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Alameda County
Environmental Health

February 28, 2011

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

**Re: Soil and Groundwater Investigation Report and Request for Case Closure
76 Service Station No. 1028
5300 Broadway
Oakland, California
Alameda County LOP Case #: RO0002967
Delta 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

Soil and Groundwater Investigation Report and Request for Case Closure

*76 Branded Service Station
No. 251028
5300 Broadway,
Oakland, California
Alameda County LOP Case #: R00002967*

*Antea Group Project No. I40251028
February 28, 2011*

Prepared for:
Ms. Barbara Jakub
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Soil and Groundwater Investigation Report and Request for Case Closure

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*Soil and Groundwater Investigation Report and Request for Case Closure
76 Branded Service Station No. 251028
5300 Broadway, Oakland, California
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Soil and Groundwater Investigation Report and Request for Case Closure

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5300 Broadway, Oakland, California
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1.0 INTRODUCTION

Antea™Group (Antea Group) (formerly Delta Consultants) has prepared this *Soil and Groundwater Investigation Report* for the 76 Branded Service Station located at 5300 Broadway in Oakland California (**Figure 1**). This investigation was performed in order to accurately characterize groundwater conditions, and to assess the vertical extent of petroleum hydrocarbons and fuel oxygenates in soil and groundwater beneath the site. The scope of work in this investigation was originally proposed in Delta Consultant's *Work Plan for Preliminary Site Assessment* dated July 6th, 2010. The work plan was prepared in response to two letters from the Alameda County Environmental Health Agency (ACEH) dated June 25, 2008 and March 6, 2009. On September 20, 2010, Delta Consultants (now Antea Group) informed the ACEH that more than 60 days had passed since the submittal of the July 2010 work plan, and that field work would commence in the 4th quarter of 2010. On September 20, 2010, the ACEH stated that a review of the work plan had not been performed, and that the ACEH would require additional time for review. If the ACEH had any changes to the scope of work in the work plan, the proceeding of field work without ACEH approval could result in additional investigation. On October 18, 2010, Delta informed the ACEH of scheduled field activities. Pertinent correspondence is contained in **Appendix A**.

During this investigation, three monitoring wells (MW-1, MW-2 and MW-3) were installed and soil borings (B-1, B-2 and B-3) were advanced at locations shown on **Figure 2**. In addition, one cone penetrometer test (CPT) boring was attempted (CPT-1) near the location of MW-3 and B-3.

1.1 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.

1.2 Petroleum Hydrocarbon Terminology

Over the history of site investigations, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Antea Group uses the designation GRO for

gasoline range organics within the C6 to C10 carbon range. Soil and groundwater samples are analyzed typically by United States Environmental Protection Agency (EPA) method 8015B or 8260B. Antea Group uses the designation DRO for diesel range organics within the C10 to C28 carbon range.

Terms from previous reports typically include total purgeable petroleum hydrocarbons (TPPH) or total petroleum hydrocarbons as gasoline (TPH-G) for GRO; and total extractable petroleum hydrocarbons (TEPH) or TPH as diesel (TPH-D) for DRO, which are generally comparable. Total recoverable petroleum hydrocarbons (TRPH) generally refer to a broad spectrum of petroleum hydrocarbons in the C8 to C40 carbon range. Antea Group has presented data in terms of originally reported terms in summarizing results of previous investigations.

1.3 Background

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 below ground surface (bgs). Analytical results from the soil samples showed 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 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).

During a 2007 due diligence site assessment conducted by ATC Associates, Inc. (ATC), TPH-G and TPH-D were detected at maximum concentrations in groundwater collected from ATC-2 and ATC-5. TPH-D was detected at a maximum concentration of 25,000 micrograms per liter ($\mu\text{g/l}$) in the duplicate sample collected from ATC-2 (the

duplicate ATC-2 sample was named B-2 when submitted to the laboratory), while the maximum TPH-G concentration was detected in ATC-5 at 5,300 µg/l. Maximum concentrations of TPH-G and TPH-D were also reported in soil samples from ATC-2 and ATC-5 from a depth of five feet; 5.2 mg/kg of TPH-G in ATC-5, and 23 mg/kg of TPH-D in ATC-2 (ATC 2007).

1.4 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).

2.0 SUBSURFACE INVESTIGATION

On December 1st through 10th, Antea Group oversaw the drilling of borings B-1, B-2 and B-3, and installation of monitoring wells MW-1, MW-2 and MW-3 in the southwest, southeast and northern portions of the site, respectively (**Figure 2**).

2.1 Pre Field Activities

Prior to field activities, Antea Group produced a Site Health and Safety Plan, which was reviewed daily by field personnel. Prior to drilling, Antea Group marked the proposed soil boring location and contacted Underground Service Alert (USA ticket number 350411) to request the locating and marking of all underground utilities at, or adjacent to, the proposed boring location. Antea Group also employed a private utility locator to identify possible private underground utilities in the vicinity of the proposed boring location. Additionally, each boring location was cleared, utilizing air-vacuum equipment (air-knife), to bedrock or a depth of five feet bgs prior to drilling. The purpose of using air-knife technology was to ensure that unmarked underground utilities would not be encountered during drilling. Air knifing was stopped at depths less than 5 feet in certain locations due to an encounter with in-situ bedrock. Antea Group obtained necessary permits from the Alameda County Public Works Agency (ACPWA) for groundwater monitoring well construction (**Appendix B**).

2.2 Soil Borings and Well Installations

Soil borings and Monitoring wells were sampled using direct push Geoprobe© drilling equipment provided and operated by Cascade Drilling, L. P. (License C57- 938110).

Soil samples were collected in 5-foot dual-tube sample barrels equipped with acetate liners. The dual tube sampling process involves an inner sampling rod surrounded by an outer rod which is not retracted with the sampler. The benefit of using this method is the reduction of slough, and the ability to retrieve discreet deep groundwater samples since upper groundwater zones will have been sealed off with the outer rods.

Discreet soil samples were collected continuously in each location. The samples were logged by the field geologist utilizing the Unified Soil Classification System by the American Society for Testing and Materials (ASTM) method D-2487, dated May 2000. A photo-ionization detector (PID) was used to measure concentrations of volatile organic compounds in soil samples collected from the boreholes.

To obtain a PID reading, a soil sample from each sampling interval was placed in a sealed plastic bag. After approximately five minutes, the PID probe was inserted into the plastic bag and soil gas allowed to pass through the PID until readings stabilized. The resulting concentration reading was recorded in the geologist's field log. The Soil Boring Log with PID readings is presented as **Appendix C**. Selected soil samples were capped with Teflon® and plastic end caps, then immediately placed on ice. The samples were then logged on to chains-of-custody forms, and submitted to Pace Analytical Laboratories in Seattle, Washington for analysis.

After borings met refusal with the sampler, an effort was made to collect a discreet groundwater sample from the bottom of each boring. In boring B-1, this was performed by advancing the sampling rods to refusal, then inserting a temporary casing into the outer rods, lifting the outer rods upwards by 2 feet, then collecting a groundwater sample. In B-2, a Hydropunch rod was used to directly push a foot past the point of Geoprobe refusal. In each circumstance, groundwater was not immediately observed in the temporary well casings. After waiting approximately 15 minutes, groundwater seeped into the boring and quickly stabilized at a depth of approximately 3 feet bgs. Antea Group determined that the groundwater was most likely sourced from the upper water bearing unit at approximately 3 feet bgs, and that the collection of the sample would not provide an accurate vertical groundwater profile. Due to the close proximity to well locations, groundwater samples were not collected from the soil borings.

Boring B-1 was advanced to a total depth of 15 feet bgs, B-2 was advanced to 13 feet bgs, and B-3 was advanced to 18 feet prior to refusal. After completion of soil sampling, soil borings were tremmie-grouted to grade, capped with concrete, and dyed black to match surrounding pavement.

Once soil sampling in well locations was completed, the borings were overdrilled using 8-inch hollow stem augers to a depth of 12 feet bgs. Wells were constructed of 2-inch diameter PVC casing and manufactured 0.020-inch well screen. Wells were screened from 2.5 feet to 12 feet bgs. The annular space around the well screen was backfilled with #3 sand to 6-inches above the top of the screen. A 6-inch thick hydrated bentonite layer was placed above the

sand pack followed by a cement grout to the ground surface. Well construction diagrams are provided with boring logs in **Appendix C**.

One CPT soil boring (CPT-1) was attempted approximately 2 feet south of B-3, but met refusal at 5 feet bgs, at the extent of the air knife's preclearance in the boring. No data was collected during the advancement of the CPT soil boring.

2.2.1 Lithology Encountered During Drilling

In the lower elevation portion of the site (western portion), surficial deposits consisting of clays and gravels were encountered to a depth of approximately 3.5 feet. In the location of MW-1 and B-1 near the fuel USTs, artificial fill consisting of particulate bedrock was encountered from approximately 2 to 3.5 feet bgs. Air knifing to 5 feet bgs was possible in the locations of MW-3 and B-3, indicating that the bedrock is more weathered in the northwest portion of the site. In the location of MW-2 and B-2, bedrock was encountered directly beneath paving materials (asphalt and base rock), and did not appear to be weathered. Although groundwater was not encountered during air knifing, on the day of drilling, it became evident that groundwater had gathered in the air knife bores over the course of a few days. Geologic cross sections A-A' and B-B' are presented as **Figure 3**.

Bedrock was encountered at depths of 3.5 feet bgs to 1 foot bgs. Bedrock was described as well indurated brown to gray shale with pronounced bedding planes striking approximately 260 degrees and dipping 18 degrees to the southeast. Vertical fracture planes were observed striking approximately 250 degrees and 346 degrees, respectively. Bedding and fracture attitudes were measured in the air knife borehole for MW-2 using a Brunton® Compass. Bedding and fracture attitudes could not be measured in MW-1 and MW-3 due to the depth at which bedrock was encountered.

2.2.2 Well Development and Survey

On December 14th, 2010, an Antea Group field geologist oversaw development of the newly installed wells. Depth to groundwater in the wells ranged from 1.16 feet bgs in well MW-3 to 4.19 feet bgs in well MW-2. During well development, wells were surged and a minimum of ten casing volumes were purged from each well. Well development logs and field data sheets are presented in **Appendix D**.

On the day of development, Mid Coast Engineers of Watsonville, California, surveyed the latitude, longitude and elevation of the newly installed wells, as well as the locations of pertinent site features. The survey report is contained in **Appendix E**. The GPS survey data has been uploaded into the State of California GeoTracker database.

2.3 Soil and Groundwater Sampling

Three to four soil samples were submitted from each boring—from shallow, intermediate and deep depths. Since no PID measurements over 1.2 (MW-3 at 10 feet bgs) were reported, samples were submitted based on data presented in ATC's 2007 report, and for vertical profiling. In addition, one composite soil was collected for waste disposal purposes.

On December 21st, 2010, an Antea Group field geologist returned to the site to gauge and sample the wells. Prior to sampling, each well cap was opened for 15 minutes to allow groundwater levels in the wells to equilibrate, then all wells were gauged.

After gauging the wells, each was purged an additional three casing volumes using a disposable bailer. During purging, temperature, electric conductivity, total dissolved solids (TDS), dissolved oxygen (DO), pH, oxidation reduction potential (ORP) and turbidity were measured after each purge volume. Field data sheets from the sampling event are contained in **Appendix D**. The groundwater samples were decanted into 40-milliliter glass VOA bottles, preserved with hydrochloric acid (HCL), and unpreserved 1-liter amber glass bottles. The bottles were placed on ice for transportation to the laboratory. Chain of Custody protocol was followed, providing a continuous record of sample possession before analysis.

Soil and groundwater samples were analyzed for GRO, benzene, toluene, ethylbenzene and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), tertiary amyl methyl ether (TAME), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), ethanol, 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) by environmental protection agency (EPA) Test Method 8260B, and DRO by EPA Test Method 8015M with silica gel cleanup. In addition, the composite soil sample collected for waste disposal was analyzed for total lead by EPA Test Method 6010.

3.0 SOIL AND GROUNDWATER RESULTS

The following sections present results of the recent investigation.

3.1 Hydrologic Conditions

An updated groundwater elevation map is provided in this report as **Figure 4**. Depth to groundwater was measured at the time of groundwater sampling on December 21, 2010. Approximate groundwater flow direction and hydraulic gradient were established based on static groundwater level on the day of groundwater sampling. Depths to water measured in the wells ranged from 1.16 feet below top of casing (btoc) in MW-1 to 4.19 feet btoc in MW-2. Groundwater flow direction was calculated to be 0.036 feet/feet to the northwest (**Figure 4**). Groundwater flow direction prior to the destruction of former wells MW-1 through MW-3 was primarily to west



and northwest, during the five monitoring events in from 1990 to 1991. It is believed that groundwater is present near the top of the bedrock, where the rock is likely more weathered; groundwater is not believed to extend below approximately 10 feet bgs.

3.2 Soil Analytical Results

DRO was reported in B-1 at 4.5 feet bgs at a concentration of 3.3 mg/kg, in B-3 at 4.5 feet bgs and MW-1 at 5 feet bgs at a concentration of 2.0 mg/kg, in MW-2 at 7.5 feet bgs at a concentration of 447 mg/kg and in the composite soil sample at a concentration of 119 mg/kg. Only the detection in MW-2, and in the composite sample exceed the Regional Water Quality Control Board Environmental Screening Level (ESL) of 83 mg/kg.

Total lead was reported in the composite soil sample at a concentration of 8.9 mg/kg. This concentration is consistent with regional background concentrations and is well below the ESL of 200 mg/kg. Copies of laboratory analytical reports are included in **Appendix F**.

3.3 Groundwater Analytical Results

In well MW-3, DRO was reported at a concentration of 74.4 ug/L and MTBE was reported at a concentration of 0.87 ug/L. Neither of the detections exceeds their respective ESLs of 100 ug/L and 5 ug/L.

No other analytes were reported in groundwater samples above laboratory reporting limits (LRL). Copies of laboratory analytical reports are included in **Appendix F**.

3.4 Quality Assurance/Quality Control (QA/QC)

Antea Group’s QA/QC measures included a detailed QA/QC data validation check on the Pace Laboratory analytical results for soil and groundwater samples. Antea Group’s laboratory data validation checklist and the Pace laboratory report are included in **Appendix F**.

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. R1: RPD value was outside control limits. 1n: Sample was diluted due to the viscosity of the sample extract. S4: Surrogate recovery not evaluated against control limits due to sample dilution. See Laboratory Validation Sheets for qualifier discussions
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 investigation are valid for their intended purpose.

4.0 WASTE HANDLING

Soil cuttings, decontamination water, well purge water, removed pavement and soiled acetate liners were temporarily stored onsite pending transport to a waste disposal facility. On January 18th, 2011, 7 soil cutting drums, two purge/decontamination water drums and three debris drums were transported offsite by Belshire Environmental Services, Inc. to their waste holding yard. Soil was later disposed of at Soil Safe, located at 12328 Hibiscus Avenue in Adelanto, California on January 27th, 2011. Purge and decontamination water were disposed of at Dermenko Kerdoon located at 2000 N. Alameda Street, Compton, CA. Debris is not considered a tracked waste stream and was disposed of at a materials recycling plant. Waste manifests are provided in **Attachment G**.

5.0 REQUEST FOR CASE CLOSURE

Antea Group requests that this site be considered for low-risk case closure based upon the following criteria:

- **The site has been adequately characterized**

The three recent monitoring wells and three soil borings (MW-1 through MW-3 and B-1 through B-3) confirm that only minor petroleum hydrocarbon mass remains in soil and groundwater. The only analyte reported above the LRL in soil samples was DRO, with detections of 2 mg/kg in two samples from B-3 and MW-1, and a maximum concentration of 447 mg/kg in MW-2 at 7.5 feet bgs. DRO was not reported above the LRL in samples collected above or below the 7.5 foot sample, and DRO was not reported above the LRL in soil samples from ATC-4 and B-2, both advanced approximately 5 feet to the north of MW-2. This detection is believed to be either a false positive, or suggests that the extent of DRO in the vicinity of MW-2 is extremely limited. No other detections above ESLs were reported in soil or groundwater. During the 2007 investigation conducted by ATC, the only groundwater samples that were collected were grab groundwater samples. Grab groundwater samples typically contain abundant suspended sediment. Suspended sediment can affect groundwater analytical results, making detections appear at levels that are biased high. As grab groundwater samples are not collected from properly developed and purged monitoring wells, they may not be representative of actual groundwater conditions. Samples during the December 2010 investigation were collected from properly purged and developed wells, in locations that are adjacent to those of the ATC investigation. As this is the case, elevated concentrations reported during the ATC investigation in 2007 are considered to be results of false positive detections, and/or biased high detections resulting from the collection of non-representative, grab-groundwater samples.

- **The dissolved hydrocarbon plume is not migrating**

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 the current investigation confirms that the reported concentrations were not representative of actual groundwater conditions, and that current conditions are similar to those reported during the site's closure in 1994.

- **No water wells, deeper drinking water aquifers or surface water bodies are likely to be impacted as a result of onsite residual detections.**

Analyte concentrations in the downgradient well MW-3 are below ESLs for residential land use and groundwater as a potential drinking water resource. In addition, Delta Consultants (now Antea Group) did not identify any water supply wells within a half-mile of the site in the 2008 Sensitive Receptor Survey.

- **The site presents no significant risk to human health**

Analyte concentrations in both soil and groundwater at the site are minimal, and generally below ESLs for residential land use. The only detection of any analyte above ESLs was DRO in one soil sample from MW-2, which has been vertically delineated. Vapor intrusion is not a concern at this site, despite shallow groundwater, due to low concentrations of analytes. Additionally, the only analytes reported in groundwater (DRO and MTBE) do not readily volatilize once dissolved in groundwater.

- **The site presents no significant risk to the environment**

The site presents no significant risk to the environment. Concentrations of remaining dissolved petroleum hydrocarbons are low and are expected to further degrade with time. The DRO and GRO concentrations reported during the ATC investigation are inconsistent with historical values, were not confirmed during the current investigation and are deemed to be false positives. Additionally, groundwater samples from properly developed and purged monitoring wells, rather than grab groundwater samples, are considered to be more representative of actual groundwater conditions.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Antea Group offers the following conclusions regarding the current investigation:

- Three soil borings were advanced to depths up to 18 feet bgs for the purpose of collecting deep groundwater samples. Deep groundwater was not believed to be encountered, so no samples were collected.
- Three monitoring wells were installed to a depth of 12 feet bgs, with screens from 2.5 feet bgs to 12 feet bgs.
- Soil samples were collected continuously from each boring.
- One CPT soil boring (CPT-1) was attempted near B-3, but met refusal at 5 feet bgs.

- Shale bedrock was first encountered at depths of approximately 1.5 to 3.5 feet bgs.
- DRO was only detected above the ESL of 83 mg/kg in soil from MW-2 at 7.5 feet bgs at a concentration of 447 mg/kg. No other analytes were reported in soil samples above laboratory reporting limits.
- Groundwater stabilized in the wells at depths of approximately one to four feet below top of casing.
- Groundwater flow is to the northwest, at a hydraulic gradient of 0.036 feet pre foot.
- In MW-3, DRO was reported at a concentration of 74.4 ug/L and MTBE was reported at a concentration of 0.87 ug/L. No other analytes were reported above laboratory reporting limits in any of the monitoring wells.

Antea Group requests that ACEH grant “no further action” for this environmental case. Based on the historical soil and groundwater results, it appears that the dissolved petroleum hydrocarbon plume does not present a risk to drinking water supply wells, sensitive receptors, human health, and the environment. Additionally, the plume is not migrating and appears to be consistent with data collected prior to case closure in 1994. Antea Group believes the site qualifies as a low-risk groundwater case and that the case should be closed based on the RWQCB’s January 2006 Regional Board Supplemental Instructions to State Water Board, December 8, 1995, Interim Guidance on Required Cleanup at Low-Risk Fuel Sites and State Water Resources Control Board (SWRCB) Resolution No. 2009-0042 dated May 19, 2009.

7.0 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.

8.0 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 Antea USA, Inc., the data from those reports is 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. 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.

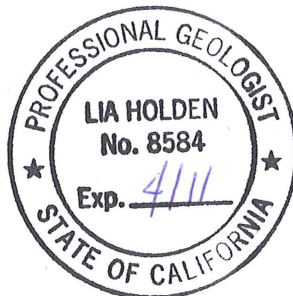


Nadine Periat
Senior Staff Geologist
Antea Group

Reviewed by:



Lia Holden, P.G. # 8584
Geologist – Project Manager
Antea Group



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Alameda County Health 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.

*Soil and Groundwater Investigation Report and Request for Case Closure
76 Branded Service Station No. 251028
5300 Broadway, Oakland, California
Alameda County LOP Case #: RO0002967
Antea Group Project No. I40251028*



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

Tables

Table 1	Soil Analytical Data
Table 2	Groundwater Analytical Data

Table 1
Summary of Soil Analytical Data
76 Branded Service Station No. 1028
5300 Broadway
Oakland California

Sample ID	Date	Time	Depth	GRO	DRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	ETBE (mg/kg)	DIPE (mg/kg)	TAME (mg/kg)	Ethanol (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	Total Lead (mg/kg)
B-1@4.5-5_20101207	12/7/2010	15:43	4.5-5	<0.13	3.3	<0.0016	<0.0016	<0.0016	<0.0048	<0.0016	<0.0081	<0.0016	<0.0016	<0.0016	<0.21	<0.0016	<0.0016	NA
B-1@7.5-8_20101207	12/7/2010	15:38	7.5-8	<0.25	<1.9	<0.0030	<0.0030	<0.0030	<0.0091	<0.0030	<0.015	<0.0030	<0.0030	<0.0030	<0.41	<0.0030	<0.0030	NA
B-1@14.5-15_20101207	12/7/2010	16:17	14.5-15	<0.28	<2.0	<0.0034	<0.0034	<0.0034	<0.010	<0.0034	<0.017	<0.0034	<0.0034	<0.0034	<0.45	<0.0034	<0.0034	NA
B-2@3.5-4_20101208	12/8/2010	9:18	3.5-4	<0.24	<2.0	<0.0029	<0.0029	<0.0029	<0.0088	<0.0029	<0.015	<0.0029	<0.0029	<0.0029	<0.39	<0.0029	<0.0029	NA
B-2@4.5-5_20101208	12/8/2010	9:08	4.5-5	<0.26	<2.0	<0.0031	<0.0031	<0.0031	<0.0094	<0.0031	<0.016	<0.0031	<0.0031	<0.0031	<0.42	<0.0031	<0.0031	NA
B-2@6-6.5_20101208	12/8/2010	9:25	6-6.5	<0.20	<1.9	<0.0024	<0.0024	<0.0024	<0.0071	<0.0024	<0.012	<0.0024	<0.0024	<0.0024	<0.31	<0.0024	<0.0024	NA
B-2@12.5-13_20101208	12/8/2010	9:39	12.5-13	<0.20	<2.0	<0.0024	<0.0024	<0.0024	<0.0072	<0.0024	<0.012	<0.0024	<0.0024	<0.0024	<0.32	<0.0024	<0.0024	NA
B-3@4.5-5_20101207	12/7/2010	8:00	4.5-5	<0.26	2.0	<0.0031	<0.0031	<0.0031	<0.0094	<0.0031	<0.016	<0.0031	<0.0031	<0.0031	<0.42	<0.0031	<0.0031	NA
B-3@7.5-8_20101207	12/7/2010	8:09	7.5-8	<0.26	<2.0	<0.0031	<0.0031	<0.0031	<0.0094	<0.0031	<0.016	<0.0031	<0.0031	<0.0031	<0.42	<0.0031	<0.0031	NA
B-3@17.5-18_20101207	12/7/2010	9:00	17.5-18	<0.41	<1.9	<0.0049	<0.0049	<0.0049	<0.015	<0.0049	<0.025	<0.0049	<0.0049	<0.0049	<0.66	<0.0049	<0.0049	NA
MW-1@5-5.5_20101207	12/7/2010	11:30	5-5.5	<0.19	2.0	<0.0023	<0.0023	<0.0023	<0.0068	<0.0023	<0.011	<0.0023	<0.0023	<0.0023	<0.30	<0.0023	<0.0023	NA
MW-1@7.5-8_20101207	12/7/2010	11:37	7.5-8	<0.18	<2.0	<0.0022	<0.0022	<0.0022	<0.0067	<0.0022	<0.011	<0.0022	<0.0022	<0.0022	<0.30	<0.0022	<0.0022	NA
MW-1@11.5-12_20101207	12/7/2010	12:05	11.5-12	<0.35	<2.0	<0.0042	<0.0042	<0.0042	<0.013	<0.0042	<0.021	<0.0042	<0.0042	<0.0042	<0.56	<0.0042	<0.0042	NA
MW-2@1.5-2_20101208	12/8/2010	10:28	1.5-2	<0.18	<2.0	<0.0022	<0.0022	<0.0022	<0.0065	<0.0022	<0.011	<0.0022	<0.0022	<0.0022	<0.29	<0.0022	<0.0022	NA
MW-2@4.5-5_20101208	12/8/2010	10:23	4.5-5	<0.23	<2.0	<0.0027	<0.0027	<0.0027	<0.0081	<0.0027	<0.014	<0.0027	<0.0027	<0.0027	<0.36	<0.0027	<0.0027	NA
MW-2@7.5-8_20101208	12/8/2010	10:37	7.5-8	<0.24	447	<0.0028	<0.0028	<0.0028	<0.0085	<0.0028	<0.014	<0.0028	<0.0028	<0.0028	<0.38	<0.0028	<0.0028	NA
MW-2@11.5-12_20101208	12/8/2010	10:45	11.5-12	<0.20	<2.0	<0.0024	<0.0024	<0.0024	<0.0071	<0.0024	<0.012	<0.0024	<0.0024	<0.0024	<0.31	<0.0024	<0.0024	NA
MW-3@4.5-5_20101206	12/6/2010	12:52	4.5-5	<0.18	<2.0	<0.0021	<0.0021	<0.0021	<0.0064	<0.0021	<0.011	<0.0021	<0.0021	<0.0021	<0.29	<0.0021	<0.0021	NA
MW-3@9.5-10_20101206	12/6/2010	12:55	9.5-10	<0.22	<2.0	<0.0027	<0.0027	<0.0027	<0.0080	<0.0027	<0.013	<0.0027	<0.0027	<0.0027	<0.36	<0.0027	<0.0027	NA
MW-3@11.5-12_20101206	12/6/2010	12:59	11.5-12	<0.19	<1.9	<0.0022	<0.0022	<0.0022	<0.0067	<0.0022	<0.011	<0.0022	<0.0022	<0.0022	<0.30	<0.0022	<0.0022	NA
COMP ABCD	12/8/2010	11:35	NA	<0.24	119	<0.0029	<0.0029	<0.0029	<0.0086	<0.0029	NA	NA	NA	NA	NA	NA	NA	8.9
Residential ESL (shallow soil)	--	--	<3m	83	83	0.044	2.9	2.3	2.3	0.023	0.075	NA	NA	NA	NA	0.00033	0.0045	200

NOTES

Depth measured in feet below ground surface

Bold concentrations indicate detections over laboratory reporting limit

- mg/kg milligrams per kilogram
- MTBE methyl tertiary butyl ether
- TBA tertiary buty alcohol
- ETBE ethyl tertiary butyl ether
- DIPE di-isopropyl ether
- TAME tertiary amyl ethyl ether
- EDB ethylene dibromide
- 1,2-DCA 1,2-dichloroethane

ESL Regional Water Quality Control Board - San Francisco Region Environmental Screening Level
ESL based on residential land use, shallow soil, and groundwater as a potential drinking resource.

