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

Subject: Semi-Annual Summary Report – January through June 2011

Site: 76 Service Station No. 5325
3220 Lakeshore Avenue
Oakland, California
Fuel Leak Case No. RO0000229

Dear Ms. Jakub;

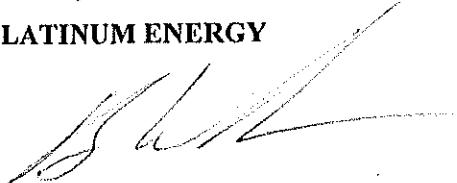
I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

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

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Agoura Hills, California 91301
Tel: (818) 206-5704
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Sincerely,

PLATINUM ENERGY



BRIAN WHALEN

Attachment

Semi-Annual Summary Report, January through June 2011

*76 Service Station No. 5325
3220 Lakeshore Avenue
Oakland, California*

*Alameda County Health Care Services
Agency
Fuel Leak Case No. RO0000229*

*San Francisco Bay Regional Water Quality
Control Board
No. 01-1588*

GeoTracker Global ID No. T0600101463

Antea Group Project No. I42705662

July 29, 2011

Prepared for:

Ms. Barbara J. Jakub, P.G.
Alameda County Environmental
Health
1131 Harbor Bay Parkway,
Suite 250
Alameda, CA 94502

Prepared by:

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- Attachment A Summary of Previous Environmental Investigations
- Attachment B Blaine Tech Services Groundwater Sampling Procedures
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- Attachment D Certified Laboratory Analytical Report and Data Validation Form

1.0 INTRODUCTION

Antea™Group (formerly Delta Consultants) is pleased to submit this *Semi-Annual Summary Report, January through June 2011* for the referenced site in Oakland, CA. The site is located on the southeast corner of the intersection of Lakeshore Avenue and Lake Park Avenue in Oakland, California (**Figure 1**). The site is bounded to the north by Lakeshore Avenue; to the west and southwest by Lake Park Avenue; to the southeast by a supermarket parking lot; and to the east by a pharmacy. Station facilities include service station building with one service bay, three fuel dispenser islands, and two 12,000-gallon double-wall fiberglass gasoline underground storage tanks (USTs) [**Figure 2**].

A summary of previous environmental investigations is presented as **Attachment A**. Blaine Tech's procedures for groundwater monitoring, sampling, and equipment decontamination are presented as **Attachment B**. Groundwater monitoring and sampling field data sheets are presented as **Attachment C**. The groundwater sampling certified analytical report and chain-of-custody documentation are presented as **Attachment D**.

Site summary data has been tabled in the following:

- **Table 1** summarizes the current groundwater gauging and analytical data.
- **Table 2** summarizes the historical groundwater gauging and analytical data.
- **Table 3** summarizes the historical groundwater gradient and flow directions.

This report summarizes the groundwater data collected to date, focusing on the most recent analytical data obtained from groundwater samples collected on June 3, 2011. This report has received a technical review by Mr. Dennis S. Dettloff, California Professional Geologist No.7480.

1.1 Work Performed: January through June 2011

1. Blaine Tech Services, Inc. (Blaine Tech) conducted the quarterly groundwater sampling event on June 3, 2011.
2. Antea Group prepared and submitted the *Semi-Annual Summary Report, July through December 2010, dated January 31, 2011*.

1.2 Work Proposed: July through December 2011

1. Antea Group will prepare and submit the *Semi-Annual Summary Report, January through June 2011*, contained herein.
2. Blaine Tech will conduct the quarterly groundwater monitoring and sampling in the fourth quarter 2011.

3. Antea Group will conduct a utility survey to locate underground utilities on the site and in the surrounding street.
4. Antea Group will submit a site summary report detailing the findings of the utility survey and evaluating the results of nitrate, sulfate, acetone, chloride, metals, etc monitoring and proposing changes to the groundwater sampling and monitoring scheme as needed.

2.0 CURRENT PROJECT STATUS

Current phase of project:	Semi-Annual Groundwater Monitoring
Local Oversight Program (LOP) – Lead agency for cleanup oversight:	Alameda County Health Care Services Agency (ACHCSA) Fuel Leak Case No. RO0000229
Contact:	Ms. Barbara Jakub
Secondary agency for cleanup oversight	San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) No. 01-1588
Monitoring well gauging schedule:	Semi-annually: U-1 through U-6 (second and fourth quarters)
Monitoring well sampling schedule:	Semi-annually: U-1 through U-6 (second and fourth quarters)
Total number of monitoring wells:	6
Range of well depths (total depth below ground surface, bgs):	21.5 to 26.5 feet
Wells with historical measurable LNAPL (light non-aqueous phase liquid):	Yes
Generalized site geology:	Predominantly sandy silt, with sandy materials beginning at approximately 6-10 feet below ground surface (bgs)
Historical Depth to Water Range, in feet below top of casing (BTOC):	Min: 2.71 (U-6, Q3 2007) Max: 12.81 (MW-6, Q3 1994)
Historical Groundwater Elevation Range, in feet above mean sea level:	Min: -5.67 (U-6, Q3 2004) Max: 4.89 (U-4, Q1 2006)
Local Receptors:	Lake Merrit is 0.3 miles southwest of the site
Current Remediation Technique:	None

2.1 Regulatory Correspondence

In a letter dated June 2, 2011, Ms. Barbara Jakub of the ACHCSA requested a report with technical comments about a preferential pathway study, bioattenuation and metals groundwater analysis, and site review.

2.2 Remediation Status

During the June 2011 groundwater sampling event, Blaine Tech, at the request of Antea Group, collected groundwater samples from monitoring wells U-1, U-2, and U-4 for additional analysis. These additional analyses were preformed to better assess the groundwater chemistry beneath the site. The data from these analyses are

currently being evaluated to assess remedial options to reduce the petroleum hydrocarbon impacted groundwater beneath the site.

2.3 Groundwater Monitoring

Semi-annual groundwater monitoring and sampling was conducted at the site on June 3, 2011 by Blaine Tech per standard sampling protocol (**Attachment B**). A total of six monitoring wells were gauged and sampled. A copy of Blaine Tech's field notes are presented as **Attachment C**. Measured depths to groundwater and respective groundwater elevations are summarized in **Table 1**. Depth to water was measured to within 0.01 feet BTOC in monitoring wells U-1 through U-6 using a water level indicator. Historic laboratory analytical results are summarized in **Table 2**. Gauging and sampling data from the most recent monitoring and sampling event are summarized below.

Well gauging and sampling date:	June 3, 2011
Wells gauged:	U-1 through U-6
Wells sampled:	U-1 through U-6
Purge method:	3 well casing volumes via electric, submersible pump
Sample collection method:	Disposable bailers
Groundwater parameters measured (Attachment C):	Dissolved oxygen (DO), temperature, conductivity, pH, oxidation-reduction potential (ORP), and turbidity
Wells with measurable LNAPL:	None
Depth to Water Range (ft BTOC):	5.12 (U-2) to 10.54 (U-3)
Groundwater Elevation Range (ft above mean sea level):	0.44 (U-3) to 3.13 (U-4)
Change in depth to water from previous event (average change for all gauged wells):	1.79 increase
Groundwater Flow Direction and Gradient in foot per foot (ft/ft):	Northeast at 0.03 ft/ft and southwest at 0.05 ft/ft

All monitoring and sampling activities for the site were conducted on June 3, 2011 by Blaine Tech and reviewed and certified by a California Professional Geologist.

2.3.1 Groundwater Sample Analysis

Groundwater samples collected from monitoring wells U-1 through U-6 were submitted with chain-of-custody documentation to Pace Analytical Services, Inc. (Pace) in Seattle, WA, a California state-certified laboratory (No. 01153CA). Groundwater samples were analyzed for the following:

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

In addition, samples were collected from monitoring wells U-1, U-2, and U-4 and analyzed for the following:

- Antimony, arsenic, barium, beryllium, cadmium, cobalt, iron, lead, manganese, molybdenum, nickel, selenium, Silver, thallium, vanadium, and zinc by EPA Method 6010,
- Mercury by EPA Method 7470,
- Ferric and ferrous iron by Standard Method (SM) 3500,
- 5 day biological oxygen demand (BOD) by SM 5210B,
- Chloride and sulfate by EPA Method 300.0,
- Total kjeldahl nitrogen (TKN) by EPA Method 351.2,
- NO₂/NO₃ by EPA Method 353.2, chemical oxygen demand (COD) by EPA Method 410.4, and
- Nitrite by SM 4500-NO₂.

2.3.2 Groundwater Quality Data

Groundwater analytical results are tabulated in **Table 1** (current) and **Table 2** (historical). During the June 2011 sampling event, the following ranges of contaminant concentrations were reported in the specified site monitoring wells (only the constituents above the laboratory's indicated reporting limits are shown):

Constituents	Number of Reported Concentrations Above LRL of Total Samples Analyzed	Minimum Reported Concentration, in µg/L (Sample ID)	Maximum Reported Concentration, in µg/L (Sample ID)
TPHg	3 of 6	85 (U-5)	6,490 (U-1)
Benzene	0 of 6	<0.50	<0.50
MTBE	4 of 4	0.73 (U-3)	33.8 (U-2)

Key: LRL = Laboratory reporting limits; µg/L = Micrograms per liter

2.3.3 Contaminants of Concern

TPHg: TPHg was above the laboratory's indicated reporting limits in the groundwater samples collected and submitted for analysis from monitoring wells U-1 (6,490 µg/L), U-2 (3,280 µg/L), and U-5 (85.0 µg/L) during the current event (**Figure 4**).

Benzene: Benzene was below the laboratory's indicated reporting limit in the groundwater samples collected and submitted for analysis from each of the six monitoring wells.

MTBE: MTBE was above the laboratory's indicated reporting limits in the groundwater samples collected and submitted for analysis from monitoring wells U-1 (6.1 µg/L), U-2 (33.8 µg/L), U-4 (0.73 µg/L) and U-5 (3.0 µg/L) during the current event (**Figure 5**).

In addition, ethylbenzene was present in the groundwater samples collected and submitted for analysis from monitoring wells U-1 (1.2 µg/L) and U-2 (7.1 µg/L); and TBA was present in the groundwater samples collected and submitted for analysis from monitoring wells U-1 (880 µg/L), U-2 (1,310 µg/L), and U-5 (61.6 µg/L). All other constituents tested were below the laboratory's indicated reporting limits in the groundwater samples collected and submitted for analysis during the current event. The June 3, 2011 groundwater analytical results and historical

groundwater monitoring and analytical results are presented in **Table 1**. Pace Laboratory's analytical report and chain-of-custody documentation are presented as **Attachment D**.

The June 2011 groundwater elevation contour map is presented as **Figure 3**. A dissolved phase TPHg iso-concentration map is presented as **Figure 4**. A dissolved phase MTBE iso-concentration map is presented as **Figure 5**. Historical groundwater flow directions are shown on a rose diagram, presented as **Figure 6**.

2.3.4 Waste Disposal Summary

Water generated during well sampling and equipment cleaning was temporarily stored by Blaine Tech in a 2000-gallon poly tank. After the batch process, the generated wastewater was transported for proper disposal at Seaport Environmental in Redwood City, California. The method of containment and disposal is reported in Blaine Tech's procedures for groundwater sampling in **Attachment B**.

2.3.5 Quality Assurance / Quality Control

Antea Group's QA/QC measures included use of a detailed QA/QC data validation check on the Pace laboratory analytical results for the June 2011 sampling event. Antea Group's laboratory data validation checklist and the Pace laboratory report are presented in **Attachment D**. A summary of QA/QC information follows.

Laboratory QA/QC Performed:	Yes (validated by Antea Group)
Laboratory Data Qualifiers:	One (M1)
Validity of Laboratory Data:	Data set is Valid

Data Qualifiers:

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

Petroleum hydrocarbon impacted soil has been adequately assessed vertically and laterally beneath the site. Petroleum hydrocarbon impacted groundwater has not been adequately delineated off-site to the north.

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:


Jonathan Fillingame

Staff Geologist

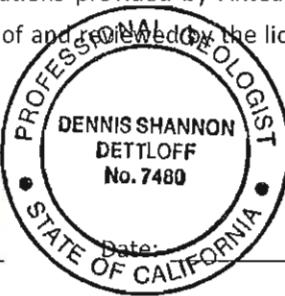
Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:


Dennis S. Dettloff, P.G.

Project Manager

California Registered Professional Geologist No. 7480

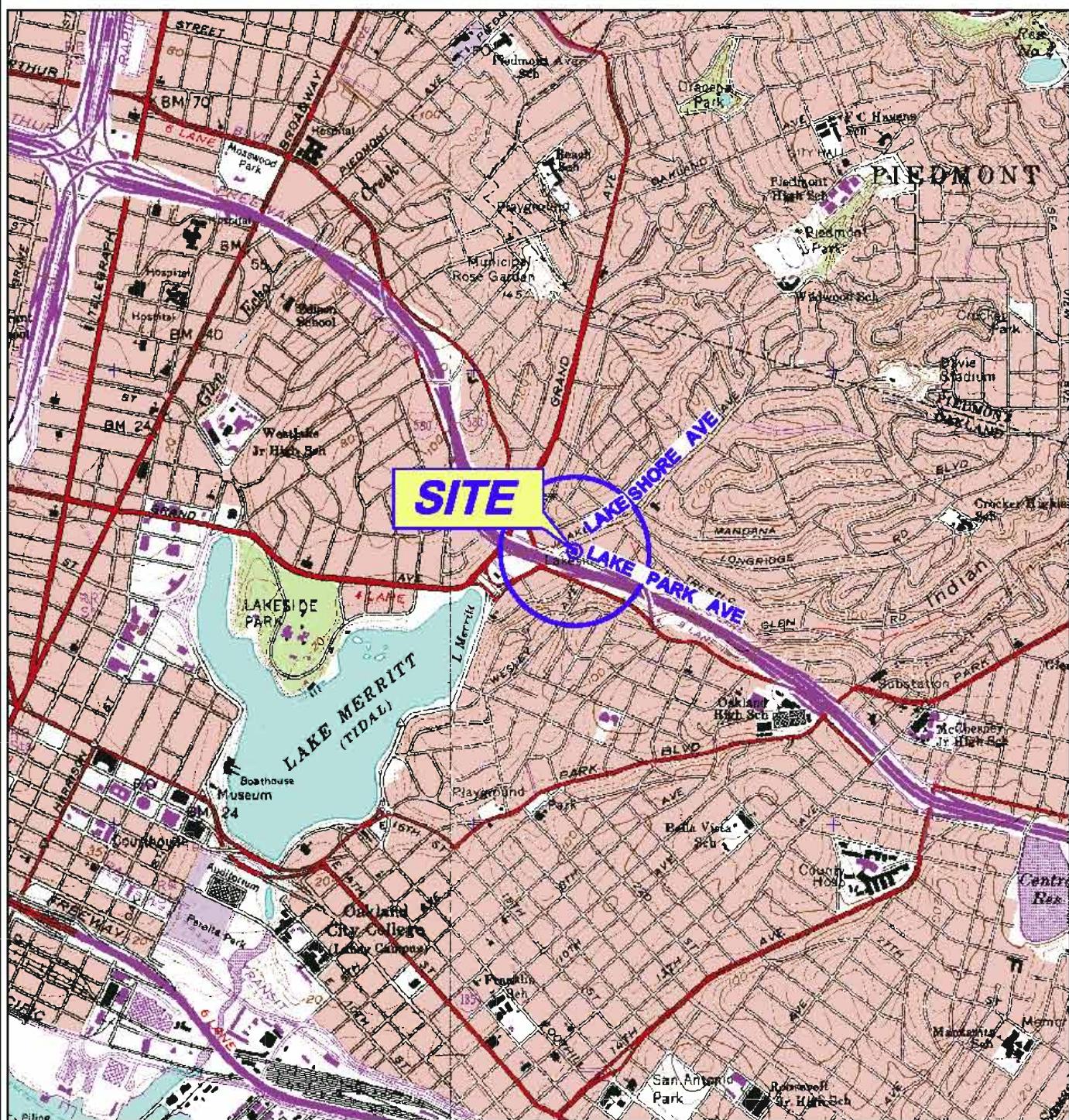


7/29/11

cc: Ms. Barbara Jakub, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Suite 250,
Alameda, CA 94502-6577.
GeoTracker (upload)

Figures

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GENERAL NOTES:
BASE MAP FROM 3-D TOPO QUADS
OAKLAND WEST & OAKLAND EAST, CA. QUADRANGLE
7.5 MINUTE TOPOGRAPHIC MAP

