GEL Engineering of NC INC

an affiliate of The GEL Group INC

PRELIMINARY SITE ASSESSMENT REPORT

3191 Old Cullowhee Road
Samuel R. Hopkins Property, Parcel 006
Cullowhee, North Carolina
State Project B-4159
WBS Element #33507.1.1
Jackson County

North Carolina Department of Transportation
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

May 23, 2014

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Signature Page

This document, entitled *Preliminary Site Assessment Report*, has been prepared for the Samuel R. Hopkins Property (Parcel 006), located at 3191 Old Cullowhee Road in Cullowhee, North Carolina (State Project B-4159, WBS Element #33507.1.1, Jackson County). It has been prepared by GEL Engineering of NC, Inc. in accordance with the Notice to Proceed provided by the North Carolina Department of Transportation-GeoEnvironmental Section, Geotechnical Engineering Unit for the exclusive use of the North Carolina Department of Transportation. It has been prepared in accordance with accepted quality control practices and has been reviewed by the undersigned.

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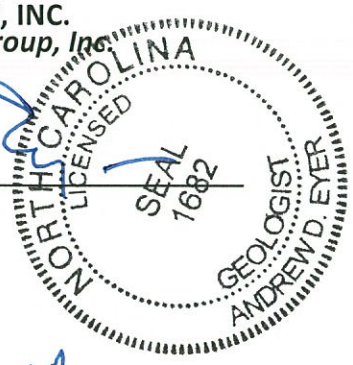

Andrew D. Eyer, L.G.
Senior Project Manager

05-23-14
Date

PRELIMINARY SITE ASSESSMENT REPORT

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State Project B-4159, WBS Element #33507.1.1
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Executive Summary

The subject site is the Samuel R. Hopkins property (Parcel 006) located at 3191 Old Cullowhee Road (SR 1002) in Cullowhee, North Carolina. The primary purpose of this investigation was to evaluate the presence or absence of underground storage tanks (USTs) and constituents of concern in soil within the accessible portions of a designated investigation area, as a result of previous and/or current operations at the subject site. The investigations area included existing and proposed rights-of-way (ROWs) and easements adjacent to Parcel 006 and an isolated tract of land located west of Parcel 006 that is owned by the North Carolina Department of Transportation (NCDOT).

The Parcel 006 property currently contains one structure: the former Hops Gas and Grocery (Amoco #217). An attached apartment/storage building is located on the eastern side of the service station. The service station reportedly closed in 2013, and the structure is currently vacant.

Representatives of the North Carolina Department of Environment and Natural Resources (NCDENR) Asheville Regional office and the results of a file review indicated that Hops Gas and Grocery , Hops Gas and Grocery was issued UST Incident No. 10525 following the removal of eight petroleum USTs at the site in February 1993. Approximately 50 cubic yards of impacted soil was removed following the UST closures, and NCDENR issued a No Further Action letter for Incident No. 10525 on January 9, 1994. Three replacement USTs were installed at the site in March 1993, and are currently registered.

GEL Engineering of NC, Inc. (GEL) performed a preliminary site assessment within the accessible portions of the designated Parcel 006 investigation area on December 18,

2013 that included a geophysical investigation, and the collection and analysis of soil samples. No subsurface anomalies indicative of suspected or known USTs were identified within the investigation area based on the results of the geophysical investigation. However, the locations of the three "Known USTs" installed in 1993 were confirmed outside the investigation area during the geophysical investigation.

Soil samples were collected for analysis from nine borings constructed within the investigation area and analyzed for petroleum hydrocarbon constituents, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). Gasoline Range Organics (GRO) was detected in one the collected soil samples, and one VOC, acetone, was detected at a significantly low level in one soil sample. Diesel Range Organics (DRO) was detected at levels exceeding the NCDENR DRO Action Level in soil samples collected from five borings. In addition, three SVOCs, benzo(a)anthracene, benzo(a)pyrene, and phenol, were detected in one soil sample at levels exceeding the respective NCDENR Maximum Soil Contaminant Concentrations (MSCCs). Benzo(a) pyrene was also detected at a level exceeding the MSCC in one additional soil sample.

Based on the detection of elevated DRO concentrations detected by QROS, LLC in soil samples S6-6 through S6-4, S6-6, and S6-7, it is estimated that there is an approximate total volume of 332 cubic yards of impacted soil (DRO >10 mg/kg) in the vicinity of borings S6-2 and S6-3, 184 cubic yards of impacted soil in the vicinity of boring S6-4, 178 cubic yards of impacted soil in the vicinity of boring S6-6, and 296 cubic yards of impacted soil in the vicinity of boring S6-7.

No additional environmental investigation of the soil at the site by NCDOT is recommended at this time. However, it is recommended that soils excavated in the vicinity of borings S6-1 through S6-7 as part of planned construction activities by NCDOT be handled appropriately and further characterized for petroleum constituents, as needed.

PRELIMINARY SITE ASSESSMENT REPORT

3191 Old Cullowhee Road
Samuel R. Hopkins Property, Parcel 006
Cullowhee, North Carolina
State Project B-4159, WBS Element #33507.1.1
Jackson County

1.0 Introduction

This document presents the details of a geophysical survey and preliminary site assessment performed at the Norman A. West property (Parcel 006) located at 3191 Old Cullowhee Road (SR 1002) in Cullowhee, North Carolina. The investigation was performed within the accessible portions of the North Carolina Department of Transportation (NCDOT) existing and proposed Rights-of-Way (ROWs) and easements associated within Parcel 006, as well as a small "teardrop-shaped" landscaped parcel located west of Parcel 006, as shown in Photographs 6 and 7 in Appendix I. The "teardrop-shaped" parcel is owned by NCDOT and separates Old Cullowhee Road and Old Monteith Gap Road/Aztec Drive.

The Parcel 006 property currently contains one structure: the former Hops Gas and Grocery (Amoco #217). An attached apartment/storage building is located on the eastern side of the service station. The service station reportedly closed in 2013, and the structure is currently vacant.

The site location is shown on Figure 1, an excerpt from the United States Geological Survey (USGS) 7.5-minute quadrangle map of Sylva South, North Carolina. The preliminary site assessment was conducted by GEL Engineering of NC, Inc. (GEL) in accordance with the Notice to Proceed issued by NCDOT on December 16, 2013.

The primary purpose of this investigation was to evaluate the presence or absence of underground storage tanks (USTs) and/or constituents of concern within the accessible portions of the Parcel 006 investigation area (shown in Figure 2) as a result of current and/or former operations.

2.0 Background

NCDOT is planning road improvements to the area in the vicinity of Old Cullowhee Road in Cullowhee, North Carolina. NCDOT wanted to assess the Parcel 006 investigation

area shown in Figure 2 to evaluate the presence or absence of USTs and soil contamination related to the current and/or former on-site operations, and the impact (if any) of these operations on the proposed road improvements. Figures 2 through 4 show the general site layout for Parcel 006**.** The parcel is currently divided by Casey Road and by Old Cullowhee Road.

One structure is located on the Parcel 006 property, as shown on Figure 4: the former Hops Gas and Grocery (Amoco #217). An attached apartment/storage building is located on the eastern side of the service station. The service station reportedly closed in 2013, and is currently vacant. A septic tank system with three aboveground septic tank access covers and a septic pumping station is located behind (on the east side of) the service station structure, as shown in Photograph 5 in Appendix I.

Based on a review of files located at and discussions with the representative of the UST Section at the North Carolina Department of Environmental Control (NCDENR) Asheville Regional Office, Hops Gas and Grocery was issued UST Incident No. 10525 following the removal of eight petroleum USTs at the site in February 1993 by Diversified Waste Management, Inc. The conclusions in the closure report indicated that minor soil impact had occurred as a result of periodic releases of petroleum at the fill ports for some of the USTs located on the south side of the service station building, and approximately 50 cubic yards of impacted soil was removed and disposed offsite. No groundwater monitoring wells were installed at the site during or following the UST Closure, and none were observed during GEL's investigation of the site. NCDENR issued a No Further Action letter for Incident No. 10525 on January 9, 1994.

Following the removal of the eight USTs in February 1993, three petroleum USTs were installed on the north side of the service station building in March 1993 at the former location of two USTs removed as part of the February 1993 closure. Analytical results for confirmation soil samples collected from the excavation pit for the two former USTs (both 4,000-gallon capacity) indicated no detection of petroleum constituents. Therefore, the pit was not overexcavated prior to installation of the three replacement USTs in March 1993 (two 3,000-gallon capacity gasoline, and one 6,000-gallon capacity gasoline). The three USTs are currently registered (Facility ID No. 0-009927), and are located outside the designated investigation area shown in Figure 2. However, the

presence of the USTs was confirmed during the geophysical survey conducted by GEL, as discussed in Section 4.1.3, and the locations are shown in Figure 4.

The two small Parcel 006 tracts located on the west side of Cullowhee Road (along the edge of the Tuckasegee River) and at the southeast quadrant intersection of Old Cullowhee Road and Casey Road are landscaped areas with no indication of previous development. The "teardrop-shaped" tract owned by NCDOT (see Photographs 6 and 7 in Appendix I) is also an undeveloped area. The west side of the tract serves as an unpaved parking area for patrons of Kokopellivillage establishments located on the west side of Aztec Drive (Parcel 003). Cullowhee property owners interviewed by GEL indicated that the tract had previously been landscaped with shrubbery and flower beds by the local citizens, and confirmed that it had never been developed or had petroleum distribution systems, including USTs, located there.

3.0 Local Geology and Surroundings

Parcel 012 is located in a developed area of Cullowhee in Jackson County, North Carolina. Surrounding land uses include residential and commercial activities.

This area is located in the Blue Ridge Belt within the Blue Ridge Physiographic of North Carolina. The land surface of the area is characterized by mountainous terrain. The Blue Ridge Belt is typified by a complex of sedimentary, metamorphic, and igneous rocks, including felsic gneiss and granite that are Late Proterozoic in age. The Cullowhee area is located adjacent to and within the Tuckasegee River floodplain.

The United States Department of Agriculture's *Web Soil Survey* (2014) (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx) maps the native soil in the investigation area as "Braddock-Urban Land Complex" (BrC), which is characterized as stream terraces consisting of clay and clay loam derived from old alluvium, "Cowee-Evard-Urban Land Complex" (CrD), which is characterized as mountain slope or back slope physiography consisting of sandy and clayey loam derived from residuum overlying weathered bedrock, and "Udorthents-Urban Land Complex (UfB), which is characterized as loamy and clayey mine spoil or earthy fill derived from metasedimentary rock. The soils encountered at the site during the preliminary site assessment for Parcel 006 consisted predominantly of red/brown, sandy, clayey silt and gravels overlying saprolite and partially weathered bedrock.

Groundwater was not encountered in borings constructed as part of the preliminary site assessment. Previous depth to groundwater measurements made in monitoring wells located in the Cullowhee area indicate the water table in the area of the site is typically located at depths of at least 20 feet below ground surface (bgs). Based on the USGS topographic map presented as Figure 1, the site is located approximately 2140 feet above mean sea level. The topography in Figure 1 indicates that groundwater in the vicinity of Parcel 006 most likely flows in a northeasterly direction towards the Tuckasegee River. Storm water from the site, as well as adjacent sites south, east and west of Parcel 006, flows in a northeasterly direction to the river.

4.0 Subsurface Investigation

To evaluate the presence or absence of USTs and/or impact to subsurface soil within the accessible portions of Parcel 006 and adjacent NCDOT ROW, GEL performed a limited site assessment within the accessible portions of the highlighted area shown in Figure 2 that consisted of the following tasks:

- Performance of a geophysical investigation to identify the presence or absence of USTs and associated appurtenances within the accessible portions of the Parcel 006 investigation area shown in Figure 2.
- Soil vapor screening of soil samples collected from subsurface soil borings located within the accessible portions of the Parcel 006 investigation area to evaluate the potential presence or absence of soil impact from petroleum constituents of concern.
- Collection and laboratory analysis of soil samples from the subsurface borings.