Table 2
Summary of Current Groundwater Analytical Data
 76 Branded Service Station No. 1028
 5300 Broadway,
 Oakland, California

Sample ID	Date	Time	Depth to Water	TOC Elevation	Groundwater Elevation	GRO (µg/L)	DRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)
MW-1_20101221	12/21/2010	11:40	1.16	176.615	175.46	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	<5.0	<0.50	<0.50	<0.50	<250	<1.0	<1.0
MW-2_20101221	12/21/2010	11:00	4.19	181.36	177.17	<50.0	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	<5.0	<0.50	<0.50	<0.50	<250	<1.0	<1.0
MW-3_20101221	12/21/2010	12:20	2.08	176.401	174.32	<50.0	74.4	<0.50	<0.50	<0.50	<1.5	0.87	<5.0	<0.50	<0.50	<0.50	<250	<1.0	<1.0
ESL	--	--	--	--	--	100	100	1	40	30	20	5	12	NA	NA	NA	NA	0.05	0.5

Notes:

Depth to water measured in feet below top of casing

Groundwater elevation measured in feet above mean sea level

Bold concentrations indicate detection above laboratory reporting limit

- (µg/L) micrograms per liter
- MTBE methyl tertiary butyl ether
- TBA tertiary butyl alcohol
- ETBE ethyl tertiary butyl ether
- DIPE di-isopropyl ether
- TAME tertiary amyl ethyl ether
- EDB ethylene dibromide
- 1,2-DCA 1,2-dichloroethane

ESL Regional Water Quality Control Board - San Francisco Region Environmental Screening Level

ESL based on residential land use, shallow soil, and groundwater as a potential drinking resource.

Figures

- Figure 1 Site Location Map
- Figure 2 Site Map
- Figure 3 Geologic Cross Sections A-A' and B-B'
- Figure 4 Groundwater Elevation Map

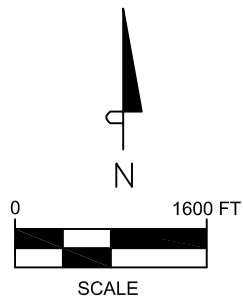
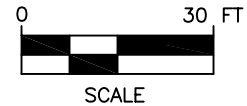
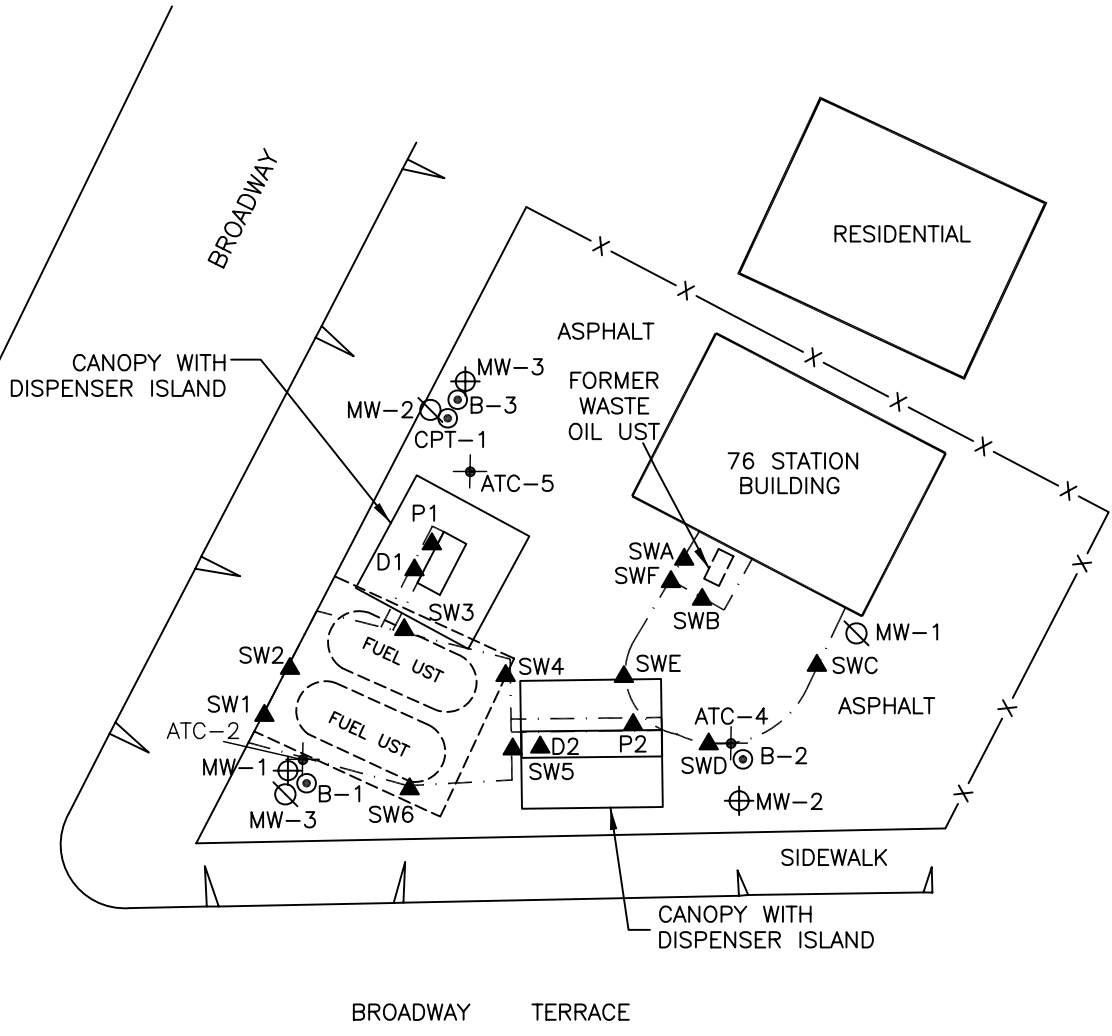


FIGURE 1
SITE LOCATION MAP

76 STATION NO. 1028
5300 BROADWAY AVENUE
OAKLAND, CALIFORNIA

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





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)

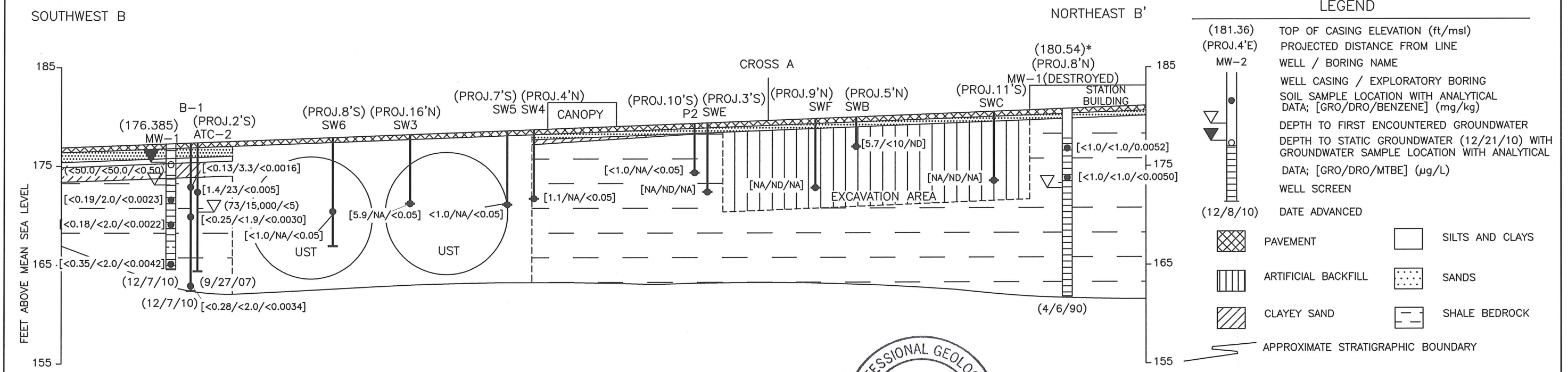
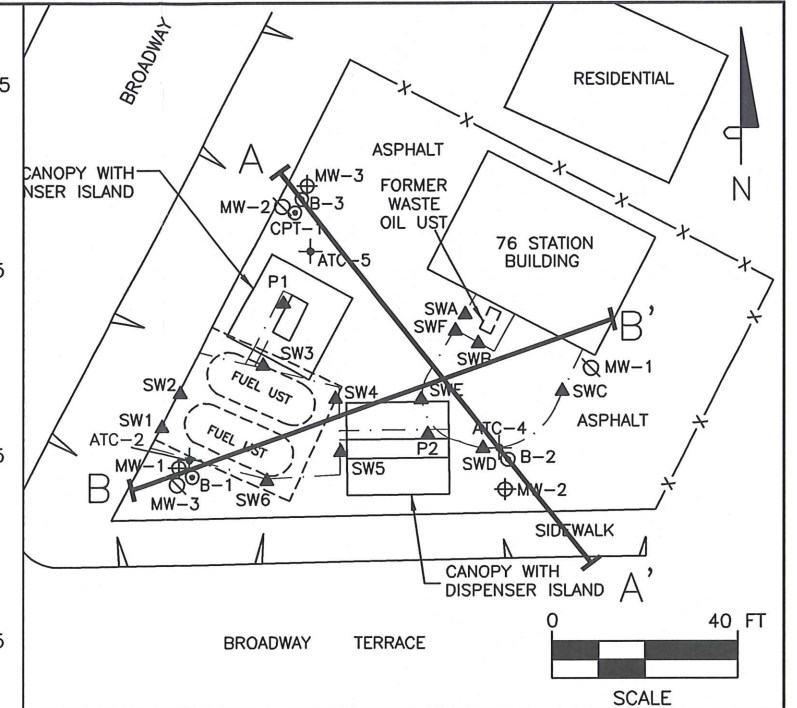
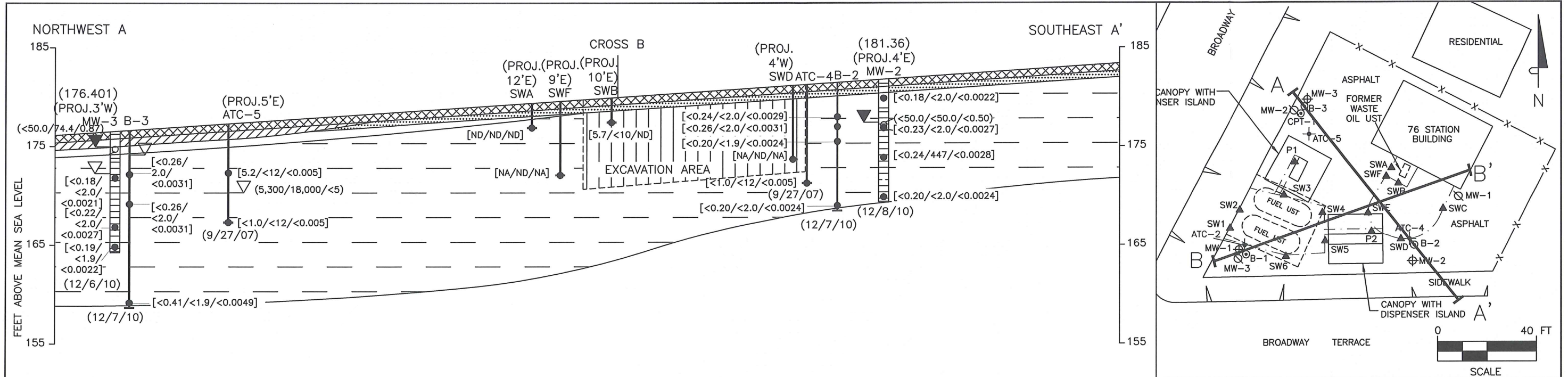
SITE MAP ADAPTED FROM A SURVEY BY MIDCOAST ENGINEERS, DECEMBER 2010 AND A SITE MAP BY ATC ASSOCIATES, 2007.

**FIGURE 2
SITE MAP**

76 STATION NO. 1028
5300 BROADWAY
OAKLAND, CALIFORNIA

PROJECT NO. I40251028	PREPARED BY NaP	DRAWN BY JH
DATE 2/22/11	REVIEWED BY LH	FILE NAME 1028-Site





NOTES:
 GRO = GASOLINE RANGE ORGANICS
 DRO = DIESEL RANGE ORGANICS
 MTBE = METHYL TERTIARY BUTYL ETHER
 mg/kg = MILLIGRAMS PER KILOGRAM
 $\mu\text{g}/\text{L}$ = MICROGRAMS PER LITER
 * WELL ELEVATION BASED ON DIFFERENCE IN TOP OF BOX (TOB) ELEVATION FROM FORMER WELL MW-3. ELEVATION WAS CALCULATED BY ADDING THIS DIFFERENCE TO TOB ELEVATION OF CURRENT WELL MW-1. ELEVATION IS APPROXIMATE.
 STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

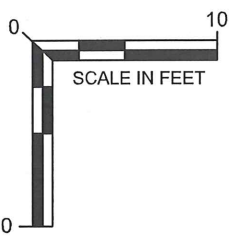
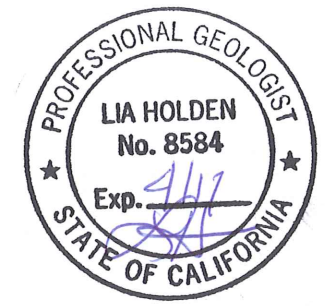
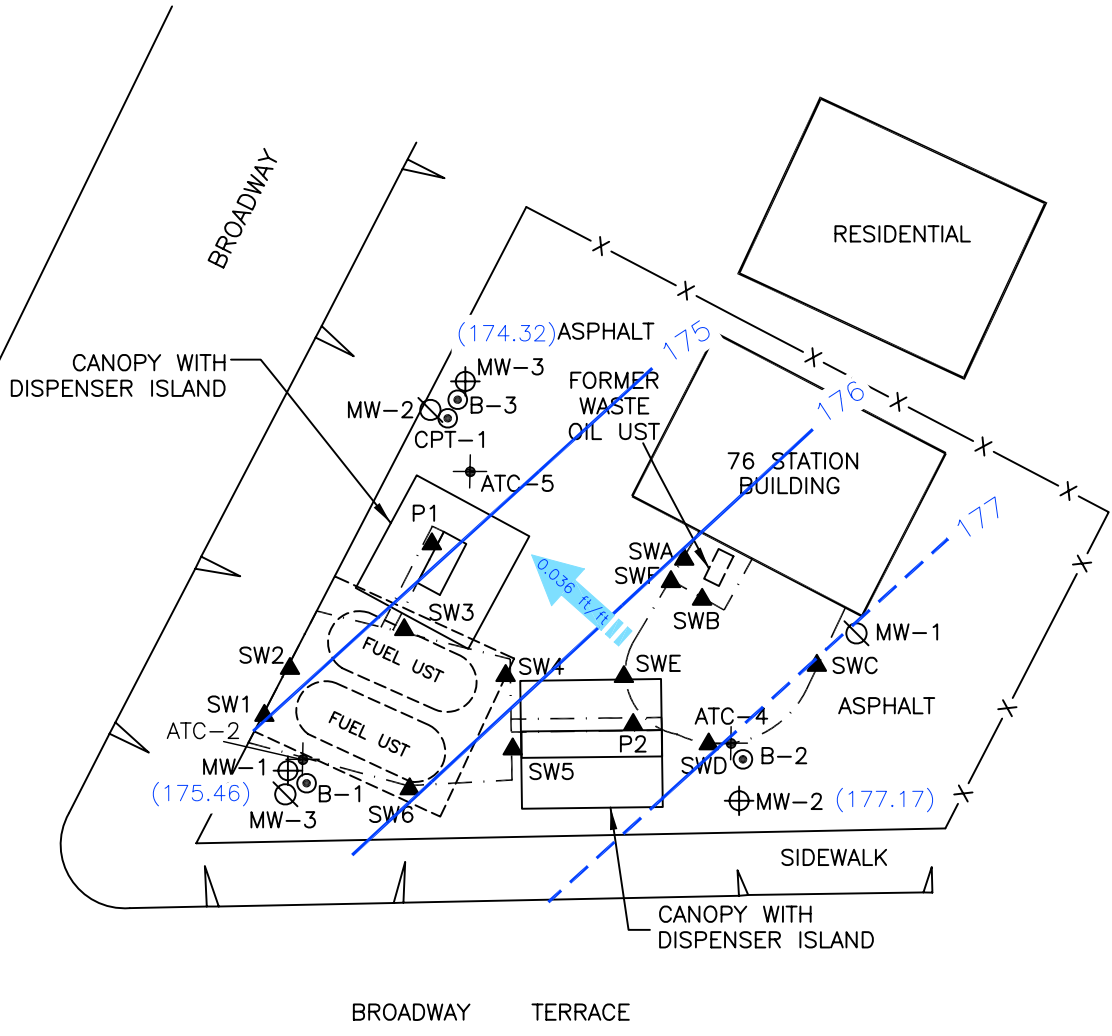


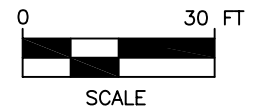
FIGURE 3
GEOLOGICAL CROSS SECTION
 A - A' AND B - B'
 76 STATION NO. 1028
 5300 BROADWAY
 OAKLAND, CALIFORNIA

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



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)
- (174.32) GROUNDWATER ELEVATION IN FEET MEAN SEA LEVEL (ft/msl)
- 175 — GROUNDWATER ELEVATION CONTOUR LINE (ft/msl) — DASHED WHERE INFERRED (CONTOUR INTERVAL: 2 ft)
- GROUNDWATER FLOW DIRECTION AND HYDRAULIC GRADIENT (ft/ft)



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

FIGURE 4
GROUNDWATER ELEVATION MAP
 DECEMBER 21, 2010
 76 STATION NO. 1028
 5300 BROADWAY
 OAKLAND, CALIFORNIA

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



*Soil and Groundwater Investigation Report and Request for Case Closure
76 Branded Service Station No. 251028
5300 Broadway, Oakland, California
Alameda County LOP Case #: R00002967
Antea Group Project No. I40251028*



Appendix A

Agency Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

June 25, 2008

Mr. Bill Borgh
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Mr. Elias and Mrs. Elaine Adamopoulos
18 Southampton Place
Lafayette, CA 94549

Subject: Fuel Leak Case No. RC00002967 and Geotracker Global ID T0619732490, Unocal #1028 / ConocoPhillips # 251028, 6300 Broadway, Oakland, CA 94618

Dear Mr. Borgh and Mr. and Mrs. Adamopoulos:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the November 1, 2007 *Due Diligence Site Assessment Report* that was submitted by ATC. This report discusses the results of the baseline assessment that was performed at the site in 2007. The report indicates that maximum concentrations of 25,000 micrograms per liter ($\mu\text{g/L}$) total petroleum hydrocarbons as diesel (TPHd) in groundwater from ATC-2 and 5,300 $\mu\text{g/L}$ total petroleum hydrocarbons as gasoline (TPHg) in ATC-5. The maximum TPHd concentration in soil [23 milligrams per kilogram (mg/Kg)] was detected in ATC-2 at a depth of five feet below ground surface (bgs) and the maximum TPHg concentration (5.2 mg/Kg) was detected in ATC-5 from 5 ft bgs.

ACEH requests that you perform additional investigation at the site including addressing the following technical comments, performing the requested work, and sending us the technical reports requested below.

TECHNICAL COMMENTS

1. **Dissolved Contamination Plume Definition.** The lateral and vertical extent of groundwater contamination is undefined since the only two groundwater samples collected during the baseline assessment both contained elevated petroleum hydrocarbons. We recommend that you perform an expedited site assessment to determine the extent of contamination in the groundwater. Please submit your proposal to define the extent of contamination in the Work Plan requested below.

2. **Preferential Pathway Evaluation Survey**- The purpose of the preferential pathway study is to locate potential migration pathways and conduits and determine the probability of the NAPL and/or plume encountering preferential pathways and conduits that could spread contamination. We request that you perform a preferential pathway study that details the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for vertical and lateral migration that may be present in the vicinity of the site.

Discuss your analysis and interpretation of the results of the preferential pathway study (including the detailed well survey and utility survey requested below) and report your results in the Work Plan requested below. The results of your study shall contain all information required by California Code of Regulations, Title 23, Division 3, Chapter 16, §2654(b).

a. **Utility Survey**

An evaluation of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s) is required as part of your study. Please include maps and cross-sections illustrating the location and depth of all utility lines and trenches within and near the site and plume areas(s) as part of your study.

b. **Well Survey**

The preferential pathway study includes a detailed well survey of all wells (monitoring and production wells: active, inactive, standby, decommissioned (sealed with concrete), abandoned (improperly decommissioned or lost); and dewatering, drainage, and cathodic protection wells) within a ¼-mile radius of the subject site. Your consultant has already contacted us to perform a well survey. Please report the results of the well survey in the work plan requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Barbara Jakub), according to the following schedule:

- **September 30, 2008** –Work Plan and preferential pathway evaluation

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used

for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is in addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including

Mr. Borgh and Mr. and Mrs. Adamopoulos
RO0002967
June 25, 2008, Page 4

the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 639-1287 or send me an electronic mail message at barbara.jakub@acgov.org.

Sincerely,



Barbara J. Jakub, P.G.
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Mr. Valentin Contantinescu, Delta Environmental Consultants, Inc., 11050 White Rock Road, Rancho Cordova, CA 95670, (via electronic mail)

Donna Drogos, ACEH (Sent via electronic mail)
Barbara Jakub, ACEH
File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director



AOC 04979 - OAKLAND
TERRY GRAYSON
AGCY COLLEGE

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

March 6, 2009

Mr. Terry Grayson
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Mr. Mohammad Ahmadi
Lafayette Investment Group, LLC
587 Ygnacio Valley Road
Walnut Creek, CA 94596

Ms. Elizabeth Bochnak
64 Glenwild Rd.
Madison, NJ 07940

Subject: Fuel Leak Case No. RO00002967 and Geotracker Global ID T0619732490, Unocal #1028 / ConocoPhillips # 251028, 5300 Broadway, Oakland, CA 94618

Dear Messrs. Grayson and Ahmadi and Ms. Bochnak:

Alameda County Environmental Health (ACEH) staff has reviewed the October 30, 2008 *Additional Site Assessment Work Plan* that was submitted by Delta for the above-referenced site. The work plan proposes advancing seven soil borings in the first phase to determine the extent of contamination in soil and groundwater. Delta proposed submit a work plan to define the vertical and lateral extent of the contamination plume and to install monitoring wells in a second phase of work. We request that you address the following technical comments and submit a brief work plan addendum that addresses the technical comments below.

TECHNICAL COMMENTS

1. **Vertical Extent of Contamination.** Your work plan does not include evaluation of the vertical extent of contamination at the site as requested in the ACEH letter dated June 26, 2008 but suggests that this will be defined in the second phase of the work. Following the Expedited Site Assessment Process, ACEH recommends that the vertical extent of contamination be assessed along with the lateral extent of contamination. Please update your work plan to assess this data gap.
2. **Soil Sampling** – In addition to your proposed sampling at five foot intervals, at the capillary fringe and areas with high PID readings, ACEH also requests that you collect continuous soil samples for lithologic logging and submit soil samples for analysis from the saturated zone to define the vertical extent of soil contamination since fluctuations in groundwater levels can submerge contaminated soils, leaving a soil source that would otherwise go undetected if not sampled.

