ConocoPhillips
76 Broadway
Sacramento, California 95818

April 14, 2011

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

Re: Quarterly Summary Report – First Quarter 2011
76 Service Station No. 1028
5300 Broadway
Oakland, California
Alameda County LOP Case #: RO0002967
Antea Group Project No. I40251028

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 Ms. Lia Holden at (408) 826-1863.

Sincerely,

Eric G. Hetrick
Site Manager
Risk Management & Remediation

Quarterly Summary Report
First Quarter 2011

76 Service Station No. 1028
5300 Broadway
Oakland, California
Alameda County Health Care Services Agency
Case #: RO0002967

Antea Group Project No. I40251028
April 14, 2011

Prepared for:
Barbara Jakub
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Prepared by:
Antea™Group
312 Piercy Road
San Jose, CA, 95138
+1800.477.7411

Quarterly Summary Report
First Quarter 2011

76 Service Station No. 1028
5300 Broadway
Oakland, California
Alameda County Health Care Services Agency
Case #: RO0002967

Antea Group Project No. I40251028
April 14, 2011

Prepared for:
Barbara Jakub
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Prepared by:
Antea™Group
312 Piercy Road
San Jose, CA, 95138
+1800.477.7411

Table of Contents

Tables

Figures

Appendices

Quarterly Summary Report
First Quarter 2011

76 Service Station No. 1028
5300 Broadway
Oakland, California
Alameda County Health Care Services Agency
Case# RO0002967

1.0 SITE DESCRIPTION

The subject site is an active service station located on the northeast corner of the intersection of Broadway and Broadway Terrace in Oakland, California (**Figure 1**). Aboveground facilities consist of two dispenser islands and repair shop. Two gasoline underground storage tanks (USTs) share a common pit located in the southwest corner of the property. One waste oil tank is located in front of the station building (**Figure 2**). The site is bordered to the north and east by residential buildings. Commercial properties are located to the west of the site across Broadway and to the south across Broadway Terrace.

1.1 Work Performed in the First Quarter 2011

- Blaine Tech Services (Blaine Tech) conducted a quarterly monitoring event.
- Antea™Group [formerly Delta Consultants (Delta)] submitted a *Soil and Groundwater Investigation Report and Request for Case Closure* dated February 28, 2011.

1.2 Work Proposed for the Second Quarter 2011

- Antea Group will submit the Quarterly Summary Report, First Quarter 2011 (contained herein) to the Alameda County Department of Environmental Health (ACEH).
- Antea Group to continue communications with Alameda County Environmental Health Department (ACEH) to obtain case closure.
- Blaine Tech to conduct a quarterly monitoring and sampling event.

2.0 CURRENT PROJECT STATUS

Current phase of project:	Quarterly Groundwater Monitoring
Local Oversight Program (LOP) - Lead Agency for Cleanup Oversight:	Alameda County Environmental Health Department (ACEH)
Secondary Agency(s):	San Francisco Bay Regional Water Quality Control

	Board
Monitoring well gauging schedule:	All wells gauged quarterly
Monitoring well sampling schedule:	Quarterly: MW-1, MW-2, MW-3
Total number of monitoring/remediation wells:	Three monitoring wells (MW-1, MW-2, MW-3)
Total depths of wells (feet below ground surface):	All wells are 12 feet deep
Wells with historical measurable LNAPL (light non-aqueous phase liquid):	None
Generalized site geology:	Upper 1 to 5 feet of subsurface is weathered shale and clay deposits with cobbles of chert and shale. Shale bedrock below to total depth explored.
Historic depth to water range (feet below top of casing (btoc):	4.26 (former well MW-1 on 8/30/1990) to 1.16 (current well MW-1 on 12/21/2011)
Historic groundwater elevation range (ft above mean sea level):	174.20 (MW-3 on 2/17/2011) to 177.26 (MW-2 on 12/21/2010)
Nearby Sensitive Receptors:	None (Delta 2008) (**Appendix A**)
Current remediation technique	None

2.1 Regulatory Correspondence

No correspondence was sent or received in the current quarter.

2.2 Groundwater Monitoring

During the first quarter 2011 groundwater monitoring and sampling event on February 17th, 2011, all wells were gauged and sampled by subcontractor Blaine Tech per standard sampling protocol (**Appendix B**). Copies of Blaine Tech's field data sheets are included in **Appendix C**. The recent gauging and sampling data are summarized below.

Well gauging and sampling date:	February 17, 2011
Wells gauged:	MW-1, MW-2, MW-3
Wells sampled:	MW-1, MW-2, MW-3
Purge Method:	3 casing volumes via electric, submersible pump
Sample collection method:	Disposable bailer
Groundwater parameters measured:	Temperature, pH, Conductivity, Oxidation-reduction potential (ORP), Dissolved Oxygen (DO),
Wells with measurable LNAPL:	None
Current depth to water range (ft btoc):	Min: 1.29 feet (MW-1) Max: 4.10 feet (MW-2)
Current groundwater elevation range (ft):	Min: 174.20 (MW-3) Max: 177.26 (MW-2)

Change in groundwater elevation from previous event (average change for all wells)	0.053 foot increase from December 2010 to February 2011.
Groundwater flow direction and gradient:	0.039 feet per foot to the Northwest (**Figure 3**)

2.2.1 Groundwater Flow Gradient and Directional Trends

In the first quarter 2011, depth to water in wells varied from 1.29 feet btoc in MW-1 to 4.10 feet in MW-2, and groundwater flow direction was to northwest (**Figure 3**). Depths to water and flow directions reported in the current quarter are consistent with those reported during the December 2010 sampling event, and also with historic depths to water and flow directions reported prior to the site's closure in 1994.

2.2.1 Groundwater Quality Data

Groundwater samples collected during the first quarter 2011 were submitted under chain-of-custody protocol to Pace Analytical Services, Inc. (PACE), a state of California Environmental Laboratory Accreditation Program (ELAP) certified laboratory (Certification No. 01153CA). The complete analytical report is included in **Appendix D**. Groundwater samples were analyzed for the following:

- Gasoline Range Organics (GRO) by Environmental Protection Agency (EPA) Method 8260B;
- Benzene, toluene, ethylbenzene, xylenes (BTEX Compounds) by EPA Method 8260B.
- Fuel oxygenates: methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), ethyl tertiary butyl ether (ETBE) and ethanol by EPA Method 8260B.
- Lead scavengers: 1, 2-dichloroethane (1, 2-DCA) and ethylene dibromide (EDB) by EPA Method 8260B.

Current groundwater analytical results are presented in **Table 1** and historic groundwater monitoring results are presented in **Table 2**. A groundwater concentration map is included as **Figure 4**. The following concentrations were reported in the first quarter 2011 sampling event:

- GRO was reported at a concentration of 52.1 micrograms per liter (µg/L) in MW-3. This concentration is below the Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) of 100 µg/L for residential land use and potential drinking water.
- DRO was reported at a concentration of 56.8 µg/L in MW-1, which is below the ESL of 100 µg/L.
- MTBE was reported in MW-3 at a concentration of 2.5 µg/L, which is below the ESL of 5 µg/L.
- TBA was reported in MW-3 at a concentration of 7.5 µg/L which is below the ESL of 12 µg/L.

No other analytes were reported above laboratory reporting limits in any of the site wells.

2.2.3 Groundwater Contaminant Trends

During the site's short monitoring period from 1990 to 1991, concentrations decreased to below detection limits after the first monitoring event. Analyte concentrations reported by ATC in their 2007 investigation were elevated, and results of the December 2010 and February 2011 sampling events confirm that the reported concentrations related to the 2007 investigation were not representative of actual groundwater conditions. Data from both the December 2010 event and the current reporting period show that conditions are similar to those reported during the site's closure in 1994.

Contaminants onsite are generally located in the lower, northwest portion of the site near MW-3 and MW-1; however, reported concentrations in the current quarter are below ESLs.

2.2.3 Waste Disposal Summary

Approximately 15 gallons of purge water were generated during well purging/sampling and equipment cleaning in the first quarter 2011 event. The waste water was transported to Blaine Tech's bulk facility in San Jose, California. After the batching process, the wastewater was transported to Seaport Environmental in Redwood City, California for disposal. Blaine Tech's standard operating procedure for purgewater handling are included in **Appendix B**.

2.2.4 Quality Assurance/ Quality Control

Antea Group's QA/QC measures included a detailed QA/QC data validation check on the Pace Laboratory analytical results for the February 2011 sampling event. Antea Group's laboratory data validation checklist and the Pace laboratory report are included in **Appendix D**.

Laboratory QA/QC Performed?	Yes (validated by Antea Group)
Laboratory Data Qualifiers:	M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
Are the data valid for their intended purpose?	Yes, the data are valid.

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

3.0 CONCLUSIONS AND RECOMMENDATIONS

- Antea Group and subcontractors conducted a quarterly monitoring event on February 17, 2010.
- Groundwater flow was directed to the Northwest at a hydraulic gradient of 0.039 feet per foot.

