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**Alameda County  
Environmental Health**

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March 30, 2012

Mr. Keith Nowell

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

**Subject: Quarterly Summary Report, First Quarter 2012**

**Site: 76 Station No. 6277  
15803 East 14<sup>th</sup> Street  
San Leandro, California  
Fuel Leak Case No. RO0002969**

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:

Brian Whalen  
Platinum Energy  
30343 Canwood Street, Suite 200  
Agoura Hills, Ca 91301  
Tel: (818) 206-5704  
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bwhalen@platinum-energy.net

Sincerely,

**PLATINUM ENERGY**

A handwritten signature in black ink, appearing to read "B Whalen", with a long horizontal flourish extending to the right.

**BRIAN WHALEN**

Attachment

# *Quarterly Summary Report, First Quarter 2012*

*76 Service Station No. 6277  
15803 East 14th Street  
San Leandro, California*

*Alameda County Health Care Services  
Agency Fuel leak Case No. RO0002969*

*GeoTracker Global ID No. T0619718179*

*Antea Group Project No. I40256277*

*March 30, 2012*

*Prepared for:*  
**Mr. Keith Nowell**  
Hazardous Materials Specialist  
Alameda County Health Care  
Services Agency  
1131 Harbor Bay Parkway,  
Suite 250  
Alameda, CA 94502-6577

*Prepared by:*  
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## 1.0 INTRODUCTION

Antea™ Group is pleased to submit this *Quarterly Summary Report, First Quarter 2012*, for the referenced site in San Leandro, CA (**Figure 1**). The subject site is currently an operating 76 service station located at 15803 East 14<sup>th</sup> Street in San Leandro, California (**Figure 1**). Station facilities include two, 12,000 gallon fuel underground storage tanks (USTs), a 520-gallon waste-oil UST, two dispenser islands, and a service station building, containing three service bays (**Figure 2**). A total of four groundwater monitoring wells are located at the site (**Figure 2**). Please refer to **Appendix A** for additional site information and for the history of environmental investigations and remedial actions.

This report summarizes the data obtained from the recent groundwater monitoring and sampling event conducted on February 22, 2012. Included herein are site figures and groundwater contaminant data tables and a discussion of trends. This report has received a technical review by Mr. Dennis Dettloff, California Professional Geologist No. 7480.

### 1.1 Work Performed [First Quarter 2012]

1. Antea Group submitted the *Quarterly Summary Report, Fourth Quarter 2011*, dated January 19, 2012 to the Alameda County Health Care Services Agency (ACHCSA).
2. Blaine Tech Services, Inc. (Blaine Tech) conducted the first quarter 2012 groundwater monitoring and sampling event on February 22, 2012.
3. Antea Group prepared and submitted the *Sensitive Receptor Survey*, dated March 26, 2012.
4. Antea Group prepared and submitted the *Quarterly Summary Report, First Quarter 2011* (contained herein) to the ACHCSA.

### 1.2 Work Proposed [Second Quarter 2012]

1. Antea Group will prepare and submit a Case Closure Request to the ACHCSA for their consideration.
2. Blaine tech will conduct the second quarter 2012 monitoring and sampling event.

## 2.0 CURRENT PROJECT STATUS

Current phase of project:	Quarterly Groundwater Monitoring
Local Oversight Program (LOP) – Lead agency for cleanup oversight:	Alameda County Health Care Services Agency Case No. RO0002969
Secondary agency(s):	None
Monitoring well gauging schedule:	Quarterly: MW-7 through MW-10
Monitoring well sampling schedule:	Quarterly: MW-7 through MW-10
Total number of monitoring/remediation wells:	Four

Range of well depths (total depth below ground surface, bgs):	Wells are set from 19 feet to 24 feet bgs.
Wells with historical measurable LNAPL (light non-aqueous phase liquid):	None
Historical depth to water range, in feet below top of casing (BTOC):	Min: 9.35 (MW-8, Q4 2011) Max: 10.78 (MW-10, Q1 2012)
Historical groundwater elevation range (ft) for wells MW-7 through MW-10:	Min: 25.07 (MW-7, Q1 2012) Max: 25.55 (MW-9, Q4 2011)
Local receptors:	See <b>Appendix A</b>
Current remediation technique	None

## 2.1 Regulatory Correspondence

The ACHCSA sent an email to Antea Group on February 16, 2012 indicating that Antea Group needs to complete one more quarter of groundwater monitoring before quarterly groundwater monitoring can be suspended pending consideration for low risk closure. Also, the ACHCSA wants to have a copy of the DWR well completion report data from an earlier report.

## 2.2 Remedial Activities

No remedial activities took place during the first quarter 2012.

## 2.3 Groundwater Monitoring

During the February 2012 groundwater monitoring and sampling event, four monitoring wells were gauged, purged, and sampled by Blaine Tech per standard sampling protocol (**Appendix B**). Copies of Blaine Tech's field data sheets are presented as **Appendix C**. The recent gauging and sampling data are summarized below and in **Table 1**.

Well gauging and sampling date:	February 22, 2012
Wells gauged:	MW-7 through MW-10
Wells sampled:	MW-7 through MW-10
Purge method:	3 well casing volumes via electric, submersible pump
Sample collection method:	Disposable bailers
Groundwater parameters measured ( <b>Appendix C</b> ):	Temperature, pH, Conductivity, Oxidation-reduction potential (ORP), Turbidity, Dissolved Oxygen (DO)
Wells with measurable LNAPL:	None
Current depth to water range (ft below top of casing (BTOC)):	Min: 9.53 (MW-7 and MW-8) Max: 10.78 (MW-10)
Current groundwater elevation range (ft):	Min: 25.07 (MW-7) Max: 25.32 (MW-8)
Change in water depths from previous event (average change for all gauged)	0.16 foot increase

wells):	
Groundwater flow direction and gradient in foot per foot (ft/ft):	Northwest at 0.002 ft/ft

### 2.3.1 Groundwater Flow Gradient and Direction

The first quarter 2012 groundwater monitoring and sampling event was performed by Blaine Tech on February 2012. The average groundwater elevation was 25.22 feet above mean sea level. The average groundwater elevation decreased 0.16 feet from the October 2012 event. Depth to groundwater in the site monitoring wells ranged from 9.53 feet (MW-7 and MW-8) to 10.78 feet (MW-10) BTOC during the current event. The groundwater flow direction and gradient were interpreted to be to the northwest at 0.002 ft/ft during the current event. A groundwater elevation contour map is presented on **Figure 3**.

### 2.3.2 Groundwater Quality Data

Groundwater samples collected during the first quarter 2012 monitoring and sampling event were submitted with chain-of-custody (COC) documentation to Pace Analytical Services, Inc. (Pace), a state of California Environmental Laboratory Accreditation Program (ELAP) certified laboratory (Certification No. 01153CA). The complete analytical report and Antea Group’s laboratory data validation checklist are presented as **Appendix D**. Groundwater samples were analyzed for the following:

- Total petroleum hydrocarbons as gasoline (TPHg) by the CA LUFT Method;
- Benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary-butyl ether (MTBE), tertiary-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary amyl-methyl ether (TAME), 1,2-dibromoethane (EDB), 1,2-dichloroethane (1,2-DCA), and ethanol by Environmental Protection Agency (EPA) Method 8260.

Groundwater analytical results are presented in **Tables 1** (current) and **Table 2** (historical samples). The following ranges of contaminant concentrations were reported in the specified site wells groundwater samples collected on February 22, 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	4 of 4	173 (MW-10)	655 (MW-7)
Benzene	1 of 4	14.9 (MW-7)	14.9 (MW-7)
Toluene	1 of 4	1.7 (MW-7)	1.7 (MW-7)
Ethylbenzene	1 of 4	16.3 (MW-7)	16.3 (MW-7)
Total Xylenes	1 of 4	38.8 (MW-7)	38.8 (MW-7)
MTBE	4 of 4	2.4 (MW-9)	112 (MW-7)



TBA	3 of 4	5.3 (MW-10)	10.9 (MW-7)
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Explanations:

µg/L = Micrograms per liter

LRL = Laboratory reporting limit

### 2.3.3 Groundwater Contaminant Trends

During the first quarter 2012, analytical results from the sample collected from monitoring well MW-7 indicated that TPHg, benzene, toluene, ethylbenzene, total xylenes, MTBE, and TBA decreased in concentration. Analytical results from the groundwater sample collected from monitoring well MW-8 indicated a decrease in TPHg, benzene, MTBE, and TBA concentrations. Analytical results from the groundwater sample collected from monitoring well MW-9 indicated a decrease in TPHg and MTBE concentrations. Analytical results from the groundwater samples collected from monitoring wells MW-10 indicated a decrease in ethylbenzene and TBA concentrations and an increase in TPHg and MTBE concentrations. Isoconcentration maps for TPHg, benzene, and MTBE are presented on **Figures 4** through **6** and historical flow directions are presented on **Figure 7**.

### 2.3.4 Waste Disposal Summary

Approximately 25 gallons of waste water were generated during well purging/sampling and equipment cleaning during the first quarter 2012 event. The waste water was transported to Blaine Tech’s bulk facility in San Jose, California. After the batching process, the wastewater was transported to Seaport Environmental in Redwood City, California for disposal. A copy of the waste manifest is presented as **Appendix E**.

### 2.3.5 Quality Assurance / Quality Control

Antea Group’s QA/QC measures included a detailed QA/QC data validation check on the Pace Laboratory analytical results for the February 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 – one qualifier*
Are the data valid for their intended purpose?	Yes, the data are valid

\*M1 – Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

Based on the data obtained during site investigations conducted subsequent to the ATC investigation in 2007,

when the environmental case was reopened and quarterly groundwater monitoring activities conducted over the past year, it appears that site conditions have remained consistent with conditions present when the site was granted closure in 2000. This appears to indicate that there has not been a new release since the site was granted closure. Therefore, Antea Group recommends that quarterly groundwater monitoring and sampling of the site monitoring wells be discontinued, and that a Case Closure Request be submitted for low risks closure evaluation.



#### 4.0 REMARKS

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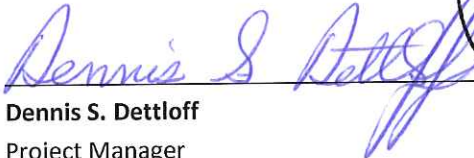
The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. For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

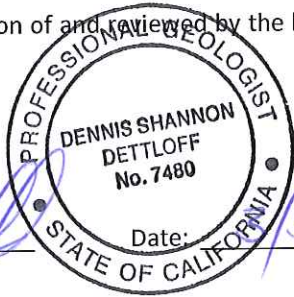
Prepared by:

  
\_\_\_\_\_  
**Jonathan Fillingame**  
Staff Geologist

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

Licensed Approver:

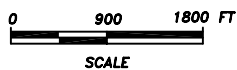
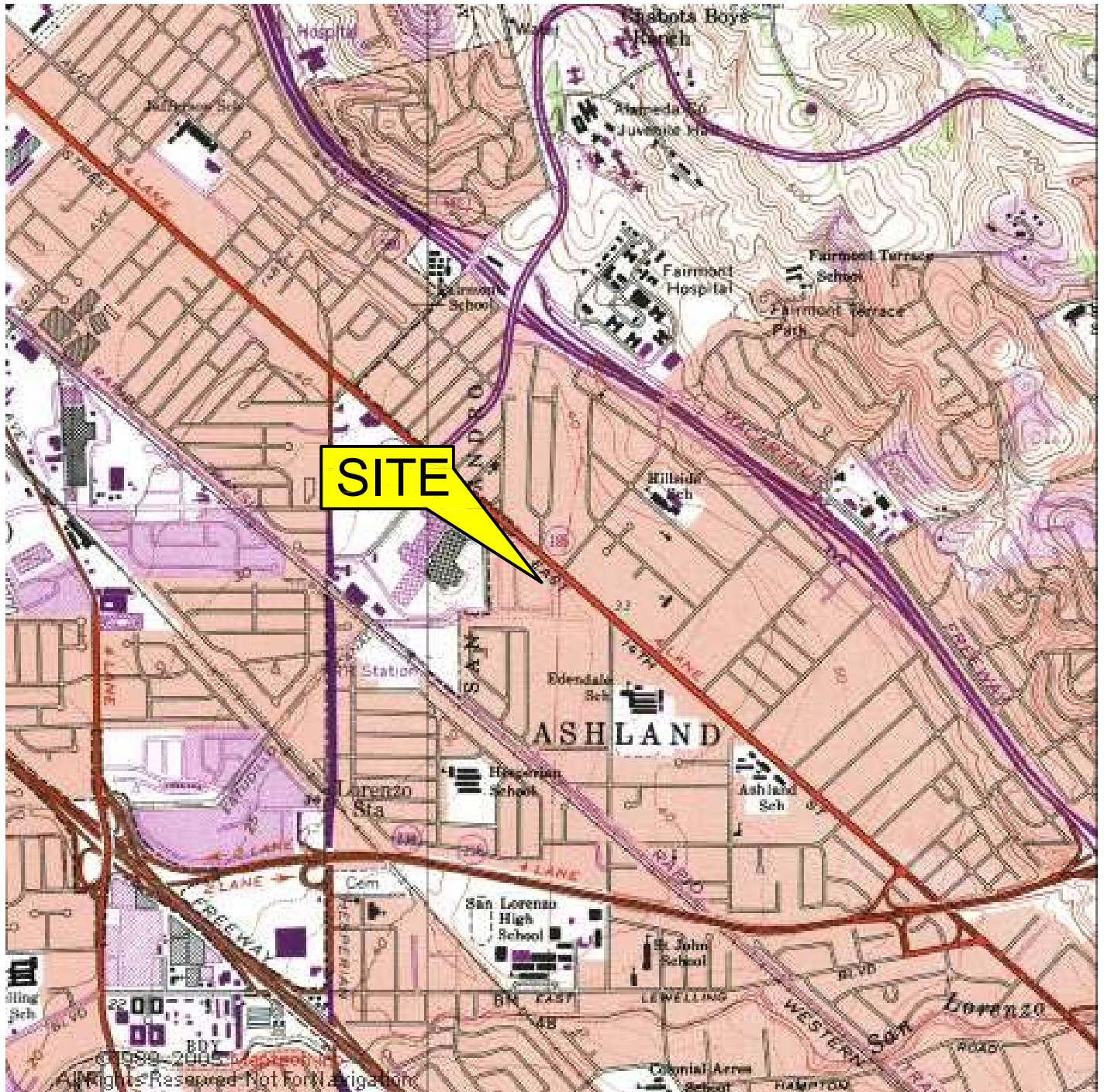
  