3. **Groundwater and Soil Analysis.** In addition to your proposed analyses, please ensure that samples are analyzed for ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), tert butyl alcohol (TBA), ethylene dibromide (EDB), ethylene dichloride (EDC) and ethanol by EPA Method 8260. Also, please add the depth to water on your groundwater analytical table.
4. **Preferential Pathway Survey.** The results of the utility survey indicate that utilities can be a preferential pathway for contaminants at the site. If your borings results indicate that contamination is present along the Broadway Terrace side of the site (proposed borings B1, B6 and/or B7), please include your proposal to investigate potential migration along the utilities in the report requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Barbara Jakub), according to the following schedule:

- **April 6, 2009** – Soil and Water Investigation Work Plan Addendum

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rmmts.shtml).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following:

Messrs. Grayson and Ahmadi and Ms. Bochnak
RO0002967
March 6, 2009, Page 3

"I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 639-1287 or send me an electronic mail message at barbara.jakub@acgov.org.

Sincerely,



Barbara J. Jakub, P.G.
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Mr. Valentin Contantinescu, Delta Environmental Consultants, Inc., 11050 White Rock Road, Rancho Cordova, CA 95670
Donna Drogos, ACEH
Barbara Jakub, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: December 16, 2005
	PREVIOUS REVISIONS: October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

Effective January 31, 2006, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection.** (Please do not submit reports as attachments to electronic mail.)
- It is preferable that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements must be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in Excel format. These are for use by assigned Caseworker only.

Submission Instructions

- 1) Obtain User Name and Password:
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to dehloptoxic@acgov.org
 - or
 - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
 - b) In the subject line of your request, be sure to include "ftp **PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to <ftp://alcoft1.acgov.org>
 - (i) Note: Netscape and Firefox browsers will not open the FTP site.
 - b) Click on File, then on Login As.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload.** (e.g., Subject: RO1234 Report Upload)

From: Jakub, Barbara, Env. Health [barbara.jakub@acgov.org]

Sent: Monday, September 20, 2010 12:18 PM

To: Lia Holden; Borgh, Bill:

Subject: RE: 5300 Broadway, Oakland, CA RO#02697

Dear Mr. Borgh and Ms. Holden,

Alameda County Environmental Health requires additional time to review the work plan addendum for site RO2967 due to a backlog of reports from the recently required SWQCB closure impediments review. If you proceed with the fieldwork, you would be doing so without concurrence from ACEH. If no comments arise from the review of the work plan addendum, then proceeding with the fieldwork would not appear to have significant repercussions. However, if comments to the work plan addendum are identified, modifications to the fieldwork may be necessary, which may require additional mobilizations/sample analyses, etc. Please note that the UST Cleanup Fund typically reimburses costs for a scope of work that has been approved by a regulatory agency. Since a review of the work plan addendum cannot be completed in the prescribed time frame, the UST Cleanup fund may not fully reimburse all costs associated with the proposed scope of work. Please contact the UST Cleanup Fund to address cost reimbursement concerns.

Regards,

Barbara Jakub, P.G.

Hazardous Materials Specialist

Alameda County Environmental Health

1131 Harbor Bay Pky.

Alameda, CA 94502

Direct: 510-639-1287

Fax: 510-337-9335

PDF copies of case files can be downloaded at:

<http://www.acgov.org/aceh/lop/ust.htm>

From: Lia Holden [mailto:LHolden@deltaenv.com]

Sent: Monday, September 20, 2010 10:56 AM

To: Jakub, Barbara, Env. Health

Subject: 5300 Broadway, Oakland, CA RO#02697

Ms. Jakub.

For the subject site, Delta submitted the Work Plan for Preliminary Site Assessment, dated July 6, 2010. As it has been greater than 60 days since the work plan was submitted, Delta wishes to proceed with the proposed scope of work. If you have the opportunity to review and respond to the submitted work plan in short order, your comments are appreciated. Otherwise, we will move forward. The work will commence during the fourth quarter 2010.

Thank you,

Lia

Lia Holden, PG | Geologist - Project Manager | North American Operations

Delta Consultants, an Oranjewoud N.V. Company

Direct (408) 826-1863 | Fax (408) 225 8506 | Mobile (408) 410-9781 | USA Toll Free 800 477 7411

lholden@deltaenv.com | www.deltaenv.com

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From: Jakub, Barbara, Env. Health [barbara.jakub@acgov.org]

Sent: Thursday, October 21, 2010 2:43 PM

To: Lia Holden

Subject: RE: Notification of Field Activities RO#2967 - 1028 Oakland - Drilling Schedule

I placed this notification on our website. This is plenty of notice.

Thanks for all the advance notice.

Barb

From: Lia Holden [<mailto:LHolden@deltaenv.com>]

Sent: Monday, October 18, 2010 2:50 PM

To: Jakub, Barbara, Env. Health

Subject: Notification of Field Activities RO#2967 - 1028 Oakland - Drilling Schedule

Hi Barb,

Field activities for the subject site are scheduled as follows:

December 1st, 2nd, and 3rd – Air Knife

December 6th through 10th – Drill soil borings/ well install/ CPT

December 14th – Well Development and Well Survey

Please confirm that this email is sufficient for notification.

Also, let me know if you have any questions. My plan is to make it out there for at least a portion of the drilling if possible. The field geologist onsite for the job duration will be Nadine Periat; Nadine and I have discussed the investigation goals, and she is familiar with the proposed scope.

Lia Holden, PG | Geologist - Project Manager | North American Operations

Delta Consultants, an Oranjewoud N.V. Company

Direct (408) 826-1863 | Fax (408) 225 8506 | Mobile (408) 410-9781 | USA Toll Free 800 477 7411

lholden@deltaenv.com | www.deltaenv.com

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*Soil and Groundwater Investigation Report and Request for Case Closure
76 Branded Service Station No. 251028
5300 Broadway, Oakland, California
Alameda County LOP Case #: R00002967
Antea Group Project No. I40251028*



Appendix B

Monitoring Well Installation Permits

Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 11/03/2010 By jamesy

Permit Numbers: W2010-0825 to W2010-0828
Permits Valid from 12/01/2010 to 12/10/2010

Application Id: 1288730856373
Site Location: 5300 Broadway, Oakland, CA
Project Start Date: 12/01/2010
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

City of Project Site:Oakland
Completion Date:12/10/2010

Applicant: Delta Consultants - Nadine Periat
312 Piercy Rd., San Jose, CA 95138
Property Owner: Lafayette Invest., Grp , LLC
587 Ygnacio Va. Rd., Walnut Creek, CA 94596
Client: Delta Consultants
312 Piercy Rd, San Jose, CA 95138

Phone: 408-826-1879
Phone: --
Phone: 408-382-1479

	Total Due:	\$1456.00
Receipt Number: WR2010-0368	Total Amount Paid:	\$1456.00
Payer Name : Delta	Paid By: CHECK	PAID IN FULL

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 3 Wells
Driller: Cascade Drilling - Lic #: 938110 - Method: other

Work Total: \$1191.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2010-0825	11/03/2010	03/01/2011	MW1	8.00 in.	2.00 in.	2.00 ft	12.00 ft
W2010-0826	11/03/2010	03/01/2011	MW2	8.00 in.	2.00 in.	2.00 ft	12.00 ft
W2010-0827	11/03/2010	03/01/2011	MW3	8.00 in.	2.00 in.	2.00 ft	12.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

Alameda County Public Works Agency - Water Resources Well Permit

4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.
5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
6. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
8. Minimum surface seal thickness is two inches of cement grout placed by tremie
9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
10. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

Borehole(s) for Investigation-Geotechnical Study/CPT's - 12 Boreholes

Driller: Cascade Drilling - Lic #: 938110 - Method: other

Work Total: \$265.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2010-0828	11/03/2010	03/01/2011	12	2.00 in.	25.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits

Alameda County Public Works Agency - Water Resources Well Permit

and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
 6. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
 7. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
 8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
 9. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.
-

*Soil and Groundwater Investigation Report and Request for Case Closure
76 Branded Service Station No. 251028
5300 Broadway, Oakland, California
Alameda County LOP Case #: RO0002967
Antea Group Project No. I40251028*



Appendix C

Boring Logs



Project No: I40251028 Client: COP/ELT Well/ Boring ID: MW-1
 Logged By: Nadine Periat Location: 5300 Broadway, Oakland, CA Page 1 of 1
 Driller: Cascade Drilling, LP Date Drilled: 12/7/2010
 Drilling Method: Hollow Stem Auger Hole Diameter: 8 inches
 Sampling Method: Direct Push Hole Depth: 12 feet
 Casing Type: Sch 40 PVC Well Diameter: 2 inches
 Slot Size: 0.02 Well Depth: 12 feet
 Gravel Pack: #3 Sand Casing Stickup: NA

Location Map
 See Attached Site Map

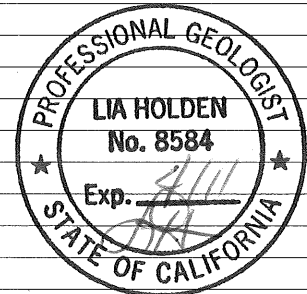
Elevation Northing Easting

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
		▼	Moist			1	GP	Concrete	
			Moist			2	CL	Poorly Graded Gravel with Sand, brown, 60% gravel, 35% coarse sand, 5% fines.	
		▽	Moist			3	GC	Lean Clay, black, <5% sand, medium plasticity, roots	
			Wet			4		Clayey Gravel, brown, 70% fine angular gravel, 30% fines	
			Wet	0.1		5		Gravel is fractured shale bedrock, up to 1" diameter fluffy texture, could be artificial fill, 4-6" cobbles at 3', some red chert and granitic rock fragments	
			Wet			6		Shale Bedrock, brown-gray, vertical fracture planes similar to those observed in MW-2, strike and dip are not possible due to depth.	
			Wet			7		As above, veins of soft, crystalline white precipitate	
			Wet	0.1		8			
			Moist	0.1		9			
			Moist	0.1		10		As above, no precipitate	
			Moist	0.2		11			
						12			

Bottom of Boring at 12 feet below grade

Legend:

-  Portland Cement
-  Bentonite Seal
-  #3 Sand Pack
-  Blank Casing
-  0.02 inch Screen
-  First Encountered Groundwater
-  Static Groundwater











Project No:	I40251028	Client:	COP/ELT	Well/ Boring ID:	MW-2
Logged By:	Nadine Periat	Location:	5300 Broadway, Oakland, CA	Page 1 of 1	
Driller:	Cascade Drilling, LP	Date Drilled:	12/8/2010	Location Map	
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8 inches	See Attached Site Map	
Sampling Method:	Direct Push	Hole Depth:	12 feet		
Casing Type:	Sch 40 PVC	Well Diameter:	2 inches		
Slot Size:	0.02	Well Depth:	12 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	NA		

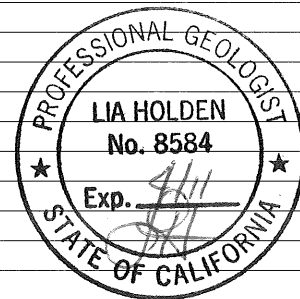
Elevation	Northing	Easting
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Backfill	Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
			damp	0.4		1		GP	Asphalt
			damp	0.4		2			Poorly Graded Gravel with Sand, brown, 60% gravel, 35% coarse sand, 5% fines.
		▼	damp	0.5		3			Air knife refusal at 1.5 feet below grade.
			damp	0.3		4			Shale Bedrock, brown-gray, fractured but not weathered vertical fracture planes striking ~250° and 346° bedding planes have 260° strike and 18° SE dip.
			damp	0.3		5			As above
			damp	0.5		6			
			damp	0.4		7			
			damp	0.5		8			As above, more difficult to drill through.
			damp	0.4		9			
			damp	0.5		10			As above, sampling rods nearly stuck in hole,
			damp	0.4		11			
						12			sampling refusal at 12 feet.

Bottom of Boring at 12 feet below grade
Groundwater not encountered during drilling.

Legend:

-  Portland Cement
-  Bentonite Seal
-  #3 Sand Pack
-  Blank Casing
-  0.02 inch Screen
-  Static Groundwater





Project No: I40251028 Client: COP/ELT Well/ Boring ID: MW-3
 Logged By: Nadine Periat Location: 5300 Broadway, Oakland, CA Page 1 of 1
 Driller: Cascade Drilling, LP Date Drilled: 12/6/2010
 Drilling Method: Hollow Stem Auger Hole Diameter: 8 inches
 Sampling Method: Direct Push Hole Depth: 12 feet
 Casing Type: Sch 40 PVC Well Diameter: 2 inches
 Slot Size: 0.02 Well Depth: 12 feet
 Gravel Pack: #3 Sand Casing Stickup: NA








Location Map
 See Attached Site Map

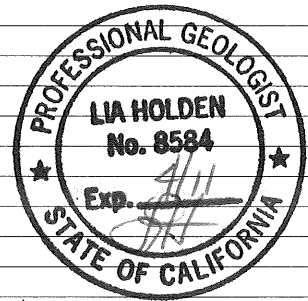
Elevation Northing Easting

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing								
									Asphalt
		▼	Moist			1	GC		Clayey Gravel, brown-orange mottled, 60% coarse gravel, 40% fines clay has medium plasticity.
			Moist			2	CL		Lean Clay with Gravel, brown orange mottled, 15% cobbles, clay is sticky and difficult to air knife through, cobbles are red chert.
		▽	Moist			3			Shale bedrock, clayey, ~3" angular cobbles, clay in bedrock fractures
			Moist			4			
			Moist	1		5			As above, rock is dry, slough is wet, some clay veins in bedrock, may be from pulverization in sampler, rock is red oxidized.
			Moist			6			
			Moist			7			
			Moist			8			
			Moist			9			
			Moist	1.2		10			
			Moist	0.4		11			As above, less weathered.
						12			

Bottom of Boring at 12 feet below grade

Legend:

-  Portland Cement
-  Bentonite Seal
-  #3 Sand Pack
-  Blank Casing
-  0.02 inch Screen
-  First Encountered Groundwater
-  Static Groundwater





Project No: I40251028 Client: COP/ELT Well/ Boring ID: B-1
 Logged By: Nadine Periat Location: 5300 Broadway, Oakland, CA Page 1 of 1
 Driller: Cascade Drilling, LP Date Drilled: 12/7/2010
 Drilling Method: Direct Push Hole Diameter: 3 inches
 Sampling Method: Direct Push Hole Depth: 15 feet
 Casing Type: NA Well Diameter: NA
 Slot Size: NA Well Depth: NA
 Gravel Pack: NA Casing Stickup: NA

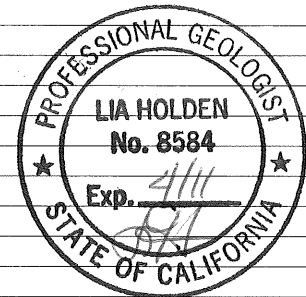
Location Map
See Attached Site Map

Well Completion		Elevation			Northing		Easting		LITHOLOGY / DESCRIPTION
Backfill	Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	
Portland Cement	▽					1		GP	Concrete
						2		CL	Poorly Graded Gravel with Sand, brown, 60% gravel, 35% coarse sand, 5% fines.
						3		GC	Lean Clay, black, <5% sand, medium plasticity, roots
			wet			4			Clayey Gravel, brown, 70% fine angular gravel, 30% fines
			wet			5			Gravel is fractured shale bedrock, up to 1" diameter
			wet			6			fluffy texture, could be artificial fill, 4-6" cobbles at 3', some red chert and granitic angular gravel
			moist	0.4		7			Shale Bedrock, brown-gray, vertical fracture planes with horizontal bedding, well indurated.
			damp	0.6		8			No Recovery - Acetate liner crushed.
			damp	0.7		9			As above (shale bedrock)
			damp	0.6		10			As above (shale bedrock)
						11			As above (shale bedrock)
						12			
						13			
						14			Geoprobe refusal at 14 feet
						15			Hydropunch to 15 feet, no sample recovery.

Legend:



Portland Cement
 First Encountered Groundwater






Project No: I40251028 Client: COP/ELT Well/ Boring ID: B-2
 Logged By: Nadine Periat Location: 5300 Broadway, Oakland, CA Page 1 of 1
 Driller: Cascade Drilling, LP Date Drilled: 12/7/2010
 Drilling Method: Direct Push Hole Diameter: 3 inches
 Sampling Method: Direct Push Hole Depth: 13 feet
 Casing Type: NA Well Diameter: NA
 Slot Size: NA Well Depth: NA
 Gravel Pack: NA Casing Stickup: NA

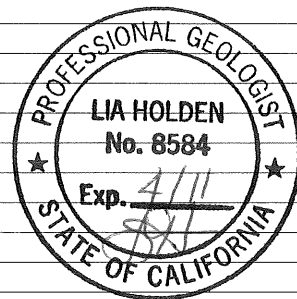
Location Map
 See Attached Site Map

Well Completion		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample		Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing						Recovery	Interval		
										Asphalt
			damp			1			GP	Poorly Graded Gravel with Sand, brown, 60% small gravel 35% coarse sand, 5% fines (base rock) Air knife refusal at 2.5 feet below grade.
			damp			2				Shale Bedrock, brown-gray, fractured but not weathered vertical fracture planes striking ~250° and 346° bedding planes have 260° strike and 18° SE dip.
				0.2		3				
			moist			4				
				0.4		5				As above, moist in center of core, dry on outside.
			moist			6				
				0.4		7				
				0.6		8				As above
			moist			9				
				0.3		10				
			damp			11				As above
				0.3		12				
						13				Refusal at 13 feet below grade, groundwater not encountered

Bottom of Boring at 13 Feet Below Grade

Legend:

 Portland Cement

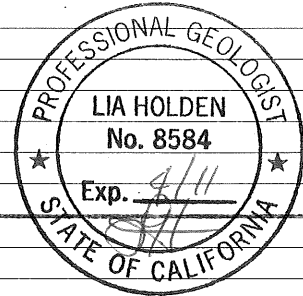




Project No: I40251028	Client: COP/ELT	Well/ Boring ID: B-3
Logged By: Nadine Periat	Location: 5300 Broadway, Oakland, CA	Page 1 of 1
Driller: Cascade Drilling, LP	Date Drilled: 12/7/2010	Location Map See Attached Site Map
Drilling Method: Direct Push	Hole Diameter: 3 inches	
Sampling Method: Direct Push	Hole Depth: 18 feet	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	

Well Completion Backfill Casing	Static Water Level	Elevation			Northing		Easting	Soil Type	LITHOLOGY / DESCRIPTION
		Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval			
								Asphalt	
	▽	wet			1	GC		Clayey Gravel, brown-orange mottled, 60% coarse gravel, clay has medium plasticity.	
		wet			2	CL		Lean Clay with Gravel, brown orange mottled, 15% cobbles, clay is sticky and difficult to air knife through, cobbles are red chert.	
		wet			3			Shale Bedrock, slightly weathered, 15% clay, clay in bedrock fractures	
		wet	0.4		4				
		wet			5			As above	
		moist	0.3		6				
		damp			7				
		damp	0.4		8			As above	
		damp	0.3		9				
		damp			10				
		damp	0.3		11				
		damp			12			As above, less clayey, much harder rock, coming out of sampler as fine gravel, pulverized by sampler. Acetate liner damaged, rocks stuck in sampler	
		damp	0.3		13				
		damp			14				
		damp	0.4		15				
		damp			16				
		damp	0.4		17			As above	
		damp			18				

Bottom of Boring at 18 Feet Below Grade



Legend:

- Portland Cement
- First Encountered Groundwater

*Soil and Groundwater Investigation Report and Request for Case Closure
76 Branded Service Station No. 251028
5300 Broadway, Oakland, California
Alameda County LOP Case #: R00002967
Antea Group Project No. I40251028*



Appendix D

Field Data Sheets from Well Development and Groundwater Sampling

WELL NUMBER MW-1 PROJECT NUMBER 140251028
 DEPTH TO BOTTOM (DB): DATE 12/14/10
 INITIAL 12.1 DATE(S) INSTALLED 12/6/10
 FINAL 12.0 DATE(S) DEVELOPED 12/14/10
 STATIC WATER LEVEL: PUMP TYPE ---
 INITIAL 1.56 PUMP CAPACITY ---
 FINAL 5.32 BAILER TYPE Steel
 MEASURING POINT TOC BAILER CAPACITY 1/2 gal
 FIELD PERSONNEL Nadine Penat

WELL MEASUREMENT: MEASURED DEPTH TO BOTTOM (DB) _____
 2-INCH I.D. = 0.16 gal/ft. DEPTH TO FLUID (DTW) _____
 4-INCH I.D. = 0.65 gal/ft. HEIGHT OF WATER COLUMN (H) = DB-DTW _____
 6-INCH I.D. = 1.47 gal/ft. ONE CASING VOLUME (CV) = X gal/ft. x H _____
 8-INCH I.D. = 2.51 gal/ft.

TIME	VOLUME REMOVED	pH	CONDUCTIVITY	TEMP (F)	TURBIDITY	OTHER PHYSICAL CHARACTERISTICS
11:07	2	8.27	1137	17.4	71000	
11:12	4	8.21	1177	17.4	71000	
11:14	6	8.14	1175	17.6	71000	
11:18	10	8.17	1026	17.9	71000	attach pump after reading
11:52	12	8.24	842	17.8	71000	continue w/bailer
11:54	14	8.26	910	17.6	71000	
11:56	16	8.23	862	17.8	71000	
12:06	18	8.28	798	17.9	71000	
12:07	20	8.15	748	17.9	71000	

TOTAL VOLUME REMOVED: 20g = DRUMS 4

COMMENTS _____

WELL NUMBER MW-2

PROJECT NUMBER 140251028

DEPTH TO BOTTOM (DB):

DATE 12/14/10

INITIAL 11.45

DATE(S) INSTALLED 12/8/2010

FINAL 11.45

DATE(S) DEVELOPED 12/14/10

STATIC WATER LEVEL:

PUMP TYPE _____

INITIAL 4.3

PUMP CAPACITY _____

FINAL 6.92

BAILER TYPE Steel

MEASURING POINT TOC

BAILER CAPACITY 1/2 gal

FIELD PERSONNEL Nadine Penat

WELL MEASUREMENT:

- 2-INCH I.D. = 0.16 gal/ft.
- 4-INCH I.D. = 0.65 gal/ft.
- 6-INCH I.D. = 1.47 gal/ft.
- 8-INCH I.D. = 2.51 gal/ft.

MEASURED DEPTH TO BOTTOM (DB) 11.45

DEPTH TO FLUID (DTW) 4.3

HEIGHT OF WATER COLUMN (H) = DB-DTW 7.15

ONE CASING VOLUME (CV) = X gal/ft. x H 1.21 gal

10 CV = 12.15 gal

TIME	VOLUME REMOVED	pH	CONDUCTIVITY	TEMP (F)	TURBIDITY	OTHER PHYSICAL CHARACTERISTICS
12:49	2 gal	8.16	1272	17.9	71000	
12:54	4 gal	8.26	1163	18.4	71000	
12:56	6 gal	8.26	880	18.6	71000	wait for recharge
12:58	8 gal	8.29	790	18.87	71000	
1:01	10 gal	8.22	263	18.8	71000	
1:13	12 gal	8.23	709	18.8	71000	
1:15	13 gal	8.22	620	19.0	71000	End.

TOTAL VOLUME REMOVED 13 gal = DRUMS 41

COMMENTS _____

WELL NUMBER MW-3

PROJECT NUMBER 1401028

DEPTH TO BOTTOM (DB):

DATE 12/14/10

INITIAL 12.42

DATE(S) INSTALLED 12/6/10

FINAL 12.43

DATE(S) DEVELOPED 12/14/10

STATIC WATER LEVEL:

PUMP TYPE _____

INITIAL 2.45

PUMP CAPACITY _____

FINAL 6.35

BAILER TYPE Steel

MEASURING POINT TOC

BAILER CAPACITY 1/2 gal

FIELD PERSONNEL Nadhe Ponat

WELL MEASUREMENT:

2-INCH I.D. = 0.16 gal/ft.

4-INCH I.D. = 0.65 gal/ft.

6-INCH I.D. = 1.47 gal/ft.

8-INCH I.D. = 2.51 gal/ft.

