ConocoPhillips
76 Broadway
Sacramento, California 95818

August 26, 2009

Jerry Wickham
Alameda County Health Agency
1131 Harbor Bay parkway, Suite250
Alameda, California 94502-577

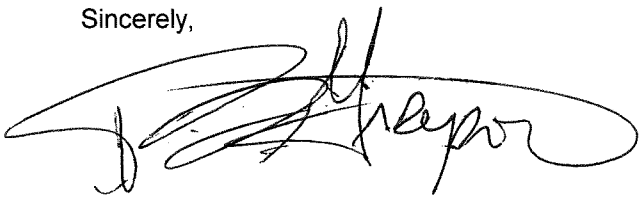
Re: ***Site Investigation Report***
76 Service Station # 1156
4276 MacAuthur Blvd
Oakland, CA

Dear Mr. Wickham:

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 me at (916) 558-7666.

Sincerely,



Terry L. Grayson
Site Manager
Risk Management & Remediation

September 8, 2009

Mr. Jerry Wickham
Alameda County Health Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: Site Investigation Report
76 Station No. 1156
4276 Mac Arthur Boulevard
Oakland, California

DELTA

Dear Mr. Wickham:

On behalf of ConocoPhillips Company (ConocoPhillips), Delta Consultants (Delta) is submitting this *Site Investigation Report* for 76 Station No. 1156 in Oakland, California (Figure 1). The additional assessment activities were performed in accordance with Delta's *Revised Work Plan for Site Investigation*, dated March 16, 2009, and submitted to the Alameda County Health Care Services Agency.

Please contact Jim Barnard at (916) 503-1279 if you have questions.

Sincerely,

DELTA CONSULTANTS

James B. Barnard

James B. Barnard, P.G.
Senior Project Manager
California Registered Professional Geologist No. 7478

Enclosure

cc: Mr. Terry Grayson, ConocoPhillips (electronic copy only)

SITE INVESTIGATION REPORT

76 SERVICE STATION NO. 1156
4276 MAC ARTHUR BOULEVARD
OAKLAND, CALIFORNIA

September 8, 2009

Prepared for

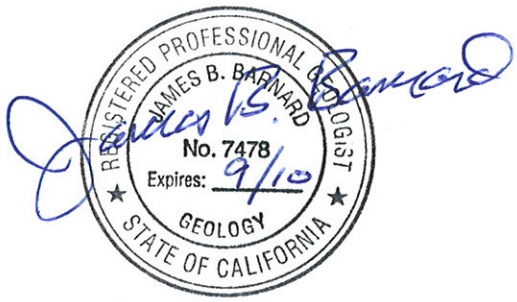
ConocoPhillips Company
76 Broadway
Sacramento, California

The material and data in this report were prepared under the supervision and direction of the undersigned.

Delta Consultants

Caitlin Morgan
Staff Scientist

Stephen Meninger
Project Geologist



James B. Barnard, P.G.
California Registered Professional Geologist No. 7478

INTRODUCTION

On behalf of ConocoPhillips, Delta has prepared this report for the 76 Service Station No. 1156 (site) located at 4276 MacArthur Boulevard, Oakland, California (Figure 1). The purpose of this report is to provide a summary of soil, groundwater, and soil vapor sampling activities; along with a discussion of the analytical results obtained at the 76 service station property.

SITE BACKGROUND AND PREVIOUS ENVIRONMENTAL WORK

In 1997, Pacific Environmental Group Inc. (PEG) advanced 5 soil/gas probes in the vicinity of the USTs, dispenser islands, and product lines to depths ranging from 3 to 15 feet below the ground surface (bgs). Elevated soil vapor concentrations of total petroleum hydrocarbons as gasoline (TPHg), benzene, and methyl tertiary butyl either (MTBE) were reported at concentrations up to 4,700, 70, and 140 micrograms per liter (µg/L), respectively.

In 1998, Tosco Marketing Company (Tosco) removed one 280-gallon used-oil UST, and removed and replaced two 10,000-gallon gasoline USTs, associated piping, and fuel dispensers. The new USTs were installed in a separate excavation. Total petroleum hydrocarbons as diesel (TPHd), TPHg, benzene, and total purgeable petroleum hydrocarbons (TPPH) were reported in the soil sample collected from the used-oil UST excavation at concentrations of 78,000 milligrams per kilogram (mg/kg), 130 mg/kg, 0.55 mg/kg, and 8,400 mg/kg, respectively. Following the over-excavation of approximately 4.6 tons of soil from the used-oil UST excavation, concentrations of TPHd, TPHg, benzene, and TPPH were reported in soil samples collected from the used-oil UST excavation at concentrations up to 560, 81, 0.64, and 360 mg/kg, respectively. TPHg and benzene were reported in the soil samples collected from the gasoline UST excavation, dispenser islands, and product lines at concentrations up to 1,200 mg/kg and 1.6 mg/kg, respectively. Analytical data from a groundwater sample collected from the gasoline UST excavation indicated that TPHg and MTBE were present at concentrations of 41,000 µg/L and 1,800 µg/L, respectively. Benzene was reported to be below the laboratory's indicated reporting limit in the groundwater sample collected for analysis.

In 1999, Environmental Resolutions Inc. (ERI) conducted a soil and groundwater assessment which included the installation of four on-site groundwater monitoring wells (MW-1 through MW-4). Analytical data from the soil samples collected from the borings at a depth of 10.5 feet bgs indicated TPHg, benzene, and MTBE were present at concentrations up to 6,800 mg/kg, 2.6 mg/kg, and 0.71 mg/kg, respectively. The soil sample from MW-1, near the former used-oil UST, was also analyzed for TPHd and TPPH. Analytical data from this soil sample indicated TPHd and TRPH were present at concentrations of 140 mg/kg and 73 mg/kg, respectively.

Analytical data from an additional soil sample collected at a depth of 20.5 feet bgs from the MW-4 boring indicated that TPHg, benzene, and MTBE were not present above the laboratory's indicated reporting limits. Quarterly groundwater monitoring and sampling activities commenced in July 1999 and are currently ongoing.

In July 2001, ERI installed a UST pit backfill well (TP-1) and initiated monthly purging of groundwater from the UST excavation. Bi-weekly groundwater purging was conducted at the site using wells TP-1 and MW-1 from July 2001 through December 2004.

In August 2001, ERI installed three off-site monitoring wells (MW-5 though MW-7). Analytical data from soil samples collected from these well borings indicated TPHg and MTBE were not present above the laboratory's indicated reporting limits. Analytical data indicated benzene was present in one soil sample collected from MW-7 at a concentration of 0.18 mg/kg.

In addition, during June 2004, the biweekly purging events included monitoring well MW-7. Approximately 1,600 gallons of groundwater were removed from monitoring well MW-7 with a cumulative total of approximately 476,015 gallons removed from the site through December 2004.

ATC Associates became the new lead consultant for the site in January 2005.

Delta Consultants became the new consultant for the site in September 2005.

In October 2007, Delta advanced six soil borings on-site and installed an additional monitoring well, off-site, down-gradient of the former waste-oil tank location. The details of this investigation were presented in Delta's *Site Investigation Report*, dated December 28, 2007.

Historical sampling locations are presented as Figure 2.

SENSITIVE RECEPTORS

2001 – A GeoTracker database search was conducted which indicated that four public water supply wells owned by the East Bay Regional Park District (Park District) are present within one-half mile of the site. Representatives from the Park District reported having no knowledge or records of any wells located in this area and indicated that the wells may have belonged to the East Bay Municipal Utility District (EBMUD); however EBMUD also reported no knowledge or records of any wells located in this area.

2001 – A Department of Water Resources (DWR) database search was conducted which indicated four water supply wells belonging to Mills College were present within the one-half mile search area. A representative from Mills College indicated that all wells associated with Mills College had been

destroyed and Mills College was now connected to a municipal water supply. The DWR search also indicated a well was located at 3397 Arkansas Street, approximately 880 feet outside of the search area. No other wells, surface water bodies, or potentially sensitive environmental habitats were identified during ERI's field receptor search.

2006 – A survey entailing a visit to the DWR office in Sacramento was conducted to examine well log records and identify domestic wells within the survey area. The DWR survey provided two potential receptors within one mile of the site: One irrigation well located 0.9 miles northwest of the site, and one domestic/irrigation well located 1.0 mile northeast of the site. Two additional potential receptors were identified, although the specific addresses could not be verified.

SITE GEOLOGY

The site is composed of unconsolidated deposits of sand and silt in a clay matrix, with some fine-grained gravel. Clay is predominant in the upper lithology- between approximately 10 to 25 feet below ground surface (bgs). The clay unit is underlain by clay interbedded with sandy clay and clayey sand units, observed to the maximum depth explored, 44 feet bgs.

SITE HYDROGEOLOGY

During drilling groundwater has typically been encountered at depths between 5.5 and 23.5 feet bgs; corresponding with the interface of the two aforementioned lithologic units. Depth to groundwater during the well development activities was measured at depths between 5.40 to 8.50 feet bgs. The predominant historical groundwater flow at the 76 service station has been to the west (with variations to the southwest) at an average gradient of approximately 0.06 foot per foot (ft/ft).

SITE ASSESSMENT UPDATE

Additional assessment was proposed on-site in vicinity of the former waste-oil tank and the former underground storage tank (UST) basin along the northwestern and southeastern edge of the station's building to determine if a preferential pathway exists between the former UST basin and monitoring well MW-1. Field work was conducted during the week of July 6th through 10th 2009, and again on August 11th 2009, in order to assess the potential for petroleum hydrocarbon migration in the soil, groundwater, and soil gas.

On December 15, 2008, Delta submitted the *Work Plan- Additional Site Investigation.* The workplan proposed ozone/oxygen injection and was denied, under circumstances explained in a letter from the Alameda County Health Care Services Agency (ACHCSA) in their letter to COP dated January 21, 2009.

On March 16, 2009 Delta submitted the *Revised Work Plan- Site Investigation* to ACHCSA. The workplan clarified the activities to be conducted in terms of delineation and soil vapor intrusion. This workplan was approved by the ACHCSA in a letter to COP dated May 1, 2009 (Appendix A). Field activities related to the assessment are summarized in the remainder of this report.

2009 SITE INVESTIGATION

Pre field activities

Before commencing field operations, Delta obtained necessary access agreements and prepared a site-specific Health and Safety plan in accordance with state and federal requirements for use during site assessment activities. In addition, drilling permits for the proposed soil borings were obtained from the ACPWA, and are included in Appendix B. Prior to drilling, Underground Service Alert (USA) was notified as required and a private utility locating service visited the site to clear the proposed boring locations for underground utilities. The proposed soil and groundwater boring locations were further cleared by air vacuum to avoid damage to possible underground utilities. The proposed soil vapor sampling locations and some CPT and direct push drilling locations were cleared by hand auger under approval by COP.

Boring placement

Delta advanced a total of twelve (12) borings to delineate the horizontal and vertical extent of petroleum hydrocarbon impact on-site.

To evaluate the hydrocarbon impact in the vicinity of the former waste oil tank location, the former UST basin, and the station building, five (5) Cone Penetration Test (CPT) borings utilizing Laser Induced Flourescence (UVOST) technology were advanced. Each CPT location (SB-7 through SB-11) required two to three separate boreholes to complete the CPT soil logging, UVOST soil screening, soil sample collection, and groundwater sample collection. A total of 15 boreholes were cleared for the CPT/UVOST and direct push investigation. For the purposes of this report, the set of two to three boreholes at each location is considered as one boring.

To evaluate potential impacted soil vapor in the vicinity of the station building Delta advanced an additional (7) seven soil borings, subsequently converted into to seven soil vapor sampling points (SV-1 through SV-7) to be utilized during a one time soil vapor sampling event.

The locations of the borings and sample collections are depicted on Figure 2.

Scope of Assessment Field Work – UVOST/CPT/Direct Push Borings

On July 6th through July 7th 2009, Delta oversaw air knifing activities for the (above) boring locations to clear for underground utilities. Site features and the presence of underground utilities created complications and warranted relocation of some borings:

Boring SB-10 located at the eastern corner of the station building, approximately five feet from the former waste oil tank, held shallow groundwater in the upper 3.5 to 4 feet.

Boring SB-11 located in the lower south western corner of the station building, was air knifed to a 2.1 foot bgs depth, where geo-fabric material was encountered. While attempting to clear sufficient boreholes for the CPT investigation in this general vicinity, concrete was also encountered at 3' bgs. Soils in this area were visibly contaminated and had a strong petroleum hydrocarbon odor.

Boring SB-8 was relocated to remain a safe distance away from three marked underground utilities. The chosen (new) location also allowed vertical clearance so that the drill rig could operate at least 5 feet from the roofing overhang of the station building. However, during the advancement of SB-8 an underground obstruction was encountered at 8.5 feet bgs and the boring was terminated.

The remaining borings (SB-7 and SB-9) were advanced in their originally proposed locations. Ultimately, CPT boring locations SB-7 through SB-11 were cleared to the required five foot depth.

From July 8th to July 9th 2009, Gregg Drilling (overseen by Delta) used a Limited Access Rig (LAR) equipped with a mounted CPT unit to advance three CPT/UVOST borings: SB-7, SB-9, and SB-11. The workplan had called for SB-8 and SB-10 to also be advanced using the CPT/UVOST technology, but equipment breakdown impeded the advancement of these CPT/UVOST borings. Further, little force/leverage could be applied in the drive of the UVOST due to the inability to stabilize the rig across uneven site surfaces. In combination with friction created by the subsurface (clay lithology_) prevented UVOST advancement greater than 21.5 feet bgs (achieved at the SB-7 location). Following unsuccessful attempts at each boring locations, UVOST technologies were abandoned for the purposes of the onsite investigation.

Subsequent to the advancement of the CPT/UVOST boring, additional borings were advanced using direct push technology. Soil samples were collected using a two-inch diameter direct push rod equipped with 4-foot, 1.5 inch diameter acetate sampling liners. Soil samples were logged using the Unified Soil Classification System (UCSS) for lithologic interpretation and field screened for the presence of volatile organic compounds at five foot intervals

using a pre-calibrated photo-ionization detector (PID). Observed groundwater levels, PID readings, soil descriptions, and field observations were recorded on the boring logs and are included as Appendix C.

Upon completion of each direct push soil borings, a 1-inch temporary PVC well with a 5 foot screened interval was placed to correspond with first encountered groundwater. Groundwater samples were collected from borings SB-7, SB-9, SB-10, and SB-11 using a stainless steel bailer through the temporary PVC wells. As stated above, the boring SB-8 was only advanced to approximately 8.5 feet bgs due to an underground obstruction and a grab groundwater sample was not collected. The depths of first encountered groundwater and static groundwater are presented on the boring logs in Appendix C.

Once the direct push technology boring was advanced to its final depth and all soil and groundwater samples were collected, the temporary PVC well was used as a tremie pipe to backfill the boreholes using neat cement. Both the CPT/UVOST and direct push boreholes were backfilled in accordance with ACPWA rules and regulations, selected boreholes were backfilled in the presence of ACPWA personnel. After the cement grout was allowed to dry, the boreholes were completed with approximately 4 to 5 inches of concrete dyed to match the existing surface conditions.

Selected soil samples for laboratory analysis were submitted for analysis for TPPH, BTEX, MTBE, di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), ethanol, and ethylene dibromide (EDB) by EPA Method 8260B.

Groundwater samples for laboratory analysis were submitted for analysis for TPHd by EPA Method 8015M and TPHg, BTEX, MTBE, di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), ethanol, and ethylene dibromide (EDB) by EPA Method 8260B.

Samples selected for laboratory analysis were properly labeled and placed on ice pending transportation to a BC Laboratories (a California Certified Laboratory) and accompanied by appropriate chain of custody documentation during transportation to the laboratory. Both soil and groundwater laboratory analytical reports are included as Appendix D.

Scope of Assessment Field Work – Soil Vapor Point Construction

Seven transient (one-time) soil vapor points (SV-1, SV-2, SV-3, SV-4, SV-5, SV-6, and SV-7) were advanced by first coring an approximately 3.5-inch diameter hole through the asphalt surface and advancing to 5 feet bgs using a hand auger. Once the soil gas sampling point borings (SV-1 though SV-7) were advanced to their final depth, the borings were backfilled with #3 sand

from 5-feet bgs to 3.5-feet bgs. Bentonite granules were placed from 3.5-feet bgs to 2.5 bgs, and were hydrated in-place. The remainder of the borehole was backfilled with a thick bentonite grout to just below the ground surface. Once the bentonite grout had been given appropriate time to slightly harden, the boreholes were completed by capping the grout with cold asphalt patch to the ground surface. A soil gas sampling point construction diagram is included as Figure 3.

A soil sample was collected from the bottom of each soil vapor boring (SV-1 through SV-7) using hand operated slide hammer sampler equipped with 6-inch long 1.5-inch diameter brass sampling liner. Soil samples were collected between 4.5 and 5.0 feet bgs in each boring, with the exception of SV-2. During clearance of the SV-2 location, visible moisture was observed at a depth of 3.0 feet bgs. Out of precaution for future vapor sampling, Delta elected to terminate the boring at 4 feet bgs; acquiring a soil sample from 3.5 to 4 feet bgs. Soil samples were logged using the Unified Soil Classification System (USCS) for lithologic interpretation. Observed groundwater levels, soil descriptions, and field observations were recorded on the boring logs. Boring logs of the soil vapor sampling points are included as Appendix C.

Selected soil samples were submitted for laboratory analyses for TPHd by EPA method 8015M and TPHg, BTEX, and 8 oxygenates by EPA Method 8260B, and Total Oil and Grease (HEM) by EPA method 1664. Samples selected for laboratory analysis were properly labeled, placed on ice, and accompanied by appropriate chain-of-custody to a California-certified laboratory (BC Labs). Laboratory analytical reports are included in Appendix E.

Scope of Assessment Field Work – Soil Vapor Point Sampling

On August 11, 2009, soil vapor points SV-1 through SV-7 were sampled by TEG, under the supervision of Delta. The soil vapor sampling points were allowed to stabilize for at least two weeks in the absence of measurable precipitation.

At each of the soil gas sampling point locations (SV-1 through SV-7), a boring was advanced using direct push technology to place a stainless steel soil gas sampling tip into the previously installed sand zone (approximately 3.5 to five feet bgs). A 0.25-inch Teflon tube was then connected to the sampling tip through the direct push rod. TEG then retracted the direct push rod approximately one inch in order to expose the screen of the soil gas sampling tip and allow adequate gas flow for sampling. A seal of hydrated bentonite granules was placed at the ground surface where the direct push rod exits the asphalt/concrete. A rubber seal was placed where the Teflon sampling tube exits the direct push rod above the ground surface.

A purge line volume test was first performed at SV-6. It was determined one purge volume was optimum for the soil gas sampling. After purging one

volume, TEG collected a soil gas sample though the Teflon tubing into a clean glass syringe while applying 1,1-Difluoroethane (1,1-DFA) leak check compound to the air surrounding the ground surface bentonite seal, Teflon tubing, and sampling valves. TEG performed a field analysis using a mobile laboratory. After a valid analysis was performed, the direct push equipment with the soil gas sampling tip was advanced in the same borehole to deeper predetermined depths (of five feet bgs). Additional soil gas samples were collected and field analyzed using the methods described above.

Depths from which samples were collected varied due to the ability of vapor to flow from the clay lithology, and through the sand pack. No soil vapor samples were collected from the SV-1, SV-3 and SV-5 due to the inability of vapor to flow across the clay lithology.

All soil gas point field samples were analyzed using the on-site mobile laboratory for TPHg, BTEX, MTBE, TAME, DIPE, TBA, EDB, and EDC by EPA Method 8260B. In addition, oxygen (O_2), carbon dioxide (CO_2), and methane (CH_4) will be analyzed by Gas Chromatograph and Thermal Conductivity Detection (GC/TCD). Additionally, analysis for the 1,1-DFA leak detection compound was performed. Laboratory reports for soil gas sampling are included in Appendix E.

Once all soil gas samples had been collected and analyzed, the soil gas sampling point boreholes were backfilled with neat cement to just below the surface. The boreholes were completed with concrete and dyed to match the surrounding concrete/asphalt.

HANDLING OF GENERATED WASTE

Drill cuttings generated during boring advancement activities were placed into properly labeled 55-gallon Department of Transportation (DOT) approved steel drums and stored on-site. These waste materials have been accepted for disposal and were transported to a ConocoPhillips-approved facility on August 12, 2009. (Reference provided as Attachment F).

SUMMARY OF FINDINGS

Summary of Findings- UVOST/CPT Results

Borings SB-7, SB-9, and SB-11 were advanced to depths of 19 feet bgs, 18 feet bgs, and 21 feet bgs, respectively using CPT/UVOST technology. As stated above, the borings were terminated due to refusal from the underlying stiff clay. A summary of the results of the CPT/UVOST investigation are below:

- SB-7: CPT results indicate the geology in the vicinity of this boring is composed of interbedded layers of stiff clay and stiff sandy/silty clay to approximately 18.5 feet bgs. A sand/silty sand layer was encountered

from 18.5 feet to 19 feet bgs. Drilling refusal was encountered at 19 feet bgs. UVOST results indicate low levels of petroleum hydrocarbon impact in the upper 5 feet and moderate levels of impact occurring from approximately 6 feet to 7 feet bgs. Very low to no impact was observed deeper than 8.5 feet bgs.

- SB-9: CPT results indicate the geology in the vicinity of this boring is composed mostly of stiff clay to approximately 16 feet bgs. From 16 feet to 17.5 feet bgs the stiff clay is also interbedded with stiff clayey silt. A sand/silty sand layer was encountered from 17.5 feet to 18 feet bgs. Drilling refusal was encountered at 18 feet bgs. UVOST results indicate low levels of petroleum hydrocarbon impact from just below the ground surface to approximately 10 feet bgs and from approximately 15 feet to 17 feet bgs.

- SB-11: CPT results indicate the geology in the vicinity of this borings is composed of interbedded layers of stiff clay and stiff sandy/silty clay to approximately 20.5 feet bgs. A sand/silty sand layer was encountered from 20.5 feet to 21 feet bgs. Drilling refusal was encountered at 21 feet bgs. UVOST results indicate low levels of petroleum hydrocarbon impact in the upper 6.5 feet bgs. Very low to no impact was observed deeper than 6.5 feet bgs.

CPT/UVOST boring logs and all calculations and assumptions used to interpret the data have been included in Gregg's report (included as Appendix G).

Summary of Findings- Soil Analytical Results

A total of seven soil samples were collected from the soil vapor borings. A total of twelve soil samples were collected from the five direct push borings. Soil sampling results indicated the maximum concentrations of the chemicals of concern were as follows:

- The highest concentrations of TPHg were encountered in the soil samples collected from SB-7 at 15.5 feet bgs (260 mg/kg), SB-8 at 7 feet bgs (760 mg/kg), SB-10 at 12 feet bgs (400 mg/kg), SB-10 at 18 feet bgs (290 mg/kg), and SB-11 at 15 feet bgs (200 mg/kg).
- Concentrations of benzene were encountered in the soil samples collected from SV-4 at 4.5 feet bgs (0.027 mg/kg), SB-7 at 15 feet bgs (0.008 mg/kg), and SB-11 at 15 feet bgs (0.26 mg/kg).
- Concentration of toluene was encountered in the soil sample collected from SB-11 at 15 feet bgs (0.0094 mg/kg).
- The highest concentrations of ethyl-benzene were encountered in the soil samples collected from SB-7 at 7.5 feet bgs (5.7 mg/kg), SB-8 at 7 feet bgs (7.7 mg/kg), and SB-10 at 12 feet bgs (6.1 mg/kg) and 18 feet bgs (5.0 mg/kg).

- The highest concentrations of total xylenes were encountered in the soil samples collected from SB-7 at 7.5 feet bgs (32 mg/kg), and SB-10 at 12 feet bgs (46 mg/kg) and 18 feet bgs (34 mg/kg).
- Concentrations of MTBE were encountered in the soil samples collected from SV-4 at 4.5 feet bgs (0.02 mg/kg), SB-7 at 15.5 feet bgs (0.0085 mg/kg), and SB-9 at 15.5 feet bgs (0.019 mg/kg).
- Concentration of TBA was encountered in the soil sample collected from SV-4 at 4.5 feet bgs (0.16 mg/kg).