\_\_\_\_\_  
**Dennis S. Dettloff**  
Project Manager  
California Registered Professional Geologist No. 7480



cc: GeoTracker (upload)

## ***Figures***

- Figure 1      Site Location Map
- Figure 2      Site Plan
- Figure 3      Groundwater Elevation Contour Map – February 22, 2012
- Figure 4      Dissolved Phase TPHg Isoconcentration Map – February 22, 2012
- Figure 5      Dissolved Phase Benzene Isoconcentration Map – February 22, 2012
- Figure 6      Dissolved Phase MTBE Isoconcentration Map – February 22, 2012
- Figure 7      Historical Groundwater Flow Directions



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SAN LEANDRO QUADRANGLE (1973)

FIGURE 1  
SITE LOCATION MAP

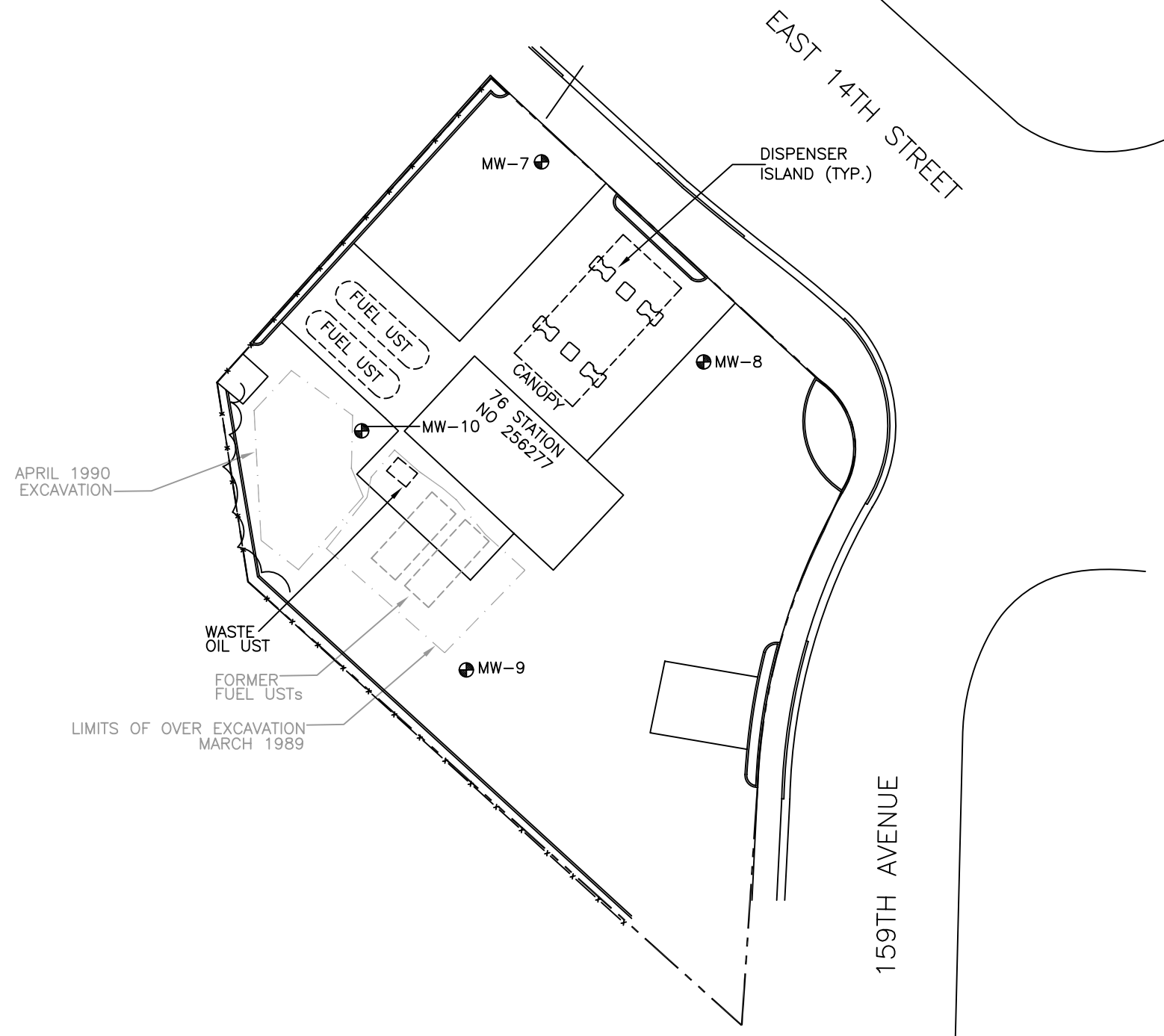
76 SERVICE STATION NO. 6277  
15803 EAST 14TH STREET  
SAN LEANDRO, CALIFORNIA

PROJECT NO. I4256277	DRAWN BY JH 05/13/11
FILE NO. 6277-SiteLocator	PREPARED BY EW
REVISION NO.	REVIEWED BY



**LEGEND:**

- — — — — APPROXIMATE PROPERTY BOUNDARY
- x - x - FENCE
- - - - - FORMER EXCAVATION AREA
- ⊕ MONITORING WELL LOCATION (ANTEA GROUP 2011)



SITE PLAN ADAPTED FROM A SURVEY BY MORROW SURVEYING 2011 AND BASE MAPS DATED 1989 AND 2003 BY KEI AND 2007 BY ATC AND ASSOCIATES.


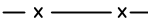



**FIGURE 2  
SITE PLAN**

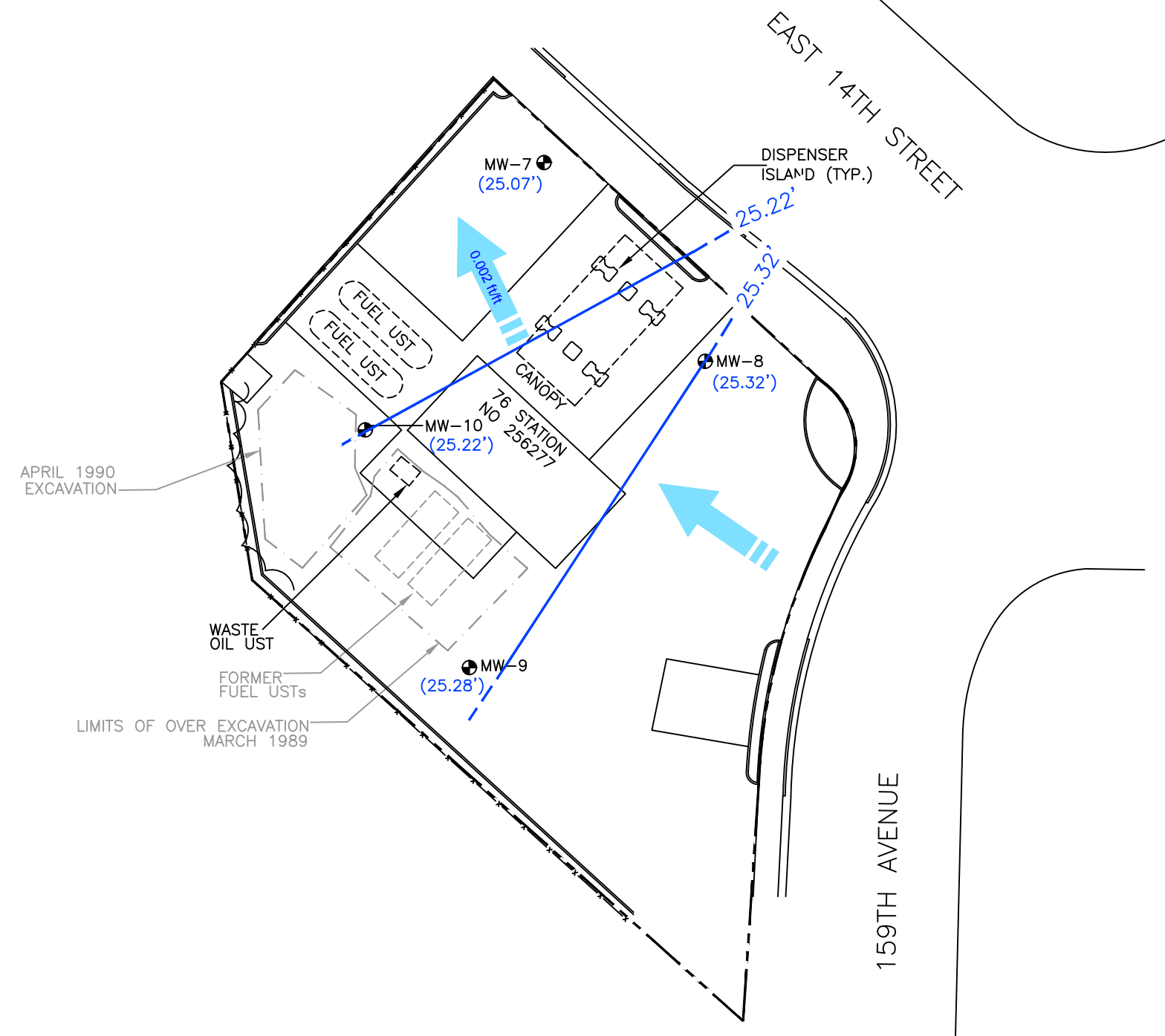
76 SERVICE STATION NO. 6277  
15803 EAST 14TH STREET  
SAN LEANDRO, CALIFORNIA

PROJECT NO. 14256277	PREPARED BY EW	DRAWN BY JH
DATE 04/21/11	REVIEWED BY DD	FILE NAME 6277-SMS



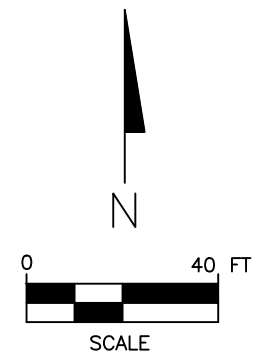
LEGEND:

-  APPROXIMATE PROPERTY BOUNDARY
-  FENCE
-  FORMER EXCAVATION AREA
-  MONITORING WELL LOCATION (ANTEA GROUP 2011)
- (25.32') GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (ft/msl)
- - 25.32' - - GROUNDWATER ELEVATION CONTOUR LINE (ft/msl) -DASHED WHERE INFERRED (CONTOUR INTERVAL: 0.10 ft)
-  GROUNDWATER FLOW DIRECTION AND HYDRAULIC GRADIENT (ft/ft)



SITE PLAN ADAPTED FROM A SURVEY BY MORROW SURVEYING 2011 AND BASE MAPS DATED 1989 AND 2003 BY KEI AND 2007 BY ATC AND ASSOCIATES.