MEASURED DEPTH TO BOTTOM (DB) _____

DEPTH TO FLUID (DTW) _____

HEIGHT OF WATER COLUMN (H) = DB-DTW _____

ONE CASING VOLUME (CV) = X gal/ft. x H _____

TIME	VOLUME REMOVED	pH	CONDUCTIVITY μS	TEMP $^{\circ}C$	TURBIDITY	OTHER PHYSICAL CHARACTERISTICS
9:35	2 gal	7.23	1583	17	21000	Silty, separates out quick
9:40	4 gal	7.52	1486	17.3	> 1800	
9:43	6 gal	7.61	1399	17.8	21000	well de-watering, must wait for recharge. using pump
9:54	8 gal	7.88	1347	17.0	21000	
10:05	10 gal	7.83	1257	17.8	21000	
10:16	12 gal	7.87	1144	18.7	18000 175	
10:22	14 gal	7.97	1106	18.3	78	
10:28	16 gal	7.96	1085	19.0	57	fast recharging, water = clear

TOTAL VOLUME REMOVED 16.5 gal. DRUMS 41

COMMENTS _____

102D well Sampling 12/21/10

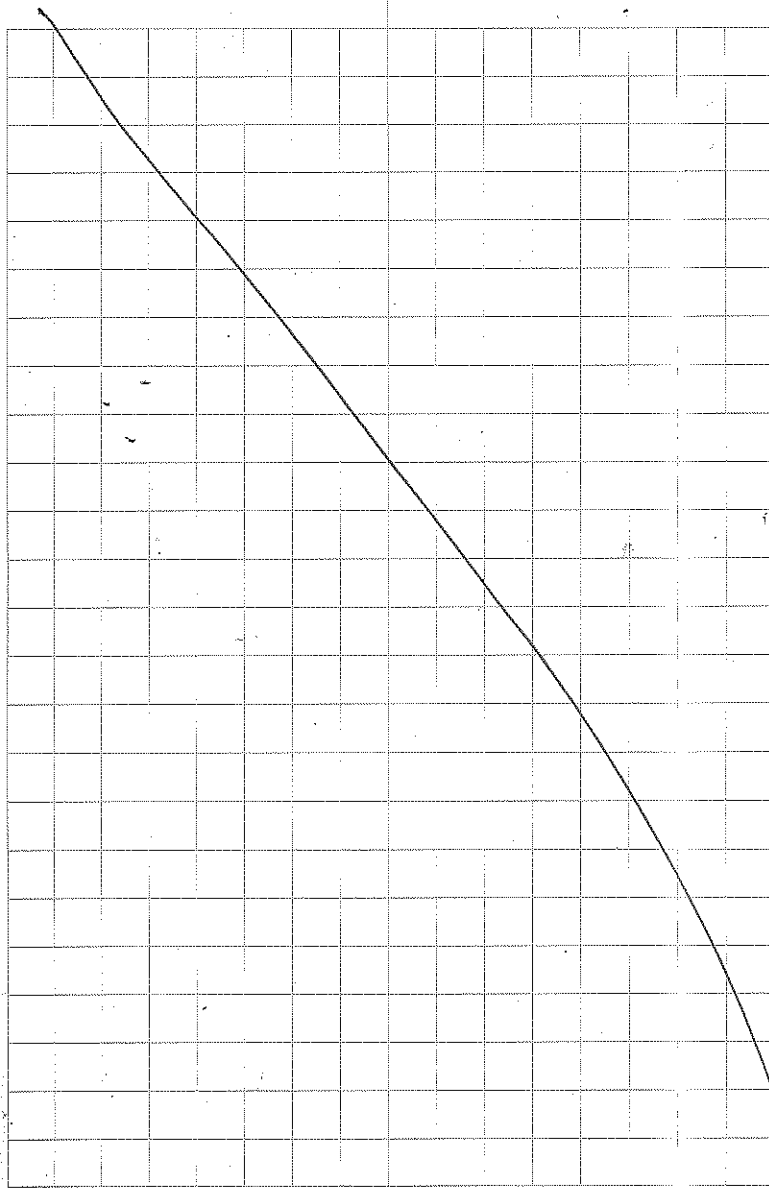
5300 Broadway, Oakland, CA

PM - Litzbiden Client - COP/ELT

Weather = Cloudy

Timeline:

- 9:45 Arrive @ site.
- 9:55 Pop MW-2
- 9:58 Pop MW-1
- 10:03 Pop MW-3
- 10:06 Setup @ MW-2
- 10:15 Start grasping/Sampling.
- 11:00 Sample MW-2
- 11:10 Move to MW-1
- 11:40 Sample MW-1
- 11:53 Move to MW-3
- 12:20 Sample MW-3, Start cleanup.
- 1:00 Leave site.



ELT Groundwater Sampling Form

Facility Location:	5300 Broadway, Oakland, CA		
Station #:	1028	Field Technician:	Nadine Penat
Well Identification:	MW-1	Date:	12/21/10
Well Diameter (in):	(2) 3 4 6 8	Depth to Water (DTW) (ft bgs):	1.16
Thickness of SPH (ft):	—	Depth to SPH (ft bgs):	—
Water Column Height (WCH) (ft):	10.99	Total Depth of Well (TDW) (ft bgs):	12.15

DTW @ 20' = 3.35'

Purging Info and Calculations:

Purge Method:	Bailer	<u>Disposable Bailer</u>	Electric Submersible	Extraction Pump	Other:
Sample Method:	Bailer	<u>Disposable Bailer</u>	Extraction Port	Other:	
Top of Casing (TOC):	—				
TOC-DTW = Groundwater Elevation:	—				

TDW-DTW=WCH

WCH x CF = CV

Top of Screen: 2.5' If well is listed as a no-purge @XX feet, confirm that water level is below the top of screen. Otherwise, the well must be purged.

Casing Volume (gal): 1.86

X Specified Volumes: 3 = Calculated Purge (gal): 5.6

Start Time: 11:20

Stop Time: 11:29

Conversion Factors (gal/ft): 2" = 0.17 3" = 0.38 4" = 0.66 6" = 1.5 8" = 2.6 Other = (diam in inches)² * 0.041

Purge:	Time	Volume Removed (gal)	Temp (°C)	Conductivity (ms/cm)	TDS (g/L)	DO (mg/L)	pH	ORP
	11:23	2	17.4	.606	.460	7.91 8.31	8.31	250.0
	11:26	4	17.7	.578	.437	8.38	8.13	244.3
	11:29	6	17.39	.578	.440	7.49	8.10	239.9
D.O. (if req'd):	Pre-purge:		mg/L	Post-purge:		7.49		mg/L
O.R.P. (if req'd):	Pre-purge:		mV	Post-purge:		239.9		mV

Turb
71000
71000
71000

Did Well dewater? Yes No

Actual Purge volume (gal): 6

Other Comments: —

Sample Info:

Sample ID:	MW-1	Sample Date and Time:	12/21/10 @ 11:40
------------	------	-----------------------	------------------

Sample Containers and Selected Analysis: 2x 50cc Ambios (amp) + 6x Vials w/HCl -> 8015/8260B

Purge Water Stored/Disposed of Where/How: onsite in 55gal Drum

Signature: Nadine Penat Date: 12/21/10

QA Signature: _____ Date: _____



ELT Groundwater Sampling Form

Facility Location:	5300 Broadway, Oakland, CA		
Station #:	1028	Field Technician:	Nadine Perat
Well Identification:	MW-2	Date:	12/21/10
Well Diameter (in):	② 3 4 6 8	Depth to Water (DTW) (ft bgs):	4.19
Thickness of SPH (ft):	—	Depth to SPH (ft bgs):	—
Water Column Height (WCH) (ft):	2.3	Total Depth of Well (TDW) (ft bgs):	11.49'

Purging Info and Calculations:

Purge Method:	<input checked="" type="radio"/> Bailer	<input checked="" type="radio"/> Disposable Bailer	<input type="radio"/> Electric Submersible	<input type="radio"/> Extraction Pump	<input type="radio"/> Other:
Sample Method:	Bailer	<input checked="" type="radio"/> Disposable Bailer	<input type="radio"/> Extraction Port	<input type="radio"/> Other:	
Top of Casing (TOC):	—				
TOC-DTW= Groundwater Elevation:	—				
TDW-DTW=WCH	WCH×CF=CV				
Top of Screen:	2.5' bgs				
Casing Volume (gal):	1.2				
Start Time:	10:35				
Stop Time:	10:47				
X Specified Volumes:	3 = Calculated Purge (gal): 3.7 gal				

DTW @ 2.5' = 5.65'

If well is listed as a no-purge @XX feet, confirm that water level is below the top of screen. Otherwise, the well must be purged.

Conversion Factors (gal/ft): 2" = 0.17 3" = 0.38 4" = 0.66 6" = 1.5 8" = 2.6 Other = (diam in inches)² * 0.041

Purge:	Time	Volume Removed (gal)	Temp (°C)	Conductivity (ms/cm)	TDS (g/L)	DO (mg/L)	pH	ORP	Turb
	10:40	1.25	18.52	.589	.442	7.5	8.15	261.3	>1000
	10:44	2.5	18.70	.557	.412	7.63	8.21	258.6	>1000
	10:47	3.75	18.85	.529	.388	7.29	8.15	256.5	>1000
D.O. (if req'd):	Pre-purge:	—		mg/L	Post-purge:	2.29		mg/L	
O.R.P. (if req'd):	Pre-purge:	—		mV	Post-purge:	256.5		mV	

Did Well dewater? Yes No Actual Purge volume (gal): 3.75

Other Comments: —

Sample Info:

Sample ID:	MW-2	Sample Date and Time:	12/21/10 11:00
------------	------	-----------------------	----------------

Sample Containers and Selected Analysis: 2x50cc Amber amp. / 6 vials w/ HCL

Purge Water Stored/Disposed of Where/How: Onsite in 55 gal Drum

Signature: *Nadine Perat* Date: 12/21/10

QA Signature: _____ Date: _____



ELT Groundwater Sampling Form

Facility Location: <u>5300 Broadway, Oakland, CA</u>		Field Technician: <u>Nadine Penar</u>							
Station #: <u>1028</u>		Date: <u>12/21/10</u>							
Well Identification: <u>MW-3</u>		Well Diameter (in): <u>2 3 4 6 8</u>							
Depth to Water (DTW) (ft bgs): <u>2.08</u>		Thickness of SPH (ft): <u>—</u>							
Depth to SPH (ft bgs): <u>—</u>		Water Column Height (WCH) (ft): <u>10.37</u>							
Total Depth of Well (TDW) (ft bgs): <u>12.45</u>									
Purging Info and Calculations:									
Purge Method:	Bailer	<u>Disposable Bailer</u>	Electric Submersible Pump Other:						
Sample Method:	Bailer	<u>Disposable Bailer</u>	Extraction Port Other:						
Top of Casing (TOC):	<u>—</u>								
TOC-DTW= Groundwater Elevation:	<u>—</u>								
TDW-DTW=WCH		WCH×CF=CV							
Top of Screen: <u>2.5'</u>		If well is listed as a no-purge @XX feet, confirm that water level is below the top of screen. Otherwise, the well must be purged.							
Casing Volume (gal): <u>1.76</u>		X Specified Volumes: <u>3</u> = Calculated Purge (gal): <u>5.28</u>							
Start Time: <u>12:00</u>		Stop Time: <u>12:13</u>							
Conversion Factors (gal/ft): 2" = 0.17 3" = 0.38 4" = 0.66 6" = 1.5 8" = 2.6 Other = (diam in inches) ² * 0.041									
Purge:	Time	Volume Removed (gal)	Temp (°C)	Conductivity (ms/cm)	TDS (g/L)	DO (mg/L)	pH	ORP	Turb
	12:03	1.75	17.05	1.360	1.28	9.25	8.01	257.4	>1000
	12:07	3.5	18.22	1.040	0.777	8.30	8.01	252.3	>1000
	12:10	4.5	18.89	1.048	0.785	8.30	8.00	250.6	>1000
	12:13	5.5	18.69	0.979	0.724	7.83	7.94	248.8	>1000
D.O. (if req'd):	Pre-purge:	<u>—</u>		mg/L	Post-purge:	<u>7.85</u>		mg/L	
O.R.P. (if req'd):	Pre-purge:	<u>—</u>		mV	Post-purge:	<u>248.8</u>		mV	
Did Well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Actual Purge volume (gal): <u>5.5</u>							
Other Comments: <u>—</u>									
Sample Info:									
Sample ID: <u>MW-3</u>		Sample Date and Time: <u>12/21/10 12:20</u>							
Sample Containers and Selected Analysis: <u>2x 50cc vials Amber / 6 Vials w/ HCL = 8205B/8015</u>									
Purge Water Stored/Disposed of Where/How: <u>Stored onsite in 55 gal drums</u>									
Signature: <u>Nadine Penar</u>					Date: <u>12/21/10</u>				
QA Signature: <u>—</u>					Date: <u>—</u>				

Twe@80%
4.15



*Soil and Groundwater Investigation Report and Request for Case Closure
76 Branded Service Station No. 251028
5300 Broadway, Oakland, California
Alameda County LOP Case #: R00002967
Antea Group Project No. I40251028*



Appendix E

Mid Coast Engineers Well Survey Report



Mid Coast Engineers

Civil Engineers and Land Surveyors

70 Penny Lane, Suite A - Watsonville, CA 95076
phone: (831) 724-2580
fax: (831) 724-8025
e-mail: lee@midcoastengineers.com

Richard A. Wadsworth
Civil Engineer

Stanley O. Nielsen
Land Surveyor

Lee D. Vaage
Land Surveyor

Jeff S. Nielsen
Land Surveyor

December 15, 2010

Nadine Periat
Delta Consultants
312 Piercy Road
San Jose, CA 95138

Re: **76 Station No. 1028, 5300 Broadway, Oakland, California;** DELTA Project No. 140251028, MCE Job No. 10110

Dear Ms. Periat,

As you requested, December 14 we surveyed three monitoring wells located at the referenced site. Our findings are listed on the attached sheets, expressed in State Plane Coordinates and Latitude/Longitude.

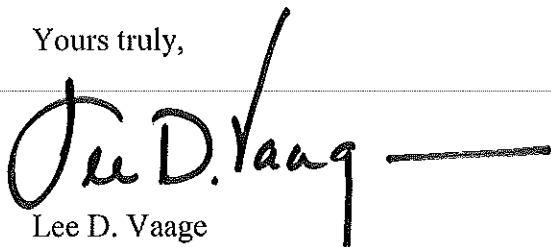
A notch was cut in the north rim of the PVC casing (TOC) and a cross chiseled in the north rim of the standard box (TOB).

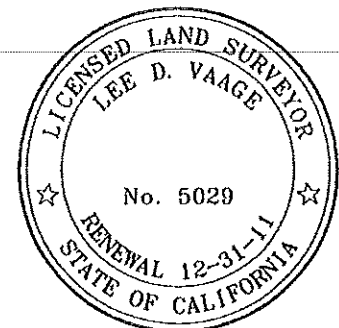
Measurements were obtained from conventional survey techniques in combination with GPS techniques (Code CGPS) using control points HT0654 (PORT 1) and HT2935 (YACHT), as published by NGS/NOAA and listed on their website. Latitude and Longitude as shown were determined from the California Coordinate System, Zone 3, NAD 83 Datum, Epoch Date 2007.00. The accuracy range of the reported information is +/- 1cm. GPS equipment is the Trimble 5700/5800 system (Code T57).

The benchmark used for this survey is HT0654, as mentioned above, a benchmark disk set in a concrete seawall at the intersection of Clay and Water Streets. Elevation = 9.39 feet, NAVD 88 datum.

Please let me know if you have questions or need additional information.

Yours truly,


Lee D. Vaage



76 STATION NO. 1028
5300 Broadway
Oakland, California

DELTA Project No. 140251028

Project : 10110

User name MCE Date & Time 10:02:16 AM 12/15/2010
Coordinate System US State Plane 1983 Zone California Zone 3 0403
Project Datum NAD 1983 (Conus)
Vertical Datum NAVD 88
Coordinate Units US survey feet
Distance Units US survey feet
Elevation Units US survey feet

Point Number	Northing	Easting	Elevation	Description
3	2132053.41	6056213.66	176.62	MW-1toc
4	2132053.67	6056213.64	176.98	MW-1tob
5	2132048.70	6056284.15	181.36	MW-2toc
6	2132048.97	6056284.06	181.74	MW-2tob
56	2132114.22	6056241.38	176.40	MW-3toc
57	2132114.59	6056241.33	176.67	MW-3tob

76 STATION NO. 1028
5300 Broadway
Oakland, California

DELTA Project No. 140251028

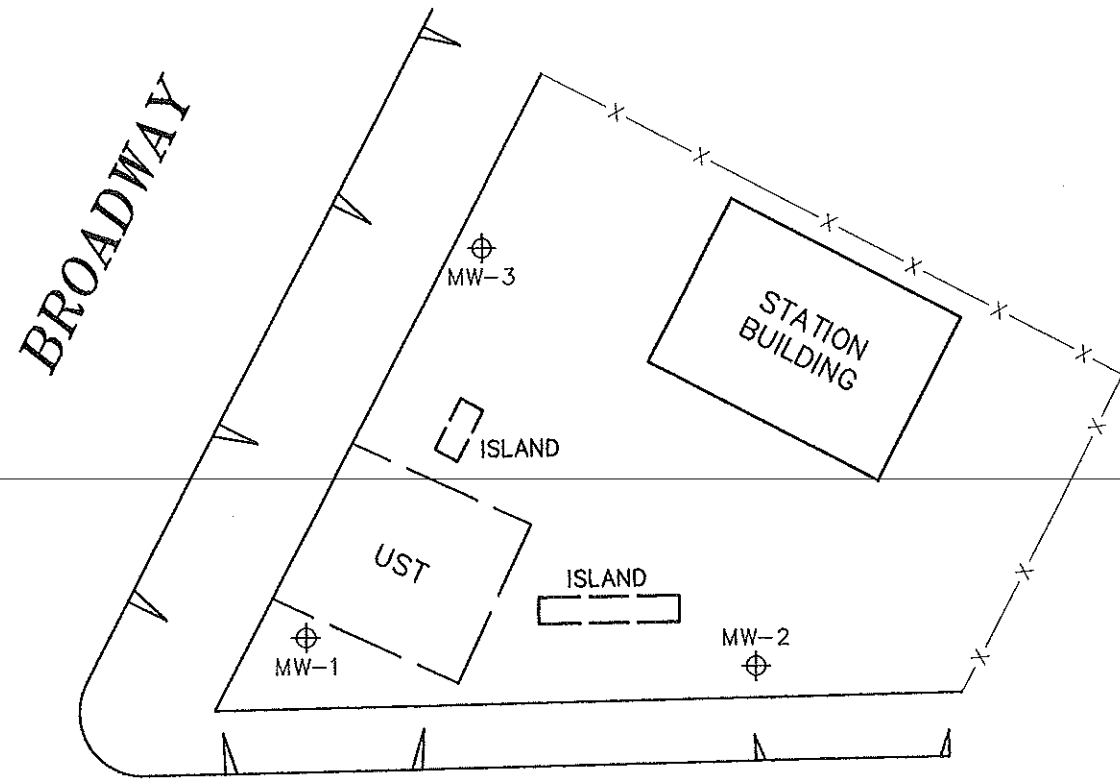
Project : 10110

User name MCE Date & Time 10:02:16 AM 12/15/2010
Coordinate System US State Plane 1983 Zone California Zone 3 0403
Project Datum NAD 1983 (Conus)
Vertical Datum NAVD 88
Coordinate Units US survey feet
Distance Units US survey feet
Elevation Units US survey feet

Point Number	Latitude	Longitude	Elevation	Description
3	37.837257327°N	122.250411740°W	176.62	MW-1toc
4	37.837258043°N	122.250411826°W	176.98	MW-1tob
5	37.837248036°N	122.250167365°W	181.36	MW-2toc
6	37.837248763°N	122.250167720°W	181.74	MW-2tob
56	37.837425746°N	122.250319702°W	176.40	MW-3toc
57	37.837426759°N	122.250319899°W	176.67	MW-3tob

	A	B	C	D	E	F	G	H	I	J	K	L
1	76 STATION NO. 1028											
2	5300 Broadway											
3	Oakland, California											
4												
5	DELTA Project No. 140251028											
6												
7	Project : 10110											
8	User name MCE Date & Time 10:02:16 AM 12/15/2010											
9	Coordinate System US State Plane 1983 Zone California Zone 3 0403											
10	Project Datum NAD 1983 (Conus)											
11	Vertical Datum NAVD 88											
12	Coordinate Units US survey feet											
13	Distance Units US survey feet											
14	Elevation Units US survey feet											
15												
16		MW-1	MW	12/14/2010	37.8372573	-122.2504117	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing
17		MW-2	MW	12/14/2010	37.8372480	-122.2501674	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing
18		MW-3	MW	12/14/2010	37.8374257	-122.2503197	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing

	A	B	C	D	E	F	G	H	I	J
1	76 STATION NO. 1028									
2	5300 Broadway									
3	Oakland, California									
4										
5	DELTA Project No. 140251028									
6										
7	Project : 10110									
8	User name	MCE	Date & Time	10:02:16 AM 12/15/2010						
9	Coordinate System	US State Plane 1983		Zone	California Zone 3 0403					
10	Project Datum	NAD 1983 (Conus)								
11	Vertical Datum	NAVD 88								
12	Coordinate Units	US survey feet								
13	Distance Units	US survey feet								
14	Elevation Units	US survey feet								
15										
16		MW-1	12/14/2010	176.62	CGPS	88	0.5	Mid Coast Engineers	-0.36	BM NGS HT0654 EL=9.39 FEET
17		MW-2	12/14/2010	181.36	CGPS	88	0.5	Mid Coast Engineers	-0.38	BM NGS HT0654 EL=9.39 FEET
18		MW-3	12/14/2010	176.40	CGPS	88	0.5	Mid Coast Engineers	-0.27	BM NGS HT0654 EL=9.39 FEET



BROADWAY TERRACE

NOTES:

1. COORDINATES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, ZONE III, NAD 83.
2. BENCHMARK IS NGS HT0654 DISK IN CONCRETE HEADWALL AT INTERSECTION OF CLAY AND WATER STREETS. ELEVATION = 9.39 FEET, NAVD 88 DATUM.
3. SURVEYED AT THE REQUEST OF DELTA CONSULTANTS IN DECEMBER 2010, PROJECT NO. 140251028.

MONITORING WELL LOCATION MAP FOR
76 STATION NO. 1028

5300 BROADWAY
OAKLAND, CALIFORNIA



MID COAST ENGINEERS
CIVIL ENGINEERS AND LAND SURVEYORS
70 PENNY LANE SUITE A WATSONVILLE, CA 95076
(831) 724-2580



SCALE:	1"=30'
JOB NO.	10110
DATE:	DEC. 15, 2010
SHEET:	1 OF 1

*Soil and Groundwater Investigation Report and Request for Case Closure
76 Branded Service Station No. 251028
5300 Broadway, Oakland, California
Alameda County LOP Case #: RO0002967
Antea Group Project No. I40251028*



Appendix F

Laboratory Analytical Reports

December 27, 2010

Lia Holden
ELT-Delta Consultants
312 Piercy Rd
San Jose, CA 95138

RE: Project: 251028
Pace Project No.: 255977

Dear Lia Holden:

Enclosed are the analytical results for sample(s) received by the laboratory on December 10, 2010. 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, ELT_Delta Consultants Sacramento
Dennis Dettloff, ELT_Delta Consultants Sacramen
Jonathon Fillingame, ELT_Delta Consultants Sacramento
Dan Keltner, ELT-Delta Consultants
Josh Mahoney, ELT_Delta Consultants San Jose
Tony Perini, ELT_Delta Consultants San Jose
Nicole Persaud, ELT-Delta Consultants
Don Pinkerton, ELT_Delta Consultants Sacramento
David Sowle, ELT_Delta Consultants Sacramento
Doug Umland, ELT_Delta Consultants San Jose

Ed Weyrens, ELT_Delta Consultants San Jose

REPORT OF LABORATORY ANALYSIS

Page 1 of 10

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CERTIFICATIONS

Project: 251028

Pace Project No.: 255977

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

REPORT OF LABORATORY ANALYSIS

Page 2 of 10

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SAMPLE ANALYTE COUNT

Project: 251028

Pace Project No.: 255977

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
255977001	COMP ABCD_20101208	EPA 8015B	AY1	3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	9	PASI-S
		CA LUFT	LPM	2	PASI-S

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255977

Sample: COMP ABCD_20101208 **Lab ID: 255977001** Collected: 12/08/10 11:35 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	119 mg/kg		2.0	1	12/16/10 09:58	12/17/10 04:07		
o-Terphenyl (S) SG	94 %		50-150	1	12/16/10 09:58	12/17/10 04:07	84-15-1	
n-Octacosane (S) SG	97 %		50-150	1	12/16/10 09:58	12/17/10 04:07	630-02-4	
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Lead	8.9 mg/kg		0.91	1	12/14/10 07:40	12/14/10 16:17	7439-92-1	
8260 MSV 5030		Analytical Method: EPA 8260						
Benzene	ND mg/kg		0.0029	1		12/16/10 13:36	71-43-2	
Ethylbenzene	ND mg/kg		0.0029	1		12/16/10 13:36	100-41-4	
Methyl-tert-butyl ether	ND mg/kg		0.0029	1		12/16/10 13:36	1634-04-4	
Toluene	ND mg/kg		0.0029	1		12/16/10 13:36	108-88-3	
Xylene (Total)	ND mg/kg		0.0086	1		12/16/10 13:36	1330-20-7	
Dibromofluoromethane (S)	97 %		80-136	1		12/16/10 13:36	1868-53-7	
Toluene-d8 (S)	110 %		80-120	1		12/16/10 13:36	2037-26-5	
4-Bromofluorobenzene (S)	110 %		72-122	1		12/16/10 13:36	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		80-143	1		12/16/10 13:36	17060-07-0	
CA LUFT MSV GRO		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	ND mg/kg		0.24	1		12/16/10 13:36		
4-Bromofluorobenzene (S)	110 %		72-122	1		12/16/10 13:36	460-00-4	

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 255977

QC Batch: OEXT/3103

Analysis Method: EPA 8015B

QC Batch Method: EPA 3546

Analysis Description: EPA 8015B CA TPH Silca Gel

Associated Lab Samples: 255977001

METHOD BLANK: 52389

Matrix: Solid

Associated Lab Samples: 255977001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO (C10-C24) SG	mg/kg	ND	2.0	12/17/10 03:21	
n-Octacosane (S) SG	%	51	50-150	12/17/10 03:21	
o-Terphenyl (S) SG	%	66	50-150	12/17/10 03:21	

LABORATORY CONTROL SAMPLE: 52390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C24) SG	mg/kg	83.3	68.3	82	56-124	
n-Octacosane (S) SG	%			86	50-150	
o-Terphenyl (S) SG	%			117	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 52391 52392

Parameter	Units	255977001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH-DRO (C10-C24) SG	mg/kg	119	82.7	81.8	67.7	152	-62	40	56-124	77	M1,R1
n-Octacosane (S) SG	%						79	92	50-150		
o-Terphenyl (S) SG	%						103	124	50-150		

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 255977

QC Batch: MPRP/1925 Analysis Method: EPA 6010
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET
 Associated Lab Samples: 255977001

METHOD BLANK: 52146 Matrix: Solid

Associated Lab Samples: 255977001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	ND	1.0	12/14/10 15:11	

LABORATORY CONTROL SAMPLE: 52147

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	25	24.1	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 52148 52149

Parameter	Units	255958001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Lead	mg/kg	4.9	22.7	22.5	22.9	21.8	79	75	75-125	5	

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 255977

QC Batch: MSV/3609

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5030 Volatile Organics

Associated Lab Samples: 255977001

METHOD BLANK: 52350

Matrix: Solid

Associated Lab Samples: 255977001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.0030	12/16/10 11:59	
Ethylbenzene	mg/kg	ND	0.0030	12/16/10 11:59	
Methyl-tert-butyl ether	mg/kg	ND	0.0030	12/16/10 11:59	
Toluene	mg/kg	ND	0.0030	12/16/10 11:59	
Xylene (Total)	mg/kg	ND	0.0090	12/16/10 11:59	
1,2-Dichloroethane-d4 (S)	%	108	80-143	12/16/10 11:59	
4-Bromofluorobenzene (S)	%	104	72-122	12/16/10 11:59	
Dibromofluoromethane (S)	%	106	80-136	12/16/10 11:59	
Toluene-d8 (S)	%	104	80-120	12/16/10 11:59	

LABORATORY CONTROL SAMPLE & LCSD: 52351

52352

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	mg/kg	.05	0.056	0.053	112	107	75-133	5	30	
Ethylbenzene	mg/kg	.05	0.056	0.053	112	106	68-131	6	30	
Methyl-tert-butyl ether	mg/kg	.05	0.052	0.051	103	101	52-143	2	30	
Toluene	mg/kg	.05	0.057	0.055	114	111	73-124	3	30	
Xylene (Total)	mg/kg	.15	0.17	0.15	110	103	68-130	7	30	
1,2-Dichloroethane-d4 (S)	%				102	102	80-143			
4-Bromofluorobenzene (S)	%				105	110	72-122			
Dibromofluoromethane (S)	%				105	101	80-136			
Toluene-d8 (S)	%				112	111	80-120			

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 255977

QC Batch: MSV/3608

Analysis Method: CA LUFT

QC Batch Method: CA LUFT

Analysis Description: CA LUFT MSV GRO

Associated Lab Samples: 255977001

METHOD BLANK: 52347

Matrix: Solid

Associated Lab Samples: 255977001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-Gasoline (C05-C12)	mg/kg	ND	0.25	12/16/10 11:59	
4-Bromofluorobenzene (S)	%	104	72-122	12/16/10 11:59	

LABORATORY CONTROL SAMPLE & LCSD: 52348

52349

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH-Gasoline (C05-C12)	mg/kg	.5	0.51	0.45	102	91	60-140	12	30	
4-Bromofluorobenzene (S)	%				110	106	72-122			

QUALIFIERS

Project: 251028

Pace Project No.: 255977

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.