Concentrations of ETBE, TAME, DIPE, 1,2-DCA, EDB, and ethanol were not encountered in any of the 19 soil samples collected and submitted for analysis. Laboratory analytical results for the collected soil samples are included as Appendix D.

Summary of Findings – Grab Groundwater Analytical Results

A total of three grab groundwater samples were collected from borings SB-7, SB-9, and SB-11. Grab groundwater sampling results indicated the maximum concentrations of the chemicals of concern were as follows:

- TPHg was reported in the grab groundwater samples collected from SB-7 (7,900 µg/L), SB-9 (630 µg/L), and SB-11 (310 µg/L).
- TPHd was reported in the grab groundwater samples collected form SB-7 (1,400 µg/L), SB-9 (350 µg/L), and SB-11 (230 µg/L).
- Benzene was reported in the grab groundwater samples collected from SB-7 (16 µg/L), SB-9 (62 µg/L), and SB-11 (27 µg/L).
- Toluene was reported in the grab groundwater samples collected from SB-7 (6.8 µg/L), SB-9 (3.9 µg/L), and SB-11 (1.4 µg/L).
- Ethyl-benzene was reported in the grab groundwater samples collected form SB-7 (270 µg/L), SB-9 (3.8 µg/L), and SB-11 (9.7 µg/L).
- Total xylenes were collected form the grab groundwater samples collected from SB-7 (1,400 µg/L), SB-9 (29 µg/L), and SB-11 (7.1 µg/L).
- MTBE was reported in the grab groundwater samples collected form SB-7 (21 µg/L), SB-9 (50 µg/L), and SB-11 (25 µg/L).
- TBA was reported in the grab groundwater sample collected from SB-11 (79 µg/L).

ETBE, TAME, DIPE, 1,2-DCA, EDB, and ethanol were not reported in any of grab groundwater samples collected from borings SB-7, SB-9, and SB-11. Laboratory analytical results for the collected grab groundwater samples are included as Appendix D.

Summary of Findings- Soil Gas Analytical Results

A total of 7 soil gas samples, including purge line test and duplicate samples, were collected and analyzed in the mobile laboratory. No soil vapor samples were collected from the SV-1, SV-3 and SV-5 due to the inability of vapor to flow across the clay lithology.

The primary finding was that the soil gas contained oxygen at near atmospheric levels (20% - 21%) in the upper soil layers (5 bgs) in the vicinity of the former waste oil tank. Oxygen was limited in two other locations also in the upper soil layers (5.2% - 11%) in the vicinity of the western and southern ends of the service station building. The clayey soil affects diffusion of atmospheric oxygen such that in areas where the upper soil layers are more clayey, less oxygen is observed.

Soil gas field sampling results indicated the concentrations of the chemicals of concern were as follows:

- TPHg was reported in the soil vapor samples collected from SV-2 (23 $\mu g/m^3$), SV-4 (67,000,000 $\mu g/m^3$), SV-6 (3,000,000 $\mu g/m^3$), and SV-7 (82,000,000 $\mu g/m^3$).
- Benzene was reported in the soil vapor samples collected from SV-2 (350 $\mu g/m^3$), SV-4 (1,100 $\mu g/m^3$), SV-6 (2,000 $\mu g/m^3$), and SV-7 (120,000 $\mu g/m^3$).
- Toluene was reported in the soil vapor sample collected from SV-2 at 370 $\mu g/m^3$.
- Ethyl-benzene was reported in the soil vapor samples collected from SV-2 (370 $\mu g/m^3$), SV-4 (17,000 $\mu g/m^3$), SV-6 (2,700 $\mu g/m^3$), and SV-7 (32,000 $\mu g/m^3$).
- M,P-xylenes were reported in the soil vapor samples collected from SV-2 (380 $\mu g/m^3$), SV-4 (6,200 $\mu g/m^3$), SV-6 (2,200 $\mu g/m^3$), and SV-7 (330 $\mu g/m^3$).
- O-xylenes were reported in the soil vapor samples collected from SV-2 (140 $\mu g/m^3$) and SV-7 (130 $\mu g/m^3$).
- Carbon dioxide was reported in the soil vapor samples collected from SV-2 (5.1% by volume) and SV-4 (9.5% by volume).
- Methane was reported in the soil vapor samples collected from SV-4 (20,000 parts per million by volume) and SV-7 (24,000 parts per million by volume).

MTBE, TBA, ETBE, TAME, and DIPE were not reported above the laboratory's indicated reporting limit in any off the soil vapor samples collected. Additionally, the leak check compound 1,1-DFA was not reported above the laboratory's indicated reporting limit in any of the soil vapor samples. Therefore, the soil vapor analytical results should be considered valid. All soil vapor analytical results are presented as Table 3.

The reported soil vapor concentrations of TPHg, benzene, and ethyl-benzene all exceeded their respective residential and commercial shallow soil gas Environmental Screening Levels (ESLs) as set by the San Francisco Bay Regional Water Quality control Board. The ESLs are presented on Table 3. Laboratory analytical results for the collected soil vapor samples are included as Appendix E.

DISCUSSION AND RECOMMENDATIONS

Field work was conducted during the week of July 6th through July 10th, 2009, and again on August 11, 2009, in order to assess the horizontal and vertical potential for petroleum hydrocarbon migration in the soil, groundwater, and soil gas. These investigations were conducted to determine if a pathway existed between the former UST pit and MW-1. A total of five CPT/direct push borings were sited along the southeast, southwest and northwest portions of the station building. Seven soil vapor sampling points were installed along all sides of the station building.

Subsurface geology consists of clay from the surface to 25 feet. Below this clay unit is another clay unit that contains discontinuous stringers or small deposits of sandy clay and clayey sand to the maximum depth explored, 44 feet bgs. This discontinuity of sandy clay/clayey sand stringers or deposits is demonstrated in the boring logs of SB-7, SB-9, and SB-11 that show first water being encountered at depths of 23.5 feet bgs, 26 feet bgs, and 42 feet bgs, respectively.

Results of the UVOST analyses of borings SB-7, SB-9, and SB-11 indicate low levels of petroleum hydrocarbons from approximately five feet bgs to 17 feet bgs. Analyses of soil samples extracted from direct push borings and the soil vapor points indicate petroleum hydrocarbon impact from 4.5 feet bgs to approximately 18.5 feet bgs (Table 1). Hydrocarbon concentrations decrease rapidly with depth within the clay soil column.

Groundwater samples were collected from SB-7, SB-9, and SB-11 (Table 2). SB-7, located between the southeast side of the station building and the former UST pit, had the highest concentrations of petroleum hydrocarbons. SB-9, located near the former WOT, and SB-11, located on the southwest side of the station building had much lower concentrations of petroleum hydrocarbons. This appears to indicate that there is no preferred pathway between the former UST pit and MW-1.

Of the seven soil vapor points installed, only SV-2, SV-4, SV-6, and SV-7 had extractable soil vapors (Table 3). The soil vapor points that were sampled contained very high concentrations of petroleum hydrocarbons. SV-4, located of the southwest side of the station building, and SV-6 and SV-7, located on the northwest side of the station building near the property line, had the highest concentrations of TPHg, Benzene, and Ethyl-benzene. MTBE was not detected in the soil vapor analyses.

Analysis of the data gathered indicates that the highest concentration of petroleum hydrocarbons in groundwater occurs in the vicinity of SB-7, SB-9, and SB-11. Though concentrations of petroleum hydrocarbons exist in the clay soil, little can be done to eliminate or reduce these concentrations due to the tight structure of the clay with the exception of site excavation.

Delta recommends a magnesium sulfate feasibility test for MW-1 and MW-3. This recommendation is based on the analyses of groundwater for nitrates, sulfates, ferrous iron, dissolved oxygen (DO) and oxidation-reduction potential (ORP). The groundwater currently exists in an anaerobic environment. This type of environment is very receptive to Delta's patented magnesium sulfate treatment, but not receptive to ozone/oxygen treatment due to the lack of deleted or nearly depleted oxygen within the groundwater. This treatment is currently in use in the southern San Francisco Bay area. The Bay Area site is the 76 Service Station No. 4386, located at 2690 Union Avenue, San Jose, CA. Santa Clara County Department of Environmental Health approved the use of magnesium sulfate for remedial enhancement work in July, 2008 by approving the Delta work plan titled *Remedial Method Assessment and Remediation Enhancement Work Plan* dated July 2, 2008. The remedial enhancement work is continuing. A report titled *Remedial Enhancement Report* dated February 18, 2009 detail the results of the biological and chemical degradation of total petroleum hydrocarbons as TPHg, BTEX, and MTBE to date. **In general, the results of the first injection of magnesium sulfate into the groundwater shows that TPHg concentrations decreased 71%, Toluene decreased 91%, and total Xylenes decreased 95% from their pre-injection levels.** Benzene, Ethyl-benzene and MTBE remained relatively stable as the microbes are selectively degrading other constituents first. This degradation of constituents occurred during the period of October 22, 2008 to January 14, 2009.

LIMITATONS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta 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 Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

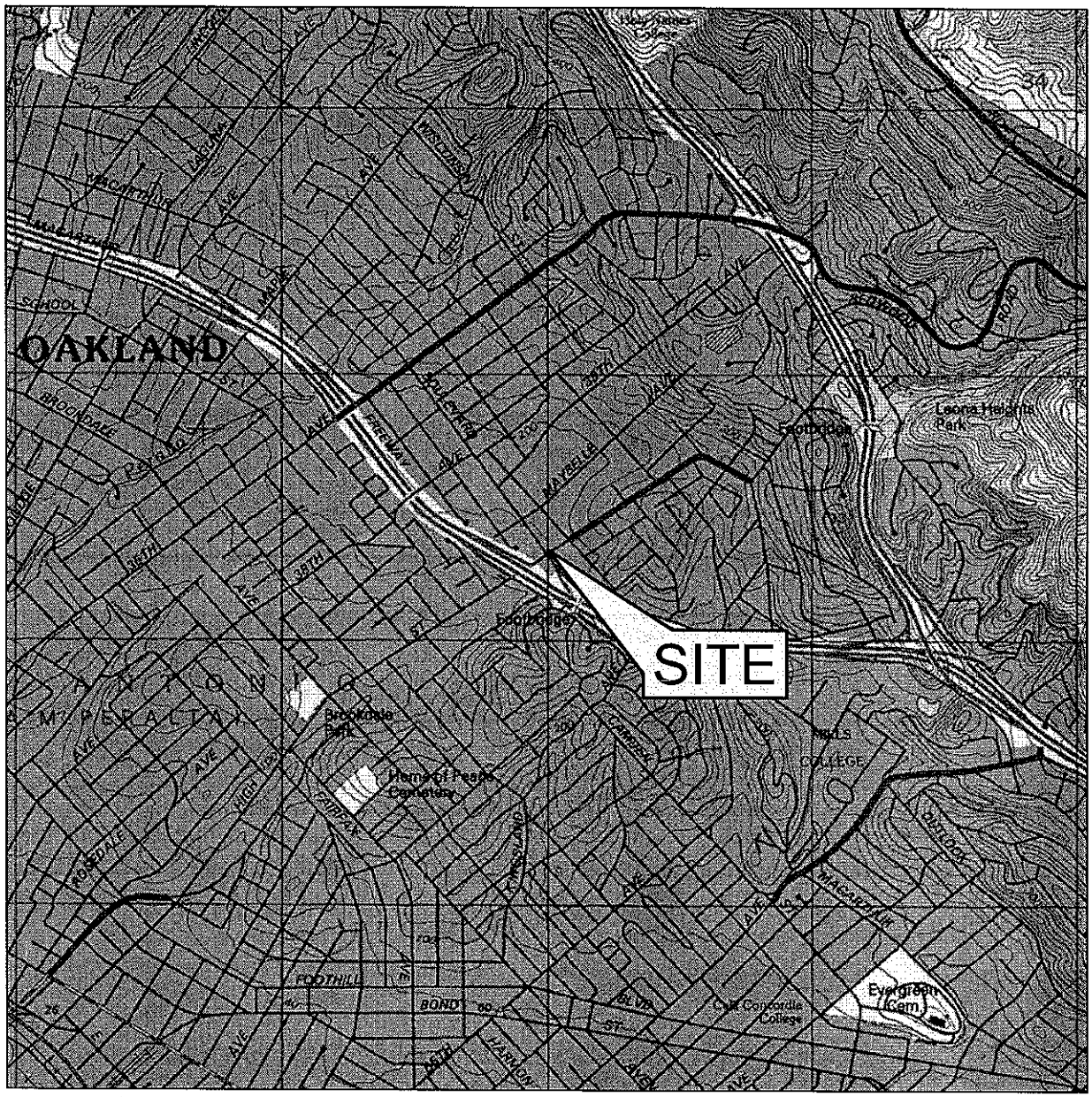
*****

TABLES

FIGURES

APPENDICES

Figures



North

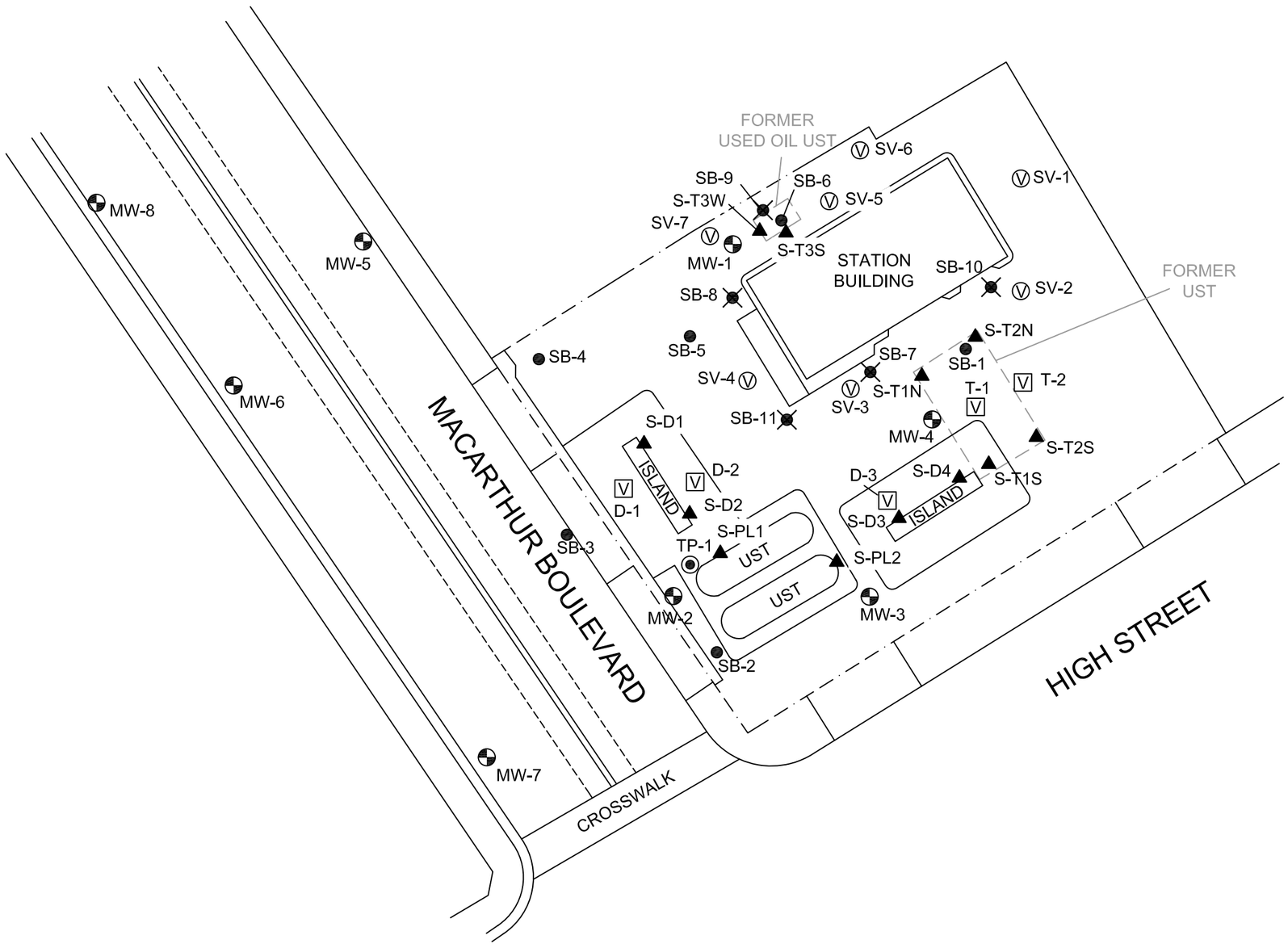
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND EAST QUADRANGLE, 1967

FIGURE 1
SITE LOCATOR MAP

76 SERVICE STATION NO. 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C101-156	DRAWN BY JH 03/01/07
FILE NO. Site Locator	PREPARED BY MC
REVISION NO.	REVIEWED BY

DELTA



LEGEND

- GROUNDWATER MONITORING WELL
- TANK PIT BACKFILL WELL
- SOIL & GROUNDWATER SAMPLE LOCATION (DELTA, 2009)
- SOIL VAPOR SAMPLE LOCATION (DELTA, 2009)
- SOIL & GROUNDWATER BORING LOCATION (DELTA, 2007)
- SOIL SAMPLE LOCATION (TOSCO, 1998)
- SOIL VAPOR SAMPLE LOCATION (PACIFIC, 1997)

North

0 40 FT

SCALE

FIGURE 2

SITE MAP WITH HISTORICAL SAMPLING LOCATIONS

76 SERVICE STATION NO. 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C101-156	DRAWN BY JH 07/28/09
FILE NO. 76-1156	PREPARED BY SM
REVISION NO. 8	REVIEWED BY JB

DELTA®

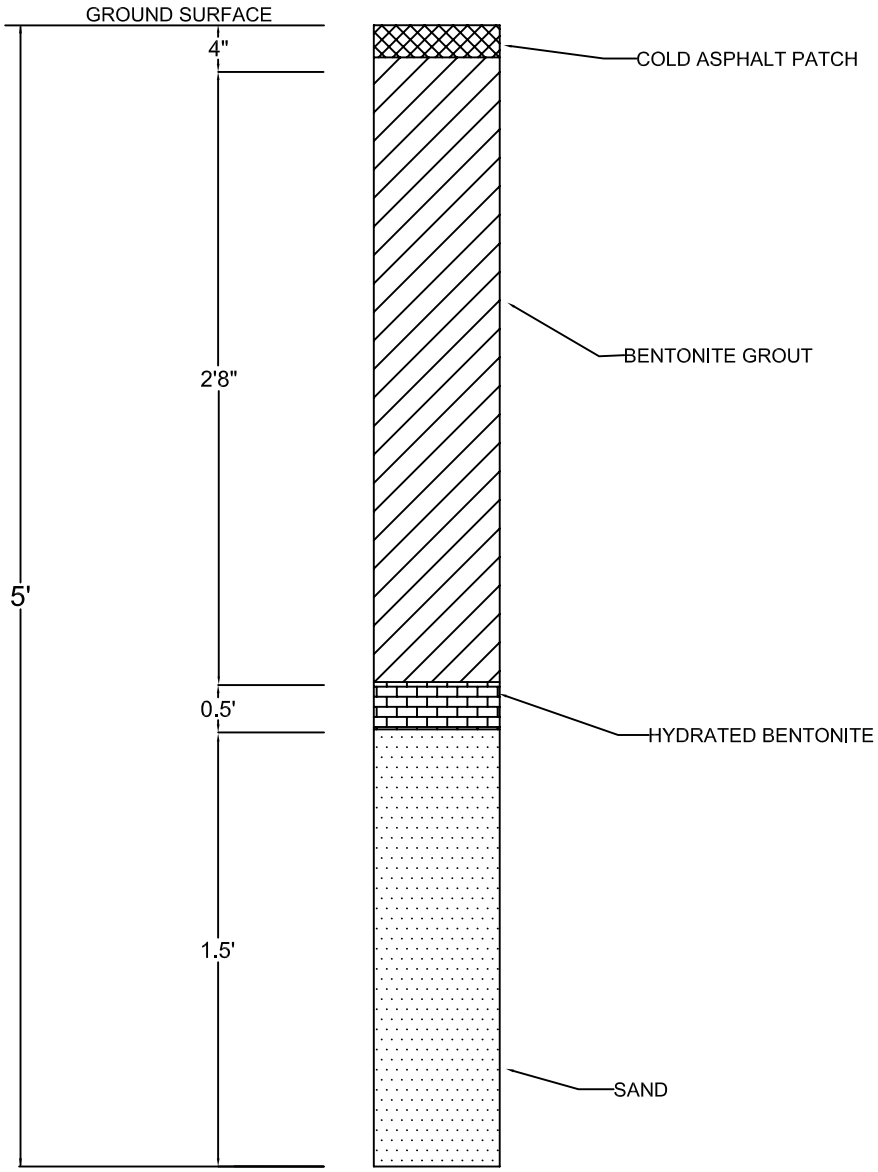


FIGURE 3

SOIL VAPOR POINT
(TYPICAL)

76 SERVICE STATION NO. 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C101156	DRAWN BY JH 03/13/09
FILE NO. 1156-SVP-LDETAIL	PREPARED BY JB
REVISION NO.	REVIEWED BY

DELTA®

Tables

Table 1
SOIL ANALYTICAL RESULTS
ConocoPhillips Station No. 1156
Oakland, California

Sample ID	Date	Time	Sample Depth (feet)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)
Soil																
SV-1-S	7/7/09	10:15	4.5	ND<0.20	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.010	ND<0.0050	ND<0.050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SV-2-S	7/7/09	14:05	3	ND<0.20	ND<0.0050	ND<0.0050	N<0.0050	ND<0.010	ND<0.0050	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SV-3-S	7/7/09	13:25	4.5	**17**	ND<0.025	ND<0.025	ND<0.025	**0.15**	ND<0.025	ND<0.25	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.0050	ND<5.0
SV-4-S	7/7/09	12:40	4.5	**0.23**	**0.027**	ND<0.0050	ND<0.0050	ND<0.010	**0.02**	**0.16**	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SV-5-S	7/7/09	11:00	4.5	**24**	ND<0.050	ND<0.050	ND<0.050	**0.15**	ND<0.050	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.0050	ND<10
SV-6-S	7/7/09	9:45	4.5	ND<0.20	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.010	ND<0.0050	ND<0.050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SV-7-S	7/7/09	11:30	4.5	**4.6**	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.10	ND<0.0050	ND<0.050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SB-7 @ 7.5-8	7/9/09	15:05	7.5-8	**260**	ND<0.50	ND<0.50	**5.7**	**32**	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.0050	ND<100
SB-7 @ 15.5-16	7/9/09	15:10	15.5-16	**1.3**	**0.0080**	ND<0.0050	ND<0.0050	**0.023**	**0.0085**	ND<0.050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SB-7 @ 23-23.5	7/9/09	15:15	23-23.5	ND<0.20	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.010	ND<0.0050	ND<0.050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SB-8 @ 7.0-7.5	7/10/09	13:21	7.0-7.5	**760**	ND<0.50	ND<0.50	**7.7**	ND<1.0	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.0050	ND<250
SB-9 @ 15.5-16	7/8/09	18:35	15.5-16	ND<0.20	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.010	**0.019**	ND<0.050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SB-9 @ 26	7/8/09	18:40	26	ND<0.20	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.010	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SB-10 @ 12-12.5	7/10/09	7:55	12-12.5	**400**	ND<0.50	ND<0.50	**6.1**	**46**	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.0050	ND<100
SB-10 @ 18-18.5	7/10/09	8:00	18-18.5	**290**	ND<0.50	ND<0.50	**5.0**	**34**	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.0050	ND<100
SB-10 @ 22.5-23	7/10/09	8:05	22.5-23	**0.78**	ND<0.0050	ND<0.0050	ND<0.0050	**0.056**	ND<0.0050	ND<0.050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SB-11 @ 7.5-8	7/10/09	10:50	7.5-8	**41**	ND<0.050	ND<0.050	**0.50**	**0.77**	ND<0.050	ND<0.50	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.0050	ND<10
SB-11 @ 15.5-16	7/10/09	10:55	15.5-16	**200**	**0.26**	**0.0094**	ND<0.0050	**0.015**	ND<0.0050	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
SB-11 @ 41-41.5	7/10/09	11:00	41-41.5	ND<0.20	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.010	ND<0.0050	ND<0.050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0
1156-CompA	7/10/09	13:55	--	**18**	ND<0.0050	ND<0.0050	**0.081**	**0.084**	ND<0.0050	ND<0.050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<1.0