**FIGURE 3**  
 GROUNDWATER ELEVATION CONTOUR MAP  
 FEBRUARY 22, 2012  
 76 SERVICE STATION NO. 6277  
 15803 EAST 14TH STREET  
 SAN LEANDRO, CALIFORNIA



PROJECT NO. 14256277	PREPARED BY DD	DRAWN BY JH
DATE 3/13/12	REVIEWED BY DD	FILE NAME 6277-SMS

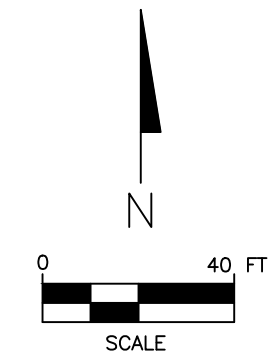
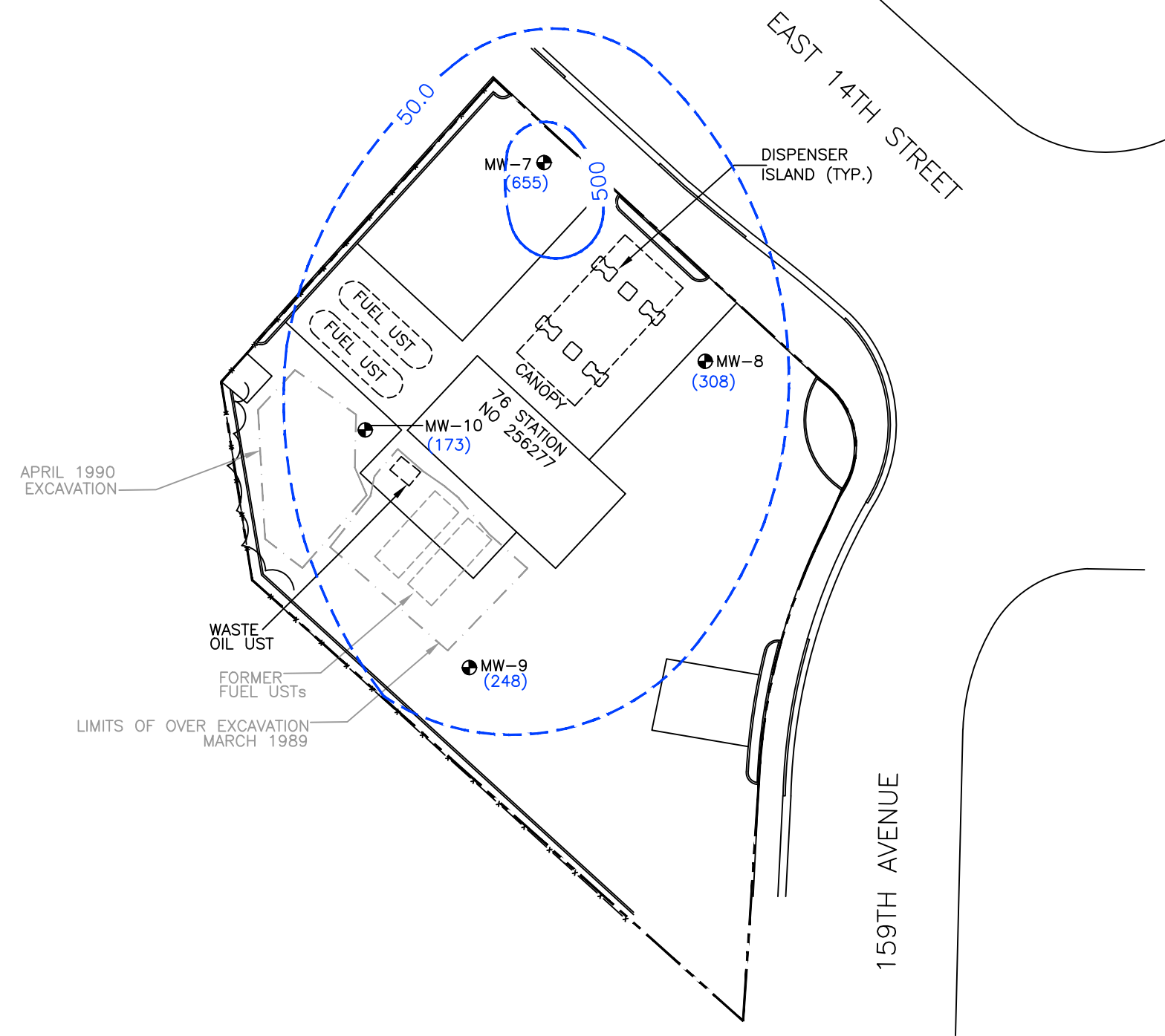


**LEGEND:**

- — — — — APPROXIMATE PROPERTY BOUNDARY
- x - - - x - FENCE
- - - - - FORMER EXCAVATION AREA
- MONITORING WELL LOCATION (ANTEA GROUP 2011)
- (655) DISSOLVED PHASE TPHg ISOCONCENTRATION (µg/L)
- 500 — DISSOLVED PHASE TPHg ISOCONTOUR (µg/L)  
-DASHED WHERE INFERRED

**NOTES:**

- TPHg = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- µg/L = MICROGRAMS PER LITER



SITE PLAN ADAPTED FROM A SURVEY BY MORROW SURVEYING 2011 AND BASE MAPS DATED 1989 AND 2003 BY KEI AND 2007 BY ATC AND ASSOCIATES.

**FIGURE 4**  
DISSOLVED PHASE TPHg ISOCONCENTRATION MAP  
FEBRUARY 22, 2012  
76 SERVICE STATION NO. 6277  
15803 EAST 14TH STREET  
SAN LEANDRO, CALIFORNIA

PROJECT NO. 14256277	PREPARED BY DD	DRAWN BY JH
DATE 3/13/12	REVIEWED BY DD	FILE NAME 6277-SMS

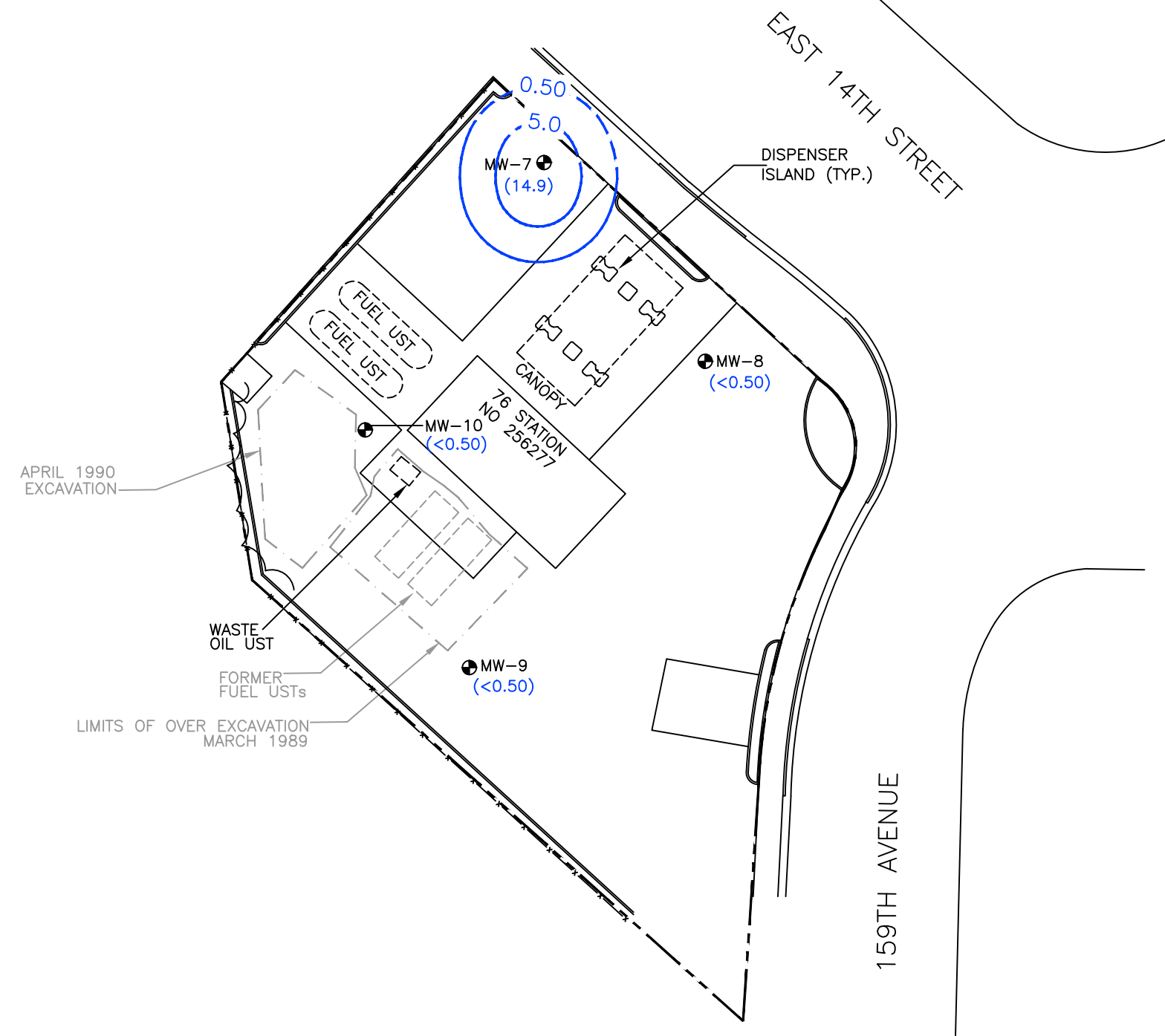


**LEGEND:**

- — — — — APPROXIMATE PROPERTY BOUNDARY
- x - - - x - FENCE
- - - - - FORMER EXCAVATION AREA
- MONITORING WELL LOCATION (ANTEA GROUP 2011)
- (14.9) DISSOLVED PHASE BENZENE ISOCONCENTRATION ( $\mu\text{g/L}$ )
- 5.0 — DISSOLVED PHASE BENZENE ISOCONTOUR ( $\mu\text{g/L}$ )  
— DASHED WHERE INFERRED

**NOTES:**

- $\mu\text{g/L}$  = MICROGRAMS PER LITER
- <0.50 = LESS THAN LABORATORY INDICATED REPORTING LIMITS



SITE PLAN ADAPTED FROM A SURVEY BY MORROW SURVEYING 2011 AND BASE MAPS DATED 1989 AND 2003 BY KEI AND 2007 BY ATC AND ASSOCIATES.

**FIGURE 5**  
 DISSOLVED PHASE BENZENE ISOCONCENTRATION MAP  
 FEBRUARY 22, 2012  
 76 SERVICE STATION NO. 6277  
 15803 EAST 14TH STREET  
 SAN LEANDRO, CALIFORNIA

PROJECT NO. 14256277	PREPARED BY DD	DRAWN BY JH
DATE 3/13/12	REVIEWED BY DD	FILE NAME 6277-SMS

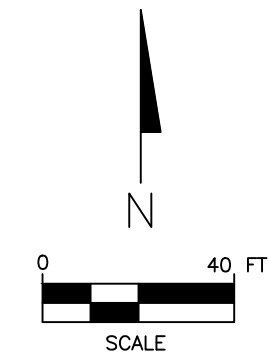
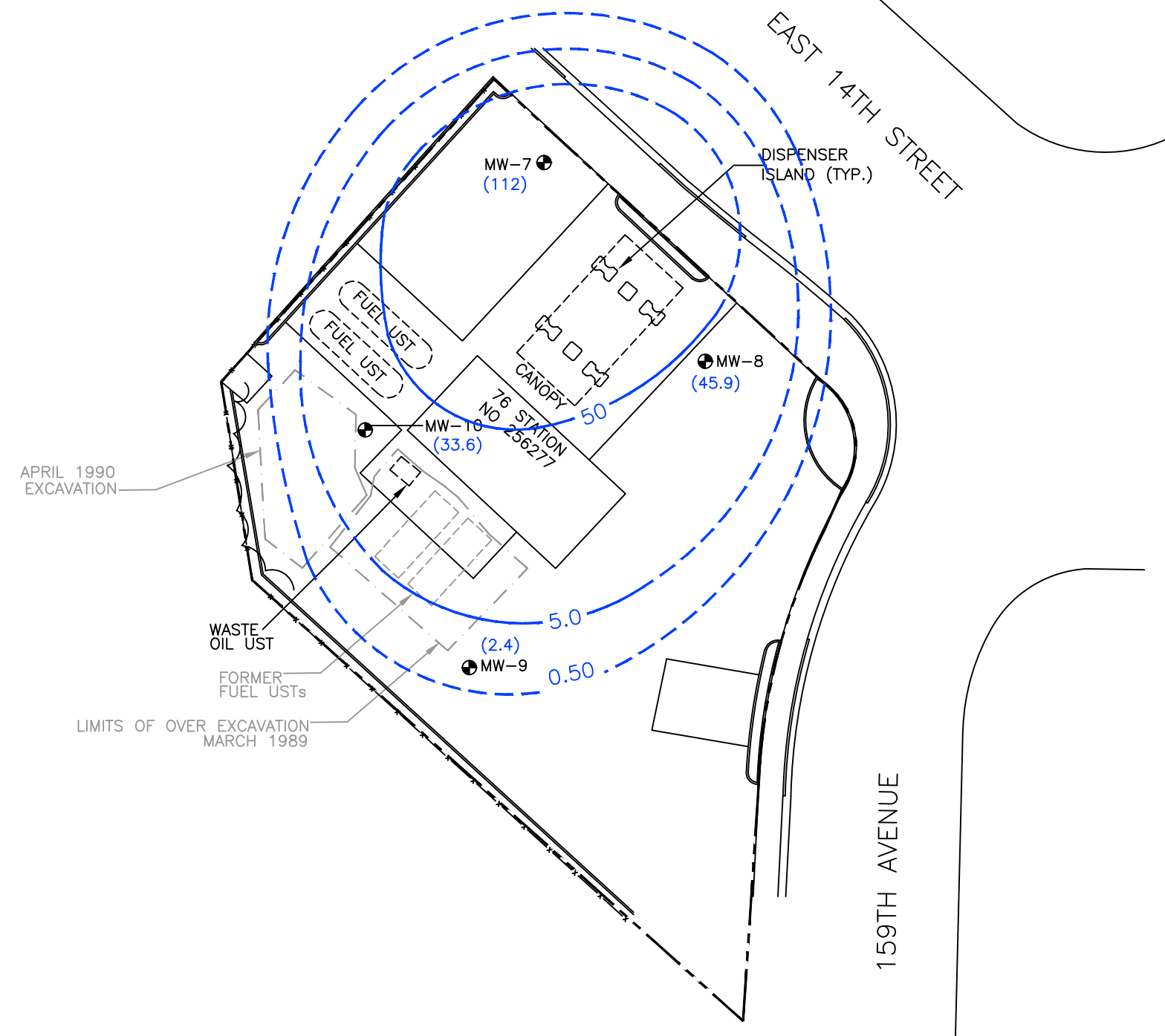