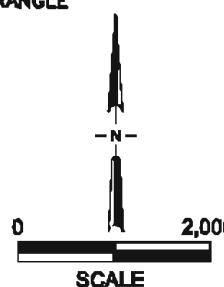
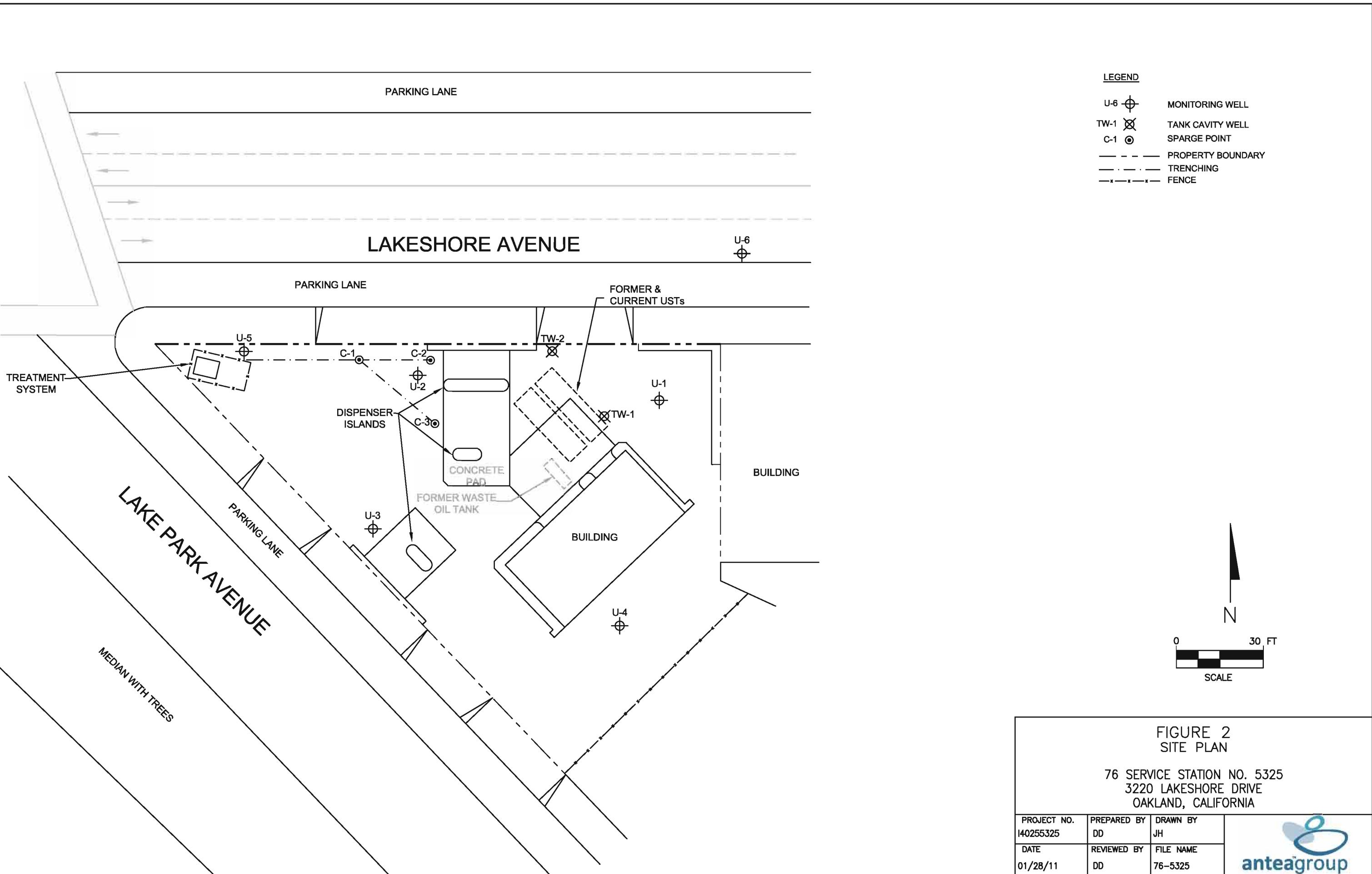


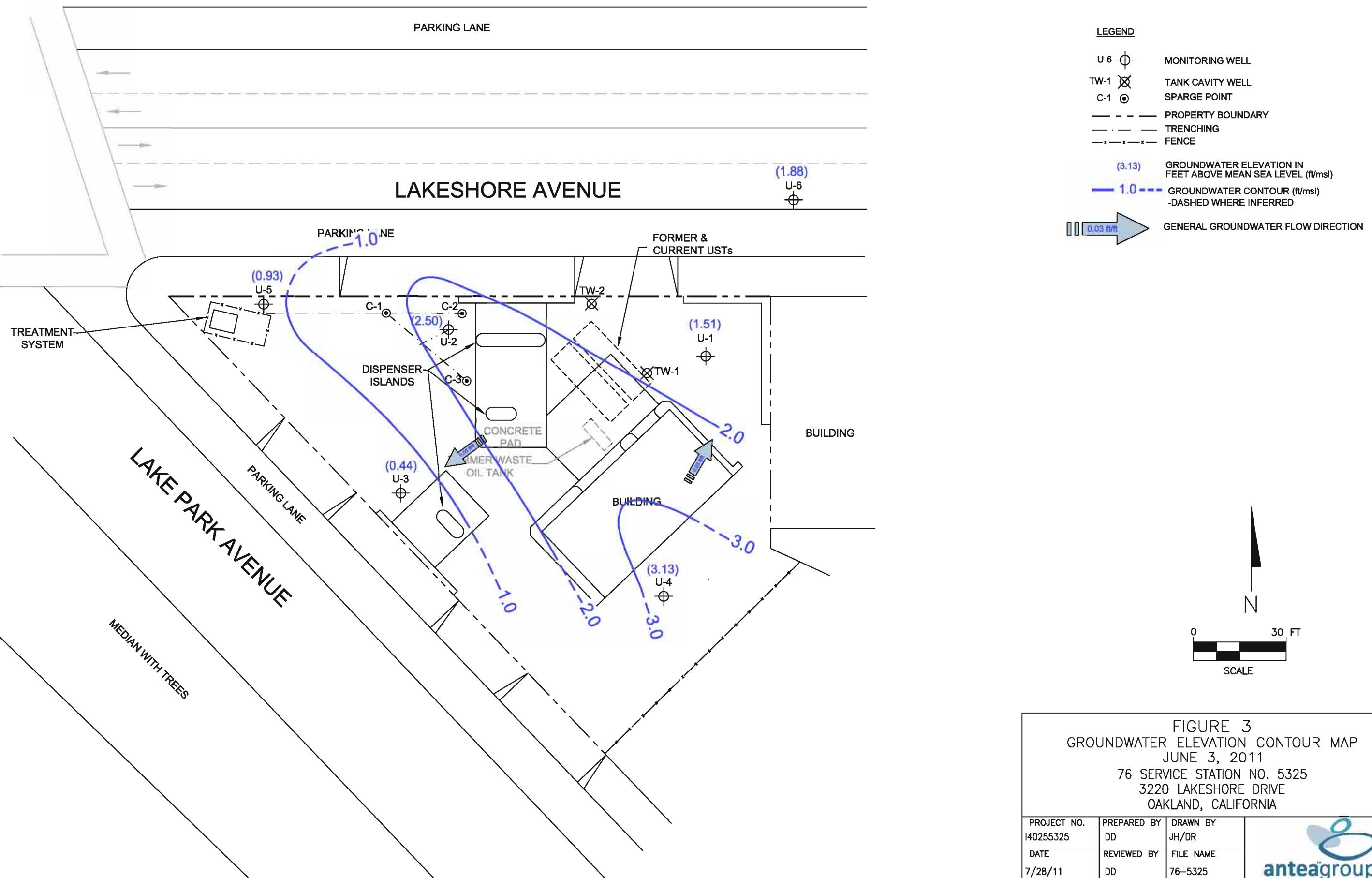
FIGURE 1
SITE LOCATION MAP

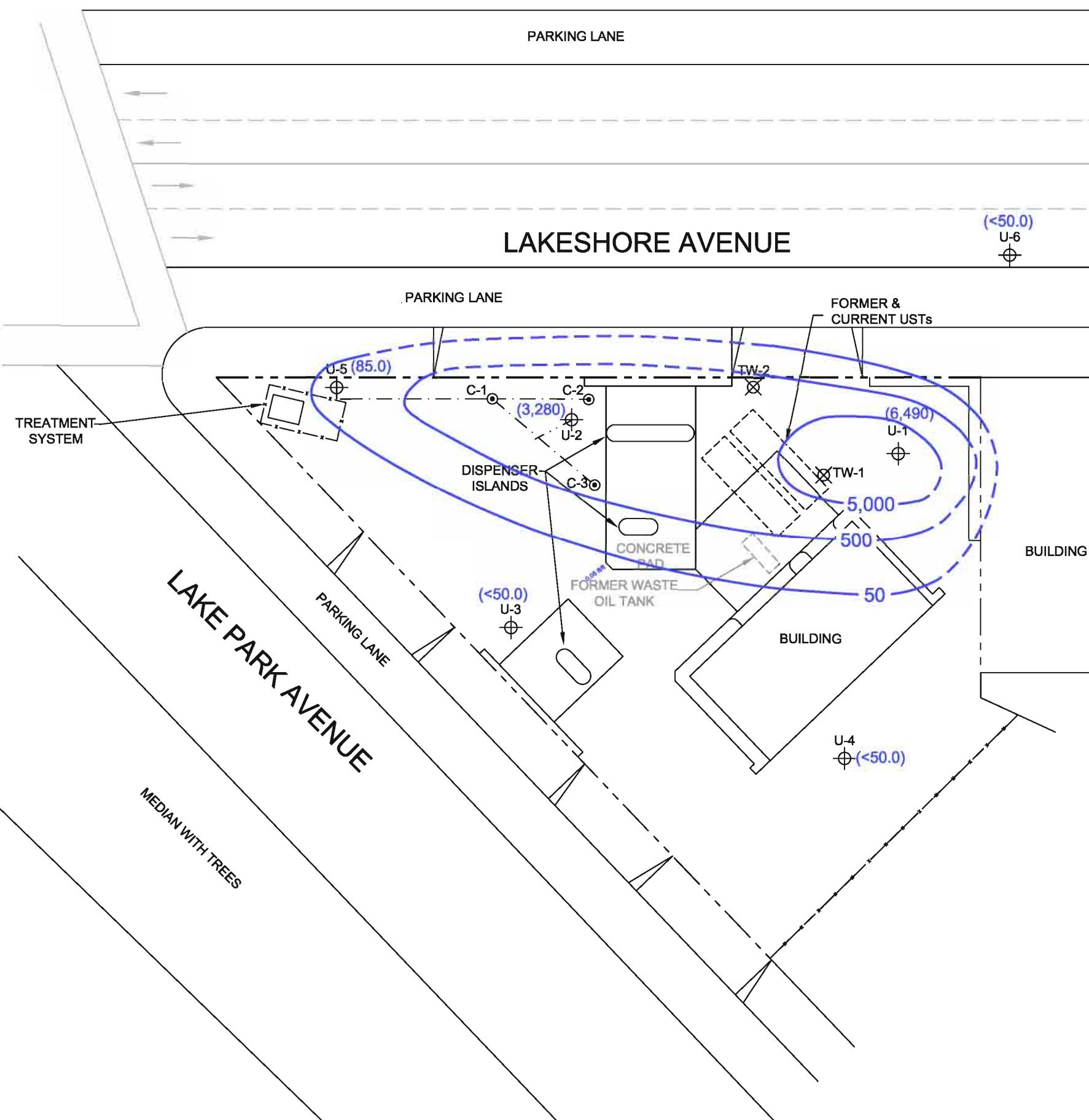
76 SERVICE STATION NO. 5325
3220 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 140255325	DRAWN BY JH	ANTEA GROUP
FILE NO. 5325-SLM	PREPARED BY EW	
DATE 28 JAN 11	REV. 2	
REVIEWED BY		









LEGEND

- U-6 MONITORING WELL
- TW-1 TANK CAVITY WELL
- C-1 SPARGE POINT
- PROPERTY BOUNDARY
- TRENCHING
- FENCE
- (6,490) DISSOLVED PHASE TPH-G CONCENTRATION ($\mu\text{g}/\text{L}$)
- 5,000 — DISSOLVED PHASE TPH-G ISOCONCENTRATION CONTOUR ($\mu\text{g}/\text{L}$) -DASHED WHERE INFERRED

NOTES:

TPH-G = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
 $\mu\text{g}/\text{L}$ = MICROGRAMS PER LITER
 <50 = LESS THAN LABORATORY INDICATED REPORTING LIMITS

N

0 30 FT
SCALE

FIGURE 4
 DISSOLVED PHASE TPH_G ISOCONCENTRATION MAP
 JUNE 3, 2011
 76 SERVICE STATION NO. 5325
 3220 LAKESHORE DRIVE
 OAKLAND, CALIFORNIA

PROJECT NO. I40255325	PREPARED BY DD	DRAWN BY JH/DR	
DATE 7/28/11	REVIEWED BY DD	FILE NAME 76-5325	

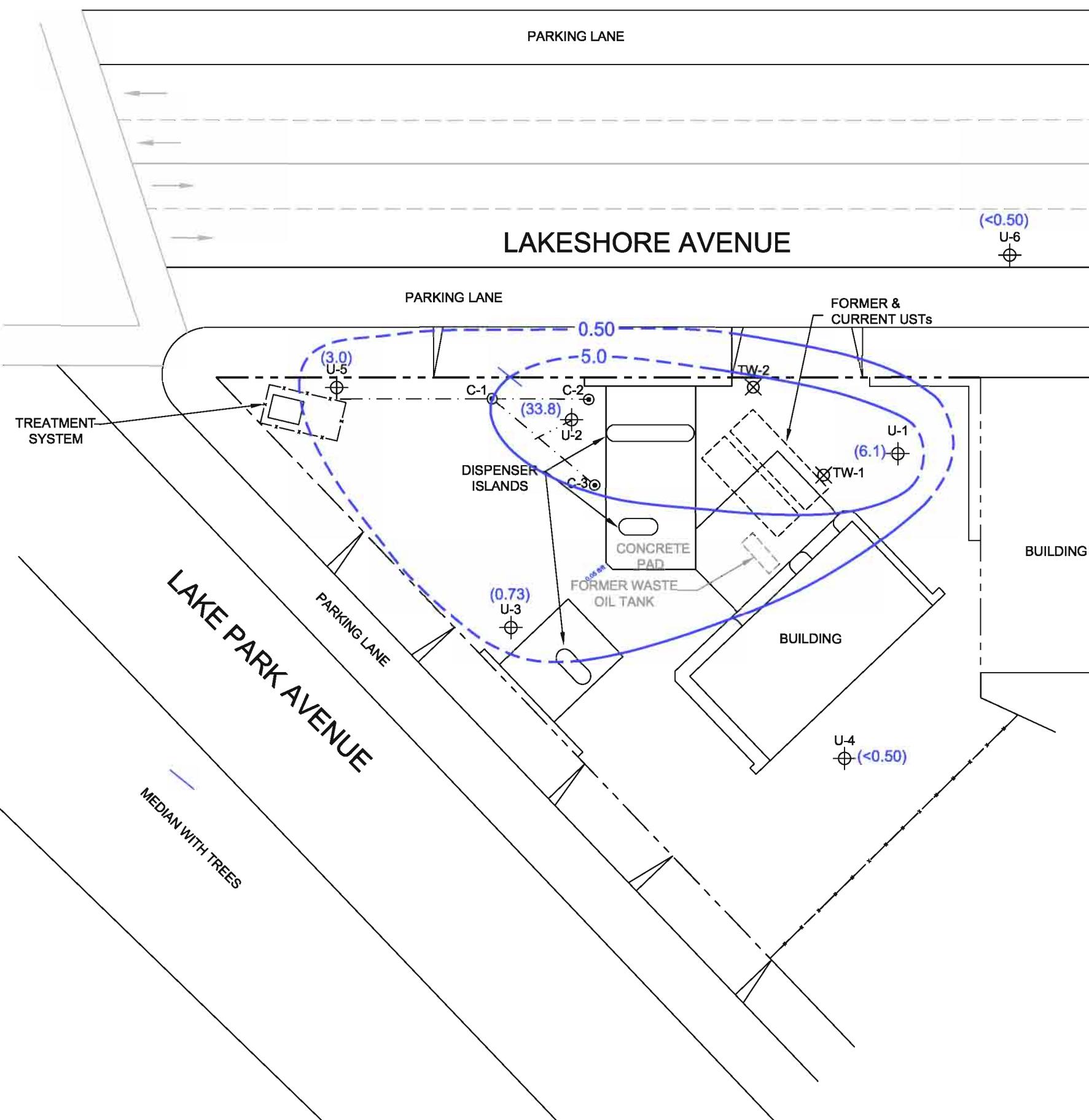
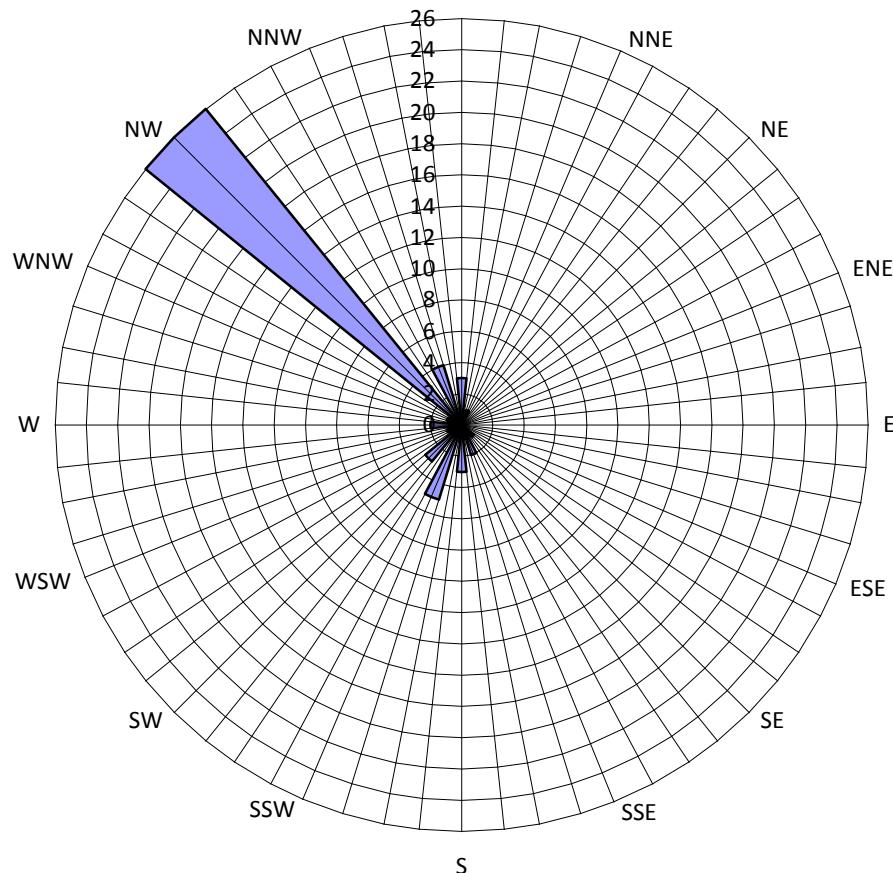