TPPH = total purgeable petroleum hydrocarbons by EPA Method 8260B
BTEX = benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B
DIPE = di-isopropyl ether by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA Method 8260B
EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method 8260B
Ethanol was analyzed by EPA Method 8260B
mg/kg = milligrams per kilogram
ND = not detected above the laboratory detection limit
Bold = detected compound concentration
EPA = US Environmental Protection Agency

Table 2

GRAB GROUNDWATER ANALYTICAL RESULTS
ConocoPhillips Station No. 1156
Oakland, California

Sample ID	Date	Time	TPH-G (µg/L)	TPH-D (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	ETBE (µg/L)	TAME (µg/L)	DIPE (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Ethanol (µg/L)
Groundwater																
SB-7	7/9/09	15:25	**7,900**	**1,400**	**16**	**6.8**	**270**	**1,400**	**21**	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<250
SB-9	7/8/09	18:58	**630**	**350**	**62**	**3.9**	**3.8**	**29**	**50**	ND<10	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<250
SB-11	7/10/09	11:55	**310**	**230**	**27**	**1.4**	**9.7**	**7.1**	**25**	**79**	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<250
1156-CompB	7:10/09	13:45	**73**	**--**	ND<0.50	ND<0.50	**0.87**	**4.7**	ND<0.50	ND<10	**0.87**	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<250

TPH-G = total petroleum hydrocarbons as gasoline by EPA Method 8260B
TPH-D total petroleum hydrocarbons as diesel by EPA Method 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B
DIPE = di-isopropyl ether by EPA Method 8260B
1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA Method 8260B
EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method 8260B
Ethanol was analyzed by EPA Method 8260B
µg/L = micrograms per liter
ND = not detected above the laboratory detection limit
Bold = detected compound concentration
EPA = US Environmental Protection Agency

Table 3
SOIL GAS ANALYTICAL RESULTS
ConocoPhillips Station No. 1156
Oakland, California

Sample ID	Date	Time	Sample Depth (feet)	TPH-G ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	m,p-Xylenes ($\mu g/m^3$)	o-Xylenes ($\mu g/m^3$)	Total Xylenes ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	TBA ($\mu g/m^3$)	ETBE ($\mu g/m^3$)	TAME ($\mu g/m^3$)	DIPE ($\mu g/m^3$)	EDB ($\mu g/m^3$)	1,2-DCA ($\mu g/m^3$)	Ethanol ($\mu g/m^3$)	1,1 DFA ($\mu g/m^3$)	Oxygen (% Vol)	Carbon Dioxide (% Vol)	Methane (ppmV)
Soil Gas																						
SV-2	8/11/09	14:43	5	**23**	**350**	**370**	**370**	**380**	**140**	--	<100	<10,000	<100	<100	<100	--	--	--	<10,000	**11**	**5.1**	<500
SV-4	8/11/09	13:49	3.5	**67,000,000**	**1,100**	<200	**17,000**	**6,200**	<100	--	<100	<10,000	<100	<100	<100	--	--	--	<10,000	**5.2**	**9.5**	**20,000**
SV-6	8/11/09	10:40	5	**3,000,000**	**2,000**	<200	**2,700**	**2,200**	<100	--	<100	<10,000	<100	<100	<100	--	--	--	<10,000	**20**	<1.0	<500
SV-7	8/11/09	12:09	3.5	**82,000,000**	**120,000**	<200	**32,000**	**330**	**130**	--	<100	<10,000	<100	<100	<100	--	--	--	<10,000	**21**	<1.0	**24,000**
Shallow Soil Gas CHHSLs for Residential Land Use				NE	**36.2**	**135,000**	NE	**319,000**	**315,000**	NE	**4,000**	NE	NE	NE	NE	NE	**49.6**	NE	-	-	-	-
Shallow Soil Gas CHHSLs for Commercial Land Use				NE	**122**	**378,000**	NE	**887,000**	**879,000**	NE	**13,400**	NE	NE	NE	NE	NE	**167**	NE	-	-	-	-
Lowest Residential Shallow Soil Gas ESLs				**10,000**	**84**	**63,000**	**980**	NE	NE	**21,000**	**9,400**	NE	NE	NE	NE	NE	**94**	NE	-	-	-	-
Lowest Commercial Shallow Soil Gas ESLs				**29,000**	**280**	**180,000**	**3,300**	NE	NE	**58,000**	**31,000**	NE	NE	NE	NE	NE	**310**	NE	-	-	-	-

TPH-G = total petroleum hydrocarbons as gasoline by EPA Method 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B

DIPE = di-isopropyl ether by EPA Method 8260B
EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method TO-15
Ethanol was analyzed by EPA Method TO-15
1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA MethodTO-15
1,1-DFA = 1,1 - Difluoroethane (leak check)

dup = duplicate sample
$\mu g/m^3$ = micrograms per cubic meter
ppmV = parts per million by volume
% Vol = percent by volume
Bold = Compound concentrations above reporting limit
** = Sample analyzed by EPA Method TO-15
NE = Not Established

CHHSLs = California Human Health Screening Levels set by the California EPA (January 2005)
ESLs = Environmental Screening Levels set by the San Francisco Bay Regional Water Quality Control Board (November 2007)

Appendix A

ACHCS Letter Dated May 1, 2009

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) 337-93

May 1, 2009

Terry Grayson
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Carole Quick and Lorraine Mudget
P.O. Box 2165
Gearheart, OR 97138

Rajan Goswamy
4276 MacArthur Boulevard
Oakland, CA 94619

Subject: Fuel Leak Case No. RO0000409 and Geotracker Global ID T0600102279, Unocal #1156, 4276 MacArthur Boulevard, Oakland, CA 94619

Dear Mr. Grayson, Ms. Quick, Ms. Mudget, and Mr. Goswamy:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site, including the recently submitted document entitled, "*Revised Work Plan – Site Investigation*," dated March 16, 2009 (Work Plan), which was prepared on behalf of ConocoPhillips by Delta Environmental. The Work Plan was prepared in response to comments in ACEH correspondence dated January 21, 2009. The Work Plan proposes soil, groundwater, and soil vapor sampling in the area of the former UST tank pit, station building, and monitoring well MW-1.

The proposed scope of work may be implemented provided that the technical comments below are addressed and incorporated during the proposed field investigation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed. We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

1. **Total Petroleum Hydrocarbon Analyses for Soil and Groundwater Samples from CPT Borings.** We request that soil and grab groundwater samples from the proposed CPT borings be analyzed for Total Petroleum Hydrocarbons (TPH) as diesel in addition to the proposed analyses for TPHg, BTEX, and various fuel oxygenates.

2. **Additional Analyses for Soil and Groundwater Samples from CPT Borings.** In addition to laboratory analyses for petroleum hydrocarbons and oxygenates, the Work Plan proposes additional analyses of soil and groundwater samples from the proposed CPT soil borings that include nitrate, sulfate, bromate, ferrous iron, bromide, chromium VI, total chromium, manganese, molybdenum, selenium, vanadium, and total organic carbon. We assume that these additional analyses have been proposed to assist in future evaluation of in-situ remedial methods. ACEH is not requiring that these additional analyses be performed but does not object to these additional analyses provided that they are necessary for future evaluation of the feasibility of remedial technologies.

3. **Metals Analyses for Soil Samples from Soil Vapor Probe Borings.** The Work Plan proposes that soil samples from the soil vapor probe borings be analyzed for CAM 17 metals in addition to analyses for petroleum hydrocarbons and fuel oxygenates. ACEH is not requiring or requesting these metals analyses.

4. **Groundwater Monitoring.** Groundwater monitoring may be reduced in frequency from quarterly to semi-annual sampling. We request that semi-annual groundwater sampling take place during the first and third quarters. Please present the results in the Groundwater Monitoring Reports requested below.

TECHNICAL REPORT REQUEST

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

- **September 9, 2009** – Site Investigation Report
- **30 days following end of First and Third Quarters** – Semi-annual Groundwater Monitoring Report

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/cleanup/electronic_reporting).

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 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) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032

James Barnard, Delta Environmental Consultants, Inc., 11050 White Rock Road, Suite 110 Rancho Cordova, CA 95670

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**ISSUE DATE:** July 5, 2005
	REVISION DATE: March 27, 2009
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

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 My Le Huynh.
   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://alcoftp1.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 @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) If site is a new case without an RO# use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

Appendix B

ACHCS Approved Drilling Permit

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: 06/24/2009 By jamesy

Permit Numbers: W2009-0597
Permits Valid from 07/06/2009 to 07/10/2009

Application Id: 1244664860774 **City of Project Site:** Oakland
Site Location: 76 Service station No. 1156, 4276 MacArthur Bl, Oakland, CA 94619
Project Start Date: 07/06/2009 **Completion Date:** 07/10/2009
Assigned Inspector: Contact John Shouldice at (510) 670-5424 or johns@acpwa.org

Applicant: DELTA Consultants - Jim Barnard **Phone:** 916-503-1274
11050 White Rock Rd. Ste. 110, Rancho Cordova, CA 95670
Property Owner: Conoco Phillips **Phone:** 916-558-7666
76 Broadway, Sacramento, CA 95818
Client: ** same as Property Owner **

Total Due: $230.00
Receipt Number: WR2009-0229 **Total Amount Paid:** $230.00
Payer Name : Delta Envr. Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 120 Boreholes
Driller: Gregg Drilling, Inc - Lic #: 485165 - Method: CPT **Work Total: $230.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2009-0597	06/24/2009	10/04/2009	120	4.00 in.	45.00 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. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

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 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 John Shouldice for an inspection time at 510-670-5424 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. 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.

7. 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.

Appendix C

Boring Logs

Delta Consultants

Project No: C101156	Client: **ConocoPhillips**	Boring No: SB-7
Logged By: S. Meninger/ C. Morgan	Location: **4276 MacArthur Blvd.** Oakland, California	Date Drilled: 07/09/09
Driller: **Gregg Drilling**		Page **1** of **2**
Drilling Method: Macrocore	Hole Diameter: 3"	
Sampling Method: Continuous	Hole Depth: 30'	
Casing Type: N/A	First Water Depth: 23.5	
Slot Size: N/A	Static Water Depth: 6.21	
Gravel Pack: N/A	Well Depth: N/A	
Elevation	Northing	Easting

▽ = First Water

▼ = Static Groundwater

Boring Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample: Recovery	Sample: Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement	▼	Moist	3.9 ppm	Air-Knife	1			CL	**Lean Clay with Sand;** light olive green to dark brown, stiff, medium plastic, hydro-carbon odor present.
					2				
					3				
					4				
					5			CL	**Lean Clay with Sand;** olive green-brown, moist, medium stiff, fine to medium grained sand, strong hydrocarbon odor, visible contamination, low to medium plastic.
					6				
					7				
			405 ppm		8		⊠		
					9			CL	**Lean Clay with Sand;** same as above
					10				
					11				
		Moist	6.5 ppm		12			CL	**Lean Clay with Sand;** same as above, with increased stiffness; visible contamination, and strong petroleum hydrocarbon odor.
					13				
					14				
					15				
			64.1 ppm		16		⊠		
					17			CL	**Lean Clay with Sand;** brown to red brown, fine to coarse grained sand, low plasticity increased sand content, increasing moisture, slight hydrocarbon odor, stiff.
					18				
					19				
			6.7 ppm		20				
					21			CL	**Lean Clay with Sand**; same as above with increasing sand content; very stiff to hard.
					22				

Delta
Consultants

Project No: C101156 | Client: **ConocoPhillips** | Boring No: SB-7
Logged By: S. Meninger/ C. Morgan | Location: **4276 MacArthur Blvd.** | Date Drilled: 07/09/09
Driller: **Gregg Drilling** | Page **2** of 2
Drilling Method: Macrocore | Hole Diameter: 3"
Sampling Method: Continuous | Hole Depth: 30.0'
Casing Type: N/A | First Water Depth: 23.5
Slot Size: N/A | Static Water Depth: 6.5'
Gravel Pack: N/A | Well Depth: N/A

▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting

Boring Completion (Backfill)	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample: Recovery	Sample: Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement	▽	Moist	0.5 ppm		23		☒	CL	**Lean Clay with Sand;** same as above; very strong hydrocarbon odor.
					24			SC	**Clayey Sand;** brown, medium to coarse grained sand with clay, medium dense to dense, moist to wet, some olive green smearing.
		Wet			25				
					26			SM	**Silty Sand;** brown, wet, medium to coarse grained, strong hydrocarbon odor.
		Moist			27			CL	**Lean Clay with Sand;** brown, low to medium plastic, stiff, hydrocarbon odor.
					28				
					29			SP	**Poorly Graded Sand;** light brown.
					30				**Total Depth of Boring = 30' bgs.**
					31				Soil Sample SB-7@ 7.5-8' collected at 15:05 7/9/2009.
					32				Soil Sample SB-7@ 15.5-16' collected at 15:10 7/9/2009.
					33				Soil Sample SB-7 @ 23-23.5' collected at 15:15 7/9/2009.
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta
Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, California
Hole Diameter: 3"
Hole Depth: 8.5'
First Water Depth: N/A
Static Water Depth: N/A
Well Depth: N/A

Boring No: SB-8
Date Drilled: 07/10/09
Page **1** of **1**

▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting

Boring Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample: Recovery	Sample: Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		Moist		Air-Knife & Hand Augered	1			CL	**Lean Clay with Sand;** thumb to fist sized gravel, with non-native pumice fill and black fines; high petroleum hydrocarbon odor.
					2				
					3				
					4				
					5			GP	**Gravel with Sand;** gray, fine to medium grained with presence of possible compressed asphalt; visible black product; very moist.
		Very Moist	1453 ppm		6				
					7		☒		
					8				
					9				**Total Depth of Boring = 8.5' bgs.** *Note that boring was terminated at 8.5' bgs due to drilling conditions. At 7'bgs drillers indicated a slight resistance was felt on the rig. A sudden push through and drop was then recorded while advancing from 8.0-8.5' bgs, at which point a vibrating feel in the rod was felt.*
					10				
					11				
					12				
					13				Soil sample SB-8 @ 7-7.5' collected at 13:21 7/10/2009.
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No:	C101156	Client: **ConocoPhillips**	Boring No: SB-9
Logged By:	S. Meninger/ C. Morgan	Location: **4276 MacArthur Blvd.**	Date Drilled: 07/08/09
Driller: **Gregg Drilling**		Oakland, California	Page **1** of **2**
Drilling Method:	Macrocore	Hole Diameter:	3"
Sampling Method:	Continuous	Hole Depth:	26.5'
Casing Type:	N/A	First Water Depth:	26'
Slot Size:	N/A	Static Water Depth:	24
Gravel Pack:	N/A	Well Depth:	N/A

▽ = First Water

▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample: Recovery	Sample: Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Air-Knife & Hand Augered	1			CL	**Lean clay with sand;** light olive green to bronw, medium plasticity, thick.
					2				
					3				
					4				
					5				
					6			CL	**Lean clay with sand;** same as above with gravel; visible contamination, and mild petroleum hydrocarbon odors.
			3.6 ppm		7				
					8				
					9				
					10				
					11				
			2.5 ppm		12			CL	**Lean clay with sand;** brown to orange brown, dry, medium plasticity, firm.
					13				
					14				
					15				
					16			CL	**Same as above.**
					17				
					18				
					19				
					20			CL	**Same as above.**
					21				
					22				

Delta
Consultants

Project No: C101156
Client: **ConocoPhillips**
Logged By: S. Meninger/ C. Morgan
Location: 4276 MacArthur Blvd.
Driller: **Gregg Drilling**
Oakland, CA
Drilling Method: Macrocore
Hole Diameter: 3"
Sampling Method: Continuous
Hole Depth: 26'
Casing Type: N/A
First Water Depth: 26'
Slot Size: N/A
Static Water Depth: 24'
Gravel Pack: N/A
Well Depth: 26'

Boring No: SB-9
Date Drilled: 07/08/09
Page **2** of 2

▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting

Boring Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement	▼ ▽				23			CL	**Same as above**, with increased sands.
					24				
					25				
					26		X		
					27				**Total Depth of Boring = 26' bgs.**
					28				Soil Sample SB-9@26' collected @ 18:40 07/08/09.
					29				
					30				
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta
Consultants

Project No:	C101156	Client: **ConocoPhillips**	Boring No: SB-10
Logged By:	S. Meninger/ C. Morgan	Location: **4276 MacArthur Blvd.**	Date Drilled: 07/08/09
Driller: **Gregg Drilling**		Oakland, California	Page **1** of **2**
Drilling Method:	Macrocore	Hole Diameter: 3"	
Sampling Method:	Continuous	Hole Depth: 23'	
Casing Type:	N/A	First Water Depth: 16	
Slot Size:	N/A	Static Water Depth: 6.21	
Gravel Pack:	N/A	Well Depth: N/A	
Elevation		Northing	Easting

▽ = First Water

▼ = Static Groundwater

Boring Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement	Moisture Content	Moist		Air-Knife & Hand Augered	1			CL	**Lean clay with sand;** oilve green to brown, medium plastic, medium stiff, mild hydrocarbon odor; possible fill material.
					2				
					3				
					4				
					5			GP	**Gravel with Sand;** gray, fine to medium gravel with fine to medium grained sand, loose, wet, fill material from former UST pit, no odor.
		Wet- Perched water in former UST pit.	1.8 ppm		6				
					7				
					8				
					9				
					10			SP	**Poorly Graded Sand with Gravel;** gray to dark gray, fine to medium grained sand, loose, wet, very strong hydrocarbon odor.
					11				
			899 ppm		12		☒	CL	**Lean Clay with Sand;** Olive green to brown, medium stiff, low to medium plastic, moist, slight hydrocarbon odor, visible contamination, ...
		Moist			13				
					14				
					15				
	▽		7.6 ppm		16				
					17			SC	**Clayey Sand;** Dark gray, loose, wet, fine to medium grained sand, very strong hydrocarbon odor, visible contamination, trace fine gravel.
			545 ppm		18		☒		
		Moist			19				
			6.6 ppm		20			CL	**Lean Clay with Sand;** brown with olive green mottling, stiff, low to medium plastic, fine to coarse grained sand, slight odor, trace fine gravel.
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: 4276 MacArthur Blvd.
Oakland, California
Hole Diameter: 3"
Hole Depth: 28'
First Water Depth: 16'
Static Water Depth: 28'
Well Depth: N/A

Boring No: SB-10
Date Drilled:
Page **2** of 2

▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting

Boring Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement	▼	moist	1.1 ppm		23		X	CL	**Same as above**, with increased sands.
					24				
					25				
					26				
					27				**Total Depth of Boring =**
					28				Soil Sample SB-10@ 12-12.5' collected at 7:55 07/10/09.
					29				Soil Sample SB-10@ 18-18.5' collected at 8:00 07/10/09.
					30				Soil Sample SB-10@ 22.5-23' collected at 8:05 07/10/09.
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta
Consultants

Project No: C101156	Client: **ConocoPhillips**	Boring No: SB-11
Logged By: S. Meninger/ C. Morgan	Location: **4276 MacArthur Blvd.** Oakland, California	Date Drilled: 07/10/09
Driller: **Gregg Drilling**		Page **1** of **2**
Drilling Method: Macrocore	Hole Diameter: 3"	
Sampling Method: Continuous	Hole Depth: 44'	▽ = First Water
Casing Type: N/A	First Water Depth: 42'	▼ = Static Groundwater
Slot Size: N/A	Static Water Depth: N/A	
Gravel Pack: N/A	Well Depth: N/A	
Elevation	Northing	Easting

Boring Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample: Recovery	Sample: Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Air-Knife & Hand Augered	0			CL	**Lean clay with sand;** light olive green to brown, medium stiff to stiff, low to medium plasticity.
					1				
					2				
					3				
					4				
					5				
					6			CL	**Lean clay with sand;** olive green, gray, brown; fine to medium coarse grained sand; trace fine to medium grained gravel; low plasticity; moist; strong hydrocarbon odor.
					7				
			405 ppm		8		☒		
					9			CL	**Lean clay with sand;** entirely green in color, very stiff to hard.
			6.8 ppm		10				
					11				
			16.7 ppm		12			CL	**Lean clay with sand;** brown and olive green, moist, very stiff to hard, very strong hydrocarbon odor, low to medium plastic.
					13				
					14				
					15				
					16		☒	CL	**Lean clay with sand;** decreasing sand content, medium to high plasticity, increasing moisture, slight hydrocarbon odor, very stiff to hard, trace fine gravel, visible contamination. *Driller reports very hard direct pushing.
			108 ppm		17				
					18				
					19				
			12.1 ppm		20			CL	**Lean clay with sand;** brown with green mottling, medium plastic, trace fine gravel, slight odor, increasing mositure.
					21				
					22				

Delta Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd. Oakland, CA**
Hole Diameter: 3"
Hole Depth: 44'
First Water Depth: 42'
Static Water Depth: N/A
Well Depth: N/A

Boring No: SB-11
Date Drilled: 07/10/09
Page **2** of 2

▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting

Boring Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		Wet	5.8 ppm		23			CL	**Poorly graded sand;** brown, wet, no odor. Wetness in small portion-Not first water.
					24				
					25			CL	**Same as above;** less visible contamination, increasing sand content.
					26				
					27				
			6.7 ppm		28			CL	**Lean clay with sand;** brownand olive green, increasing moisture, less visible contamination.
					29				
					30				
					31				
			6.8 ppm		32			CL	**Same as above;** increasing sand content, visible contamination, red brown.
					33				
					34				
					35				
			5.7 ppm		36			CL	**Same as above;** increasing moisture conent.
					37				
					38				
					39				
			7.5 ppm		40				
		▽			41		☒	CL	**Same as above;** wet.
					42				
					43				
					44				**Total Depth of Boring = 44' bgs.** SB-11 samples collected at 10:50, 10:55 & 11:00

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
First Water Depth: **N/A**
Static Water Depth: **N/A**

Boring: SV-1

Location Map

Well Completion (Backfill)	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Asphalt / Bent. Grout / Bent. Chips / #2/12 Sand		Moist			1			SM	**Sand with Gravel (SM)** - Possible fill material, brown to red brown, moist, medium dense to dense, medium to coarse sand
					2				
		Moist			3			SM	**Silty Sand (SM)** - Light brown, moist, medium dense, fine to coarse grained sand
					4				
				SV-1-S	5				Boring Terminated at 5' bgs.
					6				Groundwater Not Enountered
					7				Soil Sample SV-1-S collected at 10:15 7/7/2009
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3' - 4'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
First Water Depth: **N/A**
Static Water Depth: **N/A**

Boring: SV-2

Location Map

Well Completion (Backfill)	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Asphalt / Bent. Grout / Bent. Chips / #2/12 Sand		Moist / Moist		SV-2-S	1–4			SM	**Silty Sand with Gravel (SM)** - Brown, moist, medium dense, no odor, fine to coarse sand, well graded fine to medium grained gravel
					4				Boring Terminated at 4' bgs.
					5				Groundwater Not Enountered
					6				Soil Sample SV-2-S collected at 14:05 7/7/2009
					7–22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
First Water Depth: **N/A**
Static Water Depth: **N/A**

Boring: SV-3
Page 1 of 1

Location Map

Well Completion (Backfill)	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Asphalt / Bent. Grout		Moist	17.2		1			SM	**Silty Sand with Gravel (SM)** - Dark brown, medium dense, moist, no odor, fine to medium grained sand, possible fill material
					2				
Bent. Chips					3			CL	**Lean Clay with Sand (CL)** - Dark brown, moist, medium plastic, stiff, hydrocarbon odor, lenses of olive green
#2/12 Sand		Moist	78.9	SV-3-S	4				
					5				Boring Terminated at 5' bgs.
					6				Groundwater Not Enountered
					7				Soil Sample SV-3-S collected at 13:25 7/7/2009
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
First Water Depth: **N/A**
Static Water Depth: **N/A**