**LEGEND:**

- APPROXIMATE PROPERTY BOUNDARY
- x - x - FENCE
- - - - - FORMER EXCAVATION AREA
- MONITORING WELL LOCATION (ANTEA GROUP 2011)
- (112) DISSOLVED PHASE MTBE ISOCONCENTRATION (µg/L)
- 5.0 — DISSOLVED PHASE MTBE ISOCONTOUR (µg/L)  
-DASHED WHERE INFERRED

**NOTES:**

- MTBE = METHYL TERTIARY BUTYL ETHER
- µg/L = MICROGRAMS PER LITER
- <0.50 = LESS THAN LABORATORY INDICATED REPORTING LIMITS



SITE PLAN ADAPTED FROM A SURVEY BY MORROW SURVEYING 2011 AND BASE MAPS DATED 1989 AND 2003 BY KEI AND 2007 BY ATC AND ASSOCIATES.

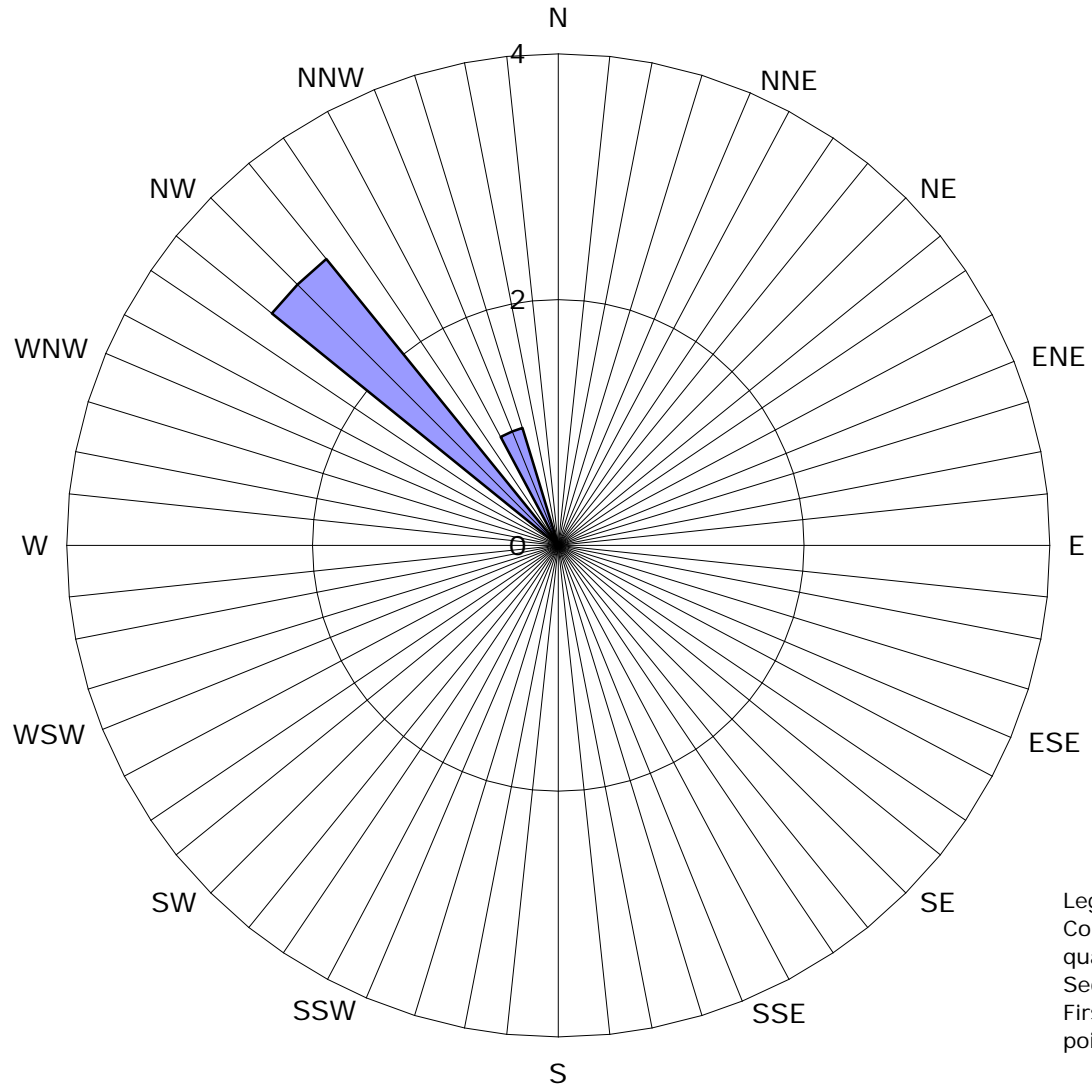
**FIGURE 6**  
DISSOLVED PHASE MTBE ISOCONCENTRATION MAP  
FEBRUARY 22, 2012  
76 SERVICE STATION NO. 6277  
15803 EAST 14TH STREET  
SAN LEANDRO, CALIFORNIA

PROJECT NO. 14256277	PREPARED BY DD	DRAWN BY JH
DATE 3/13/12	REVIEWED BY DD	FILE NAME 6277-SMS





**Figure 7**  
**Historical Groundwater Flow Directions**  
**76 Service Station No. 6277**  
15803 East 14th Street  
San Leandro, California



Legend  
Concentric circles represent  
quarterly monitoring events  
Second Quarter 2011 through  
First Quarter 2012 4 data  
points shown

■ Groundwater Flow Direction

## ***Tables***

Table 1	Current Groundwater Gauging and Analytical Data
Table 2	Historical Groundwater Gauging and Analytical Data
Table 3	Historical Groundwater Gradient and Flow Direction Data

**TABLE 1**  
**CURRENT GROUNDWATER GAUGING AND ANALYTICAL DATA**  
**76 Service Station No. 6277**  
**15803 EAST 14TH ST**  
**SAN LEANDRO, CALIFORNIA**



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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-7	2/22/2012	34.60	9.53	NP	25.07	655	14.9	1.7	16.3	38.8	112	<0.50	<0.50	<0.50	10.9	<250	<1.0	<1.0
MW-8	2/22/2012	34.85	9.53	NP	25.32	308	<0.50	<0.50	<0.50	<1.5	45.9	<0.50	<0.50	<0.50	7.4	<250	<1.0	<1.0
MW-9	2/22/2012	35.09	9.81	NP	25.28	248	<0.50	<0.50	<0.50	<1.5	2.4	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
MW-10	2/22/2012	36.00	10.78	NP	25.22	173	<0.50	<0.50	<0.50	<1.5	33.6	<0.50	<0.50	<0.50	5.3	<250	<1.0	<1.0

**Gauging Notes:**

TOC - Top of Casing  
ft - Feet  
NP - LNAPL not present  
LNAPL - Light non-aqueous phase liquid  
\* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)  
-- - No information available

**Analytical Notes:**

< - Not detected at or above indicated laboratory reporting limit  
ug/L - micrograms/liter  
TPHg- Total Petroleum Hydrocarbons as gasoline  
MTBE- Methyl tertiary-butyl ether  
TBA- Tertiary-butyl alcohol  
DIPE- Di-isopropyl ether  
ETBE- Ethyl tertiary-butyl ether  
TAME- Tertiary-amyl methyl ether

**TABLE 2**  
**HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA**  
**76 Service Station No. 6277**  
**15803 EAST 14TH ST**  
**SAN LEANDRO, CALIFORNIA**



Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	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-7	4/18/2011	34.60	9.40	NP	25.20	2,420	22.4	12.4	11.3	449	152	<0.50	<0.50	<0.50	5.7	<250	<1.0	<1.0
	7/26/2011	34.60	9.43	NP	25.17	1,770	27.3	18.9	66.4	341	102	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	10/14/2011	34.60	9.37	NP	25.23	1,480	45.0	6.6	58.2	184	110	<0.50	<0.50	<0.50	23.0	<250	<1.0	<1.0
	2/22/2012	34.60	9.53	NP	25.07	655	14.9	1.7	16.3	38.8	112	<0.50	<0.50	<0.50	10.9	<250	<1.0	<1.0
MW-8	4/18/2011	34.85	9.40	NP	25.45	439	1.4	0.75	2.8	14.2	28.3	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	7/26/2011	34.85	9.42	NP	25.43	336	4.0	<0.50	<0.50	<1.5	42.7	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	10/14/2011	34.85	9.35	NP	25.50	221	2.2	<0.50	<0.50	<1.5	30.7	<0.50	<0.50	<0.50	5.5	<250	<1.0	<1.0
	2/22/2012	34.85	9.53	NP	25.32	308	<0.50	<0.50	<0.50	<1.5	45.9	<0.50	<0.50	<0.50	7.4	<250	<1.0	<1.0
MW-9	4/18/2011	35.09	9.55	NP	25.54	208	<0.50	<0.50	<0.50	<1.5	1.6	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	7/26/2011	35.09	9.58	NP	25.51	176	<0.50	<0.50	<0.50	<1.5	1.7	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	10/14/2011	35.09	9.54	NP	25.55	154	<0.50	<0.50	<0.50	<1.5	2.2	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	2/22/2012	35.09	9.81	NP	25.28	248	<0.50	<0.50	<0.50	<1.5	2.4	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
MW-10	4/18/2011	36.00	10.55	NP	25.45	513	<0.50	<0.50	6.9	40.0	14.9	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	7/26/2011	36.00	10.74	NP	25.26	169	<0.50	<0.50	1.4	<1.5	22.9	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
	10/14/2011	36.00	10.75	NP	25.25	141	<0.50	<0.50	0.59	<1.5	29.7	<0.50	<0.50	<0.50	6.1	<250	<1.0	<1.0
	2/22/2012	36.00	10.78	NP	25.22	173	<0.50	<0.50	<0.50	<1.5	33.6	<0.50	<0.50	<0.50	5.3	<250	<1.0	<1.0

**Gauging Notes:**

TOC - Top of Casing  
ft - Feet  
NP - LNAPL not present  
LNAPL - Light non-aqueous phase liquid  
\* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)  
-- - No information available

**Analytical Notes:**

< - Not detected at or above indicated laboratory reporting limit  
ug/L - micrograms/liter  
TPHg- Total Petroleum Hydrocarbons as gasoline  
MTBE- Methyl tertiary-butyl ether  
TBA- Tertiary-butyl alcohol  
DIPE- Di-isopropyl ether  
ETBE- Ethyl tertiary-butyl ether  
TAME- Tertiary-amyl methyl ether

**TABLE 3**  
**Historical Groundwater Gradient and Flow Direction Data**

76 Service Station No. 6277  
 15803 East 14th Street  
 San Leandro, 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	
6277	04/18/11	0.003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	07/26/11	0.004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	10/14/11	0.005	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	02/22/12	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
		<b>0.004 Average</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>

**Explanation**  
 NA = Not available  
 Number of Events = 4

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## ***Appendix A***

Previous Investigation and Site History Summary

## PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

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**1969** - Reported site history indicates the site was first developed as a gas station from an empty lot in 1969.

