NP	6.84	300	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.50	<0.50
MW-13	9/6/2012	11.08	4.14	NP	6.94	87	<50	<0.50	<0.50	<0.50	<0.50	140	<0.50	<0.50	<0.50	10	<5.0	<0.50	<0.50
MW-14	9/6/2012	12.00	3.35	NP	8.65	<2000	12,000	210	9.1	1,100	1,800	<4.0	<4.0	<4.0	<4.0	<20	<40	<4.0	<4.0
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	9/6/2012	11.11	2.24	NP	8.87	64	59	<0.50	<0.50	<0.50	<0.50	76	<0.50	<0.50	<0.50	45	<5.0	<0.50	<0.50
MW-16	9/6/2012	10.98	2.61	NP	8.37	390	<150	<1.5	<1.5	<1.5	<1.5	960	<1.5	<1.5	<1.5	70	<15	<1.5	<1.5
MW-17	9/6/2012	11.52	4.39	NP	7.13	<1000	18,000	4,300	170	370	1,100	<10	<10	<10	<10	300	<100	<10	110
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

TABLE 2a
GROUND WATER ANALYTICAL DATA
76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA



Well I.D.	Date	ADDITIONAL CURRENT GROUNDWATER ANALYTICAL DATA				
		Alkalinity, Total as CaCO ₃ (mg/L)	Chromium (ug/L)	Chromium, Hexavalent (ug/L)	Methane (ug/L)	Nitrate as N (mg/L)
MW-3	9/6/2012	--	--	--	--	--
MW-6	9/6/2012	650	<5.0	<10	2,890	--
	9/11/2012	--	--	--	--	<0.10
MW-7	9/6/2012	--	--	--	--	--
MW-8	9/6/2012	--	--	--	--	--
MW-9	9/6/2012	--	--	--	--	--
MW-10	9/6/2012	561	17	<10	467	--
	9/11/2012	--	--	--	--	0.45
MW-11	9/6/2012	--	--	--	--	--
MW-12	9/6/2012	806	<5.0	<10	63.8	--
MW-12A	9/6/2012	--	--	--	--	--
MW-13	9/6/2012	--	--	--	--	--
MW-14	9/6/2012	1,720	24	<10	718	--
	9/11/2012	--	--	--	--	<0.10
MW-15	9/6/2012	--	--	--	--	--
MW-16	9/6/2012	--	--	--	--	--
MW-17	9/6/2012	2,820	38	<10	182	--
	9/11/2012	--	--	--	--	<0.50

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 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/DRO (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	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
	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	13,800	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	47.8	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	--	

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/DRO (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	6/23/2006	8.87	3.15	NP	5.72	35,000	50,000	2,200	1,400	1,900	5,700	--	<12	--	--	--	--	<6200	--	--	
	9/26/2006	8.87	3.08	NP	5.79	22,000	130,000	2,200	1,000	2,900	8,800	--	<50	--	--	--	--	<25000	--	--	
	12/22/2006	8.87	2.90	NP	5.97	62,000	90,000	940	610	1,900	4,700	--	<50	--	--	--	--	<25000	--	--	
	3/30/2007	8.87	3.26	NP	5.61	62,000	210,000	1,100	560	3,400	12,000	--	<10	--	--	--	--	<5000	--	--	
	6/28/2007	8.87	3.46	NP	5.41	71,000	67,000	2,200	1,300	2,700	10,000	--	<25	--	--	--	--	<12000	--	--	
	9/25/2007	8.87	3.52	NP	5.35	58,000	56,000	2,900	720	2,400	9,000	--	<25	--	--	--	--	<12000	--	--	
	12/28/2007	8.87	3.27	NP	5.60	18,000	78,000	28,000	2,700	4,000	8,100	--	16,000	--	--	--	--	<12000	--	--	
	3/22/2008	8.87	2.48	NP	6.39	68,000	66,000	380	150	1,500	2,400	--	<25	--	--	--	--	<12000	--	--	
	6/23/2008	8.87	3.54	NP	5.33	68,000	59,000	1,600	130	1,800	4,100	--	25	--	--	--	--	<12000	--	--	
	9/19/2008	8.87	4.06	NP	4.81	180,000	65,000	2,000	230	2,000	4,500	--	<12	--	--	--	--	<6200	--	--	
	12/31/2008	8.87	3.45	NP	5.42	68,000	91,000	2,000	320	5,300	13,000	--	<50	--	--	--	--	<25000	--	--	
	3/27/2009	8.87	3.09	NP	5.78	170,000	150,000	1,300	240	2,800	7,200	--	<50	--	--	--	--	<25000	--	--	
	5/28/2009	8.87	3.49	NP	5.38	78,000	53,000	1,700	200	2,300	5,400	--	<50	--	--	--	--	<25000	--	--	
	9/17/2009	8.87	3.64	NP	5.23	250,000 T4	77,000	2,100	1,400	2,600	8,500	--	<12	--	--	--	--	<6200	--	--	
	12/17/2009	8.87	3.14	NP	5.73	30,300	59,100	1,730	199	2,260	5,460	--	20.3	--	--	--	--	<250	--	--	
	3/29/2010	8.87	3.16	NP	5.71	106,000	48,400	1,980	208	3,070	8,070	--	12.1	--	--	--	--	<250	--	--	
	6/30/2010	11.55	3.50	NP	8.05	170,000	78,700	2,130	281	2,860	8,400	--	5.8	--	--	--	--	<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	--	19.3	--	--	--	--	<250	--	--	
	12/8/2010	11.55	8.42	NP	3.13	28,700	78,400	1,300	1,680	3,490	20,600	--	11.3	--	--	--	--	<250	--	--	
	3/14/2011	11.55	3.40	NP	8.15	93,000	44,600	912	338	728	3,670	--	16.3	--	--	--	134	<250	--	--	
	6/2/2011	11.55	2.76	NP	8.79	33,700 T4	56,200	780	262	651	3,890	--	6.7	--	--	--	81.0	<250	--	--	
	9/7/2011	11.55	2.83	NP	8.72	6,780 T4	16,600	15.6	10.6	89.6	339	--	<0.50	--	--	--	--	<250	--	--	
	12/5/2011	11.55	3.56	NP	7.99	20,200 T4	64,600	646	95.4	924	4,050	--	14.9	--	--	--	--	<250	--	--	
	3/6/2012	11.55	3.43	NP	8.12	14,800 T4	55,000	1,020	131	1,320	4,730	--	18.5	--	--	--	316	<1250	--	--	
	6/11/2012	11.55	3.33	NP	8.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/12/2012	--	--	--	--	47,100 T4	33,400	773	60.8	840	3,110	--	11.4	--	--	--	123	<250	--	--	
	9/6/2012	11.55	2.85	NP	8.70	<1000	24,000	450	51	610	1,800	--	6.4	<4.0	<4.0	<4.0	82	<40	<4.0	<4.0	
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	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	4.2	--	--	--	--	--	--	--		
4/13/2000		8.83	3.39	NP	5.44	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--		
7/14/2000		8.83	4.42	NP	4.41	68.0	ND	ND	ND	ND	ND	7.83	--	--	--	--	--	--	--		
7/17/2001		8.83	5.06	NP	3.77	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--		
10/1/2001		8.83	4.98	NP	3.85	<51	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--		
1/31/2002		8.83	3.88	NP	4.95	90	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--		
4/18/2002		8.83	4.03	NP	4.80	78	<50	<0.50	<0.50	<0.50	<0.50	5.7	--	--	--	--	--	--	--		
7/28/2002		8.83	3.59	NP	5.24	<50	<50	<0.50	<0.50	<0.50	<1.0	--	3.9	--	--	--	--	--	--		
10/9/2002		8.83	4.53	NP	4.30	<96	<50	<0.50	<0.50	<0.50	<1.0	--	3.9	--	--	--	--	--	--		
1/3/2003		8.83	3.36	NP	5.47	78	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--		
4/1/2003		8.83	3.94	NP	4.89	67	71	<0.50	<0.50	0.71	<1.0	--	3.4	--	--	--	--	--	--		
7/1/2003		8.83	4.60	NP	4.23	68	64	<0.50	<0.50	0.77	2.0	--	3.5	--	--	--	--	<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	--	--		

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/DRO (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	9/27/2005	8.83	3.44	NP	5.39	<200	<50	0.59	1.2	<0.50	<1.0	--	0.96	<0.50	<0.50	<0.50	<10	<250	--	--	
	12/13/2005	8.83	3.98	NP	4.85	<200	<50	<0.50	<0.50	<0.50	<1.0	--	0.65	--	--	--	--	<250	--	--	
	3/23/2006	8.83	3.37	NP	5.46	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	6/23/2006	8.83	5.25	NP	3.58	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	9/26/2006	8.83	4.13	NP	4.70	<50	<50	<0.50	<0.50	<0.50	<0.50	--	0.77	--	--	--	--	<250	--	--	
	12/22/2006	8.83	3.63	NP	5.20	630	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--	
	3/30/2007	8.83	4.31	NP	4.52	94	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--	
	6/28/2007	8.83	4.62	NP	4.21	<50	<50	<0.50	<0.50	<0.50	<0.50	--	0.54	--	--	--	--	<250	--	--	
	9/25/2007	8.83	4.65	NP	4.18	<50	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	<250	--	--	
	12/28/2007	8.83	3.99	NP	4.84	75	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	3/22/2008	8.83	4.08	NP	4.75	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	6/23/2008	8.83	4.10	NP	4.73	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	9/19/2008	8.83	4.86	NP	3.97	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	12/31/2008	8.83	4.17	NP	4.66	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	3/27/2009	8.83	4.00	NP	4.83	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	5/28/2009	8.83	4.71	NP	4.12	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<250	--	--	
	9/17/2009	8.83	4.87	NP	3.96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/29/2010	8.83	WI	WI	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	<50.0	<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	<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	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	<5.0	<250	--	--	
9/6/2012	11.64	4.03	NP	7.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	5/27/1997	8.52	3.42	NP	5.10	--	310	0.88	0.67	15	70	ND	--	--	--	--	--	--	--	--	
	6/1/1997	8.52	3.46	NP	5.06	320	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/15/1997	8.52	3.49	NP	5.03	ND	ND	ND	ND	2.7	3.8	ND	--	--	--	--	--	--	--	--	
	10/9/1997	8.52	3.73	NP	4.79	390	590	1.4	ND	32	4.1	ND	--	--	--	--	--	--	--	--	
	1/14/1998	8.52	1.92	NP	6.60	230	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	4/1/1998	8.52	2.38	NP	6.14	510	ND	ND	ND	ND	ND	4.7	--	--	--	--	--	--	--	--	
	7/15/1998	8.52	3.53	NP	4.99	140	ND	ND	ND	0.56	1.1	ND	--	--	--	--	--	--	--	--	
	10/16/1998	8.52	3.04	NP	5.48	170	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	1/25/1999	8.52	2.92	NP	5.60	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	4/15/1999	8.52	2.40	NP	6.12	91	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	7/14/1999	8.52	3.03	NP	5.49	120	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	10/21/1999	8.52	3.11	NP	5.41	110	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	1/20/2000	8.52	3.06	NP	5.46	583	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	4/13/2000	8.52	2.84	NP	5.68	80	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	7/14/2000	8.52	3.39	NP	5.13	113	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	7/17/2001	8.52	3.46	NP	5.06	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	10/1/2001	8.52	3.51	NP	5.01	<50	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--	--	
	1/31/2002	8.52	2.75	NP	5.77	260	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--	
	4/18/2002	8.52	2.98	NP	5.54	160	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--	
	7/28/2002	8.52	2.41	NP	6.11	140	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	--	
	10/9/2002	8.52	2.09	NP	6.43	120	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	--	
	1/2/2003	8.52	1.98	NP	6.54	210	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	--	
	4/1/2003	8.52	2.66	NP	5.86	220	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	--	--	--	
	7/1/2003	8.52	3.08	NP	5.44	170	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	<500	--	--	
	10/2/2003	8.52	3.89	NP	4.63	350	540	3.9	15	29	80	--	<2.0	--	--	--	--	<500	--	--	
	1/9/2004	8.52	2.38	NP	6.14	180	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	--	--	--	--	<500	--	--	
	4/26/2004	8.52	2.89	NP	5.63	100	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<50	--	--	
	7/22/2004	8.52	3.25	NP	5.27	250	<50	<0.5	<0.5	<0.5	<1	--	<0.5	--	--	--	--	<1000	--	--	
	10/29/2004	8.52	3.06	NP	5.46	120	<50	<0.50	<0.50	0.82	2.5	--	<0.50	--	--	--	--	<50	--	--	
	1/10/2005	8.52	1.92	NP	6.60	140	58	<0.50	0.61	1.2	4.0	--	<0.50	--	--	--	--	<50	--	--	
	6/15/2005	8.52	2.22	NP	6.30	140	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	--	<50	--	--	

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/DRO (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	9/27/2005	8.52	2.43	NP	6.09	<200	<50	<0.50	<0.50	1.2	<1.0	--	<0.50	<0.50	<0.50	<10	<250	--	--	
	12/13/2005	8.52	2.89	NP	5.63	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	3/23/2006	8.52	2.12	NP	6.40	<200	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	6/23/2006	8.52	2.65	NP	5.87	<230	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	9/26/2006	8.52	2.75	NP	5.77	110	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<250	--	--	
	12/22/2006	8.52	2.58	NP	5.94	100	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<250	--	--	
	3/30/2007	8.52	2.74	NP	5.78	120	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<250	--	--	
	6/28/2007	8.52	2.90	NP	5.62	140	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<250	--	--	
	9/25/2007	8.52	3.26	NP	5.26	110	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	<250	--	--	
	12/28/2007	8.52	2.64	NP	5.88	110	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	3/22/2008	8.52	2.31	NP	6.21	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	6/23/2008	8.52	3.13	NP	5.39	<58	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	9/19/2008	8.52	3.72	NP	4.80	79	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	12/31/2008	8.52	2.98	NP	5.54	110	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	3/27/2009	8.52	2.49	NP	6.03	89	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	5/28/2009	8.52	3.12	NP	5.40	91	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	--	--	--	<250	--	--	
	9/17/2009	8.52	3.63	NP	4.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/29/2010	8.52	WI	WI	WI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	11.32	2.60	NP	8.72	182	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--
	7/6/2010	11.32	3.03	NP	8.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2010	11.32	3.33	NP	7.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/8/2010	11.32	2.82	NP	8.50	116	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--
	3/14/2011	11.32	3.84	NP	7.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/2/2011	11.32	2.77	NP	8.55	168	<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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	ND	1.1	ND	1.9	--	--	--	--	--	--	--	
	8/17/1995	8.29	1.49	NP	6.80	ND	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	--	--	--	--	--	--	