The details of these tasks are discussed in the following sections.

4.1 Geophysical Survey

The geophysical survey included the deployment of ground penetrating radar (GPR) technology and time domain electromagnetic technology (TDEM) to the site. These technologies were used in concert with one another in order to identify subsurface metallic anomalies and, more specifically, to identify the potential presence of USTs within the investigation area. A brief description of each technology is presented in the following paragraphs followed by a discussion of the results of the geophysical investigation.

4.1.1 Ground Penetrating Radar Methodology

A RAMAC digital radar control system configured with a 250 Megahertz (MHz) antenna array was used in this investigation. GPR is an electromagnetic geophysical method that detects interfaces between subsurface materials with differing dielectric constants. The GPR system consists of an antenna that houses the transmitter and receiver, a digital control unit that both generates and digitally records the GPR data, and a color video monitor to view data as they are collected in the field.

The transmitter radiates repetitive short-duration electromagnetic waves (at radar frequencies) into the earth from an antenna moving across the ground surface. These radar waves are reflected back to the receiver from the interface of materials with different dielectric constants. The intensity of the reflected signal is a function of the contrast in the dielectric constant between the materials, the conductivity of the material through which the wave is traveling, and the frequency of the signal. Subsurface features that commonly cause such reflections are: 1) natural geologic conditions, such as changes in sediment composition, bedding, and cementation horizons and voids; or 2) unnatural changes to the subsurface, such as disturbed soils, soil backfill, buried debris, tanks, pipelines, and utilities. The digital control unit processes the signal from the receiver and produces a continuous cross-section of the subsurface interface reflection events.

GPR data profiles are collected along transects, which are measured paths along which the GPR antenna is moved. During a survey, marks are placed in the data by the operator at designated points along the GPR transects or with a survey wheel odometer. These marks allow for a correlation between the GPR data and the position of the GPR antenna on the ground.

Depth of investigation of the GPR signal is highly site-specific and is limited by signal attenuation (absorption) in the subsurface materials. Signal attenuation is dependent on the electrical conductivity of the subsurface materials. Signal attenuation is greatest in materials with relatively high electrical conductivities, such as clays, brackish groundwater, or groundwater with a high dissolved solid content from natural or man-made sources. Signal attenuation is lowest in relatively low-conductivity materials, such as dry sand or rock. Depth of investigation is also dependent on the antenna's transmitting frequency. Depth of investigation generally increases as transmitting

frequency decreases; however, the ability to resolve smaller subsurface features is diminished as frequency is decreased.

The GPR antenna used at this site is internally shielded from aboveground interference sources. Accordingly, the GPR response is not affected by overhead power lines, metallic buildings, or nearby objects.

4.1.2 Time Domain Electromagnetic Methodology

The TDEM methods measure the electrical conductivity of subsurface materials. The conductivity is determined by inducing (from a transmitter) a time or frequency-varying magnetic field and measuring (with a receiver) the amplitude and phase shift of an induced secondary magnetic field. The secondary magnetic field is created by subsurface conductive materials behaving as an inductor as the primary magnetic field is passed through them.

The Geonics EM-61 system used in this investigation operates within these principles. However, the EM-61 TDEM system can discriminate between moderately conductive earth materials and very conductive metallic targets. The EM-61 consists of a portable coincident loop time domain transmitter and receiver with a 0.5-meter by 1.0-meter coil system. The EM-61 generates 150 pulses per second and measures the response from the ground after transmission or between pulses. The secondary EM responses from metallic targets are of longer duration than those created by conductive earth materials. By recording the later time EM arrivals, only the response from metallic targets is measured, rather than the field generated by the earth material.

4.1.3 Field Procedures

The GPR and TDEM field investigation was performed on December 18, 2013, within the accessible portions of the Parcel 006 investigation, as shown in Figure 3. A GPR system time range setting of 90 nanoseconds (ns) was used during the entire investigation. This range was determined after a series of test lines were conducted to evaluate the GPR response in the local geologic section. Interpretation of the GPR data was conducted in the field and any potential anomalies were marked in the field. GPR data processing typically included band pass filtering, background removal, horizontal smoothing, and gain adjustments. TDEM was also used to scan the project site. Any electromagnetic anomalies indicative of buried metallic objects were marked in the field.

It should be noted that NC 811 underground utility locations had been performed within the investigation area at Parcel 006 prior to the initiation of the preliminary site assessment field activities at the site and were marked with paint.

The collected GPR and TDEM data did not identify any "Known USTs," "Probable USTs," or "Possible USTs" at Parcel 006 within the investigation area shown in Figure 2. There was no visual evidence of USTs or UST vents in the investigation area. However, a nest of three "Known USTs" were observed at a location on site, outside the investigation area (as shown in Figure 4), and the presence of the USTs was confirmed by TDEM data during a sweep of the area with the EM-61. TDEM data collected in the investigation area indicated responses resulting from the existing steel canopy at the entrance to the onsite service station building, a large telephone relay box at the north end of the parcel, and the septic pumping station located on the east side of the service station, as shown in Figure 3. The collected GPR and TDEM data also did not identify any "Known USTs," "Probable USTs," or "Possible USTs" in the portions of the Parcel 006 investigation area separated by Old Cullowhee Road and Casey Road, or in the "teardrop-shaped" tract owned by NCDOT.

4.2 Subsurface Soil Investigation

To evaluate the presence or absence of impact to subsurface soil by constituents of concern, GEL collected soil samples from nine subsurface soil borings, S6-1 through S6-9, at Parcel 006 on December 18, 2013, for analysis of total petroleum hydrocarbon indicator parameters. The soil borings were constructed within the accessible portions of the Parcel 006 investigation area, as shown on Figure 4 and in Photographs 1 through 7 in Appendix I. The northing and easting coordinates for the boring locations are listed in the table below.

Summary of Location Data and PID Measurements for Soil Samples Collected for Analysis at Parcel 006

Soil Boring	Depth Interval of Soil Sample Collected for Analysis (feet bgs)	PID Reading (ppm)	Northing	Easting
S6-1	7-8	19.4	595783.213	754162.035
S6-2	7-8	0.0	595828.978	754147.979
S6-3	7-8	0.0	595876.647	754134.422
S6-4	7-8	0.0	595900.095	754165.964
S6-5	7-8	0.0	595877.176	754222.248
S6-6	7-8	0.0	595835.367	754248.214
S6-7	7-8	0.0	595749.784	754184.505
S6-8	7-8	0.0	595766.515	754098.981
S6-9	7-8	77.6	595837.084	754022.695

Notes:
1) Northings and Eastings are based on the NC State Plane Coordinate System
2) bgs = below ground surface
3) PID = photoionization detector
4) ppm = parts per million

All borings were advanced to a total depth of 8 feet bgs. Soil samples were collected at depths of 7-8 feet from all borings. All soil samples were inspected for indications of impact by constituents of concern, including petroleum hydrocarbons, such as odors, discoloration, or visible sheen. This sampling was accomplished using DPT provided by Regional Probing Services. Soil boring lithologic logs are attached as Appendix II of this document. Groundwater was not encountered in any borings.

The soil samples were screened for the presence of organic vapors using a portable photoionization detector (PID). The PID measures the concentration of organic compounds in the vapor space above a soil sample resulting from volatilization of organic compounds contained in the soil. To screen the soils, each sample was placed in a clean, resealable polyethylene bag. The bag was sealed, and the sample was allowed to equilibrate for approximately 5 minutes, after which time a small opening was made in the bag. The probe of the PID was then inserted into the bag, and the airspace above the soil was screened for organic vapors.

No organic vapor concentrations were measured in any of the soil screening samples collected from the nine borings, except borings S6-1 and S6-9. The highest PID measurements recorded in those two borings were in the samples collected form the 7 to 8-foot depth interval. Therefore, to assess the subsurface soil quality, soil samples collected at a depth of 7-8 feet bgs from all borings were designated for analysis. One-half of each designated soil sample was submitted to each of two separate laboratories for analysis.

Following completion of the soil sampling activities, all borings were abandoned by filling the boreholes with soil cuttings and hydrated bentonite. Boring locations S6-1 through S6-4 were topped with asphalt patching material. Splits for each soil sample were submitted to QROS, LLC's (QROS') analytical laboratory affiliate (KB Labs, Inc.) in Gainesville, Florida for analysis of petroleum hydrocarbon constituents using Ultra-violet Fluorescence Spectrometry. Splits of the soil samples were also submitted to Pace Analytical Services, Inc. (Pace) in Huntersville, North Carolina for analysis of diesel range organics (DRO) and gasoline range organics (GRO) for soil samples S6-1 through S6-4, and S6-8 using EPA Method 8015. Soil samples collected from borings S-5, S-6, S-7, and S-9 were analyzed by Pace for volatile organic compounds (VOCs) using EPA Method 8260B and semi-volatile organic compounds (SVOCs) using EPA Method 8270D. The analytical results are included on the Certificates of Analysis provided in Appendix III, and a summary of the analytical results is presented in Table 1.

The QROS and Pace results indicate GRO was not detected in any of the soil samples except S6-1, in which pace detected a concentration of 16.4 milligrams per kilogram (mg/kg), which exceeded the NCDENR action level for GRO (10 mg/kg). QROS results indicated DRO was detected in samples S6-2 through S6-4, S6-6, and S6-7 at levels exceeding the NCDENR action level for DRO (10 mg/kg. DRO was also detected at a concentration exceeding the DRO action level in soil sample S6-1. Acetone was the only VOC detected in soil samples analyzed by Pace. It was detected in S6-7 at level of 0.119 mg/kg, which is significantly below the NCDENR Maximum Soil Contaminant Concentration (MSCC) of 24 mg/kg for acetone.

A total of eight SVOCs were detected by Pace in soil sample S6-7. Benzo(a)anthracene was detected at 0.925 mg/kg and benzo(a)pyrene was detected at 0.673 mg/kg. The QROS results also detected benzo(a)pyrene at a level of 1.3 mg/kg in soil sample S6-7.

These detected concentrations exceeded the respective NCDENR MSCCs of 0.35 mg/kg for benzo(a)anthracene and 0.088 mg/kg for benzo(a)pyrene. The Pace analytical results also indicated a detection of 1.43 mg/kg phenol in S6-6, which exceeded the NCDENR MSCC of 0.17 mg/kg for phenol. The concentrations of the other six SVOCs detected by Pace were significantly below their respective MSCCs.

Based on the QROS analytical results, it is estimated that there is an approximate total volume of 100 cubic yards of impacted soil (DRO >10 mg/kg) in the vicinity of borings S6-2, S12-7, and S12-9, and 104 cubic yards of impacted soil in the vicinity of boring S12-8 based on the following assumed areas within the investigation area (as shown on Figure 4) and assumed depths of impacted soil:

Boring S6-2 and S6-3 Area
- 1,120 square feet x 8 feet = 332 cubic yards

Boring S6-4 Area
- 620 square feet x 8 feet = 184 cubic yards

Boring S6-6 Area
- 600 square feet x 5 feet = 178 cubic yards

Boring S6-7 Area
- 1000 square feet x 8 feet = 296 cubic yards

5.0 Conclusions and Recommendations

GEL performed a preliminary site assessment within the accessible portions of the designated investigation area of Parcel 006 that included a geophysical investigation, and the collection and analysis of soil samples. No subsurface anomalies indicative of suspected or known USTs were identified within the investigation area based on the results of the geophysical investigation. However, a nest of three “Known USTs” was identified on the site, outside the investigation area.