**March 1989** - Two 10,000-gallon gasoline USTs, one 550-gallon waste-oil UST, and the product piping were removed from the site during UST replacement activities. Kaprealian Engineering Inc. (KEI) advanced two exploratory borings designated as EB-1 and EB-2 at the site. The borings were advanced at the request of Alameda County to assess the possible presence of hydrocarbon impact to the soil in the vicinity of the proposed UST excavation.

The borings were advanced to depths of 10.5 feet below ground surface (bgs) and 13.5 feet bgs. Ground water was encountered in the borings at depths of 11 to 12 feet bgs. The analytical results of the soil samples were as follows:

- At a depth of 5 feet bgs soil samples analyzed for total petroleum hydrocarbons as gasoline (TPHg) ranged from below the laboratory's indicated reporting limit in boring EB-2 to 2.1 parts per million (ppm) in boring EB-1.
- At a depth of 10 feet bgs TPHg concentrations ranged from 200 ppm in boring EB-1 to 620 ppm in boring EB-2.

Based on results of this preliminary investigation, KEI recommended that the contractor excavate the existing UST excavation to a depth of approximately 13 feet bgs. Water was encountered in the fuel UST excavation at a depth of approximately 11 feet bgs, thus prohibiting the collection of any soil samples from immediately beneath the USTs.

Six soil samples, labeled SW1 through SW6, were collected from the sidewalls of the fuel UST pit at depths of approximately 1 foot above the water table; and one soil sample, labeled WO-1, was collected from beneath the waste-oil UST at a depth of about 10 feet bgs. Based on observations in the field, it was decided to excavate additional soil from three of the four excavation sidewalls.

**March 14, 1989:** Four trenches were installed to assess the limits of additional soil excavation needed. Four soil samples were then collected at depths of approximately 10 feet bgs. The soil analytical results were as follows:

- In the fuel UST excavation, TPHg concentrations ranged from 24 ppm to 150 ppm.
- A sample collected adjacent to the existing station building indicated that TPHg was present at a concentration of 3,500 ppm.
- The soil sample collected after excavating 2 feet of sidewall toward the station building indicated that TPHg was present at a concentration of 100 ppm.
- Soil sample (SW-2) contained TPHg at a concentration of 390 ppm.
- The soil sample collected from the waste-oil UST excavation (WO-1) contained total oil and grease (TOG) at a concentration of 280 ppm. A side wall sample, SW-7 collected after excavating 14 feet of sidewall contained TOG at a concentration of 41 ppm.

The analytical results of the water sample (W1) collected from the waste-oil/fuel UST excavation contained TPHg at a concentration of 19,000 parts per billion (ppb) and benzene at a concentration of 230 ppb.

**March 23, 1989:** KEI returned to the site for pipe trench soil sampling. Six soil samples, labeled P1 through P6, were collected from beneath the product lines at depths of approximately 3 to 3.5 feet below grade. The analytical results of the soil samples P1 through P6 collected from the pipe trenches indicated concentrations of TPHg ranging from 1.1 ppm to 6.8 ppm.

The fuel UST pit and the waste-oil UST pit were over-excavated in order to remove hydrocarbon-impacted soil. The majority of the hydrocarbon-impacted soil appeared to have been removed from the site, except for the capillary fringe in the vicinity of the former UST pit and the building.

**May 24, 1989:** Four two-inch diameter monitoring wells, MW-1 through MW-4 were installed at the site. The four wells were installed to depths ranging from 24.5 to 25 feet bgs. Ground water was encountered at depths ranging from 11 to 12 feet bgs during drilling.

**July 1989:** The monitoring and sampling program was initiated.

**February 1990:** Monitoring well MW-2 was destroyed on February 1 in preparation for additional soil excavation in the vicinity of this well. Soil was excavated to a depth of approximately 6 to 12 inches below the level of the groundwater, which was encountered at a depth of about 11.5 feet below grade. After additional excavation, four soil samples were collected from the sidewalls of the excavation, each approximately 6 to 12 inches above ground water. Soil excavation activities were terminated due to the close proximity of the former and new UST excavations and the site's property line.

The analytical results of three soil samples indicated that TPHg was present at concentrations ranging from 140 ppm to 1,100 ppm, while concentrations of total petroleum hydrocarbons as diesel (TPHd) ranged from below the laboratory's indicated reporting limits to 280 ppm. The analytical results also indicated Environmental Protection Agency (EPA) Method 8010 constituents and TOG from each of the four samples were below the laboratory's indicated reporting limits, except in sample SW11A which contained TOG at a concentration of 210 ppm.

Over-excavation in the vicinity of monitoring well MW-2 was completed in April of 1990. Monitoring well MW-2 was then replaced with a new monitoring well (MW-2A) in March 1991.

**1991:** Due to the regular occurrence of tetrachloroethene (PCE), trichloroethene (TCE) and 1,2-dichloroethane (1,2-DCA) in sampled groundwater, a review of records documenting historic site activities was performed in 1991 to assess whether there were any up-gradient sources contributing to the impacted groundwater at the site. The file review was conducted by KEI at the Regional Water Quality Control Board (RWQCB).



The review focused on three sites with monitoring wells located within a half mile of the station. The Okada property, located at 16109 Ashland Avenue, a former USA Petroleum station located at 15120 Hesperian Boulevard, and Kaufman and Broad, located at 1620 162<sup>nd</sup> Avenue, approximately 1,800 feet east-southeast of the site. The file review is outlined in Delta's *Addendum to Additional Site Assessment Work Plan*, dated April 3, 2009.

**December 1992:** A file review was conducted at the ACHCSA. Four sites with existing or former USTs were located in the vicinity of the site during the file review. These sites are as follows: 1.) Nayou Properties, 1500 Thrush Avenue; 2.) ABC Auto Repair, 15960 East 14<sup>th</sup> Street; 3. Petsas Property, 16035 East 14<sup>th</sup> Street, and; 4.) Speedee Oil Change, 15900 East 14<sup>th</sup> Street.

**1991-1993:** The California EPA, Department of Toxic Substances Control (DTSC), identified regional chlorinated solvent contamination of the upper aquifer in the San Leandro area.

**1993:** Based on the results of the site history research, site reconnaissance, and file review, and based upon the fact that no evidence of an on-site solvent source area in the vicinity of monitoring wells MW-3 and MW-4 was found, it was concluded that there was no likely on-site source of the halogenated volatile organic compound (HVOC) impact.

The potential of an off-site HVOC source is further supported by the fact that the highest HVOC concentrations have been reported in samples collected from monitoring wells MW-3 and MW-4, located on the up-gradient side of the site. HVOC concentrations reported in the groundwater samples collected from these monitoring wells are likely coming from a source (E.G. reaching sanitary sewer lines, etc.) up-gradient of the site.

**March 1993:** Monitoring wells MW-5 and MW-6 were installed on March 9, 1993. These wells were monitored monthly and sampled on a quarterly basis until 1996. Groundwater flow predominantly ranged from southwest to north during the course of the investigation. Chlorinated solvents have consistently been reported in up-gradient wells MW-3 and MW-4, and it appears that the chlorinated solvent impact at the site may be due to an unidentified source (or sources) located up-gradient of the site, or is part of a regional chlorinated solvent plume. The perimeter monitoring wells, MW-5 and MW-6, have historically shown a maximum concentration of 72 micrograms per liter ( $\mu\text{g/L}$ ) of TPHg and below the laboratory's indicated reporting limits for benzene, toluene, ethylbenzene, and total xylenes (BTEX).

**March 1997:** An off-site investigation was conducted in March 1997 to assess any impacts in the down-gradient direction from monitoring well MW-1. Monitoring well MW-1 is the most down-gradient of the wells at the site and has historically contained the highest concentrations of petroleum hydrocarbons in groundwater throughout the duration of the site investigation.

Three direct push borings (EB-3, EB-4, and EB-5) were advanced through East 14th Street in a northerly transect from the site. The three borings were each advanced to total depths ranging from 11 to 15 feet below grade. Groundwater was encountered at depths ranging from 10.5 to 15 feet bgs during drilling. No reportable target compounds were identified in either soil or groundwater samples.

**1998** – A *Case Closure Summary* was prepared by the Alameda County Environmental Protection Department. This document concluded that drinking water wells are not affected. It also documented the maximum contaminant concentrations – before and after cleanup as follows:

Contaminant	Soil (ppm)		Water (ppb)		
	Before	After	Before	After	
TPHg	3,500	1,100	19,000	510	
TPHd	ND	6.2	NA	NA	
Benzene	40	8	230	72	
Toluene	280	43	79	ND	
Xylenes	600	230	1,300	17	
Ethyl-benzene	100	37	ND	ND	
Methyl tert-butyl ether (MTBE)	NA	NA	NA	390	
TOG	7,700	1,300	NA	NA	
Heavy Metals	NA	NA	NA	NA	
Other HVOC	0.063	ND	TCE	4.4	ND
			PCE	110	950
			1,2-DCA	2.8	ND

The *Case Closure Summary* concluded that “there are no known municipal or residential water wells or surface water bodies within 750 feet down-gradient of the subject site that would be impacted by shallow groundwater from this site”.

**December 2000:** The ACHCSA issued a *Case Closure* letter dated December 26, 2000.

**2003:** Six groundwater monitoring wells (MW-1, MW-2A, and MW-3 through MW-6) destroyed. Groundwater was at 6-11 feet bgs.

**September 2007:** Six soil borings (ATC-1 through ATC-6) were advanced in the vicinity of the existing fuel and waste-oil USTs and dispensers on September 25 and 26, 2007. The borings were advanced to total depths of

approximately 20 feet bgs (ATC-2, ATC-3, ATC-4, and ATC-5) and 25 feet bgs (ATC-1 and ATC-6). Groundwater was initially encountered at depths ranging from 14 feet bgs to 24 feet bgs during drilling activities.

Groundwater samples were collected from each of the six borings. A duplicate groundwater sample designated as “Duplicate B-1” was collected from boring ATC-1. Photo ionization detector (PID) readings from the screened soil samples ranged from 1.4 ppm to 2,272 ppm. The analytical results from the ATC Investigation are outlined in Delta’s *Addendum to Additional Site Assessment Work Plan* dated April 3, 2009.

**December 2009:** Delta advanced six soil borings (B-1 through B-5, and B-7) to assess the extent of petroleum hydrocarbon impact to the soil and groundwater. The borings were advanced to total depths ranging from 24 to 32 feet bgs. First groundwater was encountered at depths ranging from 21 to 28.5 feet bgs during drilling activities.

Soil and groundwater samples were collected from each of the six borings. PID readings from the screened soil samples ranged from 0.2 ppm to 197 ppm. The analytical results indicated that TPHg was present in the soil at a maximum concentration of 603 mg/kg (B-1 at 12 feet) and in the groundwater at a maximum concentration of 2,110 µg/L (B-1). The analytical results from the December 2009 Investigation are outlined in Delta’s *Subsurface Soil and Groundwater Investigation Report* dated March 23, 2010.

**January 2011:** Delta Consultants rebranded to Antea Group.

**April 5, 2011:** Antea Group completed a site investigation consisting of the installation of four on-site monitoring wells (MW-7 through MW-10). The results of the investigation are presented in the *Site Investigation Report*, dated July 5, 2011.

## **SENSITIVE RECEPTORS**

**1991:** The well survey performed by KEI focused on the area within a one-half mile radius of the subject site, and was based upon data obtained from the Alameda County Flood Control and Water Conservation District. The information revealed the presence of 15 producing wells designated as irrigation wells and had depths ranging from 20 to 440 feet bgs.

The Alameda County Flood Control and Water Conservation District records suggested that the status of many of the irrigation wells is unknown. In the 1991 survey, it was stated that “no producing wells that could possibly influence the groundwater flow direction at the subject site were located”. The closest irrigation well (148 feet deep) installed in 1949 was noted in the north corner of East 14<sup>th</sup> Street and 159<sup>th</sup> Avenue.

**2008:** This survey entailed a request to the California Department of Water Resources (DWR) office in Sacramento to provide well log records. DWR well log records were reviewed in order to assess the location of any water-supply wells in the vicinity of the subject site. Using the DWR well logs, a total of five wells had verifiable addresses within a half-mile radius of the site.

Stains and spills have been documented at the adjacent site to the east, SpeeDee Oil Change shop, located at 15900 East 14<sup>th</sup> Street, including staining from leaking automobiles, spills not cleaned up immediately, a spill migrating toward a storm drain inlet, a spill in the driveway not cleaned up, and a spill beneath the waste-oil UST was not appropriately addressed. Moreover, it is documented that solvents were used at this adjacent site in 1993 and based on that site history; it appears that solvents have been used at that site for decades.