FIGURE 5
DISSOLVED PHASE MTBE ISOCONCENTRATION MAP
JUNE 3, 2011
76 SERVICE STATION NO. 5325
3220 LAKESHORE DRIVE
OAKLAND, CALIFORNIA

PROJECT NO. I40255325	PREPARED BY DD	DRAWN BY JH/DR	anteagroup
DATE 7/28/11	REVIEWED BY DD	FILE NAME 76-5325	

Figure 6
HISTORICAL GROUNDWATER FLOW DIRECTIONS
76 SERVICE STATION NO. 5325
3220 LAKESHORE AVENUE
OAKLAND, CALIFORNIA
N



Legend
Groundwater flow directions are based
on data from the Third Quarter 1990 to
the Second Quarter 2011. 52 data points
shown.

■ Groundwater Flow Direction

Tables

- | | |
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TABLE 1
CURRENT GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Service Station No. 5325
3200 LAKESHORE AVE
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)	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)
U-1	6/3/2011	8.46	6.95	NP	1.51	6,490	<0.50	<0.50	1.2	<1.5	6.1	<0.50	<0.50	<0.50	880	<250	<1.0	<1.0
U-2	6/3/2011	7.62	5.12	NP	2.50	3,280	<0.50	<0.50	7.1	<1.5	33.8	<0.50	<0.50	<0.50	1,310	<250	<1.0	<1.0
U-3	6/3/2011	10.98	10.54	NP	0.44	<50.0	<0.50	<0.50	<0.50	<1.5	0.73	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
U-4	6/3/2011	11.15	8.02	NP	3.13	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50	<0.50	<5.0	<250	<1.0	<1.0
U-5	6/3/2011	6.98	6.05	NP	0.93	85.0	<0.50	<0.50	<0.50	<1.5	3.0	<0.50	<0.50	<0.50	61.6	<250	<1.0	<1.0
U-6	6/3/2011	7.14	5.26	NP	1.88	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50	<0.50	<5.0	<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:
Bold - above laboratory's indicated reporting limit

< - Not detected at or above indicated laboratory reporting limit

ug/L - micrograms/liter

TPHg- Total Petroleum Hydrocarbon 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 1a
ADDITIONAL CURRENT GROUNDWATER ANALYTICAL DATA
76 Service Station No. 5325
3200 LAKESHORE AVE
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA																	
		Acetone (ug/L)	Antimony SW6010 D (ug/L)	Antimony SW6010 T (ug/L)	Arsenic SW6010 D (ug/L)	Arsenic SW6010 T (ug/L)	Barium SW6010 D (ug/L)	Barium SW6010 T (ug/L)	Beryllium SW6010 D (ug/L)	Beryllium SW6010 T (ug/L)	Biochemical Oxygen Demand (ug/L)	Cadmium SW6010 D (ug/L)	Cadmium SW6010 T (ug/L)	Chemical Oxygen Demand (ug/L)	Chloride (ug/L)	Cobalt SW6010 D (ug/L)	Cobalt SW6010 T (ug/L)	Iron SW6010 T (ug/L)	Iron, Ferric (ug/L)
U-1	6/3/2011	<5.0	<60.0	<60.0	44.0	44.0	224	224	<5.0	<5.0	19,600	<5.0	<5.0	40,400	40,700	<50.0	<50.0	27,100	24,700
U-2	6/3/2011	<5.0	<60.0	<60.0	64.4	64.4	190	190	<5.0	<5.0	<2000	<5.0	<5.0	65,600	57,700	<50.0	<50.0	10,900	8,700
U-3	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
U-4	6/3/2011	<5.0	<60.0	<60.0	<20.0	<20.0	<100	<100	<5.0	<5.0	11,500	<5.0	<5.0	9,530	40,600	<50.0	<50.0	<100	<100
U-5	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
U-6	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Analytical Notes:

Bold - above laboratory's indicated reporting limit

< - Not detected at or above indicated laboratory reporting limit

ug/L - micrograms/liter

TABLE 1b
ADDITIONAL CURRENT GROUNDWATER ANALYTICAL DATA
76 Service Station No. 5325
3200 LAKESHORE AVE
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA													
		Iron, Ferrous A3500D (ug/L)	Lead SW6010 D (ug/L)	Lead SW6010 T (ug/L)	Manganese SW6010 D (ug/L)	Manganese SW6010 T (ug/L)	Mercury SW7470A D (ug/L)	Mercury SW7470A T (ug/L)	Molybdenum SW6010 D (ug/L)	Molybdenum SW6010 T (ug/L)	Nickel SW6010 D (ug/L)	Nickel SW6010 T (ug/L)	Nitrate as N (ug/L)	Nitrite as N (ug/L)	Nitrogen, NO2 plus NO3 (ug/L)
U-1	6/3/2011	2,400	<10.0	<10.0	2,920	2,920	<0.20	<0.20	<20.0	<20.0	<40.0	<40.0	52.0	<10	60.2
U-2	6/3/2011	2,200	<10.0	<10.0	4,990	4,990	<0.20	<0.20	34.5	34.5	<40.0	<40.0	<50.0	<10	<50.0
U-3	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U-4	6/3/2011	200	<10.0	<10.0	<15.0	<15.0	<0.20	<0.20	<20.0	<20.0	<40.0	<40.0	4,280	<10	4,280
U-5	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U-6	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analytical Notes:

Bold - above laboratory's indicated reporting limit

< - Not detected at or above indicated laboratory reporting limit

mg/L - milligrams per liter

MILLIVOLTS - millivolts

ug/L - micrograms/liter

TABLE 1c
 ADDITIONAL CURRENT GROUNDWATER ANALYTICAL DATA
 76 Service Station No. 5325
 3200 LAKESHORE AVE
 OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA										
		Selenium SW6010 D (ug/L)	Selenium SW6010 T (ug/L)	Silver SW6010 D (ug/L)	Silver SW6010 T (ug/L)	Sulfate (ug/L)	Thallium SW6010 D (ug/L)	Thallium SW6010 T (ug/L)	Vanadium SW6010 D (ug/L)	Vanadium SW6010 T (ug/L)	Zinc SW6010 D (ug/L)	Zinc SW6010 T (ug/L)
U-1	6/3/2011	<10.0	<10.0	<10.0	<10.0	<1000	<20.0	<20.0	<50.0	<50.0	<40.0	<40.0
U-2	6/3/2011	<10.0	<10.0	<10.0	<10.0	29,400	<20.0	<20.0	<50.0	<50.0	<40.0	<40.0
U-3	6/3/2011	--	--	--	--	--	--	--	--	--	--	--
U-4	6/3/2011	<10.0	<10.0	<10.0	<10.0	79,300	<20.0	<20.0	<50.0	<50.0	<40.0	<40.0
U-5	6/3/2011	--	--	--	--	--	--	--	--	--	--	--
U-6	6/3/2011	--	--	--	--	--	--	--	--	--	--	--

Analytical Notes:

Bold - above laboratory's indicated reporting limit
 < - Not detected at or above indicated laboratory reporting limit
 mg/L - milligrams per liter
 ug/L - micrograms/liter

TABLE 2
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Service Station No. 5325
3200 LAKESHORE AVE
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)	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)

* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)

NG - Not gauged

WI - Well Inaccessible

NSVD - Not surveyed

DRY - Well is dry

-- - No information available

ug/L - micrograms/liter

WI - Well Inaccessible

TPHg- Total Petroleum Hydrocarbon 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 2a
ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
76 Service Station No. 5325
3200 LAKESHORE AVE
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA																			
		Acenaphthylene (ug/L)	Acetone (ug/L)	Alkalinity, Total as CaCO3 (ug/L)	Antimony SW6010 D (ug/L)	Antimony SW6010 T (ug/L)	Arsenic SW6010 D (ug/L)	Arsenic SW6010 T (ug/L)	Barium SW6010 D (ug/L)	Barium SW6010 T (ug/L)	Beryllium SW6010 D (ug/L)	Beryllium SW6010 T (ug/L)	Biochemical Oxygen Demand (ug/L)	Cadmium SW6010 D (ug/L)	Cadmium SW6010 T (ug/L)	Chemical Oxygen Demand (ug/L)	Chloride (ug/L)	Cobalt SW6010 D (ug/L)	Cobalt SW6010 T (ug/L)	Iron SW6010 T (ug/L)	Iron, Ferric (ug/L)
U-1	6/30/2010	--	<5.0	--	<60.0	<60.0	52.5	52.5	293	293	<5.0	<5.0	23,400	<5.0	<5.0	113,000	43,800	<50.0	<50.0	27,700	23,700
	12/20/2010	--	<5.0	371,000	<60.0	<60.0	32.5	32.5	237	237	<5.0	<5.0	16,700	<5.0	<5.0	41,000	46,000	<50.0	<50.0	10,600	7,000
	6/3/2011	--	<5.0	--	<60.0	<60.0	44.0	44.0	224	224	<5.0	<5.0	19,600	<5.0	<5.0	40,400	40,700	<50.0	<50.0	27,100	24,700
U-2	6/30/2010	--	29.5	--	<60.0	<60.0	100	100	264	264	<5.0	<5.0	12,300	<5.0	<5.0	62,100	74,000	<50.0	<50.0	5,760	2,560
	12/20/2010	--	13.5	754,000	<60.0	<60.0	46.4	46.4	209	209	<5.0	<5.0	17,300	<5.0	<5.0	65,500	61,400	<50.0	<50.0	3,710	<100
	6/3/2011	--	<5.0	--	<60.0	<60.0	64.4	64.4	190	190	<5.0	<5.0	<2000	<5.0	<5.0	65,600	57,700	<50.0	<50.0	10,900	8,700
U-3	9/27/2000	307	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/30/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	952	--	
	12/20/2010	--	--	312,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	812	--	
	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
U-4	6/30/2010	--	<5.0	--	<60.0	<60.0	<10.0	<10.0	<100	<100	<5.0	<5.0	<2000	<5.0	<5.0	<5000	41,100	<50.0	<50.0	395	395
	12/20/2010	--	<5.0	352,000	<60.0	<60.0	<20.0	<20.0	<100	<100	<5.0	<5.0	<2000	<5.0	<5.0	9,090	43,500	<50.0	<50.0	118	118
	6/3/2011	--	<5.0	--	<60.0	<60.0	<20.0	<20.0	<100	<100	<5.0	<5.0	11,500	<5.0	<5.0	9,530	40,600	<50.0	<50.0	<100	<100
U-5	6/30/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6,650	--	
	12/20/2010	--	--	319,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7,160	--	
	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
U-6	6/30/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	566,000	--	
	12/20/2010	--	--	87,800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28,500	--	
	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

Analytical Notes:

< - Not detected at or above indicated laboratory reporting limit

DRY - Well was Dry; sample could not be taken

LPH - Liquid Phase Hydrocarbons

ug/L - micrograms/liter

TABLE 2b
ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
76 Service Station No. 5325
3200 LAKESHORE AVE
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA																			
		Iron, Ferrous A3500D (ug/L)	Lead SW6010 D (ug/L)	Lead SW6010 T (ug/L)	Manganese SW6010 D (ug/L)	Manganese SW6010 T (ug/L)	Mercury SW7470A D (ug/L)	Mercury SW7470A T (ug/L)	Molybdenum SW6010 D (ug/L)	Molybdenum SW6010 T (ug/L)	Nickel SW6010 D (ug/L)	Nickel SW6010 T (ug/L)	Nitrate as N (ug/L)	Nitrite as N (ug/L)	Nitrogen (ug/L)	Nitrogen, NO2 plus NO3 (ug/L)	Oxidation Reduction Potential FIELD_PostPurge (MILLIVOLTS)	Oxidation Reduction Potential FIELD_PrePurge (MILLIVOLTS)	Oxygen, Dissolved FIELD_PostPurge (mg/L)	Oxygen, Dissolved FIELD_PrePurge (mg/L)	Phosphate (mg/L)
	12/21/2006	11000	--	--	--	--	--	--	--	--	--	--	360	--	--	--	--	--	--	--	
	3/28/2007	<100	--	--	--	--	--	--	--	--	--	--	550	--	--	--	--	--	--	--	
	6/27/2007	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	
	9/26/2007	<100	--	--	--	--	--	--	--	--	--	--	410	--	--	--	--	--	--	--	--
	12/27/2007	7700	--	--	--	--	--	--	--	--	--	--	<100	--	--	--	--	--	--	--	--
	3/26/2008	19000	--	--	--	--	--	--	--	--	--	--	<100	--	--	--	--	--	--	--	--
	6/18/2008	2100000	--	--	--	--	--	--	--	--	--	--	<100	--	--	--	--	--	--	--	--
	9/24/2008	220000	--	--	--	--	--	--	--	--	--	--	<100	--	--	--	--	--	--	--	--
	12/22/2008	290000	--	--	--	--	--	--	--	--	--	--	<100	--	--	--	--	--	--	--	--
	3/26/2009	540000	--	--	--	--	--	--	--	--	--	--	<100	--	--	--	--	--	--	--	--
	6/23/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/3/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/28/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	--	--	--	--	--	--	--	--	--	--	--	--	44.3	--	308	--	--	--	--	--
	12/20/2010	--	--	--	--	--	--	--	--	--	--	--	486	33.4	--	520	--	--	--	--	--
	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analytical Notes:

< - Not detected at or above indicated laboratory reporting limit

DRY - Well was Dry; sample could not be taken

LPH - Liquid Phase Hydrocarbons

MG/L - milligrams per liter

MILLIVOLTS - millivolts

ND - Not detected, and detection limit is not known

ug/L - micrograms/liter

WI - Well Inaccessible

TABLE 2c
ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
76 Service Station No. 5325
3200 LAKESHORE AVE
OAKLAND, CALIFORNIA



TABLE 2c
ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
76 Service Station No. 5325
3200 LAKESHORE AVE
OAKLAND, CALIFORNIA



TABLE 2c
ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
76 Service Station No. 5325
3200 LAKESHORE AVE
OAKLAND, CALIFORNIA



TABLE 2c
ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
76 Service Station No. 5325
3200 LAKESHORE AVE
OAKLAND, CALIFORNIA