R1 RPD value was outside control limits.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 251028

Pace Project No.: 255977

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
255977001	COMP ABCD_20101208	EPA 3546	OEXT/3103	EPA 8015B	GCSV/2151
255977001	COMP ABCD_20101208	EPA 3050	MPRP/1925	EPA 6010	ICP/1839
255977001	COMP ABCD_20101208	EPA 8260	MSV/3609		
255977001	COMP ABCD_20101208	CA LUFT	MSV/3608		

COP ELT CHAIN-OF-CUSTODY / Analytical Request Document

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

255977



Required Lab Information:		Required Project Information:			Required Invoice Information:							
Lab Name: Pace-Seattle	Site ID #: 1028	Task:	Send Invoice to: Lia Holden	Delta project #: 140251028		Address: 312 Piercy Road	City/State: San Jose, CA	Phone #: 408-826-1363	Turn around time (days): 14	QC level Required: Standard <input checked="" type="checkbox"/>	Special <input type="checkbox"/>	Mark one
Address: 940 S. Harney Street Seattle WA 98108	Site Address: 5300 Broadway	City: Oakland	State: CA	Reimbursement project?	Non-reimbursement project?	Mark one	NJ Reduced Deliverable Package?		MA MCP Cert?	CT RCP Cert?	Mark one	
Lab PM: Regina Ste. Marie	Delta PM Name: Lia Holden	Send EDD to: Lholden@deltaenv.com	Npenate@deltaenv.com		CC Hardcopy report to:		Lab Project ID (lab use)					
Phone/Fax: P: 206-957-2433 F: 206-767-5063	Delta PM Email: Lholden@deltaenv.com	Delta PM Email: Lholden@deltaenv.com	CC Hardcopy report to:		Requested Analyses					Comments/Lab Sample I.D.		

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / . -) Samples IDs MUST BE UNIQUE	Valid Matrix Codes		MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	# OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives										Requested Analyses	Comments/Lab Sample I.D.				
		MATRIX	MATRIX							Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	B200 GC/MS GRO	B200BIBIOGRAVIM			B200-TOTAL AME PIPE	B200-ZINC LEAD	B200-SILICA	B200-DRUG
1	20101208_COMP ABCD	WP	W	SO	COMP	12/8/10	11:35	4	N	✓												X X	X X		
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									
13																									

Additional Comments/Special Instructions: GLOBAL ID:	RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	Sample Receipt Conditions				
					Lia Holden / PACE		12/10/10	0835	0.52	(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:											
US MAIL		SIGNATURE of SAMPLER:			DATE Signed		Time:						



Sample Container Count

255977

CLIENT: Delta



COC PAGE 1 of 1

COC ID# _____

Metal
Core

Sample Line Item	VG9H	AG1H	AG1U	BG1H	BP1U	BP2U	BP3U	BP2N	BP2S	WGFU	WGKU	4	Comments
1													
2													
3													
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 vial	WGFU	4oz clear soil jar
BP1U	1 liter unpreserved plastic							DG9M	40mL MeOH clear vial	WGFY	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								Wipe/Swab		



Sample Condition Upon Receipt

Client Name: Delta Project # 255977

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 8738 8211 5325

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 0.5c

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 12/10 CW

Temp should be above freezing $\leq 6^{\circ}\text{C}$

Comments:

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

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: RSM

Date: 12/10/10

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)

December 27, 2010

Lia Holden
ELT-Delta Consultants
312 Piercy Rd
San Jose, CA 95138

RE: Project: 251028
Pace Project No.: 255980

Dear Lia Holden:

Enclosed are the analytical results for sample(s) received by the laboratory on December 10, 2010. 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, ELT_Delta Consultants Sacramento
Dennis Dettloff, ELT_Delta Consultants Sacramen
Jonathon Fillingame, ELT_Delta Consultants Sacramento
Dan Keltner, ELT-Delta Consultants
Josh Mahoney, ELT_Delta Consultants San Jose
Tony Perini, ELT_Delta Consultants San Jose
Nicole Persaud, ELT-Delta Consultants
Don Pinkerton, ELT_Delta Consultants Sacramento
David Sowle, ELT_Delta Consultants Sacramento
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Ed Weyrens, ELT_Delta Consultants San Jose

REPORT OF LABORATORY ANALYSIS

Page 1 of 28

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CERTIFICATIONS

Project: 251028

Pace Project No.: 255980

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

REPORT OF LABORATORY ANALYSIS

Page 2 of 28

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SAMPLE ANALYTE COUNT

Project: 251028
Pace Project No.: 255980

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
255980001	B-1@4.5-5_20101207	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980002	B-1@7.5-8_20101207	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980003	B-1@14.5-15_20101207	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980004	B-2@3.5-4_20101208	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980005	B-2@4.5-5_20101208	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980006	B-2@6-6.5_20101208	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980007	B-2@12.5-13_20101208	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980008	B-3@4.5-5_20101207	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980009	B-3@7.5-8_20101207	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980010	B-3@17.5-18_20101207	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980011	MW-1@5-5.5_20101207	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980012	MW-1@7.5-8_20101207	EPA 8015B	AY1	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
255980013	MW-1@11.5-12_20101207	EPA 8015B	AY1	3	PASI-S

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SAMPLE ANALYTE COUNT

Project: 251028
Pace Project No.: 255980

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
255980014	MW-2@1.5-2_20101208	EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
		EPA 8015B	AY1	3	PASI-S
255980015	MW-2@4.5-5_20101208	EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
		EPA 8015B	AY1	3	PASI-S
255980016	MW-2@7.5-8_20101208	EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
		EPA 8015B	AY1	3	PASI-S
255980017	MW-2@11.5-12_20101208	EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
		EPA 8015B	AY1	3	PASI-S
255980018	MW-3@4.5-5_20101206	EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
		EPA 8015B	AY1	3	PASI-S
255980019	MW-3@9.5-10_20101206	EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
		EPA 8015B	AY1	3	PASI-S
255980020	MW-3@11.5-12_20101206	EPA 8260	LPM	16	PASI-S
		CA LUFT	LPM	2	PASI-S
		EPA 8015B	AY1	3	PASI-S

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ANALYTICAL RESULTS

Project: 251028

Sample Project No.: 255980

Sample: B-1@4.5-5_20101207 **Lab ID: 255980001** Collected: 12/07/10 15:43 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	3.3 mg/kg		2.0	1	12/14/10 11:50	12/15/10 21:31		
o-Terphenyl (S) SG	92 %		50-150	1	12/14/10 11:50	12/15/10 21:31	84-15-1	
n-Octacosane (S) SG	106 %		50-150	1	12/14/10 11:50	12/15/10 21:31	630-02-4	
8260 MSV 5030		Analytical Method: EPA 8260						
tert-Amylmethyl ether	ND mg/kg		0.0016	1		12/15/10 13:31	994-05-8	
Benzene	ND mg/kg		0.0016	1		12/15/10 13:31	71-43-2	
tert-Butyl Alcohol	ND mg/kg		0.0081	1		12/15/10 13:31	75-65-0	
1,2-Dibromoethane (EDB)	ND mg/kg		0.0016	1		12/15/10 13:31	106-93-4	
1,2-Dichloroethane	ND mg/kg		0.0016	1		12/15/10 13:31	107-06-2	
Diisopropyl ether	ND mg/kg		0.0016	1		12/15/10 13:31	108-20-3	
Ethanol	ND mg/kg		0.21	1		12/15/10 13:31	64-17-5	
Ethylbenzene	ND mg/kg		0.0016	1		12/15/10 13:31	100-41-4	
Ethyl-tert-butyl ether	ND mg/kg		0.0016	1		12/15/10 13:31	637-92-3	
Methyl-tert-butyl ether	ND mg/kg		0.0016	1		12/15/10 13:31	1634-04-4	
Toluene	ND mg/kg		0.0016	1		12/15/10 13:31	108-88-3	
Xylene (Total)	ND mg/kg		0.0048	1		12/15/10 13:31	1330-20-7	
Dibromofluoromethane (S)	102 %		80-136	1		12/15/10 13:31	1868-53-7	
Toluene-d8 (S)	104 %		80-120	1		12/15/10 13:31	2037-26-5	
4-Bromofluorobenzene (S)	108 %		72-122	1		12/15/10 13:31	460-00-4	
1,2-Dichloroethane-d4 (S)	108 %		80-143	1		12/15/10 13:31	17060-07-0	
CA LUFT MSV GRO		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	ND mg/kg		0.13	1		12/15/10 13:31		
4-Bromofluorobenzene (S)	108 %		72-122	1		12/15/10 13:31	460-00-4	

Sample: B-1@7.5-8_20101207 **Lab ID: 255980002** Collected: 12/07/10 15:38 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND mg/kg		1.9	1	12/14/10 11:50	12/15/10 22:41		
o-Terphenyl (S) SG	78 %		50-150	1	12/14/10 11:50	12/15/10 22:41	84-15-1	
n-Octacosane (S) SG	88 %		50-150	1	12/14/10 11:50	12/15/10 22:41	630-02-4	
8260 MSV 5030		Analytical Method: EPA 8260						
tert-Amylmethyl ether	ND mg/kg		0.0030	1		12/15/10 13:51	994-05-8	
Benzene	ND mg/kg		0.0030	1		12/15/10 13:51	71-43-2	
tert-Butyl Alcohol	ND mg/kg		0.015	1		12/15/10 13:51	75-65-0	
1,2-Dibromoethane (EDB)	ND mg/kg		0.0030	1		12/15/10 13:51	106-93-4	
1,2-Dichloroethane	ND mg/kg		0.0030	1		12/15/10 13:51	107-06-2	
Diisopropyl ether	ND mg/kg		0.0030	1		12/15/10 13:51	108-20-3	
Ethanol	ND mg/kg		0.41	1		12/15/10 13:51	64-17-5	

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ANALYTICAL RESULTS

Project: 251028

Sample Project No.: 255980

Sample: B-1@7.5-8_20101207 **Lab ID: 255980002** Collected: 12/07/10 15:38 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030		Analytical Method: EPA 8260						
Ethylbenzene	ND	mg/kg	0.0030	1		12/15/10 13:51	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0030	1		12/15/10 13:51	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0030	1		12/15/10 13:51	1634-04-4	
Toluene	ND	mg/kg	0.0030	1		12/15/10 13:51	108-88-3	
Xylene (Total)	ND	mg/kg	0.0091	1		12/15/10 13:51	1330-20-7	
Dibromofluoromethane (S)	100	%	80-136	1		12/15/10 13:51	1868-53-7	
Toluene-d8 (S)	102	%	80-120	1		12/15/10 13:51	2037-26-5	
4-Bromofluorobenzene (S)	105	%	72-122	1		12/15/10 13:51	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-143	1		12/15/10 13:51	17060-07-0	

CA LUFT MSV GRO

Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND	mg/kg	0.25	1		12/15/10 13:51		
4-Bromofluorobenzene (S)	105	%	72-122	1		12/15/10 13:51	460-00-4	

Sample: B-1@14.5-15_20101207 **Lab ID: 255980003** Collected: 12/07/10 16:17 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND	mg/kg	2.0	1	12/14/10 11:50	12/15/10 23:04		
o-Terphenyl (S) SG	81	%	50-150	1	12/14/10 11:50	12/15/10 23:04	84-15-1	
n-Octacosane (S) SG	90	%	50-150	1	12/14/10 11:50	12/15/10 23:04	630-02-4	

8260 MSV 5030

Analytical Method: EPA 8260

tert-Amylmethyl ether	ND	mg/kg	0.0034	1		12/15/10 14:11	994-05-8	
Benzene	ND	mg/kg	0.0034	1		12/15/10 14:11	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.017	1		12/15/10 14:11	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0034	1		12/15/10 14:11	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0034	1		12/15/10 14:11	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0034	1		12/15/10 14:11	108-20-3	
Ethanol	ND	mg/kg	0.45	1		12/15/10 14:11	64-17-5	
Ethylbenzene	ND	mg/kg	0.0034	1		12/15/10 14:11	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0034	1		12/15/10 14:11	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0034	1		12/15/10 14:11	1634-04-4	
Toluene	ND	mg/kg	0.0034	1		12/15/10 14:11	108-88-3	
Xylene (Total)	ND	mg/kg	0.010	1		12/15/10 14:11	1330-20-7	
Dibromofluoromethane (S)	101	%	80-136	1		12/15/10 14:11	1868-53-7	
Toluene-d8 (S)	104	%	80-120	1		12/15/10 14:11	2037-26-5	
4-Bromofluorobenzene (S)	105	%	72-122	1		12/15/10 14:11	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-143	1		12/15/10 14:11	17060-07-0	

CA LUFT MSV GRO

Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND	mg/kg	0.28	1		12/15/10 14:11		
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ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255980

Sample: B-1@14.5-15_20101207 Lab ID: 255980003 Collected: 12/07/10 16:17 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
CA LUFT MSV GRO		Analytical Method: CA LUFT						
4-Bromofluorobenzene (S)	105 %		72-122	1		12/15/10 14:11	460-00-4	

Sample: B-2@3.5-4_20101208 Lab ID: 255980004 Collected: 12/08/10 09:18 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND mg/kg		2.0	1	12/14/10 11:50	12/15/10 23:28		
o-Terphenyl (S) SG	84 %		50-150	1	12/14/10 11:50	12/15/10 23:28	84-15-1	
n-Octacosane (S) SG	90 %		50-150	1	12/14/10 11:50	12/15/10 23:28	630-02-4	

8260 MSV 5030 Analytical Method: EPA 8260

tert-Amylmethyl ether	ND mg/kg		0.0029	1		12/15/10 14:30	994-05-8	
Benzene	ND mg/kg		0.0029	1		12/15/10 14:30	71-43-2	
tert-Butyl Alcohol	ND mg/kg		0.015	1		12/15/10 14:30	75-65-0	
1,2-Dibromoethane (EDB)	ND mg/kg		0.0029	1		12/15/10 14:30	106-93-4	
1,2-Dichloroethane	ND mg/kg		0.0029	1		12/15/10 14:30	107-06-2	
Diisopropyl ether	ND mg/kg		0.0029	1		12/15/10 14:30	108-20-3	
Ethanol	ND mg/kg		0.39	1		12/15/10 14:30	64-17-5	
Ethylbenzene	ND mg/kg		0.0029	1		12/15/10 14:30	100-41-4	
Ethyl-tert-butyl ether	ND mg/kg		0.0029	1		12/15/10 14:30	637-92-3	
Methyl-tert-butyl ether	ND mg/kg		0.0029	1		12/15/10 14:30	1634-04-4	
Toluene	ND mg/kg		0.0029	1		12/15/10 14:30	108-88-3	
Xylene (Total)	ND mg/kg		0.0088	1		12/15/10 14:30	1330-20-7	
Dibromofluoromethane (S)	96 %		80-136	1		12/15/10 14:30	1868-53-7	
Toluene-d8 (S)	109 %		80-120	1		12/15/10 14:30	2037-26-5	
4-Bromofluorobenzene (S)	109 %		72-122	1		12/15/10 14:30	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-143	1		12/15/10 14:30	17060-07-0	

CA LUFT MSV GRO Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND mg/kg		0.24	1		12/15/10 14:30		
4-Bromofluorobenzene (S)	109 %		72-122	1		12/15/10 14:30	460-00-4	

Sample: B-2@4.5-5_20101208 Lab ID: 255980005 Collected: 12/08/10 09:08 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND mg/kg		2.0	1	12/14/10 11:50	12/15/10 23:51		
o-Terphenyl (S) SG	76 %		50-150	1	12/14/10 11:50	12/15/10 23:51	84-15-1	
n-Octacosane (S) SG	80 %		50-150	1	12/14/10 11:50	12/15/10 23:51	630-02-4	

ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255980

Sample: B-2@4.5-5_20101208 **Lab ID: 255980005** Collected: 12/08/10 09:08 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030		Analytical Method: EPA 8260						
tert-Amylmethyl ether	ND	mg/kg	0.0031	1		12/15/10 14:50	994-05-8	
Benzene	ND	mg/kg	0.0031	1		12/15/10 14:50	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.016	1		12/15/10 14:50	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0031	1		12/15/10 14:50	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0031	1		12/15/10 14:50	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0031	1		12/15/10 14:50	108-20-3	
Ethanol	ND	mg/kg	0.42	1		12/15/10 14:50	64-17-5	
Ethylbenzene	ND	mg/kg	0.0031	1		12/15/10 14:50	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0031	1		12/15/10 14:50	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0031	1		12/15/10 14:50	1634-04-4	
Toluene	ND	mg/kg	0.0031	1		12/15/10 14:50	108-88-3	
Xylene (Total)	ND	mg/kg	0.0094	1		12/15/10 14:50	1330-20-7	
Dibromofluoromethane (S)	94	%	80-136	1		12/15/10 14:50	1868-53-7	
Toluene-d8 (S)	110	%	80-120	1		12/15/10 14:50	2037-26-5	
4-Bromofluorobenzene (S)	110	%	72-122	1		12/15/10 14:50	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-143	1		12/15/10 14:50	17060-07-0	

CA LUFT MSV GRO

Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND	mg/kg	0.26	1		12/15/10 14:50		
4-Bromofluorobenzene (S)	110	%	72-122	1		12/15/10 14:50	460-00-4	

Sample: B-2@6-6.5_20101208 **Lab ID: 255980006** Collected: 12/08/10 09:25 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND	mg/kg	1.9	1	12/14/10 11:50	12/16/10 01:01		
o-Terphenyl (S) SG	79	%	50-150	1	12/14/10 11:50	12/16/10 01:01	84-15-1	
n-Octacosane (S) SG	75	%	50-150	1	12/14/10 11:50	12/16/10 01:01	630-02-4	

8260 MSV 5030

Analytical Method: EPA 8260

tert-Amylmethyl ether	ND	mg/kg	0.0024	1		12/15/10 15:10	994-05-8	
Benzene	ND	mg/kg	0.0024	1		12/15/10 15:10	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.012	1		12/15/10 15:10	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0024	1		12/15/10 15:10	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0024	1		12/15/10 15:10	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0024	1		12/15/10 15:10	108-20-3	
Ethanol	ND	mg/kg	0.31	1		12/15/10 15:10	64-17-5	
Ethylbenzene	ND	mg/kg	0.0024	1		12/15/10 15:10	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0024	1		12/15/10 15:10	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0024	1		12/15/10 15:10	1634-04-4	
Toluene	ND	mg/kg	0.0024	1		12/15/10 15:10	108-88-3	
Xylene (Total)	ND	mg/kg	0.0071	1		12/15/10 15:10	1330-20-7	

Date: 12/27/2010 09:29 AM

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ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255980

Sample: B-2@6-6.5_20101208 **Lab ID: 255980006** Collected: 12/08/10 09:25 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030		Analytical Method: EPA 8260						
Dibromofluoromethane (S)	95 %		80-136	1		12/15/10 15:10	1868-53-7	
Toluene-d8 (S)	108 %		80-120	1		12/15/10 15:10	2037-26-5	
4-Bromofluorobenzene (S)	110 %		72-122	1		12/15/10 15:10	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		80-143	1		12/15/10 15:10	17060-07-0	

CA LUFT MSV GRO

Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND mg/kg		0.20	1		12/15/10 15:10		
4-Bromofluorobenzene (S)	110 %		72-122	1		12/15/10 15:10	460-00-4	

Sample: B-2@12.5-13_20101208 **Lab ID: 255980007** Collected: 12/08/10 09:39 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND mg/kg		2.0	1	12/14/10 11:50	12/16/10 01:25		
o-Terphenyl (S) SG	74 %		50-150	1	12/14/10 11:50	12/16/10 01:25	84-15-1	
n-Octacosane (S) SG	66 %		50-150	1	12/14/10 11:50	12/16/10 01:25	630-02-4	

8260 MSV 5030

Analytical Method: EPA 8260

tert-Amylmethyl ether	ND mg/kg		0.0024	1		12/15/10 15:29	994-05-8	
Benzene	ND mg/kg		0.0024	1		12/15/10 15:29	71-43-2	
tert-Butyl Alcohol	ND mg/kg		0.012	1		12/15/10 15:29	75-65-0	
1,2-Dibromoethane (EDB)	ND mg/kg		0.0024	1		12/15/10 15:29	106-93-4	
1,2-Dichloroethane	ND mg/kg		0.0024	1		12/15/10 15:29	107-06-2	
Diisopropyl ether	ND mg/kg		0.0024	1		12/15/10 15:29	108-20-3	
Ethanol	ND mg/kg		0.32	1		12/15/10 15:29	64-17-5	
Ethylbenzene	ND mg/kg		0.0024	1		12/15/10 15:29	100-41-4	
Ethyl-tert-butyl ether	ND mg/kg		0.0024	1		12/15/10 15:29	637-92-3	
Methyl-tert-butyl ether	ND mg/kg		0.0024	1		12/15/10 15:29	1634-04-4	
Toluene	ND mg/kg		0.0024	1		12/15/10 15:29	108-88-3	
Xylene (Total)	ND mg/kg		0.0072	1		12/15/10 15:29	1330-20-7	
Dibromofluoromethane (S)	93 %		80-136	1		12/15/10 15:29	1868-53-7	
Toluene-d8 (S)	108 %		80-120	1		12/15/10 15:29	2037-26-5	
4-Bromofluorobenzene (S)	115 %		72-122	1		12/15/10 15:29	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		80-143	1		12/15/10 15:29	17060-07-0	

CA LUFT MSV GRO

Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND mg/kg		0.20	1		12/15/10 15:29		
4-Bromofluorobenzene (S)	115 %		72-122	1		12/15/10 15:29	460-00-4	

ANALYTICAL RESULTS

Project: 251028
Pace Project No.: 255980

Sample: B-3@4.5-5_20101207 **Lab ID: 255980008** Collected: 12/07/10 08:00 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	2.0 mg/kg		2.0	1	12/14/10 11:50	12/16/10 01:48		
o-Terphenyl (S) SG	81 %		50-150	1	12/14/10 11:50	12/16/10 01:48	84-15-1	
n-Octacosane (S) SG	72 %		50-150	1	12/14/10 11:50	12/16/10 01:48	630-02-4	
8260 MSV 5030		Analytical Method: EPA 8260						
tert-Amylmethyl ether	ND mg/kg		0.0031	1		12/15/10 15:48	994-05-8	
Benzene	ND mg/kg		0.0031	1		12/15/10 15:48	71-43-2	
tert-Butyl Alcohol	ND mg/kg		0.016	1		12/15/10 15:48	75-65-0	
1,2-Dibromoethane (EDB)	ND mg/kg		0.0031	1		12/15/10 15:48	106-93-4	
1,2-Dichloroethane	ND mg/kg		0.0031	1		12/15/10 15:48	107-06-2	
Diisopropyl ether	ND mg/kg		0.0031	1		12/15/10 15:48	108-20-3	
Ethanol	ND mg/kg		0.42	1		12/15/10 15:48	64-17-5	
Ethylbenzene	ND mg/kg		0.0031	1		12/15/10 15:48	100-41-4	
Ethyl-tert-butyl ether	ND mg/kg		0.0031	1		12/15/10 15:48	637-92-3	
Methyl-tert-butyl ether	ND mg/kg		0.0031	1		12/15/10 15:48	1634-04-4	
Toluene	ND mg/kg		0.0031	1		12/15/10 15:48	108-88-3	
Xylene (Total)	ND mg/kg		0.0094	1		12/15/10 15:48	1330-20-7	
Dibromofluoromethane (S)	99 %		80-136	1		12/15/10 15:48	1868-53-7	
Toluene-d8 (S)	102 %		80-120	1		12/15/10 15:48	2037-26-5	
4-Bromofluorobenzene (S)	107 %		72-122	1		12/15/10 15:48	460-00-4	
1,2-Dichloroethane-d4 (S)	103 %		80-143	1		12/15/10 15:48	17060-07-0	
CA LUFT MSV GRO		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	ND mg/kg		0.26	1		12/15/10 15:48		
4-Bromofluorobenzene (S)	107 %		72-122	1		12/15/10 15:48	460-00-4	