Boring: SV-4
Page 1 of 1

Location Map

Well Completion (Backfill)	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Asphalt / Bent. Grout		Moist	14.8		1			CL	**Lean Clay (CL)** - Dark brown with black mottling, moist, stiff, medium plastic
					2				
Bent. Chips					3			CL	**Sandy Lean Clay (CL)** - Dark olive green to black, moist, medium stiff, medium plastic, slight hydrocarbon odor
#2/12 Sand		Moist	21.6		4				
				SV-4-S	5			ML	**Clayey Silt (ML)** - light brown with black mottling, moist, very dense, non-plastic
					6				Boring Terminated at 5' bgs.
					7				Groundwater Not Enountered
					8				Soil Sample SV-4-S collected at 12:40 7/7/2009
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
First Water Depth: **N/A**
Static Water Depth: **N/A**

Boring: SV-5
Page 1 of 1

Location Map

Well Completion (Backfill)	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Asphalt								GW	**Well-Graded Gravel with Sand (GW)** - light brown, dense, medium grained, moist, possible fill material
Bent. Grout		Moist	27.3		1				
					2				
Bent. Chips					3			CL	**Lean Clay (CL)** - Gray/black to olive green, moist, medium stiff, medium, plastic, hydrocarbon odor
#2/12 Sand		Moist	237		4				
				SV-5-S	5				Boring Terminated at 5' bgs.
					6				Groundwater Not Enountered
					7				Soil Sample SV-5-S collected at 11:00 7/7/2009
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
First Water Depth: **N/A**
Static Water Depth: **N/A**

Boring: SV-6

Location Map

Well Completion (Backfill)	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Asphalt									
Bent. Grout		Moist			1			GW	**Well-Graded Gravel with Sand (GW)** - light brown, dense, medium grained, dry to moist, possible fill material
					2				
Bent. Chips					3			CL	**Lean Clay with Sand (CL)** - light olive green, moist, soft to stiff, low plastic, strong hydrocarbon odor
#2/12 Sand		Moist		SV-6-S	4				
					5				Boring Terminated at 5' bgs.
					6				Groundwater Not Enountered
					7				Soil Sample SV-6-S collected at 9:45 7/7/2009
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
First Water Depth: **N/A**
Static Water Depth: **N/A**

Boring: SV-7
Page 1 of 1

Location Map

Well Completion (Backfill)	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Asphalt / Bent. Grout		Moist	25.9		1–2			**SM**	**Gravelly Sand with Clay (SM)** - Brown to black, moist, medium dense to dense, medium grained gravel, possible fill material
Bent. Chips / #2/12 Sand		Moist	54.5	**SV-7-S**	3–5			**CL**	**Lean Clay (CL)** - Blue-gray to light olive green, moist, stiff, medium plastic, slight hydrocarbon odor
					5				Boring Terminated at 5' bgs.
					6				Groundwater Not Enountered
					7				Soil Sample SV-7-S collected at 11:30 7/7/2009
					8–22				

Appendix D

Soil and Grab Groundwater Laboratory Analytical Report

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 07/24/2009

Jim Barnard

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

RE: 1156
BC Work Order: 0909084
Invoice ID: B065339

Enclosed are the results of analyses for samples received by the laboratory on 7/10/2009. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information				
0909084-01	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/09/2009 15:15	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB-7
	Sampling Point:	SB-7@23-23.5'bgs	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-02	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/09/2009 15:10	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB-7
	Sampling Point:	SB-7@15.5-16'bgs	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-03	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/09/2009 15:05	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB-7
	Sampling Point:	SB-7@7.5-8'bgs	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-04	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/09/2009 15:25	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB-7
	Sampling Point:	SB-7	**Sample Matrix:**	Water	Matrix: W
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information				
0909084-05	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/10/2009 07:55	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB-10
	Sampling Point:	SB-10@12-12.5'bgs	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-06	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/10/2009 08:00	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB-10
	Sampling Point:	SB-10@18-18.5'bgs	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-07	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/10/2009 08:05	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB-10
	Sampling Point:	SB-10@22.5-23bgs	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-09	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/08/2009 06:35	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB-9
	Sampling Point:	SB-9@15.5-16.0'	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information				
0909084-10	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/08/2009 06:40	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB-9
	Sampling Point:	SB-9@26bgs'	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-11	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/08/2009 06:58	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB-9
	Sampling Point:	SB-9	**Sample Matrix:**	Water	Matrix: W
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-12	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/10/2009 10:50	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB11
	Sampling Point:	SB11@7.5-8'bgs	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-13	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/10/2009 10:55	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB11
	Sampling Point:	SB11@15.5-16'bgs	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information				
0909084-14	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/10/2009 11:00	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB11
	Sampling Point:	SB11@41-41.5'bgs	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-15	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/10/2009 11:55	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB11
	Sampling Point:	SB11	**Sample Matrix:**	Water	Matrix: W
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-16	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/10/2009 13:21	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SB8
	Sampling Point:	SB8@7.0-7.5'bgs	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-17	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/10/2009 13:35	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): 1156-COMP A
	Sampling Point:	1156-COMP A	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information				
0909084-18	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/10/2009 13:45	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): 1156-COMP B
	Sampling Point:	1156-COMP B	**Sample Matrix:**	Water	Matrix: W
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-19	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/07/2009 09:45	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SV-6-S
	Sampling Point:	SV-6-S	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-20	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/07/2009 10:15	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SV-1-S
	Sampling Point:	SV-1-S	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-21	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/07/2009 11:00	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SV-5-S
	Sampling Point:	SV-5-S	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information				
0909084-22	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/07/2009 11:30	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SV-7-S
	Sampling Point:	SV-7-S	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-23	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/07/2009 01:25	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SV-3-S
	Sampling Point:	SV-3-S	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-24	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/07/2009 12:40	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SV-4-S
	Sampling Point:	SV-4-S	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:
0909084-25	**COC Number:**	---	**Receive Date:**	07/10/2009 20:00	Delivery Work Order:
	Project Number:	1156	**Sampling Date:**	07/07/2009 02:05	Global ID: T060010279
	Sampling Location:	---	**Sample Depth:**	---	Location ID (FieldPoint): SV-2-S
	Sampling Point:	SV-2-S	**Sample Matrix:**	Solids	Matrix: SO
	Sampled By:	DECR			Sample QC Type (SACode): CS
					Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-01 | **Client Sample Name:** 1156, SB-7@23-23.5'bgs, 7/9/2009 3:15:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20		Luft-GC/MS	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane-d4 (Surrogate)	88.2	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726		
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	102	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 04:31	JSK	MS-V3	1	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-02 | **Client Sample Name:** 1156, SB-7@15.5-16'bgs, 7/9/2009 3:10:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	**0.0080**	**mg/kg**	**0.0050**		**EPA-8260**	**07/14/09**	**07/15/09 04:58**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726	ND	
Methyl t-butyl ether	**0.0085**	**mg/kg**	**0.0050**		**EPA-8260**	**07/14/09**	**07/15/09 04:58**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726	ND	
Total Xylenes	**0.023**	**mg/kg**	**0.010**		**EPA-8260**	**07/14/09**	**07/15/09 04:58**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726	ND	
Total Purgeable Petroleum Hydrocarbons	**1.3**	**mg/kg**	**0.20**		**Luft-GC/MS**	**07/14/09**	**07/15/09 04:58**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
1,2-Dichloroethane-d4 (Surrogate)	84.1	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726		
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	103	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 04:58	JSK	MS-V3	1	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-03 | **Client Sample Name:** 1156, SB-7@7.5-8'bgs, 7/9/2009 3:05:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726	ND	A01
1,2-Dibromoethane	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726	ND	A01
1,2-Dichloroethane	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726	ND	A01
Ethylbenzene	**5.7**	**mg/kg**	**0.50**		**EPA-8260**	**07/14/09**	**07/15/09 05:24**	**JSK**	**MS-V3**	**100**	**BSG0726**	**ND**	**A01**
Methyl t-butyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726	ND	A01
Toluene	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726	ND	A01
Total Xylenes	**32**	**mg/kg**	**1.0**		**EPA-8260**	**07/14/09**	**07/15/09 05:24**	**JSK**	**MS-V3**	**100**	**BSG0726**	**ND**	**A01**
t-Amyl Methyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726	ND	A01
t-Butyl alcohol	ND	mg/kg	5.0		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726	ND	A01
Diisopropyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726	ND	A01
Ethanol	ND	mg/kg	100		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726	ND	A01
Ethyl t-butyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726	ND	A01
Total Purgeable Petroleum Hydrocarbons	**260**	**mg/kg**	**100**		**Luft-GC/MS**	**07/15/09**	**07/16/09 13:03**	**JSK**	**MS-V3**	**500**	**BSG0726**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	79.5	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726		
1,2-Dichloroethane-d4 (Surrogate)	89.2	%	70 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 13:03	JSK	MS-V3	500	BSG0726		
Toluene-d8 (Surrogate)	106	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726		
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 13:03	JSK	MS-V3	500	BSG0726		
4-Bromofluorobenzene (Surrogate)	99.9	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 05:24	JSK	MS-V3	100	BSG0726		
4-Bromofluorobenzene (Surrogate)	104	%	74 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 13:03	JSK	MS-V3	500	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-04 | **Client Sample Name:** 1156, SB-7, 7/9/2009 3:25:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	**16**	**ug/L**	**5.0**		**EPA-8260**	**07/15/09**	**07/15/09 15:31**	**KEA**	**MS-V12**	**10**	**BSG0734**	**ND**	**A01**
1,2-Dibromoethane	ND	ug/L	5.0		EPA-8260	07/15/09	07/15/09 15:31	KEA	MS-V12	10	BSG0734	ND	A01
1,2-Dichloroethane	ND	ug/L	5.0		EPA-8260	07/15/09	07/15/09 15:31	KEA	MS-V12	10	BSG0734	ND	A01
Ethylbenzene	**270**	**ug/L**	**5.0**		**EPA-8260**	**07/15/09**	**07/15/09 15:31**	**KEA**	**MS-V12**	**10**	**BSG0734**	**ND**	**A01**
Methyl t-butyl ether	**21**	**ug/L**	**5.0**		**EPA-8260**	**07/15/09**	**07/15/09 15:31**	**KEA**	**MS-V12**	**10**	**BSG0734**	**ND**	**A01**
Toluene	**6.8**	**ug/L**	**5.0**		**EPA-8260**	**07/15/09**	**07/15/09 15:31**	**KEA**	**MS-V12**	**10**	**BSG0734**	**ND**	**A01**
Total Xylenes	**1400**	**ug/L**	**10**		**EPA-8260**	**07/15/09**	**07/15/09 15:31**	**KEA**	**MS-V12**	**10**	**BSG0734**	**ND**	**A01**
t-Amyl Methyl ether	ND	ug/L	5.0		EPA-8260	07/15/09	07/15/09 15:31	KEA	MS-V12	10	BSG0734	ND	A01
t-Butyl alcohol	ND	ug/L	100		EPA-8260	07/15/09	07/15/09 15:31	KEA	MS-V12	10	BSG0734	ND	A01
Diisopropyl ether	ND	ug/L	5.0		EPA-8260	07/15/09	07/15/09 15:31	KEA	MS-V12	10	BSG0734	ND	A01
Ethanol	ND	ug/L	2500		EPA-8260	07/15/09	07/15/09 15:31	KEA	MS-V12	10	BSG0734	ND	A01
Ethyl t-butyl ether	ND	ug/L	5.0		EPA-8260	07/15/09	07/15/09 15:31	KEA	MS-V12	10	BSG0734	ND	A01
Total Purgeable Petroleum Hydrocarbons	**7900**	**ug/L**	**500**		**Luft-GC/MS**	**07/15/09**	**07/15/09 15:31**	**KEA**	**MS-V12**	**10**	**BSG0734**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	108	%	76 - 114 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 15:31	KEA	MS-V12	10	BSG0734		
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 15:31	KEA	MS-V12	10	BSG0734		
4-Bromofluorobenzene (Surrogate)	98.7	%	86 - 115 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 15:31	KEA	MS-V12	10	BSG0734		

Delta Environmental Consultants, Inc.	Project: 1156	**Reported:** 07/24/2009 10:27
11050 White Rock Rd, Suite 110	Project Number: 000010112779-00007	
Rancho Cordova, CA 95670	Project Manager: Jim Barnard	

Total Petroleum Hydrocarbons

BCL Sample ID: 0909084-04 | **Client Sample Name:** 1156, SB-7, 7/9/2009 3:25:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Diesel Range Organics (C12 - C24)	**1400**	**ug/L**	**120**		**Luft/TPHd**	**07/15/09**	**07/23/09 05:23**	**OAA**	**GC-5**	**2.500**	**BSG0952**	**ND**	**A01,M02**
Tetracosane (Surrogate)	114	%	28 - 139 (LCL - UCL)		Luft/TPHd	07/15/09	07/23/09 05:23	OAA	GC-5	2.500	BSG0952		A01

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-05 | **Client Sample Name:** 1156, SB-10@12-12.5'bgs, 7/10/2009 7:55:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726	ND	A01
1,2-Dibromoethane	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726	ND	A01
1,2-Dichloroethane	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726	ND	A01
Ethylbenzene	**6.1**	**mg/kg**	**0.50**		**EPA-8260**	**07/14/09**	**07/15/09 05:50**	**JSK**	**MS-V3**	**100**	**BSG0726**	**ND**	**A01**
Methyl t-butyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726	ND	A01
Toluene	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726	ND	A01
Total Xylenes	**46**	**mg/kg**	**1.0**		**EPA-8260**	**07/14/09**	**07/15/09 05:50**	**JSK**	**MS-V3**	**100**	**BSG0726**	**ND**	**A01**
t-Amyl Methyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726	ND	A01
t-Butyl alcohol	ND	mg/kg	5.0		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726	ND	A01
Diisopropyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726	ND	A01
Ethanol	ND	mg/kg	100		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726	ND	A01
Ethyl t-butyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726	ND	A01
Total Purgeable Petroleum Hydrocarbons	**400**	**mg/kg**	**200**		**Luft-GC/MS**	**07/15/09**	**07/16/09 13:29**	**JSK**	**MS-V3**	**1000**	**BSG0726**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	90.3	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726		
1,2-Dichloroethane-d4 (Surrogate)	91.9	%	70 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 13:29	JSK	MS-V3	1000	BSG0726		
Toluene-d8 (Surrogate)	106	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726		
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 13:29	JSK	MS-V3	1000	BSG0726		
4-Bromofluorobenzene (Surrogate)	99.5	%	74 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 13:29	JSK	MS-V3	1000	BSG0726		
4-Bromofluorobenzene (Surrogate)	102	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 05:50	JSK	MS-V3	100	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-06 | **Client Sample Name:** 1156, SB-10@18-18.5'bgs, 7/10/2009 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726	ND	A01
1,2-Dibromoethane	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726	ND	A01
1,2-Dichloroethane	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726	ND	A01
Ethylbenzene	**5.0**	**mg/kg**	**0.50**		**EPA-8260**	**07/14/09**	**07/15/09 06:17**	**JSK**	**MS-V3**	**100**	**BSG0726**	**ND**	**A01**
Methyl t-butyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726	ND	A01
Toluene	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726	ND	A01
Total Xylenes	**34**	**mg/kg**	**1.0**		**EPA-8260**	**07/14/09**	**07/15/09 06:17**	**JSK**	**MS-V3**	**100**	**BSG0726**	**ND**	**A01**
t-Amyl Methyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726	ND	A01
t-Butyl alcohol	ND	mg/kg	5.0		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726	ND	A01
Diisopropyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726	ND	A01
Ethanol	ND	mg/kg	100		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726	ND	A01
Ethyl t-butyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726	ND	A01
Total Purgeable Petroleum Hydrocarbons	**290**	**mg/kg**	**100**		**Luft-GC/MS**	**07/15/09**	**07/16/09 13:55**	**JSK**	**MS-V3**	**500**	**BSG0726**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	87.2	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726		
1,2-Dichloroethane-d4 (Surrogate)	91.1	%	70 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 13:55	JSK	MS-V3	500	BSG0726		
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726		
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 13:55	JSK	MS-V3	500	BSG0726		
4-Bromofluorobenzene (Surrogate)	97.7	%	74 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 13:55	JSK	MS-V3	500	BSG0726		
4-Bromofluorobenzene (Surrogate)	99.2	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 06:17	JSK	MS-V3	100	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-07 | **Client Sample Name:** 1156, SB-10@22.5-23bgs, 7/10/2009 8:05:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
Total Xylenes	**0.056**	**mg/kg**	**0.010**		**EPA-8260**	**07/14/09**	**07/15/09 06:43**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726	ND	
Total Purgeable Petroleum Hydrocarbons	**0.78**	**mg/kg**	**0.20**		**Luft-GC/MS**	**07/14/09**	**07/15/09 06:43**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
1,2-Dichloroethane-d4 (Surrogate)	87.0	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726		
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	99.8	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 06:43	JSK	MS-V3	1	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-09 | **Client Sample Name:** 1156, SB-9@15.5-16.0', 7/8/2009 6:35:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
Methyl t-butyl ether	**0.019**	**mg/kg**	**0.0050**		**EPA-8260**	**07/14/09**	**07/15/09 07:09**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20		Luft-GC/MS	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane-d4 (Surrogate)	89.2	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726		
Toluene-d8 (Surrogate)	104	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	96.7	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 07:09	JSK	MS-V3	1	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-10 | **Client Sample Name:** 1156, SB-9@26bgs', 7/8/2009 6:40:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20		Luft-GC/MS	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane-d4 (Surrogate)	103	%	70 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726		
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	96.9	%	74 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 18:41	JSK	MS-V3	1	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-11 | **Client Sample Name:** 1156, SB-9, 7/8/2009 6:58:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	**62**	**ug/L**	**0.50**		**EPA-8260**	**07/15/09**	**07/15/09 16:26**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 16:26	KEA	MS-V12	1	BSG0734	ND	Z1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 16:26	KEA	MS-V12	1	BSG0734	ND	Z1
Ethylbenzene	**3.8**	**ug/L**	**0.50**		**EPA-8260**	**07/15/09**	**07/15/09 16:26**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
Methyl t-butyl ether	**50**	**ug/L**	**0.50**		**EPA-8260**	**07/15/09**	**07/15/09 16:26**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
Toluene	**3.9**	**ug/L**	**0.50**		**EPA-8260**	**07/15/09**	**07/15/09 16:26**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
Total Xylenes	**29**	**ug/L**	**1.0**		**EPA-8260**	**07/15/09**	**07/15/09 16:26**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 16:26	KEA	MS-V12	1	BSG0734	ND	Z1
t-Butyl alcohol	ND	ug/L	10		EPA-8260	07/15/09	07/15/09 16:26	KEA	MS-V12	1	BSG0734	ND	Z1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 16:26	KEA	MS-V12	1	BSG0734	ND	Z1
Ethanol	ND	ug/L	250		EPA-8260	07/15/09	07/15/09 16:26	KEA	MS-V12	1	BSG0734	ND	Z1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 16:26	KEA	MS-V12	1	BSG0734	ND	Z1
Total Purgeable Petroleum Hydrocarbons	**630**	**ug/L**	**50**		**Luft-GC/MS**	**07/15/09**	**07/15/09 16:26**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 16:26	KEA	MS-V12	1	BSG0734		
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 16:26	KEA	MS-V12	1	BSG0734		
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 16:26	KEA	MS-V12	1	BSG0734		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Total Petroleum Hydrocarbons

BCL Sample ID: 0909084-11 | **Client Sample Name:** 1156, SB-9, 7/8/2009 6:58:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Diesel Range Organics (C12 - C24)	**350**	**ug/L**	**76**		**Luft/TPHd**	**07/15/09**	**07/22/09 03:01**	**OAA**	**GC-5**	**1.515**	**BSG0952**	**ND**	**M02**
Tetracosane (Surrogate)	92.7	%	28 - 139 (LCL - UCL)		Luft/TPHd	07/15/09	07/22/09 03:01	OAA	GC-5	1.515	BSG0952		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-12 | **Client Sample Name:** 1156, SB11@7.5-8'bgs, 7/10/2009 10:50:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726	ND	A01
1,2-Dibromoethane	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726	ND	A01
1,2-Dichloroethane	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726	ND	A01
Ethylbenzene	**0.50**	**mg/kg**	**0.050**		**EPA-8260**	**07/15/09**	**07/16/09 14:47**	**JSK**	**MS-V3**	**10**	**BSG0726**	**ND**	**A01**
Methyl t-butyl ether	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726	ND	A01
Toluene	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726	ND	A01
Total Xylenes	**0.77**	**mg/kg**	**0.10**		**EPA-8260**	**07/15/09**	**07/16/09 14:47**	**JSK**	**MS-V3**	**10**	**BSG0726**	**ND**	**A01**
t-Amyl Methyl ether	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726	ND	A01
t-Butyl alcohol	ND	mg/kg	0.50		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726	ND	A01
Diisopropyl ether	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726	ND	A01
Ethanol	ND	mg/kg	10		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726	ND	A01
Ethyl t-butyl ether	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726	ND	A01
Total Purgeable Petroleum Hydrocarbons	**41**	**mg/kg**	**10**		**Luft-GC/MS**	**07/14/09**	**07/15/09 12:49**	**JSK**	**MS-V3**	**50**	**BSG0726**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	91.9	%	70 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726		
1,2-Dichloroethane-d4 (Surrogate)	83.7	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 12:49	JSK	MS-V3	50	BSG0726		
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726		
Toluene-d8 (Surrogate)	110	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 12:49	JSK	MS-V3	50	BSG0726		
4-Bromofluorobenzene (Surrogate)	103	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 12:49	JSK	MS-V3	50	BSG0726		
4-Bromofluorobenzene (Surrogate)	99.7	%	74 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 14:47	JSK	MS-V3	10	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-13 | **Client Sample Name:** 1156, SB11@15.5-16'bgs, 7/10/2009 10:55:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	**0.26**	**mg/kg**	**0.0050**		**EPA-8260**	**07/14/09**	**07/15/09 13:16**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726	ND	
Toluene	**0.0094**	**mg/kg**	**0.0050**		**EPA-8260**	**07/14/09**	**07/15/09 13:16**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
Total Xylenes	**0.015**	**mg/kg**	**0.010**		**EPA-8260**	**07/14/09**	**07/15/09 13:16**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726	ND	
Total Purgeable Petroleum Hydrocarbons	**200**	**mg/kg**	**20**		**Luft-GC/MS**	**07/16/09**	**07/17/09 04:58**	**JSK**	**MS-V3**	**100**	**BSG0726**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	90.5	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726		
1,2-Dichloroethane-d4 (Surrogate)	86.3	%	70 - 121 (LCL - UCL)		EPA-8260	07/16/09	07/17/09 04:58	JSK	MS-V3	100	BSG0726		
Toluene-d8 (Surrogate)	107	%	81 - 117 (LCL - UCL)		EPA-8260	07/16/09	07/17/09 04:58	JSK	MS-V3	100	BSG0726		
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	96.2	%	74 - 121 (LCL - UCL)		EPA-8260	07/16/09	07/17/09 04:58	JSK	MS-V3	100	BSG0726		
4-Bromofluorobenzene (Surrogate)	121	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 13:16	JSK	MS-V3	1	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-14 | **Client Sample Name:** 1156, SB11@41-41.5'bgs, 7/10/2009 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20		Luft-GC/MS	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane-d4 (Surrogate)	101	%	70 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726		
Toluene-d8 (Surrogate)	98.5	%	81 - 117 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	99.8	%	74 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 19:07	JSK	MS-V3	1	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-15 | **Client Sample Name:** 1156, SB11, 7/10/2009 11:55:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	**27**	**ug/L**	**0.50**		**EPA-8260**	**07/15/09**	**07/15/09 16:08**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 16:08	KEA	MS-V12	1	BSG0734	ND	Z1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 16:08	KEA	MS-V12	1	BSG0734	ND	Z1
Ethylbenzene	**9.7**	**ug/L**	**0.50**		**EPA-8260**	**07/15/09**	**07/15/09 16:08**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
Methyl t-butyl ether	**25**	**ug/L**	**0.50**		**EPA-8260**	**07/15/09**	**07/15/09 16:08**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
Toluene	**1.4**	**ug/L**	**0.50**		**EPA-8260**	**07/15/09**	**07/15/09 16:08**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
Total Xylenes	**7.1**	**ug/L**	**1.0**		**EPA-8260**	**07/15/09**	**07/15/09 16:08**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 16:08	KEA	MS-V12	1	BSG0734	ND	Z1
t-Butyl alcohol	**79**	**ug/L**	**10**		**EPA-8260**	**07/15/09**	**07/15/09 16:08**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 16:08	KEA	MS-V12	1	BSG0734	ND	Z1
Ethanol	ND	ug/L	250		EPA-8260	07/15/09	07/15/09 16:08	KEA	MS-V12	1	BSG0734	ND	Z1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 16:08	KEA	MS-V12	1	BSG0734	ND	Z1
Total Purgeable Petroleum Hydrocarbons	**310**	**ug/L**	**50**		**Luft-GC/MS**	**07/15/09**	**07/15/09 16:08**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	**Z1**
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 16:08	KEA	MS-V12	1	BSG0734		
Toluene-d8 (Surrogate)	97.8	%	88 - 110 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 16:08	KEA	MS-V12	1	BSG0734		
4-Bromofluorobenzene (Surrogate)	104	%	86 - 115 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 16:08	KEA	MS-V12	1	BSG0734		