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/DRO (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	10/26/2000	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	1.2	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
3/29/2010	8.62	3.81	NP	4.81	82.2	<50	0.77	<0.50	<0.50	3.4	--	<0.50	--	--	--	--	<250	--	--	
6/30/2010	10.97	3.90	NP	7.07	53.4	<50	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
7/6/2010	10.97	3.73	NP	7.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
9/20/2010	10.97	3.85	NP	7.12	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
12/8/2010	10.97	3.63	NP	7.34	<50.0	<50.0	1.8	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
3/14/2011	10.97	3.46	NP	7.51	63.3	<50	1.1	<0.50	<0.50	<1.5	--	<0.50	--	--	--	<5.0	<250	--	--	
6/2/2011	10.97	3.92	NP	7.05	<50.0	58.7	4.8	4.2	0.96	5.1	--	<0.50	--	--	--	<5.0	<250	--	--	
9/7/2011	10.97	4.06	NP	6.91	<50.0	<50.0	4.1	<0.50	0.66	2.4	--	<0.50	--	--	--	--	<250	--	--	
12/5/2011	10.97	3.82	NP	7.15	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	--	<250	--	--	
3/6/2012	10.97	3.74	NP	7.23	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	<0.50	--	--	--	58.7	<250	--	--	
6/11/2012	10.97	3.99	NP	6.98	<37.9	<50.0	0.79	<0.50	<0.50	<1.5	--	0.72	--	--	--	17.2	<250	--	--	
9/6/2012	10.97	4.00	NP	6.97	110	64	6.9	0.89	1.8	3.9	--	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.50	<0.50	
9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	7/6/2010	10.53	2.44	NP	8.09	226	99.2	<0.50	<0.50	<0.50	<1.5	--	165	<0.50	<0.50	<0.50	174	<250	<1.0	<1.0
	9/20/2010	10.53	2.80	NP	7.73	<50.0	76.4	<0.50	<0.50	<0.50	<1.5	--	82.7	--	--	--	--	<250	--	--
	12/8/2010	10.53	1.90	NP	8.63	52.7	<0.50	<0.50	<0.50	<0.50	<1.5	--	59.1	--	--	--	--	<250	--	--
	3/14/2011	10.53	1.89	NP	8.64	67.8	<0.50	<0.50	<0.50	<0.50	<1.5	--	44.0	--	--	--	<5.0	<250	--	--
	6/2/2011	10.53	1.75	NP	8.78	69.0	<50.0	0.61	<0.50	<0.50	<1.5	--	24.9	--	--	--	7.1	<250	--	--
	9/7/2011	10.53	1.56	NP	8.97	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	3.8	--	--	--	--	<250	--	--
	12/5/2011	10.53	2.05	NP	8.48	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	26.4	--	--	--	--	<250	--	--
	3/6/2012	10.53	2.31	NP	8.22	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	--	35.3	--	--	--	5.7	<250	--	--
	6/11/2012	10.53	2.24	NP	8.29	<37.9	<50.0	<0.50	<0.50	<0.50	<1.5	--	20.9	--	--	--	10.4	<250	--	--
	9/6/2012	10.53	1.70	NP	8.83	64	<50	<0.50	<0.50	<0.50	<0.50	--	7.7	<0.50	<0.50	<0.50	<5.0	<5.0	<0.50	<0.50
MW-12	7/6/2010	11.01	4.00	NP	7.01	990	20,300	1,030	955	311	2450	--	1,650	<0.50	<0.50	1.0	1430	<250	<1.0	<1.0
	9/20/2010	11.01	4.18	NP	6.83	5,220	73,700	6,020	6,390	2,970	18,300	--	894	--	--	--	--	<250	--	--
	12/8/2010	11.01	3.92	NP	7.09	428	3,350	249	117	89.8	558	--	1,470	--	--	--	--	<2500	--	--
	3/14/2011	11.01	3.70	NP	7.31	283	2,420	287	80.9	49.1	243	--	1,020	--	--	--	69.6	<250	--	--
	6/2/2011	11.01	4.40	NP	6.61	1,330	T4	12,200	688	70.5	225	619	--	824	--	--	110	<250	--	--
	9/7/2011	11.01	4.37	NP	6.64	1,270	T4	7,900	920	25.4	187	267	--	896	--	--	--	<2500	--	--
	12/5/2011	11.01	4.32	NP	6.69	286	T4	2,240	296	38.3	38.0	122	--	1,040	--	--	--	<250	--	--
	3/6/2012	11.01	4.01	NP	7.00	272	T4	1,260	193	22.6	28.8	80.5	--	835	--	--	78.4	<250	--	--
	6/11/2012	11.01	4.20	NP	6.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	957	T4	1,030	178	17.0	24.1	68.8	--	993	--	--	448	<250	--	--
9/6/2012	11.01	4.15	NP	6.86	<200	580	120	9.6	15	37	--	840	<1.5	<1.5	<1.5	15	<15	<1.5	14	
MW-12A	7/6/2010	11.29	4.22	NP	7.07	89.3	664	18.3	0.78	2.3	50.2	--	14.3	<0.50	<0.50	<0.50	11.9	<250	<1.0	<1.0
	9/20/2010																			

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/DRO (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (SW8021B) (ug/L)	MTBE (SW8260B) (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)	
MW-13	7/6/2010	11.08	4.26	NP	6.82	469	122	<0.50	<0.50	<0.50	<1.5	--	217	<0.50	<0.50	<0.50	199	<250	<1.0	<1.0	
	9/20/2010	11.08	4.81	NP	6.27	<50.0	250 1n	<0.50	<0.50	<0.50	<1.5	--	272	--	--	--	--	<250	--	--	
	12/8/2010	11.08	5.02	NP	6.06	97.0	177 1n	<0.50	<0.50	<0.50	<1.5	--	390	--	--	--	--	<250	--	--	
	3/14/2011	11.08	4.32	NP	6.76	162	127	<0.50	<0.50	<0.50	<1.5	--	241	--	--	--	--	<250	--	--	
	6/2/2011	11.08	3.98	NP	7.10	89.9 T4	260 1n	<0.50	<0.50	<0.50	<1.5	--	228	--	--	--	--	44.7	<250	--	--
	9/7/2011	11.08	5.74	NP	5.34	<50.0	167	<0.50	<0.50	<0.50	<1.5	--	207	--	--	--	--	--	<250	--	--
	12/5/2011	11.08	5.00	NP	6.08	<50.0	166 1n	<0.50	<0.50	<0.50	<1.5	--	215	--	--	--	--	--	<250	--	--
	3/6/2012	11.08	5.37	NP	5.71	<50.0	63.9 1n	<0.50	<0.50	<0.50	<1.5	--	110	--	--	--	--	38.5	<250	--	--
	6/11/2012	11.08	5.73	NP	5.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	<37.9	118 1n	<0.50	<0.50	<0.50	<1.5	--	220	--	--	--	--	81.7	<250	--	--
9/6/2012	11.08	4.14	NP	6.94	87	<50	<0.50	<0.50	<0.50	<0.50	--	140	<0.50	<0.50	<0.50	10	<5.0	<0.50	<0.50		
MW-14	6/2/2011	12.00	3.58	NP	8.42	4,180 T4	51,600	2,750	67.9	1,790	13,400	--	1.9	--	--	--	--	27.2	<250	--	--
	9/7/2011	12.00	3.02	NP	8.98	2,970 T4	42,600	1,050	28.1	2,990	7,300	--	<25.0	--	--	--	--	<12500	--	--	
	12/5/2011	12.00	4.05	NP	7.95	3,980 T4	14,000	709	9.1	1,420	2,530	--	0.97	--	--	--	--	<250	--	--	
	3/6/2012	12.00	3.94	NP	8.06	3,640 T4	16,600	959	15.0	2,330	3,830	--	<2.5	--	--	--	28.1	<1250	--	--	
	6/11/2012	12.00	3.91	NP	8.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	4,580	15,700	1,200	14.0	1,580	3,010	--	1.4	--	--	--	23.3	<250	--	--	
	9/6/2012	12.00	3.35	NP	8.65	<2000	12,000	210	9.1	1,100	1,800	--	<4.0	<4.0	<4.0	<4.0	<20	<40	<4.0	<4.0	
9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-15	6/2/2011	11.11	2.50	NP	8.61	124 T4	357	<0.50	<0.50	<0.50	<1.5	--	15.2	--	--	--	6.4	<250	--	--	
	9/7/2011	11.11	2.54	NP	8.57	<50.0	412	6.2	<0.50	42.8	<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	--	--	--	90.9	<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		
MW-16	6/2/2011	10.98	3.00	NP	7.98	509 T4	1,420 1n	79.4	<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		
MW-17	6/2/2011	11.52	5.78	NP	5.74	687 T4	9,130	2,530	960	35.1	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	23.8	39.3	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	<1000	18,000	4,300	170	370	1,100	--	<10	<10	<10	<10	300	<100	<10	110	
9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Gauging Notes:
TOS - Top of Screen
ft - Feet
NP - LNAPL not present
LNAPL - Light non-aqueous phase liquid
* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)
-- - No information available

Analytical Notes:
< - Below laboratory's indicated reporting limit
ug/L - micrograms/liter
DRO - diesel range organics
TPHd - Total petroleum hydrocarbons as diesel
TPHg - Total petroleum hydrocarbons as gasoline
MTBE - Methyl tertiary-butyl ether
TBA - Tertiary-butyl alcohol
Bold - Above the laboratory's indicated reporting limit
1n - The TPHg result for this sample did not match the laboratory standard for gasoline. This is likely due to the presence of MTBE in the sample.
T4 - Result reported for the hydrocarbons within the method-specific range that do not match pattern of laboratory standard.

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



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA																		
		Acetone (ug/L)	Alkalinity, Bicarbonate (mg/L)	Alkalinity, Hydroxide (CaCO) (mg/L)	Alkalinity, Total (mg/L)	Alkalinity, Total as CaCO3 (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 (ug/L)	Chemical Oxygen Demand (ug/L)	Chloride (ug/L)	Chromium (ug/L)	Chromium, Hexavalent (ug/L)	Cobalt (ug/L)	Coliform, Total (MPN/100ML)
MW-6	3/14/2011	18.4	--	--	--	--	<60.0	22.7	216	<5.0	32,200	--	--	<5.0	173,000	204,000	--	--	<50.0	--
	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
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2012	--	--	--	--	650	--	--	--	--	--	--	--	--	--	--	--	<5.0	<10	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	3/14/2011	<5.0	--	--	--	--	<60.0	<20.0	<100	<5.0	7,160	--	--	<5.0	11,500	34,700	--	--	<50.0	--
	6/2/2011	<5.0	226	<1	226	<1	<60.0	<20.0	<100	<5.0	4,170	<0.005	2	<5.0	15,100	32,400	2.4	<0.2	<50.0	2
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	9/6/2012	--	--	--	--	561	--	--	--	--	--	--	--	--	--	--	--	17	<10	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12	3/14/2011	<5.0	--	--	--	--	<60.0	<20.0	<100	<5.0	<2000	--	--	<5.0	80,100	8,240,000	--	--	<50.0	--
	6/2/2011	<5.0	905	<1	905	<1	<60.0	<20.0	<100	<5.0	7,240	<0.05	33	<5.0	191,000	7,260,000	3.3	<2	<50.0	210
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2012	--	--	--	--	806	--	--	--	--	--	--	--	--	--	--	--	<5.0	<10	--
MW-14	9/6/2012	--	--	--	--	1,720	--	--	--	--	--	--	--	--	--	--	--	24	<10	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	9/6/2012	--	--	--	--	2,820	--	--	--	--	--	--	--	--	--	--	--	38	<10	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

TABLE 3b
 ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
 76 STATION NO. S191/S043
 449 HEGENBERGER ROAD
 OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA																		
		Inorganic Carbon (mg/L)	Iron SW6010 D (ug/L)	Iron SW6010 T (ug/L)	Iron, Ferric (ug/L)	Iron, Ferrous (ug/L)	Lead (ug/L)	Manganese (ug/L)	Mercury (ug/L)	Methane (ug/L)	Molybdenum (ug/L)	Nickel (ug/L)	Nitrate as N E300.0 (mg/L)	Nitrate as N E353/E351 (ug/L)	Nitrite as N (ug/L)	Nitrogen, Ammonia (mg/L)	Nitrogen, NO2 plus NO3 (ug/L)	Nitrogen, Total Kjeldahl (mg/L)	Oil and Grease (ug/L)	Salinity (mg/L)
MW-16	6/2/2011	--	--	34,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/1/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/2012	--	--	1,730	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	9/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/2/2011	--	--	109,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/1/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	6/11/2012	--	--	44,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/12/2012	--	--	--	21,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--	182	--	--	--	--	--	--	--	--	--	--
	9/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

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



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA							
		Selenium (ug/L)	Silver (ug/L)	Sulfate E300 (ug/L)	Sulfate E300.1 (mg/L)	Thallium (ug/L)	Total Organic Carbon (mg/L)	Vanadium (ug/L)	Zinc (ug/L)
MW-7	3/14/2011	--	--	--	--	--	--	--	--
	6/2/2011	--	--	48,900	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	56,900	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
MW-8	6/30/2010	--	--	2,360,000	--	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--
	9/20/2010	--	--	--	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	--	--	--	--	--	--	--	--
	6/2/2011	--	--	2,830,000	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	2,570,000	--	--	--	--	--
9/6/2012	--	--	--	--	--	--	--	--	
MW-9	12/17/2009	--	--	--	11	--	--	--	--
	3/29/2010	--	--	--	--	--	--	--	--
	6/30/2010	--	--	19,000	--	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--
	9/20/2010	--	--	--	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	<10.0	<10.0	8,980	--	<20.0	--	<50.0	<40.0
	6/2/2011	<10.0	<10.0	18,600	--	<20.0	4.7	<50.0	<40.0
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	42,500	--	--	--	--	--
9/6/2012	--	--	--	--	--	--	--	--	
MW-10	9/17/2009	--	--	84	0.084	--	--	--	--
	12/17/2009	--	--	--	86	--	--	--	--

TABLE 3c
 ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
 76 STATION NO. 5191/5043
 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	3/29/2010	--	--	73,600	--	--	--	--	--
	6/30/2010	--	--	70,800	--	--	--	--	--
	7/6/2010	--	--	--	--	--	--	--	--
	9/20/2010	--	--	82,000	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	--	--	68,600	--	--	--	--	--
	6/2/2011	--	--	71,700	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	70,100	--	--	--	--	--
9/6/2012	--	--	--	--	--	--	--	--	
9/11/2012	--	--	--	--	--	--	--	--	
MW-11	7/6/2010	--	--	82,100	--	--	--	--	--
	9/20/2010	--	--	58,300	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	--	--	59,900	--	--	--	--	--
	6/2/2011	--	--	62,900	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	79,400	--	--	--	--	--
9/6/2012	--	--	--	--	--	--	--	--	
MW-12	7/6/2010	--	--	3,030,000	--	--	--	--	--
	9/20/2010	--	--	1,970,000	--	--	--	--	--
	12/8/2010	--	--	--	--	--	--	--	--
	3/14/2011	<10.0	<10.0	2,500,000	--	<20.0	--	<50.0	<40.0
	6/2/2011	<10.0	<10.0	2,330,000	--	<20.0	9.1	<50.0	<40.0
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
6/12/2012	--	--	2,130,000	--	--	--	--	--	

TABLE 3c
 ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
 76 STATION NO. 5191/5043
 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-15	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
	6/12/2012	--	--	42,100	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
MW-16	6/2/2011	--	--	8,740	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
	6/12/2012	--	--	19,900	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
MW-17	6/2/2011	--	--	3,920,000	--	--	--	--	--
	9/7/2011	--	--	--	--	--	--	--	--
	12/5/2011	--	--	--	--	--	--	--	--
	3/6/2012	--	--	--	--	--	--	--	--
	6/11/2012	--	--	--	--	--	--	--	--
	6/12/2012	--	--	2,520,000	--	--	--	--	--
	9/6/2012	--	--	--	--	--	--	--	--
	9/11/2012	--	--	--	--	--	--	--	--

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

TABLE 4
Historical Groundwater Gradient and Flow Direction Data

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

Site	Monitoring Date	Groundwater Gradient (feet per foot)	Groundwater Flow Direction																
			N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	04/22/92		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	08/31/92	0.05	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	11/30/92	0.04	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	02/07/94		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	11/14/94	0.03	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	02/21/95	0.08	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	05/18/95	0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	07/26/96	0.02	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	10/28/96	0.02	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	01/29/97	0.01	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	04/15/97	0.01	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	07/15/97	0.10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	10/09/97	0.10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	01/14/98	0.02	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	04/01/98	0.05	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	07/15/98	0.04	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	09/30/98	0.05	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	01/25/99	0.05	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	04/15/99	0.04	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	10/21/99	0.03	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	07/14/99	0.04	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	04/13/00	0.050	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	07/14/00	0.033	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	10/26/00	0.060	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	01/03/01	0.070	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	07/17/01	0.040	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	10/01/01	0.030	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	01/31/02	0.010	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	07/28/02	0.020	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	10/09/02	0.016	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	01/02/03	0.010	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	04/01/03	0.008	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	07/29/09	0.010	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	10/02/03	0.010	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	01/09/04	0.010	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	04/26/04	0.010	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	07/22/04	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	10/29/04	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	01/10/05	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	06/15/05	0.020	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	09/27/05	0.010	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	12/13/05	0.005	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	03/23/06	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	06/23/06	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	09/26/06	0.010	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	12/22/06	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	03/30/07	0.010	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	09/25/07	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	12/28/07	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	06/28/07	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	03/22/08	0.020	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	06/23/08	0.010	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	09/19/08	0.006	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	12/31/08	0.005	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	03/27/09	0.006	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	05/28/09	0.008	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	09/17/09	0.010	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
	12/17/09	0.008	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	03/29/10	0.010	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	06/30/10	0.009	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	09/20/10	0.007	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	12/08/10	0.018	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	03/14/11	0.020	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	06/02/11	0.020	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	09/07/11	0.020	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	12/05/11	0.020	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	03/06/12	0.010	0	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	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	0
		0.025 Average	0	0	0	0	0	0	1	29	1	13	0	20	2	3	0	0	0

Explanation

NA = Not available
 Number of Events = 67

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Appendix A

Previous Investigation and Site History Summary

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SENSITIVE RECEPTORS

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

Current Consultant: **Antea Group**

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Appendix B

Blaine Tech Services Groundwater Sampling Procedures

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

SAMPLING PROCEDURES OVERVIEW

SAFETY

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

INSPECTION AND GAUGING

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

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

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

EVACUATION

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

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

PARAMETER STABILIZATION

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

than once per case volume).

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

DEWATERED WELLS

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

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

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

PURGEWATER CONTAINMENT

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

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

SAMPLE COLLECTION DEVICES

All samples are collected using disposable bailers.

SAMPLE CONTAINERS

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

TRIP BLANKS

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

DUPLICATES

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

SAMPLE STORAGE

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

DOCUMENTATION CONVENTIONS

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

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

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

DECONTAMINATION

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

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

and bailers.