**2012:** Antea Group reviewed well records from the Alameda County Public Works Agency as well as the DWR well log records. Sixteen irrigation wells had identifiable addresses in the search area and five wells has insufficient data to locate, but may be within the search area. In addition Antea Group conducted a web based search for potential receptors and a site reconnaissance to confirm receptor locations and locate additional receptors. Fourteen other receptors (daycares, senior cares, places of worship, schools, and water bodies) were identified in the web based search and the site reconnaissance. Based on the distance from the site and the location with respect to prevailing groundwater flow direction, no wells or other receptors appear to be affected by soil, soil vapor, or groundwater impact due to a release at the site.

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



## Groundwater Sampling Form

Site Address: <b>15803 E. 14th St., SAN LEANDRO</b>	
Project No: <b>296277</b>	Field Technician: <b>CK</b>
Field Point: <b>MW-7</b>	Date: <b>2/22/12</b>
Depth to Water (DTW) (ft bgs): <b>9.53</b>	Well Diameter (in): <b>② 4 6 8</b>
Depth to LNAPL (ft bgs):	Thickness of LNAPL (ft):
Total Depth of Well (ft bgs): <b>18.85</b>	Water Column Height (ft): <b>9.32</b>

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow <u>3 casing volumes</u> Other: _____	<b>Purge Equipment:</b> Disposable Bailor <u>Electric Submersible</u> Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> <u>Disposable Bailor w/ RED</u> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>9.32</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 <sup>2</sup> * 0.163		

Purge: Start Time: 10:05 Stop Time: 11:16

Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
<b>Pre-Purge</b>								
1011	21.9	7.06	1347	27.1	71000	4.02	0.8	
1012	21.9	7.06	1373	33.2	71000	2.71	1.6	
1013	21.0	7.06	1362	27.2	71000	1.08	2.4	
1014	20.9	7.08	1335	22.6	71000	0.60	3.2	
1015	20.8	7.11	1317	17.0	71000	0.57	4.0	
1016	20.8	7.12	1305	16.2	71000	0.50	4.8	
<b>Post-Purge</b>								

Did Well dewater? Yes  No  Total Purge volume (gal): 4.8

**Other Comments:** 80% 11.39  
DTW = 9.84      \* PURGED THROUGH FLOW CELL

**Sample Info:**

Sample ID: <u>MW-7-20120229</u>	Sample Date and Time: <u>2/22/12 1020</u>
Selected Analysis: <u>SEE COC</u>	

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

Signature: [Signature] Date: 2/22/12



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:	15802 E. 14th St., SAN LEANDRO		
Project No:	256277	Field Technician:	CK
Field Point:	MW-8	Date:	2/22/12
Depth to Water (DTW) (ft bgs):	9.53	Well Diameter (in):	② 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	19.62	Water Column Height (ft):	10.09

### Purging Info and Calculations:

<b>Purge Method:</b> <u>Low-Flow</u> 3 casing volumes Other: _____	<b>Purge Equipment:</b> <u>Disposable Bailor</u> <u>Electric Submersible</u> Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> <u>Disposable Bailor w/RED</u> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>10.09</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 <sup>2</sup> * 0.163		

Purge: Start Time: 2:30 Stop Time: 3:30

Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
<b>Pre-Purge</b>								
0930	19.6	7.13	1227	43.6	71000	0.57	0.90	
0931	19.7	7.16	1227	37.3	71000	1.48	1.60	
0932	20.3	7.19	1237	35.4	71000	0.97	2.71	
0933	20.7	7.20	1239	34.3	71000	0.76	3.6	
0934	20.8	7.22	1236	31.9	71000	0.77	4.5	
0935	20.9	7.22	1230	31.5	71000	0.72	5.4	
<b>Post-Purge</b>								

Did Well dewater? Yes  No  Total Purge volume (gal): 5.4

**Other Comments:** 80% 11.55  
DTW = 9.60  
\* PURGED THROUGH FLOW CELL

<b>Sample Info:</b>	
Sample ID: MW-8-20120229	Sample Date and Time: 2/22/12 0940
Selected Analysis: SEE COC	

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

Signature: [Signature] Date: 2/22/12



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:	15802 E. 14th St., SAN LEANDRO		
Project No:	256277	Field Technician:	CK
Field Point:	MW-9	Date:	2/22/12
Depth to Water (DTW) (ft bgs):	9.91	Well Diameter (in):	2 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	23.93	Water Column Height (ft):	14.12

### Purging Info and Calculations:

<b>Purge Method:</b> Low-Flow 3 casing volumes Other: _____	<b>Purge Equipment:</b> Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> Disposable Bailer w/RED Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): 14.12    X Conversion Factor (gal/ft): 0.17    = Casing Volume (gal): 2.4 Casing Volume (gal): 2.4    X Specified Volumes: 3    = Calculated Purge (gal): 7.2		
Conversion Factors (gal/ft): 2" = 0.17    4" = 0.66    6" = 1.5    8" = 2.6    Other = radius <sup>2</sup> * 0.163		

Purge:	Start Time: 0845	Stop Time: 0839						
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
<b>Pre-Purge</b>								
0849	15.4	6.69	1151	-21.0	>1000	2.94	1.2	
0850	18.1	6.94	1233	-15.4	>1000	0.78	2.4	
0851	18.6	7.00	1230	-12.9	>1000	0.55	3.6	
0852	19.2	7.10	1225	-8.7	>1000	0.41	4.8	
0853	19.4	7.12	1225	-8.4	>1000	0.40	6.0	
0854	19.4	7.13	1225	-7.8	>1000	0.39	7.2	
<b>Post-Purge</b>								
Did Well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Total Purge volume (gal): 7.2						

<b>Other Comments:</b>	80% 12.63    * MS/MSD TAKEN DTW = 9.93    * PURGED THROUGH FLOW CELL		
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<b>Sample Info:</b>	
Sample ID: MW-9 20120229	Sample Date and Time: 2/22/12 0910
Selected Analysis: SEE COC	

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

Signature: [Signature] Date: 2/22/12

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

## Groundwater Sampling Form

Site Address:	15803 E. 14th St., SAN LEANDRO		
Project No:	256277	Field Technician:	CK
Field Point:	MW-10	Date:	2/22/12
Depth to Water (DTW) (ft bgs):	10.78	Well Diameter (in):	(2) 4 6 8
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	19.62	Water Column Height (ft):	8.84

### Purging Info and Calculations

<b>Purge Method:</b> <u>Low-Flow</u> <u>3 casing volumes</u> Other: _____	<b>Purge Equipment:</b> <u>Disposable Bailer</u> <u>Electric Submersible</u> Peristaltic Pump Bladder Pump Other: _____	<b>Sample Collection Method:</b> <u>Disposable Bailer w/RED</u> Extraction Port Dedicated Tubing Disposable Tubing Other: _____
Water Column Height (ft): <u>8.84</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 <sup>2</sup> * 0.163		

Purge: \_\_\_\_\_ Start Time: 09:49 Stop Time: \_\_\_\_\_

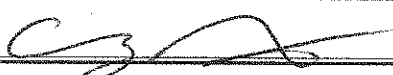
Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
<b>Pre-Purge</b>								
0949	22.9	7.18	1221	34.5	71000	3.43	0.9	
0950	23.1	7.14	1288	34.7	71000	3.12	1.6	
0951	22.2	7.10	1327	31.6	71000	1.45	2.4	
0952	21.5	7.10	1330	26.9	71000	0.64	3.2	
0953	21.1	7.09	1327	22.4	71000	0.55	4.0	
0954	21.0	7.09	1326	21.8	71000	0.54	4.8	
<b>Post-Purge</b>								

Did Well dewater? Yes  No  Total Purge volume (gal): 4.8

**Other Comments:** 80% 12.55  
DTW = 11.16  
\* PURGED THROUGH FLOW CELL

<b>Sample Info:</b>	
Sample ID: MW-10-20120229	Sample Date and Time: 2/22/12 1000
Selected Analysis: SEE COC	

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

Signature:  Date: 2/22/12



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







*Quarterly Summary Report, First Quarter 2012*  
*76 Service Station No. 6277*  
*San Leandro, CA*  
*Antea Group Project No. I40256277*



## ***Appendix D***

Certified Laboratory Analytical Report and Data Validation Form

March 09, 2012

Dennis Dettloff  
Antea USA  
11050 White Rock Rd. #110  
Rancho Cordova, CA 95670


RE: Project: 256277  
Pace Project No.: 2510980

Dear Dennis Dettloff:

Enclosed are the analytical results for sample(s) received by the laboratory on February 24, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Regina SteMarie

regina.stemarie@pacelabs.com  
Project Manager

Enclosures

cc: Tara Bosch, Antea USA  
Jonathon Fillingame, Antea USA  
Lia Holden, Antea USA  
Dan Keltner, Antea USA  
Josh Mahoney, Antea USA  
Tony Perini, Antea USA  
Nicole Persaud, Antea USA  
Don Pinkerton, Antea USA  
Doug Umland, Antea USA  
Ed Weyrens, Antea USA



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 256277

Pace Project No.: 2510980

### Washington Certification IDs

940 South Harney Street, Seattle, WA 98108

Alaska CS Certification #: UST-025

Arizona Certification #: AZ0770

California Certification #: 01153CA

Florida/NELAP Certification #: E87617

Oregon Certification #: WA200007

Washington Certification #: C555

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## REPORT OF LABORATORY ANALYSIS

Page 2 of 17

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### SAMPLE ANALYTE COUNT

Project: 256277  
Pace Project No.: 2510980

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2510980001	MW-10_20120229	EPA 5030B/8260	ERB	16	PASI-S
		CA LUFT	CC	2	PASI-S
2510980002	MW-7_20120229	EPA 5030B/8260	CC	16	PASI-S
		CA LUFT	CC	2	PASI-S
2510980003	MW-8_20120229	EPA 5030B/8260	ERB	16	PASI-S
		CA LUFT	CC	2	PASI-S
2510980004	MW-9_20120229	EPA 5030B/8260	ERB	16	PASI-S
		CA LUFT	ERB	2	PASI-S

### REPORT OF LABORATORY ANALYSIS

### HITS ONLY

Project: 256277  
Pace Project No.: 2510980

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>2510980001</b>	<b>MW-10_20120229</b>					
EPA 5030B/8260	tert-Butyl Alcohol	5.3	ug/L	5.0	03/06/12 23:23	
EPA 5030B/8260	Methyl-tert-butyl ether	33.6	ug/L	0.50	03/06/12 23:23	
CA LUFT	TPH-Gasoline (C05-C12)	173	ug/L	50.0	03/03/12 16:39	
<b>2510980002</b>	<b>MW-7_20120229</b>					
EPA 5030B/8260	Benzene	14.9	ug/L	0.50	03/03/12 16:57	
EPA 5030B/8260	tert-Butyl Alcohol	10.9	ug/L	5.0	03/03/12 16:57	
EPA 5030B/8260	Ethylbenzene	16.3	ug/L	0.50	03/03/12 16:57	
EPA 5030B/8260	Methyl-tert-butyl ether	112	ug/L	0.50	03/03/12 16:57	
EPA 5030B/8260	Toluene	1.7	ug/L	0.50	03/03/12 16:57	
EPA 5030B/8260	Xylene (Total)	38.8	ug/L	1.5	03/03/12 16:57	
CA LUFT	TPH-Gasoline (C05-C12)	655	ug/L	50.0	03/03/12 16:57	
<b>2510980003</b>	<b>MW-8_20120229</b>					
EPA 5030B/8260	tert-Butyl Alcohol	7.4	ug/L	5.0	03/06/12 23:40	
EPA 5030B/8260	Methyl-tert-butyl ether	45.9	ug/L	0.50	03/06/12 23:40	
CA LUFT	TPH-Gasoline (C05-C12)	308	ug/L	50.0	03/03/12 17:15	
<b>2510980004</b>	<b>MW-9_20120229</b>					
EPA 5030B/8260	Methyl-tert-butyl ether	2.4	ug/L	0.50	03/04/12 08:56	
CA LUFT	TPH-Gasoline (C05-C12)	248	ug/L	50.0	03/04/12 08:56	

### REPORT OF LABORATORY ANALYSIS

## ANALYTICAL RESULTS

Project: 256277

Pace Project No.: 2510980

Sample: MW-10_20120229		Lab ID: 2510980001	Collected: 02/22/12 10:00	Received: 02/24/12 09:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
tert-Amylmethyl ether	ND	ug/L	0.50	1		03/06/12 23:23	994-05-8	
Benzene	ND	ug/L	0.50	1		03/06/12 23:23	71-43-2	
tert-Butyl Alcohol	5.3	ug/L	5.0	1		03/06/12 23:23	75-65-0	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/06/12 23:23	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/06/12 23:23	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		03/06/12 23:23	108-20-3	
Ethanol	ND	ug/L	250	1		03/06/12 23:23	64-17-5	
Ethylbenzene	ND	ug/L	0.50	1		03/06/12 23:23	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		03/06/12 23:23	637-92-3	
Methyl-tert-butyl ether	33.6	ug/L	0.50	1		03/06/12 23:23	1634-04-4	
Toluene	ND	ug/L	0.50	1		03/06/12 23:23	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		03/06/12 23:23	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	116	%	79-121	1		03/06/12 23:23	460-00-4	
Dibromofluoromethane (S)	99	%	81-119	1		03/06/12 23:23	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	72-127	1		03/06/12 23:23	17060-07-0	
Toluene-d8 (S)	100	%	77-120	1		03/06/12 23:23	2037-26-5	
<b>CA LUFT MSV GRO</b>		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	173	ug/L	50.0	1		03/03/12 16:39		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104	%	76-121	1		03/03/12 16:39	460-00-4	