Delta Environmental Consultants, Inc.	Project: 1156	**Reported:** 07/24/2009 10:27
11050 White Rock Rd, Suite 110	Project Number: 000010112779-00007	
Rancho Cordova, CA 95670	Project Manager: Jim Barnard	

Total Petroleum Hydrocarbons

BCL Sample ID: 0909084-15 | **Client Sample Name:** 1156, SB11, 7/10/2009 11:55:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Diesel Range Organics (C12 - C24)	**230**	**ug/L**	**120**		**Luft/TPHd**	**07/15/09**	**07/22/09 03:15**	**OAA**	**GC-5**	**2.462**	**BSG0952**	**ND**	**M02**
Tetracosane (Surrogate)	102	%	28 - 139 (LCL - UCL)		Luft/TPHd	07/15/09	07/22/09 03:15	OAA	GC-5	2.462	BSG0952		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-16 | **Client Sample Name:** 1156, SB8@7.0-7.5'bgs, 7/10/2009 1:21:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
1,2-Dibromoethane	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
1,2-Dichloroethane	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
Ethylbenzene	**7.7**	**mg/kg**	**0.50**		**EPA-8260**	**07/14/09**	**07/15/09 14:08**	**JSK**	**MS-V3**	**100**	**BSG0726**	**ND**	**A01**
Methyl t-butyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
Toluene	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
Total Xylenes	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
t-Amyl Methyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
t-Butyl alcohol	ND	mg/kg	5.0		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
Diisopropyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
Ethanol	ND	mg/kg	100		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
Ethyl t-butyl ether	ND	mg/kg	0.50		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726	ND	A01
Total Purgeable Petroleum Hydrocarbons	**760**	**mg/kg**	**100**		**Luft-GC/MS**	**07/15/09**	**07/16/09 16:05**	**JSK**	**MS-V3**	**500**	**BSG0726**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	86.8	%	70 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 16:05	JSK	MS-V3	500	BSG0726		
1,2-Dichloroethane-d4 (Surrogate)	82.5	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726		
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726		
Toluene-d8 (Surrogate)	99.0	%	81 - 117 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 16:05	JSK	MS-V3	500	BSG0726		
4-Bromofluorobenzene (Surrogate)	101	%	74 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 16:05	JSK	MS-V3	500	BSG0726		
4-Bromofluorobenzene (Surrogate)	99.0	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 14:08	JSK	MS-V3	100	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-17 | **Client Sample Name:** 1156, 1156-COMP A, 7/10/2009 1:35:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726	ND	
Ethylbenzene	**0.081**	**mg/kg**	**0.0050**		**EPA-8260**	**07/14/09**	**07/15/09 14:34**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726	ND	
Total Xylenes	**0.084**	**mg/kg**	**0.010**		**EPA-8260**	**07/14/09**	**07/15/09 14:34**	**JSK**	**MS-V3**	**1**	**BSG0726**	**ND**	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726	ND	
Total Purgeable Petroleum Hydrocarbons	**18**	**mg/kg**	**2.0**		**Luft-GC/MS**	**07/16/09**	**07/17/09 05:25**	**JSK**	**MS-V3**	**10**	**BSG0726**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	90.8	%	70 - 121 (LCL - UCL)		EPA-8260	07/16/09	07/17/09 05:25	JSK	MS-V3	10	BSG0726		
1,2-Dichloroethane-d4 (Surrogate)	88.1	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726		
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)		EPA-8260	07/16/09	07/17/09 05:25	JSK	MS-V3	10	BSG0726		
Toluene-d8 (Surrogate)	104	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	105	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 14:34	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	97.3	%	74 - 121 (LCL - UCL)		EPA-8260	07/16/09	07/17/09 05:25	JSK	MS-V3	10	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Total Concentrations (TTLC)

BCL Sample ID: 0909084-17 | **Client Sample Name:** 1156, 1156-COMP A, 7/10/2009 1:35:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Lead	35	mg/kg	2.5		EPA-6010B	07/16/09	07/17/09 08:04	JDC	PE-OP2	0.971	BSG0823	ND	

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-18 | **Client Sample Name:** 1156, 1156-COMP B, 7/10/2009 1:45:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734	ND	
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734	ND	
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734	ND	
Ethylbenzene	**0.87**	**ug/L**	**0.50**		**EPA-8260**	**07/15/09**	**07/15/09 15:50**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734	ND	
Toluene	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734	ND	
Total Xylenes	**4.7**	**ug/L**	**1.0**		**EPA-8260**	**07/15/09**	**07/15/09 15:50**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734	ND	
Ethanol	ND	ug/L	250		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734	ND	
Total Purgeable Petroleum Hydrocarbons	**73**	**ug/L**	**50**		**Luft-GC/MS**	**07/15/09**	**07/15/09 15:50**	**KEA**	**MS-V12**	**1**	**BSG0734**	**ND**	
1,2-Dichloroethane-d4 (Surrogate)	108	%	76 - 114 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734		
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734		
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)		EPA-8260	07/15/09	07/15/09 15:50	KEA	MS-V12	1	BSG0734		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-19 | **Client Sample Name:** 1156, SV-6-S, 7/7/2009 9:45:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20		Luft-GC/MS	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane-d4 (Surrogate)	88.8	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726		
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	99.1	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 15:00	JSK	MS-V3	1	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-20 | **Client Sample Name:** 1156, SV-1-S, 7/7/2009 10:15:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20		Luft-GC/MS	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726	ND	
1,2-Dichloroethane-d4 (Surrogate)	84.3	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726		
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726		
4-Bromofluorobenzene (Surrogate)	99.8	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 15:26	JSK	MS-V3	1	BSG0726		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-21 | **Client Sample Name:** 1156, SV-5-S, 7/7/2009 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
1,2-Dibromoethane	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
1,2-Dichloroethane	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
Ethylbenzene	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
Methyl t-butyl ether	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
Toluene	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
Total Xylenes	**0.15**	**mg/kg**	**0.10**		**EPA-8260**	**07/15/09**	**07/16/09 16:31**	**JSK**	**MS-V3**	**10**	**BSG0798**	**ND**	**A01**
t-Amyl Methyl ether	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
t-Butyl alcohol	ND	mg/kg	0.50		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
Diisopropyl ether	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
Ethanol	ND	mg/kg	10		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
Ethyl t-butyl ether	ND	mg/kg	0.050		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798	ND	A01
Total Purgeable Petroleum Hydrocarbons	**24**	**mg/kg**	**10**		**Luft-GC/MS**	**07/14/09**	**07/15/09 15:52**	**JSK**	**MS-V3**	**50**	**BSG0798**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	86.6	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 15:52	JSK	MS-V3	50	BSG0798		
1,2-Dichloroethane-d4 (Surrogate)	91.4	%	70 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798		
Toluene-d8 (Surrogate)	99.7	%	81 - 117 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798		
Toluene-d8 (Surrogate)	105	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 15:52	JSK	MS-V3	50	BSG0798		
4-Bromofluorobenzene (Surrogate)	99.2	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 15:52	JSK	MS-V3	50	BSG0798		
4-Bromofluorobenzene (Surrogate)	97.6	%	74 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 16:31	JSK	MS-V3	10	BSG0798		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-22 | **Client Sample Name:** 1156, SV-7-S, 7/7/2009 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798	ND	
Total Purgeable Petroleum Hydrocarbons	**4.6**	**mg/kg**	**2.0**		**Luft-GC/MS**	**07/15/09**	**07/16/09 16:58**	**JSK**	**MS-V3**	**10**	**BSG0798**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	88.9	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798		
1,2-Dichloroethane-d4 (Surrogate)	92.7	%	70 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 16:58	JSK	MS-V3	10	BSG0798		
Toluene-d8 (Surrogate)	98.2	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798		
Toluene-d8 (Surrogate)	99.5	%	81 - 117 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 16:58	JSK	MS-V3	10	BSG0798		
4-Bromofluorobenzene (Surrogate)	96.3	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 16:18	JSK	MS-V3	1	BSG0798		
4-Bromofluorobenzene (Surrogate)	99.7	%	74 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 16:58	JSK	MS-V3	10	BSG0798		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-23 | **Client Sample Name:** 1156, SV-3-S, 7/7/2009 1:25:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.025		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
1,2-Dibromoethane	ND	mg/kg	0.025		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
1,2-Dichloroethane	ND	mg/kg	0.025		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
Ethylbenzene	ND	mg/kg	0.025		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
Methyl t-butyl ether	ND	mg/kg	0.025		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
Toluene	ND	mg/kg	0.025		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
Total Xylenes	**0.15**	**mg/kg**	**0.050**		**EPA-8260**	**07/15/09**	**07/16/09 17:24**	**JSK**	**MS-V3**	**5**	**BSG0798**	**ND**	**A01**
t-Amyl Methyl ether	ND	mg/kg	0.025		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
t-Butyl alcohol	ND	mg/kg	0.25		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
Diisopropyl ether	ND	mg/kg	0.025		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
Ethanol	ND	mg/kg	5.0		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
Ethyl t-butyl ether	ND	mg/kg	0.025		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798	ND	A01
Total Purgeable Petroleum Hydrocarbons	**17**	**mg/kg**	**10**		**Luft-GC/MS**	**07/14/09**	**07/15/09 16:44**	**JSK**	**MS-V3**	**50**	**BSG0798**	**ND**	**A01**
1,2-Dichloroethane-d4 (Surrogate)	98.4	%	70 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798		
1,2-Dichloroethane-d4 (Surrogate)	88.0	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 16:44	JSK	MS-V3	50	BSG0798		
Toluene-d8 (Surrogate)	98.9	%	81 - 117 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798		
Toluene-d8 (Surrogate)	106	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 16:44	JSK	MS-V3	50	BSG0798		
4-Bromofluorobenzene (Surrogate)	96.4	%	74 - 121 (LCL - UCL)		EPA-8260	07/15/09	07/16/09 17:24	JSK	MS-V3	5	BSG0798		
4-Bromofluorobenzene (Surrogate)	99.8	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 16:44	JSK	MS-V3	50	BSG0798		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-24 | **Client Sample Name:** 1156, SV-4-S, 7/7/2009 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	**0.027**	**mg/kg**	**0.0050**		**EPA-8260**	**07/14/09**	**07/15/09 17:10**	**JSK**	**MS-V3**	**1**	**BSG0798**	**ND**	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798	ND	
Methyl t-butyl ether	**0.020**	**mg/kg**	**0.0050**		**EPA-8260**	**07/14/09**	**07/15/09 17:10**	**JSK**	**MS-V3**	**1**	**BSG0798**	**ND**	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798	ND	
t-Butyl alcohol	**0.16**	**mg/kg**	**0.050**		**EPA-8260**	**07/14/09**	**07/15/09 17:10**	**JSK**	**MS-V3**	**1**	**BSG0798**	**ND**	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798	ND	
Total Purgeable Petroleum Hydrocarbons	**0.23**	**mg/kg**	**0.20**		**Luft-GC/MS**	**07/14/09**	**07/15/09 17:10**	**JSK**	**MS-V3**	**1**	**BSG0798**	**ND**	
1,2-Dichloroethane-d4 (Surrogate)	93.0	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798		
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798		
4-Bromofluorobenzene (Surrogate)	102	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 17:10	JSK	MS-V3	1	BSG0798		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0909084-25 | **Client Sample Name:** 1156, SV-2-S, 7/7/2009 2:05:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20		Luft-GC/MS	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798	ND	
1,2-Dichloroethane-d4 (Surrogate)	91.2	%	70 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798		
Toluene-d8 (Surrogate)	100	%	81 - 117 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798		
4-Bromofluorobenzene (Surrogate)	98.5	%	74 - 121 (LCL - UCL)		EPA-8260	07/14/09	07/15/09 17:36	JSK	MS-V3	1	BSG0798		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Benzene	BSG0726	Matrix Spike	0908002-57	0	0.12049	0.12500	mg/kg		96.4		70 - 130	
		Matrix Spike Duplicate	0908002-57	0	0.11266	0.12500	mg/kg	6.8	90.1	20	70 - 130	
Toluene	BSG0726	Matrix Spike	0908002-57	0	0.11861	0.12500	mg/kg		94.9		70 - 130	
		Matrix Spike Duplicate	0908002-57	0	0.11942	0.12500	mg/kg	0.6	95.5	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BSG0726	Matrix Spike	0908002-57	ND	0.046664	0.050000	mg/kg		93.3		70 - 121	
		Matrix Spike Duplicate	0908002-57	ND	0.043211	0.050000	mg/kg		86.4		70 - 121	
Toluene-d8 (Surrogate)	BSG0726	Matrix Spike	0908002-57	ND	0.050222	0.050000	mg/kg		100		81 - 117	
		Matrix Spike Duplicate	0908002-57	ND	0.051297	0.050000	mg/kg		103		81 - 117	
4-Bromofluorobenzene (Surrogate)	BSG0726	Matrix Spike	0908002-57	ND	0.049803	0.050000	mg/kg		99.6		74 - 121	
		Matrix Spike Duplicate	0908002-57	ND	0.050359	0.050000	mg/kg		101		74 - 121	
Benzene	BSG0734	Matrix Spike	0909039-01	0	21.690	25.000	ug/L		86.8		70 - 130	
		Matrix Spike Duplicate	0909039-01	0	23.640	25.000	ug/L	8.6	94.6	20	70 - 130	
Toluene	BSG0734	Matrix Spike	0909039-01	0	22.510	25.000	ug/L		90.0		70 - 130	
		Matrix Spike Duplicate	0909039-01	0	24.860	25.000	ug/L	9.9	99.4	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BSG0734	Matrix Spike	0909039-01	ND	10.600	10.000	ug/L		106		76 - 114	
		Matrix Spike Duplicate	0909039-01	ND	10.600	10.000	ug/L		106		76 - 114	
Toluene-d8 (Surrogate)	BSG0734	Matrix Spike	0909039-01	ND	10.020	10.000	ug/L		100		88 - 110	
		Matrix Spike Duplicate	0909039-01	ND	9.8300	10.000	ug/L		98.3		88 - 110	
4-Bromofluorobenzene (Surrogate)	BSG0734	Matrix Spike	0909039-01	ND	9.9600	10.000	ug/L		99.6		86 - 115	
		Matrix Spike Duplicate	0909039-01	ND	10.060	10.000	ug/L		101		86 - 115	
Benzene	BSG0798	Matrix Spike	0908002-58	0	0.12148	0.12500	mg/kg		97.2		70 - 130	
		Matrix Spike Duplicate	0908002-58	0	0.11434	0.12500	mg/kg	6.0	91.5	20	70 - 130	
Toluene	BSG0798	Matrix Spike	0908002-58	0	0.12477	0.12500	mg/kg		99.8		70 - 130	
		Matrix Spike Duplicate	0908002-58	0	0.12149	0.12500	mg/kg	2.6	97.2	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BSG0798	Matrix Spike	0908002-58	ND	0.044301	0.050000	mg/kg		88.6		70 - 121	
		Matrix Spike Duplicate	0908002-58	ND	0.045043	0.050000	mg/kg		90.1		70 - 121	

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Toluene-d8 (Surrogate)	BSG0798	Matrix Spike	0908002-58	ND	0.050811	0.050000	mg/kg		102		81 - 117	
		Matrix Spike Duplicate	0908002-58	ND	0.050772	0.050000	mg/kg		102		81 - 117	
4-Bromofluorobenzene (Surrogate)	BSG0798	Matrix Spike	0908002-58	ND	0.048878	0.050000	mg/kg		97.8		74 - 121	
		Matrix Spike Duplicate	0908002-58	ND	0.050596	0.050000	mg/kg		101		74 - 121	

Delta Environmental Consultants, Inc.	Project: 1156	**Reported:** 07/24/2009 10:27
11050 White Rock Rd, Suite 110	Project Number: 000010112779-00007	
Rancho Cordova, CA 95670	Project Manager: Jim Barnard	

Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Diesel Range Organics (C12 - C24)	BSG0952	Matrix Spike	0908002-53	28.929	484.71	500.00	ug/L		91.2		36 - 130	
		Matrix Spike Duplicate	0908002-53	28.929	396.36	500.00	ug/L	21.5	73.5	30	36 - 130	
Tetracosane (Surrogate)	BSG0952	Matrix Spike	0908002-53	ND	20.400	20.000	ug/L		102		28 - 139	
		Matrix Spike Duplicate	0908002-53	ND	18.191	20.000	ug/L		91.0		28 - 139	

Delta Environmental Consultants, Inc.	Project: 1156	**Reported:** 07/24/2009 10:27
11050 White Rock Rd, Suite 110	Project Number: 000010112779-00007	
Rancho Cordova, CA 95670	Project Manager: Jim Barnard	

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Lead	BSG0823	Duplicate	0909084-17	34.823	47.692		mg/kg	31.2		20		Q01
		Matrix Spike	0909084-17	34.823	109.57	97.087	mg/kg		77.0		75 - 125	
		Matrix Spike Duplicate	0909084-17	34.823	134.41	97.087	mg/kg	28.9	103	20	75 - 125	Q02

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Benzene	BSG0726	BSG0726-BS1	LCS	0.11641	0.12500	0.0050	mg/kg	93.1		70 - 130		
Toluene	BSG0726	BSG0726-BS1	LCS	0.12136	0.12500	0.0050	mg/kg	97.1		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BSG0726	BSG0726-BS1	LCS	0.047682	0.050000		mg/kg	95.4		70 - 121		
Toluene-d8 (Surrogate)	BSG0726	BSG0726-BS1	LCS	0.050752	0.050000		mg/kg	102		81 - 117		
4-Bromofluorobenzene (Surrogate)	BSG0726	BSG0726-BS1	LCS	0.051575	0.050000		mg/kg	103		74 - 121		
Benzene	BSG0734	BSG0734-BS1	LCS	23.490	25.000	0.50	ug/L	94.0		70 - 130		
Toluene	BSG0734	BSG0734-BS1	LCS	24.530	25.000	0.50	ug/L	98.1		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BSG0734	BSG0734-BS1	LCS	10.520	10.000		ug/L	105		76 - 114		
Toluene-d8 (Surrogate)	BSG0734	BSG0734-BS1	LCS	10.150	10.000		ug/L	102		88 - 110		
4-Bromofluorobenzene (Surrogate)	BSG0734	BSG0734-BS1	LCS	9.6500	10.000		ug/L	96.5		86 - 115		
Benzene	BSG0798	BSG0798-BS1	LCS	0.12398	0.12500	0.0050	mg/kg	99.2		70 - 130		
Toluene	BSG0798	BSG0798-BS1	LCS	0.12767	0.12500	0.0050	mg/kg	102		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BSG0798	BSG0798-BS1	LCS	0.045523	0.050000		mg/kg	91.0		70 - 121		
Toluene-d8 (Surrogate)	BSG0798	BSG0798-BS1	LCS	0.051979	0.050000		mg/kg	104		81 - 117		
4-Bromofluorobenzene (Surrogate)	BSG0798	BSG0798-BS1	LCS	0.049294	0.050000		mg/kg	98.6		74 - 121		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Diesel Range Organics (C12 - C24)	BSG0952	BSG0952-BS1	LCS	454.33	500.00	50	ug/L	90.9		48 - 125		
Tetracosane (Surrogate)	BSG0952	BSG0952-BS1	LCS	21.195	20.000		ug/L	106		28 - 139		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Total Concentrations (TTLC)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Lead	BSG0823	BSG0823-BS1	LCS	105.83	100.00	2.5	mg/kg	106		75 - 125		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BSG0726	BSG0726-BLK1	ND	mg/kg	0.0050		
1,2-Dibromoethane	BSG0726	BSG0726-BLK1	ND	mg/kg	0.0050		
1,2-Dichloroethane	BSG0726	BSG0726-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BSG0726	BSG0726-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BSG0726	BSG0726-BLK1	ND	mg/kg	0.0050		
Toluene	BSG0726	BSG0726-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BSG0726	BSG0726-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BSG0726	BSG0726-BLK1	ND	mg/kg	0.0050		
t-Butyl alcohol	BSG0726	BSG0726-BLK1	ND	mg/kg	0.050		
Diisopropyl ether	BSG0726	BSG0726-BLK1	ND	mg/kg	0.0050		
Ethanol	BSG0726	BSG0726-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BSG0726	BSG0726-BLK1	ND	mg/kg	0.0050		
Total Purgeable Petroleum Hydrocarbons	BSG0726	BSG0726-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BSG0726	BSG0726-BLK1	92.6	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BSG0726	BSG0726-BLK1	101	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BSG0726	BSG0726-BLK1	106	%	74 - 121 (LCL - UCL)		
Benzene	BSG0734	BSG0734-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BSG0734	BSG0734-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BSG0734	BSG0734-BLK1	ND	ug/L	0.50		
Ethylbenzene	BSG0734	BSG0734-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BSG0734	BSG0734-BLK1	ND	ug/L	0.50		
Toluene	BSG0734	BSG0734-BLK1	ND	ug/L	0.50		
Total Xylenes	BSG0734	BSG0734-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BSG0734	BSG0734-BLK1	ND	ug/L	0.50		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
t-Butyl alcohol	BSG0734	BSG0734-BLK1	ND	ug/L	10		
Diisopropyl ether	BSG0734	BSG0734-BLK1	ND	ug/L	0.50		
Ethanol	BSG0734	BSG0734-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BSG0734	BSG0734-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BSG0734	BSG0734-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BSG0734	BSG0734-BLK1	104	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BSG0734	BSG0734-BLK1	101	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BSG0734	BSG0734-BLK1	91.9	%	86 - 115 (LCL - UCL)		
Benzene	BSG0798	BSG0798-BLK1	ND	mg/kg	0.0050		
1,2-Dibromoethane	BSG0798	BSG0798-BLK1	ND	mg/kg	0.0050		
1,2-Dichloroethane	BSG0798	BSG0798-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BSG0798	BSG0798-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BSG0798	BSG0798-BLK1	ND	mg/kg	0.0050		
Toluene	BSG0798	BSG0798-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BSG0798	BSG0798-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BSG0798	BSG0798-BLK1	ND	mg/kg	0.0050		
t-Butyl alcohol	BSG0798	BSG0798-BLK1	ND	mg/kg	0.050		
Diisopropyl ether	BSG0798	BSG0798-BLK1	ND	mg/kg	0.0050		
Ethanol	BSG0798	BSG0798-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BSG0798	BSG0798-BLK1	ND	mg/kg	0.0050		
Total Purgeable Petroleum Hydrocarbons	BSG0798	BSG0798-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BSG0798	BSG0798-BLK1	92.9	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BSG0798	BSG0798-BLK1	101	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BSG0798	BSG0798-BLK1	97.0	%	74 - 121 (LCL - UCL)		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Diesel Range Organics (C12 - C24)	BSG0952	BSG0952-BLK1	ND	ug/L	50		M02
Tetracosane (Surrogate)	BSG0952	BSG0952-BLK1	106	%	28 - 139 (LCL - UCL)		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Project: 1156
Project Number: 000010112779-00007
Project Manager: Jim Barnard

Reported: 07/24/2009 10:27

Total Concentrations (TTLC)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Lead	BSG0823	BSG0823-BLK1	ND	mg/kg	2.5		

Delta Environmental Consultants, Inc.	Project: 1156	**Reported:** 07/24/2009 10:27
11050 White Rock Rd, Suite 110	Project Number: 000010112779-00007	
Rancho Cordova, CA 95670	Project Manager: Jim Barnard	

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
M02	Analyte detected in the Method Blank at a level between the PQL and 1/2 the PQL.
Q01	Sample precision is not within the control limits.
Q02	Matrix spike precision is not within the control limits.
Z1	Combined two VOAs for a complete sample.