Well I.D.	Date	GROUNDWATER ANALYTICAL DATA											
		Phosphate, Ortho (mg/L)	Selenium SW6010 D (ug/L)	Selenium SW6010 T (ug/L)	Silver SW6010 D (ug/L)	Silver SW6010 T (ug/L)	Sulfate (ug/L)	Thallium SW6010 D (ug/L)	Thallium SW6010 T (ug/L)	Vanadium SW6010 D (ug/L)	Vanadium SW6010 T (ug/L)	Zinc SW6010 D (ug/L)	Zinc SW6010 T (ug/L)
U-6	3/30/2004	<1.0	--	--	--	--	--	--	--	--	--	--	--
	6/7/2004	<0.20	--	--	--	--	--	--	--	--	--	--	--
	9/9/2004	3.8	--	--	--	--	--	--	--	--	--	--	--
	12/20/2004	<1.0	--	--	--	--	--	--	--	--	--	--	--
	3/28/2005	<1.0	--	--	--	--	--	--	--	--	--	--	--
	6/14/2005	<1.0	--	--	--	--	--	--	--	--	--	--	--
	9/28/2005	3.4	--	--	--	--	--	--	--	--	--	--	--
	12/29/2005	<0.050	--	--	--	--	--	--	--	--	--	--	--
	3/27/2006	0.19	--	--	--	--	--	--	--	--	--	--	--
	6/12/2006	<0.050	--	--	--	--	--	--	--	--	--	--	--
	9/21/2006	0.31	--	--	--	--	--	--	--	--	--	--	--
	12/21/2006	0.41	--	--	--	--	--	--	--	--	--	--	--
	3/28/2007	0.31	--	--	--	--	--	--	--	--	--	--	--
	6/27/2007	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	9/26/2007	0.34	--	--	--	--	--	--	--	--	--	--	--
	12/27/2007	1.0	--	--	--	--	--	--	--	--	--	--	--
	3/26/2008	1.2	--	--	--	--	--	--	--	--	--	--	--
	6/18/2008	0.076	--	--	--	--	--	--	--	--	--	--	--
	9/24/2008	0.28	--	--	--	--	--	--	--	--	--	--	--
	12/22/2008	0.39	--	--	--	--	--	--	--	--	--	--	--
	3/26/2009	0.28	--	--	--	--	--	--	--	--	--	--	--
	6/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	12/3/2009	--	--	--	--	--	--	--	--	--	--	--	--
	6/28/2010	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2010	--	--	--	--	--	10100	--	--	--	--	--	--
	12/20/2010	--	--	--	--	--	12400	--	--	--	--	--	--
	6/3/2011	--	--	--	--	--	--	--	--	--	--	--	--

Analytical Notes:

< - Not detected at or above indicated laboratory reporting limit

DRY - Well was Dry; sample could not be taken

LPH - Liquid Phase Hydrocarbons

mg/L - milligrams per liter

ug/L - micrograms/liter

WI - Well Inaccessible

TABLE 3
Historical Groundwater Gradient and Flow Directions
76 Service Station No. 5325
3220 Lakeshore Avenue
Oakland, CA

TABLE 3
Historical Groundwater Gradient and Flow Directions
76 Service Station No. 5325
3220 Lakeshore Avenue
Oakland, CA

TABLE 3
Historical Groundwater Gradient and Flow Directions

76 Service Station No. 5325
 3220 Lakeshore Avenue
 Oakland, CA

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		
5325	6/14/2005	0.0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
	9/28/2005	0.0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
	12/29/2005	0.0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
	3/27/2006	0.0250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
	6/12/2006	0.0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
	9/21/2006	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12/21/2006	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3/28/2007	0.0100	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0		
	6/27/2007	0.0300	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0		
	9/26/2007	0.0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
	12/27/2007	0.0200	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0		
	3/6/2008	0.0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
	6/18/2008	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9/24/2008	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12/22/2008	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3/26/2009	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6/23/2009	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12/3/2009	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6/28/2009	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6/28/2010	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12/20/2010	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6/3/2011	Varies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			0.024	Average	3	1	0	0	0	0	1	2	3	5	3	1	2	1	26	4

Explanation

NA = Not available

Number of Events = 77

Semi-Annual Summary Report, January through June 2011

76 Service Station No. 5325

Oakland, CA

Antea Group Project No. I40255325



Attachment A

Summary of Previous Environmental Investigations

SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATIONS

May 1990 Three exploratory soil borings were advanced adjacent to the UST complex to depths ranging from 10 to 12.5 feet below ground surface (bgs). Soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and benzene, toluene, ethylbenzene, and xylenes (BTEX). The samples contained TPH-G concentrations ranging from 2 to 7,500 parts per million (ppm) and benzene concentrations ranging from 0.14 to 13 ppm.

June 1990 Two 10,000-gallon gasoline USTs, one 550-gallon waste oil UST, and related product dispensers were replaced. Soil samples from the UST excavation sidewalls and bottom and product line trenches were reported to contain TPH-G and benzene at concentrations ranging from 12 to 2,800 ppm and 0.008 to 11 ppm, respectively. Approximately 250 cubic yards of soil and backfill material were aerated onsite to reduce concentrations to below 100 ppm TPH-G, then transported to an appropriate soil disposal facility. Groundwater was encountered at approximately 7.5 feet bgs.

September 1990 Monitoring wells U-1, U-2, and U-3 were installed. TPH-G was detected in soil samples collected from the capillary fringe in well borings U-1 and U-2 at levels of 110 and 480 ppm, respectively. Benzene was detected in the soil sample from well boring U-1 at a level of 4.5 ppm. Petroleum hydrocarbons were not detected in soil or groundwater samples from U-3. Groundwater samples collected from wells U-1 and U-2 were reported to contain 690 and 38 parts per billion (ppb) TPH-G and 780 and 27 ppb benzene, respectively.

June 1990 Monitoring wells U-4, U-5, and U-6 were installed. TPH-G and benzene were detected in the capillary fringe soil sample collected from boring U-5 at levels of 400 ppm and 1.9 ppm, respectively. TPH-G and benzene were not detected in soil samples collected from borings U-4 and U-6. Groundwater levels stabilized at depths between 8.8 and 9.2 feet bgs.

November 1996 One 550-gallon waste oil UST was removed and the product lines and dispensers were replaced. A soil sample collected from the sidewall of the waste oil UST excavation contained 1.5 ppm total petroleum hydrocarbons as diesel (TPH-D) and 78 ppm total oil and grease (TOG). TPH-G, benzene, methyl tertiary butyl ether (MTBE), halogenated volatile organic compounds (HVOCs), and semi-volatile organic compounds (SVOCs) were not detected. Product line trench excavation and over excavation samples were reported to contain petroleum hydrocarbon levels ranging from non-detect to 880 ppm of TPH-G, non-detect to 3.6 ppm of benzene, and non-detect to 23 ppm of MTBE. Approximately 276 tons of excavated soil was transported to an appropriate disposal facility.

June 1997 Two exploratory borings (U-D and U-E) and one UST observation well were installed. U-D was advanced offsite on Lakeshore Avenue. TPH-G, BTEX, and MTBE were detected in one or all of the soil samples collected at the capillary fringe from the soil borings. TPH-G and MTBE were detected at a maximum of 450 ppm and 1.1 ppm, respectively, in U-D.

October 2003 Site environmental consulting responsibilities were transferred to TRC.

April 2006 Three ozone sparge wells (C-1 through C-3) were installed by TRC in the vicinity of U-2 for the purpose of an ozone pilot study. Total purgeable petroleum hydrocarbons (TPPH) were detected at a maximum of 4,600 milligrams per kilograms (mg/kg) in the five feet below grade (fbg) soil sample collected from C-1.

June through August 2006 A 3-month ozone sparge event was completed on sparge points C-1 through C-3 located in the vicinity of Site well U-2 using a mobile ozone sparge treatment system.

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

January 2011 Delta Consultants rebranded to Antea Group.

SENSITIVE RECEPTORS SURVEY

Lake Merritt is located approximately 0.3 miles down gradient. No domestic water wells are located within a one mile distance of the site.

Current Consultant: Antea Group

Semi-Annual Summary Report, January through June 2011

76 Service Station No. 5325

Oakland, CA

Antea Group Project No. I40255325



Attachment 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 dewatered 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 detuned 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.

Semi-Annual Summary Report, January through June 2011

76 Service Station No. 5325

Oakland, CA

Antea Group Project No. I40255325



Attachment C

Blaine Tech Services Groundwater Sampling Field Data Sheets

COP-ELT Groundwater Sampling Form

Site Address:	3200 Lakeshore Ave Oakland							
Project No.:	255325	Field Technician:	B. Powell					
Field Point:	U-1	Date:	6-3-11					
Depth to Water (DTW) (ft bgs):	6.95	Well Diameter (in):	2 4 6 8 (3)					
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—					
Total Depth of Well (ft bgs):	13.46	Water Column Height (ft):	6.51					
Purging Info and Calculations.								
Purge Method:	Purge Equipment:				Sample Collection Method:			
Low-Flow 3 casing volumes	Disposable Bailer	Disposable Bailer	Extraction Port	Other:	Electric Submersible	Dedicated Tubing	Dedicated Tubing	w/BED
Other:	Peristaltic Pump	Bladder Pump	Disposable Tubing	Other:	—	—	—	—
Water Column Height (ft):	6.51	X Conversion Factor (gal/ft):	0.37	= 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 ² * 0.163								
Purge:	Start Time: 1107			Stop Time: 1110				
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				—		—		
1108	18.35	6.45	971	-111.7	29	1.87	1.2	
1108	18.65	6.38	930	-119.1	27	1.36	2.4	
1109	18.87	6.36	813	-130.4	19	0.58	3.6	
1110	18.79	6.38	849	-135.7	17	0.55	4.8	
1110	Well Dewatered @ 5.3 Gals							5.3 10.38
1135	17.79	6.57	1012	-137.8	21	1.21	—	
Post-Purge				—		—		
Did Well dewater?	Yes	No	Total Purge volume (gal): 5.3					
Other Comments:	80% @ 8.25 Post Purge DTW: 8.20 Fe ²⁺ : 2.4 mg/L * purged through ODOR flow cell							
Sample Info:								
Sample ID:	U-1 - 20110630			Sample Date and Time: 6/3/11 @ 1135				
Selected Analysis:	SEE C.O.C.							
Signature:	B. Powell Date: 6/3/11							

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

COR-ELT Groundwater Sampling Form

Site Address:	3200 Lakeshore Ave Oakland								
Project No:	255325	Field Technician:	B. Powell						
Field Point:	U-2	Date:	6-3-11						
Depth to Water (DTW) (ft bgs):	5.12	Well Diameter (in):	2 4 6 8 (3)						
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—						
Total Depth of Well (ft bgs):	19.60	Water Column Height (ft):	14.54						
Purging Info and Calculations:									
Purge Method:	Purge Equipment:				Sample Collection Method:				
Low-Flow 3 casing volumes	Disposable Bailer	Disposable Bailer	Extraction Port	Other:	Electric Submersible	Dedicated Tubing	Bladder Pump	w/BED	
Other:	Peristaltic Pump	Disposable Tubing	Other:	Bladder Pump	Other:	Disposable Tubing	Other:	—	
Water Column Height (ft): 14.54	X Conversion Factor (gal/ft): 0.37	= 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 = radius ² * 0.163									
Purge:	Start Time:	1052							
		Stop Time: 1055							
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				—		—			
1053	19.18	6.38	1383	-123.6	36	1.13	2.4		
1054	18.99	6.35	1226	-137.2	23	0.71	4.8		
1055	19.63	6.35	1150	-142.0	20	0.81	7.2		
1055	Well Dewatered @ 7.6		Gals			7.6	16.98		
1330	18.73	6.62	1520	-92.0	17	2.42	—		
Post-Purge				—		—			
Did Well dewater?	Yes	No	Total Purge volume (gal): 7.6						
Other Comments:	809. @ 8.02 Post Purge DTW: 13.36 (2 hr) Fe ²⁺ : 2.2 mg/L * purged through flow cell								
Sample Info:									
Sample ID:	U-2-20110630			Sample Date and Time: 6/3/11 @ 1330					
Selected Analysis:	SEE C.O.C.								
Signature:					Date:	6/3/11			

Antea™ Group, 1-800-477-7411

LNAPL = light non-aqueous phase liquids

gal = gallon/s

bgs = below ground surface

temp = temperature

ORP = Oxidation-Reduction Potential

NTU = Nephelometric Turbidity Units

D.O. = dissolved oxygen

mV = millivolts

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anteagroup

CO. -ELT Groundwater Sampling Form

Site Address:	3200 Lakeshore Ave Oakland								
Project No:	255325	Field Technician:	B. Powell						
Field Point:	U-3	Date:	6-3-11						
Depth to Water (DTW) (ft bgs):	10.54	Well Diameter (in):	2 4 6 8 (3)						
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—						
Total Depth of Well (ft bgs):	19.27	Water Column Height (ft):	8.73						
Purging Info and Calculations:									
Purge Method: Low-Flow 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): 8.73	X Conversion Factor (gal/ft): 0.37	= Casing Volume (gal): 3.2							
Casing Volume (gal): 3.2	X Specified Volumes: 3	= Calculated Purge (gal): 9.6							
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163									
Purge:	Start Time:	1001							
	Stop Time:	1005							
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				—		—			
1002	16.24	6.51	161	106.8	55	2.97	1.6		
1003	17.27	6.67	806	55.4	46	0.99	3.2		
1004	17.83	6.91	834	30.5	17	0.91	4.8		
1005	Well dewatered @ 4.9 Gals						4.9	16.54	
1155	17.84	6.87	831	-96.4	27	1.11	—		
Post-Purge				—					
Did Well dewater?	Yes	No	Total Purge volume (gal): 4.9						
Other Comments:	809 @ 12.28 DTW: 10.53								*purged through flow cell
Sample Info:									
Sample ID:	U-3 - 20110630			Sample Date and Time: 6/3/11 @ 1155					
Selected Analysis:	SEE C.O.C.								
Signature:	B. Powell								Date: 6/3/11

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

CO--ELT Groundwater Sampling Form

Site Address:	3200 Lakeshore Ave Oakland							
Project No:	255325	Field Technician:	B. Powell					
Field Point:	U-4	Date:	6-3-11					
Depth to Water (DTW) (ft bgs):	8.02	Well Diameter (in):	2 4 6 8					
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—					
Total Depth of Well (ft bgs):	19.57	Water Column Height (ft):	11.55					
Purging Info and Calculations:								
Purge Method: Low-Flow casing volumes		Purge Equipment: Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump			Sample Collection Method: Disposable Bailer w/BED Extraction Port Dedicated Tubing Disposable Tubing			
Other:		Other:			Other:			
Water Column Height (ft): 11.55		X Conversion Factor (gal/ft): 0.66			= Casing Volume (gal): 7.6			
Casing Volume (gal): 7.6		X Specified Volumes: 3			= Calculated Purge (gal): 22.8			
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163								
Purge:	Start Time: 1013			Stop Time: 1025				
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				—		—		
1015	19.47	7.07	945	20.2	11	1.15	3.8	
1018	19.86	7.08	940	15.9	9	1.83	7.6	
1021	19.86	7.07	966	15.6	8	2.16	11.4	
1024	19.70	7.12	942	9.3	7	2.17	15.2	
1025	Well Dewatered @ 16.2 Gals					16.2	17.40	
1230	19.48	7.06	940	-61.5	15	3.07	—	
Post-Purge				—		—		
Did Well dewater?	Yes	No	Total Purge volume (gal): 16.2					
Other Comments:	80g. @ 10.33 Post Purge * purged through DTW: 14.33 (2hr) Fe ²⁺ : 0.2 mg/L flow cell							
Sample Info:								
Sample ID:	U-4-20110630			Sample Date and Time: 6/3/11 @ 1230				
Selected Analysis:	SEE C.O.C.							
Signature:					Date:	6/3/11		

Antea™ Group, 1-800-477-7411

LNAPL = light non-aqueous phase liquids

gal = gallon/s

bgs = below ground surface

temp = temperature

ORP = Oxidation-Reduction Potential

NTU = Nephelometric Turbidity Units

D.O. = dissolved oxygen

mV = millivolts

CO-ELT Groundwater Sampling Form

Site Address:	3200 Lakeshore Ave Oakland								
Project No:	255325	Field Technician:	B. Powell						
Field Point:	U-5	Date:	6-3-11						
Depth to Water (DTW) (ft bgs):	6.05	Well Diameter (in):	2 4 6 8						
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—						
Total Depth of Well (ft bgs):	19.97	Water Column Height (ft):	13.92						
Purging Info and Calculations:									
Purge Method: Low-Flow <i>3 casing volumes</i>			Purge Equipment: Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump			Sample Collection Method: Disposable Bailer Extraction Port Dedicated Tubing Disposable Tubing			
Other: _____			Other: _____			Other: _____			
Water Column Height (ft):		13.92	X Conversion Factor (gal/ft):	0.06	= Casing Volume (gal):	9.2			
Casing Volume (gal):		9.2	X Specified Volumes:	3	= Calculated Purge (gal):	27.6			
Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius ² * 0.163									
Purge:	Start Time: 1034			Stop Time: 1043					
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				—		—			
1036	19.01	6.50	767	-138.4	15	0.58	4.6		
1038	19.43	6.51	691	-143.3	12	0.71	9.2		
1040	19.00	6.53	845	-146.8	10	0.91	13.8		
1043	Well Dewatered @		17.8 Gals				17.8	16.42	
1300	18.94	6.62	1331	-99.1	17	1.51	—		
Post-Purge				—		—			
Did Well dewater?	Yes	No	Total Purge volume (gal): 17.8						
Other Comments:	80% @ 8.83 DTW: 7.72 *purged through flow cell								
Sample Info:									
Sample ID:	U-5-20110630			Sample Date and Time: 6/3/11 @ 1300					
Selected Analysis:	SEE C.O.C.								
Signature:	<i>S. Powell</i>			Date: 6/3/11					