Sample: MW-7_20120229		Lab ID: 2510980002	Collected: 02/22/12 10:20	Received: 02/24/12 09:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
tert-Amylmethyl ether	ND	ug/L	0.50	1		03/03/12 16:57	994-05-8	
Benzene	14.9	ug/L	0.50	1		03/03/12 16:57	71-43-2	
tert-Butyl Alcohol	10.9	ug/L	5.0	1		03/03/12 16:57	75-65-0	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/03/12 16:57	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/03/12 16:57	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		03/03/12 16:57	108-20-3	
Ethanol	ND	ug/L	250	1		03/03/12 16:57	64-17-5	
Ethylbenzene	16.3	ug/L	0.50	1		03/03/12 16:57	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		03/03/12 16:57	637-92-3	
Methyl-tert-butyl ether	112	ug/L	0.50	1		03/03/12 16:57	1634-04-4	
Toluene	1.7	ug/L	0.50	1		03/03/12 16:57	108-88-3	
Xylene (Total)	38.8	ug/L	1.5	1		03/03/12 16:57	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98	%	79-121	1		03/03/12 16:57	460-00-4	
Dibromofluoromethane (S)	99	%	81-119	1		03/03/12 16:57	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	72-127	1		03/03/12 16:57	17060-07-0	
Toluene-d8 (S)	101	%	77-120	1		03/03/12 16:57	2037-26-5	

Date: 03/09/2012 04:51 PM

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 256277

Pace Project No.: 2510980

<b>Sample:</b> MW-7_20120229	<b>Lab ID:</b> 2510980002	Collected: 02/22/12 10:20	Received: 02/24/12 09:40	Matrix: Water
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>CA LUFT MSV GRO</b>		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	655	ug/L	50.0	1		03/03/12 16:57		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98	%	76-121	1		03/03/12 16:57	460-00-4	

<b>Sample:</b> MW-8_20120229	<b>Lab ID:</b> 2510980003	Collected: 02/22/12 09:40	Received: 02/24/12 09:40	Matrix: Water
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
tert-Amylmethyl ether	ND	ug/L	0.50	1		03/06/12 23:40	994-05-8	
Benzene	ND	ug/L	0.50	1		03/06/12 23:40	71-43-2	
tert-Butyl Alcohol	7.4	ug/L	5.0	1		03/06/12 23:40	75-65-0	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/06/12 23:40	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/06/12 23:40	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		03/06/12 23:40	108-20-3	
Ethanol	ND	ug/L	250	1		03/06/12 23:40	64-17-5	
Ethylbenzene	ND	ug/L	0.50	1		03/06/12 23:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		03/06/12 23:40	637-92-3	
Methyl-tert-butyl ether	45.9	ug/L	0.50	1		03/06/12 23:40	1634-04-4	
Toluene	ND	ug/L	0.50	1		03/06/12 23:40	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		03/06/12 23:40	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	115	%	79-121	1		03/06/12 23:40	460-00-4	
Dibromofluoromethane (S)	100	%	81-119	1		03/06/12 23:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	72-127	1		03/06/12 23:40	17060-07-0	
Toluene-d8 (S)	99	%	77-120	1		03/06/12 23:40	2037-26-5	

<b>CA LUFT MSV GRO</b>		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	308	ug/L	50.0	1		03/03/12 17:15		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104	%	76-121	1		03/03/12 17:15	460-00-4	

<b>Sample:</b> MW-9_20120229	<b>Lab ID:</b> 2510980004	Collected: 02/22/12 09:10	Received: 02/24/12 09:40	Matrix: Water
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
tert-Amylmethyl ether	ND	ug/L	0.50	1		03/04/12 08:56	994-05-8	
Benzene	ND	ug/L	0.50	1		03/04/12 08:56	71-43-2	
tert-Butyl Alcohol	ND	ug/L	5.0	1		03/04/12 08:56	75-65-0	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/04/12 08:56	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/04/12 08:56	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		03/04/12 08:56	108-20-3	
Ethanol	ND	ug/L	250	1		03/04/12 08:56	64-17-5	
Ethylbenzene	ND	ug/L	0.50	1		03/04/12 08:56	100-41-4	

Date: 03/09/2012 04:51 PM

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 256277  
Pace Project No.: 2510980

Sample: MW-9_20120229	Lab ID: 2510980004	Collected: 02/22/12 09:10	Received: 02/24/12 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		03/04/12 08:56	637-92-3	
Methyl-tert-butyl ether	2.4	ug/L	0.50	1		03/04/12 08:56	1634-04-4	
Toluene	ND	ug/L	0.50	1		03/04/12 08:56	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		03/04/12 08:56	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	105 %		79-121	1		03/04/12 08:56	460-00-4	
Dibromofluoromethane (S)	102 %		81-119	1		03/04/12 08:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	97 %		72-127	1		03/04/12 08:56	17060-07-0	
Toluene-d8 (S)	100 %		77-120	1		03/04/12 08:56	2037-26-5	
<b>CA LUFT MSV GRO</b>		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	248	ug/L	50.0	1		03/04/12 08:56		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	105 %		76-121	1		03/04/12 08:56	460-00-4	

**QUALITY CONTROL DATA**

Project: 256277  
Pace Project No.: 2510980

QC Batch: MSV/6503 Analysis Method: EPA 5030B/8260  
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge  
Associated Lab Samples: 2510980002

METHOD BLANK: 104993 Matrix: Water

Associated Lab Samples: 2510980002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	03/03/12 11:15	
1,2-Dichloroethane	ug/L	ND	1.0	03/03/12 11:15	
Benzene	ug/L	ND	0.50	03/03/12 11:15	
Diisopropyl ether	ug/L	ND	0.50	03/03/12 11:15	
Ethanol	ug/L	ND	250	03/03/12 11:15	
Ethyl-tert-butyl ether	ug/L	ND	0.50	03/03/12 11:15	
Ethylbenzene	ug/L	ND	0.50	03/03/12 11:15	
Methyl-tert-butyl ether	ug/L	ND	0.50	03/03/12 11:15	
tert-Amylmethyl ether	ug/L	ND	0.50	03/03/12 11:15	
tert-Butyl Alcohol	ug/L	ND	5.0	03/03/12 11:15	
Toluene	ug/L	ND	0.50	03/03/12 11:15	
Xylene (Total)	ug/L	ND	1.5	03/03/12 11:15	
1,2-Dichloroethane-d4 (S)	%	98	72-127	03/03/12 11:15	
4-Bromofluorobenzene (S)	%	103	79-121	03/03/12 11:15	
Dibromofluoromethane (S)	%	98	81-119	03/03/12 11:15	
Toluene-d8 (S)	%	100	77-120	03/03/12 11:15	

LABORATORY CONTROL SAMPLE: 104994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	21.7	108	65-123	
1,2-Dichloroethane	ug/L	20	21.4	107	63-131	
Benzene	ug/L	20	20.6	103	66-123	
Diisopropyl ether	ug/L	20	21.2	106	70-136	
Ethanol	ug/L	800	774	97	40-160	
Ethyl-tert-butyl ether	ug/L	20	19.9	100	65-135	
Ethylbenzene	ug/L	20	21.2	106	67-122	
Methyl-tert-butyl ether	ug/L	20	21.9	109	65-138	
tert-Amylmethyl ether	ug/L	20	21.2	106	68-138	
tert-Butyl Alcohol	ug/L	100	93.9	94	57-153	
Toluene	ug/L	20	20.4	102	64-118	
Xylene (Total)	ug/L	60	64.0	107	68-122	
1,2-Dichloroethane-d4 (S)	%			97	72-127	
4-Bromofluorobenzene (S)	%			95	79-121	
Dibromofluoromethane (S)	%			100	81-119	
Toluene-d8 (S)	%			99	77-120	

### QUALITY CONTROL DATA

Project: 256277  
Pace Project No.: 2510980

Parameter	Units	2510926001		105328		105329		% Rec	% Rec	Limits	RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	23.3	21.2	117	106	61-127	10		
1,2-Dichloroethane	ug/L	ND	20	20	22.5	21.2	112	106	60-138	6		
Benzene	ug/L	ND	20	20	22.2	21.9	111	109	63-138	2		
Diisopropyl ether	ug/L	ND	20	20	24.2	21.3	121	107	68-146	12		
Ethanol	ug/L	ND	800	800	957	828	120	103	40-160	14		
Ethyl-tert-butyl ether	ug/L	ND	20	20	23.4	21.5	117	107	63-138	8		
Ethylbenzene	ug/L	ND	20	20	22.7	22.4	113	112	65-135	1		
Methyl-tert-butyl ether	ug/L	202	20	20	228	231	128	144	59-143	1	M1	
tert-Amylmethyl ether	ug/L	2.5	20	20	25.3	23.8	114	106	62-142	6		
tert-Butyl Alcohol	ug/L	708	100	100	907	856	199	147	46-156	6	M1	
Toluene	ug/L	ND	20	20	21.9	21.4	109	107	64-128	2		
Xylene (Total)	ug/L	ND	60	60	68.3	67.0	114	112	65-133	2		
1,2-Dichloroethane-d4 (S)	%						98	95	72-127			
4-Bromofluorobenzene (S)	%						96	96	79-121			
Dibromofluoromethane (S)	%						103	101	81-119			
Toluene-d8 (S)	%						99	100	77-120			

### QUALITY CONTROL DATA

Project: 256277  
Pace Project No.: 2510980

QC Batch:	MSV/6508	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	2510980004		

METHOD BLANK: 105050 Matrix: Water  
Associated Lab Samples: 2510980004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	03/04/12 08:38	
1,2-Dichloroethane	ug/L	ND	1.0	03/04/12 08:38	
Benzene	ug/L	ND	0.50	03/04/12 08:38	
Diisopropyl ether	ug/L	ND	0.50	03/04/12 08:38	
Ethanol	ug/L	ND	250	03/04/12 08:38	
Ethyl-tert-butyl ether	ug/L	ND	0.50	03/04/12 08:38	
Ethylbenzene	ug/L	ND	0.50	03/04/12 08:38	
Methyl-tert-butyl ether	ug/L	ND	0.50	03/04/12 08:38	
tert-Amylmethyl ether	ug/L	ND	0.50	03/04/12 08:38	
tert-Butyl Alcohol	ug/L	ND	5.0	03/04/12 08:38	
Toluene	ug/L	ND	0.50	03/04/12 08:38	
Xylene (Total)	ug/L	ND	1.5	03/04/12 08:38	
1,2-Dichloroethane-d4 (S)	%	100	72-127	03/04/12 08:38	
4-Bromofluorobenzene (S)	%	104	79-121	03/04/12 08:38	
Dibromofluoromethane (S)	%	103	81-119	03/04/12 08:38	
Toluene-d8 (S)	%	100	77-120	03/04/12 08:38	

LABORATORY CONTROL SAMPLE: 105051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	21.2	106	65-123	
1,2-Dichloroethane	ug/L	20	20.3	102	63-131	
Benzene	ug/L	20	20.5	102	66-123	
Diisopropyl ether	ug/L	20	20.6	103	70-136	
Ethanol	ug/L	800	904	113	40-160	
Ethyl-tert-butyl ether	ug/L	20	21.5	108	65-135	
Ethylbenzene	ug/L	20	20.9	104	67-122	
Methyl-tert-butyl ether	ug/L	20	21.2	106	65-138	
tert-Amylmethyl ether	ug/L	20	21.3	107	68-138	
tert-Butyl Alcohol	ug/L	100	105	105	57-153	
Toluene	ug/L	20	20.0	100	64-118	
Xylene (Total)	ug/L	60	62.8	105	68-122	
1,2-Dichloroethane-d4 (S)	%			97	72-127	
4-Bromofluorobenzene (S)	%			94	79-121	
Dibromofluoromethane (S)	%			103	81-119	
Toluene-d8 (S)	%			99	77-120	