ConocoPhillips Chain Of Custody Record

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
(661) 327-4911 (661) 327-1918 fax

ConocoPhillips Site Manager: Shelby Lathrop

INVOICE REMITTANCE ADDRESS:
CONOCOPHILLIPS
Attn: Dee Hutchinson
3611 South Harbor, Suite 200
Santa Ana, CA. 92704

ConocoPhillips Work Order Number: 000010112779-00007
ConocoPhillips Cost Object:

DATE: 07/10/09
PAGE: 1 of 3

SAMPLING COMPANY: Delta Consultants	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: 1156	GLOBAL ID NO.: T060010279
ADDRESS: 11050 White Rock Road, Suite 110, Rancho Cordova, CA		SITE ADDRESS (Street and City): 4276 MacArthur Blvd, Oakland, CA	CONOCOPHILLIPS SITE MANAGER: Terry Grayson; Phone No.: 916-558-7666
PROJECT CONTACT (Hardcopy or PDF Report to): James Barnard		please cc: CMorgan@deltaenv.com and SMeninger@deltaenv.com on lab results.	PHONE NO.: 916-503-1279
TELEPHONE: 916-503-1279	FAX: 916-638-8385	E-MAIL: jbarnard@deltaenv.com	E-MAIL: terry.l.grayson@contractor.conocophillips.com
SAMPLER NAME(S) (Print): S. Meninger / C. Morgan	CONSULTANT PROJECT NUMBER: C101156203		LAB USE ONLY: 09-09084

TURNAROUND TIME (CALENDAR DAYS):
☑ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑
* SB-10 did not produce H_2O to fill req. bottles. Please run what is possible, if anything at all.
* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

CHECKED BY: RMS
DISTRIBUTION: SUB-OUT ☐

FIELD NOTES:
Container/Preservative or PID Readings or Laboratory Notes

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8260B - TPH-G/BTEX/ MTBE/8 OXYS/ETHANOL	300.0 - Nitrate, Sulfate	3500 - Ferrous Iron	415.1 - Total Organic Carbon	200.8 - Manganese (Total and Dissolved)	Chloride	Alkalinity, Acidity, specific Conductivity, DO, ORP	8015M - TPHd	6010B - Total Lead										TEMPERATURE ON RECEIPT C°
1	SB-7@23-23.5' bgs	7/9	15:15	S	1	X																		
2	SB-7@15.5-16' bgs	7/9	15:10	S	1	X																		
3	SB-7@7.5-8' bgs	7/9	15:05	S	1	X																		
4	SB-7	7/9	15:25	H_2O	4	X							X											
5	SB-10@12-12.5' bgs	7/10	7:55	S	1	X																		
6	SB-10@18-18.5' bgs	7/10	8:00	S	1	X																		
7	SB-10@22.5-23' bgs	7/10	8:05	S	1	X																		
8	SB-10*	7/10	8:30	H_2O	1.5	X							X											
9	SB-9@15.5-16.0'	7/8	6:35	S	1	X																		
10	SB-9@20' bgs	7/8	6:40 PM	S	1	X																		

Relinquished by: (Signature)		Received by: (Signature)		Date:	Time:
	7/10/09	2:28pm Ross Dickey BC Labs		7/10/09	1425
Ross Dickey 7/10/09				7.10.09	1640
	7.10.09 2000			7-10-09	2000

9/19/03 Revision

ConocoPhillips Chain Of Custody Record

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
(661) 327-4911 (661) 327-1918 fax

ConocoPhillips Site Manager: Shelby Lathrop

INVOICE REMITTANCE ADDRESS:
CONOCOPHILLIPS
Attn: Dee Hutchinson
3611 South Harbor, Suite 200
Santa Ana, CA. 92704

ConocoPhillips Work Order Number: 000010112779-00007
ConocoPhillips Cost Object:

DATE: 7/10/09
PAGE: 2 of 3

SAMPLING COMPANY: Delta Consultants	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: 1156	GLOBAL ID NO.: T060010279
ADDRESS: 11050 White Rock Road, Suite 110, Rancho Cordova, CA		SITE ADDRESS (Street and City): 4276 MacArthur Blvd, Oakland, CA	CONOCOPHILLIPS SITE MANAGER: Terry Grayson; Phone No.: 916-558-7666
PROJECT CONTACT (Hardcopy or PDF Report to): James Barnard		PHONE NO.: 916-503-1279	E-MAIL: terry.l.grayson@contractor.conocophillips.com
TELEPHONE: 916-503-1279; FAX: 916-638-8385	E-MAIL: jbarnard@deltaenv.com		LAB USE ONLY: 09-09084
SAMPLER NAME(S) (Print): S. Meninger / C. Morgan	CONSULTANT PROJECT NUMBER: C101156203		

TURNAROUND TIME (CALENDAR DAYS):
☑ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8260B -TPH-G/BTEX/ MTBE/8 OXYS/ETHANOL	300.0 - Nitrate, Sulfate	3500 - Ferrous Iron	415.1 - Total Organic Carbon	200.8 - Manganese (Total and Dissolved)	Chloride	Alkalinity, Acidity, specific Conductivity, DO, ORP	8015M - TPHd	6010B - Total Lead
11	SB-9	7/8	6:58	H_2O	4	X							X	
12	SB11 @ 7.5-8'bgs	7/10	10:50	S	1	X								
13	SB11 @ 15.5-16'bgs	7/10	10:55	S	1	X								
14	SB11 @ 41-41.5'bgs	7/10	11:00	S	1	X								
15	SB11	7/10	11:55	H_2O	4	X							X	
16	SB8 @ 7.0-7.5'bgs	7/10	13:21	S	1	X								
17	~~SB8~~													
18	1156-COMPA	7/10	13:35	S	1	X								X
19	1156-COMPB	7/10	13:45	W	3	X							X	
20														

FIELD NOTES:
Container/Preservative or PID Readings or Laboratory Notes

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature) 7/10/09	Received by: (Signature) 8:28PM Ross Duckhorn BC Labs	Date: 7/10/09	Time: 1928
Relinquished by: (Signature) Ross Duckhorn 7/10/09	Received by: (Signature)	Date: 7.10.09	Time: 1640
Relinquished by: (Signature) 7.10.09 2000	Received by: (Signature)	Date: 7-10-09	Time: 2000

9/19/03 Revision

ConocoPhillips Chain Of Custody Record

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
(661) 327-4911 (661) 327-1918 fax

ConocoPhillips Site Manager: Shelby Lathrop

INVOICE REMITTANCE ADDRESS:
CONOCOPHILLIPS
Attn: Dee Hutchinson
3611 South Harbor, Suite 200
Santa Ana, CA. 92704

ConocoPhillips Work Order Number: 000010112779-00007
ConocoPhillips Cost Object:

DATE: 7/10/09
PAGE: 3 of 3

SAMPLING COMPANY: Delta Consultants	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: 1156	GLOBAL ID NO.: T060010279
ADDRESS: 11050 White Rock Road, Suite 110, Rancho Cordova, CA		SITE ADDRESS (Street and City): 4276 MacArthur Blvd, Oakland, CA	CONOCOPHILLIPS SITE MANAGER: Terry Grayson; Phone No.: 916-558-7666
PROJECT CONTACT (Hardcopy or PDF Report to): James Barnard			PHONE NO.: 916-503-1279; E-MAIL: terry.l.grayson@contractor.conocophillips.com
TELEPHONE: 916-503-1279; FAX: 916-638-8385; E-MAIL: jbarnard@deltaenv.com			LAB USE ONLY: 09-09084
SAMPLER NAME(S) (Print): S. Meninger / C. Morgan	CONSULTANT PROJECT NUMBER: C101156203		

TURNAROUND TIME (CALENDAR DAYS):
☑ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

REQUESTED ANALYSES

FIELD NOTES:
Container/Preservative or PID Readings or Laboratory Notes

* Field Point name only required if different from Sample ID

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8260B - TPH-G/BTEX/ MTBE/8 OXYS/ETHANOL	300.0 - Nitrate, Sulfate	3500 - Ferrous Iron	415.1 - Total Organic Carbon	200.8 - Manganese (Total and Dissolved)	Chloride	Alkalinity, Acidity, specific Conductivity, DO, ORP	8015M - TPHd	6010B - Total Lead	TEMPERATURE ON RECEIPT C°
21	SV-6-S -19	7/7/09	9:45	Soil	1	X							n/a		
22	SV-1-S -20		10:15	Soil	1	X							n/a		
	SV-5-S -21		11:00	Soil	1	X									
	SV-7-S -22		11:30	Soil	1	X									
	SV-3-S -23		1:25	SOIL	1	X									
	SV-4-S -24		12:40	SOIL	1	X									
	SV-2-S -25		2:05	SOIL	1	X									

Relinquished by: (Signature) 7/10/09	Received by: (Signature) 2:28 p.m. Ron Dudley BC LABS	Date: 7/10/09	Time: 1428
Relinquished by: (Signature) Ron Dudley 7/10/09	Received by: (Signature)	Date: 7-10-09	Time: 1640
Relinquished by: (Signature) 7-10-09 2000	Received by: (Signature)	Date: 7-10-09	Time: 2000

9/19/03 Revision

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 Of 3

Submission #: 09-09084

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☐ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☐ YES ☐ NO

Emissivity: .98 Container: QtA Thermometer ID: TH163

Temperature: A 4.8 °C / C 4.5 °C

2000
Date/Time 07-10-09

Analyst Init IAZw

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	A 3	( )	( )	( )	A 2	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER				B						
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE plastic BAG	A	A	A		A	A	A		A	A
~~PCB VIAL~~ soil sleeve BRASS										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: one VOA is half way full

Sample Numbering Completed By: CMM Date/Time: 7/14/09 0840

A = Actual / C = Corrected

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 2 Of 3

Submission #: 09-09084

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☐ Comments:

All samples received? Yes ☐ No ☐ All samples containers intact? Yes ☐ No ☐ Description(s) match COC? Yes ☐ No ☐

COC Received ☐ YES ☐ NO

Emissivity: .98 Container: QtA Thermometer ID: TH163

Temperature: A 4.8 °C / C 4.5 °C

2000 Date/Time 07-10-09

Analyst Init IAZW

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A 3	( )	( )	( )	A 3	( )	( )	A 3	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER	B				B					
8 OZ. JAR							A			
32 OZ. JAR										
SOIL SLEEVE plastic		A	A	A		A				
~~PCB VIAL~~ Soil sleeve Brass									A	A
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: CAM Date/Time: 7/14/09 0840

A = Actual / C = Corrected

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 3 of 3

Submission #: 09-09084

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☐ Comments:

All samples received? Yes ☐ No ☐ All samples containers intact? Yes ☐ No ☐ Description(s) match COC? Yes ☐ No ☐

COC Received ☐ YES ☐ NO

Emissivity: .98 Container: CtA Thermometer ID: TH163

Temperature: A 4.8 °C / C 4.5 °C

2000
Date/Time 07-10-09

Analyst Init IAZ

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	21	22	23	24	25	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
~~PCB VIAL~~ Soil Sleeve Brass	A	A	A	A	A					
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:
Sample Numbering Completed By: CAM Date/Time: 7/14/09 0840
A = Actual / C = Corrected

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Appendix E

Soil Vapor Laboratory Analytical Report

TEG Northern California Inc.

31 August 2009

Mr. Jim Barnard
Delta Consultants
11050 White Rock Road, Suite 110
Rancho Cordova, CA 95670

SUBJECT: DATA REPORT - Delta Consultants Project # C101156
4276 MacArthur Boulevard, Oakland, California

TEG Project # 90811F

Mr. Barnard:

Please find enclosed a data report for the samples analyzed from the above referenced project for Delta Consultants. The samples were analyzed on site in TEG's mobile laboratory. TEG conducted a total of 14 analyses on 14 soil vapor samples.

-- 7 analyses on soil vapors for aromatic volatile hydrocarbons (BTEX), fuel oxygenates, and total petroleum hydrocarbons-gasoline by EPA method 8260B.

-- 7 analyses on soil vapors for methane, oxygen and carbon dioxide by GC/TCD.

The results of the analyses are summarized in the enclosed tables. Applicable detection limits and calibration data are included in the tables.

1,1 difluoroethane was used as a leak check compound around the probe rods during the soil vapor sampling. No 1,1 difluoroethane was detected in any of the soil vapor samples reported at or above the DTSC recommended leak check compound reporting limit of 10 μg/L of vapor.

TEG appreciates the opportunity to have provided analytical services to Delta Consultants on this project. If you have any further questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Mark Jerpbak
Director, TEG-Northern California

Delta Project # C101156
4276 MacArthur Boulevard
Oakland, California

TEG Project #90811F

Analyses of SOIL VAPOR
BTEX, Oxygenates, & TPH-gasoline (EPA method 8260B) in micrograms per cubic meter of Vapor
Methane in ppmV, and Oxygen and Carbon Dioxide in percent by Volume

SAMPLE NUMBER:		Probe Blank	SV-2	SV-2 dup	SV-4
SAMPLE DEPTH (feet):			5.0	5.0	3.5
PURGE VOLUME:			1	1	1
COLLECTION DATE:		8/11/09	8/11/09	8/11/09	8/11/09
COLLECTION TIME:		09:52	14:43	14:43	13:49
DILUTION FACTOR (VOCs):		1	1	1	10
	RL				
Benzene	100	nd	350	360	1100
Toluene	200	nd	370	400	nd
Ethylbenzene	100	nd	370	400	17000
m,p-Xylene	100	nd	380	390	6200
o-Xylene	100	nd	140	160	nd
tert-Butanol (TBA)	1000	nd	nd	nd	nd
Methyl-t-butyl ether (MtBE)	100	nd	nd	nd	nd
Diisopropyl ether (DIPE)	100	nd	nd	nd	nd
Ethyl-t-butyl ether (EtBE)	100	nd	nd	nd	nd
Tert-amyl methyl ether (TAME)	100	nd	nd	nd	nd
TPH (gasoline range)	10000	nd	23000	23000	57000000
Methane	500	nd	nd	nd	20000
Oxygen	5.0	21	11	11	5.2
Carbon Dioxide	1.0	nd	5.1	5.1	9.5
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd
Surrogate Recovery (DBFM)		92%	89%	92%	93%
Surrogate Recovery (1,4-BFB)		112%	107%	111%	112%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Jon Edmondson

11350 Monier Park Place, Rancho Cordova, CA 95742 Phone: (916) 853-8010 Fax: (916) 853-8020

Delta Project # C101156
4276 MacArthur Boulevard
Oakland, California

TEG Project #90811F

Analyses of SOIL VAPOR
BTEX, Oxygenates, & TPH-gasoline (EPA method 8260B) in micrograms per cubic meter of Vapor
Methane in ppmV, and Oxygen and Carbon Dioxide in percent by Volume

SAMPLE NUMBER:		SV-6	SV-6	SV-6	SV-7
SAMPLE DEPTH (feet):		5.0	5.0	5.0	3.5
PURGE VOLUME:		1	3	7	1
COLLECTION DATE:		8/11/09	8/11/09	8/11/09	8/11/09
COLLECTION TIME:		10:40	11:04	11:30	12:09
DILUTION FACTOR (VOCs):		1	1	1	400
	RL				
Benzene	100	2000	1600	1200	93000
Toluene	200	nd	nd	nd	nd
Ethylbenzene	100	2700	2200	1300	nd
m,p-Xylene	100	2200	1800	1100	nd
o-Xylene	100	nd	nd	nd	nd
tert-Butanol (TBA)	1000	nd	nd	nd	nd
Methyl-t-butyl ether (MtBE)	100	nd	nd	nd	nd
Diisopropyl ether (DIPE)	100	nd	nd	nd	nd
Ethyl-t-butyl ether (EtBE)	100	nd	nd	nd	nd
Tert-amyl methyl ether (TAME)	100	nd	nd	nd	nd
TPH (gasoline range)	10000	3000000	2600000	1300000	82000000
Methane	500	nd	nd	nd	24000
Oxygen	5.0	20	20	21	9.2
Carbon Dioxide	1.0	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd
Surrogate Recovery (DBFM)		91%	91%	92%	88%
Surrogate Recovery (1,4-BFB)		112%	113%	121%	110%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Jon Edmondson

11350 Monier Park Place, Rancho Cordova, CA 95742 Phone: (916) 853-8010 Fax: (916) 853-8020

Delta Project # C101156
4276 MacArthur Boulevard
Oakland, California

TEG Project #90811F

CALIBRATION STANDARDS - Initial Calibration / LCS

Instrument: Agilent 5973N MSD

	INITIAL CALIBRATION		LCS	
COMPOUND	RF	%RSD	RF	%DIFF
Benzene	1.129	6.5%	1.188	5.2%
Toluene	0.674	5.8%	0.725	7.6%
Ethylbenzene	0.512	3.9%	0.584	14.1%
m,p-Xylene	0.610	7.5%	0.663	8.7%
o-Xylene	0.586	5.1%	0.649	10.8%
tert-Butanol (TBA)*	0.014	17.9%	0.017	21.4%
Methyl-t-butyl ether (MtBE)	0.592	9.2%	0.644	8.8%
Diisopropyl ether (DIPE)	0.950	7.0%	1.059	11.5%
Ethyl-t-butyl ether (EtBE)	0.727	6.5%	0.808	11.1%
Tert-amyl methyl ether (TAME)	0.615	8.3%	0.686	11.5%
TPH-Gasoline	1.070	9.0%	1.032	3.6%
Acceptable Limits		20.0%		15.0%

'*' Indicates RSD not to exceed 30% & LCS not to exceed 25%

11350 Monier Park Place, Rancho Cordova, CA 95742 Phone: (916) 853-8010 Fax: (916) 853-8020

Appendix F

Non-Hazardous Waste Manifest Data Form

Manifest

TPST Soil Recyclers of CA
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transporter Truck #:	Facility #:	Given by TPST:	Load #
/ /		621732	407	33810	901

Generator and/or Consultant

Generator's Name and Billing Address: CONOCOPHILLIPS RM & R 76 BROADWAY SACRAMENTO, CA 95818	Generator's Phone #: Person to Contact: Terry L. Grayson FAX#:	Generator's US EPA ID No. Customer Account Number with TPST:
Consultant's Name and Billing Address:	Consultant's Phone #: Person to Contact: Caitlin Morgan DELTA FAX#:	Customer Account Number with TPST:
Generation Site (Transport from): *(name & address)* CONOCOPHILLIPS #1156 4276 MACARTHUR BLVD OAKLAND, CA 94619	Site Phone #: Person to Contact: FAX#:	BTEX Levels TPH Levels AVG. Levels
Designated Facility (Transport to): *(name & address)* TPST SOIL RECYCLERS OF CALIFORNIA 12328 HIBISCUS AVENUE ADELANTO, CA 92301	Facility Phone #: (800) 862-8001 Person to Contact: DELLENA JEFFREY FAX#: (760) 246-9004	Facility Permit Numbers
Transporter Name and Mailing Address: BELSHIRE 25971 TOWNE CENTRE DRIVE FOOTHILL RANCH, CA 92610 BESI: 171416	Transporter's Phone #: (949) 460-6200 Person to Contact: LARRY MOOTHART FAX#: (949) 460-6210	Transporter's US EPA ID No.: CAR000183913 Transporter's DOT No.: 450647 Customer Account Number with TPST:

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐	3 dms		3640	1900	1740
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					87

List any exception to items listed above: Scale Ticket# 13006

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:	Month	Day	Year
Larry Moothart of BESI on behalf of ConocoPhillips		8	12	09

Transporter

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this 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:	Signature and date:	Month	Day	Year
Kevin Dunlop		8	12	09

Recycling Facility

Discrepancies:
1156
528219

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

Print or Type Name:	Signature and date:
D. JEFFREY/J. PROVANSAL	8/24/09

Please print or type.

TRANSPORTER COPY

15

NO. 681263

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

GENERATING SITE:

NAME: CONOCOPHILLIPS RM & R — CONOCOPHILLIPS #1156

EPA I.D. NO.:

ADDRESS: 76 BROADWAY — 4276 MACARTHUR BLVD

PROFILE NO.:

CITY, STATE, ZIP: SACRAMENTO, CA 95818 — OAKLAND, CA 94619

PHONE NO. ( )

ATTN: TERRY L. GRAYSON

CONTAINERS: No. 1 VOLUME 55 WEIGHT

TYPE: [X] TANK TRUCK [ ] DUMP TRUCK [ ] DRUMS [ ] CARTONS [ ] OTHER

WASTE DESCRIPTION: NON-HAZARDOUS WATER — GENERATING PROCESS: WELL PURGING / DECON WATER

COMPONENTS OF WASTE	PPM	%	COMPONENTS OF WASTE	PPM	%
1. WATER		99-100%	5.		
2. TPH		<1%	6.		
3.			7.		
4.			8. BESI;171416		

PROPERTIES: pH 7-10 [ ] SOLID [X] LIQUID [ ] SLUDGE [ ] SLURRY [ ] OTHER

HANDLING INSTRUCTIONS: 24-HOUR EMERGENCY PHONE: 800-424-9300

THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS.

Larry Moothart of BESI on behalf of ConocoPhillips Company — 8/12/09

TYPED OR PRINTED FULL NAME & SIGNATURE — DATE

TRANSPORTER

NAME: BELSHIRE — NIETO & SONS

EPA I.D. NO.:

ADDRESS: 25971 TOWNE CENTRE DRIVE — 1281 BREA CANYON ROAD

SERVICE ORDER NO.:

CITY, STATE, ZIP: FOOTHILL RANCH, CA 92610 — BREA, CA 92821

PICK UP DATE: 8/12/09

PHONE NO.: (949) 460-5200 — (714) 990-6855

TRUCK, UNIT, I.D. NO.: 253-325

Jeff Wyrick — 8/17/09

TYPED OR PRINTED FULL NAME & SIGNATURE — DATE

TSD FACILITY

NAME: DEMENNO KERDOON

EPA I.D. NO.:

ADDRESS: 2000 N. ALAMEDA ST.

DISPOSAL METHOD

[ ] LANDFILL [X] OTHER Recycle

CITY, STATE, ZIP: COMPTON, CA 90222

PHONE NO.: 310-537-7100

1156

527029

Fernando Marquez — 8-17-09

TYPED OR PRINTED FULL NAME & SIGNATURE — DATE

GEN	OLD/NEW	L	A	TONS
TRANS		S	B	
C/Q		RT/CD	HWDF: NONE	

DISCREPANCY

Appendix G

Gregg CPT/UVOST Data Report

GREGG DRILLING & TESTING, INC.
GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATION SERVICES

July 20, 2009

Delta
Attn: Jim Barnard
11050 White Rock Rd., Suite 110
Rancho Cordova, California 95670

Subject: CPT Site Investigation
COP 1156
Oakland, California
GREGG Project Number: 09-107MA

Dear Mr. Barnard:

The following report presents the results of GREGG Drilling & Testing's Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

1	Cone Penetration Tests	(CPTU)	☒
2	Pore Pressure Dissipation Tests	(PPD)	☐
3	Seismic Cone Penetration Tests	(SCPTU)	☐
4	Resistivity Cone Penetration Tests	(RCPTU)	☐
5	UVOST Laser Induced Fluorescence	(UVOST)	☒
6	Groundwater Sampling	(GWS)	☐
7	Soil Sampling	(SS)	☐
8	Vapor Sampling	(VS)	☐
9	Vane Shear Testing	(VST)	☐
10	SPT Energy Calibration	(SPTE)	☐

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact our office at (925) 313-5800.

Sincerely,
GREGG Drilling & Testing, Inc.

Mary Walden
Operations Manager

Cone Penetration Test Sounding Summary

-Table 1-

CPT Sounding Identification	Date	Termination Depth (Feet)	Depth of Groundwater Samples (Feet)	Depth of Soil Samples (Feet)	Depth of Pore Pressure Dissipation Tests (Feet)
SB-07	7/09/09	19	-	-	-
SB-09	7/08/09	18	-	-	-
SB-11	7/09/09	21	-	-	-

Bibliography

Lunne, T., Robertson, P.K. and Powell, J.J.M., "Cone Penetration Testing in Geotechnical Practice" E & FN Spon. ISBN 0 419 23750, 1997

Roberston, P.K., "Soil Classification using the Cone Penetration Test", Canadian Geotechnical Journal, Vol. 27, 1990 pp. 151-158.