Antea™ Group, 1-800-477-7411

LNAPL = light non-aqueous phase liquids

gal = gallon/s

bgs = below ground surface

temp = temperature

ORP = Oxidation-Reduction Potential

NTU = Nephelometric Turbidity Units

D.O. = dissolved oxygen

mV = millivolts

CC - ELT Groundwater Sampling Form

Site Address:	3200 Lakeshore Ave Oakland		
Project No:	255325	Field Technician:	B. Patel
Field Point:	U-6	Date:	6-3-11
Depth to Water (DTW) (ft bgs):	5.26	Well Diameter (in):	② 4 6 8
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	22.36	Water Column Height (ft):	17.10

Purging Info and Calculations:

Purge Method:	Purge Equipment:	Sample Collection Method:
Low-Flow 3 casing volumes	Disposable Bailer Electric Submersible Peristaltic Pump Bladder Pump	Disposable Bailer w/BED Extraction Port Dedicated Tubing Disposable Tubing
Other:	Other:	Other:
Water Column Height (ft): 17.10	X Conversion Factor (gal/ft): 0.17	= Casing Volume (gal): 2.9
Casing Volume (gal): 2.9	X Specified Volumes: 3	= Calculated Purge (gal): 8.7
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				—	>1000	—	—	
0930	16.38	7.31	748	-101.1	>1000	3.51	1.4	
0931	16.39	7.09	185	-43.2	>1000	3.21	2.9	
0932	16.51	6.80	171	2.9	>1000	2.59	4.3	
0933	16.54	6.72	275	19.4	>1000	1.45	5.8	
0934	16.59	6.57	180	42.1	>1000	1.58	7.2	
0935	16.62	6.49	166	51.0	>1000	1.55	8.7	
0936	16.72	6.45	160	59.0	>1000	1.48	10.1	15.95
Post-Purge				—	—	—	—	NOT AT 80% SHORT WAIT
Did Well dewater?	Yes	No						
								Total Purge volume (gal): 10.1

80% @ 8.68 MS/MSP *purged through flow cell
 Other Comments: DTW: 8.51 #water is dark brown

Sample Info:	Sample ID:	U-6 - 20110630	Sample Date and Time:	6/3/11 @ 0950
	Selected Analysis:	SEE C.O.C.		
Signature:			Date:	6/3/11

Antea™ Group, 1-800-477-7411

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ORP = Oxidation-Reduction Potential

D.O. = dissolved oxygen

gal = gallon/s

temp = temperature

NTU = Nephelometric Turbidity Units

mV = millivolts



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: 1 of _____
Cooler #: _____

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PACE ANALYTICAL- SEATTLE (Subcontract Samples)

Required Lab Information:

Lab Name: Pace-Seattle		Site ID #: 255325	Task: WG_Q_201106	Send Invoice to: David Sowle				
Address: Delta project #		Address: 11050 White Rock Road, Suite 110				Turn around time (days) 10		
940 S. Harvey Street Seattle WA 98108		Site Address: 3200 LAKESHORE AVE	City/State: Rancho Cordova CA 95670	Phone #: 1-800-477-7411	QC level Required: Standard		Special	Mark one
Lab PM: Regina Ste. Marie		City: OAKLAND	State: CA 94810	Reimbursement project?	Non-reimbursement project? Y	Mark one	NJ Reduced Deliverable Package?	
Phone/Fax: P: 206-957-2433 F: 206-767-5063		Delta PM Name: Dennis Dettloff	Send EDD to: copeitdata@intelligentehs.com			MA MCP Cert?	CT RCP Cert?	Mark One
Lab PM email: Regina.SteMarie@pacelabs.com		Phone/Fax: P: 1-800-477-7411 F: 916-638-8385	CC Hardcopy report to:			Lab Project ID (lab use)		
Applicable Lab Quote #:		Delta PM Email: ddettloff@deltaenv.com	CC Hardcopy report to:					

2Q11 GW Eve

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / -) IDs MUST BE UNIQUE	Valid Matrix Codes		MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives							Comments/Lab Sample I.D.
		MATRIX DRINKING WATER INDUS WATER WASTE WATER FREE PRODUCT SOIL OIL WATER SUSP AIR DUST AIR SOIL SAM	MATRIX WATER WATER WATER OC LF SLUDGE SL OTHER OT ANIMAL TISSUE TA							H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	
1	U-1_20110630	WG	G	6-3-11	1135	14	Y	YXXX	X								
2	U-2_20110630	WG	G		1330	14	Y	YXXX	X								
3	U-3_20110630	WG	G		1155	6	N		X								
4	U-4_20110630	WG	G		1230	14	Y	YXXX	X								
5	U-5_20110630	WG	G		1300	6	N		X								
6	U-6_20110630	WG	G		0950	10	N		X								
7																	
8																	
9																	
10																	
11																	
12																	

Additional Comments/Special Instructions: Fe 2+

U-1: 2.4 mg/l
U-2: 2.2 mg/l
U-4: 0.2 mg/l

GLOBAL ID: T0600101463

RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	Sample Receipt Conditions		
<i>BSDell/BTS</i>		03-11-1620						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 <i>FEDEx</i>		PRINT Name of SAMPLER: <i>Ben Powell</i>								
US MAIL		SIGNATURE of SAMPLER: <i>Ben Powell</i> DATE Signed 03-11 Time: 1620								
		Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?					

Inogen®
Environmental Alliance



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:
Cooler #

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of

2

McCampbell Analytical (bill PACE)

Required Lab Information:

Lab Name:	Pace-Seattle	Site ID #:	255325	Task:	WG_Q_201106	Send Invoice to:	David Sowle	2Q11 GW Eve						
Address:	Delta project #			Address:			11050 White Rock Road, Suite 110	Turn around time (days)	10					
940 S. Harney Street Seattle WA 98108	Site Address			3200 LAKESHORE AVE	City/State	Rancho Cordova CA 95670	Phone #:	1-800-477-7411						
Lab PM:	Regina Ste. Marie			City	OAKLAND	State	CA 94610	Reimbursement project?	<input checked="" type="checkbox"/>	Non-reimbursement project?	<input checked="" type="checkbox"/>	Mark one		
Phone/Fax:	P: 206-957-2433 F: 206-767-5063			Delta PM Name	Dennis Dettloff			Send EDD to:	copeldata@intelligentehs.com			MA MCP Cert?	CT RCP Cert?	Mark One
Lab PM email	Regina.SteMarie@pacelabs.com			Phone/Fax:	P: 1-800-477-7411 F: 916-638-8385			CC Hardcopy report to:				Lab Project ID (lab use)		
Applicable Lab Quote #:				Delta PM Email:	ddettloff@deltaenvr.com			CC Hardcopy report to:				Requested Analyses		

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9 / -) Samples IDs MUST BE UNIQUE</small>	Valid Matrix Codes		MATRIX CODE	SAMPLE TYPE G-GRAB C-COMP	SAMPLE DATE	SAMPLE TIME	# OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives						Comments/Lab Sample I.D.	
		MATRIX	DRINKING WATER	WATER	WATER	WATER	WATER QC	WATER QC		H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ SiO ₃	Methanol	Other	
1	U-1_20110630	WG	G	6-3-11	1135	1	10	N	X	XX	XX	X	X	X	X	X	***Hex Cr has short hold 24 hours***
2	U-2_20110630	WG	G		1330	1	10	N	X	XX	XX	X	X	X	X	X	
4	U-4_20110630	WG	G		1230	1	10	N	X	XX	XX	X	X	X	X	X	
5																	
6																	
8																	
10																	
11																	
12																	

Additional Comments/Special Instructions:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	Sample Receipt Conditions
Ben Powell/BTS	6-3-11/630	Dark Card	6-3-11	1630	Y/N Y/N Y/N
					Y/N Y/N Y/N
					Y/N Y/N Y/N
					Y/N Y/N Y/N
GLOBAL ID: T0600101463	SHIPPING METHOD: (mark as appropriate)	SAMPLER NAME AND SIGNATURE	Temp in °C		
UPS COURIER	PRINT Name of SAMPLER:	Ben Powell			
FEDEX	SIGNATURE of SAMPLER:	Ben Powell			
US MAIL			Samples on ice?		
			Sample intact?		
			Trip Blank?		

Inogen®
Environmental Alliance

TEST EQUIPMENT CALIBRATION LOG

Semi-Annual Summary Report, January through June 2011

76 Service Station No. 5325

Oakland, CA

Antea Group Project No. I40255325



Attachment D

Certified Laboratory Analytical Report and Data Validation Form

June 20, 2011

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

RE: Project: 255325
Pace Project No.: 257973

Dear Dennis Dettloff:

Enclosed are the analytical results for sample(s) received by the laboratory on June 04, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated 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: 255325

Pace Project No.: 257973

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
 A2LA Certification #: 2926.01
 Alaska Certification #: UST-078
 Alaska Certification #MN00064
 Arizona Certification #: AZ-0014
 Arkansas Certification #: 88-0680
 California Certification #: 01155CA
 EPA Region 8 Certification #: Pace
 Florida/NELAP Certification #: E87605
 Georgia Certification #: 959
 Idaho Certification #: MN00064
 Illinois Certification #: 200011
 Iowa Certification #: 368
 Kansas Certification #: E-10167
 Louisiana Certification #: 03086
 Louisiana Certification #: LA080009
 Maine Certification #: 2007029
 Maryland Certification #: 322
 Michigan DEQ Certification #: 9909
 Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace
 Montana Certification #: MT CERT0092
 Nebraska Certification #: Pace
 Nevada Certification #: MN_00064
 New Jersey Certification #: MN-002
 New Mexico Certification #: Pace
 New York Certification #: 11647
 North Carolina Certification #: 530
 North Dakota Certification #: R-036
 North Dakota Certification #: R-036A
 Ohio VAP Certification #: CL101
 Oklahoma Certification #: D9921
 Oklahoma Certification #: 9507
 Oregon Certification #: MN200001
 Pennsylvania Certification #: 68-00563
 Puerto Rico Certification
 Tennessee Certification #: 02818
 Texas Certification #: T104704192
 Washington Certification #: C754
 Wisconsin Certification #: 999407970

Washington Certification IDs

940 South Harney Street, Seattle, WA 98108
 Alaska CS Certification #: UST-025
 Alaska Drinking Water VOC Certification #: WA01230
 Alaska Drinking Water Micro Certification #: WA01230

California Certification #: 01153CA
 Florida/NELAP Certification #: E87617
 Oregon Certification #: WA200007
 Washington Certification #: C1229

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SAMPLE ANALYTE COUNT

Project: 255325
Pace Project No.: 257973

Lab ID	Sample ID	Method	Analysts	Analytics Reported	Laboratory
257973001	U-1_20110630	RSK 175	CJR	1	PASI-M
		EPA 6010	BGA	1	PASI-S
		EPA 6010	BGA	15	PASI-S
		EPA 7470	BGA	1	PASI-S
		EPA 5030B/8260	LPM	17	PASI-S
		CA LUFT	LPM	2	PASI-S
		SM 3500-Fe B#4	CMS	1	PASI-S
		SM 3500-Fe B#4	CMS	1	PASI-S
		SM 5210B	CMS	1	PASI-S
		EPA 300.0	CMS	2	PASI-S
		EPA 353.2	CMS	2	PASI-S
		EPA 410.4	KMT	1	PASI-S
		SM 4500-NO2 B	CMS	1	PASI-S
257973002	U-2_20110630	RSK 175	CJR	1	PASI-M
		EPA 6010	BGA	1	PASI-S
		EPA 6010	BGA	15	PASI-S
		EPA 7470	BGA	1	PASI-S
		EPA 5030B/8260	LPM	17	PASI-S
		CA LUFT	LPM	2	PASI-S
		SM 3500-Fe B#4	CMS	1	PASI-S
		SM 3500-Fe B#4	CMS	1	PASI-S
		SM 5210B	CMS	1	PASI-S
		EPA 300.0	CMS	2	PASI-S
		EPA 353.2	CMS	2	PASI-S
		EPA 410.4	KMT	1	PASI-S
		SM 4500-NO2 B	CMS	1	PASI-S
257973003	U-3_20110630	EPA 5030B/8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
257973004	U-4_20110630	RSK 175	CJR	1	PASI-M
		EPA 6010	BGA	1	PASI-S
		EPA 6010	BGA	15	PASI-S
		EPA 7470	BGA	1	PASI-S
		EPA 5030B/8260	LPM	17	PASI-S
		CA LUFT	LPM	2	PASI-S
		SM 3500-Fe B#4	CMS	1	PASI-S
		SM 3500-Fe B#4	CMS	1	PASI-S
		SM 5210B	CMS	1	PASI-S

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 255325
 Pace Project No.: 257973

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
257973005	U-5_20110630	EPA 300.0	CMS	2	PASI-S
		EPA 353.2	CMS	2	PASI-S
		EPA 410.4	KMT	1	PASI-S
		SM 4500-NO2 B	CMS	1	PASI-S
		EPA 5030B/8260	LPM	16	PASI-S
257973006	U-6_20110630	CA LUFT	LPM	2	PASI-S
		EPA 5030B/8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S

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HITS ONLY

Project: 255325
Pace Project No.: 257973

Lab Sample ID	Client Sample ID						
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers	
257973001	U-1_20110630						
RSK 175	Methane	983	ug/L	10.0	06/08/11 09:48		
EPA 6010	Iron	27100	ug/L	100	06/08/11 14:32		
EPA 6010	Arsenic, Dissolved	44.0	ug/L	20.0	06/10/11 11:15		
EPA 6010	Barium, Dissolved	224	ug/L	100	06/10/11 11:15		
EPA 6010	Manganese, Dissolved	2920	ug/L	15.0	06/10/11 11:15		
EPA 5030B/8260	tert-Butyl Alcohol	880	ug/L	5.0	06/14/11 15:43		
EPA 5030B/8260	Ethylbenzene	1.2	ug/L	0.50	06/14/11 15:43		
EPA 5030B/8260	Methyl-tert-butyl ether	6.1	ug/L	0.50	06/14/11 15:43		
CA LUFT	TPH-Gasoline (C05-C12)	6490	ug/L	50.0	06/10/11 16:44		
SM 3500-Fe B#4	Iron, Ferric	24700	ug/L	100	06/17/11 11:45		
SM 3500-Fe B#4	Iron, Ferrous	2400	ug/L	100	06/03/11 11:35		
SM 5210B	BOD, 5 day	19600	ug/L	2000	06/09/11 13:30		
EPA 300.0	Chloride	40700	ug/L	10000	06/08/11 23:34		
EPA 353.2	Nitrogen, Nitrate	52.0	ug/L	50.0	06/07/11 14:52		
EPA 353.2	Nitrogen, NO ₂ plus NO ₃	60.2	ug/L	50.0	06/07/11 14:52		
EPA 410.4	Chemical Oxygen Demand	40400	ug/L	5000	06/15/11 13:00		
257973002	U-2_20110630						
RSK 175	Methane	291	ug/L	10.0	06/08/11 10:10		
EPA 6010	Iron	10900	ug/L	100	06/08/11 14:35		
EPA 6010	Arsenic, Dissolved	64.4	ug/L	20.0	06/10/11 11:18		
EPA 6010	Barium, Dissolved	190	ug/L	100	06/10/11 11:18		
EPA 6010	Manganese, Dissolved	4990	ug/L	15.0	06/10/11 11:18		
EPA 6010	Molybdenum, Dissolved	34.5	ug/L	20.0	06/17/11 09:16		
EPA 5030B/8260	tert-Butyl Alcohol	1310	ug/L	5.0	06/14/11 16:00	M1	
EPA 5030B/8260	Ethylbenzene	7.1	ug/L	0.50	06/14/11 16:00		
EPA 5030B/8260	Methyl-tert-butyl ether	33.8	ug/L	0.50	06/14/11 16:00		
CA LUFT	TPH-Gasoline (C05-C12)	3280	ug/L	50.0	06/10/11 21:19		
SM 3500-Fe B#4	Iron, Ferric	8700	ug/L	100	06/17/11 11:45		
SM 3500-Fe B#4	Iron, Ferrous	2200	ug/L	100	06/03/11 13:30		
EPA 300.0	Chloride	57700	ug/L	10000	06/08/11 23:52		
EPA 300.0	Sulfate	29400	ug/L	2000	06/10/11 19:13		
EPA 410.4	Chemical Oxygen Demand	65600	ug/L	5000	06/15/11 13:00		
257973003	U-3_20110630						
EPA 5030B/8260	Methyl-tert-butyl ether	0.73	ug/L	0.50	06/10/11 17:01		
257973004	U-4_20110630						
SM 3500-Fe B#4	Iron, Ferrous	200	ug/L	100	06/03/11 12:30		
SM 5210B	BOD, 5 day	11500	ug/L	2000	06/09/11 13:30		
EPA 300.0	Chloride	40600	ug/L	10000	06/09/11 00:10		
EPA 300.0	Sulfate	79300	ug/L	10000	06/09/11 00:10		
EPA 353.2	Nitrogen, Nitrate	4280	ug/L	100	06/07/11 15:43		
EPA 353.2	Nitrogen, NO ₂ plus NO ₃	4280	ug/L	100	06/07/11 15:43		
EPA 410.4	Chemical Oxygen Demand	9530	ug/L	5000	06/15/11 13:00		
257973005	U-5_20110630						
EPA 5030B/8260	tert-Butyl Alcohol	61.6	ug/L	5.0	06/10/11 17:36		
EPA 5030B/8260	Methyl-tert-butyl ether	3.0	ug/L	0.50	06/10/11 17:36		