- No analyte concentrations were reported above ESLs.
- Antea Group recently submitted a Soil and Groundwater Investigation Report and Request for Case Closure dated February 22nd, 2011. The report documented the installation of the site's three monitoring wells and recommended case closure based on the site conditions and closure criteria.
- Concentrations reported during the site's environmental case closure in 1994 are generally consistent with data associated with the well installation investigation and with the current quarter's groundwater results. Antea Group believes that elevated concentrations reported during the 2007 ATC investigation were false positives, not representative of actual groundwater conditions, and that the site meets the criteria for case closure.
- Antea Group recommends case closure by the ACEH and that monitoring and sampling is allowed to cease while the case is being reviewed for closure.

4.0 CURRENT QUARTER ACTIVITIES (FOURTH QUARTER 2010 AND FIRST QUARTER 2011)

- BlaineTech .
- TRC performed the First Quarter 2011 semi-annual monitoring/sampling event and prepared a semi-annual monitoring report.
- Antea Group prepared and submitted the Semi-Annual Summary Report – October 2010 through March 2011.
- The site's environmental case was transferred to Stantec, under the direction of Chevron Environmental Management Company.

5.0 PLANNED ACTIVITIES (SECOND AND THIRD QUARTERS 2011)

- TRC to conduct the Third Quarter, 2011 groundwater monitoring and sampling event.
- Stantec to prepare and submit a semi-annual summary report.
- Stantec to prepare and submit a Corrective Action Plan. .

6.0 LIMITATIONS

The findings contained in this report represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This report is based upon a specific scope of work requested by

the client. The Contract between Antea Group 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 Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this report.

Yvette M Rico for Date: 4/19/2011

Nadine Periat
Senior Staff Geologist

Reviewed by:

PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp. 4/13
STATE OF CALIFORNIA

Lia Holden Date: 4/19/2011

Lia Holden, P.G. No. 8584
Geologist – Project Manager

Tables

TABLE 1
CURRENT GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Service Station No. 1028
5300 BROADWAY 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)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	TBA (ug/L)	Ethanol (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)	DRO (ug/L)
MW-1	2/17/2011	176.62	1.29	NP	175.33	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	<5.0	<250	<0.50	<0.50	<0.50	<1.0	<1.0	56.8
MW-2	2/17/2011	181.36	4.10	NP	177.26	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	<5.0	<250	<0.50	<0.50	<0.50	<1.0	<1.0	<50.0
MW-3	2/17/2011	176.40	2.20	NP	174.20	52.1	<0.50	<0.50	<0.50	<1.5	2.5	7.5	<250	<0.50	<0.50	<0.50	<1.0	<1.0	<50.0

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)
NSVD - Not surveyed
-- - No information available

Analytical Notes:
< - Not detected at or above indicated laboratory reporting limit
ug/L - micrograms/liter
GRO- gasoline range organics
MTBE- Methyl tertiary-butyl ether
TBA- Tertiary-butyl alcohol
DIPE- Di-isopropyl ether
ETBE- Ethyl tertiary-butyl ether
TAME- Tertiary-amyl methyl ether
DRO- diesel range organics

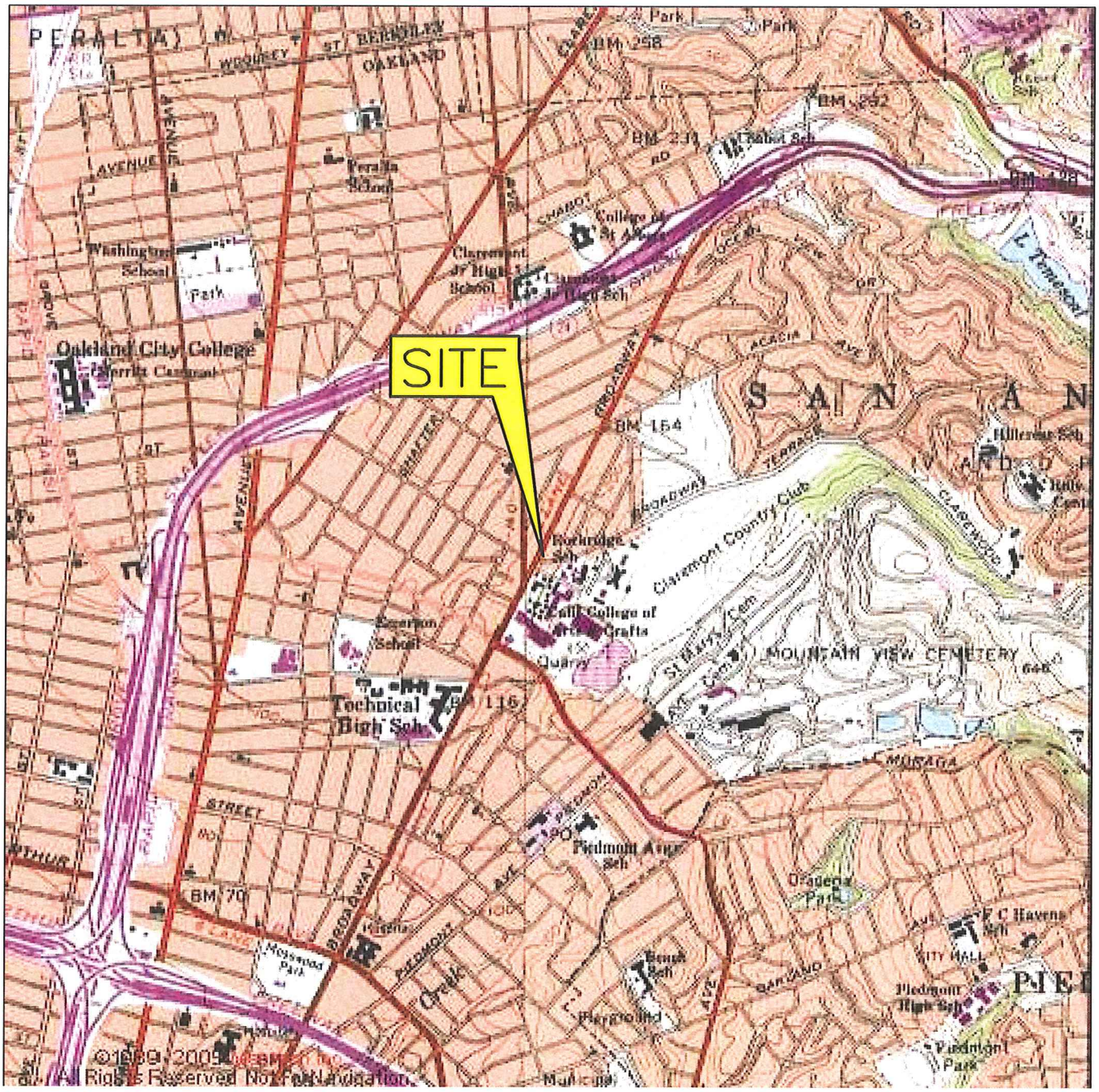
TABLE 2
HISTORIC GROUNDWATER GAUGING AND ANALYTICAL DATA
76 Service Station No. 1028
5300 BROADWAY AVE
OAKLAND, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA													
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	TBA (ug/L)	Ethanol (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)	DRO (ug/L)
MW-1	12/21/2010	176.62	1.16	NP	175.46	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	<5.0	<250	<0.50	<0.50	<0.50	<1.0	<1.0	<50.0
MW-1	2/17/2011	176.62	1.29	NP	175.33	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	<5.0	<250	<0.50	<0.50	<0.50	<1.0	<1.0	**56.8**
MW-2	12/21/2010	181.36	4.19	NP	177.17	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	<5.0	<250	<0.50	<0.50	<0.50	<1.0	<1.0	<50.0
MW-2	2/17/2011	181.36	4.10	NP	177.26	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	<5.0	<250	<0.50	<0.50	<0.50	<1.0	<1.0	<50.0
MW-3	12/21/2010	176.40	2.08	NP	174.32	<50.0	<0.50	<0.50	<0.50	<1.5	**0.87**	<5.0	<250	<0.50	<0.50	<0.50	<1.0	<1.0	**74.4**
MW-3	2/17/2011	176.40	2.20	NP	174.20	**52.1**	<0.50	<0.50	<0.50	<1.5	**2.5**	**7.5**	<250	<0.50	<0.50	<0.50	<1.0	<1.0	<50.0

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)
NSVD - Not surveyed
-- - No information available

Analytical Notes:
< - Not detected at or above indicated laboratory reporting limit
ug/L - micrograms/liter
GRO- gasoline range organics
MTBE- Methyl tertiary-butyl ether
TBA- Tertiary-butyl alcohol
DIPE- Di-isopropyl ether
ETBE- Ethyl tertiary-butyl ether
TAME- Tertiary-amyl methyl ether
DRO- diesel range organics