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

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

DISSOLVED OXYGEN READINGS

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

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

OXYIDATON REDUCTION POTENTIAL READINGS

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

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Appendix C

Blaine Tech Services Groundwater Sampling Field Data Sheets

Well-Head Inspection & Well Gauging Form

Antea Group Project No: 270571 Site Address: 449 Hegenberger Rd, Oakland, CA

Field Technician: Mark McCulloch *Blaine Tech Services* Date: 9-6-12 Weather: _____
(Print Full Name & Company*)

Well Condition														
Sample Order	Field Point	Bolts	Seal	Lid Secure	Lock	Expanding Cap	Water In Well Box	Well Casing Dia.	Time Gauged	Depth to Water (Feet)	Depth to Bottom (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Comments
1	MW-8	G	G	G	G	G	N	2	0817	2.91	14.70			
2	MW-7	G	G	G	G	G	N	2	0822	4.03	12.97			
3	MW-12A	G	G	G	G	G	N	2	0827	4.45	32.62			
4	MW-9	P	G	G	G	G	N	2	0832	1.24	12.58			
5	MW-3	G	G	G	G	G	N	2	0837	2.50	13.92			
6	MW-11	G	G	G	G	G	N	4	0842	1.76	19.58			
7	MW-10	G	G	G	G	G	N	2	0848	4.00	12.65			
8	MW-13	G	P	G	G	G	Y	2	0852	4.14	14.52			
9	MW-15	G	G	G	G	G	N	2	0856	2.24	12.71			
10	MW-16	G	G	G	G	G	N	2	0907	2.61	12.68			
11	MW-12	G	G	G	G	G	N	4	0912	4.15	19.47			
12	MW-6	G	G	G	G	G	Y	2	0916	2.85	12.64			
13	MW-14	G	G	G	G	G	N	2	0922	3.35	12.78			
14	MW-17	G	G	G	G	G	N	2	0930	4.39	12.68			

Notes: MW-9 1/3 tabs broken 1/3 bolts missing MW-3 1/2 tabs stripped

** 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 Rd. Oakland, CA		
Project No:	2705191	Field Technician:	MM (BP)
Field Point:	MW-6	Date:	9-6-12
Depth to Water (DTW) (ft bgs):	2.85	Well Diameter (in):	(2) 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	12.64	Water Column Height (ft):	9.79

Purging Info and Calculations:

Purge Method: Low-Flow <u>3 casing volumes</u> Other: _____	Purge Equipment: <u>Disposable Bailor</u> Electric Submersible Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: <u>Disposable Bailor</u> w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>9.79</u>	X Conversion Factor (gal/ft): <u>0.17</u>	= Casing Volume (gal): <u>1.67</u>
Casing Volume (gal): <u>1.67</u>	X Specified Volumes: <u>3</u>	= Calculated Purge (gal): <u>5.0</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:	Stop Time:						
	11:57	1:00						
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				—		—		
1201	24.3	6.59	1404	-145.5	42	1.19	0.9	
1202	25.7	6.55	1388	-143.8	37	0.48	1.7	
1203	24.6	6.61	1400	-146.6	33	0.50	2.6	
1205	23.8	6.69	1816	-147.7	15	0.51	3.4	
1206	23.8	6.73	1907	-151.3	13	0.43	4.3	
1206	Well Dewatered @ 4.4 Gallons							
1406	23.8	6.78	1635	-889	61	1.95	—	
Post-Purge				—		—		0.8 mg/L
Did Well dewater? <u>Yes</u> No			Total Purge volume (gal): <u>4.4</u>					

Other Comments: 80% = 4.80 * Purged through flow cell
DTW = 5.81 (2m) * ODOR

Sample Info:

Sample ID: MW-6-20120930	Sample Date and Time: 9-6-12 @ 1406
Selected Analysis: See COC	

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

Signature: Date: 9-6-12

Groundwater Sampling Form

Site Address:	449 Hegenberger Rd. Oakland, CA		
Project No:	2705191	Field Technician:	MM
Field Point:	MW-10	Date:	9-6-12
Depth to Water (DTW) (ft bgs):	4.00	Well Diameter (in):	② 4 6 8 —
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	12.65	Water Column Height (ft):	8.65

Purging Info and Calculations:

Purge Method: Low-Flow <u>3 casing volumes</u> Other: _____	Purge Equipment: Disposable Bailor <u>Electric Submersible</u> Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: <u>Disposable Bailor</u> w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>8.65</u> X Conversion Factor (gal/ft): <u>0.17</u> = Casing Volume (gal): <u>1.5</u> Casing Volume (gal): <u>1.5</u> X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>4.5</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:	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								
			1043	18.92	7.29	1069	-289.6	15	1.18	0.75	
			1044	18.69	7.33	1075	-135.7	12	4.39	1.5	
			1045	18.99	6.71	2475	-158.7	26	2.37	2.25	
			1046	19.13	6.78	2230	-170.4	13	2.47	3	
			1047	19.04	6.77	2231	-181.2	12	2.42	3.75	
			1048	19.00	6.77	2234	-196.7	10	2.38	4.50	
			Post-Purge								

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

Other Comments: 80% = 5.73 * Purged through flow cell
DTW = 4.26 Fe2+ = 0.6 mg/L

Sample Info:
Sample ID: MW-10-20120930 Sample Date and Time: 9-6-12 @ 1050
Selected Analysis: See COC

This form was provided by Antea Group and completed by: (Print Full Name) Mark McCulloch, an employee of Blaine Tech Services, Inc.
Signature: [Signature] Date: 9-6-12



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

Groundwater Sampling Form

Site Address:	449 Hegenberger Rd. Oakland, CA		
Project No:	2705191	Field Technician:	MM
Field Point:	MW-11	Date:	9-6-12
Depth to Water (DTW) (ft bgs):	1.70	Well Diameter (in):	2 ④ 6 8
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	19.58	Water Column Height (ft):	17.88

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> w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>17.88</u>	X Conversion Factor (gal/ft): <u>0.66</u>	= Casing Volume (gal): <u>11.8</u>
Casing Volume (gal): <u>11.8</u>	X Specified Volumes: <u>3</u>	= Calculated Purge (gal): <u>35.40</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: <u>10:00</u>	Stop Time: <u>10:21</u>						
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								
1011	16.40	6.71	1905	-110.2	24	2.43	5.9	
1013	17.32	7.38	1091	-236.2	26	0.99	11.8	
1015	17.89	7.38	1050	-264.9	43	0.82	17.7	
1017	18.57	7.36	1047	-280.0	40	0.71	23.6	
1019	18.94	7.35	1051	-288.4	37	0.67	29.5	
1021	19.00	7.34	1060	-290.1	35	0.64	35.4	
Post-Purge								
Did Well dewater?	Yes	<u>No</u>	Total Purge volume (gal): <u>35.4</u>					

Other Comments: 80% = 5.27 * Purged through flow cell
DTW = 4.51

Sample Info:	
Sample ID: MW-11-20120930	Sample Date and Time: 9-6-12 @ 1028
Selected Analysis: See COC	

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

Signature: [Signature] Date: 9-6-12



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

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

Groundwater Sampling Form

Site Address: <u>449 Hegenberger Rd. Oakland, CA</u>	
Project No: <u>2705191</u>	Field Technician: <u>MM</u>
Field Point: <u>MW-12</u>	Date: <u>9-6-12</u>
Depth to Water (DTW) (ft bgs): <u>4.15</u>	Well Diameter (in): <u>2 6 8</u>
Depth to LNAPL (ft bgs): <u>-</u>	Thickness of LNAPL (ft): <u>-</u>
Total Depth of Well (ft bgs): <u>19.47</u>	Water Column Height (ft): <u>15.32</u>

Purging Info and Calculations:

Purge Method: <u>Low-Flow</u> <u>3 casing volumes</u> Other: _____	Purge Equipment: <u>Disposable Bailer</u> <u>Electric Submersible</u> Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: <u>Disposable Bailer</u> w/BEU Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>15.32</u> X Conversion Factor (gal/ft): <u>0.66</u> = Casing Volume (gal): <u>10.</u> Casing Volume (gal): <u>10</u> X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>30</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:	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								
			<u>1256</u>	<u>16.45</u>	<u>6.34</u>	<u>14996</u>	<u>-258.2</u>	<u>63</u>	<u>0.79</u>	<u>5</u>	
			<u>1258</u>	<u>16.66</u>	<u>6.32</u>	<u>15915</u>	<u>-276.0</u>	<u>13</u>	<u>0.70</u>	<u>10</u>	
			<u>1300</u>	<u>17.11</u>	<u>6.56</u>	<u>15499</u>	<u>-290.4</u>	<u>16</u>	<u>0.68</u>	<u>15</u>	
			<u>1303</u>	<u>16.91</u>	<u>6.43</u>	<u>16827</u>	<u>-309.7</u>	<u>13</u>	<u>0.67</u>	<u>20</u>	
			<u>1305</u>	<u>16.72</u>	<u>6.34</u>	<u>17022</u>	<u>-310.2</u>	<u>11</u>	<u>0.66</u>	<u>25</u>	
			<u>1307</u>	<u>16.53</u>	<u>6.27</u>	<u>17112</u>	<u>-319.2</u>	<u>10</u>	<u>0.65</u>	<u>30</u>	
			Post-Purge								

Did Well dewater? Yes No Total Purge volume (gal): 30

Other Comments: 80% = 7.21 * Purged through flow cell
DTW = Fe2+ = 0.4 mg/L

Sample Info:
 Sample ID: MW-12-20120930 Sample Date and Time: 9-6-12 @ 1340
 Selected Analysis: See COC

This form was provided by Antea Group and completed by: (Print Full Name) Mark McColloch, an employee of Blaine Tech Services, Inc.
 Signature: [Signature] Date: 9-6-12

Groundwater Sampling Form

Site Address:	449 Hegenberger Rd. Oakland, CA		
Project No:	2705191	Field Technician:	MM
Field Point:	MW-12A	Date:	9-6-12
Depth to Water (DTW) (ft bgs):	4.45	Well Diameter (in):	② 4 6 8
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	32.62	Water Column Height (ft):	28.17

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 w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 28.17	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 4.8
Casing Volume (gal): 4.8	X Specified Volumes: 3	= Calculated Purge (gal): 14.4

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

Purge: _____ Start Time: 0941 Stop Time: 0951

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								
0942	15.67	6.03	1769	-104.6	30	3.75	2.4	
0943	16.00	6.49	2538	-191.8	962	1.27	4.8	
0945	16.19	6.54	2522	-215.2	94	0.99	7.2	
0947	16.22	6.57	2559	-245.0	132	0.83	9.6	
0948	16.28	6.58	2581	-250.2	40	0.78	12	
0950	16.31	6.60	2602	-260.2	35	0.72	14.4	
0951	16.30	6.61	2611	-264.3	32	0.71	16.8	
Post-Purge								

Did Well dewater? Yes No Total Purge volume (gal): 17

Other Comments: 80% = 10.08 * Purged through flow cell
DTW = 4.55

Sample Info:

Sample ID: MW-12A-20120930	Sample Date and Time: 9-6-12 @ 0954
Selected Analysis: See COC	

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

Signature: [Signature] Date: 9-6-12



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

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

Groundwater Sampling Form

Site Address:	449 Hegenberger Rd. Oakland, CA		
Project No:	2705191	Field Technician:	MM
Field Point:	MW-13	Date:	9-6-12
Depth to Water (DTW) (ft bgs):	4.14	Well Diameter (in):	② 4 6 8 —
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	14.52	Water Column Height (ft):	10.38

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 w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 10.38	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.8
Casing Volume (gal): 1.8	X Specified Volumes: 3	= Calculated Purge (gal): 5.4
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163		

Purge:	Start Time: 1120	Stop Time: 1137						
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								
1121	19.81	6.99	2730	-143.9	20	5.00	0.9	
1122	19.97	7.37	3150	-183.7	211	1.90	1.8	
1123	19.31	7.40	2956	-195.2	263	1.48	2.7	
1124	19.32	7.39	3012	-201.2	108	1.32	3.6	
1125	19.34	7.38	3098	-201.7	47	1.21	4.5	
1126	19.31	7.36	3131	-205.6	45	1.19	5.4	
1127	19.28	7.35	3150	-209.2	40	1.18	6.3	
Post-Purge								

Did Well dewater? Yes No Total Purge volume (gal): 6.3

Other Comments: 80% = 6.21 * Purged through flow cell
DTW = 6.11

Sample Info:	
Sample ID: MW-13-20120930	Sample Date and Time: 9-6-12 @ 1137
Selected Analysis: See COC	

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

Signature: [Signature] Date: 9-6-12



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

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

Groundwater Sampling Form

Site Address: <u>449 Hegenberger Rd. Oakland, CA</u>	
Project No: <u>2705191</u>	Field Technician: <u>MM</u> <u>BD</u>
Field Point: <u>MW-14</u>	Date: <u>9-6-12</u>
Depth to Water (DTW) (ft bgs): <u>3.35</u>	Well Diameter (in): <u>②</u> 4 6 8
Depth to LNAPL (ft bgs):	Thickness of LNAPL (ft):
Total Depth of Well (ft bgs): <u>12.78</u>	Water Column Height (ft): <u>9.43</u>

Purging Info and Calculations:

Purge Method: Low-Flow <u>3 casing volumes</u> Other: _____	Purge Equipment: Disposable Bailor <u>Electric Submersible</u> Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: <u>Disposable Bailor</u> w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>9.43</u>	X Conversion Factor (gal/ft): <u>0.17</u>	= Casing Volume (gal): <u>1.6</u>
Casing Volume (gal): <u>1.6</u>	X Specified Volumes: <u>3</u>	= Calculated Purge (gal): <u>4.8</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: 1217 Stop Time: 1223

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				—		—		
1218	20.9	7.02	6500	-129.1	24	0.29	0.8	
1219	21.4	6.88	5460	-112.2	21	0.22	1.6	
1220	21.4	6.84	5527	-112.4	13	0.20	2.4	
1221	21.2	6.81	6225	-121.5	17	0.19	3.2	
1222	21.0	6.87	7063	-138.6	16	0.17	4.0	
1223	20.8	6.99	10537	-166.6	19	0.15	4.8	
1223	Well Dewatered @ 4.9 Gallons							
1425	21.2	7.06	6492	-105.8	36	2.45	—	
Post-Purge				—		—		

Did Well dewater? Yes No Total Purge volume (gal): 4.9

Other Comments: 80% = 5.23 * Purged through flow cell
DTW = 5.24 (2hr) * ODOR

Sample Info:

Sample ID: <u>MW-14-20120930</u>	Sample Date and Time: <u>9-6-12 @ 1425</u>
Selected Analysis: <u>See COC</u>	

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

Signature: [Signature] Date: 9-6-12

Groundwater Sampling Form

Site Address:	449 Hegenberger Rd. Oakland, CA		
Project No:	2705191	Field Technician:	MM
Field Point:	MW-15	Date:	9-6-12
Depth to Water (DTW) (ft bgs):	2.24	Well Diameter (in):	② 4 6 8
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	12.71	Water Column Height (ft):	10.47

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> w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>10.47</u>	X Conversion Factor (gal/ft): <u>0.17</u>	= Casing Volume (gal): <u>1.8</u>
Casing Volume (gal): <u>1.8</u>	X Specified Volumes: <u>3</u>	= Calculated Purge (gal): <u>5.4</u>
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius 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)
	<u>1204</u>	<u>1211</u>	Pre-Purge								
			1205	19.38	7.28	4016	-201.4	25	2.15	0.9	
			1206	19.96	7.27	4278	-145.6	32	3.48	1.8	
			1207	19.20	6.82	4500	-184.4	44	1.84	2.7	
			1208	18.92	6.51	2500	-193.3	51	1.65	3.6	
			1209	19.17	6.36	1637	-186.2	22	1.36	4.5	
			1210	19.25	6.42	1723	-196.4	37	1.22	5.4	
			1211	19.20	6.47	1831	-200.1	35	1.23	6.3	
			Post-Purge								
Did Well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>		Total Purge volume (gal): <u>6.3</u>									

Other Comments: 80% = 4.33 * Purged through flow cell
DTW = 8.95 (2HR)

Sample Info:	
Sample ID: MW-15-20120930	Sample Date and Time: 9-6-12 @ 1411 (2HR)
Selected Analysis: See COC	

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

Signature: [Signature] Date: 9-6-12

Groundwater Sampling Form

Site Address:	449 Hegenberger Rd. Oakland, CA		
Project No:	2705191	Field Technician:	MM
Field Point:	MW-16	Date:	9-6-12
Depth to Water (DTW) (ft bgs):	2.61	Well Diameter (in):	2 4 6 8
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	12.68	Water Column Height (ft):	10.07

Purging Info and Calculations:

Purge Method: Low-Flow <u>3 casing volumes</u> Other: _____	Purge Equipment: <u>Disposable Bailer</u> <u>Electric Submersible</u> Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: <u>Disposable Bailer</u> w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>10.07</u>	X Conversion Factor (gal/ft): <u>0.17</u>	= Casing Volume (gal): <u>1.7</u>
Casing Volume (gal): <u>1.7</u>	X Specified Volumes: <u>3</u>	= Calculated Purge (gal): <u>5.1</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: 1222 Stop Time: 1227