Mayne, P.W., "NHI (2002) Manual on Subsurface Investigations: Geotechnical Site Characterization", available through www.ce.gatech.edu/~geosys/Faculty/Mayne/papers/index.html, Section 5.3, pp. 107-112.

Robertson, P.K., R.G. Campanella, D. Gillespie and A. Rice, "Seismic CPT to Measure In-Situ Shear Wave Velocity", Journal of Geotechnical Engineering ASCE, Vol. 112, No. 8, 1986 pp. 791-803.

Robertson, P.K., Sully, J., Woeller, D.J., Lunne, T., Powell, J.J.M., and Gillespie, D.J., "Guidelines for Estimating Consolidation Parameters in Soils from Piezocone Tests", Canadian Geotechnical Journal, Vol. 29, No. 4, August 1992, pp. 539-550.

Robertson, P.K., T. Lunne and J.J.M. Powell, "Geo-Environmental Application of Penetration Testing", Geotechnical Site Characterization, Robertson & Mayne (editors), 1998 Balkema, Rotterdam, ISBN 90 5410 939 4 pp 35-47.

Campanella, R.G. and I. Weemees, "Development and Use of An Electrical Resistivity Cone for Groundwater Contamination Studies", Canadian Geotechnical Journal, Vol. 27 No. 5, 1990 pp. 557-567.

DeGroot, D.J. and A.J. Lutenegger, "Reliability of Soil Gas Sampling and Characterization Techniques", International Site Characterization Conference - Atlanta, 1998.

Woeller, D.J., P.K. Robertson, T.J. Boyd and Dave Thomas, "Detection of Polyaromatic Hydrocarbon Contaminants Using the UVIF-CPT", 53rd Canadian Geotechnical Conference Montreal, QC October pp. 733-739, 2000.

Zemo, D.A., T.A. Delfino, J.D. Gallinatti, V.A. Baker and L.R. Hilpert, "Field Comparison of Analytical Results from Discrete-Depth Groundwater Samplers" BAT EnviroProbe and QED HydroPunch, Sixth national Outdoor Action Conference, Las Vegas, Nevada Proceedings, 1992, pp 299-312.

Copies of ASTM Standards are available through www.astm.org

Cone Penetration Testing Procedure (CPT)

Gregg Drilling carries out all Cone Penetration Tests (CPT) using an integrated electronic cone system, *Figure CPT*. The soundings were conducted using a 20 ton capacity cone with a tip area of 15 cm^2 and a friction sleeve area of 225 cm^2. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.80.

The cone takes measurements of cone bearing (q_c), sleeve friction (f_s) and penetration pore water pressure (u_2) at 5-cm intervals during penetration to provide a nearly continuous hydrogeologic log. CPT data reduction and interpretation is performed in real time facilitating on-site decision making. The above mentioned parameters are stored on disk for further analysis and reference. All CPT soundings are performed in accordance with revised (2002) ASTM standards (D 5778-95).

The cone also contains a porous filter element located directly behind the cone tip (u_2), *Figure CPT*. It consists of porous plastic and is 5.0mm thick. The filter element is used to obtain penetration pore pressure as the cone is advanced as well as Pore Pressure Dissipation Tests (PPDT's) during appropriate pauses in penetration. It should be noted that prior to penetration, the element is fully saturated with silicon oil under vacuum pressure to ensure accurate and fast dissipation.

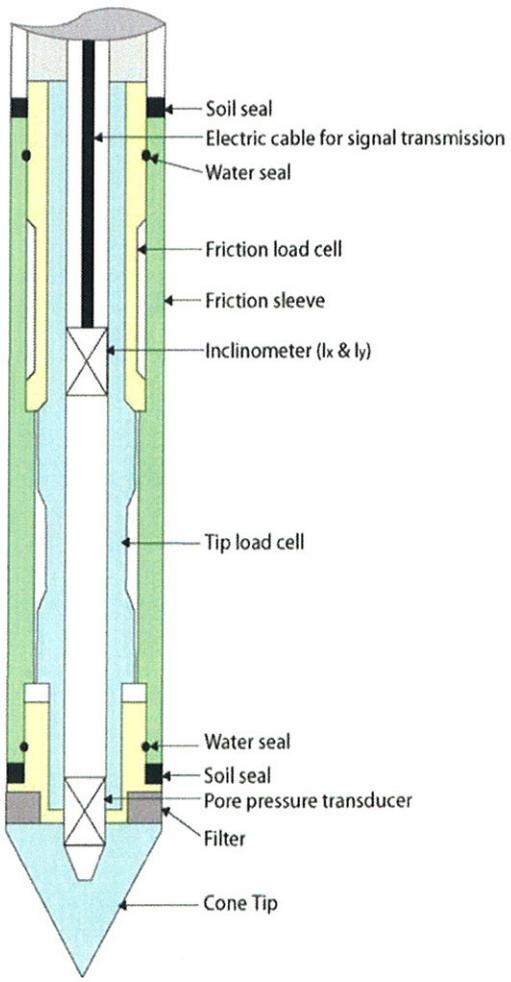


Figure CPT

When the soundings are complete, the test holes are grouted using a Gregg support rig. The grouting procedures generally consist of pushing a hollow CPT rod with a "knock out" plug to the termination depth of the test hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole. Disruption or further contamination to the site is therefore minimized.

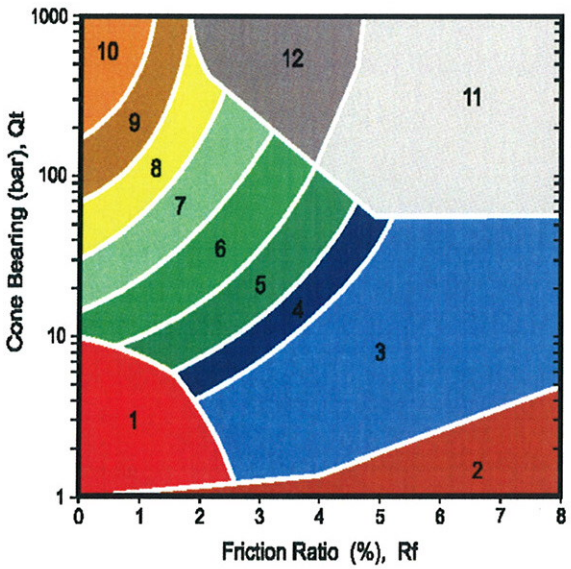
Cone Penetration Test Data & Interpretation

The Cone Penetration Test (CPT) data collected from your site are presented in graphical form in the attached report. The plots include interpreted Soil Behavior Type (SBT) based on the charts described by Robertson (1990). Typical plots display SBT based on the non-normalized charts of Robertson et al (1986). For CPT soundings extending greater than 50 feet, we recommend the use of the normalized charts of Robertson (1990) which can be displayed as SBTn, upon request. The report also includes spreadsheet output of computer calculations of basic interpretation in terms of SBT and SBTn and various geotechnical parameters using current published correlations based on the comprehensive review by Lunne, Robertson and Powell (1997), as well as recent updates by Professor Robertson. The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg Drilling & Testing Inc. do not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and do not assume any liability for any use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software.

Some interpretation methods require input of the groundwater level to calculate vertical effective stress. An estimate of the in-situ groundwater level has been made based on field observations and/or CPT results, but should be verified by the user.

A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface.

Note that it is not always possible to clearly identify a soil type based solely on q_t, f_s, and u_2. In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the correct soil behavior type.



(After Robertson, et al., 1986)

ZONE	SBT
1	Sensitive, fine grained
2	Organic materials
3	Clay
4	Silty clay to clay
5	Clayey silt to silty clay
6	Sandy silt to clayey silt
7	Silty sand to sandy silt
8	Sand to silty sand
9	Sand
10	Gravely sand to sand
11	Very stiff fine grained*
12	Sand to clayey sand*

*over consolidated or cemented

Figure SBT

Cone Penetration Test (CPT) Interpretation

Gregg has recently updated their CPT interpretation and plotting software (2007). The software takes the CPT data and performs basic interpretation in terms of soil behavior type (SBT) and various geotechnical parameters using current published empirical correlations based on the comprehensive review by Lunne, Robertson and Powell (1997). The interpretation is presented in tabular format using MS Excel. The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and does not assume any liability for any use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software.

The following provides a summary of the methods used for the interpretation. Many of the empirical correlations to estimate geotechnical parameters have constants that have a range of values depending on soil type, geologic origin and other factors. The software uses 'default' values that have been selected to provide, in general, conservatively low estimates of the various geotechnical parameters.

Input:

1. Units for display (Imperial or metric) (atm. pressure, pa = 0.96 tsf or 0.1 MPa)
2. Depth interval to average results,(ft or m). Data are collected at either 0.02 or 0.05m and can be averaged every 1, 3 or 5 intervals.
3. Elevation of ground surface (ft or m)
4. Depth to water table, z_w (ft or m) – input required
5. Net area ratio for cone, a (default to 0.80)
6. Relative Density constant, C_{Dr} (default to 350)
7. Young's modulus number for sands, α (default to 5)
8. Small strain shear modulus number
   a. for sands, S_G (default to 180 for SBT_n 5, 6, 7)
   b. for clays, C_G (default to 50 for SBT_n 1, 2, 3 & 4)
9. Undrained shear strength cone factor for clays, N_{kt} (default to 15)
10. Over Consolidation ratio number, k_{ocr} (default to 0.3)
11. Unit weight of water, (default to $\gamma_w = 62.4$ lb/ft^3 or 9.81 kN/m^3)

Column

1. Depth, z, (m) – CPT data is collected in meters
2. Depth (ft)
3. Cone resistance, q_c (tsf or MPa)
4. Sleeve friction, f_s (tsf or MPa)
5. Penetration pore pressure, u (psi or MPa), measured behind the cone (i.e. u_2)
6. Other – any additional data, if collected, e.g. electrical resistivity or UVIF
7. Total cone resistance, q_t (tsf or MPa) $q_t = q_c + u(1-a)$

8	Friction Ratio, R_f (%)	$R_f = (f_s/q_t) \times 100\%$
9	Soil Behavior Type (non-normalized), SBT	see note
10	Unit weight, γ (pcf or kN/m^3)	based on SBT, see note
11	Total overburden stress, σ_v (tsf)	$\sigma_{vo} = \gamma z$
12	Insitu pore pressure, u_o (tsf)	$u_o = \gamma_w (z - z_w)$
13	Effective overburden stress, σ'_{vo} (tsf)	$\sigma'_{vo} = \sigma_{vo} - u_o$
14	Normalized cone resistance, Q_{t1}	$Q_{t1} = (q_t - \sigma_{vo}) / \sigma'_{vo}$
15	Normalized friction ratio, F_r (%)	$F_r = f_s / (q_t - \sigma_{vo}) \times 100\%$
16	Normalized Pore Pressure ratio, B_q	$B_q = u - u_o / (q_t - \sigma_{vo})$
17	Soil Behavior Type (normalized), SBT_n	see note
18	SBT_n Index, I_c	see note
19	Normalized Cone resistance, Q_{tn} (n varies with Ic)	see note
20	Estimated permeability, k_{SBT} (cm/sec or ft/sec)	see note
21	Equivalent SPT N_{60}, blows/ft	see note
22	Equivalent SPT $(N_1)_{60}$ blows/ft	see note
23	Estimated Relative Density, D_r, (%)	see note
24	Estimated Friction Angle, ϕ', (degrees)	see note
25	Estimated Young's modulus, E_s (tsf)	see note
26	Estimated small strain Shear modulus, Go (tsf)	see note
27	Estimated Undrained shear strength, s_u (tsf)	see note
28	Estimated Undrained strength ratio	s_u/σ_v'
29	Estimated Over Consolidation ratio, OCR	see note

Notes:

1 Soil Behavior Type (non-normalized), SBT — Lunne et al. (1997) listed below

2 Unit weight, γ either constant at 119 pcf or based on Non-normalized SBT (Lunne et al., 1997 and table below)

3 Soil Behavior Type (Normalized), SBT_n — Lunne et al. (1997)

4 SBT_n Index, I_c — $I_c = ((3.47 - \log Q_{t1})^2 + (\log F_r + 1.22)^2)^{0.5}$

5 Normalized Cone resistance, Q_{tn} (n varies with Ic)

$Q_{tn} = ((q_t - \sigma_{vo})/pa)\ (pa/(\sigma'_{vo})^n$ and recalculate I_c, then iterate:

When $I_c < 1.64$, $n = 0.5$ (clean sand)
When $I_c > 3.30$, $n = 1.0$ (clays)
When $1.64 < I_c < 3.30$, $n = (I_c - 1.64)0.3 + 0.5$
Iterate until the change in n, $\Delta n < 0.01$

6 Estimated permeability, k_{SBT} (based on Normalized SBT_n)
(Lunne et al., 1997 and table below)

7 Equivalent SPT N_{60}, blows/ft Lunne et al. (1997)

$$\frac{(q_t/p_a)}{N_{60}} = 8.5\left(1 - \frac{I_c}{4.6}\right)$$

8 Equivalent SPT $(N_1)_{60}$ blows/ft $(N_1)_{60} = N_{60} C_N$,
where $C_N = (pa/\sigma'_{vo})^{0.5}$

9 Relative Density, D_r, (%) $D_r^2 = Q_{tn} / C_{Dr}$
Only SBT_n 5, 6, 7 & 8 *Show 'N/A' in zones 1, 2, 3, 4 & 9*

10 Friction Angle, ϕ', (degrees) $\tan \phi' = \frac{1}{2.68}\left[\log\left(\frac{q_c}{\sigma'_{vo}}\right) + 0.29\right]$
Only SBT_n 5, 6, 7 & 8 *Show 'N/A' in zones 1, 2, 3, 4 & 9*

11 Young's modulus, E_s $E_s = \alpha\, q_t$
Only SBT_n 5, 6, 7 & 8 *Show 'N/A' in zones 1, 2, 3, 4 & 9*

12 Small strain shear modulus, Go
a. $G_o = S_G (q_t\ \sigma'_{vo}\ pa)^{1/3}$ *For SBT_n 5, 6, 7*
b. $G_o = C_G\, q_t$ *For SBT_n 1, 2, 3& 4*
Show 'N/A' in zones 8 & 9

13 Undrained shear strength, s_u $s_u = (q_t - \sigma_{vo}) / N_{kt}$
Only SBT_n 1, 2, 3, 4 & 9 *Show 'N/A' in zones 5, 6, 7 & 8*

14 Over Consolidation ratio, OCR $OCR = k_{ocr}\, Q_{tl}$
Only SBT_n 1, 2, 3, 4 & 9 *Show 'N/A' in zones 5, 6, 7 & 8*

SBT Zones		**SBT_n Zones**	
The following updated and simplified SBT descriptions have been used in the software:			
1	sensitive fine grained	1	sensitive fine grained
2	organic soil	2	organic soil
3	clay	3	clay
4	clay & silty clay	4	clay & silty clay
5	clay & silty clay		
6	sandy silt & clayey silt		
7	silty sand & sandy silt	5	silty sand & sandy silt
8	sand & silty sand	6	sand & silty sand
9	sand		
10	sand	7	sand

11	very dense/stiff soil*	8	very dense/stiff soil*
12	very dense/stiff soil*	9	very dense/stiff soil*

*heavily overconsolidated and/or cemented

Track when soils fall with zones of same description and print that description (i.e. if soils fall only within SBT zones 4 & 5, print 'clays & silty clays')

Estimated Permeability (see Lunne et al., 1997)

SBT_n	Permeability (ft/sec)	(m/sec)
1	$3x\ 10^{-8}$	$1x\ 10^{-8}$
2	$3x\ 10^{-7}$	$1x\ 10^{-7}$
3	$1x\ 10^{-9}$	$3x\ 10^{-10}$
4	$3x\ 10^{-8}$	$1x\ 10^{-8}$
5	$3x\ 10^{-6}$	$1x\ 10^{-6}$
6	$3x\ 10^{-4}$	$1x\ 10^{-4}$
7	$3x\ 10^{-2}$	$1x\ 10^{-2}$
8	$3x\ 10^{-6}$	$1x\ 10^{-6}$
9	$1x\ 10^{-8}$	$3x\ 10^{-9}$

Estimated Unit Weight (see Lunne et al., 1997)

SBT	Approximate Unit Weight (lb/ft^3)	(kN/m^3)
1	111.4	17.5
2	79.6	12.5
3	111.4	17.5
4	114.6	18.0
5	114.6	18.0
6	114.6	18.0
7	117.8	18.5
8	120.9	19.0
9	124.1	19.5
10	127.3	20.0
11	130.5	20.5
12	120.9	19.0

Laser Induced Fluorescence (UVOST)

Gregg Drilling conducts Laser Induced Fluorescence (LIF) Cone Penetration Tests using a UVOST module that is located behind the standard piezocone, *Figure UVOST*. The laser induced fluorescence cone works on the principle that polycyclic aromatic hydrocarbons (PAH's), mixed with soil and/or groundwater, fluoresce when irradiated by ultra violet light. Therefore, by measuring the intensity of fluorescence, the lateral and vertical extent of hydrocarbon contamination in the ground can be determined.

The UVOST module uses principles of fluorescence spectrometry by irradiating the soil with ultra violet light produced by a laser and transmitted to the cone through fiber optic cables. The light is then passes through a small window in the side of the cone into the soil. Any hydrocarbon molecules present in the soil absorb the light energy during radiation and immediately re-emit the light at a longer wavelength. This re-emission is termed fluorescence. The UVOST system also measures the emission decay with time at four different wavelengths (350nm, 400nm, 450nm, and 500nm). This allows the software to determine a product "signature" at each data point. This process allows determination of the type of contaminant as shown in Figure *Concept*.

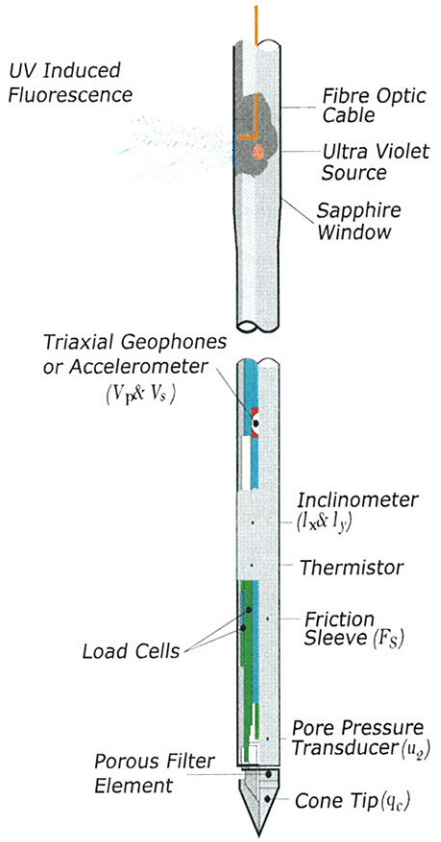


Figure UVOST: UVOST system deployed with the CPT

In general, the typical detection limit for the UVOST system is <100 ppm and it will operate effectively above and below the saturated zone. With the capability to push up to 600 feet per day, laser induced fluorescence offers a fast and efficient means for delineating PAH contaminant plumes. Color coded logs offer qualitative information in a quick glance and can be produced in the field for real-time decision making. Coupled with the data provided by the CPT, a complete site assessment can be completed with no samples or cuttings, saving laboratory costs as well as site and environmental impact.

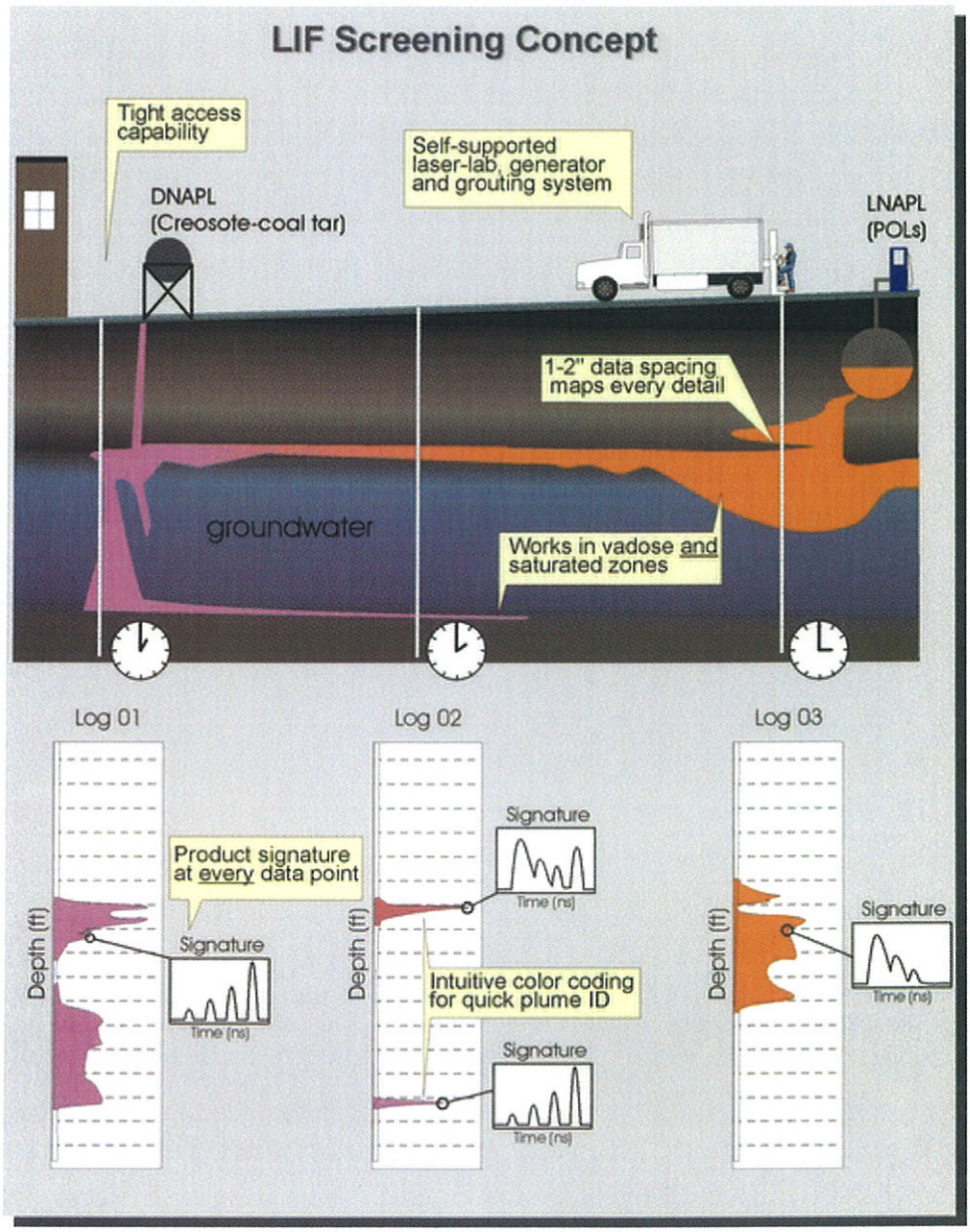


Figure Concept (figure provided by Dakota Technologies)

Hydrocarbons detected with UVOST	Hydrocarbons rarely detected using UVOST
Gasoline	Extremely weathered gasoline
Diesel	Coal tar
Jet (Kerosene)	Creosote
Motor Oil	Bunker Oil
Cutting fluids	Polychlorinated bi-phenols (PCB's)
Hydraulic fluids	Chlorinated solvent DNAPL
Crude Oil	Dissolved phase (aqueous) PAH's