Figures



N

0 1600 FT

SCALE

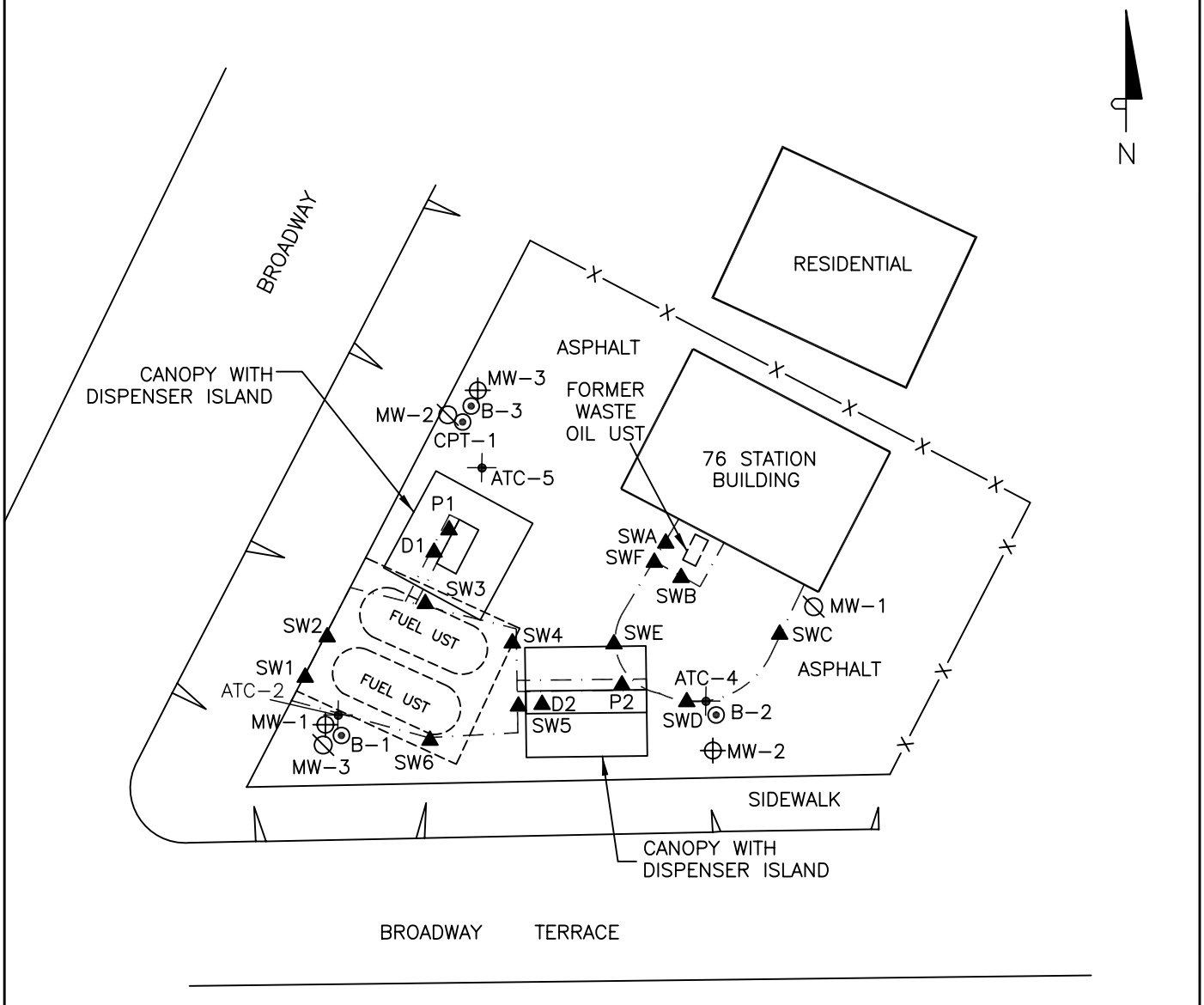
FIGURE 1
SITE LOCATION MAP

76 STATION NO. 1028
5300 BROADWAY AVENUE
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
140251028	NP	JH
DATE	REVIEWED BY	FILE NAME
04/19/10	LH	1028-Topo

anteagroup

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



LEGEND:

- ATC-5 — SOIL BORING (ATC 2007)
- MW-1 — ABANDONED MONITORING WELL
- MW-3 — MONITORING WELL (DELTA 2010)
- B-3 — SOIL BORING (DELTA 2010)
- SW1 — EXCAVATION SIDEWALL SAMPLE (1989)
- P1 — PRODUCT TRENCH SAMPLE (1989)
- LIMITS OF EXCAVATION (ANTEA 2011)

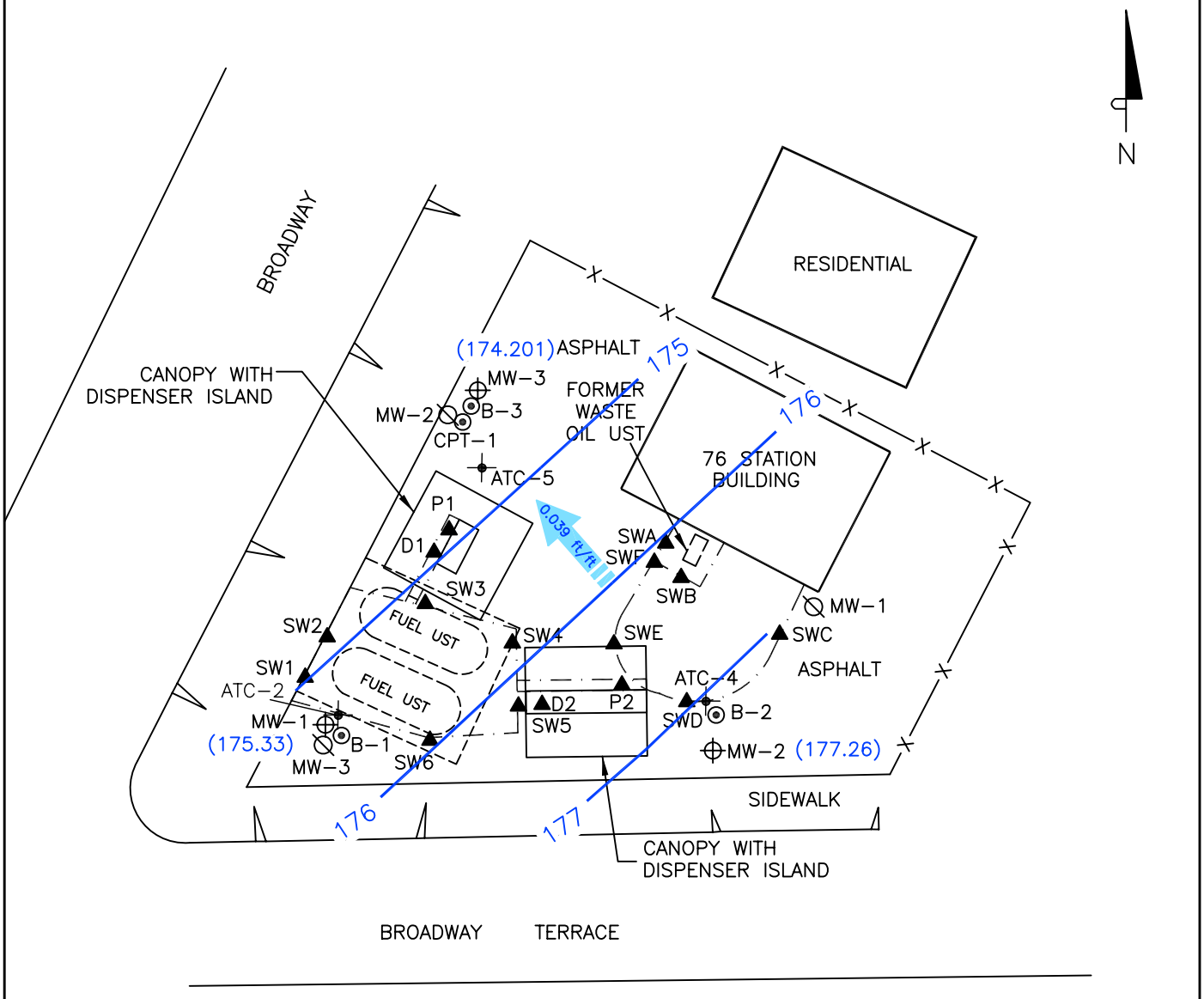
SITE MAP ADAPTED FROM A SURVEY BY MIDCOAST ENGINEERS, DECEMBER 2010 AND A SITE MAP BY ATC ASSOCIATES, 2007.

FIGURE 2
SITE MAP

76 STATION NO. 1028
5300 BROADWAY
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
140251028	NaP	JH
DATE	REVIEWED BY	FILE NAME
2/22/11	LH	1028-Site

anteagroup



LEGEND:

- ATC-5 — SOIL BORING (ATC 2007)
- MW-1 — ABANDONED MONITORING WELL
- MW-3 — MONITORING WELL (DELTA 2010)
- B-3 — SOIL BORING (DELTA 2010)
- SW1 — EXCAVATION SIDEWALL SAMPLE (1989)
- P1 — PRODUCT TRENCH SAMPLE (1989)
- LIMITS OF EXCAVATION (ANTEA 2011)
- (174.201) — GROUNDWATER ELEVATON IN FEET MEAN SEA LEVEL (ft/msl)
- 175 — GROUNDWATER ELEVATION CONTOUR LINE (ft/msl) (CONTOUR INTERVAL: 1 ft)
- 0.039 ft/ft — GROUNDWATER FLOW DIRECTION AND HYDRAULIC GRADIENT (ft/ft)