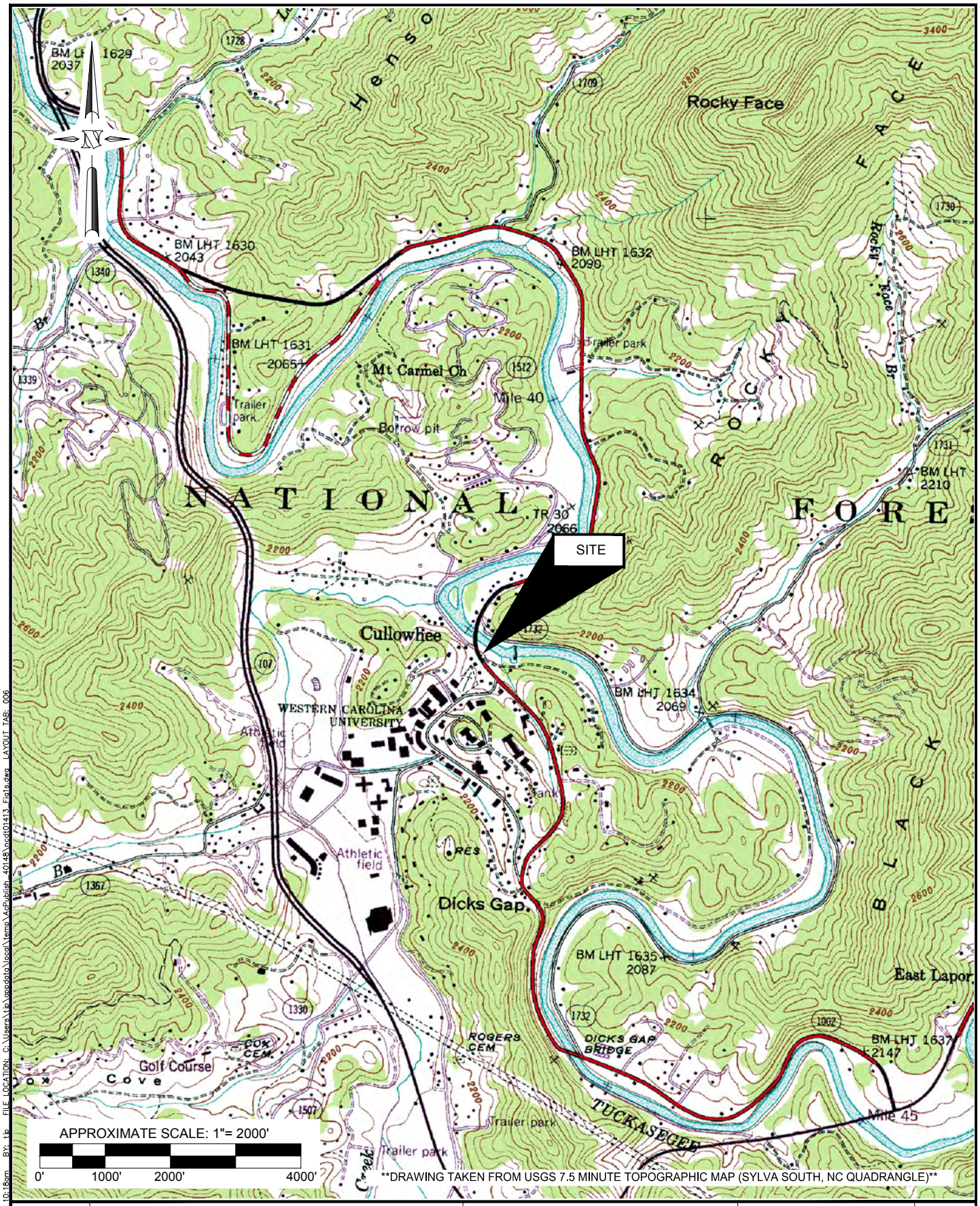
Soil samples were collected for analysis from nine borings constructed within the investigation area and analyzed for petroleum hydrocarbon constituents, VOCs, and SVOCs. GRO was detected in one of the collected soil samples and one VOC, acetone, was detected at a significantly low levels in one soil sample. DRO was detected by QROS at levels exceeding the NCDENR DRO Action Level in soil samples collected from borings

S6-6 through S6-4, S6-6, and S6-7. In addition, three SVOCs, benzo(a)anthracene), benzo(a)pyrene, and phenol, were detected in soil sample S6-7 at levels exceeding the respective NCDENR MSCCs. Benzo(a)pyrene was also detected in soil sample S6-6 at a level exceeding the MSCC.

Based on the detection of elevated DRO concentrations detected by QROS in soil samples S6-6 through S6-4, S6-6, and S6-7, it is estimated that there is an approximate total volume of 332 cubic yards of impacted soil (DRO >10 mg/kg) in the vicinity of borings S6-2 and S6-3, 184 cubic yards of impacted soil in the vicinity of boring S6-4, 178 cubic yards of impacted soil in the vicinity of boring S6-6, and 296 cubic yards of impacted soil in the vicinity of boring S6-7.

No additional environmental investigation of the soil at the site by NCDOT is recommended at this time. However, it is recommended that soils excavated in the vicinity of borings S6-1 through S6-7 as part of planned construction activities by NCDOT be handled appropriately and further characterized for petroleum constituents, as needed.

FIGURES



DRAWING TAKEN FROM USGS 7.5 MINUTE TOPOGRAPHIC MAP (SYLVA SOUTH, NC QUADRANGLE)

PLOTTED: Feb 03, 2014 – 10:18am By: tjp FILE LOCATION: C:\Users\tjp\appdata\local\Temp\AcPublish_4048\ncdt01413_Fig1s.dwg LAYOUT TAB: 006

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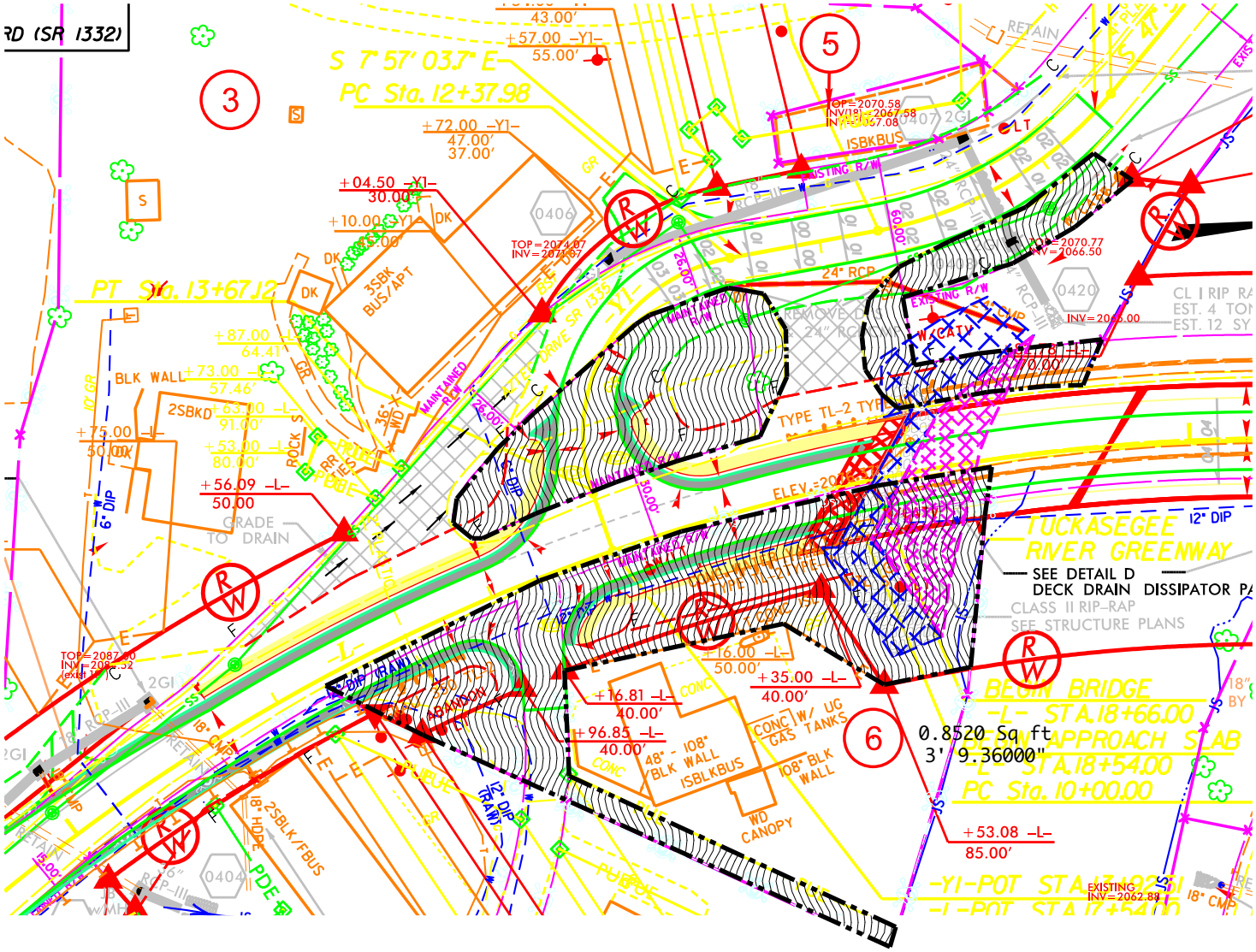
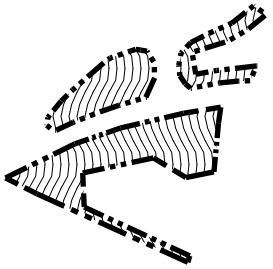
PROJECT: ncdt01413			
PRELIMINARY SITE ASSESSMENT PARCEL 00□ CULLOW□EE, JAC□SON COUNTY, NORT□ CAROLINA TIP NO. B□41□□, WBS ELEMENT NO. 33□0□1.1	SITE LOCATION MAP		FIGURE 1
DATE: F□□r□ary 3, 2014	DRAWN: TJP	APPRV.: ADE	



PARCEL 006 INVESTIGATION AREA



SEE FIGURE 5 FOR SUPPLEMENTAL LEGEND FOR USE WITH FIGURE 2

GEL ENGINEERING of NC, Inc.