Sample: B-3@7.5-8_20101207 **Lab ID: 255980009** Collected: 12/07/10 08:09 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND mg/kg		2.0	1	12/14/10 11:50	12/16/10 02:11		
o-Terphenyl (S) SG	81 %		50-150	1	12/14/10 11:50	12/16/10 02:11	84-15-1	
n-Octacosane (S) SG	68 %		50-150	1	12/14/10 11:50	12/16/10 02:11	630-02-4	
8260 MSV 5030		Analytical Method: EPA 8260						
tert-Amylmethyl ether	ND mg/kg		0.0031	1		12/15/10 16:08	994-05-8	
Benzene	ND mg/kg		0.0031	1		12/15/10 16:08	71-43-2	
tert-Butyl Alcohol	ND mg/kg		0.016	1		12/15/10 16:08	75-65-0	
1,2-Dibromoethane (EDB)	ND mg/kg		0.0031	1		12/15/10 16:08	106-93-4	
1,2-Dichloroethane	ND mg/kg		0.0031	1		12/15/10 16:08	107-06-2	
Diisopropyl ether	ND mg/kg		0.0031	1		12/15/10 16:08	108-20-3	
Ethanol	ND mg/kg		0.42	1		12/15/10 16:08	64-17-5	

ANALYTICAL RESULTS

Project: 251028

Sample Project No.: 255980

Sample: B-3@7.5-8_20101207 **Lab ID: 255980009** Collected: 12/07/10 08:09 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030		Analytical Method: EPA 8260						
Ethylbenzene	ND	mg/kg	0.0031	1		12/15/10 16:08	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0031	1		12/15/10 16:08	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0031	1		12/15/10 16:08	1634-04-4	
Toluene	ND	mg/kg	0.0031	1		12/15/10 16:08	108-88-3	
Xylene (Total)	ND	mg/kg	0.0094	1		12/15/10 16:08	1330-20-7	
Dibromofluoromethane (S)	95 %		80-136	1		12/15/10 16:08	1868-53-7	
Toluene-d8 (S)	104 %		80-120	1		12/15/10 16:08	2037-26-5	
4-Bromofluorobenzene (S)	110 %		72-122	1		12/15/10 16:08	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		80-143	1		12/15/10 16:08	17060-07-0	
CA LUFT MSV GRO		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	ND	mg/kg	0.26	1		12/15/10 16:08		
4-Bromofluorobenzene (S)	110 %		72-122	1		12/15/10 16:08	460-00-4	

Sample: B-3@17.5-18_20101207 **Lab ID: 255980010** Collected: 12/07/10 09:00 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND	mg/kg	1.9	1	12/14/10 11:50	12/16/10 02:35		
o-Terphenyl (S) SG	78 %		50-150	1	12/14/10 11:50	12/16/10 02:35	84-15-1	
n-Octacosane (S) SG	61 %		50-150	1	12/14/10 11:50	12/16/10 02:35	630-02-4	
8260 MSV 5030		Analytical Method: EPA 8260						
tert-Amylmethyl ether	ND	mg/kg	0.0049	1		12/15/10 16:28	994-05-8	
Benzene	ND	mg/kg	0.0049	1		12/15/10 16:28	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.025	1		12/15/10 16:28	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0049	1		12/15/10 16:28	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0049	1		12/15/10 16:28	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0049	1		12/15/10 16:28	108-20-3	
Ethanol	ND	mg/kg	0.66	1		12/15/10 16:28	64-17-5	
Ethylbenzene	ND	mg/kg	0.0049	1		12/15/10 16:28	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0049	1		12/15/10 16:28	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0049	1		12/15/10 16:28	1634-04-4	
Toluene	ND	mg/kg	0.0049	1		12/15/10 16:28	108-88-3	
Xylene (Total)	ND	mg/kg	0.015	1		12/15/10 16:28	1330-20-7	
Dibromofluoromethane (S)	93 %		80-136	1		12/15/10 16:28	1868-53-7	
Toluene-d8 (S)	109 %		80-120	1		12/15/10 16:28	2037-26-5	
4-Bromofluorobenzene (S)	108 %		72-122	1		12/15/10 16:28	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		80-143	1		12/15/10 16:28	17060-07-0	
CA LUFT MSV GRO		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	ND	mg/kg	0.41	1		12/15/10 16:28		

Date: 12/27/2010 09:29 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255980

Sample: B-3@17.5-18_20101207 Lab ID: **255980010** Collected: 12/07/10 09:00 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
CA LUFT MSV GRO		Analytical Method: CA LUFT						
4-Bromofluorobenzene (S)	108 %		72-122	1		12/15/10 16:28	460-00-4	

Sample: MW-1@5-5.5_20101207 Lab ID: **255980011** Collected: 12/07/10 11:30 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	2.0 mg/kg		2.0	1	12/14/10 11:50	12/16/10 02:58		
o-Terphenyl (S) SG	77 %		50-150	1	12/14/10 11:50	12/16/10 02:58	84-15-1	
n-Octacosane (S) SG	56 %		50-150	1	12/14/10 11:50	12/16/10 02:58	630-02-4	

8260 MSV 5030 Analytical Method: EPA 8260

tert-Amylmethyl ether	ND mg/kg		0.0023	1		12/15/10 16:47	994-05-8	
Benzene	ND mg/kg		0.0023	1		12/15/10 16:47	71-43-2	
tert-Butyl Alcohol	ND mg/kg		0.011	1		12/15/10 16:47	75-65-0	
1,2-Dibromoethane (EDB)	ND mg/kg		0.0023	1		12/15/10 16:47	106-93-4	
1,2-Dichloroethane	ND mg/kg		0.0023	1		12/15/10 16:47	107-06-2	
Diisopropyl ether	ND mg/kg		0.0023	1		12/15/10 16:47	108-20-3	
Ethanol	ND mg/kg		0.30	1		12/15/10 16:47	64-17-5	
Ethylbenzene	ND mg/kg		0.0023	1		12/15/10 16:47	100-41-4	
Ethyl-tert-butyl ether	ND mg/kg		0.0023	1		12/15/10 16:47	637-92-3	
Methyl-tert-butyl ether	ND mg/kg		0.0023	1		12/15/10 16:47	1634-04-4	
Toluene	ND mg/kg		0.0023	1		12/15/10 16:47	108-88-3	
Xylene (Total)	ND mg/kg		0.0068	1		12/15/10 16:47	1330-20-7	
Dibromofluoromethane (S)	94 %		80-136	1		12/15/10 16:47	1868-53-7	
Toluene-d8 (S)	104 %		80-120	1		12/15/10 16:47	2037-26-5	
4-Bromofluorobenzene (S)	109 %		72-122	1		12/15/10 16:47	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		80-143	1		12/15/10 16:47	17060-07-0	

CA LUFT MSV GRO Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND mg/kg		0.19	1		12/15/10 16:47		
4-Bromofluorobenzene (S)	109 %		72-122	1		12/15/10 16:47	460-00-4	

Sample: MW-1@7.5-8_20101207 Lab ID: **255980012** Collected: 12/07/10 11:37 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND mg/kg		2.0	1	12/14/10 11:50	12/16/10 03:22		
o-Terphenyl (S) SG	82 %		50-150	1	12/14/10 11:50	12/16/10 03:22	84-15-1	
n-Octacosane (S) SG	57 %		50-150	1	12/14/10 11:50	12/16/10 03:22	630-02-4	

ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255980

Sample: MW-1@7.5-8_20101207 **Lab ID:** 255980012 **Collected:** 12/07/10 11:37 **Received:** 12/10/10 08:35 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030		Analytical Method: EPA 8260						
tert-Amylmethyl ether	ND	mg/kg	0.0022	1		12/15/10 17:07	994-05-8	
Benzene	ND	mg/kg	0.0022	1		12/15/10 17:07	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.011	1		12/15/10 17:07	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0022	1		12/15/10 17:07	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0022	1		12/15/10 17:07	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0022	1		12/15/10 17:07	108-20-3	
Ethanol	ND	mg/kg	0.30	1		12/15/10 17:07	64-17-5	
Ethylbenzene	ND	mg/kg	0.0022	1		12/15/10 17:07	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0022	1		12/15/10 17:07	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0022	1		12/15/10 17:07	1634-04-4	
Toluene	ND	mg/kg	0.0022	1		12/15/10 17:07	108-88-3	
Xylene (Total)	ND	mg/kg	0.0067	1		12/15/10 17:07	1330-20-7	
Dibromofluoromethane (S)	99 %		80-136	1		12/15/10 17:07	1868-53-7	
Toluene-d8 (S)	101 %		80-120	1		12/15/10 17:07	2037-26-5	
4-Bromofluorobenzene (S)	108 %		72-122	1		12/15/10 17:07	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-143	1		12/15/10 17:07	17060-07-0	

CA LUFT MSV GRO

Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND	mg/kg	0.18	1		12/15/10 17:07		
4-Bromofluorobenzene (S)	108 %		72-122	1		12/15/10 17:07	460-00-4	

Sample: MW-1@11.5-12_20101207 **Lab ID:** 255980013 **Collected:** 12/07/10 12:05 **Received:** 12/10/10 08:35 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND	mg/kg	2.0	1	12/14/10 11:50	12/16/10 03:45		
o-Terphenyl (S) SG	77 %		50-150	1	12/14/10 11:50	12/16/10 03:45	84-15-1	
n-Octacosane (S) SG	54 %		50-150	1	12/14/10 11:50	12/16/10 03:45	630-02-4	

8260 MSV 5030

Analytical Method: EPA 8260

tert-Amylmethyl ether	ND	mg/kg	0.0042	1		12/15/10 17:26	994-05-8	
Benzene	ND	mg/kg	0.0042	1		12/15/10 17:26	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.021	1		12/15/10 17:26	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0042	1		12/15/10 17:26	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0042	1		12/15/10 17:26	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0042	1		12/15/10 17:26	108-20-3	
Ethanol	ND	mg/kg	0.56	1		12/15/10 17:26	64-17-5	
Ethylbenzene	ND	mg/kg	0.0042	1		12/15/10 17:26	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0042	1		12/15/10 17:26	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0042	1		12/15/10 17:26	1634-04-4	
Toluene	ND	mg/kg	0.0042	1		12/15/10 17:26	108-88-3	
Xylene (Total)	ND	mg/kg	0.013	1		12/15/10 17:26	1330-20-7	

ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255980

Sample: MW-1@11.5-12_20101207 **Lab ID: 255980013** Collected: 12/07/10 12:05 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030		Analytical Method: EPA 8260						
Dibromofluoromethane (S)	92 %		80-136	1		12/15/10 17:26	1868-53-7	
Toluene-d8 (S)	106 %		80-120	1		12/15/10 17:26	2037-26-5	
4-Bromofluorobenzene (S)	106 %		72-122	1		12/15/10 17:26	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		80-143	1		12/15/10 17:26	17060-07-0	

CA LUFT MSV GRO

Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND mg/kg		0.35	1		12/15/10 17:26		
4-Bromofluorobenzene (S)	106 %		72-122	1		12/15/10 17:26	460-00-4	

Sample: MW-2@1.5-2_20101208 **Lab ID: 255980014** Collected: 12/08/10 10:28 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND mg/kg		2.0	1	12/14/10 11:50	12/16/10 04:08		
o-Terphenyl (S) SG	82 %		50-150	1	12/14/10 11:50	12/16/10 04:08	84-15-1	
n-Octacosane (S) SG	57 %		50-150	1	12/14/10 11:50	12/16/10 04:08	630-02-4	

8260 MSV 5030

Analytical Method: EPA 8260

tert-Amylmethyl ether	ND mg/kg		0.0022	1		12/15/10 17:46	994-05-8	
Benzene	ND mg/kg		0.0022	1		12/15/10 17:46	71-43-2	
tert-Butyl Alcohol	ND mg/kg		0.011	1		12/15/10 17:46	75-65-0	
1,2-Dibromoethane (EDB)	ND mg/kg		0.0022	1		12/15/10 17:46	106-93-4	
1,2-Dichloroethane	ND mg/kg		0.0022	1		12/15/10 17:46	107-06-2	
Diisopropyl ether	ND mg/kg		0.0022	1		12/15/10 17:46	108-20-3	
Ethanol	ND mg/kg		0.29	1		12/15/10 17:46	64-17-5	
Ethylbenzene	ND mg/kg		0.0022	1		12/15/10 17:46	100-41-4	
Ethyl-tert-butyl ether	ND mg/kg		0.0022	1		12/15/10 17:46	637-92-3	
Methyl-tert-butyl ether	ND mg/kg		0.0022	1		12/15/10 17:46	1634-04-4	
Toluene	ND mg/kg		0.0022	1		12/15/10 17:46	108-88-3	
Xylene (Total)	ND mg/kg		0.0065	1		12/15/10 17:46	1330-20-7	
Dibromofluoromethane (S)	99 %		80-136	1		12/15/10 17:46	1868-53-7	
Toluene-d8 (S)	101 %		80-120	1		12/15/10 17:46	2037-26-5	
4-Bromofluorobenzene (S)	108 %		72-122	1		12/15/10 17:46	460-00-4	
1,2-Dichloroethane-d4 (S)	103 %		80-143	1		12/15/10 17:46	17060-07-0	

CA LUFT MSV GRO

Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND mg/kg		0.18	1		12/15/10 17:46		
4-Bromofluorobenzene (S)	108 %		72-122	1		12/15/10 17:46	460-00-4	

ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255980

Sample: MW-2@4.5-5_20101208 **Lab ID: 255980015** Collected: 12/08/10 10:23 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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8015B CA Diesel Range Org SG

Analytical Method: EPA 8015B Preparation Method: EPA 3546

TPH-DRO (C10-C24) SG	ND	mg/kg	2.0	1	12/14/10 11:50	12/16/10 05:18		
o-Terphenyl (S) SG	77	%	50-150	1	12/14/10 11:50	12/16/10 05:18	84-15-1	
n-Octacosane (S) SG	55	%	50-150	1	12/14/10 11:50	12/16/10 05:18	630-02-4	

8260 MSV 5030

Analytical Method: EPA 8260

tert-Amylmethyl ether	ND	mg/kg	0.0027	1		12/15/10 18:05	994-05-8	
Benzene	ND	mg/kg	0.0027	1		12/15/10 18:05	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.014	1		12/15/10 18:05	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0027	1		12/15/10 18:05	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0027	1		12/15/10 18:05	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0027	1		12/15/10 18:05	108-20-3	
Ethanol	ND	mg/kg	0.36	1		12/15/10 18:05	64-17-5	
Ethylbenzene	ND	mg/kg	0.0027	1		12/15/10 18:05	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0027	1		12/15/10 18:05	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0027	1		12/15/10 18:05	1634-04-4	
Toluene	ND	mg/kg	0.0027	1		12/15/10 18:05	108-88-3	
Xylene (Total)	ND	mg/kg	0.0081	1		12/15/10 18:05	1330-20-7	
Dibromofluoromethane (S)	94	%	80-136	1		12/15/10 18:05	1868-53-7	
Toluene-d8 (S)	105	%	80-120	1		12/15/10 18:05	2037-26-5	
4-Bromofluorobenzene (S)	114	%	72-122	1		12/15/10 18:05	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-143	1		12/15/10 18:05	17060-07-0	

CA LUFT MSV GRO

Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND	mg/kg	0.23	1		12/15/10 18:05		
4-Bromofluorobenzene (S)	114	%	72-122	1		12/15/10 18:05	460-00-4	

Sample: MW-2@7.5-8_20101208 **Lab ID: 255980016** Collected: 12/08/10 10:37 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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8015B CA Diesel Range Org SG

Analytical Method: EPA 8015B Preparation Method: EPA 3546

TPH-DRO (C10-C24) SG	447	mg/kg	19.6	10	12/14/10 11:50	12/16/10 05:41		
o-Terphenyl (S) SG	0	%	50-150	10	12/14/10 11:50	12/16/10 05:41	84-15-1	1n,S4
n-Octacosane (S) SG	0	%	50-150	10	12/14/10 11:50	12/16/10 05:41	630-02-4	S4

8260 MSV 5030

Analytical Method: EPA 8260

tert-Amylmethyl ether	ND	mg/kg	0.0028	1		12/15/10 18:25	994-05-8	
Benzene	ND	mg/kg	0.0028	1		12/15/10 18:25	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.014	1		12/15/10 18:25	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0028	1		12/15/10 18:25	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0028	1		12/15/10 18:25	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0028	1		12/15/10 18:25	108-20-3	
Ethanol	ND	mg/kg	0.38	1		12/15/10 18:25	64-17-5	

ANALYTICAL RESULTS

Project: 251028

Sample Project No.: 255980

Sample: MW-2@7.5-8_20101208 **Lab ID: 255980016** Collected: 12/08/10 10:37 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030		Analytical Method: EPA 8260						
Ethylbenzene	ND	mg/kg	0.0028	1		12/15/10 18:25	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0028	1		12/15/10 18:25	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0028	1		12/15/10 18:25	1634-04-4	
Toluene	ND	mg/kg	0.0028	1		12/15/10 18:25	108-88-3	
Xylene (Total)	ND	mg/kg	0.0085	1		12/15/10 18:25	1330-20-7	
Dibromofluoromethane (S)	94	%	80-136	1		12/15/10 18:25	1868-53-7	
Toluene-d8 (S)	105	%	80-120	1		12/15/10 18:25	2037-26-5	
4-Bromofluorobenzene (S)	111	%	72-122	1		12/15/10 18:25	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-143	1		12/15/10 18:25	17060-07-0	

CA LUFT MSV GRO Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND	mg/kg	0.24	1		12/15/10 18:25		
4-Bromofluorobenzene (S)	111	%	72-122	1		12/15/10 18:25	460-00-4	

Sample: MW-2@11.5-12_20101208 **Lab ID: 255980017** Collected: 12/08/10 10:45 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND	mg/kg	2.0	1	12/14/10 11:50	12/16/10 06:28		
o-Terphenyl (S) SG	97	%	50-150	1	12/14/10 11:50	12/16/10 06:28	84-15-1	
n-Octacosane (S) SG	93	%	50-150	1	12/14/10 11:50	12/16/10 06:28	630-02-4	

8260 MSV 5030 Analytical Method: EPA 8260

tert-Amylmethyl ether	ND	mg/kg	0.0024	1		12/15/10 18:45	994-05-8	
Benzene	ND	mg/kg	0.0024	1		12/15/10 18:45	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.012	1		12/15/10 18:45	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0024	1		12/15/10 18:45	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0024	1		12/15/10 18:45	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0024	1		12/15/10 18:45	108-20-3	
Ethanol	ND	mg/kg	0.31	1		12/15/10 18:45	64-17-5	
Ethylbenzene	ND	mg/kg	0.0024	1		12/15/10 18:45	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0024	1		12/15/10 18:45	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0024	1		12/15/10 18:45	1634-04-4	
Toluene	ND	mg/kg	0.0024	1		12/15/10 18:45	108-88-3	
Xylene (Total)	ND	mg/kg	0.0071	1		12/15/10 18:45	1330-20-7	
Dibromofluoromethane (S)	101	%	80-136	1		12/15/10 18:45	1868-53-7	
Toluene-d8 (S)	99	%	80-120	1		12/15/10 18:45	2037-26-5	
4-Bromofluorobenzene (S)	111	%	72-122	1		12/15/10 18:45	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-143	1		12/15/10 18:45	17060-07-0	

CA LUFT MSV GRO Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND	mg/kg	0.20	1		12/15/10 18:45		
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Date: 12/27/2010 09:29 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255980

Sample: MW-2@11.5-12_20101208 **Lab ID: 255980017** Collected: 12/08/10 10:45 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
CA LUFT MSV GRO		Analytical Method: CA LUFT						
4-Bromofluorobenzene (S)	111 %		72-122	1		12/15/10 18:45	460-00-4	

Sample: MW-3@4.5-5_20101206 **Lab ID: 255980018** Collected: 12/06/10 12:52 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND mg/kg		2.0	1	12/14/10 11:50	12/16/10 06:51		
o-Terphenyl (S) SG	81 %		50-150	1	12/14/10 11:50	12/16/10 06:51	84-15-1	
n-Octacosane (S) SG	72 %		50-150	1	12/14/10 11:50	12/16/10 06:51	630-02-4	

8260 MSV 5030 Analytical Method: EPA 8260

tert-Amylmethyl ether	ND mg/kg		0.0021	1		12/14/10 18:04	994-05-8	
Benzene	ND mg/kg		0.0021	1		12/14/10 18:04	71-43-2	
tert-Butyl Alcohol	ND mg/kg		0.011	1		12/14/10 18:04	75-65-0	
1,2-Dibromoethane (EDB)	ND mg/kg		0.0021	1		12/14/10 18:04	106-93-4	
1,2-Dichloroethane	ND mg/kg		0.0021	1		12/14/10 18:04	107-06-2	
Diisopropyl ether	ND mg/kg		0.0021	1		12/14/10 18:04	108-20-3	
Ethanol	ND mg/kg		0.29	1		12/14/10 18:04	64-17-5	
Ethylbenzene	ND mg/kg		0.0021	1		12/14/10 18:04	100-41-4	
Ethyl-tert-butyl ether	ND mg/kg		0.0021	1		12/14/10 18:04	637-92-3	
Methyl-tert-butyl ether	ND mg/kg		0.0021	1		12/14/10 18:04	1634-04-4	
Toluene	ND mg/kg		0.0021	1		12/14/10 18:04	108-88-3	
Xylene (Total)	ND mg/kg		0.0064	1		12/14/10 18:04	1330-20-7	
Dibromofluoromethane (S)	94 %		80-136	1		12/14/10 18:04	1868-53-7	
Toluene-d8 (S)	107 %		80-120	1		12/14/10 18:04	2037-26-5	
4-Bromofluorobenzene (S)	108 %		72-122	1		12/14/10 18:04	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		80-143	1		12/14/10 18:04	17060-07-0	

CA LUFT MSV GRO Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND mg/kg		0.18	1		12/14/10 18:04		
4-Bromofluorobenzene (S)	108 %		72-122	1		12/14/10 18:04	460-00-4	

Sample: MW-3@9.5-10_20101206 **Lab ID: 255980019** Collected: 12/06/10 12:55 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND mg/kg		2.0	1	12/14/10 11:50	12/16/10 07:15		
o-Terphenyl (S) SG	80 %		50-150	1	12/14/10 11:50	12/16/10 07:15	84-15-1	
n-Octacosane (S) SG	69 %		50-150	1	12/14/10 11:50	12/16/10 07:15	630-02-4	

ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255980

Sample: MW-3@9.5-10_20101206 **Lab ID:** 255980019 Collected: 12/06/10 12:55 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030		Analytical Method: EPA 8260						
tert-Amylmethyl ether	ND	mg/kg	0.0027	1		12/14/10 18:24	994-05-8	
Benzene	ND	mg/kg	0.0027	1		12/14/10 18:24	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.013	1		12/14/10 18:24	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0027	1		12/14/10 18:24	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0027	1		12/14/10 18:24	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0027	1		12/14/10 18:24	108-20-3	
Ethanol	ND	mg/kg	0.36	1		12/14/10 18:24	64-17-5	
Ethylbenzene	ND	mg/kg	0.0027	1		12/14/10 18:24	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0027	1		12/14/10 18:24	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0027	1		12/14/10 18:24	1634-04-4	
Toluene	ND	mg/kg	0.0027	1		12/14/10 18:24	108-88-3	
Xylene (Total)	ND	mg/kg	0.0080	1		12/14/10 18:24	1330-20-7	
Dibromofluoromethane (S)	93 %		80-136	1		12/14/10 18:24	1868-53-7	
Toluene-d8 (S)	107 %		80-120	1		12/14/10 18:24	2037-26-5	
4-Bromofluorobenzene (S)	109 %		72-122	1		12/14/10 18:24	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		80-143	1		12/14/10 18:24	17060-07-0	

CA LUFT MSV GRO

Analytical Method: CA LUFT

TPH-Gasoline (C05-C12)	ND	mg/kg	0.22	1		12/14/10 18:24		
4-Bromofluorobenzene (S)	109 %		72-122	1		12/14/10 18:24	460-00-4	

Sample: MW-3@11.5-12_20101206 **Lab ID:** 255980020 Collected: 12/06/10 12:59 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Org SG		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO (C10-C24) SG	ND	mg/kg	1.9	1	12/14/10 11:50	12/16/10 07:38		
o-Terphenyl (S) SG	81 %		50-150	1	12/14/10 11:50	12/16/10 07:38	84-15-1	
n-Octacosane (S) SG	68 %		50-150	1	12/14/10 11:50	12/16/10 07:38	630-02-4	