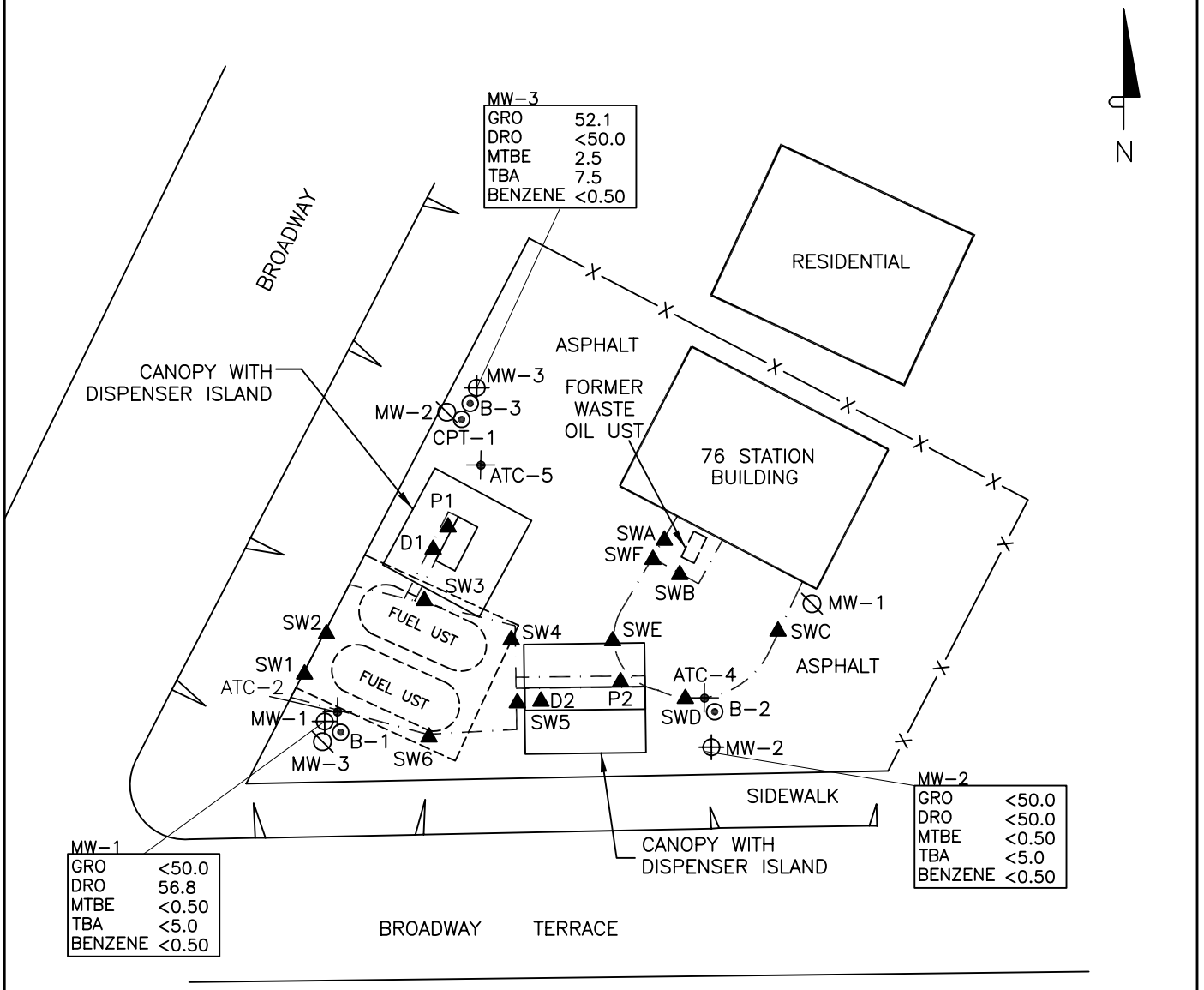
0 30 FT
SCALE

SITE MAP ADAPTED FROM A SURVEY BY MIDCOAST ENGINEERS, DECEMBER 2010 AND A SITE MAP BY ATC ASSOCIATES, 2007.

FIGURE 3
GROUNDWATER ELEVATION MAP
FEBRUARY 17, 2011
76 STATION NO. 1028
5300 BROADWAY
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
140251028	NaP	JH
DATE	REVIEWED BY	FILE NAME
2/17/11	LH	1028-Site

anteagroup



LEGEND:

ATC-5 SOIL BORING (ATC 2007)

MW-1 ABANDONED MONITORING WELL

MW-3 MONITORING WELL (DELTA 2010)

B-3 SOIL BORING (DELTA 2010)

SW1 EXCAVATION SIDEWALL SAMPLE (1989)

P1 PRODUCT TRENCH SAMPLE (1989)

LIMITS OF EXCAVATION (ANTEA 2011)

NOTES:
GRO = GASOLINE RANGE ORGANICS
DRO = DIESEL RANGE ORGANICS
MTBE = METHYL TERTIARY BUTYL ETHER
TBA = TERTIARY BUTYL ALCOHOL
<0.50= LESS THAN LABORATORY INDICATED REPORTING LIMITS

CONCENTRATIONS IN MICROGRAMS PER LITER (µg/L).

0 30 FT
SCALE

SITE MAP ADAPTED FROM A SURVEY BY MIDCOAST ENGINEERS, DECEMBER 2010 AND A SITE MAP BY ATC ASSOCIATES, 2007.

FIGURE 4
GROUNDWATER CONCENTRATION MAP
FEBRUARY 17, 2011
76 STATION NO. 1028
5300 BROADWAY
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
140251028	NaP	JH
DATE	REVIEWED BY	FILE NAME
2/17/11	LH	1028-Site

anteagroup

Appendix A

Summary of Previous Site Investigations

Summary of Previous Site Investigations

1989 – Soil samples were collected by Kaprealian Engineering, Inc. (KEI) following the removal of two fuel USTs, their associated piping, and a waste-oil UST. Ground water was encountered in the tank pit at a depth of approximately 7 to 8 feet. Analytical results from the soil samples showed total petroleum hydrocarbons as gasoline (TPH-G) ranged from non-detectable above laboratory reporting limits to 22 parts per million (ppm) in the fuel UST excavation, and from non-detectable to 5.7 ppm in the waste-oil UST excavation. All total petroleum hydrocarbons as diesel (TPH-D) concentrations were less than 10 ppm and all total oil and grease (TOG) concentrations in the waste-oil UST excavation were less than 50 ppm (KEI January 1990).

1990 – Three two-inch diameter monitoring wells (MW-1 through MW-3) were installed at the site. TPH-G was not detected above the laboratory reporting limit in soil samples from well borings. Benzene was reported in the soil samples at concentrations ranging from non-detectable to 0.0066 ppm. TPH-G, benzene, toluene, ethylbenzene, and total xylenes (BTEX) were not detected above the laboratory reporting limits in groundwater samples collected from MW-1 and MW-2. TPH-G and benzene were reported in the groundwater sample from MW-3 at concentrations of 590 parts per billion (ppb) and 2.5 ppb, respectively. TPH-D was reported in monitoring well MW-1 at a concentration of 5.4 ppb (KEI May 1990).

1998 – Environmental Resolutions, Inc. (ERI), oversaw the removal of product lines and dispensers. Product lines consisted of double-walled fiberglass piping and showed no visible evidence of damage or straining. The piping was removed only in the dispenser area. Residual petroleum hydrocarbons were not reported above the laboratory reporting limits in soil samples collected adjacent to former dispensers D-1 and D-2 with the exception of methyl tertiary-butyl ether (MTBE) which was reported at a concentration of 0.46 milligrams per kilogram (mg/kg). Lead was reported in the sample collected adjacent to dispenser D-1 at 6.4 mg/kg (ERI 1998).

2007 – ATC observed the advancement of three soil borings (ATC-2, ATC-4, and ATC-5) in the vicinity of the existing fuel USTs and dispensers. TPH-G was reported at concentrations of 1.4 mg/kg and 5.2 mg/kg in soil samples collected at approximately five feet below ground surface (bgs) in borings ATC-2 and ATC-5, respectively. TPH-D was reported in boring ATC-2 at a depth of five feet bgs at a concentration of 23 mg/kg. TPH-G was reported at concentrations of 73 micrograms per liter (µg/L), 69 µg/L, and 5,300 µg/L in groundwater samples collected from ATC-2 (including duplicate B-2) and ATC-5, respectively. TPH-D was reported at concentrations of 15,000 µg/L, 25,000 µg/L, and 18,000 µg/L in groundwater samples collected from ATC-2 (including duplicate B-2) and ATC-5, respectively (ATC 2007).

December 1st through 8th 2010: Delta oversaw the installation of three groundwater monitoring wells (MW-1, MW-2 and MW-3) and the advancement of four soil borings (CPT-1, B-1, B-2 and B-3) located near the dispenser islands and fuel USTs. In soil samples, only DRO was reported above the laboratory reporting limit, with a maximum concentration of 447 mg/kg in MW-2 at a depth of 7.5 feet. In groundwater samples, only DRO and MTBE were reported in MW-3 at concentrations 74.4 µg/L and 0.87 µg/L, respectively. Groundwater was reported at depths of approximately 1 to 4 feet below top of casing in the wells, and groundwater was directed to the northwest. Further details regarding the investigation are included in Antea Group's Soil and Groundwater Investigation Report dated February 22, 2011.

SENSITIVE RECEPTORS

In 2008, Delta performed a water well survey to locate all water supply wells within a half-mile of the site. The survey included a request to the Department of Water Resources (DWR) to provide well log records. No water supply wells were identified in the search.