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								
1223	17.92	6.80	4744	-202.6	40	1.10	0.89	
1224	18.23	6.82	3769	-159.4	43	1.74	1.7	
1225	19.12	6.72	3849	-165.6	43	1.37	2.5	
1226	20.64	6.71	2915	-179.6	45	1.04	3.4	
1227	21.44	6.75	2921	-215.2	46	0.76	4.25	
1228	21.80	6.78	2937	-219.7	47	0.75	5.1	
1229	21.90	6.79	3000	-221.6	50	0.73	5.95	
Post-Purge								

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

Other Comments: 80% = 4.62 * Purged through flow cell
DTW = 5.74 (2 HR)

Sample Info:	
Sample ID: MW-16-20120930	Sample Date and Time: 9-6-12 @ 1430
Selected Analysis: See COC	

This form was provided by Antea Group and completed by: (Print Full Name) Mark McCulloch, an employee of Blaine Tech Services, Inc.
Signature: [Signature] Date: 9-6-12

Groundwater Sampling Form

Site Address:	449 Hegenberger Rd. Oakland, CA		
Project No:	2705191	Field Technician:	MM BL
Field Point:	MW-17	Date:	9-6-12
Depth to Water (DTW) (ft bgs):	4.39	Well Diameter (in):	2 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	12.68	Water Column Height (ft):	9.29

Purging Info and Calculations:

Purge Method: Low-Flow 3 casing volumes Other: _____	Purge Equipment: Disposable-Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: Disposable Bailer w/BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 9.29	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.4
Casing Volume (gal): 1.4	X Specified Volumes: 3	= Calculated Purge (gal): 4.2
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163		

Purge:	Start Time: 12:36	Stop Time: 1:12
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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				-		-		
1237	20.8	6.87	23614	-168.8	36	0.18	0.7	
1238	20.9	6.89	22301	-173.3	40	0.17	1.4	
1239	20.8	6.91	21639	-185.4	34	0.16	2.1	
1240	20.8	6.89	23087	-177.3	19	0.15	2.8	
1241	20.7	6.86	24643	-172.0	15	0.16	3.5	
1242	20.7	6.83	26821	-170.4	14	0.17	4.2	
1243	20.6	6.68	33806	-147.3	13	0.19	4.9	
1243	Well Dewatered @			5.1 Gallons				
Post-Purge				-		-		

Did Well dewater?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Total Purge volume (gal): 5.1
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Other Comments: 80% = 6.04 * Purged through flow cell
 DTW = * ODOR

Sample Info:	
Sample ID: MW-17_20120930	Sample Date and Time: 9-6-12 @ 1445
Selected Analysis: See COC	

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

Signature:	Date: 9-6-12
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LNAPL = light non-aqueous phase liquids
 bgs = below ground surface
 ORP = Oxidation-Reduction Potential
 D.O. = dissolved oxygen

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

Groundwater Sampling Form

Site Address:	449 Hegenbeger Rd Oakland		
Project No:	2705191	Field Technician:	BP
Field Point:	MW-17	Date:	9-6-12
Depth to Water (DTW) (ft bgs):	4.39	Well Diameter (in):	② 4 6 8 —
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	12.68	Water Column Height (ft):	8.29

Purging Info and Calculations:

Purge Method: Low-Flow 3 casing volumes Other: _____	Purge Equipment: Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____	Sample Collection Method: Disposable Bailer w/ BED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 8.29	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 1.4
Casing Volume (gal): 1.4	X Specified Volumes: 3	= Calculated Purge (gal): 4.2
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163		

Purge: _____ Start Time: 12:36 Stop Time: 12:45

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								
1445	20.8	6.82	23001	-157.3	247	2.25	—	
Post-Purge								
								Post-Purge: 1.60 mg/L

Did Well dewater? Yes No Total Purge volume (gal): 5.1


Other Comments: 80% = 0.04 * purge through flow cell
 DTW = 10.20 (2hr) * 8DOR

Sample Info:

Sample ID: MW-17-20120930	Sample Date and Time: 9-6-12 @ 1445
Selected Analysis: SEE COL	

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

Signature: [Signature] Date: 9-6-12

 Antea™ Group, 1-800-477-7411	LNAPL = light non-aqueous phase liquids bgs = below ground surface ORP = Oxidation-Reduction Potential D.O. = dissolved oxygen	gal = gallon/s temp = temperature NTU = Nephelometric Turbidity Units mV = millivolts
---	---	--

82518



COP ELT CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

Page: 2 of 2
 Cooler # _____ of _____

3Q12 GW Event

Required Lab Information:		Required Project Information:		Required Invoice Information:		Turn around time (days)							
Lab Name:	Kiff Analytical	Site ID #:	2705191	Task:	WG_Q_201209	Send Invoice to:	Tara Bosch						
Address:	2795 Second Street #300	AnteaGrp proj#		Address:	11050 White Rock Road, Suite 110	QC level Required:	Standard						
Davis, CA 95618		Site Address:	449 Hegenberger	City/State:	Rancho Cordova CA 95670	Phone #:	1-800-477-7411						
Lab PM:	Scott Forbes	City:	Oakland	State:	CA 94621	Reimbursement project?							
Phone/Fax:	530-297-4800 Ext 109	AG PM Name:	Dennis Dettloff	Send EDD to:	copeldata@intelligentehs.com	Non-reimbursement project?	y						
Lab PM email:	Sforbes@kiffanalytical.com	Phone/Fax:	P: 1-800-477-7411 F: 916-638-8395	CC Hardcopy report to:		Mark one							
Applicable Lab Quote #:		AG PM Email:	dennis.dettloff@anteagroup.com	CC Hardcopy report to:		MA MCP Cert?							
						CT RCP Cert?	Mark One						
						Lab Project ID (lab use)							
						Requested Analyses							
						253 2 Metals 363 2534 1 Nitrate 50123016 Ammonia 8010 Total Hardness 7186 Residual Chlorine 8010 Total & Diss. Metals 80123016 TDS							
						Comments/Lab Sample I.D.							
ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / .)	SAMPLE IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G-CRAB C-COMP	SAMPLE DATE	SAMPLE TIME	PCF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives	Requested Analyses	Comments/Lab Sample I.D.		
	MW-10_20120930		WG	G	9-6-12	1050	13	Y	X X X	X X X X X X X X	01		
	MW-6_20120930		WG	G		1406	13	Y	X X X	X X X X X X X X	10		
	MW-12_20120930		WG	G		1340	13	Y	X X X	X X X X X X X X	03		
	MW-14_20120930		WG	G		1425	13	Y	X X X	X X X X X X X X	06		
	MW-17_20120930		WG	G		1445	13	Y	X X X	X X X X X X X X	09		
	FD1_20120930		w	G		1450	13	Y	X X X	X X X X X X X X	11		
Additional Comments/Special Instructions:		REMOVED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	Sample Receipt Conditions			
Global ID: T0600101476		Mark McColloch		9-6-12	1600	Mark McColloch		9-6-12	1600	Y/N	Y/N	Y/N	
		_____				_____				Y/N	Y/N	Y/N	
		_____				_____				Y/N	Y/N	Y/N	
SHIPPING METHOD (FEDEX, UPS, USPS, etc.)		SAMPLE NAME AND NUMBER		UPS COURIER FEDEX		PRINT Name of SAMPLER:		Signature of SAMPLER:		Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?
US MAIL		Mark McColloch		Mark McColloch		Mark McColloch		Mark McColloch					



Quarterly Summary Report, Third Quarter 2012
76 Station No. 5191/5043
Oakland, CA
Antea Group Project No. I42705191



Appendix D

Certified Laboratory Analytical Report and Data Validation Form

Is the Data Set Valid?

(circle)

Yes / No

Preservation Temperature

(if Known): 1.8 °C

Antea™ Group Laboratory Data Validation Sheet

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

Project #: 142705191

Date of Validation: 10-25-12 **Date of Analysis:** 9-7-12 to 9-18-12

Sample Date: 9-6-12 **Completed By:** ETW

Signature: [Signature]

Circle
or
Highlight

 Yes / No

(below)

Analytical Lab Used and Report # (if any): K:AA #: 82518

1. Were the analyses the ones requested?
2. Do the sample number(s) on the chain-of-custody (COC) match the one(s) that appear on the laboratory data sheet?
3. Were samples prepared (extracted, filtered, etc.) within EPA holding times?
4. Once prepared/extracted, were the samples analyzed within the EPA holding times?
5. Were Laboratory blanks performed, if so, were they non-detect?
6. Are the units correct? (i.e., soil samples in mg/kg or ug/g, water samples mg/L, ug/L, and air samples in volume mg/m³, etc.)
7. Were appropriate Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples included in the laboratory batch sample?
8. In lieu of MS/ MSD, were surrogate spike (SS) or surrogate spike duplicate (SSD) samples included in the laboratory batch samples?
9. Were MS/ MSD (or SS/SSD) within the acceptable range of % recovery (i.e., approximately 80-120%, depending on the analyte)?
10. Were MS/MSD (or SS/SSD) values used to calculate Relative Percent Difference (RPD)?
11. Were Relative Percent Difference values within the acceptable range (i.e. ±25%)?

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

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

4. Hold time exceeded for Nitrate as N for samples from MW-10 and MW-11

9. MS/MSD results for Nitrate as N from FD-1 were outside control limits.

Laboratory Results

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

Subject : 11 Water Samples
Project Name : 2705191
Project Number :

Dear Mr. Dettloff,

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

Sincerely,



Troy Turpen

Subject : 11 Water Samples
Project Name : 2705191
Project Number :

Case Narrative

Matrix Spike/Matrix Spike Duplicate results associated with samples MW-10_20120930, MW-12_20120930, MW-14_20120930, MW-17_20120930, MW-6_20120930, and FD1_20120930 for the analyte Iron were affected by the analyte concentrations already present in the un-spiked sample.

Trivalent Chromium results for samples MW-10_20120930, MW-12_20120930, MW-14_20120930, MW-17_20120930, MW-6_20120930, and FD1_20120930 were calculated assuming no Hexavalent Chromium was present in the samples. No Hexavalent Chromium was detected by Method EPA 7196 above our Method Detection Limit of 4.3 ug/L. Trivalent chromium was calculated as the difference between Total Chromium and Hexavalent Chromium.

The Method Reporting Limit for Nitrate as N by Method EPA 300.0 was raised due to high concentrations of other analytes for sample MW-12_20120930, MW-14_20120930, MW-17_20120930, and FD1_20120930.

The Method Reporting Limit for Nitrite as N by Method EPA 300.0 was raised due to high concentrations of other analytes for samples FD1_20120930, MW-12_20120930 and MW-17_20120930.

Tert-Butanol results for sample MW-12_20120930 may be biased slightly high and are flagged with a 'J'. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples. We consider this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 20:1.

The recommended Hold Time was exceeded for the analyte Nitrate as N associated with samples MW-10_20120930 and MW-14_20120930.

Matrix Spike/Matrix Spike Duplicate results associated with sample FD1_20120930 for the analyte Nitrate as N were outside of control limits. This may indicate a bias for the sample that was spiked. Since the LCS recoveries were within control limits, no data are flagged.

Matrix Spike/Matrix Spike Duplicate results associated with samples FD1_20120930, MW-10_20120930, MW-12_20120930, MW-14_20120930 and MW-17_20120930 for the analyte Sulfate were affected by the analyte concentration present in the un-spiked sample.



Report Number : 82518

Date : 09/18/12

Analysis Summary

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

Project Name :2705191

Project Number :

Sample Name		MW-10_20120930	MW-11_20120930	MW-12_20120930	MW-12A_2012093	MW-13_20120930	MW-14_20120930	MW-15_20120930								
Sample Date		09/06/12	09/06/12	09/06/12	09/06/12	09/06/12	09/06/12	09/06/12								
Analyte	Method	Units	MRL	Results	MRL	Results	MRL	Results	MRL	Results	MRL	Results	MRL	Results		
Ferric Iron	CALCFE3	mg/L	0.10	11			0.10	0.19					0.10	8.9		
Hexavalent Chromium	EPA 7196A	ug/L	10	ND			10	ND					10	ND		
Nitrate as N	EPA 300.0	mg/L	0.10	1.0			1.0	ND					0.50	ND		
Nitrite as N	EPA 300.0	mg/L	0.10	ND			1.0	ND					0.10	ND		
Sulfate	EPA 300.0	mg/L	5.0	59			50	2400					50	840		
Sulfide, Total	SM4500-S2 D	mg/L	0.050	ND			0.050	ND					0.050	ND		
Trivalent Chromium	CALCCR3	ug/L	10	17			10	ND					10	24		
Chromium	EPA 6010B	mg/L	0.0050	0.017			0.0050	ND					0.0050	0.024		
Iron	EPA 6010B	mg/L	0.10	12			0.10	0.59					0.10	9.7		
Manganese	EPA 6010B	mg/L	0.0050	0.70			0.0050	10					0.0050	3.0		
Manganese, Dissolved	EPA 6010B	mg/L	0.0050	0.49			0.0050	10					0.0050	2.3		
Benzene	EPA 8260B	ug/L	0.50	6.9	0.50	ND	1.5	120	0.50	ND	0.50	ND	4.0	210	0.50	ND
Ethylbenzene	EPA 8260B	ug/L	0.50	1.8	0.50	ND	1.5	15	0.50	ND	0.50	ND	4.0	1100	0.50	ND
Toluene	EPA 8260B	ug/L	0.50	0.89	0.50	ND	1.5	9.6	0.50	ND	0.50	ND	4.0	9.1	0.50	ND
Total Xylenes	EPA 8260B	ug/L	0.50	3.9	0.50	ND	1.5	37	0.50	ND	0.50	ND	4.0	1800	0.50	ND
Diisopropyl ether (DIPE)	EPA 8260B	ug/L	0.50	ND	0.50	ND	1.5	ND	0.50	ND	0.50	ND	4.0	ND	0.50	ND
Ethanol	EPA 8260B	ug/L	5.0	ND	5.0	ND	15	ND	5.0	ND	5.0	ND	40	ND	5.0	ND
Ethyl-t-butyl ether (ETBE)	EPA 8260B	ug/L	0.50	ND	0.50	ND	1.5	ND	0.50	ND	0.50	ND	4.0	ND	0.50	ND
Methyl-t-butyl ether (MTBE)	EPA 8260B	ug/L	0.50	ND	0.50	7.7	1.5	840	0.50	ND	0.50	140	4.0	ND	0.50	76
Tert-Butanol	EPA 8260B	ug/L	5.0	ND	5.0	ND	7.0	15 J	5.0	ND	5.0	10	20	ND	5.0	45

MRL = Method Reporting Limit

ND = Not Detected



Analysis Summary

Report Number : 82518

Date : 09/18/12

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

Project Name :2705191

Project Number :

Sample Name			MW-10_20120930		MW-11_20120930		MW-12_20120930		MW-12A_2012093		MW-13_20120930		MW-14_20120930		MW-15_20120930	
Sample Date			09/06/12		09/06/12		09/06/12		09/06/12		09/06/12		09/06/12		09/06/12	
Analyte	Method	Units	MRL	Results	MRL	Results	MRL	Results	MRL	Results	MRL	Results	MRL	Results	MRL	Results
Tert-amyl methyl ether (TAME)	EPA 8260B	ug/L	0.50	ND	0.50	ND	1.5	ND	0.50	ND	0.50	ND	4.0	ND	0.50	ND
TPH as Gasoline	EPA 8260B	ug/L	50	64	50	ND	150	580	50	ND	50	ND	400	12000	50	59
1,2-Dibromoethane	EPA 8260B	ug/L	0.50	ND	0.50	ND	1.5	ND	0.50	ND	0.50	ND	4.0	ND	0.50	ND
1,2-Dichloroethane	EPA 8260B	ug/L	0.50	ND	0.50	ND	1.5	14	0.50	ND	0.50	ND	4.0	ND	0.50	ND
1,2-Dichloroethane-d4 (Surr)	EPA 8260B	%		103		102		101		102		103		103		97.4
Toluene - d8 (Surr)	EPA 8260B	%		101		100		100		98.8		101		101		108
TPH as Diesel	M EPA 8015	ug/L	50	110	50	64	200	ND	50	300	50	87	2000	ND	50	64
Octacosane (Diesel Surrogate)	M EPA 8015	%		103		102		103		107		82.6		93.7		109

MRL = Method Reporting Limit

ND = Not Detected



Report Number : 82518

Date : 09/18/12

Analysis Summary

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

Project Name :2705191

Project Number :