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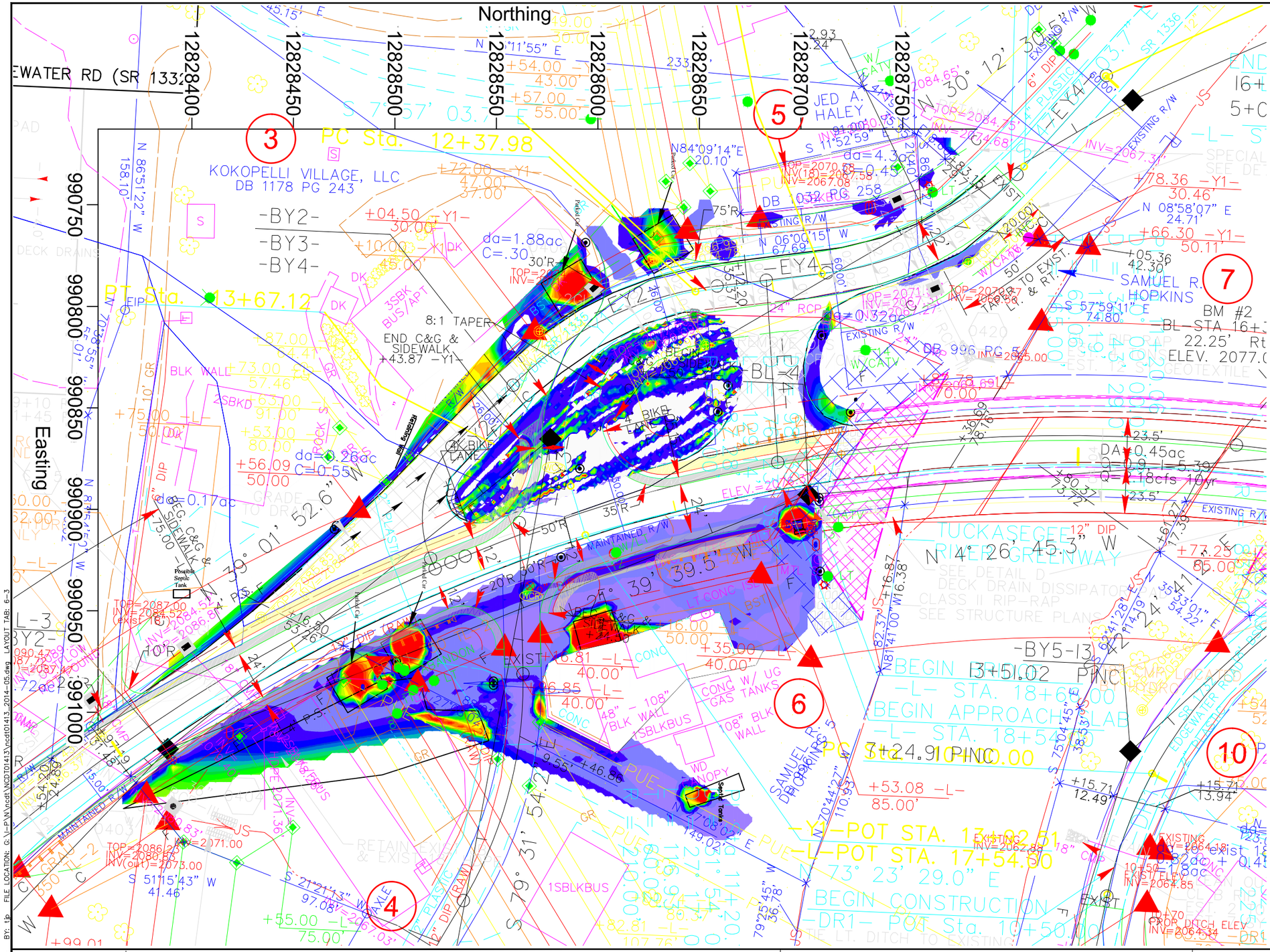
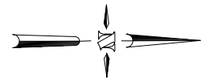
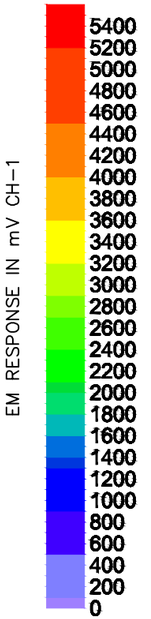
PROJECT: ncdt01413			
PRELIMINARY SITE ASSESSMENTS JACKSON COUNTY, NORTH CAROLINA TIP NO. B-4159, WBS ELEMENT NO. 33507.1.1		DESIGNATED INVESTIGATION AREA FOR PARCEL 006	FIGURE 2
DATE: April 2, 2014	DRAWN BY: ADE		





SEE FIGURE 5 FOR SUPPLEMENTAL LEGEND FOR USE WITH FIGURE 3



NOTES

1. UNDERGROUND FEATURES WERE LOCATED USING VISUAL EVIDENCE, GROUND PENETRATING RADAR □GPR□, AND TIME DOMAIN ELECTROMAGNETIC □TDEM□MET□ODS. OT□ER BURIED UTILITIES AND STRUCTURES MAY EXIST BUT WERE NOT DETECTED DUE TO LIMITATIONS OF T□E GEOP□YSICAL MET□ODS, SITE ACCESS, AND□OR □IG□ TARGET CONGESTION. T□EREFORE, DUE CAUTION S□OULD BE USED W□EN PERFORMING SUBSURFACE EXCAVATION ACTIVITIES W□ERE POTENTIAL CONFLICTS EXIST. GEL ENGINEERING OF NC, INC. IS NOT RESPONSIBLE FOR DAMAGES T□AT MAY OCCUR. IDENTIFYING T□E LOCATION OF SOME UTILITIES MAY ONLY BE POSSIBLE WIT□ VACUUM OR OT□ER EXCAVATION MET□ODS.
2. FIELD SURVEY CONDUCTED ON 12.1□1□.13.
3. DATA FROM GEONICS, LTD. EM□□1 M□II AND MALA GEOSCIENCE GROUND PENETRATING RADAR.
4. BASE MAP PROVIDED BY NCDOT. GEL ENGINEERING OF NC IS NOT LIABLE FOR ACCURACY.

APPROXIMATE SCALE: 1"= □0'

0' 2□ □0' 100'

PLOTTED: May 22, 2014 - 7:43am BY: tjp FILE LOCATION: G:\C-PVM\ncdt\NCDT01413\ncdt01413_2014-05.dwg LAYOUT TAB: 6-3

GEL Engineering of NC Inc.

an Affiliate of THE GEL GROUP INC
ENVIRONMENTAL ■ ENGINEERING ■ SURVEYING

problem solved

Post Office Box 14262
Research Triangle Park, NC 27709
P 919-544-1100
F 919-406-1807
www.gel.com

PROJECT: ncdt01413

PRELIMINARY SITE ASSESSMENT
PARCEL 006
CULLOWHEE, JACKSON COUNTY,
NORTH CAROLINA
TIP NO. B-4159, WBS ELEMENT NO. 33507.1.1

DATE: May 20, 2014

SITE MAP SHOWING RESULTS OF GEOPHYSICAL INVESTIGATION

DRAWN BY: TJP APPRV. BY: ADE

FIGURE 3

SEE FIGURE 5 FOR SUPPLEMENTAL LEGEND FOR USE WITH FIGURE 4

LEGEND

- S6-1 — SOIL BORING LOCATION
- KNOWN SOIL CONTAMINATION
- UST — KNOWN UST
- DRO = 121.7 mg/kg — DRO CONCENTRATION DETECTED BY QROS

APPROXIMATE SCALE: 1"= 40'
0' 20' 40' 80'

S6-1 DRO = 26.7 mg/kg
S6-2 DRO = 121.7 mg/kg
S6-3 DRO = 60.5 mg/kg
S6-4 DRO = 129.8 mg/kg
S6-5 DRO = 49.5 mg/kg
S6-6
S6-7
S6-8
S6-9

KOKOPELLI VILLAGE, LLC
DB 1178 PG 243

SAMUEL R. HOPKINS

TUCKASEGEE RIVER GREENWAY

EXISTING R/W

DB 1032 PG 258

DB 996 PG 5

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PRELIMINARY SITE ASSESSMENT
PARCEL 006
CULLOWHEE, JACKSON COUNTY,
NORTH CAROLINA
TIP NO. B-4159, WBS ELEMENT NO. 33507.1.1

DATE: May 20, 2014

SITE MAP SHOWING LOCATIONS OF SOIL BORINGS

DRAWN BY: TJP APPRV. BY: ADE

FIGURE 4

PLOTTED: May 22, 2014 - 9:45am BY: tjp FILE LOCATION: G:\--P:\NCDT\ncdt\NCDT01413\ncdt01413_2014-05.dwg LAYOUT TAB: 6-4

04/16/11

Note: Not to Scale

**S.U.E. = Subsurface Utility Engineering*

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

PROJECT REFERENCE NO. R-2506C | SHEET NO. 4B

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin
- Property Corner
- Property Monument
- Parcel/Sequence Number
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary
- Proposed Wetland Boundary
- Existing Endangered Animal Boundary
- Existing Endangered Plant Boundary
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign
- Well
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream
- Buffer Zone 1
- Buffer Zone 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch
- False Sump

RAILROADS:

- Standard Gauge
- RR Signal Milepost
- Switch
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line
- Proposed Right of Way Line with Iron Pin and Cap Marker
- Proposed Right of Way Line with Concrete or Granite R/W Marker
- Proposed Control of Access Line with Concrete C/A Marker
- Existing Control of Access
- Proposed Control of Access
- Existing Easement Line
- Proposed Temporary Construction Easement
- Proposed Temporary Drainage Easement
- Proposed Permanent Drainage Easement
- Proposed Permanent Drainage / Utility Easement
- Proposed Permanent Utility Easement
- Proposed Temporary Utility Easement
- Proposed Aerial Utility Easement
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut
- Proposed Slope Stakes Fill
- Proposed Curb Ramp
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard

EXISTING STRUCTURES:

MAJOR:
- Bridge, Tunnel or Box Culvert
- Bridge Wing Wall, Head Wall and End Wall

MINOR:
- Head and End Wall
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB
- Paved Ditch Gutter
- Storm Sewer Manhole
- Storm Sewer

UTILITIES:

POWER:
- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- Recorded U/G Power Line
- Designated U/G Power Line (S.U.E.*)

TELEPHONE:
- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole
- Telephone Booth
- Telephone Pedestal
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole
- Recorded U/G Telephone Cable
- Designated U/G Telephone Cable (S.U.E.*)
- Recorded U/G Telephone Conduit
- Designated U/G Telephone Conduit (S.U.E.*)
- Recorded U/G Fiber Optics Cable
- Designated U/G Fiber Optics Cable (S.U.E.*)

WATER:
- Water Manhole
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line
- Designated U/G Water Line (S.U.E.*)
- Above Ground Water Line

TV:
- TV Satellite Dish
- TV Pedestal
- TV Tower
- U/G TV Cable Hand Hole
- Recorded U/G TV Cable
- Designated U/G TV Cable (S.U.E.*)
- Recorded U/G Fiber Optic Cable
- Designated U/G Fiber Optic Cable (S.U.E.*)

GAS:
- Gas Valve
- Gas Meter
- Recorded U/G Gas Line
- Designated U/G Gas Line (S.U.E.*)
- Above Ground Gas Line

SANITARY SEWER:
- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line
- Above Ground Sanitary Sewer
- Recorded SS Forced Main Line
- Designated SS Forced Main Line (S.U.E.*)

MISCELLANEOUS:
- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box
- Utility Unknown U/G Line
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc.
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

NOTE: LEGEND WAS PROVIDED BY NCDOT

GEL ENGINEERING of NC, Inc.
an Affiliate of THE GEL GROUP, Inc.