A preferential pathway study was performed to determine whether trench backfill for utilities beneath the site or in the site vicinity could potential conduits for contaminant migration. Delta concluded that due to shallow groundwater and location of identified utilities, a nearby sewer line/trench and water line/trench could provide a direct conduit for groundwater migration from the site to neighboring sites (Delta 2008).

REFERENCES CITED

Kaprealian Engineering, Inc., Soil Sampling Report, Unocal Service Station #1028, 5300 Broadway, Oakland, California, January 29, 1990.

Kaprealian Engineering, Inc., Preliminary Groundwater Investigation, Unocal Service Station #1028, 5300 Broadway, Oakland, California, May 14, 1990.

Environmental Resolutions, Inc., Environmental Work Related to EPA Retrofit, Tosco (Union) 76 Service Station 1028, 5300 Broadway Avenue, Oakland, California, June 16, 1998.

ATC Associates Inc., Due Diligence Site Assessment Report, ConocoPhillips Site No. 251028, 5300 Broadway Avenue, Oakland, California, November 1, 2007.

San Francisco Bay Regional Water Quality Control Board, California EPA, *Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater* (November 2007), http://www.waterboards.ca.gov/sanfranciscobay/esl.htm, Revised May 2008.

Delta Consultants, Additional Site Assessment Work Plan First Phase, Fuel Leak Case No. RO00002967, GeoTracker Global ID T0619732490, Unocal #1028 / ConocoPhillips # 251028, 5300 Broadway, Oakland, CA 94618, October 29, 2008

Alameda County Heath Care Services Agency, Fuel Leak Case No. RO00002967 and Geotracker Global ID T0619732490, Unocal #1028 / ConocoPhillips # 251028, 5300 Broadway, Oakland, CA 94618, March 6, 2009.

Delta Consultants, Soil and Water Investigation Work Plan Addendum, Fuel Leak Case No. RO00002967, GeoTracker Global ID T0619732490, Unocal #1028 / ConocoPhillips # 251028, 5300 Broadway, Oakland, CA 94618, April 3, 2009.

Delta Consultants, Soil and Water Investigation Work Plan Addendum dated April 3, 2009 (60 day Notification), Fuel Leak Case No. RO00002967, GeoTracker Global ID T0619732490, Unocal #1028 / ConocoPhillips # 251028, 5300 Broadway, Oakland, CA 94618, October 2, 2009.

Alameda County Environmental Health, Email Correspondence: RO00002967, 5300 Broadway, Oakland, October 29, 2009.

Delta Consultants, Work Plan for Preliminary Site Assessment, 76 Service Station No. 1028, 5300 Broadway Oakland, California Alameda County LOP Case #: RO0002967 Delta Project No. I40251028, July 6th, 2010.

Delta Consultants, Email Correspondence, 5300 Broadway, Oakland, CA RO#02697, September 20th, 2010

Alameda County Environmental Health, Email Correspondence: RO00002967, 5300 Broadway, Oakland, September 20th, 2010

Antea Group, Soil and Groundwater Investigation Report and Case Closure Request, 76 Service Station No. 1028, 5300 Broadway Oakland, California Alameda County LOP Case #: RO0002967 Delta Project No. I40251028, February 22, 2011

Appendix B

Blaine Tech Services Standard Operating 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 dewaters and does not recharge.

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

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

PURGEWATER CONTAINMENT

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

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

SAMPLE COLLECTION DEVICES

All samples are collected using disposable bailers.

SAMPLE CONTAINERS

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

TRIP BLANKS

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

DUPLICATES

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

SAMPLE STORAGE

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

DOCUMENTATION CONVENTIONS

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

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

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

DECONTAMINATION

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

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

and bailers.

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

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

DISSOLVED OXYGEN READINGS

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

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

OXYIDATON REDUCTION POTENTIAL READINGS

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

Blaine Tech Services, Inc.
Standard Operating Procedure

Purge Water Handling Procedure

Purpose

Control of non-hazardous purge water disposal. This procedure outlines the handling and disposing of non-hazardous purge water for the DELTA/COP portfolio.

Procedure

1) All purge and rinsate water will be contained in onboard truck tanks or trailers. Water may be commingled with other sites in the same portfolio of DELTA/COP sites.

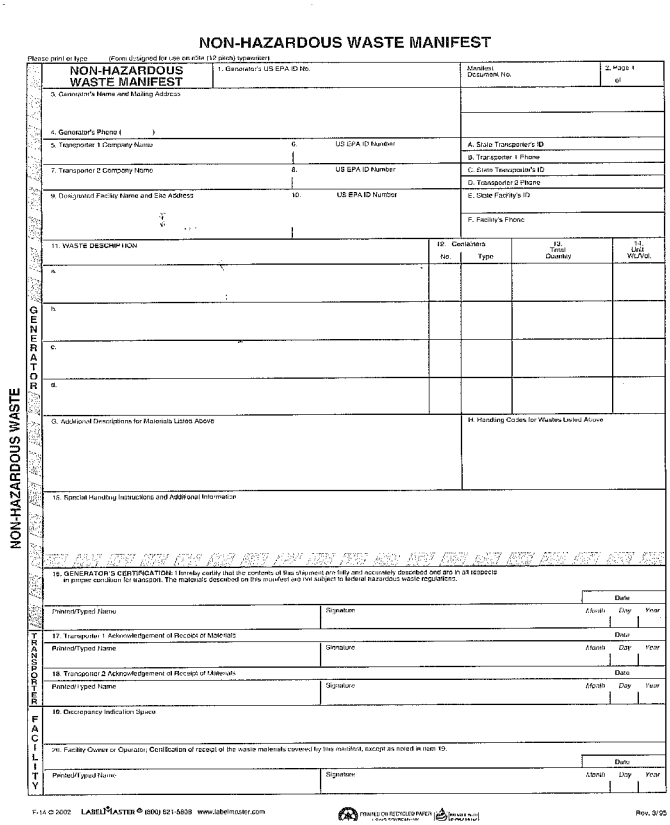
2) A Non-Hazardous Waste manifest will be generated prior to leaving site.

3) All water will be offloaded into a commingled DELTA/COP tank at BLAINE facility.

4) Water will then be offloaded from the DELTA/COP tank and the BLAINE facility and transported to a disposal facility.

   For Southern California sites water will be disposed at Crosby and Overton in Wilmington, CA. For Northern California water will be disposed at Seaport Environmental in Redwood City, CA.

Example Manifest:



NON-HAZARDOUS WASTE MANIFEST

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

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
Manifest Document No.
2. Page 1 of

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

5. Transporter 1 Company Name
6. US EPA ID Number
A. State Transporter's ID
B. Transporter 1 Phone

7. Transporter 2 Company Name
8. US EPA ID Number
C. State Transporter's ID
D. Transporter 2 Phone

9. Designated Facility Name and Site Address
10. US EPA ID Number
E. State Facility's ID
F. Facility's Phone

11. WASTE DESCRIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a.				
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Date

Printed/Typed Name | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Date

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Date

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in Item 19.

Date

Printed/Typed Name | Signature | Month Day Year

NON-HAZARDOUS WASTE
GENERATOR
TRANSPORTER
FACILITY

Rev. 9/05

Appendix C

Blaine Tech Services Field Data Sheets for Groundwater Monitoring and Sampling

COP-ELT Well-Head Inspection & Well Gauging Form

Project No: 251028 **Site Address:** 5300 BROADWAY

Field Technician: J. PARKER **Date:** 2/17/11 **Weather:** RAINING

Sample Order	Field Point	Well Condition: Bolts	Seal	Lid Secure	Lock	Expanding Cap	Water in Well Box	Well Casing Dia.	Time Gauged	Depth to Water (Feet)	Depth to Bottom (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Comments
	MW-1	G	G	G	G	G	Y	2	1015	1.29	12.25			LOCK REPLACED
	MW-2	G	G	G	G	G	Y	2	1020	4.10	11.61			" "
	MW-3	G	G	G	G	G	Y	2	1025	2.20	12.55			" "

Notes:

** All well caps opened at least 15 minutes or longer before gauging wells:

CIRCLE ONE: YES or ~~NO~~**

anteagroup

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

COP-ELT Groundwater Sampling Form

Site Address:	5300 BROADWAY		
Project No:	251028	Field Technician:	J. PRELLER
Field Point:	MW-1	Date:	2/17/11
Depth to Water (DTW) (ft bgs):	1.29	Well Diameter (in):	(2) 4 6 8 ___
Depth to LNAPL (ft bgs):		Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	12.25	Water Column Height (ft):	10.96

Purging Info and Calculations:

Purge Method:

Low-Flow
X 3 casing volumes
Other:_____

Purge Equipment:

~~X~~ Disposable Bailer
X Electric Submersible
Peristaltic Pump
Bladder Pump
Other:_____

Sample Collection Method:

X Disposable Bailer
Extraction Port
Dedicated Tubing
Disposable Tubing
Other:_____

Water Column Height (ft): 10.96 X Conversion Factor (gal/ft): 0.17 = Casing Volume (gal): 1.8

Casing Volume (gal): 1.8 X Specified Volumes: 3 = Calculated Purge (gal): 5.4

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

Purge: **Start Time:** 1057 **Stop Time:** 1100

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				—		—		
1059	10.9	7.37	440	—	—	—	1.8	
1059	11.2	7.25	442	—	—	—	3.6	
1100	11.8	7.26	451	—	—	—	5.4	
Post-Purge				—		—		