Sample Name			MW-16_20120930		MW-17_20120930		MW-6_20120930		FD1_20120930	
Sample Date			09/06/12		09/06/12		09/06/12		09/06/12	
Analyte	Method	Units	MRL	Results	MRL	Results	MRL	Results	MRL	Results
Ferric Iron	CALCFE3	mg/L			0.10	21	0.10	1.0		
Hexavalent Chromium	EPA 7196A	ug/L			10	ND	10	ND	10	ND
Nitrate as N	EPA 300.0	mg/L			1.0	ND	0.10	ND	1.0	ND
Nitrite as N	EPA 300.0	mg/L			1.0	ND	0.10	ND	1.0	ND
Sulfate	EPA 300.0	mg/L			50	2100	0.50	0.60	50	1900
Sulfide, Total	SM4500-S2 D	mg/L			0.050	ND	0.050	ND	0.050	ND
Trivalent Chromium	CALCCR3	ug/L			10	38	10	ND	10	26
Chromium	EPA 6010B	mg/L			0.0050	0.038	0.0050	ND	0.0050	0.026
Iron	EPA 6010B	mg/L			0.10	23	0.10	1.8	0.10	18
Manganese	EPA 6010B	mg/L			0.0050	7.5	0.0050	1.4	0.0050	7.6
Manganese, Dissolved	EPA 6010B	mg/L			0.0050	7.9	0.0050	1.2	0.0050	8.2
Benzene	EPA 8260B	ug/L	1.5	ND	10	4300	4.0	450	10	5700
Ethylbenzene	EPA 8260B	ug/L	1.5	ND	10	370	4.0	610	10	650
Toluene	EPA 8260B	ug/L	1.5	ND	10	170	4.0	51	10	390
Total Xylenes	EPA 8260B	ug/L	1.5	ND	10	1100	4.0	1800	10	1600
Diisopropyl ether (DIPE)	EPA 8260B	ug/L	1.5	ND	10	ND	4.0	ND	10	ND
Ethanol	EPA 8260B	ug/L	15	ND	100	ND	40	ND	100	ND
Ethyl-t-butyl ether (ETBE)	EPA 8260B	ug/L	1.5	ND	10	ND	4.0	ND	10	ND
Methyl-t-butyl ether (MTBE)	EPA 8260B	ug/L	1.5	960	10	ND	4.0	6.4	10	ND
Tert-Butanol	EPA 8260B	ug/L	7.0	70	50	300	20	82	50	290

MRL = Method Reporting Limit

ND = Not Detected



Analysis Summary

Report Number : 82518

Date : 09/18/12

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

Project Name :2705191

Project Number :

Sample Name			MW-16_20120930		MW-17_20120930		MW-6_20120930		FD1_20120930	
Sample Date			09/06/12		09/06/12		09/06/12		09/06/12	
Analyte	Method	Units	MRL	Results	MRL	Results	MRL	Results	MRL	Results
Tert-amyl methyl ether (TAME)	EPA 8260B	ug/L	1.5	ND	10	ND	4.0	ND	10	ND
TPH as Gasoline	EPA 8260B	ug/L	150	ND	1000	18000	400	24000	1000	26000
1,2-Dibromoethane	EPA 8260B	ug/L	1.5	ND	10	ND	4.0	ND	10	ND
1,2-Dichloroethane	EPA 8260B	ug/L	1.5	ND	10	110	4.0	ND	10	90
1,2-Dichloroethane-d4 (Surr)	EPA 8260B	%		99.4		100		101		98.2
Toluene - d8 (Surr)	EPA 8260B	%		101		100		101		99.7
TPH as Diesel	M EPA 8015	ug/L	50	390	1000	ND	1000	ND	2000	ND
Octacosane (Diesel Surrogate)	M EPA 8015	%		102		110		109		102

MRL = Method Reporting Limit

ND = Not Detected

Project Name : **2705191**

Project Number :

Sample : **MW-10_20120930**

Matrix : Water

Lab Number : 82518-01

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Hexavalent Chromium	< 10	10	ug/L	EPA 7196A	09/07/12 10:25
Trivalent Chromium	17	10	ug/L	CALCCR3	09/14/12 10:28
Nitrate as N	1.0	0.10	mg/L	EPA 300.0	09/10/12 11:57
Nitrite as N	< 0.10	0.10	mg/L	EPA 300.0	09/07/12 12:06
Sulfate	59	5.0	mg/L	EPA 300.0	09/12/12 21:34
Sulfide, Total	< 0.050	0.050	mg/L	SM4500-S2 D	09/13/12 15:04
Ferric Iron	11	0.10	mg/L	CALCFE3	09/14/12 10:27
Iron	12	0.10	mg/L	EPA 6010B	09/13/12 14:33
Manganese	0.70	0.0050	mg/L	EPA 6010B	09/13/12 14:33
Manganese, Dissolved	0.49	0.0050	mg/L	EPA 6010B	09/13/12 11:02
Chromium	0.017	0.0050	mg/L	EPA 6010B	09/13/12 14:33
Benzene	6.9	0.50	ug/L	EPA 8260B	09/13/12 10:06
Toluene	0.89	0.50	ug/L	EPA 8260B	09/13/12 10:06
Ethylbenzene	1.8	0.50	ug/L	EPA 8260B	09/13/12 10:06
Total Xylenes	3.9	0.50	ug/L	EPA 8260B	09/13/12 10:06
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:06
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:06
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:06
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:06
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12 10:06
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12 10:06
TPH as Gasoline	64	50	ug/L	EPA 8260B	09/13/12 10:06
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:06
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:06
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	09/13/12 10:06
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/13/12 10:06
TPH as Diesel	110	50	ug/L	M EPA 8015	09/11/12 23:45

(Note: Discrete peaks in Diesel range, atypical for Diesel Fuel.)



Report Number : 82518

Date : 09/18/12

Project Name : **2705191**

Project Number :

Sample : **MW-10_20120930**

Matrix : Water

Lab Number : 82518-01

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Octacosane (Diesel Surrogate)	103		% Recovery	M EPA 8015	09/11/12 23:45

Project Name : **2705191**

Project Number :

Sample : **MW-11_20120930**

Matrix : Water

Lab Number : 82518-02

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:43
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:43
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:43
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:43
Methyl-t-butyl ether (MTBE)	7.7	0.50	ug/L	EPA 8260B	09/13/12 10:43
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:43
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:43
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:43
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12 10:43
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12 10:43
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/13/12 10:43
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:43
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 10:43
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	09/13/12 10:43
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/13/12 10:43
TPH as Diesel	64	50	ug/L	M EPA 8015	09/12/12 00:19
Octacosane (Diesel Surrogate)	102		% Recovery	M EPA 8015	09/12/12 00:19

Project Name : **2705191**

Project Number :

Sample : **MW-12_20120930**

Matrix : Water

Lab Number : 82518-03

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Hexavalent Chromium	< 10	10	ug/L	EPA 7196A	09/07/12 10:26
Trivalent Chromium	< 10	10	ug/L	CALCCR3	09/14/12 10:28
Nitrate as N	< 1.0	1.0	mg/L	EPA 300.0	09/07/12 12:35
Nitrite as N	< 1.0	1.0	mg/L	EPA 300.0	09/07/12 12:35
Sulfate	2400	50	mg/L	EPA 300.0	09/12/12 22:03
Sulfide, Total	< 0.050	0.050	mg/L	SM4500-S2 D	09/13/12 15:04
Ferric Iron	0.19	0.10	mg/L	CALCFE3	09/14/12 10:27
Iron	0.59	0.10	mg/L	EPA 6010B	09/13/12 14:45
Manganese	10	0.0050	mg/L	EPA 6010B	09/13/12 14:45
Manganese, Dissolved	10	0.0050	mg/L	EPA 6010B	09/13/12 11:14
Chromium	< 0.0050	0.0050	mg/L	EPA 6010B	09/13/12 14:45
Benzene	120	1.5	ug/L	EPA 8260B	09/13/12 11:21
Toluene	9.6	1.5	ug/L	EPA 8260B	09/13/12 11:21
Ethylbenzene	15	1.5	ug/L	EPA 8260B	09/13/12 11:21
Total Xylenes	37	1.5	ug/L	EPA 8260B	09/13/12 11:21
Methyl-t-butyl ether (MTBE)	840	1.5	ug/L	EPA 8260B	09/13/12 11:21
Diisopropyl ether (DIPE)	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 11:21
Ethyl-t-butyl ether (ETBE)	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 11:21
Tert-amyl methyl ether (TAME)	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 11:21
Tert-Butanol	15 J	7.0	ug/L	EPA 8260B	09/13/12 23:16
Ethanol	< 15	15	ug/L	EPA 8260B	09/13/12 11:21
TPH as Gasoline	580	150	ug/L	EPA 8260B	09/13/12 11:21
1,2-Dichloroethane	14	1.5	ug/L	EPA 8260B	09/13/12 11:21
1,2-Dibromoethane	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 11:21
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	09/13/12 11:21
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/13/12 11:21
TPH as Diesel	< 200	200	ug/L	M EPA 8015	09/12/12 00:53

(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)



Report Number : 82518

Date : 09/18/12

Project Name : **2705191**

Project Number :

Sample : **MW-12_20120930**

Matrix : Water

Lab Number : 82518-03

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Octacosane (Diesel Surrogate)	103		% Recovery	M EPA 8015	09/12/12 00:53

Project Name : **2705191**

Project Number :

Sample : **MW-12A_20120930**

Matrix : Water

Lab Number : 82518-04

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:43
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:43
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:43
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:43
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:43
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:43
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:43
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:43
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12 22:43
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12 22:43
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/13/12 22:43
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:43
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:43
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	09/13/12 22:43
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	09/13/12 22:43
TPH as Diesel	300	50	ug/L	M EPA 8015	09/12/12 01:28
(Note: Discrete peaks in Diesel range, atypical for Diesel Fuel.)					
Octacosane (Diesel Surrogate)	107		% Recovery	M EPA 8015	09/12/12 01:28

Project Name : **2705191**

Project Number :

Sample : **MW-13_20120930**

Matrix : Water

Lab Number : 82518-05

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 13:10
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 13:10
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 13:10
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 13:10
Methyl-t-butyl ether (MTBE)	140	0.50	ug/L	EPA 8260B	09/13/12 13:10
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 13:10
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 13:10
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 13:10
Tert-Butanol	10	5.0	ug/L	EPA 8260B	09/13/12 13:10
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12 13:10
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/13/12 13:10
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 13:10
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 13:10
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	09/13/12 13:10
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/13/12 13:10
TPH as Diesel	87	50	ug/L	M EPA 8015	09/12/12 02:02
Octacosane (Diesel Surrogate)	82.6		% Recovery	M EPA 8015	09/12/12 02:02

Project Name : **2705191**

Project Number :

Sample : **MW-14_20120930**

Matrix : Water

Lab Number : 82518-06

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Hexavalent Chromium	< 10	10	ug/L	EPA 7196A	09/07/12 10:27
Trivalent Chromium	24	10	ug/L	CALCCR3	09/14/12 10:29
Nitrate as N	< 0.50	0.50	mg/L	EPA 300.0	09/10/12 11:27
Nitrite as N	< 0.10	0.10	mg/L	EPA 300.0	09/07/12 13:05
Sulfate	840	50	mg/L	EPA 300.0	09/12/12 22:32
Sulfide, Total	< 0.050	0.050	mg/L	SM4500-S2 D	09/13/12 15:04
Ferric Iron	8.9	0.10	mg/L	CALCFE3	09/14/12 10:27
Iron	9.7	0.10	mg/L	EPA 6010B	09/13/12 14:50
Manganese	3.0	0.0050	mg/L	EPA 6010B	09/13/12 14:50
Manganese, Dissolved	2.3	0.0050	mg/L	EPA 6010B	09/13/12 11:18
Chromium	0.024	0.0050	mg/L	EPA 6010B	09/13/12 14:50
Benzene	210	4.0	ug/L	EPA 8260B	09/13/12 14:27
Toluene	9.1	4.0	ug/L	EPA 8260B	09/13/12 14:27
Ethylbenzene	1100	4.0	ug/L	EPA 8260B	09/13/12 14:27
Total Xylenes	1800	4.0	ug/L	EPA 8260B	09/13/12 14:27
Methyl-t-butyl ether (MTBE)	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 14:27
Diisopropyl ether (DIPE)	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 14:27
Ethyl-t-butyl ether (ETBE)	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 14:27
Tert-amyl methyl ether (TAME)	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 14:27
Tert-Butanol	< 20	20	ug/L	EPA 8260B	09/13/12 14:27
Ethanol	< 40	40	ug/L	EPA 8260B	09/13/12 14:27
TPH as Gasoline	12000	400	ug/L	EPA 8260B	09/13/12 14:27
1,2-Dichloroethane	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 14:27
1,2-Dibromoethane	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 14:27
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	09/13/12 14:27
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/13/12 14:27
TPH as Diesel	< 2000	2000	ug/L	M EPA 8015	09/12/12 02:37

(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)



Report Number : 82518

Date : 09/18/12

Project Name : **2705191**

Project Number :

Sample : **MW-14_20120930**

Matrix : Water

Lab Number : 82518-06

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Octacosane (Diesel Surrogate)	93.7		% Recovery	M EPA 8015	09/12/12 02:37

Project Name : **2705191**

Project Number :

Sample : **MW-15_20120930**

Matrix : Water

Lab Number : 82518-07

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:57
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:57
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:57
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:57
Methyl-t-butyl ether (MTBE)	76	0.50	ug/L	EPA 8260B	09/13/12 22:57
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:57
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:57
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:57
Tert-Butanol	45	5.0	ug/L	EPA 8260B	09/13/12 22:57
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12 15:48
TPH as Gasoline	59	50	ug/L	EPA 8260B	09/13/12 22:57
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:57
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12 22:57
1,2-Dichloroethane-d4 (Surr)	97.4		% Recovery	EPA 8260B	09/13/12 22:57
Toluene - d8 (Surr)	108		% Recovery	EPA 8260B	09/13/12 22:57
TPH as Diesel	64	50	ug/L	M EPA 8015	09/12/12 03:11
(Note: Discrete peaks in Diesel range, atypical for Diesel Fuel.)					
Octacosane (Diesel Surrogate)	109		% Recovery	M EPA 8015	09/12/12 03:11

Project Name : **2705191**

Project Number :

Sample : **MW-16_20120930**

Matrix : Water

Lab Number : 82518-08

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 16:22
Toluene	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 16:22
Ethylbenzene	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 16:22
Total Xylenes	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 16:22
Methyl-t-butyl ether (MTBE)	960	1.5	ug/L	EPA 8260B	09/13/12 16:22
Diisopropyl ether (DIPE)	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 16:22
Ethyl-t-butyl ether (ETBE)	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 16:22
Tert-amyl methyl ether (TAME)	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 16:22
Tert-Butanol	70	7.0	ug/L	EPA 8260B	09/13/12 23:28
Ethanol	< 15	15	ug/L	EPA 8260B	09/13/12 16:22
TPH as Gasoline	< 150	150	ug/L	EPA 8260B	09/13/12 16:22
1,2-Dichloroethane	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 16:22
1,2-Dibromoethane	< 1.5	1.5	ug/L	EPA 8260B	09/13/12 16:22
1,2-Dichloroethane-d4 (Surr)	99.4		% Recovery	EPA 8260B	09/13/12 16:22
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/13/12 16:22
TPH as Diesel	390	50	ug/L	M EPA 8015	09/12/12 03:45
Octacosane (Diesel Surrogate)	102		% Recovery	M EPA 8015	09/12/12 03:45

Project Name : **2705191**

Project Number :

Sample : **MW-17_20120930**

Matrix : Water

Lab Number : 82518-09

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Hexavalent Chromium	< 10	10	ug/L	EPA 7196A	09/07/12 10:27
Trivalent Chromium	38	10	ug/L	CALCCR3	09/14/12 10:29
Nitrate as N	< 1.0	1.0	mg/L	EPA 300.0	09/07/12 13:34
Nitrite as N	< 1.0	1.0	mg/L	EPA 300.0	09/07/12 13:34
Sulfate	2100	50	mg/L	EPA 300.0	09/12/12 23:02
Sulfide, Total	< 0.050	0.050	mg/L	SM4500-S2 D	09/13/12 15:05
Ferric Iron	21	0.10	mg/L	CALCFE3	09/14/12 10:28
Iron	23	0.10	mg/L	EPA 6010B	09/13/12 15:28
Manganese	7.5	0.0050	mg/L	EPA 6010B	09/13/12 15:28
Manganese, Dissolved	7.9	0.0050	mg/L	EPA 6010B	09/13/12 11:22
Chromium	0.038	0.0050	mg/L	EPA 6010B	09/13/12 15:28
Benzene	4300	10	ug/L	EPA 8260B	09/18/12 01:44
Toluene	170	10	ug/L	EPA 8260B	09/18/12 01:44
Ethylbenzene	370	10	ug/L	EPA 8260B	09/18/12 01:44
Total Xylenes	1100	10	ug/L	EPA 8260B	09/18/12 01:44
Methyl-t-butyl ether (MTBE)	< 10	10	ug/L	EPA 8260B	09/18/12 01:44
Diisopropyl ether (DIPE)	< 10	10	ug/L	EPA 8260B	09/18/12 01:44
Ethyl-t-butyl ether (ETBE)	< 10	10	ug/L	EPA 8260B	09/18/12 01:44
Tert-amyl methyl ether (TAME)	< 10	10	ug/L	EPA 8260B	09/18/12 01:44
Tert-Butanol	300	50	ug/L	EPA 8260B	09/18/12 01:44
Ethanol	< 100	100	ug/L	EPA 8260B	09/18/12 01:44
TPH as Gasoline	18000	1000	ug/L	EPA 8260B	09/18/12 01:44
1,2-Dichloroethane	110	10	ug/L	EPA 8260B	09/18/12 01:44
1,2-Dibromoethane	< 10	10	ug/L	EPA 8260B	09/18/12 01:44
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	09/18/12 01:44
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/18/12 01:44
TPH as Diesel	< 1000	1000	ug/L	M EPA 8015	09/12/12 04:20