### QUALITY CONTROL DATA

Project: 256277

Pace Project No.: 2510980

Parameter	Units	2510973001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Qual
		Result	Conc.	Spike	Conc.	Result	Conc.	Result	Conc.	% Rec	% Rec				
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	20	23.5	21.9	117	109	61-127	7				
1,2-Dichloroethane	ug/L	ND	20	20	20	23.3	21.1	117	105	60-138	10				
Benzene	ug/L	ND	20	20	20	23.6	21.7	118	108	63-138	8				
Diisopropyl ether	ug/L	ND	20	20	20	23.1	21.2	115	106	68-146	8				
Ethanol	ug/L	ND	800	800	800	980	893	122	112	40-160	9				
Ethyl-tert-butyl ether	ug/L	ND	20	20	20	24.2	22.5	121	112	63-138	7				
Ethylbenzene	ug/L	ND	20	20	20	23.9	22.0	119	110	65-135	8				
Methyl-tert-butyl ether	ug/L	0.53	20	20	20	24.0	22.2	118	109	59-143	8				
tert-Amylmethyl ether	ug/L	ND	20	20	20	22.9	21.5	114	107	62-142	6				
tert-Butyl Alcohol	ug/L	6.1	100	100	100	119	114	113	108	46-156	4				
Toluene	ug/L	ND	20	20	20	23.1	21.1	115	105	64-128	9				
Xylene (Total)	ug/L	ND	60	60	60	71.6	66.3	119	110	65-133	8				
1,2-Dichloroethane-d4 (S)	%							102	96	72-127					
4-Bromofluorobenzene (S)	%							96	97	79-121					
Dibromofluoromethane (S)	%							104	104	81-119					
Toluene-d8 (S)	%							100	98	77-120					

### QUALITY CONTROL DATA

Project: 256277  
Pace Project No.: 2510980

QC Batch: MSV/6538 Analysis Method: EPA 5030B/8260  
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge  
Associated Lab Samples: 2510980001, 2510980003

METHOD BLANK: 105396 Matrix: Water  
Associated Lab Samples: 2510980001, 2510980003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	03/06/12 22:16	
1,2-Dichloroethane	ug/L	ND	1.0	03/06/12 22:16	
Benzene	ug/L	ND	0.50	03/06/12 22:16	
Diisopropyl ether	ug/L	ND	0.50	03/06/12 22:16	
Ethanol	ug/L	ND	250	03/06/12 22:16	
Ethyl-tert-butyl ether	ug/L	ND	0.50	03/06/12 22:16	
Ethylbenzene	ug/L	ND	0.50	03/06/12 22:16	
Methyl-tert-butyl ether	ug/L	ND	0.50	03/06/12 22:16	
tert-Amylmethyl ether	ug/L	ND	0.50	03/06/12 22:16	
tert-Butyl Alcohol	ug/L	ND	5.0	03/06/12 22:16	
Toluene	ug/L	ND	0.50	03/06/12 22:16	
Xylene (Total)	ug/L	ND	1.5	03/06/12 22:16	
1,2-Dichloroethane-d4 (S)	%	100	72-127	03/06/12 22:16	
4-Bromofluorobenzene (S)	%	114	79-121	03/06/12 22:16	
Dibromofluoromethane (S)	%	100	81-119	03/06/12 22:16	
Toluene-d8 (S)	%	100	77-120	03/06/12 22:16	

LABORATORY CONTROL SAMPLE: 105397

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	16.7	84	65-123	
1,2-Dichloroethane	ug/L	20	17.7	89	63-131	
Benzene	ug/L	20	17.5	87	66-123	
Diisopropyl ether	ug/L	20	19.4	97	70-136	
Ethanol	ug/L	800	737	92	40-160	
Ethyl-tert-butyl ether	ug/L	20	19.2	96	65-135	
Ethylbenzene	ug/L	20	17.1	86	67-122	
Methyl-tert-butyl ether	ug/L	20	19.5	97	65-138	
tert-Amylmethyl ether	ug/L	20	17.6	88	68-138	
tert-Butyl Alcohol	ug/L	100	87.0	87	57-153	
Toluene	ug/L	20	16.8	84	64-118	
Xylene (Total)	ug/L	60	48.6	81	68-122	
1,2-Dichloroethane-d4 (S)	%			96	72-127	
4-Bromofluorobenzene (S)	%			101	79-121	
Dibromofluoromethane (S)	%			100	81-119	
Toluene-d8 (S)	%			101	77-120	

### QUALITY CONTROL DATA

Project: 256277  
Pace Project No.: 2510980

Parameter	Units	2510980001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Qual
		Result	Conc.	Spike	Conc.	Result	Result	% Rec	% Rec						
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	20.4	19.4	102	97	61-127	5					
1,2-Dichloroethane	ug/L	ND	20	20	22.2	21.5	111	107	60-138	3					
Benzene	ug/L	ND	20	20	23.6	22.7	118	114	63-138	4					
Diisopropyl ether	ug/L	ND	20	20	24.6	23.8	123	119	68-146	3					
Ethanol	ug/L	ND	800	800	622	665	78	83	40-160	7					
Ethyl-tert-butyl ether	ug/L	ND	20	20	23.5	22.5	118	113	63-138	4					
Ethylbenzene	ug/L	ND	20	20	22.7	21.8	112	108	65-135	4					
Methyl-tert-butyl ether	ug/L	33.6	20	20	51.8	56.7	91	115	59-143	9					
tert-Amylmethyl ether	ug/L	ND	20	20	21.3	20.1	107	101	62-142	6					
tert-Butyl Alcohol	ug/L	5.3	100	100	88.3	87.3	83	82	46-156	1					
Toluene	ug/L	ND	20	20	22.1	20.9	111	105	64-128	5					
Xylene (Total)	ug/L	ND	60	60	64.5	61.6	106	101	65-133	5					
1,2-Dichloroethane-d4 (S)	%							94	94	72-127					
4-Bromofluorobenzene (S)	%							100	101	79-121					
Dibromofluoromethane (S)	%							99	100	81-119					
Toluene-d8 (S)	%							102	100	77-120					







## QUALIFIERS

Project: 256277  
Pace Project No.: 2510980

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel Clean-Up

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

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

### LABORATORIES

PASI-S Pace Analytical Services - Seattle

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 256277  
Pace Project No.: 2510980

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2510980001	MW-10_20120229	EPA 5030B/8260	MSV/6538		
2510980002	MW-7_20120229	EPA 5030B/8260	MSV/6503		
2510980003	MW-8_20120229	EPA 5030B/8260	MSV/6538		
2510980004	MW-9_20120229	EPA 5030B/8260	MSV/6508		
2510980001	MW-10_20120229	CA LUFT	MSV/6502		
2510980002	MW-7_20120229	CA LUFT	MSV/6502		
2510980003	MW-8_20120229	CA LUFT	MSV/6502		
2510980004	MW-9_20120229	CA LUFT	MSV/6507		



Sample Container Count

2510980



CLIENT: Antea

COC PAGE 1 of 1

COC ID# \_\_\_\_\_

Trip Blank(s) Provided?  
Y / N

Sample Line Item	VG9H	AG1H	AG1U	BP1U	BP2U	BP3U	BP3N	BP3S	WGKU	WGFU	WG2U	DG9M	DG9B	VG9W	VSG	Comments
1	6															
2	6															
3	6															
4	10															
5																
6																
7																
8																
9																
10																
11																
12																

AG1H	1 liter HCL amber glass	BP2S	500mL H2SO4 plastic	JGFU	4 oz amber glass soil jar
AG1U	1liter unpreserved amber glass	BP2U	500mL unpreserved plastic	WGKU	8 oz clear glass soil jar
AG2S	500mL H2SO4 amber glass	BP2Z	500mL NaOH, Zn Ac	WGFU	4 oz clear glass soil jar
AG2U	500mL unpreserved amber glass	BP3C	250mL NaOH plastic	WG2U	2 oz clear glass soil jar
AG3S	250mL H2SO4 amber glass	BP3N	250mL HNO3 plastic	JGFM	4 oz amber glass soil jar with MeOH
BG1H	1 liter HCL clear glass	BP3S	250mL H2SO4 plastic	VG9U	40mL unpreserved clear vial
BG1U	1 liter unpreserved glass	BP3U	250mL unpreserved plastic	VG9W	40mL clear vial pre-weighted with DI water
BP1N	1 liter HNO3 plastic	DG9B	40mL Na Bisulfate clear vial	VSG	Headspace septa vial
BP1S	1 liter H2SO4 plastic	DG9H	40mL HCL amber voa vial	VG9H	40mL HCL clear vial
BP1U	1 liter unpreserved plastic	DG9M	40mL MeOH clear vial	WGFU	4oz wide jar w/hexane wipe
BP1Z	1 liter NaOH, Zn, Ac	DG9T	40mL Na Thio amber vial	VG9T	40mL Na Thio. clear vial
BP2N	500mL HNO3 plastic	DG9U	40mL unpreserved amber vial	ZPLC	Ziploc Bag
BP2O	500mL NaOH plastic	I	Wipe/Swab	U	Summa Can



Sample Condition Upon Receipt

Client Name: Anotea Project # 2510980

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 8989 0685 0537

Custody Seal on Cooler/Box Present:  Yes  No Seals intact:  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_ Temp. Blank Yes \_\_\_\_\_ No

Thermometer Used 132013 or 101731962 or 226099 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 3.3c  
Temp should be above freezing ≤ 6°C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 022412 CW

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Follow Up / Hold Analysis Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: <u>VOA</u> , coliform, TOC, O&G	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blanks Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Creation Date:		

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N  
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: RSM Date: 02/24/12

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

Is the Data Valid?

(circle)

Yes / No

Preservation Temperature  
(if Known): 3.3 °C

## Antea Group Lab Validation Sheet

Project/Client: COP/ELT

Project #: 140256277

Date of Validation: 3/19/12 Date of Analysis: 3/6/12 Sample Date: 2/22/12

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

Analytical Lab Used and Report # (if any): Pace Analytical 2510980

Circle or  
Highlight  
Yes/No  
below

1. Was the analysis the one requested?

Yes / No

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

Yes / No

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

Yes / No

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

Yes / No

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

Yes / No

6. Are the units correct? (i.e., soil samples in mg/kg or ug/g, water samples mg/L, ug/L, and air samples in volume mg/m<sup>3</sup>, etc.)

Yes / No

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

Yes / No

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

Yes / No N/a

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

Yes /  No

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

Yes / No

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

Yes / No

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

9. Matrix spike recovery exceeded QC limits for MTBE and TBA. Batch accepted based on laboratory control sample (LCS) recovery.

*Quarterly Summary Report, First Quarter 2012*  
*76 Service Station No. 6277*  
*San Leandro, CA*  
*Antea Group Project No. I40256277*



## ***Appendix E***

Waste Manifest



# NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <i>n/a</i>	Manifest Document No. <i>2502770112</i>	2. Page 1 of <i>1</i>
3. Generator's Name and Mailing Address <i>Platinum Energy c/o Shane Nolan 30343 Capwood #300 Hesperia Hills, CA 91301</i>		Site # <i>250277</i> <i>15803 East 14th Street San Leandro, CA 94577</i>		
4. Generator's Phone <i>(818) 200-5705</i>	6. US EPA ID Number _____	A. State Transporter's ID _____		
5. Transporter 1 Company Name <i>Blaine Tech Services</i>	8. US EPA ID Number _____	B. Transporter 1 Phone <i>310-885-4455</i>		
7. Transporter 2 Company Name _____	10. US EPA ID Number _____	C. State Transporter's ID _____		
9. Designated Facility Name and Site Address <i>Seaport Environmental 700 Seaport Blvd. Redwood City, CA 94063</i>	11. WASTE DESCRIPTION	D. Transporter 2 Phone _____		
		E. State Facility's ID _____		
		F. Facility's Phone <i>650-314-1024</i>		
		12. Containers	13. Total Quantity	14. Unit Wt./Vol.
		No.	Type	
a. <i>Non hazardous waste liquid</i>		<i>1</i>	<i>TR</i>	<i>25</i> <i>6</i>
b.				
c.				
d.				
G. Additional Descriptions for Materials Listed Above		H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information <i>Wear protective equipment while handling Weights and volumes are approximate 24hr emergency phone No (310) 885-4455</i>				
<i>Approval No 500-1049 Direct bill Blaine Tech</i>				
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.				
Printed/Typed Name <i>(Antia Group) Jenilyn Mendes on behalf of Plat. Energy</i>		Signature <i>Jenilyn Mendes</i>	Date <i>12/16/11</i>	
17. Transporter 1 Acknowledgement of Receipt of Materials		Date		
Printed/Typed Name <i>COREY KIRKPATRICK</i>		Signature <i>[Signature]</i>	Month Day Year <i>2/22/12</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials		Date		
Printed/Typed Name		Signature	Month Day Year	
19. Discrepancy Indication Space				
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.				
Printed/Typed Name <i>Josquin D. Canoa</i>		Signature <i>[Signature]</i>	Date <i>03/06/12</i>	

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