REPORT OF LABORATORY ANALYSIS

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HITS ONLY

Project: 255325
Pace Project No.: 257973

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
257973005	U-5_20110630					
CA LUFT	TPH-Gasoline (C05-C12)	85.0	ug/L	50.0	06/10/11 17:36	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 255325
Pace Project No.: 257973

Sample: U-1_20110630	Lab ID: 257973001	Collected: 06/03/11 11:35	Received: 06/04/11 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
CA LUFT MSV GRO	Analytical Method: CA LUFT							
4-Bromofluorobenzene (S)	94 %		82-116	1		06/10/11 16:44	460-00-4	
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4							
Iron, Ferric	24700 ug/L		100	1		06/17/11 11:45	7439-89-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4							
Iron, Ferrous	2400 ug/L		100	1		06/03/11 11:35		
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	19600 ug/L		2000	1	06/04/11 12:15	06/09/11 13:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	40700 ug/L		10000	10		06/08/11 23:34	16887-00-6	
Sulfate	ND ug/L		1000	1		06/10/11 18:53	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	52.0 ug/L		50.0	1		06/07/11 14:52		
Nitrogen, NO2 plus NO3	60.2 ug/L		50.0	1		06/07/11 14:52		
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	40400 ug/L		5000	1		06/15/11 13:00		
SM4500NO2-B, Nitrite, unpres	Analytical Method: SM 4500-NO2 B							
Nitrite as N	ND ug/L		10.0	1		06/04/11 11:52	14797-65-0	
Sample: U-2_20110630	Lab ID: 257973002	Collected: 06/03/11 13:30	Received: 06/04/11 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Methane	291 ug/L		10.0	1		06/08/11 10:10	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron	10900 ug/L		100	1	06/07/11 11:36	06/08/11 14:35	7439-89-6	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony, Dissolved	ND ug/L		60.0	1	06/09/11 09:48	06/10/11 11:18	7440-36-0	
Arsenic, Dissolved	64.4 ug/L		20.0	1	06/09/11 09:48	06/10/11 11:18	7440-38-2	
Barium, Dissolved	190 ug/L		100	1	06/09/11 09:48	06/10/11 11:18	7440-39-3	
Beryllium, Dissolved	ND ug/L		5.0	1	06/09/11 09:48	06/10/11 11:18	7440-41-7	
Cadmium, Dissolved	ND ug/L		5.0	1	06/09/11 09:48	06/10/11 11:18	7440-43-9	
Cobalt, Dissolved	ND ug/L		50.0	1	06/09/11 09:48	06/10/11 11:18	7440-48-4	
Lead, Dissolved	ND ug/L		10.0	1	06/09/11 09:48	06/10/11 11:18	7439-92-1	
Manganese, Dissolved	4990 ug/L		15.0	1	06/09/11 09:48	06/10/11 11:18	7439-96-5	

Date: 06/20/2011 04:35 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 255325
Pace Project No.: 257973

Sample: U-2_20110630	Lab ID: 257973002	Collected: 06/03/11 13:30	Received: 06/04/11 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Molybdenum, Dissolved	34.5	ug/L	20.0	1	06/09/11 09:48	06/17/11 09:16	7439-98-7	
Nickel, Dissolved	ND	ug/L	40.0	1	06/09/11 09:48	06/10/11 11:18	7440-02-0	
Selenium, Dissolved	ND	ug/L	10.0	1	06/09/11 09:48	06/10/11 11:18	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	06/09/11 09:48	06/10/11 11:18	7440-22-4	
Thallium, Dissolved	ND	ug/L	20.0	1	06/09/11 09:48	06/10/11 11:18	7440-28-0	
Vanadium, Dissolved	ND	ug/L	50.0	1	06/09/11 09:48	06/10/11 11:18	7440-62-2	
Zinc, Dissolved	ND	ug/L	40.0	1	06/09/11 09:48	06/10/11 11:18	7440-66-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury, Dissolved	ND	ug/L	0.20	1	06/07/11 10:41	06/08/11 10:36	7439-97-6	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	5.0	1		06/14/11 16:00	67-64-1	
tert-Amyl methyl ether	ND	ug/L	0.50	1		06/14/11 16:00	994-05-8	
Benzene	ND	ug/L	0.50	1		06/14/11 16:00	71-43-2	
tert-Butyl Alcohol	1310	ug/L	5.0	1		06/14/11 16:00	75-65-0	M1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		06/14/11 16:00	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		06/14/11 16:00	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		06/14/11 16:00	108-20-3	
Ethanol	ND	ug/L	250	1		06/14/11 16:00	64-17-5	
Ethylbenzene	7.1	ug/L	0.50	1		06/14/11 16:00	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		06/14/11 16:00	637-92-3	
Methyl-tert-butyl ether	33.8	ug/L	0.50	1		06/14/11 16:00	1634-04-4	
Toluene	ND	ug/L	0.50	1		06/14/11 16:00	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		06/14/11 16:00	1330-20-7	
4-Bromofluorobenzene (S)	97 %		80-120	1		06/14/11 16:00	460-00-4	
Dibromofluoromethane (S)	100 %		80-122	1		06/14/11 16:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	92 %		80-124	1		06/14/11 16:00	17060-07-0	
Toluene-d8 (S)	95 %		80-123	1		06/14/11 16:00	2037-26-5	
CA LUFT MSV GRO	Analytical Method: CA LUFT							
TPH-Gasoline (C05-C12)	3280	ug/L	50.0	1		06/10/11 21:19		
4-Bromofluorobenzene (S)	94 %		82-116	1		06/10/11 21:19	460-00-4	
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4							
Iron, Ferric	8700	ug/L	100	1		06/17/11 11:45	7439-89-6	
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4							
Iron, Ferrous	2200	ug/L	100	1		06/03/11 13:30		
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	ND	ug/L	2000	1	06/04/11 12:15	06/09/11 13:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	57700	ug/L	10000	10		06/08/11 23:52	16887-00-6	
Sulfate	29400	ug/L	2000	2		06/10/11 19:13	14808-79-8	

Date: 06/20/2011 04:35 PM

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ANALYTICAL RESULTS

Project: 255325
Pace Project No.: 257973

Sample: U-2_20110630	Lab ID: 257973002	Collected: 06/03/11 13:30	Received: 06/04/11 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO₂/NO₃ pres.	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND ug/L		50.0	1		06/07/11 14:53		
Nitrogen, NO ₂ plus NO ₃	ND ug/L		50.0	1		06/07/11 14:53		
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	65600 ug/L		5000	1		06/15/11 13:00		
SM4500NO₂-B, Nitrite, unpres	Analytical Method: SM 4500-NO ₂ B							
Nitrite as N	ND ug/L		10.0	1		06/04/11 11:52	14797-65-0	
Sample: U-3_20110630	Lab ID: 257973003	Collected: 06/03/11 11:55	Received: 06/04/11 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
tert-Amylmethyl ether	ND ug/L		0.50	1		06/10/11 17:01	994-05-8	
Benzene	ND ug/L		0.50	1		06/10/11 17:01	71-43-2	
tert-Butyl Alcohol	ND ug/L		5.0	1		06/10/11 17:01	75-65-0	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	1		06/10/11 17:01	106-93-4	
1,2-Dichloroethane	ND ug/L		1.0	1		06/10/11 17:01	107-06-2	
Diisopropyl ether	ND ug/L		0.50	1		06/10/11 17:01	108-20-3	
Ethanol	ND ug/L		250	1		06/10/11 17:01	64-17-5	
Ethylbenzene	ND ug/L		0.50	1		06/10/11 17:01	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		0.50	1		06/10/11 17:01	637-92-3	
Methyl-tert-butyl ether	0.73 ug/L		0.50	1		06/10/11 17:01	1634-04-4	
Toluene	ND ug/L		0.50	1		06/10/11 17:01	108-88-3	
Xylene (Total)	ND ug/L		1.5	1		06/10/11 17:01	1330-20-7	
4-Bromofluorobenzene (S)	101 %		80-120	1		06/10/11 17:01	460-00-4	
Dibromofluoromethane (S)	97 %		80-122	1		06/10/11 17:01	1868-53-7	
1,2-Dichloroethane-d4 (S)	95 %		80-124	1		06/10/11 17:01	17060-07-0	
Toluene-d8 (S)	98 %		80-123	1		06/10/11 17:01	2037-26-5	
CA LUFT MSV GRO	Analytical Method: CA LUFT							
TPH-Gasoline (C05-C12)	ND ug/L		50.0	1		06/13/11 15:37		
4-Bromofluorobenzene (S)	100 %		82-116	1		06/13/11 15:37	460-00-4	
Sample: U-4_20110630	Lab ID: 257973004	Collected: 06/03/11 12:30	Received: 06/04/11 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Methane	ND ug/L		10.0	1		06/07/11 14:55	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron	ND ug/L		100	1	06/07/11 11:36	06/08/11 14:38	7439-89-6	

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ANALYTICAL RESULTS

Project: 255325
Pace Project No.: 257973

Sample: U-4_20110630	Lab ID: 257973004	Collected: 06/03/11 12:30	Received: 06/04/11 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony, Dissolved	ND ug/L		60.0	1	06/09/11 09:48	06/10/11 12:38	7440-36-0	
Arsenic, Dissolved	ND ug/L		20.0	1	06/09/11 09:48	06/10/11 12:38	7440-38-2	
Barium, Dissolved	ND ug/L		100	1	06/09/11 09:48	06/10/11 12:38	7440-39-3	
Beryllium, Dissolved	ND ug/L		5.0	1	06/09/11 09:48	06/10/11 12:38	7440-41-7	
Cadmium, Dissolved	ND ug/L		5.0	1	06/09/11 09:48	06/10/11 12:38	7440-43-9	
Cobalt, Dissolved	ND ug/L		50.0	1	06/09/11 09:48	06/10/11 12:38	7440-48-4	
Lead, Dissolved	ND ug/L		10.0	1	06/09/11 09:48	06/10/11 12:38	7439-92-1	
Manganese, Dissolved	ND ug/L		15.0	1	06/09/11 09:48	06/10/11 12:38	7439-96-5	
Molybdenum, Dissolved	ND ug/L		20.0	1	06/09/11 09:48	06/10/11 12:38	7439-98-7	
Nickel, Dissolved	ND ug/L		40.0	1	06/09/11 09:48	06/10/11 12:38	7440-02-0	
Selenium, Dissolved	ND ug/L		10.0	1	06/09/11 09:48	06/10/11 12:38	7782-49-2	
Silver, Dissolved	ND ug/L		10.0	1	06/09/11 09:48	06/10/11 12:38	7440-22-4	
Thallium, Dissolved	ND ug/L		20.0	1	06/09/11 09:48	06/10/11 12:38	7440-28-0	
Vanadium, Dissolved	ND ug/L		50.0	1	06/09/11 09:48	06/10/11 12:38	7440-62-2	
Zinc, Dissolved	ND ug/L		40.0	1	06/09/11 09:48	06/10/11 12:38	7440-66-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury, Dissolved	ND ug/L		0.20	1	06/07/11 10:41	06/08/11 10:38	7439-97-6	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND ug/L		5.0	1		06/14/11 10:33	67-64-1	
tert-Amyl methyl ether	ND ug/L		0.50	1		06/14/11 10:33	994-05-8	
Benzene	ND ug/L		0.50	1		06/14/11 10:33	71-43-2	
tert-Butyl Alcohol	ND ug/L		5.0	1		06/14/11 10:33	75-65-0	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	1		06/14/11 10:33	106-93-4	
1,2-Dichloroethane	ND ug/L		1.0	1		06/14/11 10:33	107-06-2	
Diisopropyl ether	ND ug/L		0.50	1		06/14/11 10:33	108-20-3	
Ethanol	ND ug/L		250	1		06/14/11 10:33	64-17-5	
Ethylbenzene	ND ug/L		0.50	1		06/14/11 10:33	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		0.50	1		06/14/11 10:33	637-92-3	
Methyl-tert-butyl ether	ND ug/L		0.50	1		06/14/11 10:33	1634-04-4	
Toluene	ND ug/L		0.50	1		06/14/11 10:33	108-88-3	
Xylene (Total)	ND ug/L		1.5	1		06/14/11 10:33	1330-20-7	
4-Bromofluorobenzene (S)	100 %		80-120	1		06/14/11 10:33	460-00-4	
Dibromofluoromethane (S)	100 %		80-122	1		06/14/11 10:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	94 %		80-124	1		06/14/11 10:33	17060-07-0	
Toluene-d8 (S)	96 %		80-123	1		06/14/11 10:33	2037-26-5	
CA LUFT MSV GRO	Analytical Method: CA LUFT							
TPH-Gasoline (C05-C12)	ND ug/L		50.0	1		06/10/11 17:19		
4-Bromofluorobenzene (S)	100 %		82-116	1		06/10/11 17:19	460-00-4	
Iron, Ferric (Calculation)	Analytical Method: SM 3500-Fe B#4							
Iron, Ferric	ND ug/L		100	1		06/17/11 11:45	7439-89-6	

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ANALYTICAL RESULTS

Project: 255325
Pace Project No.: 257973

Sample: U-4_20110630	Lab ID: 257973004	Collected: 06/03/11 12:30	Received: 06/04/11 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4							
Iron, Ferrous	200	ug/L	100	1		06/03/11 12:30		
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	11500	ug/L	2000	1	06/04/11 12:15	06/09/11 13:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	40600	ug/L	10000	10		06/09/11 00:10	16887-00-6	
Sulfate	79300	ug/L	10000	10		06/09/11 00:10	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	4280	ug/L	100	2		06/07/11 15:43		
Nitrogen, NO2 plus NO3	4280	ug/L	100	2		06/07/11 15:43		
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	9530	ug/L	5000	1		06/15/11 13:00		
SM4500NO2-B, Nitrite, unpres	Analytical Method: SM 4500-NO2 B							
Nitrite as N	ND	ug/L	10.0	1		06/04/11 11:52	14797-65-0	
Sample: U-5_20110630	Lab ID: 257973005	Collected: 06/03/11 13:00	Received: 06/04/11 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
tert-Amylmethyl ether	ND	ug/L	0.50	1		06/10/11 17:36	994-05-8	
Benzene	ND	ug/L	0.50	1		06/10/11 17:36	71-43-2	
tert-Butyl Alcohol	61.6	ug/L	5.0	1		06/10/11 17:36	75-65-0	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		06/10/11 17:36	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		06/10/11 17:36	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		06/10/11 17:36	108-20-3	
Ethanol	ND	ug/L	250	1		06/10/11 17:36	64-17-5	
Ethylbenzene	ND	ug/L	0.50	1		06/10/11 17:36	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		06/10/11 17:36	637-92-3	
Methyl-tert-butyl ether	3.0	ug/L	0.50	1		06/10/11 17:36	1634-04-4	
Toluene	ND	ug/L	0.50	1		06/10/11 17:36	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		06/10/11 17:36	1330-20-7	
4-Bromofluorobenzene (S)	101	%	80-120	1		06/10/11 17:36	460-00-4	
Dibromofluoromethane (S)	98	%	80-122	1		06/10/11 17:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	80-124	1		06/10/11 17:36	17060-07-0	
Toluene-d8 (S)	97	%	80-123	1		06/10/11 17:36	2037-26-5	
CA LUFT MSV GRO	Analytical Method: CA LUFT							
TPH-Gasoline (C05-C12)	85.0	ug/L	50.0	1		06/10/11 17:36		
4-Bromofluorobenzene (S)	101	%	82-116	1		06/10/11 17:36	460-00-4	