(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)



Report Number : 82518

Date : 09/18/12

Project Name : **2705191**

Project Number :

Sample : **MW-17_20120930**

Matrix : Water

Lab Number : 82518-09

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Octacosane (Diesel Surrogate)	110		% Recovery	M EPA 8015	09/12/12 04:20

Project Name : **2705191**

Project Number :

Sample : **MW-6_20120930**

Matrix : Water

Lab Number : 82518-10

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Hexavalent Chromium	< 10	10	ug/L	EPA 7196A	09/07/12 10:28
Trivalent Chromium	< 10	10	ug/L	CALCCR3	09/14/12 10:29
Nitrate as N	< 0.10	0.10	mg/L	EPA 300.0	09/07/12 14:04
Nitrite as N	< 0.10	0.10	mg/L	EPA 300.0	09/07/12 14:04
Sulfate	0.60	0.50	mg/L	EPA 300.0	09/07/12 14:04
Sulfide, Total	< 0.050	0.050	mg/L	SM4500-S2 D	09/13/12 15:05
Ferric Iron	1.0	0.10	mg/L	CALCFE3	09/14/12 10:28
Iron	1.8	0.10	mg/L	EPA 6010B	09/13/12 15:05
Manganese	1.4	0.0050	mg/L	EPA 6010B	09/13/12 15:05
Manganese, Dissolved	1.2	0.0050	mg/L	EPA 6010B	09/13/12 11:34
Chromium	< 0.0050	0.0050	mg/L	EPA 6010B	09/13/12 15:05
Benzene	450	4.0	ug/L	EPA 8260B	09/13/12 01:13
Toluene	51	4.0	ug/L	EPA 8260B	09/13/12 01:13
Ethylbenzene	610	4.0	ug/L	EPA 8260B	09/13/12 01:13
Total Xylenes	1800	4.0	ug/L	EPA 8260B	09/13/12 01:13
Methyl-t-butyl ether (MTBE)	6.4	4.0	ug/L	EPA 8260B	09/13/12 01:13
Diisopropyl ether (DIPE)	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 01:13
Ethyl-t-butyl ether (ETBE)	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 01:13
Tert-amyl methyl ether (TAME)	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 01:13
Tert-Butanol	82	20	ug/L	EPA 8260B	09/13/12 01:13
Ethanol	< 40	40	ug/L	EPA 8260B	09/13/12 01:13
TPH as Gasoline	24000	400	ug/L	EPA 8260B	09/13/12 01:13
1,2-Dichloroethane	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 01:13
1,2-Dibromoethane	< 4.0	4.0	ug/L	EPA 8260B	09/13/12 01:13
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	09/13/12 01:13
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/13/12 01:13
TPH as Diesel	< 1000	1000	ug/L	M EPA 8015	09/12/12 04:54

(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)



Report Number : 82518

Date : 09/18/12

Project Name : **2705191**

Project Number :

Sample : **MW-6_20120930**

Matrix : Water

Lab Number : 82518-10

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Octacosane (Diesel Surrogate)	109		% Recovery	M EPA 8015	09/12/12 04:54

Project Name : **2705191**

Project Number :

Sample : **FD1_20120930**

Matrix : Water

Lab Number : 82518-11

Sample Date :09/06/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Hexavalent Chromium	< 10	10	ug/L	EPA 7196A	09/07/12 10:28
Trivalent Chromium	26	10	ug/L	CALCCR3	09/14/12 10:29
Nitrate as N	< 1.0	1.0	mg/L	EPA 300.0	09/08/12 00:46
Nitrite as N	< 1.0	1.0	mg/L	EPA 300.0	09/08/12 00:46
Sulfate	1900	50	mg/L	EPA 300.0	09/12/12 23:31
Sulfide, Total	< 0.050	0.050	mg/L	SM4500-S2 D	09/13/12 15:05
Iron	18	0.10	mg/L	EPA 6010B	09/13/12 15:32
Manganese	7.6	0.0050	mg/L	EPA 6010B	09/13/12 15:32
Manganese, Dissolved	8.2	0.0050	mg/L	EPA 6010B	09/13/12 11:38
Chromium	0.026	0.0050	mg/L	EPA 6010B	09/13/12 15:32
Benzene	5700	10	ug/L	EPA 8260B	09/18/12 01:09
Toluene	390	10	ug/L	EPA 8260B	09/18/12 01:09
Ethylbenzene	650	10	ug/L	EPA 8260B	09/18/12 01:09
Total Xylenes	1600	10	ug/L	EPA 8260B	09/18/12 01:09
Methyl-t-butyl ether (MTBE)	< 10	10	ug/L	EPA 8260B	09/18/12 01:09
Diisopropyl ether (DIPE)	< 10	10	ug/L	EPA 8260B	09/18/12 01:09
Ethyl-t-butyl ether (ETBE)	< 10	10	ug/L	EPA 8260B	09/18/12 01:09
Tert-amyl methyl ether (TAME)	< 10	10	ug/L	EPA 8260B	09/18/12 01:09
Tert-Butanol	290	50	ug/L	EPA 8260B	09/18/12 01:09
Ethanol	< 100	100	ug/L	EPA 8260B	09/18/12 01:09
TPH as Gasoline	26000	1000	ug/L	EPA 8260B	09/18/12 01:09
1,2-Dichloroethane	90	10	ug/L	EPA 8260B	09/18/12 01:09
1,2-Dibromoethane	< 10	10	ug/L	EPA 8260B	09/18/12 01:09
1,2-Dichloroethane-d4 (Surr)	98.2		% Recovery	EPA 8260B	09/18/12 01:09
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	09/18/12 01:09
TPH as Diesel	< 2000	2000	ug/L	M EPA 8015	09/12/12 05:29
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
Octacosane (Diesel Surrogate)	102		% Recovery	M EPA 8015	09/12/12 05:29

QC Report : Method Blank Data

Project Name : **2705191**

Project Number :

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Manganese, Dissolved	< 0.0050	0.0050	mg/L	EPA 6010B	09/13/12
Chromium	< 0.0050	0.0050	mg/L	EPA 6010B	09/13/12
Iron	< 0.10	0.10	mg/L	EPA 6010B	09/13/12
Manganese	< 0.0050	0.0050	mg/L	EPA 6010B	09/13/12
TPH as Diesel	< 50	50	ug/L	M EPA 8015	09/11/12
Octacosane (Diesel Surrogate)	108		%	M EPA 8015	09/11/12
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/12
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/12
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/12
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/12
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/12
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	09/12/12
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/12
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/12
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/12/12
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	09/12/12
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/12
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	09/12/12
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	09/12/12
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	09/12/12
Toluene - d8 (Surr)	100		%	EPA 8260B	09/12/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/13/12
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
1,2-Dichloroethane-d4 (Surr)	99.4		%	EPA 8260B	09/13/12
Toluene - d8 (Surr)	111		%	EPA 8260B	09/13/12
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/13/12
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/13/12
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	09/13/12
1,2-Dichloroethane-d4 (Surr)	99.0		%	EPA 8260B	09/13/12
Toluene - d8 (Surr)	99.7		%	EPA 8260B	09/13/12

QC Report : Method Blank Data

Project Name : **2705191**

Project Number :

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/17/12
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/17/12
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/17/12
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/17/12
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/17/12
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	09/17/12
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/17/12
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/17/12
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/17/12
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	09/17/12
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/17/12
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	09/17/12
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	09/17/12
1,2-Dichloroethane-d4 (Surr)	99.0		%	EPA 8260B	09/17/12
Toluene - d8 (Surr)	100		%	EPA 8260B	09/17/12
Nitrate as N	<0.10	0.10	mg/L	EPA 300.0	09/06/12
Nitrite as N	<0.10	0.10	mg/L	EPA 300.0	09/06/12
Sulfate	<0.50	0.50	mg/L	EPA 300.0	09/06/12
Hexavalent Chromium	<10	10	ug/L	EPA 7196A	09/07/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Nitrate as N	<0.10	0.10	mg/L	EPA 300.0	09/07/12
Nitrite as N	<0.10	0.10	mg/L	EPA 300.0	09/07/12
Nitrate as N	<0.10	0.10	mg/L	EPA 300.0	09/10/12
Sulfate	<0.50	0.50	mg/L	EPA 300.0	09/12/12
Sulfide, Total	<0.050	0.050	mg/L	SM4500-S2 D	09/13/12
Ferric Iron	<0.10	0.10	mg/L	CALCFE3	09/14/12
Trivalent Chromium	<10	10	ug/L	CALCCR3	09/14/12

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **2705191**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Nitrite as N	82502-02	< 0.10	0.500	0.500	0.520	0.524	mg/L	EPA 300.0	9/7/12	104	105	0.690	85.0-115	10
Nitrate as N	82502-02	4.8	0.500	0.500	5.31	5.28	mg/L	EPA 300.0	9/7/12	101	95.1	0.523	85.0-115	10
Sulfate	82502-02	12	2.50	2.50	14.6	14.5	mg/L	EPA 300.0	9/7/12	98.7	96.9	0.300	85.0-115	10
Hexavalent Chromium	82518-01	< 10	50.0	50.0	49.2	49.4	ug/L	EPA 7196A	9/7/12	106	106	0.312	85.0-115	20
Nitrate as N	82502-01	< 0.10	0.500	0.500	0.665	0.654	mg/L	EPA 300.0	9/8/12	116	114	1.63	85.0-115	10
Nitrate as N	82504-06	2.6	0.500	0.500	3.10	3.16	mg/L	EPA 300.0	9/10/12	97.4	110	1.93	85.0-115	10
Sulfate	82557-04	18	2.50	2.50	20.3	20.5	mg/L	EPA 300.0	9/12/12	101	110	1.02	85.0-115	10

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **2705191**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Manganese, (Dis)	82518-01	0.49	0.400	0.400	0.835	0.846	mg/L	EPA 6010B	9/13/12	85.6	88.2	1.24	75-125	20
Chromium	82518-01	0.017	0.400	0.400	0.392	0.392	mg/L	EPA 6010B	9/13/12	93.6	93.6	0.0510	75-125	20
Iron	82518-01	12	0.400	0.400	18.3	20.4	mg/L	EPA 6010B	9/13/12	1660	2170	10.4	75-125	20
Manganese	82518-01	0.70	0.400	0.400	1.05	1.07	mg/L	EPA 6010B	9/13/12	87.5	91.2	1.42	75-125	20
TPH as Diesel	BLANK	<50	1000	1000	1080	1080	ug/L	M EPA 8015	9/11/12	108	108	0.354	70-130	25
1,2-Dibromoethane	82549-01	<0.50	39.7	39.8	40.8	40.7	ug/L	EPA 8260B	9/12/12	103	102	0.753	80-120	25
1,2-Dichloroethane	82549-01	<0.50	39.8	39.9	36.1	36.1	ug/L	EPA 8260B	9/12/12	90.7	90.4	0.346	75.7-122	25
Benzene	82549-01	<0.50	39.8	39.9	39.5	40.1	ug/L	EPA 8260B	9/12/12	99.4	100	0.941	80-120	25
Diisopropyl ether	82549-01	0.58	39.3	39.5	39.9	40.1	ug/L	EPA 8260B	9/12/12	100	100	0.188	80-120	25

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 2705191

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Ethanol	82549-01	<5.0	99.5	99.9	104	109	ug/L	EPA 8260B	9/12/12	105	109	4.04	55.1-159	25
Ethyl-tert-butyl ether	82549-01	<0.50	39.6	39.7	40.4	40.1	ug/L	EPA 8260B	9/12/12	102	101	1.12	76.5-120	25
Ethylbenzene	82549-01	<0.50	39.8	39.9	38.1	39.0	ug/L	EPA 8260B	9/12/12	95.9	97.8	1.92	80-120	25
Methyl-t-butyl ether	82549-01	16	39.8	39.9	54.9	54.8	ug/L	EPA 8260B	9/12/12	98.9	98.1	0.808	69.7-121	25
P + M Xylene	82549-01	<0.50	39.8	39.9	38.8	39.4	ug/L	EPA 8260B	9/12/12	97.6	98.8	1.14	76.8-120	25
Tert-Butanol	82549-01	34	200	201	225	224	ug/L	EPA 8260B	9/12/12	95.4	94.7	0.786	80-120	25
Tert-amyl-methyl ether	82549-01	<0.50	39.7	39.9	40.2	40.5	ug/L	EPA 8260B	9/12/12	101	102	0.205	78.9-120	25
Toluene	82549-01	<0.50	39.8	39.9	39.7	40.4	ug/L	EPA 8260B	9/12/12	99.8	101	1.37	80-120	25
1,2-Dibromoethane	82579-01	<0.50	39.9	39.9	46.8	44.5	ug/L	EPA 8260B	9/13/12	117	112	5.10	80-120	25

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **2705191**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
1,2-Dichloroethane	82579-01	<0.50	40.0	40.0	42.9	42.1	ug/L	EPA 8260B	9/13/12	107	105	1.96	75.7-122	25
Benzene	82579-01	<0.50	40.0	40.0	39.0	38.1	ug/L	EPA 8260B	9/13/12	97.6	95.3	2.37	80-120	25
Diisopropyl ether	82579-01	<0.50	39.5	39.5	38.5	37.4	ug/L	EPA 8260B	9/13/12	97.3	94.6	2.82	80-120	25
Ethyl-tert-butyl ether	82579-01	<0.50	39.8	39.8	40.4	36.6	ug/L	EPA 8260B	9/13/12	102	91.8	10.0	76.5-120	25
Ethylbenzene	82579-01	1.4	40.0	40.0	40.4	39.4	ug/L	EPA 8260B	9/13/12	97.4	95.0	2.54	80-120	25
Methyl-t-butyl ether	82579-01	0.60	40.0	40.0	39.6	34.7	ug/L	EPA 8260B	9/13/12	97.4	85.2	13.4	69.7-121	25
P + M Xylene	82579-01	8.1	40.0	40.0	47.0	45.3	ug/L	EPA 8260B	9/13/12	97.3	93.0	4.50	76.8-120	25
Tert-Butanol	82579-01	63	202	202	267	265	ug/L	EPA 8260B	9/13/12	101	99.8	1.35	80-120	25
Tert-amyl-methyl ether	82579-01	<0.50	39.9	39.9	41.5	38.5	ug/L	EPA 8260B	9/13/12	104	96.4	7.55	78.9-120	25
Toluene	82579-01	0.51	40.0	40.0	42.8	41.2	ug/L	EPA 8260B	9/13/12	106	102	3.90	80-120	25

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 2705191

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
1,2-Dibromoethane	82579-02	<0.50	39.9	39.9	42.7	41.5	ug/L	EPA 8260B	9/13/12	107	104	2.86	80-120	25
1,2-Dichloroethane	82579-02	<0.50	40.0	40.0	41.7	40.7	ug/L	EPA 8260B	9/13/12	104	102	2.40	75.7-122	25
Benzene	82579-02	15	40.0	40.0	55.9	53.2	ug/L	EPA 8260B	9/13/12	101	94.7	6.78	80-120	25
Diisopropyl ether	82579-02	<0.50	39.5	39.5	39.9	40.0	ug/L	EPA 8260B	9/13/12	101	101	0.162	80-120	25
Ethanol	82579-02	<5.0	100	100	114	115	ug/L	EPA 8260B	9/13/12	114	115	1.28	55.1-159	25
Ethyl-tert-butyl ether	82579-02	<0.50	39.8	39.8	37.5	37.3	ug/L	EPA 8260B	9/13/12	94.1	93.8	0.341	76.5-120	25
Ethylbenzene	82579-02	19	40.0	40.0	63.6	60.1	ug/L	EPA 8260B	9/13/12	112	104	8.09	80-120	25
Methyl-t-butyl ether	82579-02	7.9	40.0	40.0	46.4	46.6	ug/L	EPA 8260B	9/13/12	96.1	96.6	0.480	69.7-121	25
P + M Xylene	82579-02	39	40.0	40.0	82.3	78.3	ug/L	EPA 8260B	9/13/12	108	98.6	9.62	76.8-120	25