GEL

Post Office Box 14262
Research Triangle Park, NC 27709
(919) 544-1100

PROJECT: ncdt01413		
PRELIMIINARY SITE ASSESSMENT PARCEL 006 CULLOWHEE, JACKSON COUNTY, NORTH CAROLINA TIP NO. B-4159, WBS ELEMENT NO. 33507.1.1	SUPPLEMENTAL LEGEND FOR USE WITH FIGURES 2, 3, AND 4	FIGURE 5
DATE: April 2, 2014	DRAWN BY: ADE	

TABLES

TABLE 1

SUMMARY OF ANALYTICAL RESULTS FOR COLLECTED SOIL SAMPLES

Preliminary Site Assessment
Parcel 006, 3191 Old Cullowhee Road
Cullowhee, Jackson County, North Carolina
State Project No. B-4159, WBS Element #33507.1.1

	Diesel Range Organics (DRO)		Gasoline Range Organics (GRO)		QROS Analytical Results				
Sample ID	**QROS**	**Pace**	**QROS**	**Pace**	**BTEX (C6-C9)**	**TPH (C5-C35)**	**Total Aromatics (C10-C35)**	**16 EPA PAHs**	**Benzo(a)pyrene**
S-6-1	5.1	10.3	<1.3	16.4	<1.3	5.1	3.58	<0.13	<0.065
S-6-2	26.7	7.5	<0.6	<5.9	<0.6	26.7	19.78	0.5	<0.029
S-6-3	121.7	79.5	<40.3	<5.3	<40.3	121.7	93.6	<4	<2.02
S-6-4	60.5	8.5	<2.2	<5.9	<2.2	60.5	44.64	1.11	0.112
S-6-5	<0.6	NA	<0.6	NA	<0.6	<0.6	<0.58	<0.06	<0.029
S-6-6	49.6	NA	<3.1	NA	<3.1	49.6	32.82	1.58	<0.155
S-6-7*	129.8	NA	<4.7	NA	<4.7	129.8	107.8	4.7	1.3
S-6-8*	5.3	<6.3	<0.5	<5.7	<0.5	5.3	1.87	<0.05	<0.026
S-6-9	<0.6	NA	<0.6	NA	<0.6	<0.6	< 0.58	<0.06	<0.029
NCDENR Action Level	***10***	***10***	***10***	***10***					
NCDENR MSCC									***0.088***

	Pace Detected SVOCs									Pace Detected VOCs
Sample ID	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene**	**Benzo(k)fluoranthene**	**Chrysene**	**Fluoranthene**	**Phenanthrene**	**Phenol**	**Pyrene**	**Acetone**
S-6-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-6-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-6-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-6-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-6-5	<0.390	<0.390	<0.390	<0.390	<0.390	<0.390	<0.390	<0.390	<0.390	<0.0863
S-6-6	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	1.43	<1.40	<0.593
S-6-7	0.625	0.673	0.516	0.493	0.648	1.32	0.688	<0.419	0.981	0.119
S-6-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-6-9	<0.492	<0.492	<0.492	<0.492	<0.492	<0.492	<0.492	<0.492	<0.492	<0.122
NCDENR MSCC	***0.35***	***0.088***	***0.88***	***9***	***39***	***290***	***56***	***0.17***	***270***	***24***

1) All reported values are shown in milligrams per kilogram (mg/kg).
2) MSCC = NCDENR's Maximum Soil Contaminant Concentration Levels (April 2012); MSCC shown is the lowest of established Residential Soil Cleanup Levels and Soil-to-Groundwater Maximum Contaminant Concentration shown in the NCDENR MSCC Table for any given constituent.
3) NA = Not analyzed.
4) Reported values exceeding corresponding NCDENR Action Levels or MSCCs are highlighted in yellow.
5) * = Replicate analyses were performed by QROS at two or more dilution factors. Concentrations reported on this table are the higher of the replicate analyses, and non-detect results are listed on this table with the lower of the replicate reporting limits.

APPENDICES

APPENDIX I

PHOTOGRAPHS

Photograph 1: View looking north at former service station and locations of soil borings S6-1, S6-2, and S6-7.

Photograph 2: View looking northwest at locations of soil borings S6-3 and S6-4. The Tuckasegee River and Edgewater Road are in the background.

Photograph 3: View looking northwest at soil boring location S6-5. Retaining wall for the 3 known onsite USTs is shown on left, and the Old Cullowhee Road bridge over the Tuckasegee River is shown in background in upper right.

Photograph 4: View looking north at soil boring location S6-6. Parcel 004 is on the right, and the Tuckasegee River and Edgewater Road are shown in the background.

Photograph 5: View looking north at septic tanks and sewage pump station located west of soil boring S6-6. The Tuckasegee River and Edgewater Road are shown in the background.

Photograph 6: View looking north at soil boring S6-8 located near south end of "teardrop-shaped" tract owned by NCDOT.

Photograph 7: View looking southeast at soil boring S6-9 located near north end of "teardrop-shaped" tract owned by NCDOT.

APPENDIX II

SOIL BORING LITHOLOGIC LOGS

SOIL BORING LOG

Boring/Well No.: **S6-1**
Date Started: 12/18/13
Date Completed: 12/18/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	7.9	Red Gray Sandy Silt; Moist; Asphalt/Gravel fill material	ML
2	4.0' – 8.0'	--	19.4	Gray Sandy Silt; Moist; Weathered Quartz 7'-8'	ML
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

SOIL BORING LOG

Boring/Well No.: **S6-2**
Date Started: 12/18/13
Date Completed: 12/18/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	0.0	Red Brown Silt; Moist; Asphalt/Gravel 0'-0.5'; Micaceous	ML
2	4.0' – 8.0'	--	0.0	Red Brown Sandy Silt; Moist; Weathered rock throughout	ML
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

SOIL BORING LOG

Boring/Well No.: **S6-3**
Date Started: 12/18/13
Date Completed: 12/18/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	0.0	Red Brown Silt with Sand; Moist; Weathered rock throughout	ML
2	4.0' – 8.0'	--	0.0	Red Clay; Moist; Tight, Cohesive Clay, Gneiss at 7'-8'	CL
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

SOIL BORING LOG

Boring/Well No.: **S6-4**
Date Started: 12/18/13
Date Completed: 12/18/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	0.0	Red Silt with Sand; Moist; Asphalt/gravel 0'-0.5'	ML
2	4.0' – 8.0'	--	0.0	Brown Tan Sandy Silt with Gravel	ML
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

SOIL BORING LOG

Boring/Well No.: **S6-5**
Date Started: 12/18/13
Date Completed: 12/18/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	0.0	Red Silt with Sand; Moist; Asphalt/gravel 0'-0.5'; Saprolite, highly weathered	ML
2	4.0' – 8.0'	--	0.0	Saprolite, hard Gneiss within	
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

SOIL BORING LOG

Boring/Well No.: **S6-6**
Date Started: 12/18/13
Date Completed: 12/18/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	0.0	Red Brown Sandy Silt with Gravel; Moist	ML
2	4.0' – 8.0'	--	0.0	Red Brown, fill material; Septic Drain Field, Septic Odor	
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

SOIL BORING LOG

Boring/Well No.: **S6-7**
Date Started: 12/18/13
Date Completed: 12/18/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	0.0	Red Clay; Moist; Micaceous	CL
2	4.0' – 8.0'	--	0.0	Red Brown Silt with Sand; Rock throughout; Moist	ML
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

SOIL BORING LOG

Boring/Well No.: **S6-8**
Date Started: 12/18/13
Date Completed: 12/18/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	0.0	Red Brown Sandy Silt with Gravel; Moist	ML
2	4.0' – 8.0'	--	0.0	Red Brown Sandy Silt with Gravel; Moist	ML
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

SOIL BORING LOG

Boring/Well No.: **S6-9**
Date Started: 12/18/13
Date Completed: 12/18/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	12.5	Red Brown Silt; Moist	ML
2	4.0' – 6.0'	--	--	Red Brown Silt; Moist; Weathered Gneiss & Quartz	ML
3	6.0' – 8.0'	--	77.6	Orange Brown Silt; Moist	ML
4					
5				Total depth = 8 feet below land surface	
6					
7					
8					
9					
10					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

APPENDIX III

CERTIFICATES OF ANALYSIS AND CHAIN OF CUSTODY RECORD FOR SOIL SAMPLES

KB Labs, Inc. Results

QED

AQROS

Hydrocarbon Analysis Results

Client: GEL
Address:

Samples taken DECEMBER 17/18, 2013
Samples extracted DECEMBER 17/18, 2013
Samples analysed Friday, December 20, 2013

Contact: ANDREW EYER

Operator CSB

Project: GEL B-4159 CULLOWHEE NC

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
										% light	% mid	% heavy	
s	S-12-8	157.0	<7.9	<7.9	382.2	382.2	279.4	6.8	<0.39	56.6	37.7	5.7	V.Deg.PHC 93.1%
s	S-12-9 (Low volume)	182.0	<9.1	<9.1	66.9	66.9	50.2	1.2	<0.46	51.1	34.4	14.6	V.Deg.PHC 90.2%
s	S-8-1 (Low volume)	26.0	<1.3	<1.3	3.2	3.2	2.93	< 0.13	< 0.065	36.5	49.3	14.2	V.Deg.PHC 94.5%
s	S-8-2	10.0	<0.5	<0.5	1.9	1.9	1.43	< 0.05	< 0.025	46.6	43.6	9.8	V.Deg.PHC 99.6%
s	S-8-5 (Low volume)	26.0	<1.3	<1.3	75.3	75.3	42.25	0.69	< 0.065	38.8	37.9	23.4	Degraded Fuel (est) 57.5%
s	S-8-4	13.3	<0.7	<0.7	3.5	3.5	2.26	< 0.07	< 0.033	81.6	18.2	0.2	Deg.Fuel 82.5%
s	S-8-3 (Low volume)	26.0	<1.3	<1.3	60.9	60.9	40.72	0.77	< 0.065	76.2	18.4	5.4	V.Deg Fuel (est) 90.5%
s	S-6-1 (Low volume)	26.0	<1.3	<1.3	5.1	5.1	3.58	< 0.13	< 0.065	64.1	30.1	5.8	V.Deg.PHC 98.4%
s	S-6-2	11.5	<0.6	<0.6	26.7	26.7	19.78	0.5	< 0.029	53.7	39.9	6.4	V.Deg.PHC 89.1%
s	S-6-3 (Low volume)	806.0	<40.3	<40.3	121.7	121.7	93.6	<4	<2.02	54.4	32.2	13.4	Degraded Fuel (est) 89.2%

Initial Calibrator QC check: Fail

Low Range Calibrator Final check: Low 0.063

High Range Calibrator Final check: OK 1.459

Results generated by a QED HC-1 analyser

Concentration values in mg/kg for soil samples and mg/L for water samples.

Soil values are not corrected for moisture or stone content

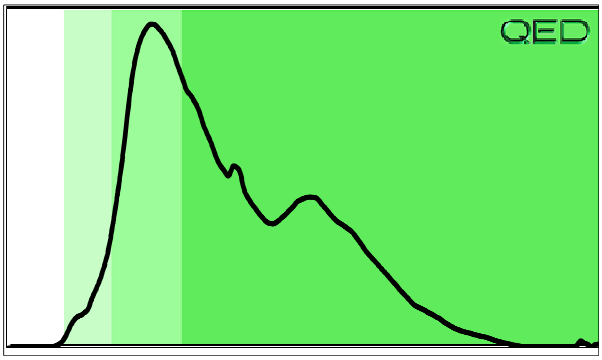
Fingerprints provide a tentative hydrocarbon identification based on operator selected library matches

Fingerprint match abbreviations Est = Specific calibrator not used, result estimated (PFM)= Poor library fingerprint match

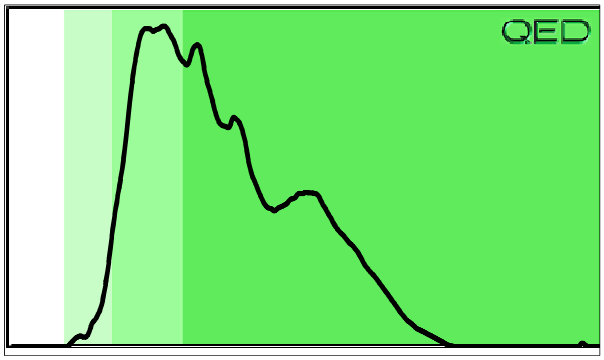
(SBS)= site specific background subracted (LBS)= Library background subtracted % = match confidence