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

Other Comments: 80% @ 3.48 ; 1.51

Sample Info:

Sample ID: MW-1_20110217 Sample Date and Time: 2/17/11 @ 1220

Selected Analysis: SEE COC

Signature: _____ Date: 2/17/11

COP-ELT Groundwater Sampling Form

Site Address:	5300 BROADWAY		
Project No:	251028	Field Technician:	J. PARKER
Field Point:	MW-3	Date:	2/17/11
Depth to Water (DTW) (ft bgs):	2.20	Well Diameter (in):	(2) 4 6 8 ___
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	12.55	Water Column Height (ft):	10.35

Purging Info and Calculations:

Purge Method:

Low-Flow
X 3 casing volumes
Other:_____

Purge Equipment:

~~X~~ Disposable Bailer
X Electric Submersible
Peristaltic Pump
Bladder Pump
Other:_____

Sample Collection Method:

X Disposable Bailer
Extraction Port
Dedicated Tubing
Disposable Tubing
Other:_____

Water Column Height (ft): 10.35 X Conversion Factor (gal/ft): 0.17 = Casing Volume (gal): 1.8

Casing Volume (gal): 1.8 X Specified Volumes: 3 = Calculated Purge (gal): 5.4

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

Purge: **Start Time:** 1154 **Stop Time:** 1157

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				—		—		
1155	12.6	7.31	737	—	—	—	1.8	
1156	12.8	7.29	891	—	—	—	3.6	
1157	13.0	7.34	901	—	—	—	5.4	
Post-Purge				—		—		

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

Other Comments: 80% @ 4.27 ; DTW: 4.19

Sample Info:

Sample ID: MW-3_20110217 Sample Date and Time: 2/17/11 @ 1235

Selected Analysis: See COC

Signature: _____ Date: 2/17/11

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

anteagroup

COP-ELT Groundwater Sampling Form

Site Address:	5300 BROADWAY		
Project No:	251028	Field Technician:	J. PARKER
Field Point:	MW-2	Date:	2/17/11
Depth to Water (DTW) (ft bgs):	4.10	Well Diameter (in):	(2) 4 6 8 ___
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	—
Total Depth of Well (ft bgs):	11.61	Water Column Height (ft):	7.51

Purging Info and Calculations:

Purge Method:
Low-Flow
X 3 casing volumes
Other:_____

Purge Equipment:
Disposable Bailer
X Electric Submersible
Peristaltic Pump
Bladder Pump
Other:_____

Sample Collection Method:
X Disposable Bailer
Extraction Port
Dedicated Tubing
Disposable Tubing
Other:_____

Water Column Height (ft): 7.51 X Conversion Factor (gal/ft): 0.17 = Casing Volume (gal): 1.3

Casing Volume (gal): 1.3 X Specified Volumes: 3 = Calculated Purge (gal): 3.9

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

Purge: **Start Time:** 1113 **Stop Time:** 1116

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				—		—		
1114	12.7	7.36	467	—	—	—	1.3	
1115	13.2	7.30	475	—	—	—	2.6	
1116	13.9	7.27	479	—	—	—	3.9	
Post-Purge				—		—		

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

Other Comments: 80% @ 5.60 ; 5.55 MS/MSD TAKEN

Sample Info:

Sample ID: MW-2_20110228 Sample Date and Time: 2/17/11 @ 1120

Selected Analysis: SEE COC

Signature: _____ Date: 2/17/11

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

anteagroup

20110228.251028.Oakland

anteagroup

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 1
Cooler # ____ of ____

1Q 2011 GW Event

Required Lab Information:

Lab Name:	Pace-Seattle
Address:	940 S. Harney Street Seattle WA 98108
Lab PM:	Regina Ste. Marie
Phone/Fax:	P: 206-957-2427 F: 206-767-5063
Lab PM email	Regina.Stemarie@pacelabs.com
Billable Lab Quote #:	

Required Project Information:

Site ID #:	251028
Task:	WG_Q_201102
Antea Group project #	140251028
Site Address	5300 Broadway
City	Oakland
State	CA
Antea Group PM Name	Lia Holden
Phone/Fax:	P: 408-826-1863 F: 408-255-8506
Antea Group PM Email:	lia.holden@anteagroup.com

Required Invoice Information:

Send Invoice to:	David Sowle
Address:	11050 White Rock Road, Suite 110
City/State	Rancho Cordova CA 95670
Phone #:	916-503-1277
Reimbursement project?	
Non-reimbursement project?	Y
Mark one	
Send EDD to	copeltdata@intelligentehs.com
CC Hardcopy report to	
CC Hardcopy report to	

Turn around time (days)	10
QC level Required: Standard	Special — Mark one
NJ Reduced Deliverable Package?	
MA MCP Cert?	CT RCP Cert? — Mark One
Lab Project ID (lab use)	

Valid Matrix Codes

MATRIX		MATRIX	
DRINKING WATER	WP	WATER	W
GROUND WATER	WG	SURFACE WATER	WS
WASTE WATER	WW	WATER QC	WQ
FREE PRODUCT	LF	SLUDGE	SL
SOIL	SO	RINSEATE	WH
OIL	OIL	OTHER	OT
WIPE	SW	ANIMAL TISSUE	TA
AMBIENT AIR	AA		
SVE AIR	AE		
SOIL GAS	GS		

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analyses: 8015TPHDiesel	8260 GC/MS GRO	8260BtexMTBE7OxyCA	Comments/Lab Sample I.D.
1	MW-1_20110228	WG	G	2/17	1220	8	N	2			6					X	X	X	
2	MW-2_20110228	WG	↓	2/17	1120	16	N	6			10					X	X	X	7 Oxy's = DIPE, ETBE, TAME, TBA, Ethanol, 1,2DCIA, and EDB
3	MW-3_20110228	WG	↓	2/17	1235	8	N	2			6					X	X	X	
4																			
5																			8015 DRO is with Silica Gel Cleanup
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Additional Comments/Special Instructions:

Global ID: T0619732490

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME

Sample Receipt Conditions

	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) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed: Time:

Temp in °C | Samples on Ice? | Sample intact? | Trip Blank?

Final 11/13/06. AMTait

Inogen Environmental Alliance

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME	COP @ OAKLAND.			PROJECT NUMBER	110217-JP1		
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
IWRON L	607549	2/17/11	7/10/4 3900	7.00/9.98/4.01 3873	YES	16.1	JP

Appendix D

Laboratory Analytical Report and Validation Form

Is the Data Valid?

(circle)

Yes / No

Preservation Temperature

(if Known): ___________°C

Antea Group Lab Validation Sheet

Project/Client: CoP/ ELT Antea Group

Project #: I40251028

Date of Validation: 3/9/2011 **Date of Analysis:** 2/24-2/48/2011

Sample Date: 2/17/2011 **Completed By:** Nadine Periat

Signature: [signature]

Circle or Highlight

Yes / No

(below)

Analytical Lab Used and Report #Pace Analytical Laboratories No. 256685

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?	NA
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. Data Qualifier M1: MS recovery exceeded QC limits, batch accepted based on LCS recovery. This data Qualifier was noted for MS/MSD no. 60222.

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

March 04, 2011

Lia Holden
Antea USA
312 Piercy Rd
San Jose, CA 95138

RE: Project: 251028
Pace Project No.: 256685

Dear Lia Holden:
Enclosed are the analytical results for sample(s) received by the laboratory on February 18, 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
Dennis Dettloff, Antea USA
Jonathon Fillingame, 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

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

CERTIFICATIONS

Project: 251028
Pace Project No.: 256685

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

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

SAMPLE ANALYTE COUNT

Project: 251028
Pace Project No.: 256685

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
256685001	**MW-1_20110228**	EPA 8015B	AY1	3	PASI-S
		EPA 5030B/8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
256685002	**MW-2_20110228**	EPA 8015B	AY1	3	PASI-S
		EPA 5030B/8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
256685003	**MW-3_20110228**	EPA 8015B	AY1	3	PASI-S
		EPA 5030B/8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

HITS ONLY

Project: 251028
Pace Project No.: 256685

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
256685001	**MW-1_20110228**					
EPA 8015B	TPH-DRO (C10-C24) SG	56.8	ug/L	50.0	02/24/11 03:16	
256685003	**MW-3_20110228**					
EPA 5030B/8260	tert-Butyl Alcohol	7.5	ug/L	5.0	02/28/11 18:41	
EPA 5030B/8260	Methyl-tert-butyl ether	2.5	ug/L	0.50	02/28/11 18:41	
CA LUFT	TPH-Gasoline (C05-C12)	52.1	ug/L	50.0	02/28/11 18:41	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