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **2705191**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Tert-Butanol	82579-02	82	202	202	283	282	ug/L	EPA 8260B	9/13/12	100	99.4	0.584	80-120	25
Tert-amyl-methyl ether	82579-02	<0.50	39.9	39.9	40.5	39.7	ug/L	EPA 8260B	9/13/12	101	99.3	2.03	78.9-120	25
Toluene	82579-02	6.9	40.0	40.0	47.3	44.9	ug/L	EPA 8260B	9/13/12	101	94.9	6.23	80-120	25
Nitrite as N	82502-01	< 0.10	0.500	0.500	0.551	0.556	mg/L	EPA 300.0	9/8/12	110	111	0.957	85.0-115	10
1,2-Dibromoethane	82612-04	<0.50	39.9	39.9	40.6	37.8	ug/L	EPA 8260B	9/17/12	102	94.6	7.23	80-120	25
1,2-Dichloroethane	82612-04	0.55	40.0	40.0	39.4	36.2	ug/L	EPA 8260B	9/17/12	97.2	89.1	8.68	75.7-122	25
Benzene	82612-04	<0.50	40.0	40.0	39.1	36.0	ug/L	EPA 8260B	9/17/12	97.8	90.1	8.26	80-120	25
Diisopropyl ether	82612-04	<0.50	39.5	39.5	39.6	37.0	ug/L	EPA 8260B	9/17/12	100	93.5	6.84	80-120	25
Ethanol	82612-04	<5.0	100	100	83.4	81.6	ug/L	EPA 8260B	9/17/12	83.3	81.5	2.22	55.1-159	25

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **2705191**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Ethyl-tert-butyl ether	82612-04	<0.50	39.8	39.8	42.5	39.0	ug/L	EPA 8260B	9/17/12	107	97.8	8.57	76.5-120	25
Ethylbenzene	82612-04	<0.50	40.0	40.0	38.9	35.7	ug/L	EPA 8260B	9/17/12	97.3	89.3	8.57	80-120	25
Methyl-t-butyl ether	82612-04	<0.50	40.0	40.0	41.4	38.3	ug/L	EPA 8260B	9/17/12	103	95.8	7.65	69.7-121	25
P + M Xylene	82612-04	<0.50	40.0	40.0	39.1	35.9	ug/L	EPA 8260B	9/17/12	97.9	89.7	8.67	76.8-120	25
Tert-Butanol	82612-04	<5.0	202	202	199	187	ug/L	EPA 8260B	9/17/12	98.6	92.7	6.09	80-120	25
Tert-amyl-methyl ether	82612-04	<0.50	39.9	39.9	40.9	37.4	ug/L	EPA 8260B	9/17/12	102	93.8	8.71	78.9-120	25
Toluene	82612-04	<0.50	40.0	40.0	39.2	36.4	ug/L	EPA 8260B	9/17/12	98.1	91.0	7.45	80-120	25

QC Report : Laboratory Control Sample (LCS)

Project Name : 2705191

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Manganese, (Dis)	0.400	mg/L	EPA 6010B	9/13/12	89.0	85-115
Chromium	0.400	mg/L	EPA 6010B	9/13/12	93.6	85-115
Iron	0.400	mg/L	EPA 6010B	9/13/12	87.1	85-115
Manganese	0.400	mg/L	EPA 6010B	9/13/12	88.5	85-115
1,2-Dibromoethane	39.9	ug/L	EPA 8260B	9/12/12	101	80-120
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	9/12/12	91.4	75.7-122
Benzene	40.0	ug/L	EPA 8260B	9/12/12	104	80-120
Diisopropyl ether	39.5	ug/L	EPA 8260B	9/12/12	103	80-120
Ethanol	100	ug/L	EPA 8260B	9/12/12	108	55.1-159
Ethyl-tert-butyl ether	39.8	ug/L	EPA 8260B	9/12/12	104	76.5-120
Ethylbenzene	40.0	ug/L	EPA 8260B	9/12/12	102	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	9/12/12	98.5	69.7-121
P + M Xylene	40.0	ug/L	EPA 8260B	9/12/12	103	76.8-120
Tert-Butanol	202	ug/L	EPA 8260B	9/12/12	97.7	80-120
Tert-amyl-methyl ether	39.9	ug/L	EPA 8260B	9/12/12	102	78.9-120
Toluene	40.0	ug/L	EPA 8260B	9/12/12	105	80-120
1,2-Dibromoethane	39.9	ug/L	EPA 8260B	9/13/12	116	80-120
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	9/13/12	108	75.7-122
Benzene	40.0	ug/L	EPA 8260B	9/13/12	98.6	80-120

QC Report : Laboratory Control Sample (LCS)

Project Name : **2705191**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Diisopropyl ether	39.5	ug/L	EPA 8260B	9/13/12	96.9	80-120
Ethyl-tert-butyl ether	39.8	ug/L	EPA 8260B	9/13/12	96.4	76.5-120
Ethylbenzene	40.0	ug/L	EPA 8260B	9/13/12	96.3	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	9/13/12	86.6	69.7-121
P + M Xylene	40.0	ug/L	EPA 8260B	9/13/12	95.8	76.8-120
TPH as Gasoline	496	ug/L	EPA 8260B	9/13/12	94.3	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	9/13/12	98.7	80-120
Tert-amyl-methyl ether	39.9	ug/L	EPA 8260B	9/13/12	100	78.9-120
Toluene	40.0	ug/L	EPA 8260B	9/13/12	107	80-120
1,2-Dibromoethane	40.1	ug/L	EPA 8260B	9/13/12	108	80-120
1,2-Dichloroethane	40.2	ug/L	EPA 8260B	9/13/12	106	75.7-122
Benzene	40.2	ug/L	EPA 8260B	9/13/12	104	80-120
Diisopropyl ether	39.7	ug/L	EPA 8260B	9/13/12	101	80-120
Ethanol	100	ug/L	EPA 8260B	9/13/12	111	55.1-159
Ethyl-tert-butyl ether	40.0	ug/L	EPA 8260B	9/13/12	94.5	76.5-120
Ethylbenzene	40.2	ug/L	EPA 8260B	9/13/12	116	80-120
Methyl-t-butyl ether	40.2	ug/L	EPA 8260B	9/13/12	96.6	69.7-121
P + M Xylene	40.2	ug/L	EPA 8260B	9/13/12	112	76.8-120
TPH as Gasoline	498	ug/L	EPA 8260B	9/13/12	98.4	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	9/13/12	100	80-120
Tert-amyl-methyl ether	40.1	ug/L	EPA 8260B	9/13/12	102	78.9-120
Toluene	40.2	ug/L	EPA 8260B	9/13/12	104	80-120

QC Report : Laboratory Control Sample (LCS)

Project Name : 2705191

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
1,2-Dibromoethane	39.9	ug/L	EPA 8260B	9/17/12	100	80-120
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	9/17/12	95.9	75.7-122
Benzene	40.0	ug/L	EPA 8260B	9/17/12	96.8	80-120
Diisopropyl ether	39.5	ug/L	EPA 8260B	9/17/12	99.0	80-120
Ethanol	100	ug/L	EPA 8260B	9/17/12	82.6	55.1-159
Ethyl-tert-butyl ether	39.8	ug/L	EPA 8260B	9/17/12	104	76.5-120
Ethylbenzene	40.0	ug/L	EPA 8260B	9/17/12	97.1	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	9/17/12	102	69.7-121
P + M Xylene	40.0	ug/L	EPA 8260B	9/17/12	97.2	76.8-120
TPH as Gasoline	501	ug/L	EPA 8260B	9/17/12	86.5	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	9/17/12	97.2	80-120
Tert-amyl-methyl ether	39.9	ug/L	EPA 8260B	9/17/12	100	78.9-120
Toluene	40.0	ug/L	EPA 8260B	9/17/12	97.7	80-120
Nitrite as N	0.500	mg/L	EPA 300.0	9/6/12	104	85.0-115
Nitrate as N	0.500	mg/L	EPA 300.0	9/6/12	107	85.0-115
Sulfate	2.50	mg/L	EPA 300.0	9/6/12	106	85.0-115
Hexavalent Chromium	50.0	ug/L	EPA 7196A	9/7/12	97.7	85.0-115
Nitrate as N	0.500	mg/L	EPA 300.0	9/7/12	110	85.0-115

QC Report : Laboratory Control Sample (LCS)

Project Name : **2705191**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Nitrite as N	0.500	mg/L	EPA 300.0	9/7/12	110	85.0-115
Nitrate as N	0.500	mg/L	EPA 300.0	9/10/12	109	85.0-115
Sulfate	2.50	mg/L	EPA 300.0	9/12/12	109	85.0-115

QC Report : Sample Duplicate

Project Name : **2705191**

Project Number :

Parameter	Sample ID	Units	Analysis Method	Date Analyzed	Sample Value	Duplicate Value	RPD	RPD Limit
Sulfide, Total	82518-01	mg/L	SM4500-S2 D	9/13/12	< 0.0500	< 0.0500	NC	25

NC RPD not calculated. Both Sample and Duplicate < Lab PQL

82518

COP ELT CHAIN-OF-CUSTODY / Analytical Request Document

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



3Q12 GW Event

Required Lab Information:		Required Project Information:			Required Invoice Information:		
Lab Name: Kiff Analytical	Site ID #: 2705191	Task: WG_Q_201209	Send Invoice to: Tara Bosch		Turn around time (days) 10		
Address: 2795 Second Street #300	AnteaGrp proj#		Address: 11050 White Rock Road, Suite 110			QC level Required: Standard	
Davis, CA 95618	Site Address 449 Hegenberger		City/State: Rancho Cordova CA 95670	Phone #: 1-800-477-7411	Special		Mark one
Lab PM: Scott Forbes	City: Oakland	State: CA 94621	Reimbursement project?	Non-reimbursement project? <input checked="" type="checkbox"/>	Mark one		
Phone/Fax: 530-297-4800 Ext 109	AG PM Name: Dennis Dettloff		Send EDD to: copelldata@intelligentehs.com			MA MCP Cert?	
Lab PM email: Sforbes@kiffanalytical.com	Phone/Fax: P: 1-800-477-7411 F: 916-638-8385		CC Hardcopy report to			CT RCP Cert?	
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 DRINKING WATER WP WATER W GROUND WATER WG SURFACE WATER WS WASTE WATER WW WATER QC WQ FREE PRODUCT LF SLUDGE SL SOL SO RINSEATE WH OIL OL OTHER OT WIRE SW ANIMAL TISSUE TA WIRE AMBENT AIR AA SVE AIR AE SOL GAS GS	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.						
									Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₈	Methanol	Other	3005 Sulfate	3536 Nitrate	6010 Iron Total			8015 TP/Phosphate	8260 GC/MS GRO	8260 GC/MS GRO	8260 GC/MS GRO	RSK T3 Methane	SM4500-SZE Sulfide In
1	MW-10_20120930		WG	G	9-6-12	1050	13	Y	X	X	X						X	X	X	X	X	X	X	X	X	X	7 Oxy's = DIPE, TBA, TAME, ETBE, 1,2DCA, EDB, and Ethanol
2	MW-11_20120930		WG	G		1028	5	N			X																
3	MW-12_20120930		WG	G		1340	13	Y	X	X	X																
4	MW-12A_20120930		WG	G		0954	5	N			X																
5	MW-13_20120930		WG	G		1137	5	N			X																
6	MW-14_20120930		WG	G		1425	13	Y	X	X	X						X	X	X	X	X	X	X	X	X	X	
7	MW-15_20120930		WG	G		1411	5	N			X																
8	MW-16_20120930		WG	G		1430	5	N			X																
9	MW-17_20120930		WG	G		1445	13	Y	X	X	X						X	X	X	X	X	X	X	X	X	X	
10	MW-6_20120930		WG	G		1406	13	Y	X	X	X						X	X	X	X	X	X	X	X	X	X	
11	FD1_20120930		W	G		1450	13	Y	X	X	X						X	X	X	X	X	X	X	X	X	X	

Additional Comments/Special Instructions: 1-2 nd MW-6 = 0.8 mg/L MW-14 = 0.8 mg/L MW-10 = 0.6 mg/L MW-17 = 1.6 mg/L MW-12 = 0.4 mg/L Global ID: T0600101476	RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	Sample Receipt Conditions					
	Mark McColech		9-6-12	1600	Mark McColech		090612	1600	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									Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?
UPS COURIER FEDEX		PRINT Name of SAMPLER: Mark McColech												
US MAIL		SIGNATURE of SAMPLER: Mark McColech			DATE Signed	9-28-12	Time	1600						



82518



COP ELT CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2
Cooler # _____ of _____

3Q12 GW Event

Required Lab Information:		Required Project Information:		Required Invoice Information:	
Lab Name: Kiff Analytical	Site ID #: 2705191	Task: WG_Q_201209	Send Invoice to: Tara Bosch	Turn around time (days) 10	
Address: 2795 Second Street #300	AnteaGrp proj#	Address: 11050 White Rock Road, Suite 110		QC level Required: Standard	Special
Davis, CA 95618	Site Address 449 Hegenberger	City/State	Rancho Cordova CA 95670	Phone #: 1-800-477-7411	Mark one
Lab PM: Scott Forbes	City Oakland	State CA	CA 94621	Reimbursement project?	Non-reimbursement project? <input checked="" type="checkbox"/>
Phone/Fax: 530-297-4800 Ext 109	AG PM Name: Dennis Dettloff	Send EDD to: copelldata@intelligentehs.com		MA MCP Cert?	CT RCP Cert?
Lab PM email: Sforbes@kiffanalytical.com	Phone/Fax: P: 1-800-477-7411 F: 916-638-8385	CC Hardcopy report to		Lab Project ID (lab use)	
Applicable Lab Quote #:	AG PM Email: dennis.dettloff@anteagroup.com	CC Hardcopy report to		Requested Analyses	

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / .)	Valid Matrix Codes MATRIX DRINKING WATER WP GROUND WATER WG WASTE WATER WW FREE PRODUCT LF SOIL SO OIL OL WIRE WIRE AMBIENT AIR AA SVE AIR AE DOK GAS GS	MATRIX WATER W SURFACE WATER WS WATER QC WQ SLUDGE SL FIBREGATE WH OTHER OT ANIMAL TISSUE TA	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.						
										Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ SO ₄	Methanol	Other	35312 Nitrate	35212/3531 Nitrite			SM2323B Nitrate/Nitrite	4010 Turbidity	7189 Hexavalent Chromium	4010 Total Diss. Metals	SM2340C TDS	
1	MW-10_20120930			WG	G	9-6-12	1050	13	Y	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	01
2	MW-6_20120930			WG	G		1400	13	Y	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	10
3	MW-12_20120930			WG	G		1340	13	Y	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	03
4	MW-14_20120930			WG	G		1425	13	Y	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	06
5	MW-17_20120930			WG	G		1445	13	Y	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	09
6	FD1_20120930			w	G		1450	13	Y	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	11

Additional Comments/Special Instructions: Global ID: T0600101476	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Sample Receipt Conditions				
	<i>Mark McColloch</i>	9-6-12	1600	<i>Mark McColloch</i>			Y/N	Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N	Y/N
SHIPPING METHOD (mark as appropriate)							SAMPLER NAME AND SIGNATURE				
UPS COURIER FEDEX			PRINT Name of SAMPLER:		<i>Mark McColloch</i>		Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?	
US MAIL			SIGNATURE of SAMPLER:		<i>Mark McColloch</i>						
							DATE Signed		Time: 1600		



SAMPLE RECEIPT CHECKLIST

SRG#: 82518 Date: 090612

Project ID: 2705191

Method of Receipt: Courier Over-the-counter Shipper

Shipping Only: FedEx * OnTrac * Greyhound Other *Service level if not Priority or Sunrise (M-F): _____

COC Inspection

Is COC present? Yes No
 Custody seals on shipping container? Intact Broken Not present N/A
 Is COC Signed by Relinquisher? Yes No Dated? Yes No
 Is sampler name legibly indicated on COC? Yes No
 Is analysis or hold requested for all samples? Yes No
 Is the turnaround time indicated on COC? Yes No
 Is COC free of whiteout and uninitialed cross-outs? Yes No, Whiteout No, Cross-outs

Sample Inspection

Coolant Present: Yes No (includes water)
 Temperature °C 1.8 Therm. ID# IR-4 Initial TJB Date/Time 090612/1923 N/A
 Are there custody seals on sample containers? Intact Broken Not present
 Do containers match COC? Yes No No, COC lists absent sample(s) No, Extra sample(s) present
 Are there samples matrices other than soil, water, air or carbon? Yes No
 Are any sample containers broken, leaking or damaged? Yes No
 Are preservatives indicated? Yes, on sample containers Yes, on COC Not indicated N/A
 Are preservatives correct for analyses requested? Yes No N/A
 Are samples within holding time for analyses requested? Yes No
 Are the correct sample containers used for the analyses requested? Yes No
 Is there sufficient sample to perform testing? Yes No
 Does any sample contain product, have strong odor or are otherwise suspected to be hot? Yes No

Receipt Details

Matrix WA Container type VOA # of containers received 67
 Matrix WA Container type Poly # of containers received 36
 Matrix _____ Container type _____ # of containers received _____
 Date and Time Sample Put into Temp Storage Date: 090612 Time: 1429