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ANALYTICAL RESULTS

Project: 255325
Pace Project No.: 257973

Sample: U-6_20110630	Lab ID: 257973006	Collected: 06/03/11 09:50	Received: 06/04/11 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
tert-Amylmethyl ether	ND	ug/L	0.50	1		06/10/11 17:53	994-05-8	
Benzene	ND	ug/L	0.50	1		06/10/11 17:53	71-43-2	
tert-Butyl Alcohol	ND	ug/L	5.0	1		06/10/11 17:53	75-65-0	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		06/10/11 17:53	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		06/10/11 17:53	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		06/10/11 17:53	108-20-3	
Ethanol	ND	ug/L	250	1		06/10/11 17:53	64-17-5	
Ethylbenzene	ND	ug/L	0.50	1		06/10/11 17:53	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		06/10/11 17:53	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		06/10/11 17:53	1634-04-4	
Toluene	ND	ug/L	0.50	1		06/10/11 17:53	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		06/10/11 17:53	1330-20-7	
4-Bromofluorobenzene (S)	101 %		80-120	1		06/10/11 17:53	460-00-4	
Dibromofluoromethane (S)	99 %		80-122	1		06/10/11 17:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	95 %		80-124	1		06/10/11 17:53	17060-07-0	
Toluene-d8 (S)	96 %		80-123	1		06/10/11 17:53	2037-26-5	
CA LUFT MSV GRO	Analytical Method: CA LUFT							
TPH-Gasoline (C05-C12)	ND	ug/L	50.0	1		06/10/11 17:53		
4-Bromofluorobenzene (S)	101 %		82-116	1		06/10/11 17:53	460-00-4	

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QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch: AIR/12443

Analysis Method: RSK 175

QC Batch Method: RSK 175

Analysis Description: RSK 175 AIR HEADSPACE

Associated Lab Samples: 257973004

METHOD BLANK: 989256

Matrix: Water

Associated Lab Samples: 257973004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methane	ug/L	ND	10.0	06/07/11 10:58	

LABORATORY CONTROL SAMPLE & LCSD: 989257

989258

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	60.7	62.1	60.6	102	100	70-130	2	30	

SAMPLE DUPLICATE: 989560

Parameter	Units	9295374010 Result	Dup Result	RPD	Qualifiers
Methane	ug/L	899	964	7	

SAMPLE DUPLICATE: 990020

Parameter	Units	10159335014 Result	Dup Result	RPD	Qualifiers
Methane	ug/L	229	243	6	

QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch: AIR/12455 Analysis Method: RSK 175

QC Batch Method: RSK 175 Analysis Description: RSK 175 AIR HEADSPACE

Associated Lab Samples: 257973001, 257973002

METHOD BLANK: 990028 Matrix: Water

Associated Lab Samples: 257973001, 257973002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methane	ug/L	ND	10.0	06/08/11 09:38	

LABORATORY CONTROL SAMPLE & LCSD: 990029 990030

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	60.7	67.0	63.4	110	104	70-130	6	30	

SAMPLE DUPLICATE: 990087

Parameter	Units	257973001 Result	Dup Result	RPD	Qualifiers
Methane	ug/L	983	1000	2	

QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch: MPRP/2263 Analysis Method: EPA 6010

QC Batch Method: EPA 3010 Analysis Description: 6010 MET

Associated Lab Samples: 257973001, 257973002, 257973004

METHOD BLANK: 73299 Matrix: Water

Associated Lab Samples: 257973001, 257973002, 257973004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron	ug/L	ND	100	06/08/11 13:40	

LABORATORY CONTROL SAMPLE: 73300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	10300	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73301 73302

Parameter	Units	257943001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Iron	ug/L	2960	10000	10000	13100	12700	101	97	75-125	3	

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QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch:	MPRP/2268	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET Dissolved
Associated Lab Samples:	257973001, 257973002, 257973004		

METHOD BLANK: 73574	Matrix: Water
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Associated Lab Samples:	257973001, 257973002, 257973004
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Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	ND	60.0	06/10/11 10:50	
Arsenic, Dissolved	ug/L	ND	20.0	06/10/11 10:50	
Barium, Dissolved	ug/L	ND	100	06/10/11 10:50	
Beryllium, Dissolved	ug/L	ND	5.0	06/10/11 10:50	
Cadmium, Dissolved	ug/L	ND	5.0	06/10/11 10:50	
Cobalt, Dissolved	ug/L	ND	50.0	06/10/11 10:50	
Lead, Dissolved	ug/L	ND	10.0	06/10/11 10:50	
Manganese, Dissolved	ug/L	ND	15.0	06/10/11 10:50	
Molybdenum, Dissolved	ug/L	ND	20.0	06/10/11 10:50	
Nickel, Dissolved	ug/L	ND	40.0	06/10/11 10:50	
Selenium, Dissolved	ug/L	ND	10.0	06/10/11 10:50	
Silver, Dissolved	ug/L	ND	10.0	06/10/11 10:50	
Thallium, Dissolved	ug/L	ND	20.0	06/10/11 10:50	
Vanadium, Dissolved	ug/L	ND	50.0	06/10/11 10:50	
Zinc, Dissolved	ug/L	ND	40.0	06/10/11 10:50	

LABORATORY CONTROL SAMPLE: 73575

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	500	468	94	80-120	
Arsenic, Dissolved	ug/L	500	478	96	80-120	
Barium, Dissolved	ug/L	500	472	94	80-120	
Beryllium, Dissolved	ug/L	500	494	99	80-120	
Cadmium, Dissolved	ug/L	500	466	93	80-120	
Cobalt, Dissolved	ug/L	500	483	97	80-120	
Lead, Dissolved	ug/L	500	484	97	80-120	
Manganese, Dissolved	ug/L	500	483	97	80-120	
Molybdenum, Dissolved	ug/L	500	509	102	80-120	
Nickel, Dissolved	ug/L	500	490	98	80-120	
Selenium, Dissolved	ug/L	500	465	93	80-120	
Silver, Dissolved	ug/L	250	242	97	80-120	
Thallium, Dissolved	ug/L	500	470	94	80-120	
Vanadium, Dissolved	ug/L	500	470	94	80-120	
Zinc, Dissolved	ug/L	500	483	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73576 73577

Parameter	Units	MS 257959003 Result	MSD Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Antimony, Dissolved	ug/L	ND	500	500	536	522	107	104	75-125	3	

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QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

Parameter	Units	257959003		MS Spike		MSD Spike		MS		MSD		% Rec Limits	RPD	Qual			
		Result	Conc.	Conc.	Result	MSD	% Rec	MSD	% Rec	MSD	% Rec						
Arsenic, Dissolved	ug/L	ND	500	500	569	558	114	112	75-125	112	112	75-125	.2				
Barium, Dissolved	ug/L	ND	500	500	612	616	111	112	75-125	112	112	75-125	.7				
Beryllium, Dissolved	ug/L	ND	500	500	543	537	109	107	75-125	107	107	75-125	1				
Cadmium, Dissolved	ug/L	ND	500	500	551	538	110	108	75-125	108	108	75-125	2				
Cobalt, Dissolved	ug/L	ND	500	500	465	456	90	88	75-125	88	88	75-125	2				
Lead, Dissolved	ug/L	ND	500	500	455	452	90	89	75-125	89	89	75-125	.7				
Manganese, Dissolved	ug/L	12800	500	500	13600	13400	162	130	75-125	130	130	75-125	1	M1			
Molybdenum, Dissolved	ug/L	ND	500	500	520	513	102	101	75-125	101	101	75-125	1				
Nickel, Dissolved	ug/L	119	500	500	577	567	91	90	75-125	90	90	75-125	2				
Selenium, Dissolved	ug/L	ND	500	500	566	549	112	109	75-125	109	109	75-125	3				
Silver, Dissolved	ug/L	ND	250	250	298	299	119	119	75-125	119	119	75-125	.07				
Thallium, Dissolved	ug/L	ND	500	500	432	431	85	85	75-125	85	85	75-125	.2				
Vanadium, Dissolved	ug/L	ND	500	500	479	477	95	94	75-125	94	94	75-125	.5				
Zinc, Dissolved	ug/L	ND	500	500	463	458	91	90	75-125	90	90	75-125	.9				

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QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch: MERP/1451 Analysis Method: EPA 7470

QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury ,Dissolved

Associated Lab Samples: 257973001, 257973002, 257973004

METHOD BLANK: 73264 Matrix: Water

Associated Lab Samples: 257973001, 257973002, 257973004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	06/08/11 10:15	

LABORATORY CONTROL SAMPLE: 73265

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73266 73267

Parameter	Units	257959003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	2.1	2.2	42	43	85-115	2 M1	

QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch:	MSV/4670	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	257973003, 257973005, 257973006		

METHOD BLANK: 73818 Matrix: Water

Associated Lab Samples: 257973003, 257973005, 257973006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	06/10/11 16:27	
1,2-Dichloroethane	ug/L	ND	1.0	06/10/11 16:27	
Benzene	ug/L	ND	0.50	06/10/11 16:27	
Diisopropyl ether	ug/L	ND	0.50	06/10/11 16:27	
Ethanol	ug/L	ND	250	06/10/11 16:27	
Ethyl-tert-butyl ether	ug/L	ND	0.50	06/10/11 16:27	
Ethylbenzene	ug/L	ND	0.50	06/10/11 16:27	
Methyl-tert-butyl ether	ug/L	ND	0.50	06/10/11 16:27	
tert-Amyl methyl ether	ug/L	ND	0.50	06/10/11 16:27	
tert-Butyl Alcohol	ug/L	ND	5.0	06/10/11 16:27	
Toluene	ug/L	ND	0.50	06/10/11 16:27	
Xylene (Total)	ug/L	ND	1.5	06/10/11 16:27	
1,2-Dichloroethane-d4 (S)	%	94	80-124	06/10/11 16:27	
4-Bromofluorobenzene (S)	%	101	80-120	06/10/11 16:27	
Dibromofluoromethane (S)	%	98	80-122	06/10/11 16:27	
Toluene-d8 (S)	%	97	80-123	06/10/11 16:27	

LABORATORY CONTROL SAMPLE: 73819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	18.9	94	73-124	
1,2-Dichloroethane	ug/L	20	19.0	95	78-125	
Benzene	ug/L	20	19.8	99	76-127	
Diisopropyl ether	ug/L	20	20.5	102	70-137	
Ethanol	ug/L	400	347	87	31-182	
Ethyl-tert-butyl ether	ug/L	20	19.0	95	70-137	
Ethylbenzene	ug/L	20	19.4	97	72-125	
Methyl-tert-butyl ether	ug/L	20	19.5	97	58-145	
tert-Amyl methyl ether	ug/L	20	19.5	98	71-133	
tert-Butyl Alcohol	ug/L	100	98.9	99	31-166	
Toluene	ug/L	20	18.9	95	69-125	
Xylene (Total)	ug/L	60	58.3	97	74-124	
1,2-Dichloroethane-d4 (S)	%			93	80-124	
4-Bromofluorobenzene (S)	%			98	80-120	
Dibromofluoromethane (S)	%			99	80-122	
Toluene-d8 (S)	%			96	80-123	

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QUALITY CONTROL DATA

Project: 255325
Pace Project No.: 257973

Parameter	Units	258073001		MSD		74088		% Rec	MSD % Rec	Limits	RPD	Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec					
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	19.8	18.5	99	93	78-117	6		
1,2-Dichloroethane	ug/L	ND	20	20	20.3	19.0	101	95	73-127	6		
Benzene	ug/L	ND	20	20	21.9	20.5	108	101	75-124	7		
Diisopropyl ether	ug/L	ND	20	20	22.1	20.7	111	103	69-130	7		
Ethanol	ug/L	ND	400	400	407	403	102	101	36-177	1		
Ethyl-tert-butyl ether	ug/L	ND	20	20	20.3	19.4	102	97	67-131	5		
Ethylbenzene	ug/L	1.1	20	20	22.5	20.8	107	98	76-124	8		
Methyl-tert-butyl ether	ug/L	5.8	20	20	26.5	26.1	103	101	72-130	1		
tert-Amyl methyl ether	ug/L	ND	20	20	20.7	19.7	104	99	67-132	5		
tert-Butyl Alcohol	ug/L	852	100	100	874	917	22	65	36-164	5 M1		
Toluene	ug/L	ND	20	20	20.9	19.1	104	95	75-124	9		
Xylene (Total)	ug/L	ND	60	60	65.1	59.9	107	98	76-123	8		
1,2-Dichloroethane-d4 (S)	%						92	93	80-124			
4-Bromofluorobenzene (S)	%						97	97	80-120			
Dibromofluoromethane (S)	%						100	100	80-122			
Toluene-d8 (S)	%						96	96	80-123			

QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch:	MSV/4690	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	257973001, 257973002, 257973004		

METHOD BLANK: 74146 Matrix: Water

Associated Lab Samples: 257973001, 257973002, 257973004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	06/14/11 09:59	
1,2-Dichloroethane	ug/L	ND	1.0	06/14/11 09:59	
Acetone	ug/L	ND	5.0	06/14/11 09:59	
Benzene	ug/L	ND	0.50	06/14/11 09:59	
Diisopropyl ether	ug/L	ND	0.50	06/14/11 09:59	
Ethanol	ug/L	ND	250	06/14/11 09:59	
Ethyl-tert-butyl ether	ug/L	ND	0.50	06/14/11 09:59	
Ethylbenzene	ug/L	ND	0.50	06/14/11 09:59	
Methyl-tert-butyl ether	ug/L	ND	0.50	06/14/11 09:59	
tert-Amylmethyl ether	ug/L	ND	0.50	06/14/11 09:59	
tert-Butyl Alcohol	ug/L	ND	5.0	06/14/11 09:59	
Toluene	ug/L	ND	0.50	06/14/11 09:59	
Xylene (Total)	ug/L	ND	1.5	06/14/11 09:59	
1,2-Dichloroethane-d4 (S)	%	94	80-124	06/14/11 09:59	
4-Bromofluorobenzene (S)	%	101	80-120	06/14/11 09:59	
Dibromofluoromethane (S)	%	101	80-122	06/14/11 09:59	
Toluene-d8 (S)	%	96	80-123	06/14/11 09:59	

LABORATORY CONTROL SAMPLE: 74147

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	19.4	97	73-124	
1,2-Dichloroethane	ug/L	20	19.3	97	78-125	
Acetone	ug/L	40	57.4	143	30-180	
Benzene	ug/L	20	19.5	98	76-127	
Diisopropyl ether	ug/L	20	20.7	104	70-137	
Ethanol	ug/L	400	671	168	31-182	
Ethyl-tert-butyl ether	ug/L	20	19.4	97	70-137	
Ethylbenzene	ug/L	20	19.0	95	72-125	
Methyl-tert-butyl ether	ug/L	20	19.9	100	58-145	
tert-Amylmethyl ether	ug/L	20	19.7	98	71-133	
tert-Butyl Alcohol	ug/L	100	102	102	31-166	
Toluene	ug/L	20	18.5	93	69-125	
Xylene (Total)	ug/L	60	57.1	95	74-124	
1,2-Dichloroethane-d4 (S)	%			93	80-124	
4-Bromofluorobenzene (S)	%			98	80-120	
Dibromofluoromethane (S)	%			102	80-122	
Toluene-d8 (S)	%			95	80-123	

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QUALITY CONTROL DATA

Project: 255325
Pace Project No.: 257973

Parameter	Units	257973002		MS		MSD		MS		MSD		% Rec Limits	RPD	Qual			
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	MSD % Rec									
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	16.8	18.5	84	93	78-117	10							
1,2-Dichloroethane	ug/L	ND	20	20	17.9	19.2	89	96	73-127	7							
Acetone	ug/L	ND	40	40	30.4	35.6	64	77	58-146	16							
Benzene	ug/L	ND	20	20	20.8	21.5	102	106	75-124	3							
Diisopropyl ether	ug/L	ND	20	20	20.5	21.8	103	109	69-130	6							
Ethanol	ug/L	ND	400	400	353	367	88	92	36-177	4							
Ethyl-tert-butyl ether	ug/L	ND	20	20	18.4	19.9	92	99	67-131	8							
Ethylbenzene	ug/L	7.1	20	20	27.6	29.0	102	109	76-124	5							
Methyl-tert-butyl ether	ug/L	33.8	20	20	49.3	57.5	78	118	72-130	15							
tert-Amyl methyl ether	ug/L	ND	20	20	18.3	20.3	91	101	67-132	10							
tert-Butyl Alcohol	ug/L	1310	100	100	1160	1400	-151	94	36-164	19 M1							
Toluene	ug/L	ND	20	20	19.7	20.2	97	100	75-124	3							
Xylene (Total)	ug/L	ND	60	60	61.5	62.7	101	103	76-123	2							
1,2-Dichloroethane-d4 (S)	%						89	91	80-124								
4-Bromofluorobenzene (S)	%						98	97	80-120								
Dibromofluoromethane (S)	%						100	100	80-122								
Toluene-d8 (S)	%						97	95	80-123								