Project GEL B-4159 CULLOWHEE NC **Date** Friday, December 20, 2013

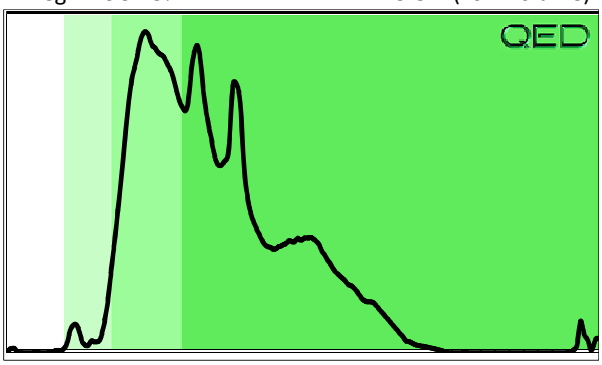
V.Deg.PHC 93.1% S-12-8



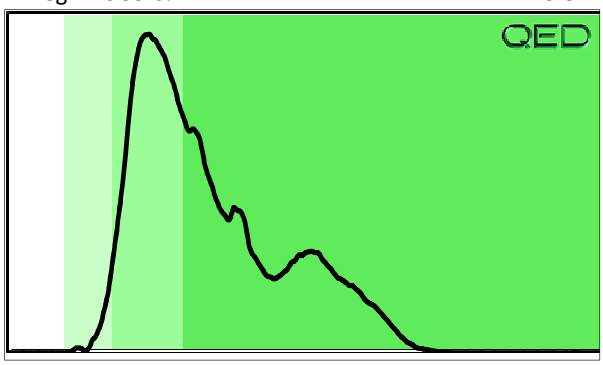
V.Deg.PHC 90.2% S-12-9 (Low volume)



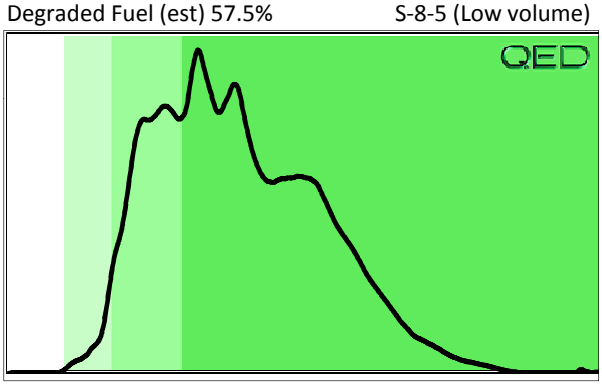
V.Deg.PHC 94.5% S-8-1 (Low volume)



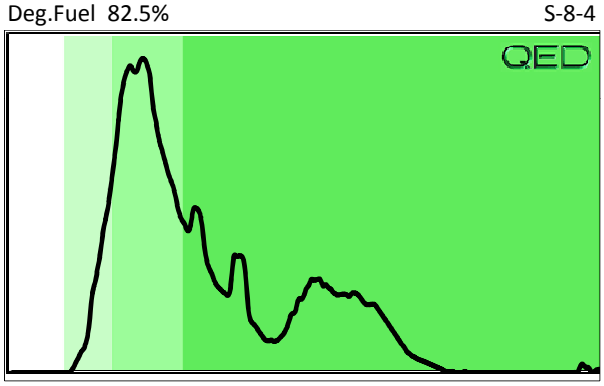
V.Deg.PHC 99.6% S-8-2



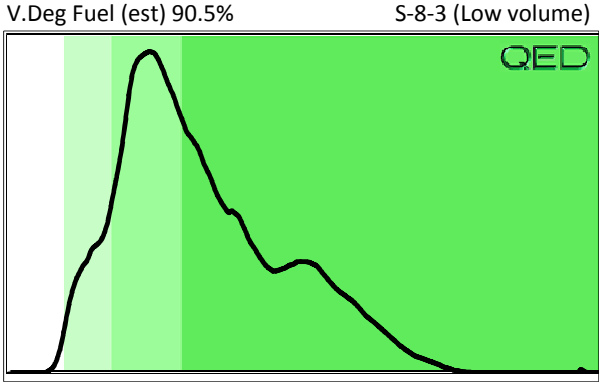
Degraded Fuel (est) 57.5% S-8-5 (Low volume)



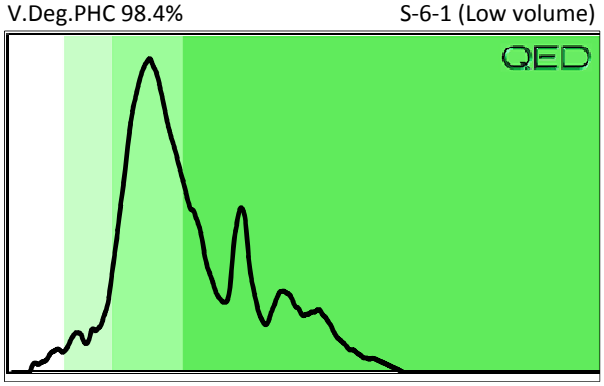
Deg.Fuel 82.5% S-8-4



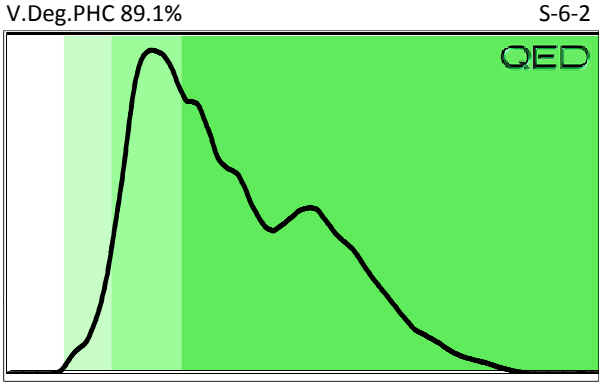
V.Deg Fuel (est) 90.5% S-8-3 (Low volume)



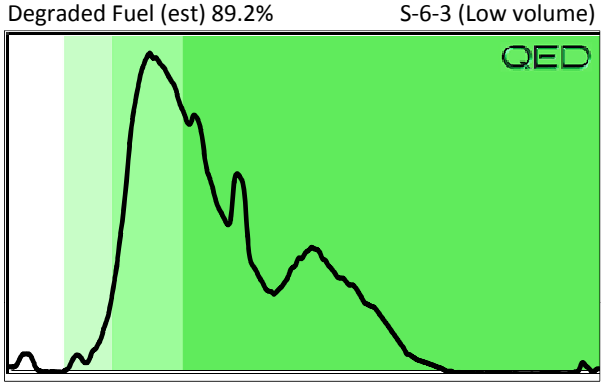
V.Deg.PHC 98.4% S-6-1 (Low volume)



V.Deg.PHC 89.1% S-6-2



Degraded Fuel (est) 89.2% S-6-3 (Low volume)



QED

AQROS

Hydrocarbon Analysis Results

Client: GEL
Address:

Samples taken DECEMBER 17/18, 2013
Samples extracted DECEMBER 17/18, 2013
Samples analysed Friday, December 20, 2013

Contact: ANDREW EYER

Operator CSB

Project: GEL B-4159 CULLOWHEE NC

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
										% light	% mid	% heavy	
s	S-4-1	11.4	<0.6	<0.6	<0.6	<0.6	< 0.57	< 0.06	< 0.028	0	0	100	Match not possible
s	S-6-4	44.8	<2.2	<2.2	60.5	60.5	44.64	1.11	< 0.112	54.6	41.1	4.3	V.Deg.PHC 98%
s	S-6-5	11.7	<0.6	<0.6	<0.6	<0.6	< 0.58	< 0.06	< 0.029	0	80.6	19.4	Deg.Fuel 27.2%
s	S-6-6 (Low Volume)	62.0	<3.1	<3.1	49.6	49.6	32.82	1.58	< 0.155	78.8	19.4	1.8	V.Deg.PHC 97.6%
s	S-6-7 reanalyze	1475.1	<37	<37	<37	<37	< 74	<7	<1	0	59.4	40.6	PAH
s	S-6-8	10.6	<0.5	<0.5	4.1	4.1	1.44	< 0.05	< 0.026	29.8	47.6	22.5	Degraded Fuel (est) 77.5%
s	S-6-9	11.6	<0.6	<0.6	<0.6	<0.6	< 0.58	< 0.06	< 0.029	0	0	100	Particulate

Initial Calibrator QC check Fail

Low Range Calibrator Final check Low 0.057

High Range Calibrator Final check High 1.852

Results generated by a QED HC-1 analyser

Concentration values in mg/kg for soil samples and mg/L for water sa

Soil values are not corrected for moisture or stone content

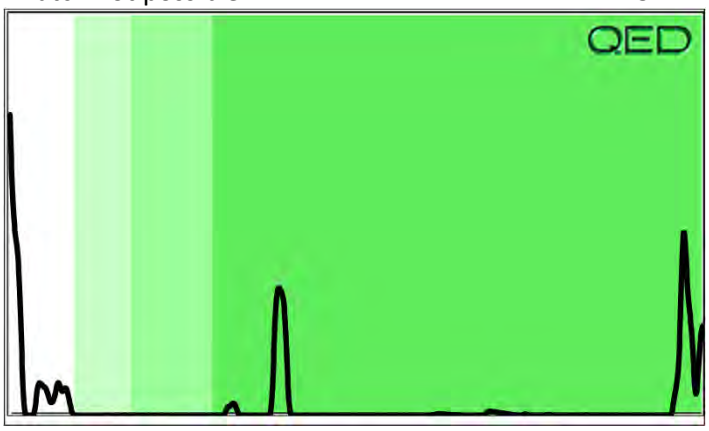
Fingerprints provide a tentative hydrocarbon identification based on operator selected library matches

Fingerprint match abbreviations Est = Specific calibrator not used, result estimated (PFM)= Poor library fingerprint match

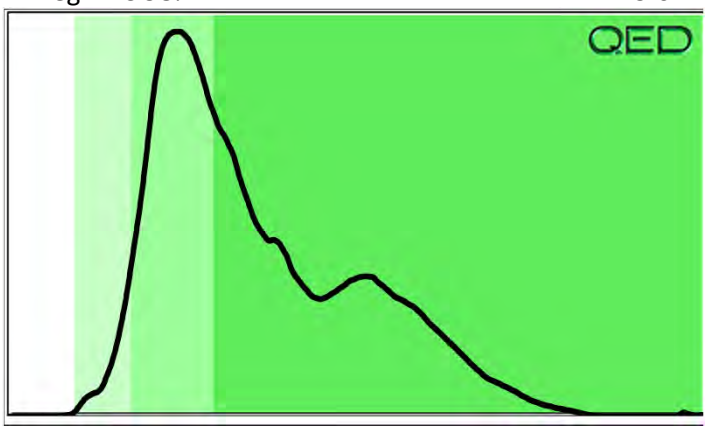
(SBS)= site specific background subracted (LBS)= Library background subtracted % = match confidence