Quicklog

Are the Sample ID's indicated: On COC On sample container(s) On Both Not indicated
 If Sample ID's are listed on both COC and containers, do they all match? Yes No N/A
 Is the Project ID indicated: On COC On sample container(s) On Both Not indicated
 If project ID is listed on both COC and containers, do they all match? Yes No N/A
 Are the sample collection dates indicated: On COC On sample container(s) On Both Not indicated
 If collection dates are listed on both COC and containers, do they all match? Yes No N/A
 Are the sample collection times indicated: On COC On sample container(s) On Both Not indicated
 If collection times are listed on both COC and containers, do they all match? Yes No N/A

COMMENTS: Samples -01, -03, -06, -09, -10, -11 are listed on pages 1 and 2 of the COC. Each page lists 13 containers for each sample - Only 13 containers total were received for each of these samples. LTR 090712-1134



Subcontract Laboratory Report Attachments



CALSCIENCE

WORK ORDER NUMBER: 12-09-0439

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Kiff Analytical

Client Project Name: 2705191

Attention: Joel Kiff
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Amanda Porter

Approved for release on 09/14/2012 by:
Amanda Porter
Project Manager

ResultLink ▶

Email your PM ▶



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





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Work Order Number: 12-09-0439

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Analytical Report



Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Date Received: 09/08/12
Work Order No: 12-09-0439
Preparation: N/A
Method: RSK-175M

Project: 2705191

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-10_20120930	12-09-0439-1-A	09/06/12 10:50	Aqueous	GC 52	N/A	09/10/12 15:22	120910L01

Parameter	Result	RL	DF	Qual	Units
Methane	467	1.00	1		ug/L

MW-12_20120930	12-09-0439-2-A	09/06/12 13:40	Aqueous	GC 52	N/A	09/10/12 15:53	120910L01
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Parameter	Result	RL	DF	Qual	Units
Methane	63.8	1.00	1		ug/L

MW-14_20120930	12-09-0439-3-A	09/06/12 14:25	Aqueous	GC 52	N/A	09/10/12 17:00	120910L01
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Parameter	Result	RL	DF	Qual	Units
Methane	718	2.00	2		ug/L

MW-17_20120930	12-09-0439-4-A	09/06/12 14:45	Aqueous	GC 52	N/A	09/10/12 17:36	120910L01
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Parameter	Result	RL	DF	Qual	Units
Methane	182	2.00	2		ug/L

MW-6_20120930	12-09-0439-5-B	09/06/12 14:06	Aqueous	GC 52	N/A	09/11/12 16:44	120911L01
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Parameter	Result	RL	DF	Qual	Units
Methane	2890	8.00	8		ug/L

FD1_20120930	12-09-0439-6-A	09/06/12 14:50	Aqueous	GC 52	N/A	09/10/12 18:35	120910L01
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Parameter	Result	RL	DF	Qual	Units
Methane	179	2.00	2		ug/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Analytical Report



Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Date Received: 09/08/12
Work Order No: 12-09-0439
Preparation: N/A
Method: RSK-175M

Project: 2705191

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-663-1,694	N/A	Aqueous	GC 52	N/A	09/11/12 11:21	120911L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Methane	ND	1.00	1		ug/L

Method Blank	099-12-663-1,695	N/A	Aqueous	GC 52	N/A	09/10/12 11:42	120910L01
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Methane	ND	1.00	1		ug/L

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Date Received: 09/08/12
Work Order No: 12-09-0439

Project: 2705191

Page 1 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix
MW-10_20120930	12-09-0439-1	09/06/12	Aqueous

Parameter	Results	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Alkalinity, Total (as CaCO3)	561	5.00	1		mg/L	N/A	09/13/12	SM 2320B
Solids, Total Dissolved	1350	10.0	1		mg/L	09/10/12	09/10/12	SM 2540 C

MW-12_20120930	12-09-0439-2	09/06/12	Aqueous
-----------------------	---------------------	-----------------	----------------

Parameter	Results	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Alkalinity, Total (as CaCO3)	806	5.00	1		mg/L	N/A	09/13/12	SM 2320B
Solids, Total Dissolved	15000	100	1		mg/L	09/10/12	09/10/12	SM 2540 C

MW-14_20120930	12-09-0439-3	09/06/12	Aqueous
-----------------------	---------------------	-----------------	----------------

Parameter	Results	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Alkalinity, Total (as CaCO3)	1720	10.0	1		mg/L	N/A	09/13/12	SM 2320B
Solids, Total Dissolved	4490	10.0	1		mg/L	09/10/12	09/10/12	SM 2540 C

MW-17_20120930	12-09-0439-4	09/06/12	Aqueous
-----------------------	---------------------	-----------------	----------------

Parameter	Results	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Alkalinity, Total (as CaCO3)	2820	10.0	1		mg/L	N/A	09/13/12	SM 2320B
Solids, Total Dissolved	23000	100	1		mg/L	09/10/12	09/10/12	SM 2540 C

MW-6_20120930	12-09-0439-5	09/06/12	Aqueous
----------------------	---------------------	-----------------	----------------

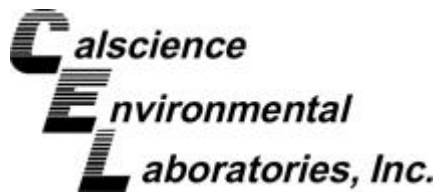
Parameter	Results	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Alkalinity, Total (as CaCO3)	650	5.00	1		mg/L	N/A	09/13/12	SM 2320B
Solids, Total Dissolved	995	1.00	1		mg/L	09/10/12	09/10/12	SM 2540 C

FD1_20120930	12-09-0439-6	09/06/12	Aqueous
---------------------	---------------------	-----------------	----------------

Parameter	Results	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Alkalinity, Total (as CaCO3)	2860	10.0	1		mg/L	N/A	09/13/12	SM 2320B
Solids, Total Dissolved	23000	100	1		mg/L	09/10/12	09/10/12	SM 2540 C

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Return to Contents



Analytical Report



Kiff Analytical
 2795 2nd Street, Suite 300
 Davis, CA 95618-6505

Date Received: 09/08/12
 Work Order No: 12-09-0439

Project: 2705191

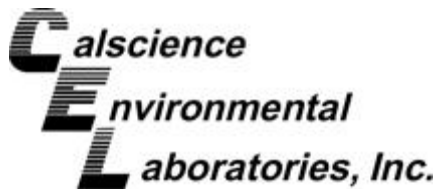
Page 2 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix
Method Blank		N/A	Aqueous

Parameter	Results	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Alkalinity, Total (as CaCO3)	ND	1.0	1		mg/L	N/A	09/13/12	SM 2320B
Solids, Total Dissolved	ND	1.0	1		mg/L	09/10/12	09/10/12	SM 2540 C

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Quality Control - Duplicate



Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Date Received: N/A
Work Order No: 12-09-0439

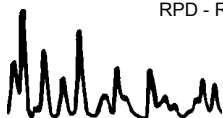
Project: 2705191

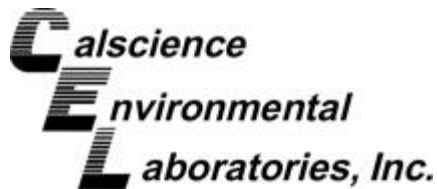
Matrix: Aqueous or Solid

<u>Parameter</u>	<u>Method</u>	<u>QC Sample ID</u>	<u>Date Analyzed</u>	<u>Sample Conc</u>	<u>DUP Conc</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Alkalinity, Total (as CaCO3)	SM 2320B	12-09-0486-1	09/13/12	319	317	1	0-25	
Solids, Total Dissolved	SM 2540 C	12-09-0436-1	09/10/12	925	895	3	0-10	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Kiff Analytical
 2795 2nd Street, Suite 300
 Davis, CA 95618-6505

Date Received: N/A
 Work Order No: 12-09-0439
 Preparation: N/A
 Method: RSK-175M

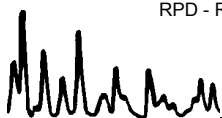
Project: 2705191

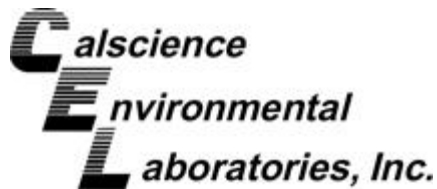
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-663-1,695	Aqueous	GC 52	N/A	09/10/12	120910L01

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Methane	98.50	92.78	94	92.48	94	79-109	0	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Kiff Analytical
 2795 2nd Street, Suite 300
 Davis, CA 95618-6505

Date Received: N/A
 Work Order No: 12-09-0439
 Preparation: N/A
 Method: RSK-175M

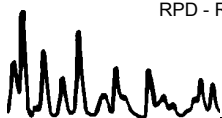
Project: 2705191

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-663-1,694	Aqueous	GC 52	N/A	09/11/12	120911L01

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Methane	98.50	93.36	95	93.30	95	79-109	0	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 12-09-0439

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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

MPN - Most Probable Number





2795 Second Street, Suite 300
 Davis, CA 95618
 Lab: 530.297.4800
 Fax: 530.297.4808

Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 714-895-5494

12-09-0439

COC No. **82518** Page 1 of 1

Project Contact (Hardcopy or PDF to): Scott Forbes	EDF Report? YES	Chain-of-Custody Record and Analysis Request	
--	------------------------	---	--

Company/Address: Kiff Analytical	Recommended but not mandatory to complete this section:		Analysis Request	TAT
Phone No.: 530-297-4800	FAX No.: 530-297-4808	Global ID: T0600101476		

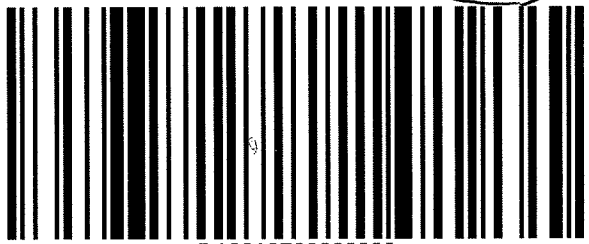
Project Number:	P.O. No.: 82518	Deliverables to (Email Address): inbox@kiffanalytical.com
-----------------	---------------------------	---

Project Name: 2705191	Project Address:	Container / Preservative						Matrix		Alkalinity SM 2320 (1)	Hydrocarbons in Water by RSK 175 (1)	Total Dissolved Solids	4-Days	For Lab Use Only
		1-L Poly None	250ml Poly None	VOA 40 ml HCl				Water						
Sample Designation	Date	Time												
MW-10_20120930	09/06/12	10:50	1	1	2				X		X	X	X	1
MW-12_20120930	09/06/12	13:40	1	1	2				X		X	X	X	2
MW-14_20120930	09/06/12	14:25	1	1	2				X		X	X	X	3
MW-17_20120930	09/06/12	14:45	1	1	2				X		X	X	X	4
MW-6_20120930	09/06/12	14:06	1	1	2				X		X	X	X	5
FD1_20120930	09/06/12	14:50	1	1	2				X		X	X	X	6

Relinquished by: <i>[Signature]</i> Kiff Analytical	Date 09/07/12	Time 1900	Received by:	Remarks: 1) Please refer to attached Test Detail. 2) Please provide an Antea "TDM_EDD" formatted EQiS electronic deliverable.
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date 9/8/12	Time 1105	Received by Laboratory: <i>[Signature]</i>	
Bill to: Accounts Payable				Page 11 of 13



800.334.5000
ontrac.com



D10010508028332

Date Printed 9/7/2012

Tracking#D10010508028332

Shipped From:
KIFF ANALYTICAL
2795 2ND STREET 300
DAVIS, CA 95618

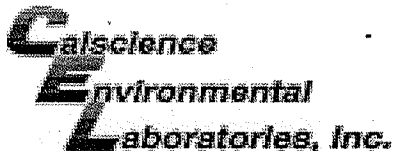
Sent By: SAMPLE RECEIVINGX125
Phone#: (530)297-4800
wgt(lbs): 1
Reference: SUB SRG SAMPLES
Reference 2:

Ship To Company:
CALSCIENCE ENVIRONMENTAL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841
RECEIVING (714)895-5494

B10207210772

Service: **S**
Sort Code: **ORG**

Special Services:
Saturday Delivery
Signature Required



WORK ORDER #: 12-09-0439

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: KIFF

DATE: 09/08/12

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 1.7 °C - 0.3 °C (CF) = 1.5 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Initial: YL

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Initial: YL

Sample _____ No (Not Intact) Not Present Initial: WSc

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Water: VOA VOA_h VOAn₂ 125AGB 125AGB_h 125AGB_p 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Summa® Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: WSc

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: WSc

Preservative: h: HCL n: HNO₃ na₂:Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered Scanned by: WSc

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Is the Data Set Valid?

(circle)

Yes / No

Preservation Temperature

(if Known): 2.6 °C

Antea™ Group Laboratory Data Validation Sheet

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

Project #: I42705191

Date of Validation: 10-25-12 **Date of Analysis:** 9-12-12

Sample Date: 9-11-12 **Completed By:** ETW

Signature: [Signature]

Circle
or
Highlight
 Yes / No
(below)

Analytical Lab Used and Report # (if any): Kill # 82557

1. Were the analyses the ones requested?
2. Do the sample number(s) on the chain-of-custody (COC) match the one(s) that appear on the laboratory data sheet?
3. Were samples prepared (extracted, filtered, etc.) within EPA holding times?
4. Once prepared/extracted, were the samples analyzed within the EPA holding times?
5. Were Laboratory blanks performed, if so, were they non-detect?
6. Are the units correct? (i.e., soil samples in mg/kg or ug/g, water samples mg/L, ug/L, and air samples in volume mg/m³, etc.)
7. Were appropriate Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples included in the laboratory batch sample?
8. In lieu of MS/ MSD, were surrogate spike (SS) or surrogate spike duplicate (SSD) samples included in the laboratory batch samples?
9. Were MS/ MSD (or SS/SSD) within the acceptable range of % recovery (i.e., approximately 80-120%, depending on the analyte)?
10. Were MS/MSD (or SS/SSD) values used to calculate Relative Percent Difference (RPD)?
11. Were Relative Percent Difference values within the acceptable range (i.e. ±25%)?

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

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

9. MS/MSD results for Nitrate as N were outside control limits. However, LCS recoveries were within control limits.



Laboratory Results

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

Subject : 4 Water Samples
Project Name : 2705191
Project Number :

Dear Mr. Dettloff,

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

Sincerely,

Troy Turpen

Subject : 4 Water Samples
Project Name : 2705191
Project Number :

Case Narrative

The Method Reporting Limit for Nitrate as N by Method EPA 300.0 was raised due to high chloride concentration for sample MW-17_20120911.

Matrix Spike/Matrix Spike Duplicate results associated with samples MW-10_20120911, MW-14_20120911, MW-17_20120911 and MW-6_20120911 for the analyte Nitrate as N were outside of control limits. This may indicate a bias for the sample that was spiked. Since the LCS recoveries were within control limits, no data are flagged.



Analysis Summary

Report Number : 82557

Date : 09/17/12

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

Project Name :2705191

Project Number :

Sample Name			MW-10_20120911		MW-14_20120911		MW-17_20120911		MW-6_20120911	
Sample Date			09/11/12		09/11/12		09/11/12		09/11/12	
Analyte	Method	Units	MRL	Results	MRL	Results	MRL	Results	MRL	Results
Nitrate as N	EPA 300.0	mg/L	0.10	0.45	0.10	ND	0.50	ND	0.10	ND

MRL = Method Reporting Limit

ND = Not Detected

Project Name : **2705191**

Project Number :

Sample : **MW-10_20120911**

Matrix : Water

Lab Number : 82557-01

Sample Date :09/11/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Nitrate as N	0.45	0.10	mg/L	EPA 300.0	09/12/12 16:08

Sample : **MW-14_20120911**

Matrix : Water

Lab Number : 82557-02

Sample Date :09/11/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Nitrate as N	< 0.10	0.10	mg/L	EPA 300.0	09/12/12 18:37

Sample : **MW-17_20120911**

Matrix : Water

Lab Number : 82557-03

Sample Date :09/11/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Nitrate as N	< 0.50	0.50	mg/L	EPA 300.0	09/12/12 17:08

Sample : **MW-6_20120911**

Matrix : Water

Lab Number : 82557-04

Sample Date :09/11/12

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Nitrate as N	< 0.10	0.10	mg/L	EPA 300.0	09/12/12 17:37

Report Number : 82557

Date : 09/17/12

QC Report : Method Blank Data

Project Name : **2705191**

Project Number :

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
Nitrate as N	<0.10	0.10	mg/L	EPA 300.0	09/12/12

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
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QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **2705191**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Nitrate as N	82557-04	< 0.10	0.500	0.500	0.610	0.605	mg/L	EPA 300.0	9/12/12	122	121	0.896	85.0-115	10

QC Report : Laboratory Control Sample (LCS)

Project Name : **2705191**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Nitrate as N	0.500	mg/L	EPA 300.0	9/12/12	108	85.0-115