ANALYTICAL RESULTS

Project: 251028
Pace Project No.: 256685

Sample: MW-1_20110228 **Lab ID: 256685001** Collected: 02/17/11 12:20 Received: 02/18/11 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA TPH DRO SG	Analytical Method: EPA 8015B Preparation Method: EPA 3510 Modified							
TPH-DRO (C10-C24) SG	**56.8**	ug/L	50.0	1	02/23/11 11:30	02/24/11 03:16		
o-Terphenyl (S) SG	74	%	51-147	1	02/23/11 11:30	02/24/11 03:16	84-15-1	
n-Octacosane (S) SG	82	%	50-150	1	02/23/11 11:30	02/24/11 03:16	630-02-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
tert-Amylmethyl ether	ND	ug/L	0.50	1		02/28/11 17:20	994-05-8	
Benzene	ND	ug/L	0.50	1		02/28/11 17:20	71-43-2	
tert-Butyl Alcohol	ND	ug/L	5.0	1		02/28/11 17:20	75-65-0	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/28/11 17:20	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		02/28/11 17:20	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		02/28/11 17:20	108-20-3	
Ethanol	ND	ug/L	250	1		02/28/11 17:20	64-17-5	
Ethylbenzene	ND	ug/L	0.50	1		02/28/11 17:20	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		02/28/11 17:20	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		02/28/11 17:20	1634-04-4	
Toluene	ND	ug/L	0.50	1		02/28/11 17:20	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		02/28/11 17:20	1330-20-7	
4-Bromofluorobenzene (S)	97	%	80-120	1		02/28/11 17:20	460-00-4	
Dibromofluoromethane (S)	100	%	80-122	1		02/28/11 17:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	80-124	1		02/28/11 17:20	17060-07-0	
Toluene-d8 (S)	89	%	80-123	1		02/28/11 17:20	2037-26-5	
CA LUFT MSV GRO	Analytical Method: CA LUFT							
TPH-Gasoline (C05-C12)	ND	ug/L	50.0	1		02/28/11 17:20		
4-Bromofluorobenzene (S)	97	%	82-116	1		02/28/11 17:20	460-00-4	

Sample: MW-2_20110228 **Lab ID: 256685002** Collected: 02/17/11 11:20 Received: 02/18/11 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA TPH DRO SG	Analytical Method: EPA 8015B Preparation Method: EPA 3510 Modified							
TPH-DRO (C10-C24) SG	ND	ug/L	50.0	1	02/23/11 11:30	02/24/11 03:32		
o-Terphenyl (S) SG	91	%	51-147	1	02/23/11 11:30	02/24/11 03:32	84-15-1	
n-Octacosane (S) SG	105	%	50-150	1	02/23/11 11:30	02/24/11 03:32	630-02-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
tert-Amylmethyl ether	ND	ug/L	0.50	1		02/28/11 17:40	994-05-8	
Benzene	ND	ug/L	0.50	1		02/28/11 17:40	71-43-2	
tert-Butyl Alcohol	ND	ug/L	5.0	1		02/28/11 17:40	75-65-0	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/28/11 17:40	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		02/28/11 17:40	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		02/28/11 17:40	108-20-3	
Ethanol	ND	ug/L	250	1		02/28/11 17:40	64-17-5	
Ethylbenzene	ND	ug/L	0.50	1		02/28/11 17:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		02/28/11 17:40	637-92-3	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

ANALYTICAL RESULTS

Project: 251028
Pace Project No.: 256685

Sample: MW-2_20110228 **Lab ID: 256685002** Collected: 02/17/11 11:20 Received: 02/18/11 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Methyl-tert-butyl ether	ND	ug/L	0.50	1		02/28/11 17:40	1634-04-4	
Toluene	ND	ug/L	0.50	1		02/28/11 17:40	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		02/28/11 17:40	1330-20-7	
4-Bromofluorobenzene (S)	100	%	80-120	1		02/28/11 17:40	460-00-4	
Dibromofluoromethane (S)	100	%	80-122	1		02/28/11 17:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	80-124	1		02/28/11 17:40	17060-07-0	
Toluene-d8 (S)	88	%	80-123	1		02/28/11 17:40	2037-26-5	
CA LUFT MSV GRO	Analytical Method: CA LUFT							
TPH-Gasoline (C05-C12)	ND	ug/L	50.0	1		02/28/11 17:40		
4-Bromofluorobenzene (S)	100	%	82-116	1		02/28/11 17:40	460-00-4	

Sample: MW-3_20110228 **Lab ID: 256685003** Collected: 02/17/11 12:35 Received: 02/18/11 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA TPH DRO SG	Analytical Method: EPA 8015B Preparation Method: EPA 3510 Modified							
TPH-DRO (C10-C24) SG	ND	ug/L	50.0	1	02/23/11 11:30	02/24/11 04:22		
o-Terphenyl (S) SG	85	%	51-147	1	02/23/11 11:30	02/24/11 04:22	84-15-1	
n-Octacosane (S) SG	93	%	50-150	1	02/23/11 11:30	02/24/11 04:22	630-02-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
tert-Amylmethyl ether	ND	ug/L	0.50	1		02/28/11 18:41	994-05-8	
Benzene	ND	ug/L	0.50	1		02/28/11 18:41	71-43-2	
tert-Butyl Alcohol	**7.5**	ug/L	5.0	1		02/28/11 18:41	75-65-0	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/28/11 18:41	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		02/28/11 18:41	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		02/28/11 18:41	108-20-3	
Ethanol	ND	ug/L	250	1		02/28/11 18:41	64-17-5	
Ethylbenzene	ND	ug/L	0.50	1		02/28/11 18:41	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		02/28/11 18:41	637-92-3	
Methyl-tert-butyl ether	**2.5**	ug/L	0.50	1		02/28/11 18:41	1634-04-4	
Toluene	ND	ug/L	0.50	1		02/28/11 18:41	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		02/28/11 18:41	1330-20-7	
4-Bromofluorobenzene (S)	100	%	80-120	1		02/28/11 18:41	460-00-4	
Dibromofluoromethane (S)	99	%	80-122	1		02/28/11 18:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	80-124	1		02/28/11 18:41	17060-07-0	
Toluene-d8 (S)	90	%	80-123	1		02/28/11 18:41	2037-26-5	
CA LUFT MSV GRO	Analytical Method: CA LUFT							
TPH-Gasoline (C05-C12)	**52.1**	ug/L	50.0	1		02/28/11 18:41		
4-Bromofluorobenzene (S)	100	%	82-116	1		02/28/11 18:41	460-00-4	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA

Project: 251028
Pace Project No.: 256685

QC Batch: OEXT/3347 Analysis Method: EPA 8015B
QC Batch Method: EPA 3510 Modified Analysis Description: 8015B CA DRO Silica Gel
Associated Lab Samples: 256685001, 256685002, 256685003

METHOD BLANK: 59591 Matrix: Water
Associated Lab Samples: 256685001, 256685002, 256685003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO (C10-C24) SG	ug/L	ND	50.0	02/24/11 02:43	
n-Octacosane (S) SG	%	98	50-150	02/24/11 02:43	
o-Terphenyl (S) SG	%	92	51-147	02/24/11 02:43	

LABORATORY CONTROL SAMPLE: 59592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C24) SG	ug/L	3120	2620	84	51-147	
n-Octacosane (S) SG	%			97	50-150	
o-Terphenyl (S) SG	%			114	51-147	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 59593 59594

Parameter	Units	256685002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH-DRO (C10-C24) SG	ug/L	ND	3120	3120	2670	2350	84	74	51-147	13	
n-Octacosane (S) SG	%						101	93	50-150		
o-Terphenyl (S) SG	%						116	108	51-147		

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA

Project: 251028
Pace Project No.: 256685

QC Batch: MSV/3923 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 256685001, 256685002, 256685003

METHOD BLANK: 60220 Matrix: Water
Associated Lab Samples: 256685001, 256685002, 256685003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	02/28/11 11:42	
1,2-Dichloroethane	ug/L	ND	1.0	02/28/11 11:42	
Benzene	ug/L	ND	0.50	02/28/11 11:42	
Diisopropyl ether	ug/L	ND	0.50	02/28/11 11:42	
Ethanol	ug/L	ND	250	02/28/11 11:42	
Ethyl-tert-butyl ether	ug/L	ND	0.50	02/28/11 11:42	
Ethylbenzene	ug/L	ND	0.50	02/28/11 11:42	
Methyl-tert-butyl ether	ug/L	ND	0.50	02/28/11 11:42	
tert-Amylmethyl ether	ug/L	ND	0.50	02/28/11 11:42	
tert-Butyl Alcohol	ug/L	ND	5.0	02/28/11 11:42	
Toluene	ug/L	ND	0.50	02/28/11 11:42	
Xylene (Total)	ug/L	ND	1.5	02/28/11 11:42	
1,2-Dichloroethane-d4 (S)	%	104	80-124	02/28/11 11:42	
4-Bromofluorobenzene (S)	%	98	80-120	02/28/11 11:42	
Dibromofluoromethane (S)	%	97	80-122	02/28/11 11:42	
Toluene-d8 (S)	%	90	80-123	02/28/11 11:42	

LABORATORY CONTROL SAMPLE: 60221

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	20.8	104	73-124	
1,2-Dichloroethane	ug/L	20	22.0	110	78-125	
Benzene	ug/L	20	19.0	95	76-127	
Diisopropyl ether	ug/L	20	21.7	108	70-137	
Ethanol	ug/L	400	604	151	31-182	
Ethyl-tert-butyl ether	ug/L	20	21.6	108	70-137	
Ethylbenzene	ug/L	20	19.0	95	72-125	
Methyl-tert-butyl ether	ug/L	20	23.1	116	58-145	
tert-Amylmethyl ether	ug/L	20	22.9	115	71-133	
tert-Butyl Alcohol	ug/L	100	123	123	31-166	
Toluene	ug/L	20	17.7	89	69-125	
Xylene (Total)	ug/L	60	56.5	94	74-124	
1,2-Dichloroethane-d4 (S)	%			104	80-124	
4-Bromofluorobenzene (S)	%			99	80-120	
Dibromofluoromethane (S)	%			101	80-122	
Toluene-d8 (S)	%			92	80-123	