Project GEL B-4159 CULLOWHEE NC **Date** Friday, December 20, 2013

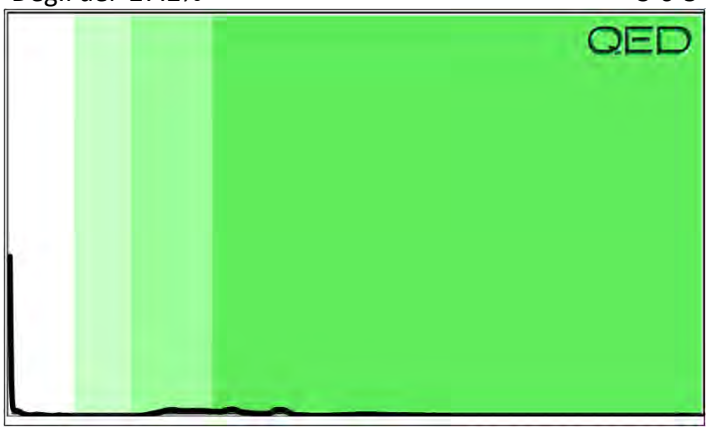
Match not possible S-4-1



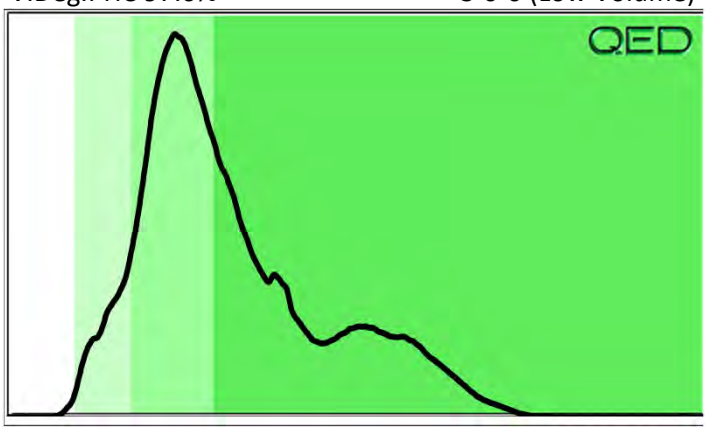
V.Deg.PHC 98% S-6-4



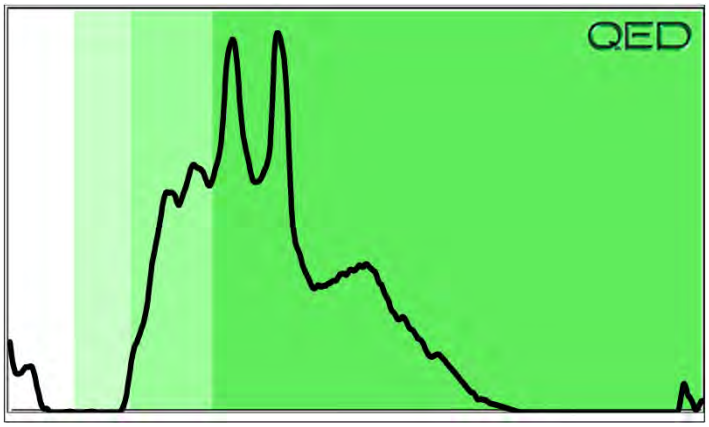
Deg.Fuel 27.2% S-6-5



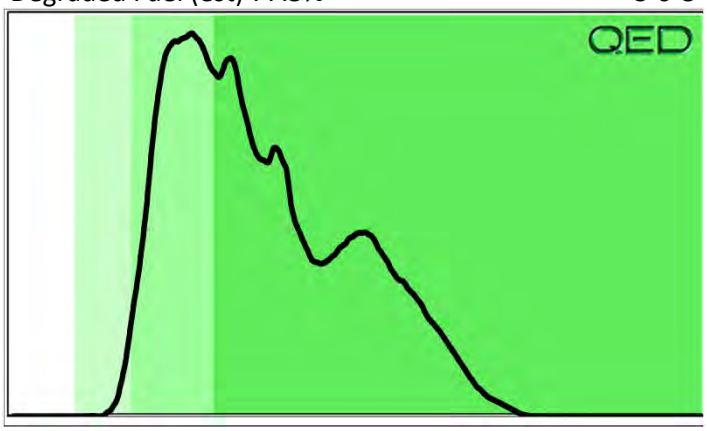
V.Deg.PHC 97.6% S-6-6 (Low Volume)



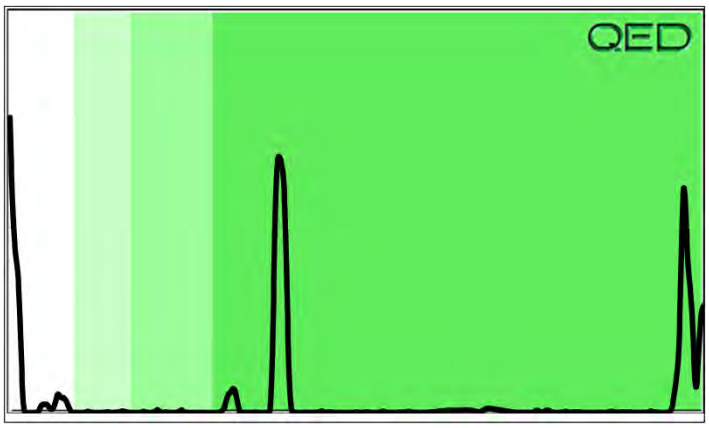
PAH S-6-7



Degraded Fuel (est) 77.5% S-6-8



Particulate S-6-9



QED

AQROS

Hydrocarbon Analysis Results

Client: GEL
Address:

Samples taken Thursday, December 19, 2013
Samples extracted Thursday, December 19, 2013
Samples analysed Monday, December 23, 2013

Contact: Andrew Eyer

Operator MKB

Project: B-4159 Cullowhee, NC

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
										% light	% mid	% heavy	
s	S-6-7 REPLICATE	260.0	<13	<13	129.8	129.8	107.8	4.7	1.3	45.9	39.3	14.8	V.Deg.PHC 71.7%
s	S-6-7 REPLICATE new dilution	93.8	<4.7	<4.7	101.7	101.7	100.64	4.22	0.95	44.6	39.1	16.3	V.Deg.PHC 72%
s	S-20-1 REPLICATE	20.2	<1	<1	6.2	6.2	4.59	< 0.1	< 0.05	53.8	36.5	9.7	V.Deg.PHC 99.8%
s	S-12-9 REPLICATE	338.0	<16.9	<16.9	98.3	98.3	72.8	<1.7	<0.85	54	31.1	14.9	V.Deg.PHC 94.8%
s	S-6-8 REPLICATE	19.7	<1	<1	5.3	5.3	1.87	< 0.1	< 0.049	38.7	38.2	23	Degraded Fuel (est) 79%
s	S-8-4 REPLICATE	13.3	<0.7	<0.7	2.1	2.1	1.53	0.15	< 0.033	81.3	13.3	5.4	Match not possible

Initial Calibrator QC check OK

Low Range Calibrator Final check Low 0.067

High Range Calibrator Final check Low 1.310

Results generated by a QED HC-1 analyser

Concentration values in mg/kg for soil samples and mg/L for water samples.

Soil values are not corrected for moisture or stone content

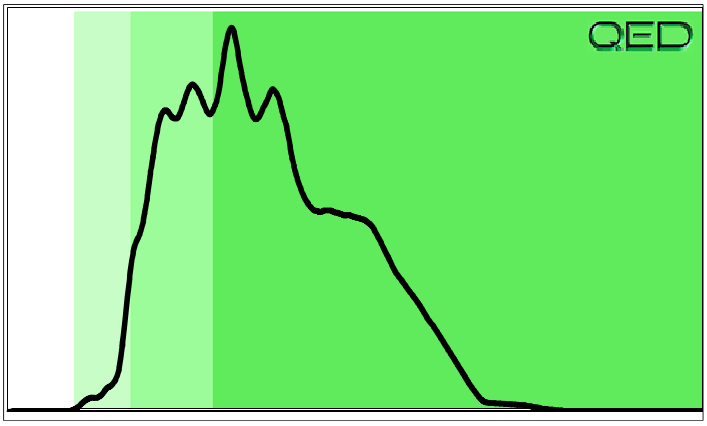
Fingerprints provide a tentative hydrocarbon identification based on operator selected library matches

Fingerprint match abbreviations Est = Specific calibrator not used, result estimated (PFM)= Poor library fingerprint match

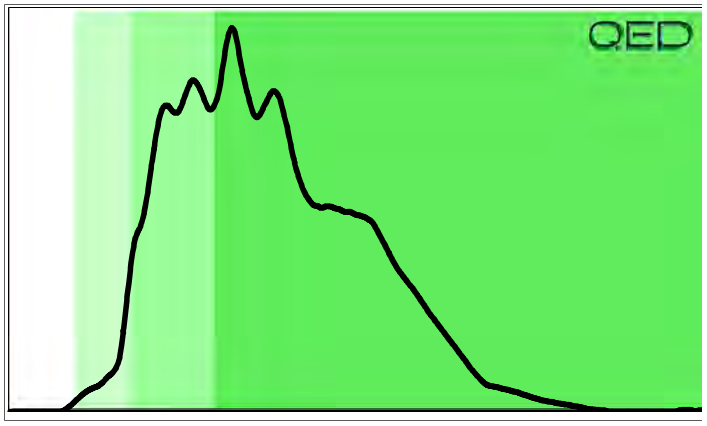
(SBS)= site specific background subracted (LBS)= Library background subtracted % = match confidence

Project B-4159 Cullowhee, NC **Date** ay, December 23, 2013

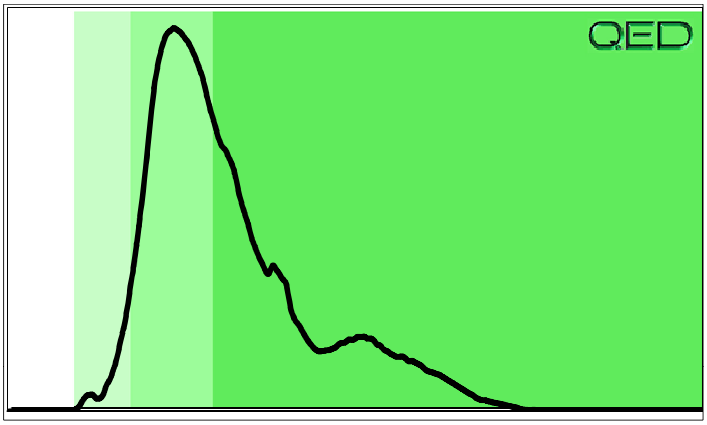
V.Deg.PHC 71.7% S-6-7 REPLICATE



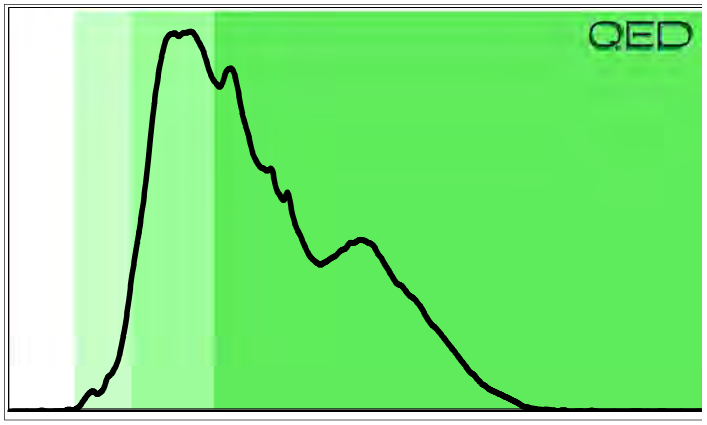
V.Deg.PHC 72% S-6-7 REPLICATE



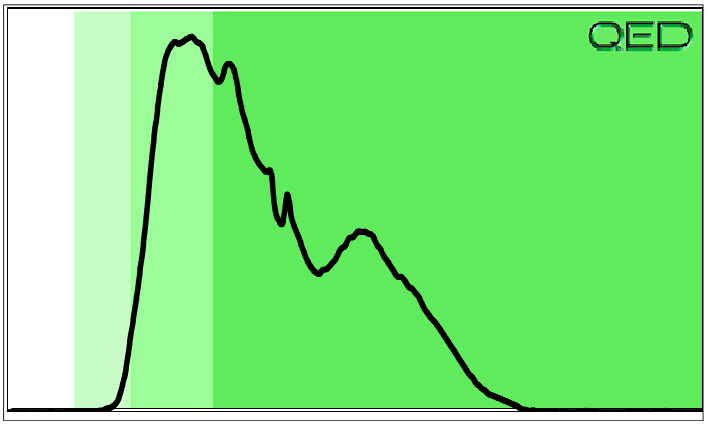
V.Deg.PHC 99.8% S-20-1 REPLICATE



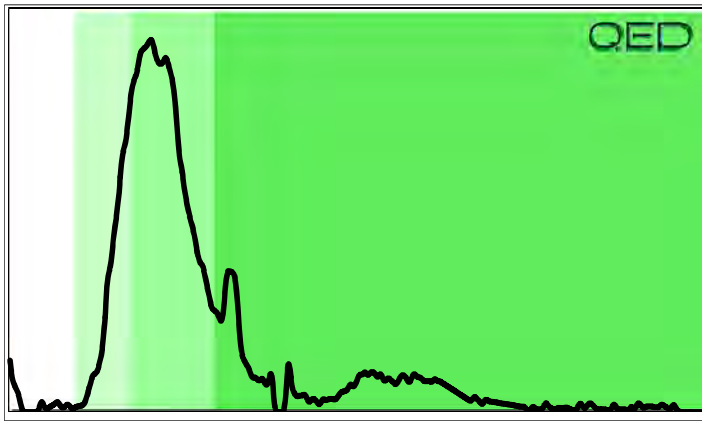
V.Deg.PHC 94.8% S-12-9 REPLICATE



Degraded Fuel (est) 79% S-6-8 REPLICATE



Match not possible S-8-4 REPLLICATE



CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

MOBILE UNIT #

CLIENT NAME	PROJECT NAME & ADDRESS
GEL ENG. of N.C.	B-4159 Cullowhee, N.C.
SAMPLERS	**CONTACT PERSON**
WSR, RSG	Andrew Eyer