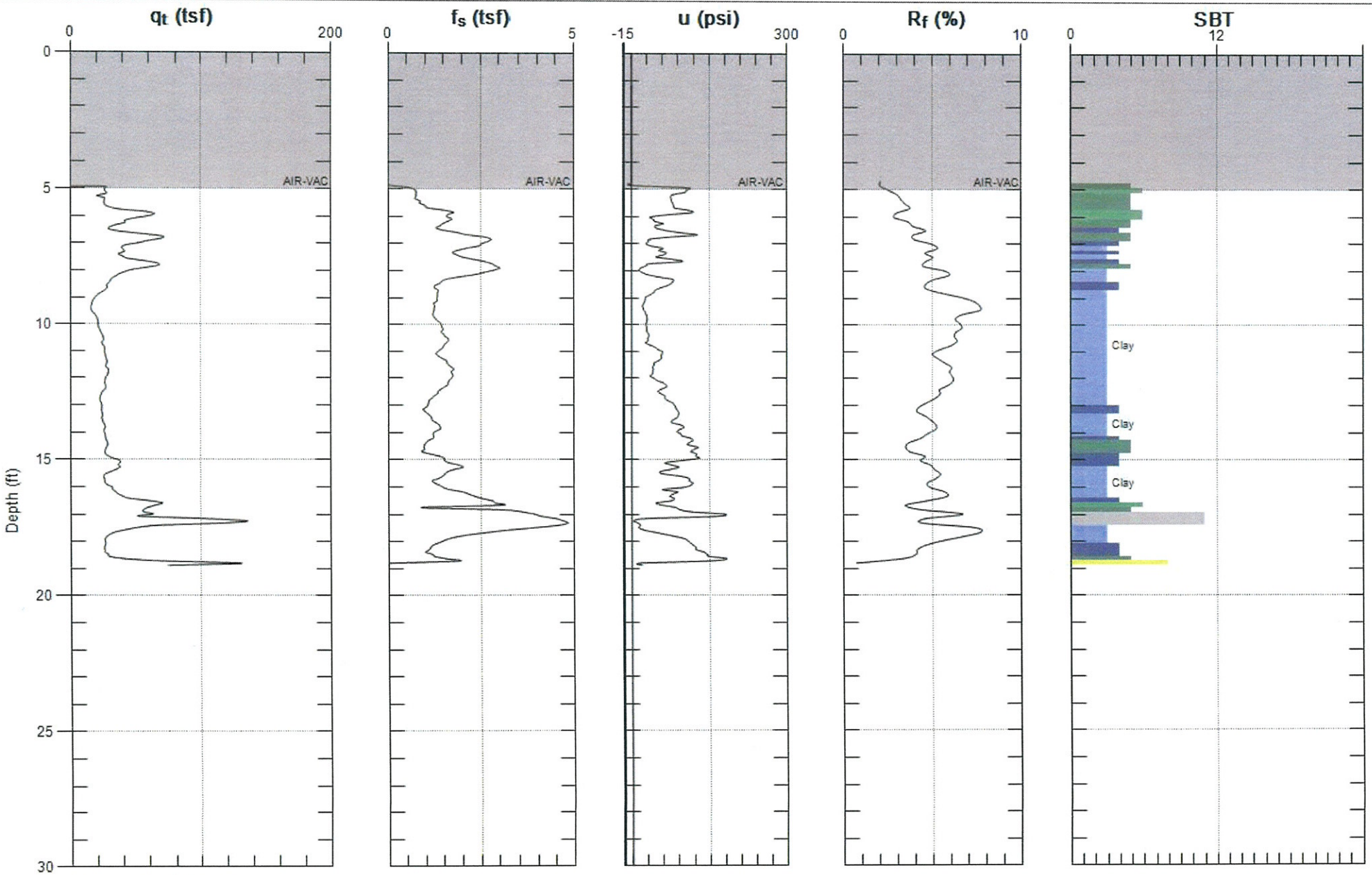
Potential False Positives (fluorescence observed)	Potential False Negatives (do not fluoresce)
Sea-shells (weak-medium)	Extremely weathered fuels (especially gasoline)
Paper (medium-strong depending on color)	Aviation gasoline (weak)
Peat/meadow mat (weak)	Coal tars (most)
Calcite/calcareous sands (weak)	Creosotes (most)
Tree roots (weak-medium)	"Dry" PAHs such as aqueous phase, lamp black, purifier chips
Sewer lines (medium-strong)	Most chlorinated solvents
	Benzene, toluene, zylenes (relatively pure)

GREGG

DELTA

Site: COP 1156
Sounding: SB-07

Engineer: C.MORGAN
Date: 7/9/2009 02:46



Max. Depth: 18.881 (ft)
Avg. Interval: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

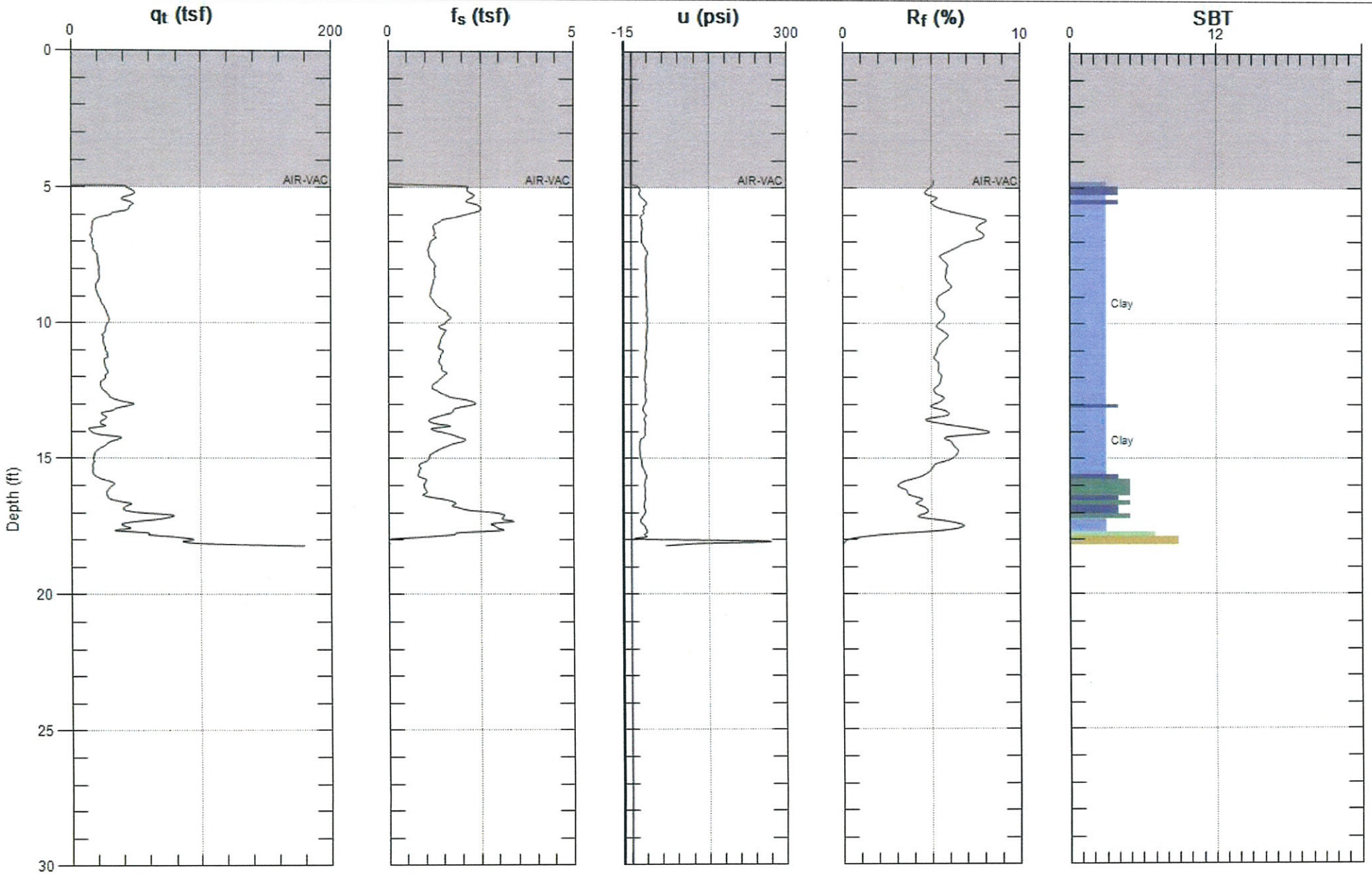
DELTA

Site: COP 1156

Sounding: SB-9

Engineer: C.MORGAN

Date: 7/8/2009 02:00



Max. Depth: 18.225 (ft)

Avg. Interval: 0.164 (ft)

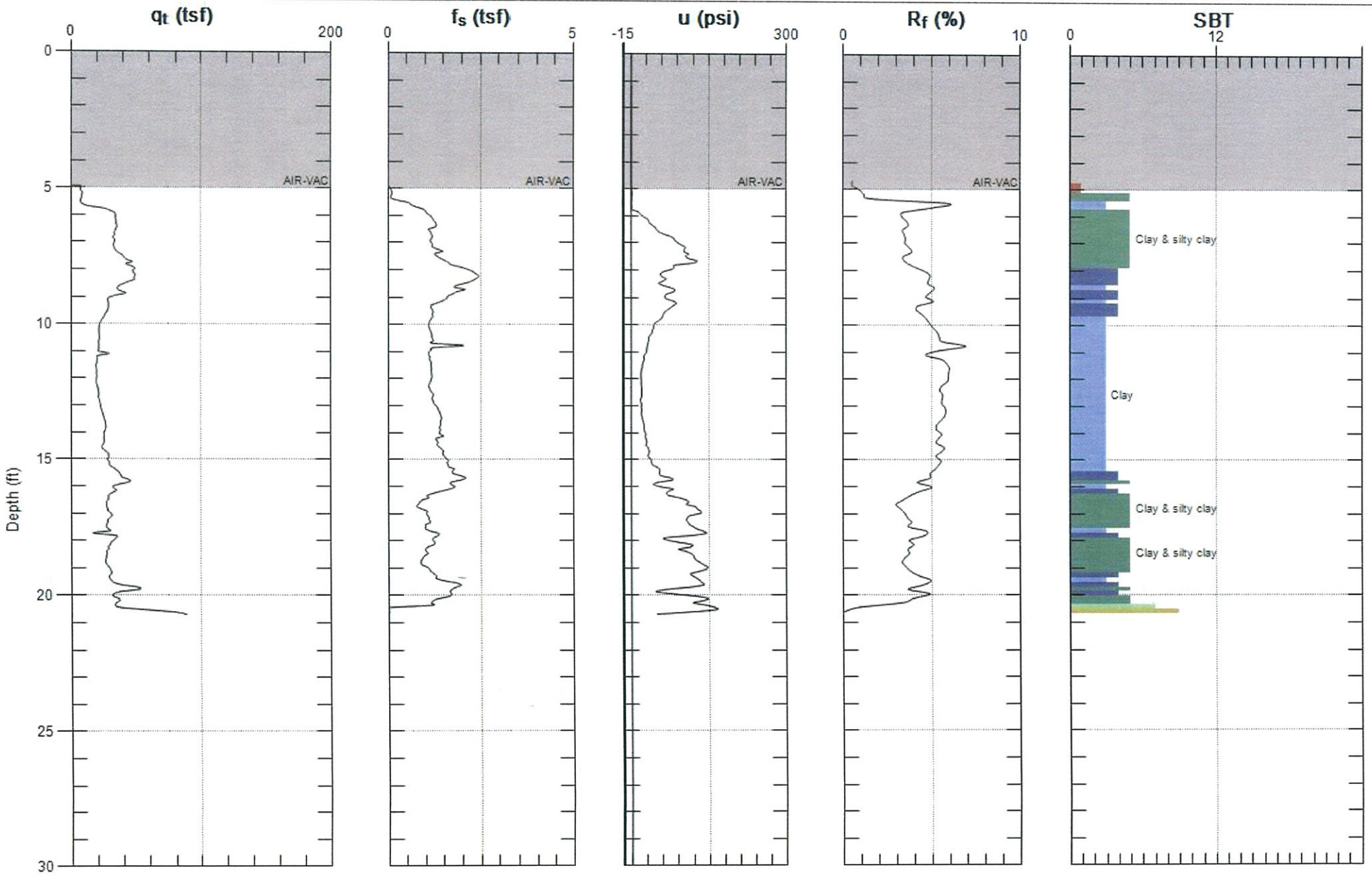
SBT: Soil Behavior Type (Robertson 1990)

GREGG

DELTA

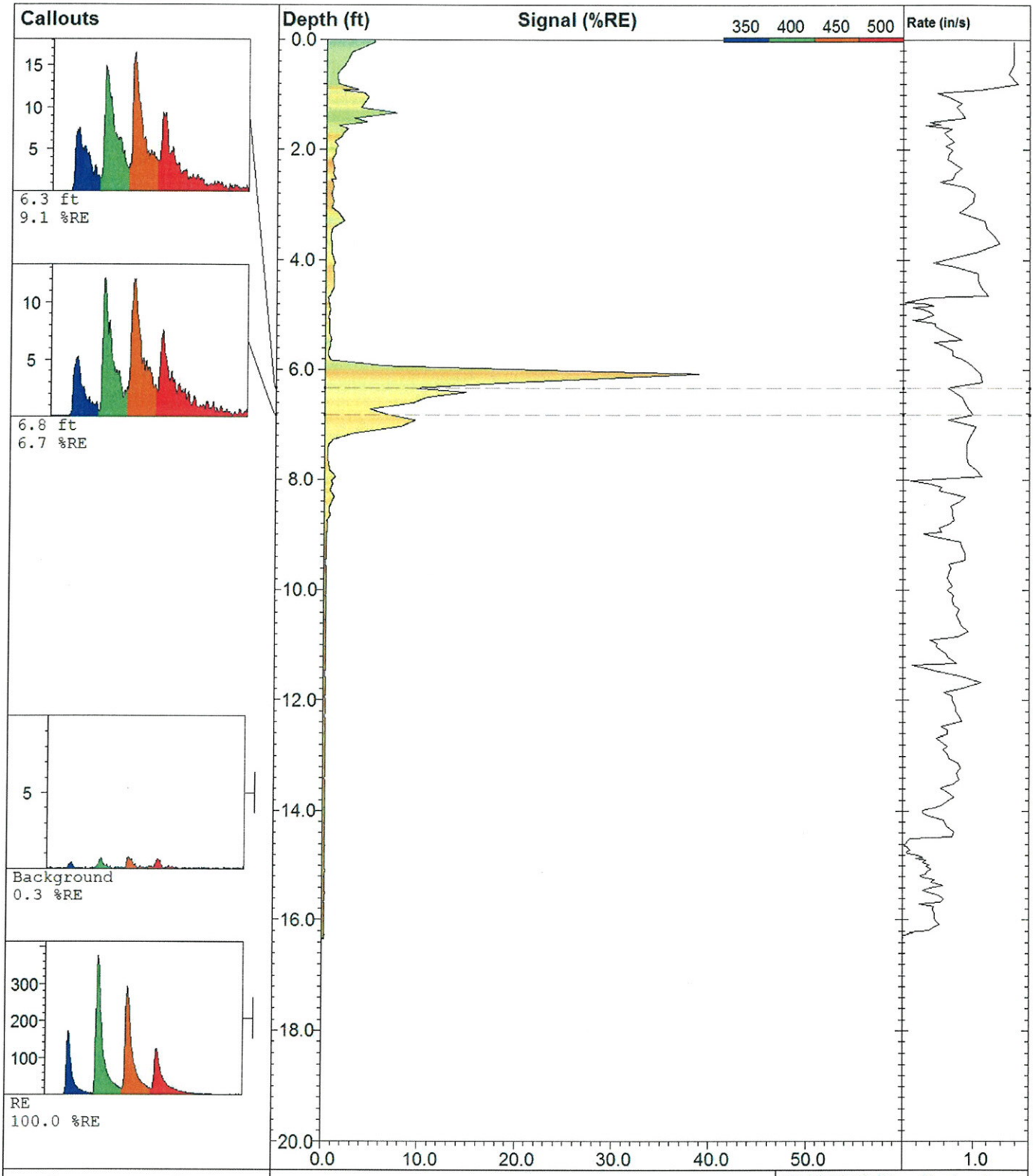
Site: COP 1156
Sounding: SB-11

Engineer: C.MORGAN
Date: 7/9/2009 12:43



Max. Depth: 20.686 (ft)
Avg. Interval: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)



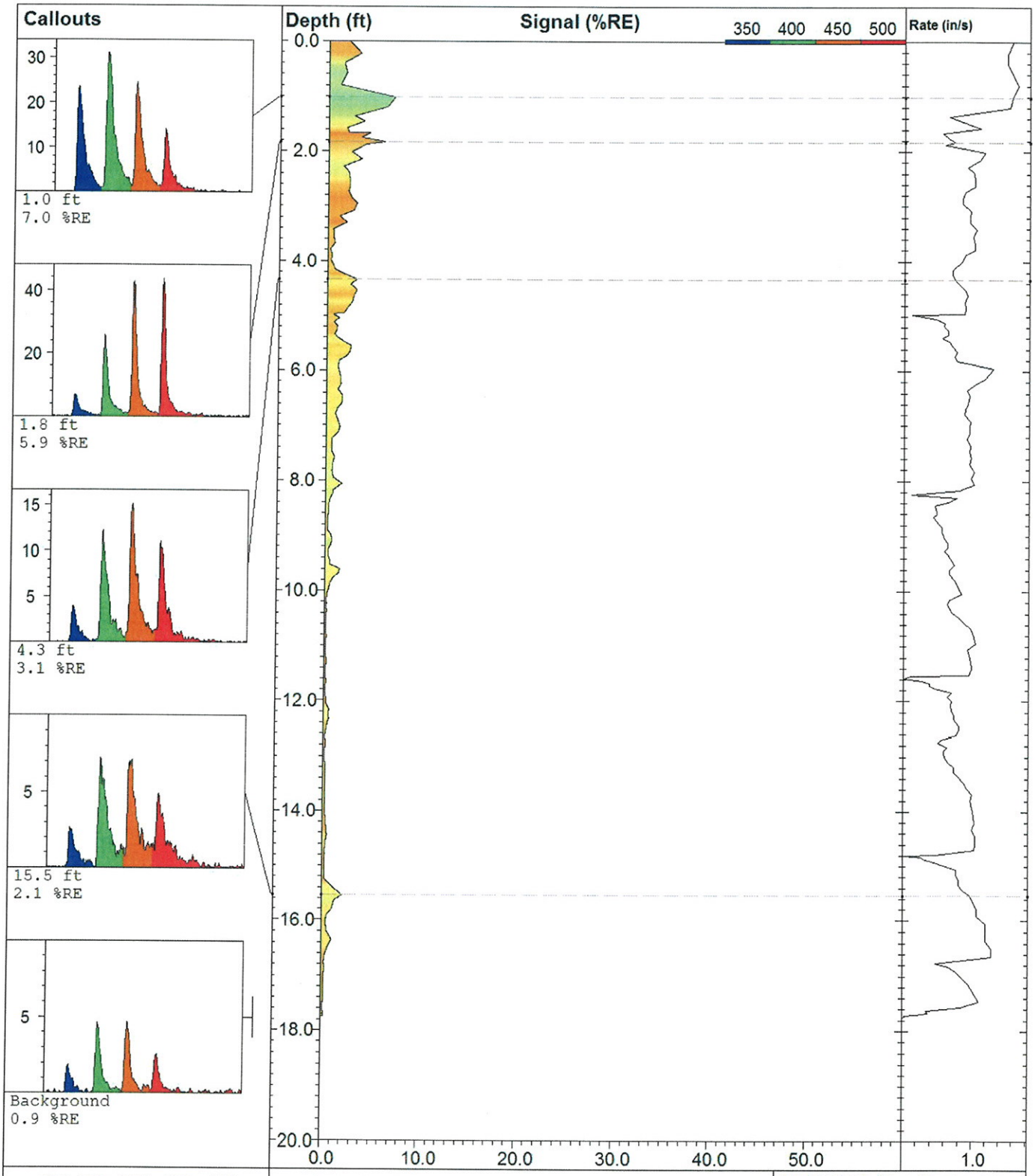
GREGG

www.greggdrilling.com

107SB-07

UVOST By Dakota
www.DakotaTechnologies.com

Site: **COP1156**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **16.35 ft**
Client: **Delta**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **38.9 % @ 6.07 ft**
Job: **09-107ma**	*Operator/Unit:* **John H./UVOST1009**	*Date & Time:* **2009-07-09 14:52 PDT**



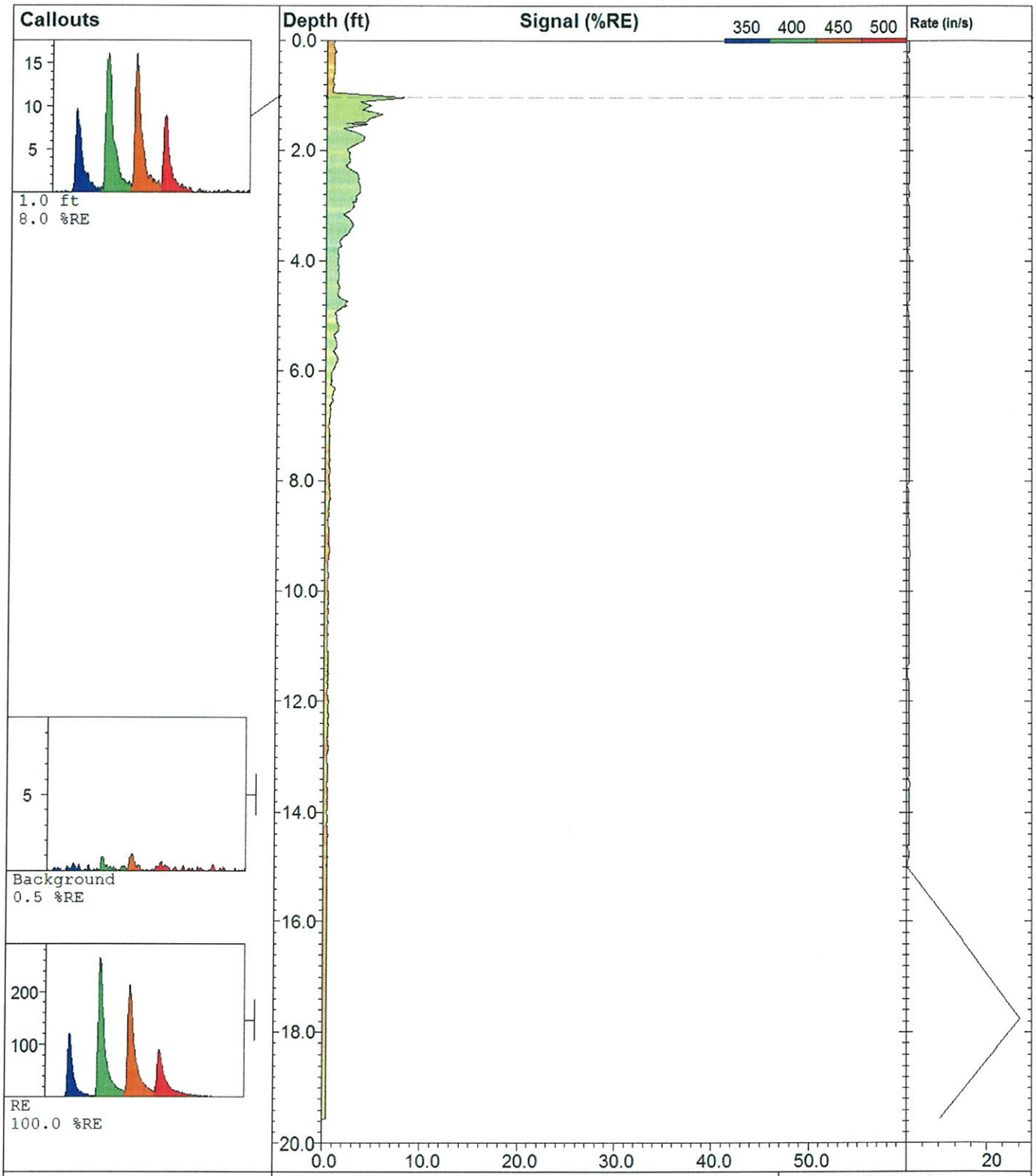
GREGG

www.greggdrilling.com

107SB-11

UVOST By Dakota
www.DakotaTechnologies.com

Site: **COP1156**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **17.75 ft**
Client: **Delta**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **7.0 % @ 1.02 ft**
Job: **09-107ma**	*Operator/Unit:* **John H./UVOST1009**	*Date & Time:* **2009-07-09 12:46 PDT**



GREGG

www.greggdrilling.com

107SB-9

UVOST By Dakota
www.DakotaTechnologies.com

Site: **COP 1156**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **19.56 ft**
Client: **Delta**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **8.0 % @ 1.04 ft**
Job: **09-107ma**	*Operator/Unit:* **J. Hancock/UVOST1009**	*Date & Time:* **2009-07-08 14:16 PDT**