8260 MSV 5030

Analytical Method: EPA 8260

tert-Amylmethyl ether	ND	mg/kg	0.0022	1		12/15/10 19:05	994-05-8	
Benzene	ND	mg/kg	0.0022	1		12/15/10 19:05	71-43-2	
tert-Butyl Alcohol	ND	mg/kg	0.011	1		12/15/10 19:05	75-65-0	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0022	1		12/15/10 19:05	106-93-4	
1,2-Dichloroethane	ND	mg/kg	0.0022	1		12/15/10 19:05	107-06-2	
Diisopropyl ether	ND	mg/kg	0.0022	1		12/15/10 19:05	108-20-3	
Ethanol	ND	mg/kg	0.30	1		12/15/10 19:05	64-17-5	
Ethylbenzene	ND	mg/kg	0.0022	1		12/15/10 19:05	100-41-4	
Ethyl-tert-butyl ether	ND	mg/kg	0.0022	1		12/15/10 19:05	637-92-3	
Methyl-tert-butyl ether	ND	mg/kg	0.0022	1		12/15/10 19:05	1634-04-4	
Toluene	ND	mg/kg	0.0022	1		12/15/10 19:05	108-88-3	
Xylene (Total)	ND	mg/kg	0.0067	1		12/15/10 19:05	1330-20-7	

ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 255980

Sample: MW-3@11.5-12_20101206 **Lab ID: 255980020** Collected: 12/06/10 12:59 Received: 12/10/10 08:35 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030		Analytical Method: EPA 8260						
Dibromofluoromethane (S)	93 %		80-136	1		12/15/10 19:05	1868-53-7	
Toluene-d8 (S)	104 %		80-120	1		12/15/10 19:05	2037-26-5	
4-Bromofluorobenzene (S)	109 %		72-122	1		12/15/10 19:05	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-143	1		12/15/10 19:05	17060-07-0	
CA LUFT MSV GRO		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	ND mg/kg		0.19	1		12/15/10 19:05		
4-Bromofluorobenzene (S)	109 %		72-122	1		12/15/10 19:05	460-00-4	

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 255980

QC Batch: OEXT/3093 Analysis Method: EPA 8015B
 QC Batch Method: EPA 3546 Analysis Description: EPA 8015B CA TPH Silca Gel
 Associated Lab Samples: 255980001, 255980002, 255980003, 255980004, 255980005, 255980006, 255980007, 255980008, 255980009, 255980010, 255980011, 255980012, 255980013, 255980014, 255980015, 255980016, 255980017, 255980018, 255980019, 255980020

METHOD BLANK: 52172 Matrix: Solid
 Associated Lab Samples: 255980001, 255980002, 255980003, 255980004, 255980005, 255980006, 255980007, 255980008, 255980009, 255980010, 255980011, 255980012, 255980013, 255980014, 255980015, 255980016, 255980017, 255980018, 255980019, 255980020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO (C10-C24) SG	mg/kg	ND	2.0	12/15/10 20:44	
n-Octacosane (S) SG	%	81	50-150	12/15/10 20:44	
o-Terphenyl (S) SG	%	70	50-150	12/15/10 20:44	

LABORATORY CONTROL SAMPLE: 52173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C24) SG	mg/kg	83.3	64.1	77	56-124	
n-Octacosane (S) SG	%			86	50-150	
o-Terphenyl (S) SG	%			106	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 52174 52175

Parameter	Units	255980001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH-DRO (C10-C24) SG	mg/kg	3.3	83.3	83.3	69.8	72.2	80	83	56-124	3	
n-Octacosane (S) SG	%						95	95	50-150		
o-Terphenyl (S) SG	%						116	115	50-150		

QUALITY CONTROL DATA

Project: 251028
Pace Project No.: 255980

QC Batch: MSV/3597 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5030 Volatile Organics
Associated Lab Samples: 255980018, 255980019

METHOD BLANK: 52228 Matrix: Solid
Associated Lab Samples: 255980018, 255980019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0030	12/14/10 15:08	
1,2-Dichloroethane	mg/kg	ND	0.0030	12/14/10 15:08	
Benzene	mg/kg	ND	0.0030	12/14/10 15:08	
Diisopropyl ether	mg/kg	ND	0.0030	12/14/10 15:08	
Ethanol	mg/kg	ND	0.40	12/14/10 15:08	
Ethyl-tert-butyl ether	mg/kg	ND	0.0030	12/14/10 15:08	
Ethylbenzene	mg/kg	ND	0.0030	12/14/10 15:08	
Methyl-tert-butyl ether	mg/kg	ND	0.0030	12/14/10 15:08	
tert-Amylmethyl ether	mg/kg	ND	0.0030	12/14/10 15:08	
tert-Butyl Alcohol	mg/kg	ND	0.015	12/14/10 15:08	
Toluene	mg/kg	ND	0.0030	12/14/10 15:08	
Xylene (Total)	mg/kg	ND	0.0090	12/14/10 15:08	
1,2-Dichloroethane-d4 (S)	%	101	80-143	12/14/10 15:08	
4-Bromofluorobenzene (S)	%	104	72-122	12/14/10 15:08	
Dibromofluoromethane (S)	%	97	80-136	12/14/10 15:08	
Toluene-d8 (S)	%	109	80-120	12/14/10 15:08	

LABORATORY CONTROL SAMPLE & LCSD: 52229

52230

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	mg/kg	.05	0.054	0.053	108	106	71-123	2	30	
1,2-Dichloroethane	mg/kg	.05	0.054	0.053	107	107	70-124	.7	30	
Benzene	mg/kg	.05	0.051	0.052	102	103	75-133	1	30	
Diisopropyl ether	mg/kg	.05	0.053	0.055	106	109	63-139	3	30	
Ethanol	mg/kg	1	0.98	1.0	98	101	53-134	3	30	
Ethyl-tert-butyl ether	mg/kg	.05	0.053	0.056	107	112	63-135	5	30	
Ethylbenzene	mg/kg	.05	0.050	0.050	101	100	68-131	.7	30	
Methyl-tert-butyl ether	mg/kg	.05	0.054	0.056	108	112	52-143	4	30	
tert-Amylmethyl ether	mg/kg	.05	0.056	0.058	112	117	62-138	5	30	
tert-Butyl Alcohol	mg/kg	.25	0.26	0.27	102	109	35-151	6	30	
Toluene	mg/kg	.05	0.053	0.051	105	102	73-124	4	30	
Xylene (Total)	mg/kg	.15	0.15	0.15	100	100	68-130	.1	30	
1,2-Dichloroethane-d4 (S)	%				101	101	80-143			
4-Bromofluorobenzene (S)	%				107	106	72-122			
Dibromofluoromethane (S)	%				102	104	80-136			
Toluene-d8 (S)	%				110	107	80-120			

QUALITY CONTROL DATA

Project: 251028
Pace Project No.: 255980

QC Batch: MSV/3605 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5030 Volatile Organics
Associated Lab Samples: 255980001, 255980002, 255980003, 255980004, 255980005, 255980006, 255980007, 255980008, 255980009, 255980010, 255980011, 255980012, 255980013, 255980014, 255980015, 255980016, 255980017, 255980020

METHOD BLANK: 52301 Matrix: Solid
Associated Lab Samples: 255980001, 255980002, 255980003, 255980004, 255980005, 255980006, 255980007, 255980008, 255980009, 255980010, 255980011, 255980012, 255980013, 255980014, 255980015, 255980016, 255980017, 255980020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0030	12/15/10 13:09	
1,2-Dichloroethane	mg/kg	ND	0.0030	12/15/10 13:09	
Benzene	mg/kg	ND	0.0030	12/15/10 13:09	
Diisopropyl ether	mg/kg	ND	0.0030	12/15/10 13:09	
Ethanol	mg/kg	ND	0.40	12/15/10 13:09	
Ethyl-tert-butyl ether	mg/kg	ND	0.0030	12/15/10 13:09	
Ethylbenzene	mg/kg	ND	0.0030	12/15/10 13:09	
Methyl-tert-butyl ether	mg/kg	ND	0.0030	12/15/10 13:09	
tert-Amylmethyl ether	mg/kg	ND	0.0030	12/15/10 13:09	
tert-Butyl Alcohol	mg/kg	ND	0.015	12/15/10 13:09	
Toluene	mg/kg	ND	0.0030	12/15/10 13:09	
Xylene (Total)	mg/kg	ND	0.0090	12/15/10 13:09	
1,2-Dichloroethane-d4 (S)	%	102	80-143	12/15/10 13:09	
4-Bromofluorobenzene (S)	%	106	72-122	12/15/10 13:09	
Dibromofluoromethane (S)	%	96	80-136	12/15/10 13:09	
Toluene-d8 (S)	%	108	80-120	12/15/10 13:09	

LABORATORY CONTROL SAMPLE: 52302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	mg/kg	.05	0.051	103	71-123	
1,2-Dichloroethane	mg/kg	.05	0.050	100	70-124	
Benzene	mg/kg	.05	0.052	104	75-133	
Diisopropyl ether	mg/kg	.05	0.052	104	63-139	
Ethanol	mg/kg	1	0.95	95	53-134	
Ethyl-tert-butyl ether	mg/kg	.05	0.051	102	63-135	
Ethylbenzene	mg/kg	.05	0.052	104	68-131	
Methyl-tert-butyl ether	mg/kg	.05	0.050	100	52-143	
tert-Amylmethyl ether	mg/kg	.05	0.054	109	62-138	
tert-Butyl Alcohol	mg/kg	.25	0.22	90	35-151	
Toluene	mg/kg	.05	0.051	103	73-124	
Xylene (Total)	mg/kg	.15	0.15	102	68-130	
1,2-Dichloroethane-d4 (S)	%			100	80-143	
4-Bromofluorobenzene (S)	%			110	72-122	
Dibromofluoromethane (S)	%			100	80-136	
Toluene-d8 (S)	%			107	80-120	

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 255980

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 52303		52304		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		255980004 Result	MS Spike Conc.	MSD Spike Conc.								
1,2-Dibromoethane (EDB)	mg/kg	ND	.054	.048	0.051	0.044	95	92	71-123	15		
1,2-Dichloroethane	mg/kg	ND	.054	.048	0.052	0.044	95	92	71-124	16		
Benzene	mg/kg	ND	.054	.048	0.051	0.044	94	91	68-124	16		
Diisopropyl ether	mg/kg	ND	.054	.048	0.054	0.048	99	100	20-160	11		
Ethanol	mg/kg	ND	1.1	.96	0.98	0.85	90	89	60-140	14		
Ethyl-tert-butyl ether	mg/kg	ND	.054	.048	0.051	0.047	94	98	70-140	9		
Ethylbenzene	mg/kg	ND	.054	.048	0.049	0.043	91	90	63-131	13		
Methyl-tert-butyl ether	mg/kg	ND	.054	.048	0.053	0.048	97	101	68-139	9		
tert-Amylmethyl ether	mg/kg	ND	.054	.048	0.053	0.049	97	103	74-125	7		
tert-Butyl Alcohol	mg/kg	ND	.27	.24	0.23	0.21	85	88	49-122	9		
Toluene	mg/kg	ND	.054	.048	0.048	0.043	88	89	61-126	11		
Xylene (Total)	mg/kg	ND	.16	.14	0.14	0.13	88	87	68-129	14		
1,2-Dichloroethane-d4 (S)	%						101	98	80-143			
4-Bromofluorobenzene (S)	%						111	109	72-122			
Dibromofluoromethane (S)	%						101	104	80-136			
Toluene-d8 (S)	%						103	107	80-120			

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 255980

QC Batch: MSV/3596

Analysis Method: CA LUFT

QC Batch Method: CA LUFT

Analysis Description: CA LUFT MSV GRO

Associated Lab Samples: 255980018, 255980019

METHOD BLANK: 52225

Matrix: Solid

Associated Lab Samples: 255980018, 255980019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-Gasoline (C05-C12)	mg/kg	ND	0.25	12/14/10 15:08	
4-Bromofluorobenzene (S)	%	104	72-122	12/14/10 15:08	

LABORATORY CONTROL SAMPLE & LCSD: 52226

52227

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH-Gasoline (C05-C12)	mg/kg	.5	0.46	0.40	91	81	60-140	12	30	
4-Bromofluorobenzene (S)	%				105	107	72-122			

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 255980

QC Batch: MSV/3601

Analysis Method: CA LUFT

QC Batch Method: CA LUFT

Analysis Description: CA LUFT MSV GRO

Associated Lab Samples: 255980001, 255980002, 255980003, 255980004, 255980005, 255980006, 255980007, 255980008, 255980009, 255980010, 255980011, 255980012, 255980013

METHOD BLANK: 52276

Matrix: Solid

Associated Lab Samples: 255980001, 255980002, 255980003, 255980004, 255980005, 255980006, 255980007, 255980008, 255980009, 255980010, 255980011, 255980012, 255980013, 255980014, 255980015, 255980016, 255980017, 255980020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-Gasoline (C05-C12)	mg/kg	ND	0.25	12/15/10 13:09	
4-Bromofluorobenzene (S)	%	106	72-122	12/15/10 13:09	

LABORATORY CONTROL SAMPLE & LCSD: 52277

52342

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH-Gasoline (C05-C12)	mg/kg	.5	0.46	0.56	91	111	60-140	20	30	
4-Bromofluorobenzene (S)	%				106	104	72-122			

QUALIFIERS

Project: 251028

Pace Project No.: 255980

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

1n Sample was diluted due to the viscosity of the sample extract.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 251028
Pace Project No.: 255980

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
255980001	B-1@4.5-5_20101207	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980002	B-1@7.5-8_20101207	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980003	B-1@14.5-15_20101207	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980004	B-2@3.5-4_20101208	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980005	B-2@4.5-5_20101208	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980006	B-2@6-6.5_20101208	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980007	B-2@12.5-13_20101208	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980008	B-3@4.5-5_20101207	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980009	B-3@7.5-8_20101207	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980010	B-3@17.5-18_20101207	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980011	MW-1@5-5.5_20101207	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980012	MW-1@7.5-8_20101207	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980013	MW-1@11.5-12_20101207	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980014	MW-2@1.5-2_20101208	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980015	MW-2@4.5-5_20101208	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980016	MW-2@7.5-8_20101208	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980017	MW-2@11.5-12_20101208	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980018	MW-3@4.5-5_20101206	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980019	MW-3@9.5-10_20101206	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980020	MW-3@11.5-12_20101206	EPA 3546	OEXT/3093	EPA 8015B	GCSV/2147
255980001	B-1@4.5-5_20101207	EPA 8260	MSV/3605		
255980002	B-1@7.5-8_20101207	EPA 8260	MSV/3605		
255980003	B-1@14.5-15_20101207	EPA 8260	MSV/3605		
255980004	B-2@3.5-4_20101208	EPA 8260	MSV/3605		
255980005	B-2@4.5-5_20101208	EPA 8260	MSV/3605		
255980006	B-2@6-6.5_20101208	EPA 8260	MSV/3605		
255980007	B-2@12.5-13_20101208	EPA 8260	MSV/3605		
255980008	B-3@4.5-5_20101207	EPA 8260	MSV/3605		
255980009	B-3@7.5-8_20101207	EPA 8260	MSV/3605		
255980010	B-3@17.5-18_20101207	EPA 8260	MSV/3605		
255980011	MW-1@5-5.5_20101207	EPA 8260	MSV/3605		
255980012	MW-1@7.5-8_20101207	EPA 8260	MSV/3605		
255980013	MW-1@11.5-12_20101207	EPA 8260	MSV/3605		
255980014	MW-2@1.5-2_20101208	EPA 8260	MSV/3605		
255980015	MW-2@4.5-5_20101208	EPA 8260	MSV/3605		
255980016	MW-2@7.5-8_20101208	EPA 8260	MSV/3605		
255980017	MW-2@11.5-12_20101208	EPA 8260	MSV/3605		
255980018	MW-3@4.5-5_20101206	EPA 8260	MSV/3597		
255980019	MW-3@9.5-10_20101206	EPA 8260	MSV/3597		
255980020	MW-3@11.5-12_20101206	EPA 8260	MSV/3605		
255980001	B-1@4.5-5_20101207	CA LUFT	MSV/3601		
255980002	B-1@7.5-8_20101207	CA LUFT	MSV/3601		
255980003	B-1@14.5-15_20101207	CA LUFT	MSV/3601		
255980004	B-2@3.5-4_20101208	CA LUFT	MSV/3601		
255980005	B-2@4.5-5_20101208	CA LUFT	MSV/3601		
255980006	B-2@6-6.5_20101208	CA LUFT	MSV/3601		
255980007	B-2@12.5-13_20101208	CA LUFT	MSV/3601		

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 251028

Pace Project No.: 255980

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
255980008	B-3@4.5-5_20101207	CA LUFT	MSV/3601		
255980009	B-3@7.5-8_20101207	CA LUFT	MSV/3601		
255980010	B-3@17.5-18_20101207	CA LUFT	MSV/3601		
255980011	MW-1@5-5.5_20101207	CA LUFT	MSV/3601		
255980012	MW-1@7.5-8_20101207	CA LUFT	MSV/3601		
255980013	MW-1@11.5-12_20101207	CA LUFT	MSV/3601		
255980014	MW-2@1.5-2_20101208	CA LUFT	MSV/3601		
255980015	MW-2@4.5-5_20101208	CA LUFT	MSV/3601		
255980016	MW-2@7.5-8_20101208	CA LUFT	MSV/3601		
255980017	MW-2@11.5-12_20101208	CA LUFT	MSV/3601		
255980018	MW-3@4.5-5_20101206	CA LUFT	MSV/3596		
255980019	MW-3@9.5-10_20101206	CA LUFT	MSV/3596		
255980020	MW-3@11.5-12_20101206	CA LUFT	MSV/3601		

Sample Container Count

255980

CLIENT: _____

Delta



COC PAGE 1 of 2

COC ID# _____

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

Metal core

1

13

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 vial	WGFU	4oz clear soil jar
BP1U	1 liter unpreserved plastic	DG9M	40mL MeOH clear vial	WGFY	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		

Sample Container Count

CLIENT:

Delta



COC PAGE 2 of 2

COC ID#

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

metal core
↓

AG1H	1 liter HCL amber glass							BP2S	500mL H2SO4 plastic		JGFU	4oz unpreserved amber wide
AG1U	1 liter 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 vial		WGFU	4oz clear soil jar
BP1U	1 liter unpreserved plastic							DG9M	40mL MeOH clear vial		WGFY	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			



Sample Condition Upon Receipt

Client Name: Delta Project # 255980

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 8738 8211 5325

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

Packing Material: Bubble Wrap Bubble Bags None Other _____ Temp. Blank Yes _____ No 1

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

Cooler Temperature 0.5c Biological Tissue is Frozen: Yes No
Temp should be above freezing $\leq 6^{\circ}\text{C}$ Comments:

Date and Initials of person examining contents: 12/10 CW

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

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

Project Manager Review: Rsm Date: 12/10/10

January 06, 2011

Lia Holden
ELT-Delta Consultants
312 Piercy Rd
San Jose, CA 95138

RE: Project: 251028
Pace Project No.: 256112

Dear Lia Holden:

Enclosed are the analytical results for sample(s) received by the laboratory on December 22, 2010. 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, ELT_Delta Consultants Sacramento
Dennis Dettloff, ELT_Delta Consultants Sacramen
Jonathon Fillingame, ELT_Delta Consultants Sacramento
Dan Keltner, ELT-Delta Consultants
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Ed Weyrens, ELT_Delta Consultants San Jose

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 251028

Pace Project No.: 256112

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: 251028

Pace Project No.: 256112

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
256112001	MW-1_20101221	EPA 8015B	AY1	3	PASI-S
		EPA 5030B/8260	LPM	16	PASI-S
		CA LUFT	LNH	2	PASI-S
256112002	MW-2_20101221	EPA 8015B	AY1	3	PASI-S
		EPA 5030B/8260	ATH	16	PASI-S
		CA LUFT	LNH	2	PASI-S
256112003	MW-3_20101221	EPA 8015B	AY1	3	PASI-S
		EPA 5030B/8260	ATH	16	PASI-S
		CA LUFT	LNH	2	PASI-S

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 256112

Sample: MW-1_20101221		Lab ID: 256112001	Collected: 12/21/10 11:40	Received: 12/22/10 12:40	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	12/27/10 09:30	12/27/10 18:40		
o-Terphenyl (S) SG	92 %		51-147	1	12/27/10 09:30	12/27/10 18:40	84-15-1	
n-Octacosane (S) SG	100 %		50-150	1	12/27/10 09:30	12/27/10 18:40	630-02-4	
8260 MSV		Analytical Method: EPA 5030B/8260						
tert-Amylmethyl ether	ND ug/L		0.50	1		01/03/11 17:05	994-05-8	
Benzene	ND ug/L		0.50	1		01/03/11 17:05	71-43-2	
tert-Butyl Alcohol	ND ug/L		5.0	1		01/03/11 17:05	75-65-0	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	1		01/03/11 17:05	106-93-4	
1,2-Dichloroethane	ND ug/L		1.0	1		01/03/11 17:05	107-06-2	
Diisopropyl ether	ND ug/L		0.50	1		01/03/11 17:05	108-20-3	
Ethanol	ND ug/L		250	1		01/03/11 17:05	64-17-5	
Ethylbenzene	ND ug/L		0.50	1		01/03/11 17:05	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		0.50	1		01/03/11 17:05	637-92-3	
Methyl-tert-butyl ether	ND ug/L		0.50	1		01/03/11 17:05	1634-04-4	
Toluene	ND ug/L		0.50	1		01/03/11 17:05	108-88-3	
Xylene (Total)	ND ug/L		1.5	1		01/03/11 17:05	1330-20-7	
4-Bromofluorobenzene (S)	94 %		80-120	1		01/03/11 17:05	460-00-4	
Dibromofluoromethane (S)	101 %		80-122	1		01/03/11 17:05	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		80-124	1		01/03/11 17:05	17060-07-0	
Toluene-d8 (S)	99 %		80-123	1		01/03/11 17:05	2037-26-5	
CA LUFT MSV GRO		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	ND ug/L		50.0	1		12/28/10 21:46		
4-Bromofluorobenzene (S)	93 %		82-116	1		12/28/10 21:46	460-00-4	

Sample: MW-2_20101221		Lab ID: 256112002	Collected: 12/21/10 11:00	Received: 12/22/10 12:40	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	12/27/10 09:30	12/27/10 18:57		
o-Terphenyl (S) SG	96 %		51-147	1	12/27/10 09:30	12/27/10 18:57	84-15-1	
n-Octacosane (S) SG	101 %		50-150	1	12/27/10 09:30	12/27/10 18:57	630-02-4	
8260 MSV		Analytical Method: EPA 5030B/8260						
tert-Amylmethyl ether	ND ug/L		0.50	1		12/24/10 01:55	994-05-8	
Benzene	ND ug/L		0.50	1		12/24/10 01:55	71-43-2	
tert-Butyl Alcohol	ND ug/L		5.0	1		12/24/10 01:55	75-65-0	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	1		12/24/10 01:55	106-93-4	
1,2-Dichloroethane	ND ug/L		1.0	1		12/24/10 01:55	107-06-2	
Diisopropyl ether	ND ug/L		0.50	1		12/24/10 01:55	108-20-3	
Ethanol	ND ug/L		250	1		12/24/10 01:55	64-17-5	
Ethylbenzene	ND ug/L		0.50	1		12/24/10 01:55	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		0.50	1		12/24/10 01:55	637-92-3	

Date: 01/06/2011 09:17 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 251028

Pace Project No.: 256112

Sample: MW-2_20101221		Lab ID: 256112002	Collected: 12/21/10 11:00	Received: 12/22/10 12:40	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		12/24/10 01:55	1634-04-4	
Toluene	ND	ug/L	0.50	1		12/24/10 01:55	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		12/24/10 01:55	1330-20-7	
4-Bromofluorobenzene (S)	92	%	80-120	1		12/24/10 01:55	460-00-4	
Dibromofluoromethane (S)	90	%	80-122	1		12/24/10 01:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	84	%	80-124	1		12/24/10 01:55	17060-07-0	
Toluene-d8 (S)	91	%	80-123	1		12/24/10 01:55	2037-26-5	
CA LUFT MSV GRO		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	ND	ug/L	50.0	1		12/28/10 22:06		
4-Bromofluorobenzene (S)	94	%	82-116	1		12/28/10 22:06	460-00-4	

Sample: MW-3_20101221		Lab ID: 256112003	Collected: 12/21/10 12:20	Received: 12/22/10 12:40	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	74.4	ug/L	50.0	1	12/27/10 09:30	12/27/10 19:13		
o-Terphenyl (S) SG	91	%	51-147	1	12/27/10 09:30	12/27/10 19:13	84-15-1	
n-Octacosane (S) SG	97	%	50-150	1	12/27/10 09:30	12/27/10 19:13	630-02-4	
8260 MSV		Analytical Method: EPA 5030B/8260						
tert-Amylmethyl ether	ND	ug/L	0.50	1		12/24/10 02:16	994-05-8	
Benzene	ND	ug/L	0.50	1		12/24/10 02:16	71-43-2	
tert-Butyl Alcohol	ND	ug/L	5.0	1		12/24/10 02:16	75-65-0	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		12/24/10 02:16	106-93-4	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/24/10 02:16	107-06-2	
Diisopropyl ether	ND	ug/L	0.50	1		12/24/10 02:16	108-20-3	
Ethanol	ND	ug/L	250	1		12/24/10 02:16	64-17-5	
Ethylbenzene	ND	ug/L	0.50	1		12/24/10 02:16	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	0.50	1		12/24/10 02:16	637-92-3	
Methyl-tert-butyl ether	0.87	ug/L	0.50	1		12/24/10 02:16	1634-04-4	
Toluene	ND	ug/L	0.50	1		12/24/10 02:16	108-88-3	
Xylene (Total)	ND	ug/L	1.5	1		12/24/10 02:16	1330-20-7	
4-Bromofluorobenzene (S)	91	%	80-120	1		12/24/10 02:16	460-00-4	
Dibromofluoromethane (S)	90	%	80-122	1		12/24/10 02:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	84	%	80-124	1		12/24/10 02:16	17060-07-0	
Toluene-d8 (S)	93	%	80-123	1		12/24/10 02:16	2037-26-5	
CA LUFT MSV GRO		Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	ND	ug/L	50.0	1		12/28/10 22:26		
4-Bromofluorobenzene (S)	92	%	82-116	1		12/28/10 22:26	460-00-4	