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA

Project: 251028
Pace Project No.: 256685

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60222 60223

Parameter	Units	256686002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	21.1	20.9	106	104	78-117	1	
1,2-Dichloroethane	ug/L	ND	20	20	24.6	23.4	123	117	73-127	5	
Benzene	ug/L	3.4	20	20	23.9	22.8	103	97	75-124	5	
Diisopropyl ether	ug/L	ND	20	20	23.7	22.7	119	113	69-130	5	
Ethanol	ug/L	ND	400	400	546	594	137	148	36-177	8	
Ethyl-tert-butyl ether	ug/L	ND	20	20	23.1	22.2	115	111	67-131	4	
Ethylbenzene	ug/L	354	20	20	257	257	-487	-485	76-124	.2	M1
Methyl-tert-butyl ether	ug/L	12.4	20	20	32.1	31.2	98	94	72-130	3	
tert-Amylmethyl ether	ug/L	ND	20	20	23.0	22.3	115	111	67-132	3	
tert-Butyl Alcohol	ug/L	23.1	100	100	133	138	110	115	36-164	4	
Toluene	ug/L	1.1	20	20	19.5	18.8	92	89	75-124	4	
Xylene (Total)	ug/L	92.4	60	60	118	118	43	43	76-123	.1	M1
1,2-Dichloroethane-d4 (S)	%						108	107	80-124		
4-Bromofluorobenzene (S)	%						101	100	80-120		
Dibromofluoromethane (S)	%						104	100	80-122		
Toluene-d8 (S)	%						87	88	80-123		

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA

Project: 251028
Pace Project No.: 256685

QC Batch: MSV/3919 Analysis Method: CA LUFT
QC Batch Method: CA LUFT Analysis Description: CA LUFT MSV GRO
Associated Lab Samples: 256685001, 256685002, 256685003

METHOD BLANK: 60181 Matrix: Water
Associated Lab Samples: 256685001, 256685002, 256685003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-Gasoline (C05-C12)	ug/L	ND	50.0	02/28/11 11:42	
4-Bromofluorobenzene (S)	%	98	82-116	02/28/11 11:42	

LABORATORY CONTROL SAMPLE: 60182

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-Gasoline (C05-C12)	ug/L	500	489	98	60-140	
4-Bromofluorobenzene (S)	%			98	82-116	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60508 60509

Parameter	Units	256686002 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	4540	500	500	4950	5090	82	111	60-140	3	
4-Bromofluorobenzene (S)	%						98	100	82-116		

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALIFIERS

Project: 251028
Pace Project No.: 256685

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel Clean-Up

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

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

LABORATORIES

PASI-S	Pace Analytical Services - Seattle

ANALYTE QUALIFIERS

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

Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 251028
Pace Project No.: 256685

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
256685001	**MW-1_20110228**	EPA 3510 Modified	OEXT/3347	EPA 8015B	GCSV/2281
256685002	**MW-2_20110228**	EPA 3510 Modified	OEXT/3347	EPA 8015B	GCSV/2281
256685003	**MW-3_20110228**	EPA 3510 Modified	OEXT/3347	EPA 8015B	GCSV/2281
256685001	**MW-1_20110228**	EPA 5030B/8260	MSV/3923		
256685002	**MW-2_20110228**	EPA 5030B/8260	MSV/3923		
256685003	**MW-3_20110228**	EPA 5030B/8260	MSV/3923		
256685001	**MW-1_20110228**	CA LUFT	MSV/3919		
256685002	**MW-2_20110228**	CA LUFT	MSV/3919		
256685003	**MW-3_20110228**	CA LUFT	MSV/3919		

anteagroup

COP ELT CHAIN-OF-CUSTODY / Analytical Request Document

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

1Q 2011 GW Event

22373 L1/L2 (TB)

256685

Required Lab Information:

Lab Name:	Pace-Seattle
Address:	940 S. Harney Street Seattle WA 98108
Lab PM:	Regina Ste. Marie
Phone/Fax:	P: 206-957-2427 F: 206-767-5063
Lab PM email	Regina.Stemarie@pacelabs.com
Applicable Lab Quote #:	

Required Project Information:

Site ID #:	251028
Task:	WG_Q_201102
Antea Group project #	I40251028
Site Address	5300 Broadway
City	Oakland
State	CA
Antea Group PM Name	Lia Holden
Phone/Fax:	P: 408-826-1863 F: 408-255-8506
Antea Group PM Email:	lia.holden@anteagroup.com

Required Invoice Information:

Send Invoice to:	David Sowle
Address:	11050 White Rock Road, Suite 110
City/State	Rancho Cordova CA 95670
Phone #:	916-503-1277
Reimbursement project?	
Non-reimbursement project?	Y
Mark one	
Send EDD to	copeltdata@intelligentehs.com
CC Hardcopy report to	
CC Hardcopy report to	

Turn around time (days)	10
QC level Required: Standard	Special / Mark one
NJ Reduced Deliverable Package?	
MA MCP Cert? / CT RCP Cert?	Mark One
Lab Project ID (lab use)	

Valid Matrix Codes

MATRIX		MATRIX	
DRINKING WATER	WP	WATER	W
GROUND WATER	WG	SURFACE WATER	WS
WASTE WATER	WW	WATER QC	WQ
FREE PRODUCT	LF	SLUDGE	SL
SOIL	SO	RINSEATE	WH
OIL	OL	OTHER	OT
WIPE	SW	ANIMAL TISSUE	TA
AMBIENT AIR	AA		
SVE AIR	AE		
SOIL GAS	GS		

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analyses: 8015TPHDiesel	8260 GC/MS GRO	8260BtexMTBE7OxyCA	Comments/Lab Sample I.D.
1	MW-1_20110228	WG	G	2/17	1220	8	N	2			6					X	X	X	
2	MW-2_20110228	WG	↓	2/17	1120	16	N	6			10					X	X	X	7 Oxy's = DIPE, ETBE, TAME, TBA, Ethanol, 1,2DCIA, and EDB
3	MW-3_20110228	WG	↓	2/17	1235	8	N	2			6					X	X	X	
4																			
5																			8015 DRO is with Silica Gel Cleanup
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Additional Comments/Special Instructions:

Global ID: T0619732490

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Fedex	2/18/11	0840	Jyothi Sivaj	2/18/11	0840

Sample Receipt Conditions

	Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?
	0.6	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) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: [illegible]

SIGNATURE of SAMPLER: [illegible]

DATE Signed 2/17/11 Time: 1630

Inogen Environmental Alliance

Sample Container Count

CLIENT: Antea - CA

Pace Analytical™ www.pacelabs.com

COC PAGE 1 of 1

COC ID# —

256685

Sample Line Item	VG9H	AG1H	AG1U	BG1H	BP1U	BP2U	BP3U	BP2N	BP2S	WGFU	WGKU	AG2U			Comments
1	6											2			
2	10											6			
3	6											2			
4															
5															
6															
7															
8															
9															
10															
11															
12															Trip Blank? No

AG1H	1 liter HCL amber glass		BP2S	500mL H2SO4 plastic	JGFU	4oz unpreserved amber wide
AG1U	1liter unpreserved amber glass		BP2U	500mL unpreserved plastic	R	terra core kit
AG2S	500mL H2SO4 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 H2SO4 amber glass		BP3N	250mL HNO3 plastic	VG9T	40mL Na Thio. clear vial
BG1H	1 liter HCL clear glass		BP3S	250mL H2SO4 plastic	VG9U	40mL unpreserved **clear** vial
BG1U	1 liter unpreserved glass		BP3U	250mL unpreserved plastic	VG9W	40mL glass vial preweighted (EPA 5035)
BP1N	1 liter HNO3 plastic		DG9B	40mL Na Bisulfate amber vial	VSG	Headspace septa vial & HCL
BP1S	1 liter H2SO4 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 HNO3 plastic		DG9U	40mL unpreserved **amber** vial		
BP2O	500mL NaOH plastic		I	Wipe/Swab		

Pace Analytical

Sample Condition Upon Receipt

256685

Client Name: Antea-CA Project #

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #: 873882611465

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

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

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

Cooler Temperature 0.6°C Biological Tissue is Frozen: Yes No

Temp should be above freezing ≤ 6°C

Date and Initials of person examining contents: NJS 2/18/11

Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☐Yes ☑No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Follow Up / Hold Analysis Requested:	☐Yes ☑No ☐N/A	8.
Sufficient Volume:	☑Yes ☐No ☐N/A	9.
Correct Containers Used:	☑Yes ☐No ☐N/A	10.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☐Yes ☑No ☐N/A	11. 1/6 of MW-3 received broken.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	12.
Sample Labels match COC:	☑Yes ☐No ☐N/A	13.
-Includes date/time/ID/Analysis Matrix: Water		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
Exceptions: VOA, coliform, TOC, O&G		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☐N/A	15.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☐N/A	16.
Trip Blanks Present:	☐Yes ☑No ☐N/A	17.
Trip Blank Custody Seals Present	☐Yes ☐No ☑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: JENNI GROSS Date: 2/18/11

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)