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QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch:	MSV/4669	Analysis Method:	CA LUFT
QC Batch Method:	CA LUFT	Analysis Description:	CA LUFT MSV GRO
Associated Lab Samples:	257973001, 257973002, 257973004, 257973005, 257973006		

METHOD BLANK: 73816 Matrix: Water

Associated Lab Samples: 257973001, 257973002, 257973004, 257973005, 257973006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-Gasoline (C05-C12)	ug/L	ND	50.0	06/10/11 16:27	
4-Bromofluorobenzene (S)	%	101	82-116	06/10/11 16:27	

LABORATORY CONTROL SAMPLE: 73817

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-Gasoline (C05-C12)	ug/L	500	447	89	60-140	
4-Bromofluorobenzene (S)	%			98	82-116	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74083 74084

Parameter	Units	257973006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH-Gasoline (C05-C12)	ug/L	ND	500	500	532	478	103	92	60-140	11	
4-Bromofluorobenzene (S)	%						100	100	82-116		

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QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch:	MSV/4679	Analysis Method:	CA LUFT
QC Batch Method:	CA LUFT	Analysis Description:	CA LUFT MSV GRO
Associated Lab Samples:	257973003		

METHOD BLANK: 74035 Matrix: Water

Associated Lab Samples: 257973003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-Gasoline (C05-C12)	ug/L	ND	50.0	06/13/11 10:10	
4-Bromofluorobenzene (S)	%	100	82-116	06/13/11 10:10	

LABORATORY CONTROL SAMPLE: 74036

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-Gasoline (C05-C12)	ug/L	500	450	90	60-140	
4-Bromofluorobenzene (S)	%			100	82-116	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74362 74363

Parameter	Units	258055002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH-Gasoline (C05-C12)	ug/L	ND	500	500	477	456	86	82	60-140	5	
4-Bromofluorobenzene (S)	%						99	101	82-116		

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QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch:	WET/2851	Analysis Method:	SM 5210B
QC Batch Method:	SM 5210B	Analysis Description:	5210B BOD, 5 day
Associated Lab Samples:	257973001, 257973002, 257973004		

METHOD BLANK: 73114	Matrix: Water
---------------------	---------------

Associated Lab Samples: 257973001, 257973002, 257973004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	ug/L	ND	2000	06/09/11 13:30	

LABORATORY CONTROL SAMPLE: 73115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	ug/L	198000	188000	95	85-115	

SAMPLE DUPLICATE: 73116

Parameter	Units	Result	Dup Result	RPD	Qualifiers
BOD, 5 day	ug/L	19600	18500	5	

QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch:	WETA/2039	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
Associated Lab Samples:	257973001, 257973002, 257973004		

METHOD BLANK: 73217 Matrix: Water

Associated Lab Samples: 257973001, 257973002, 257973004

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Chloride	ug/L	ND	1000	06/08/11 16:08	
Sulfate	ug/L	ND	1000	06/08/11 16:08	

LABORATORY CONTROL SAMPLE: 73218

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Chloride	ug/L	5000	4530	91	90-110	
Sulfate	ug/L	15000	14300	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73219 73220

Parameter	Units	257888001	MS	MSD	MS	% Rec	MSD	% Rec	% Rec	RPD	Qual
		Result	Spike	Spike							
Chloride	ug/L	21.8	50000	50000	69400	69300	95	95	90-110	.2	
Sulfate	ug/L	91.6	150000	150000	244000	242000	102	100	90-110	.7	

MATRIX SPIKE SAMPLE: 73221

Parameter	Units	257942001	Spike	MS	MS	% Rec	% Rec	Limits	Qualifiers
		Result	Conc.	Result	% Rec				
Chloride	ug/L	96.4 mg/L	50000	148000	103			90-110	
Sulfate	ug/L	18.3 mg/L	150000	163000	96			90-110	

QUALITY CONTROL DATA

Project: 255325
Pace Project No.: 257973

QC Batch:	WETA/2037	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate + Nitrite, preserved
Associated Lab Samples:	257973001, 257973002, 257973004		

METHOD BLANK: 73156 Matrix: Water

Associated Lab Samples: 257973001, 257973002, 257973004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO ₂ plus NO ₃	ug/L	ND	50.0	06/07/11 14:29	

LABORATORY CONTROL SAMPLE: 73157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO ₂ plus NO ₃	ug/L	1000	973	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73158 73159

Parameter	Units	257926001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, NO ₂ plus NO ₃	ug/L	0.80 mg/L	1000	1000	1920	1910	112	111	90-110	.5	M1

QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch:	WETA/2047	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	257973001, 257973002, 257973004		

METHOD BLANK: 74346 Matrix: Water

Associated Lab Samples: 257973001, 257973002, 257973004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	ug/L	ND	5000	06/15/11 13:00	

LABORATORY CONTROL SAMPLE: 74347

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	ug/L	42500	43600	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74348 74349

Parameter	Units	257959010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chemical Oxygen Demand	ug/L	15100	50000	50000	65600	66700	101	103	90-110	2	

QUALITY CONTROL DATA

Project: 255325

Pace Project No.: 257973

QC Batch: WETA/2035 Analysis Method: SM 4500-NO2 B

QC Batch Method: SM 4500-NO2 B Analysis Description: SM4500NO2-B, Nitrite, unpres

Associated Lab Samples: 257973001, 257973002, 257973004

METHOD BLANK: 73117 Matrix: Water

Associated Lab Samples: 257973001, 257973002, 257973004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	ug/L	ND	10.0	06/04/11 11:52	

LABORATORY CONTROL SAMPLE: 73118

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	ug/L	50	50.6	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73119 73120

Parameter	Units	257973001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrite as N	ug/L	ND	50	50	58.1	55.9	100	95	71-109	4	

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QUALIFIERS

Project: 255325
 Pace Project No.: 257973

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.

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LABORATORIES

PASI-M Pace Analytical Services - Minneapolis
 PASI-S Pace Analytical Services - Seattle

BATCH QUALIFIERS

Batch: WET/2852

[1] Ferrous iron results obtained in the field and provided by the client. Total iron results obtained in the lab within acceptable hold times. No holding time violations occurred for ferric iron calculation.

Batch: WET/2853

[1] Ferrous iron results obtained in the field and provided by the client. Total iron results obtained in the lab within acceptable hold times. No holding time violations occurred for ferric iron calculation.

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: 255325
Pace Project No.: 257973

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
257973001	U-1_20110630	RSK 175	AIR/12455		
257973002	U-2_20110630	RSK 175	AIR/12455		
257973004	U-4_20110630	RSK 175	AIR/12443		
257973001	U-1_20110630	EPA 3010	MPRP/2263	EPA 6010	ICP/2167
257973002	U-2_20110630	EPA 3010	MPRP/2263	EPA 6010	ICP/2167
257973004	U-4_20110630	EPA 3010	MPRP/2263	EPA 6010	ICP/2167
257973001	U-1_20110630	EPA 3010	MPRP/2268	EPA 6010	ICP/2173
257973002	U-2_20110630	EPA 3010	MPRP/2268	EPA 6010	ICP/2173
257973004	U-4_20110630	EPA 3010	MPRP/2268	EPA 6010	ICP/2173
257973001	U-1_20110630	EPA 7470	MERP/1451	EPA 7470	MERC/1465
257973002	U-2_20110630	EPA 7470	MERP/1451	EPA 7470	MERC/1465
257973004	U-4_20110630	EPA 7470	MERP/1451	EPA 7470	MERC/1465
257973001	U-1_20110630	EPA 5030B/8260	MSV/4690		
257973002	U-2_20110630	EPA 5030B/8260	MSV/4690		
257973003	U-3_20110630	EPA 5030B/8260	MSV/4670		
257973004	U-4_20110630	EPA 5030B/8260	MSV/4690		
257973005	U-5_20110630	EPA 5030B/8260	MSV/4670		
257973006	U-6_20110630	EPA 5030B/8260	MSV/4670		
257973001	U-1_20110630	CA LUFT	MSV/4669		
257973002	U-2_20110630	CA LUFT	MSV/4669		
257973003	U-3_20110630	CA LUFT	MSV/4679		
257973004	U-4_20110630	CA LUFT	MSV/4669		
257973005	U-5_20110630	CA LUFT	MSV/4669		
257973006	U-6_20110630	CA LUFT	MSV/4669		
257973001	U-1_20110630	SM 3500-Fe B#4	WET/2852		
257973002	U-2_20110630	SM 3500-Fe B#4	WET/2852		
257973004	U-4_20110630	SM 3500-Fe B#4	WET/2852		
257973001	U-1_20110630	SM 3500-Fe B#4	WET/2853		
257973002	U-2_20110630	SM 3500-Fe B#4	WET/2853		
257973004	U-4_20110630	SM 3500-Fe B#4	WET/2853		
257973001	U-1_20110630	SM 5210B	WET/2851	SM 5210B	WET/2865
257973002	U-2_20110630	SM 5210B	WET/2851	SM 5210B	WET/2865
257973004	U-4_20110630	SM 5210B	WET/2851	SM 5210B	WET/2865
257973001	U-1_20110630	EPA 300.0	WETA/2039		
257973002	U-2_20110630	EPA 300.0	WETA/2039		
257973004	U-4_20110630	EPA 300.0	WETA/2039		
257973001	U-1_20110630	EPA 353.2	WETA/2037		
257973002	U-2_20110630	EPA 353.2	WETA/2037		
257973004	U-4_20110630	EPA 353.2	WETA/2037		
257973001	U-1_20110630	EPA 410.4	WETA/2047		

Date: 06/20/2011 04:35 PM

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 255325
 Pace Project No.: 257973

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
257973002	U-2_20110630	EPA 410.4	WETA/2047		
257973004	U-4_20110630	EPA 410.4	WETA/2047		
257973001	U-1_20110630	SM 4500-NO2 B	WETA/2035		
257973002	U-2_20110630	SM 4500-NO2 B	WETA/2035		
257973004	U-4_20110630	SM 4500-NO2 B	WETA/2035		

Date: 06/20/2011 04:35 PM

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2 5 7 9 7 3



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: 1 of 2
Cooler #: _____

PACE ANALYTICAL- SEATTLE (Subcontract Samples)

Required Lab Information:

Lab Name	Pace-Seattle			Site ID #	255325	Task	WG_O_201105	Send invoice to	David Seawie	Turn around time (days)	10
Address	Delta project #			Address	11050 White Rock Road, Suite 110			QC level Required:		Standard	
940 S. Harney Street Seattle WA 98108	Site Address	3200 LAKESHORE AVE		City/State	Rancho Cucamonga CA 91730	Phone #:	1-800-477-7411	Special		Mark one	
Lab P.M.	Regina Ste-Marie	City	OAKLAND	State	CA 94610	Reimbursement project?		Non-reimbursement project?	Y	Mark one	NJ Reduced Deliverable Package?
Phone/Fax:	P: 206-957-2433 F: 206-767-5063	Delta PM Name	Dennis Dettloff		Send EDD to	copeldata@intelligentus.com			MA MCP Cert?		CT RCP Cert?
Lab PM email	Regina.SteMarie@pacelabs.com	Phone/Fax:	P: 1-800-477-7411 F: 816-633-5385	CC Hardcopy report to							Mark One
Applicable Lab Quote #		Delta PM Email	ddettloff@deltaenv.com		CC Hardcopy report to						

2Q11 GW Eve

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9/-)</small> <small>IDs MUST BE UNIQUE</small>	Valid Matrix Code		MATRIX CODE	SAMPLE TYPE <small>GROUNDS CHOWDIP</small>	SAMPLE DATE	SAMPLE TIME	TIME CONVENTION	FIELD FILTERED (Y/N)	Preservatives														Comments/Lab Sample I.D.			
		MATRIX	SAMPLE							Hg	As	Ag	Al	Cu	Li	Al	Li	Tl	Sn	Tl	Sn	Tl	Sn	As	Li		
1	U-1_20110630	WG	G	6	3	11	1135	14	Y	X	X	X															
2	U-2_20110630	WG	G				1330	14	Y	X	X	X															
3	U-3_20110630	WG	G				1155	0	N				X														
4	U-4_20110630	WG	G				1230	14	Y	X	X	X															
5	U-5_20110630	WG	G				1300	6	N				X														
6	U-6_20110630	WG	G				0950	10	N			X															
7																											
8																											
9																											
10																											
11																											
12																											

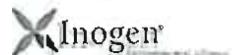
Additional Comments/Special Instructions: Fe Z+

U-1: 2.4 mg/l
U-2: 2.2 mg/l
U-4: 0.2 mg/l

GLOBAL ID: T0600101463

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Comments
B Shell / BTS	6-3-11	6:20				Y/N Y/N Y/N
Faslex	6/4/11	11:55	Jyothi Sway/PACE	6/4/11	0945	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 Signature of Sampler				
US MAIL	SIGNATURE OF SAMPLER	DATE Signed 6-3-11	Time: 16:20		



Sample Container Count

CLIENT: An tea

COC PAGE 1 of 1

COC ID#



257973

Sample Line

Item	VG9H	AG1H	AG1U	BG1H	BP1U	BP2U	BP3U	BP2N	BP2S	WGFU	WGKU	VSG	BP3N	Comments
1	6				2				1 ^{oz}	1 ^{oz}		3	1 ^{oz}	
2									1 ^{oz}	1 ^{oz}		3	1 ^{oz}	
3														
4							2		1 ^{oz}	1 ^{oz}		3	1 ^{oz}	
5														
6														
7														
8														
9														
10														
11														
12													Trip Blank? <u>No</u>	

AG1H	1 liter HCL amber glass		BP2S	500mL H ₂ SO ₄ plastic		JGFU	4oz unpreserved amber wide
AG1U	1liter unpreserved amber glass		BP2U	500mL unpreserved plastic		R	terra core kit
AG2S	500mL H ₂ SO ₄ amber glass		BP2Z	500mL NaOH, Zn Ac		U	Summa Can
AG2U	500mL unpreserved amber glass		BP3C	250mL NaOH plastic		VG9H	40mL HCL clear vial
AG3S	250mL H ₂ SO ₄ amber glass		BP3N	250mL HNO ₃ plastic		VG9T	40mL Na Thio, clear vial
BG1H	1 liter HCL clear glass		BP3S	250mL H ₂ SO ₄ plastic		VG9U	40mL unpreserved clear vial
BG1U	1 liter unpreserved glass		BP3U	250mL unpreserved plastic		VG9W	40mL glass vial preweighted (EPA 5035)
BP1N	1 liter HNO ₃ plastic		DG9B	40mL Na Bisulfate amber vial		VSG	Headspace septa vial & HCL
BP1S	1 liter H ₂ SO ₄ plastic		DG9H	40mL HCL amber voa vial		WGFU	4oz clear soil jar
BP1U	1 liter unpreserved plastic		DG9M	40mL MeOH clear vial		WGFX	4oz wide jar w/hexane wipe
BP1Z	1 liter NaOH, Zn, Ac		DG9T	40mL Na Thio amber vial		ZPLC	Ziploc Bag
BP2N	500mL HNO ₃ plastic		DG9U	40mL unpreserved amber vial			
BP2O	500mL NaOH plastic			I Wipe/Swab			



Sample Condition Upon Receipt

Client Name: Antea Project # 257973

Courier: FedEx UPS USPS Client Commercial Pace Other _____

Tracking #: 8664 1833 0411

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 101731982 or 226099 Type of Ice: White Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.7, 1.8°C Biological Tissue Is Frozen: Yes No Comments: Date and Initials of person examining contents: NBS 6/4/11

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD, NO₂/NO₃</u>
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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>Water</u>	
All containers needing preservation have been checked:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: VOA, polifilm, TOC, O&G	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 type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review:

RSM

Date: 06/06/11

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): 1.8 °C

Antea Group Lab Validation Sheet

Project/Client: COP/ELT

Project #: I40255325

Date of Validation: 7/26/11 Date of Analysis: 6/3/11 Sample Date: 6/10/11

Completed By: Jon F. Signature: Jonathan Filligrene

Analytical Lab Used and Report # (if any): Pace Analytical 257973

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^3,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 dissolved Manganese, TBA, and Nitrogen, NO₂ plus NO₃