QUALITY CONTROL DATA

Project: 251028
Pace Project No.: 256112

QC Batch: OEXT/3128 Analysis Method: EPA 8015B
QC Batch Method: EPA 3510 Modified Analysis Description: 8015B CA DRO Silica Gel
Associated Lab Samples: 256112001, 256112002, 256112003

METHOD BLANK: 53337 Matrix: Water
Associated Lab Samples: 256112001, 256112002, 256112003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO (C10-C24) SG	ug/L	ND	50.0	12/27/10 18:07	
n-Octacosane (S) SG	%	98	50-150	12/27/10 18:07	
o-Terphenyl (S) SG	%	89	51-147	12/27/10 18:07	

LABORATORY CONTROL SAMPLE: 53338

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C24) SG	ug/L	3120	2590	83	51-147	
n-Octacosane (S) SG	%			102	50-150	
o-Terphenyl (S) SG	%			113	51-147	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 53339 53340

Parameter	Units	256115001 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	2570	1870	82	59	51-147	31	R1
n-Octacosane (S) SG	%						104	96	50-150		
o-Terphenyl (S) SG	%						114	99	51-147		

QUALITY CONTROL DATA

Project: 251028
Pace Project No.: 256112

QC Batch: MSV/3654 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 256112002, 256112003

METHOD BLANK: 53314 Matrix: Water
Associated Lab Samples: 256112002, 256112003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	12/23/10 19:09	
1,2-Dichloroethane	ug/L	ND	1.0	12/23/10 19:09	
Benzene	ug/L	ND	0.50	12/23/10 19:09	
Diisopropyl ether	ug/L	ND	0.50	12/23/10 19:09	
Ethanol	ug/L	ND	250	12/23/10 19:09	
Ethyl-tert-butyl ether	ug/L	ND	0.50	12/23/10 19:09	
Ethylbenzene	ug/L	ND	0.50	12/23/10 19:09	
Methyl-tert-butyl ether	ug/L	ND	0.50	12/23/10 19:09	
tert-Amylmethyl ether	ug/L	ND	0.50	12/23/10 19:09	
tert-Butyl Alcohol	ug/L	ND	5.0	12/23/10 19:09	
Toluene	ug/L	ND	0.50	12/23/10 19:09	
Xylene (Total)	ug/L	ND	1.5	12/23/10 19:09	
1,2-Dichloroethane-d4 (S)	%	87	80-124	12/23/10 19:09	
4-Bromofluorobenzene (S)	%	93	80-120	12/23/10 19:09	
Dibromofluoromethane (S)	%	93	80-122	12/23/10 19:09	
Toluene-d8 (S)	%	92	80-123	12/23/10 19:09	

LABORATORY CONTROL SAMPLE: 53315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	20.9	104	73-124	
1,2-Dichloroethane	ug/L	20	20.4	102	78-125	
Benzene	ug/L	20	21.2	106	76-127	
Diisopropyl ether	ug/L	20	23.3	117	70-137	
Ethanol	ug/L	400	457	114	31-182	
Ethyl-tert-butyl ether	ug/L	20	21.4	107	70-137	
Ethylbenzene	ug/L	20	21.4	107	72-125	
Methyl-tert-butyl ether	ug/L	20	21.5	107	58-145	
tert-Amylmethyl ether	ug/L	20	21.8	109	71-133	
tert-Butyl Alcohol	ug/L	100	106	106	31-166	
Toluene	ug/L	20	20.8	104	69-125	
Xylene (Total)	ug/L	60	63.7	106	74-124	
1,2-Dichloroethane-d4 (S)	%			88	80-124	
4-Bromofluorobenzene (S)	%			91	80-120	
Dibromofluoromethane (S)	%			96	80-122	
Toluene-d8 (S)	%			91	80-123	

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 256112

Parameter	Units	53316		53317		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		256096005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	14.3	15.3	72	77	78-117	7	M1	
1,2-Dichloroethane	ug/L	ND	20	20	13.8	15.3	69	77	73-127	11	M1	
Benzene	ug/L	ND	20	20	14.4	16.2	72	81	75-124	12	M1	
Diisopropyl ether	ug/L	ND	20	20	15.5	17.4	78	87	69-130	11		
Ethanol	ug/L	ND	400	400	375	353	94	88	36-177	6		
Ethyl-tert-butyl ether	ug/L	ND	20	20	14.2	16.0	71	80	67-131	12		
Ethylbenzene	ug/L	ND	20	20	14.4	15.6	72	78	76-124	8	M1	
Methyl-tert-butyl ether	ug/L	3.4	20	20	17.8	19.6	72	81	72-130	9		
tert-Amylmethyl ether	ug/L	ND	20	20	14.6	16.5	73	82	67-132	12		
tert-Butyl Alcohol	ug/L	ND	100	100	72.4	79.1	72	79	36-164	9		
Toluene	ug/L	ND	20	20	14.3	15.2	71	76	75-124	6	M1	
Xylene (Total)	ug/L	ND	60	60	43.2	46.5	72	78	76-123	7	M1	
1,2-Dichloroethane-d4 (S)	%						86	87	80-124			
4-Bromofluorobenzene (S)	%						89	93	80-120			
Dibromofluoromethane (S)	%						92	96	80-122			
Toluene-d8 (S)	%						91	91	80-123			

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 256112

QC Batch: MSV/3668

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 256112001

METHOD BLANK: 53640

Matrix: Water

Associated Lab Samples: 256112001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	01/03/11 14:23	
1,2-Dichloroethane	ug/L	ND	1.0	01/03/11 14:23	
Benzene	ug/L	ND	0.50	01/03/11 14:23	
Diisopropyl ether	ug/L	ND	0.50	01/03/11 14:23	
Ethanol	ug/L	ND	250	01/03/11 14:23	
Ethyl-tert-butyl ether	ug/L	ND	0.50	01/03/11 14:23	
Ethylbenzene	ug/L	ND	0.50	01/03/11 14:23	
Methyl-tert-butyl ether	ug/L	ND	0.50	01/03/11 14:23	
tert-Amylmethyl ether	ug/L	ND	0.50	01/03/11 14:23	
tert-Butyl Alcohol	ug/L	ND	5.0	01/03/11 14:23	
Toluene	ug/L	ND	0.50	01/03/11 14:23	
Xylene (Total)	ug/L	ND	1.5	01/03/11 14:23	
1,2-Dichloroethane-d4 (S)	%	95	80-124	01/03/11 14:23	
4-Bromofluorobenzene (S)	%	98	80-120	01/03/11 14:23	
Dibromofluoromethane (S)	%	98	80-122	01/03/11 14:23	
Toluene-d8 (S)	%	101	80-123	01/03/11 14:23	

LABORATORY CONTROL SAMPLE: 53641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	20	21.9	109	73-124	
1,2-Dichloroethane	ug/L	20	21.6	108	78-125	
Benzene	ug/L	20	20.6	103	76-127	
Diisopropyl ether	ug/L	20	22.5	112	70-137	
Ethanol	ug/L	400	430	107	31-182	
Ethyl-tert-butyl ether	ug/L	20	21.9	110	70-137	
Ethylbenzene	ug/L	20	21.9	109	72-125	
Methyl-tert-butyl ether	ug/L	20	22.3	112	58-145	
tert-Amylmethyl ether	ug/L	20	22.9	114	71-133	
tert-Butyl Alcohol	ug/L	100	120	120	31-166	
Toluene	ug/L	20	20.5	103	69-125	
Xylene (Total)	ug/L	60	64.4	107	74-124	
1,2-Dichloroethane-d4 (S)	%			103	80-124	
4-Bromofluorobenzene (S)	%			94	80-120	
Dibromofluoromethane (S)	%			102	80-122	
Toluene-d8 (S)	%			101	80-123	

QUALITY CONTROL DATA

Project: 251028

Pace Project No.: 256112

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 53656		53657		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		256095006 Result	MS Spike Conc.	MSD Spike Conc.								
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	21.1	20.1	106	101	78-117	5		
1,2-Dichloroethane	ug/L	ND	20	20	21.5	20.5	107	102	73-127	5		
Benzene	ug/L	ND	20	20	21.2	20.3	106	101	75-124	4		
Diisopropyl ether	ug/L	ND	20	20	22.2	21.7	111	109	69-130	2		
Ethanol	ug/L	ND	400	400	529	511	132	128	36-177	3		
Ethyl-tert-butyl ether	ug/L	ND	20	20	22.0	21.2	110	106	67-131	4		
Ethylbenzene	ug/L	ND	20	20	21.5	21.6	108	108	76-124	.5		
Methyl-tert-butyl ether	ug/L	ND	20	20	22.3	21.0	111	105	72-130	6		
tert-Amylmethyl ether	ug/L	ND	20	20	22.7	21.9	114	110	67-132	3		
tert-Butyl Alcohol	ug/L	ND	100	100	132	129	131	129	36-164	2		
Toluene	ug/L	ND	20	20	20.6	20.4	103	102	75-124	1		
Xylene (Total)	ug/L	ND	60	60	63.7	63.3	106	105	76-123	.6		
1,2-Dichloroethane-d4 (S)	%						105	102	80-124			
4-Bromofluorobenzene (S)	%						95	95	80-120			
Dibromofluoromethane (S)	%						102	102	80-122			
Toluene-d8 (S)	%						99	99	80-123			

QUALITY CONTROL DATA

Project: 251028
Pace Project No.: 256112

QC Batch: MSV/3663 Analysis Method: CA LUFT
QC Batch Method: CA LUFT Analysis Description: CA LUFT MSV GRO
Associated Lab Samples: 256112001, 256112002, 256112003

METHOD BLANK: 53446 Matrix: Water
Associated Lab Samples: 256112001, 256112002, 256112003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-Gasoline (C05-C12)	ug/L	ND	50.0	12/28/10 15:43	
4-Bromofluorobenzene (S)	%	92	82-116	12/28/10 15:43	

LABORATORY CONTROL SAMPLE: 53447

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-Gasoline (C05-C12)	ug/L	500	446	89	60-140	
4-Bromofluorobenzene (S)	%			93	82-116	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 53568 53569

Parameter	Units	256095005 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	164	500	500	658	648	99	97	60-140	1	
4-Bromofluorobenzene (S)	%						92	91	82-116		

QUALIFIERS

Project: 251028

Pace Project No.: 256112

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.

R1 RPD value was outside control limits.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 251028

Pace Project No.: 256112

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
256112001	MW-1_20101221	EPA 3510 Modified	OEXT/3128	EPA 8015B	GCSV/2164
256112002	MW-2_20101221	EPA 3510 Modified	OEXT/3128	EPA 8015B	GCSV/2164
256112003	MW-3_20101221	EPA 3510 Modified	OEXT/3128	EPA 8015B	GCSV/2164
256112001	MW-1_20101221	EPA 5030B/8260	MSV/3668		
256112002	MW-2_20101221	EPA 5030B/8260	MSV/3654		
256112003	MW-3_20101221	EPA 5030B/8260	MSV/3654		
256112001	MW-1_20101221	CA LUFT	MSV/3663		
256112002	MW-2_20101221	CA LUFT	MSV/3663		
256112003	MW-3_20101221	CA LUFT	MSV/3663		

COP ELT CHAIN-OF-CUSTODY / Analytical Request Document

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



Required Lab Information:		Required Project Information:				Required Invoice Information:			
Lab Name: Pace-Seattle		Site ID #: 1028	Task: 0001	Send Invoice to: Lia Holden		22284/L3			
Address: 940 S. Harney Street Seattle WA 98108		Delta project #: 140251028		Address: 312 Piercy Road		Turn around time (days) 14			
Lab PM: Regina Ste. Marie		Site Address: 5300 Broadway	City/State: Oakland CA	City/State: San Jose, CA	Phone #: 408-826-1863	QC level Required: Standard <input checked="" type="checkbox"/> Special <input type="checkbox"/> Mark one			
Phone/Fax: P: 206-957-2433 F: 206-767-5063		City: Oakland	State: CA	Reimbursement project?	Non-reimbursement project?	NJ Reduced Deliverable Package?			
Lab PM email: Regina.SteMarie@pacelabs.com		Delta PM Name: Lia Holden		Send EDD to: Lholden@deltaenv.com / Nperit@deltaenv.com		MA MCP Cert? <input type="checkbox"/> CT RCP Cert? <input type="checkbox"/> Mark One			
Applicable Lab Quote #:		Delta PM Email: Lholden@deltaenv.com		CC Hardcopy report to:		Lab Project ID (lab use):			
				CC Hardcopy report to:		Requested Analyses			

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / . -) Samples IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX GROUND WATER WP WATER WASTE WATER WW SURFACE WATER WS WATER QC WQ FRESH PRODUCT LP SLUDGE SL SOL SO RINSEATE RH OL OL OTHER OT WPE SW ANIMAL TISSUE TA JAMBERT AIR AA SVE AIR AE SOL GAS GS	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	# OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives							Comments/Lab Sample I.D.				
									Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₈	Methanol		Other			
1	MW-1		WG	G	12/21/10	11:40	8	N	✓											
2	MW-2		WG	G	12/21/10	11:00	8	N	✓											
3	MW-3		WG	G	12/21/10	12:20	8	N	✓											
4			WG																	
5			WG																	
6			WG																	
7			WG																	
8			WG																	
9			WG																	
10			WG																	
11			WG																	
12			WG																	
13			W																	

Additional Comments/Special Instructions: 7 oxy's = DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB, Ethanol GLOBAL ID: T0619732490	RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	Sample Receipt Conditions			
	Nadine Periat		12/21/10	2:30	Justin Sway (PACE)		12/22/10	12:48	2.2	(Y/N)	(Y/N)	(Y/N)
										Y/N	Y/N	Y/N
										Y/N	Y/N	Y/N
										Y/N	Y/N	Y/N
SHIPPING METHOD: (mark as appropriate)								SAMPLER NAME AND SIGNATURE				
UPS COURIER FEDEX			PRINT Name of SAMPLER: Nadine Periat					Temp in °C				
US MAIL			SIGNATURE of SAMPLER: Nadine Periat									
			DATE Signed: 12/21/10		Time: 2:30			Samples on ice? <input type="checkbox"/>				
								Sample intact? <input type="checkbox"/>				
								Trip Blank? <input type="checkbox"/>				

Sample Container Count

256112

CLIENT: Delta



COC PAGE 1 of 1

COC ID# -

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

AG1H	1 liter HCL amber glass							BP2S	500mL H2SO4 plastic	JGFU	4oz unpreserved amber wide
AG1U	1 liter 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 vial	WGFU	4oz clear soil jar
BP1U	1 liter unpreserved plastic							DG9M	40mL MeOH clear vial	WGFU	4oz wide jar w/hexane wipe
BP1Z	1 liter NaOH, Zn, Ac							DG9T	40mL Na Thio amber vial	ZPLC	Ziploc Bag
BP2N	500mL HNO3 plastic							DG9U	40mL unpreserved amber vial		
BP2O	500mL NaOH plastic							I	Wipe/Swab		



Sample Condition Upon Receipt

Client Name: Delta Project # 256112

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 8738 8211 6593

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 2.2 Biological Tissue is Frozen: Yes No
Temp should be above freezing $\leq 6^{\circ}\text{C}$ Comments:

Date and Initials of person examining contents: NSS 12/22/10

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

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: RSM

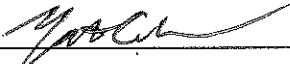
Date: 12/22/10

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

Is the Data Valid?
 (circle)
 Yes / No

Preservation Temperature
 (if Known): 0.5 °C

Antea Group Lab Validation Sheet

Project/Client: Antea Group ELT
 Project #: I40251028
 Date of Validation: 1/28/11 Date of Analysis: 12/16-17/10
 Sample Date: 12/8/10 Completed By: M. Corley
 Signature: 
 Analytical Lab Used and Report # Pace Analytical Services, Inc #255977

Circle
 or
 Highlight
 Yes / No
 (below)

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

Yes / No
 Yes / No
 Yes / No
 Yes / No
~~Yes / No~~
 Yes / No
 NA
 Yes / No
 Yes / No
 Yes / No

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

Report 255977:
 The laboratory noted the following qualifiers in their lab report:
 M1 - Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
 R1 - RPD value was outside control limits.
 These qualifiers were noted against TPH-DRO QA/QC analysis associated with lab sample #255977001. The above qualifiers do not invalidate the reported analytical results.

Is the Data Valid?

(circle)

Yes / No

Preservation Temperature

(if Known): 0.5 °C

Antea Group Lab Validation Sheet

Project/Client: Antea Group ELT

Project #: I40251028

Date of Validation: 1/28/11 Date of Analysis: 12/14-16/10

Sample Date: 12/6-8/10 Completed By: M. Corley

Signature: *[Signature]*

Analytical Lab Used and Report # Pace Analytical Services, Inc #255980

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

Circle or Highlight

Yes / No

(below)

<input checked="" type="radio"/> Yes	/	<input type="radio"/> No
<input checked="" type="radio"/> Yes	/	<input type="radio"/> No
<input checked="" type="radio"/> Yes	/	<input type="radio"/> No
<input checked="" type="radio"/> Yes	/	<input type="radio"/> No
Yes	/	No
<input checked="" type="radio"/> Yes	/	<input type="radio"/> No
<input checked="" type="radio"/> Yes	/	<input type="radio"/> No
NA		
<input checked="" type="radio"/> Yes	/	<input type="radio"/> No
<input checked="" type="radio"/> Yes	/	<input type="radio"/> No
<input checked="" type="radio"/> Yes	/	<input type="radio"/> No

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

Report 255980:

The laboratory noted the following qualifiers in their lab report:

- 1n - Sample was diluted due to the viscosity of the sample extract.
- S4 - Surrogate recovery not evaluated against control limits due to sample dilution.

These qualifiers were noted against surrogate samples for TPH-DRO analysis of sample MW-2@7.5-8_20101208. The above qualifiers do not invalidate the reported analytical results.

Is the Data Valid?

(circle)

Yes / No

Preservation Temperature

(if Known): 2.2 °C

Antea Group Lab Validation Sheet

Project/Client: Antea Group ELT

Project #: 140251028

Date of Validation: 1/28/11 Date of Analysis: 12/24/10-1/3/11

Sample Date: 12/21/10 Completed By: M. Corley

Signature: *M. Corley*

Analytical Lab Used and Report # Pace Analytical Services, Inc #256112

Circle
or
Highlight

 Yes / No

(below)

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

Yes / No

Yes / No

Yes / No

Yes / No

~~Yes / No~~

Yes / No

NA

Yes / No

Yes / No

Yes / No

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

Report 256112:

The laboratory noted the following qualifiers in their lab report:

M1 - Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1 - RPD value was outside control limits.

Qualifier R1 was noted against TPH-DRO QA/QC analysis associated with lab samples #256112001, #256112002, and #256112003. Qualifier M1 was noted against 6 analytes for QA/QC analysis associated with lab samples #256112002 and #256112003. The above qualifiers do not invalidate the reported analytical results.

*Soil and Groundwater Investigation Report and Request for Case Closure
76 Branded Service Station No. 251028
5300 Broadway, Oakland, California
Alameda County LOP Case #: RO0002967
Antea Group Project No. I40251028*



Appendix G

Non-Hazardous Waste Manifests

Manifest

SOIL SAFE OF CA - TPST Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment: 1 / 1 Responsible for Payment: _____ Transport Truck #: 3941732 Facility #: A07 Approval Number: 36603 Load #: 1001

Generator's Name and Billing Address: **CONOCOPHILLIPS RM & R
ATTN: ED RALSTON
78 BROADWAY
SACRAMENTO, CA 95818**

Generator's Phone #: 916-558-7633
Person to Contact: _____
FAX#: _____ Customer Account Number: _____

Consultant's Name and Billing Address: _____

Consultant's Phone #: _____
Person to Contact: _____
FAX#: _____ Customer Account Number: _____

Generation Site (Transport from): (name & address)
**78 STATION NO. 261028
6300 BROADWAY
OAKLAND, CA 94618**

Site Phone #: _____
Person to Contact: _____
FAX#: _____

Designated Facility (Transport to): (name & address)
**SOIL SAFE
12328 Hibiscus Avenue
ADELANTO, CA 92301**

Facility Phone #: (800) 882-8001
Person to Contact: DELLENA JEFFREY
FAX#: (760) 248-8004

Transporter Name and Mailing Address: **BELSHIRE
26071 TOWNE CENTRE DRIVE
FOOTHILL RANCH, CA 92610**

Transporter's Phone #: 949-480-6200 CAR000183813
Person to Contact: LARRY MOOTHART 450847
FAX#: 949-480-6210 Customer Account Number: _____

BESI: 187911

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>	<u>7dms</u>		<u>41640</u>	<u>37120</u>	<u>4520</u>
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					<u>226</u>

List any exception to items listed above: _____ Scale Ticket # 89002

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator Consultant Signature and date: [Signature] Month, Day Year: 1/18/11
Larry Moothart of BESI on behalf of ConocoPhillips

Transporter's certification: I/We acknowledge receipt of the soil referenced above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that the soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: Kevin Dunlop Signature and date: [Signature] Month, Day Year: 1/18/11

Discrepancies: 251028
632320

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:


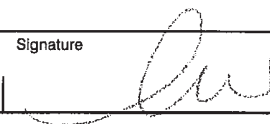
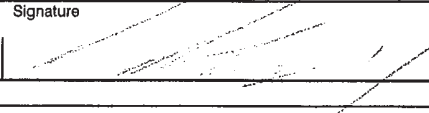

Print or Type Name: D. JEFFREY/J. PROVANSAL Signature and date: [Signature] 1-27-11

Please print or type.

9

NON-HAZARDOUS WASTE DATA FORM

BESI # 187911

GENERATOR	Generator's Name and Mailing Address CONOCOPHILLIPS RM & R ATTN: ED RALSTON 76 BROADWAY SACRAMENTO, CA 95818		Generator's Site Address (if different than mailing address) 76 STATION NO. 251028 5300 BROADWAY OAKLAND, CA 94618	
	Generator's Phone: 916-568-7833			
	Container type removed from site: <input checked="" type="checkbox"/> Drums <input type="checkbox"/> Vacuum Truck <input type="checkbox"/> Roll-off Truck <input type="checkbox"/> Dump Truck <input type="checkbox"/> Other _____		Container type transported to receiving facility: <input type="checkbox"/> Drums <input checked="" type="checkbox"/> Vacuum Truck <input type="checkbox"/> Roll-off Truck <input type="checkbox"/> Dump Truck <input type="checkbox"/> Other _____	
	Quantity <u>2</u>		Quantity <u>1</u> Volume <u>110 gallons</u>	
WASTE DESCRIPTION <u>NON-HAZARDOUS WATER</u>		GENERATING PROCESS <u>WELL PURGING / DECON WATER</u>		
COMPONENTS OF WASTE		COMPONENTS OF WASTE		
1. <u>WATER</u> PPM % <u>98-100%</u>		3. _____ PPM %		
2. <u>TPH</u> PPM % <u><1%</u>		4. _____ PPM %		
Waste Profile _____		PROPERTIES: pH <u>7.10</u> <input type="checkbox"/> SOLID <input checked="" type="checkbox"/> LIQUID <input type="checkbox"/> SLUDGE <input type="checkbox"/> SLURRY <input type="checkbox"/> OTHER _____		
HANDLING INSTRUCTIONS: <u>WEAR ALL APPROPRIATE PROTECTIVE CLOTHING</u>				
Generator Printed/Typed Name		Signature		
<u>Larry Moorhead of BESI on behalf of ConocoPhillips Company</u>				
		Month Day Year <u>11 18 11</u>		
The Generator certifies that the waste as described is 100% non-hazardous				
TRANSPORTER	Transporter 1 Company Name <u>BELSHIRE</u>		Phone# <u>949-480-5200</u>	
	Transporter 1 Printed/Typed Name <u>LARRY MOORHEAD</u>		Signature 	
			Month Day Year <u>11 18 11</u>	
	Transporter Acknowledgment of Receipt of Materials			
Transporter 2 Company Name <u>NIETO & SONS TRUCKING, INC.</u>		Phone# <u>714-990-8355</u>		
Transporter 2 Printed/Typed Name <u>Ed Nieto</u>		Signature 		
		Month Day Year <u>12 28 11</u>		
Transporter Acknowledgment of Receipt of Materials				
RECEIVING FACILITY	Designated Facility Name and Site Address <u>DEMENNO KERDOON</u> <u>2000 N. ALAMEDA ST.</u> <u>COMPTON, CA 90222</u>		Phone# <u>310-537-7100</u>	
	Printed/Typed Name <u>Fernando Marquez</u>		Signature 	
			Month Day Year <u>01 28 11</u>	
Designated Facility Owner or Operator: Certification of receipt of materials covered by this data form.				