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

	SAMPLE FIELD ID.\ NUMBER	DATE SAMPLED	TIME SAMPLED	COMP.	GRAB	DATE REC'D	TIME REC'D	~~STATION LOCATION / No.~~ Weight	SAMPLE MATRIX	NUMBER OF CONTAINERS	IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: UVF	COMMENT / SAMPLE PRE FIX
✓✓	S-12-3	12/17/13	1310		X			11.77	S	1	✓	48hr TA
✓✓	S-12-5		1509		X			13.6	S	1	✓	48hr TA
✓✓	S-12-6		1540		X			11.65	S	1	✓	48hr TA
✓✓	S-12-7		1555		X			11.7	S	1	✓	48hr TA
✓✓	S-12-8		1610		X			11.59	S	1	✓	48hr TA
✓✓	S-12-9 Low volume		1625		X			~~7.17~~ (10)	S	1	✓	48hr TA
✓✓	S-8-1 Low volume		1635		X			(10)	S	1	✓	48hr TA
✓✓	S-8-2	12/18/13	0855		X			14.06	S	1	✓	48hr TA
✓✓	S-8-5 Low volume		0925		X			(10)	S	1	✓	48hr TA
✓✓	S-8-4		1000		X			10.49	S	1	✓	48hr TA
✓✓	S-8-3 Low volume		1025		X			(10)	S	1	✓	48hr TA
✓✓	S-6-1 Low volume		1150		X			(10)	S	1	✓	48hr TA
✓✓	S-6-2		1220		X			12.2	S	1	✓	48hr TA
✓✓	S-6-3 Low volume		1235		X			(10)	S	1	✓	48hr TA
✓✓	S-4-1		1505		X			12.32	S	1	✓	48hr TA

Precleaned Containers Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Date / Time	**Remarks and Observations**
	12/19/13 1400			
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Date / Time	
			12/24/13	

Matrix Types S Soil SW Surface Water GW Ground Water SG Soil Gas

CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

MOBILE UNIT #

CLIENT NAME: GEL ENG. of N.C.

PROJECT NAME & ADDRESS: B-4159 Cullowhee, N.C.

SAMPLERS: WSR, RSG

CONTACT PERSON: Andrew Eyer

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

SAMPLE FIELD ID.\ NUMBER	DATE SAMPLED	TIME SAMPLED	COMP.	GRAB	DATE REC'D	TIME REC'D	~~STATION LOCATION~~ / No.	SAMPLE MATRIX	NUMBER OF CONTAINERS	IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: UVF	COMMENT / SAMPLE PRE FIX
S-6-4	12/18/13	1520		X			13.83	S	1	✓	48 hr TA
S-6-5		1545		X			11.99	S	1	✓	48 hr TA
S-6-6 Low volume		1555		X			(10)	S	1	✓	48 hr TA
S-6-7		1620		X			13.03	S	1	✓	48 hr TA
S-6-8		1645		X			13.25	S	1	✓	48 hr TA
S-6-9		1700		X			12.06	S	1	✓	48 hr TA
S-4-4	12/19/13	0850		X			13.25	S	1	✓	48hr TA
S-4-3		0925		X			12.74	S	1	✓	48hr TA
S-4-2		0940		X			12.15	S	1	✓	48hr TA
S-5-1		1005		X			13.12	S	1	✓	48hr TA
S-5-2		1030		X			13	S	1	✓	48 hr TA
S-5-3		1055		X			12.59	S	1	✓	48hr TA
S-3-1		1110		X			15.46	S	1	✓	48 hr TA
S-3-2		1120		X			12.68	S	1	✓	48hr TA
S-3-3		1130		X			12.29	S	1	✓	48hr TA

	Date / Time	Received by: (Signature)	Date / Time	Remarks and Observations
Precleaned Containers Relinquished by: (Signature) Steve Ruby	12/17/13 1400			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time 12/20/13	

Matrix Types S Soil SW Surface Water GW Ground Water SG Soil Gas

Pace Analytical Services Results

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 07, 2014

Andrew Eyer
GEL Engineering of NC
PO Box 14262
Research Triangle, NC 27709

RE: Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Dear Andrew Eyer:
Enclosed are the analytical results for sample(s) received by the laboratory on December 19, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

The laboratory report is being reissued on January 7, 2014. The sample ID for 92184127002 were revised, per client request.

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

Sincerely,

Angela M. Baioni

Angela Baioni

angela.baioni@pacelabs.com
Project Manager

Enclosures

cc: Chemical Testing Engineer, NCDOT

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

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2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92184127001	**S-8-4**	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127002	**S-8-3**	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127003	**S-4-1**	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127004	**S-6-5**	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127005	**S-6-6**	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127006	**S-6-7**	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127007	**S-6-9**	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127008	**S-6-1**	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127009	**S-6-2**	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127010	**S-6-3**	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127011	**S-6-4**	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184127012	**S-6-8**	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-8-4 **Lab ID: 92184127001** Collected: 12/18/13 10:00 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	83-32-9	
Acenaphthylene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	208-96-8	
Aniline	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	62-53-3	
Anthracene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	120-12-7	
Benzo(a)anthracene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	56-55-3	
Benzo(a)pyrene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	207-08-9	
Benzoic Acid	ND	ug/kg	1890	1	12/20/13 10:30	12/23/13 18:46	65-85-0	
Benzyl alcohol	ND	ug/kg	756	1	12/20/13 10:30	12/23/13 18:46	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	101-55-3	
Butylbenzylphthalate	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	756	1	12/20/13 10:30	12/23/13 18:46	59-50-7	
4-Chloroaniline	ND	ug/kg	1890	1	12/20/13 10:30	12/23/13 18:46	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	108-60-1	
2-Chloronaphthalene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	91-58-7	
2-Chlorophenol	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	7005-72-3	
Chrysene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	53-70-3	
Dibenzofuran	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1890	1	12/20/13 10:30	12/23/13 18:46	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	120-83-2	
Diethylphthalate	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	105-67-9	
Dimethylphthalate	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	131-11-3	
Di-n-butylphthalate	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	756	1	12/20/13 10:30	12/23/13 18:46	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1890	1	12/20/13 10:30	12/23/13 18:46	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	606-20-2	
Di-n-octylphthalate	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	117-81-7	
Fluoranthene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	206-44-0	
Fluorene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	87-68-3	
Hexachlorobenzene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	77-47-4	
Hexachloroethane	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-8-4 **Lab ID: 92184127001** Collected: 12/18/13 10:00 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Isophorone	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	78-59-1	
1-Methylnaphthalene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	90-12-0	
2-Methylnaphthalene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46		
Naphthalene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	91-20-3	
2-Nitroaniline	ND	ug/kg	1890	1	12/20/13 10:30	12/23/13 18:46	88-74-4	
3-Nitroaniline	ND	ug/kg	1890	1	12/20/13 10:30	12/23/13 18:46	99-09-2	
4-Nitroaniline	ND	ug/kg	756	1	12/20/13 10:30	12/23/13 18:46	100-01-6	
Nitrobenzene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	98-95-3	
2-Nitrophenol	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	88-75-5	
4-Nitrophenol	ND	ug/kg	1890	1	12/20/13 10:30	12/23/13 18:46	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	86-30-6	
Pentachlorophenol	ND	ug/kg	1890	1	12/20/13 10:30	12/23/13 18:46	87-86-5	
Phenanthrene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	85-01-8	
Phenol	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	108-95-2	
Pyrene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	378	1	12/20/13 10:30	12/23/13 18:46	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	41	%	23-110	1	12/20/13 10:30	12/23/13 18:46	4165-60-0	
2-Fluorobiphenyl (S)	47	%	30-110	1	12/20/13 10:30	12/23/13 18:46	321-60-8	
Terphenyl-d14 (S)	57	%	28-110	1	12/20/13 10:30	12/23/13 18:46	1718-51-0	
Phenol-d6 (S)	47	%	22-110	1	12/20/13 10:30	12/23/13 18:46	13127-88-3	
2-Fluorophenol (S)	47	%	13-110	1	12/20/13 10:30	12/23/13 18:46	367-12-4	
2,4,6-Tribromophenol (S)	43	%	27-110	1	12/20/13 10:30	12/23/13 18:46	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	103	1		12/24/13 03:48	67-64-1	
Benzene	ND	ug/kg	5.2	1		12/24/13 03:48	71-43-2	
Bromobenzene	ND	ug/kg	5.2	1		12/24/13 03:48	108-86-1	
Bromochloromethane	ND	ug/kg	5.2	1		12/24/13 03:48	74-97-5	
Bromodichloromethane	ND	ug/kg	5.2	1		12/24/13 03:48	75-27-4	
Bromoform	ND	ug/kg	5.2	1		12/24/13 03:48	75-25-2	
Bromomethane	ND	ug/kg	10.3	1		12/24/13 03:48	74-83-9	
2-Butanone (MEK)	ND	ug/kg	103	1		12/24/13 03:48	78-93-3	
n-Butylbenzene	ND	ug/kg	5.2	1		12/24/13 03:48	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.2	1		12/24/13 03:48	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.2	1		12/24/13 03:48	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.2	1		12/24/13 03:48	56-23-5	
Chlorobenzene	ND	ug/kg	5.2	1		12/24/13 03:48	108-90-7	
Chloroethane	ND	ug/kg	10.3	1		12/24/13 03:48	75-00-3	
Chloroform	ND	ug/kg	5.2	1		12/24/13 03:48	67-66-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-8-4 **Lab ID: 92184127001** Collected: 12/18/13 10:00 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Chloromethane	ND	ug/kg	10.3	1		12/24/13 03:48	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.2	1		12/24/13 03:48	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.2	1		12/24/13 03:48	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.2	1		12/24/13 03:48	96-12-8	
Dibromochloromethane	ND	ug/kg	5.2	1		12/24/13 03:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.2	1		12/24/13 03:48	106-93-4	
Dibromomethane	ND	ug/kg	5.2	1		12/24/13 03:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.2	1		12/24/13 03:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.2	1		12/24/13 03:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.2	1		12/24/13 03:48	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.3	1		12/24/13 03:48	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.2	1		12/24/13 03:48	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.2	1		12/24/13 03:48	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.2	1		12/24/13 03:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.2	1		12/24/13 03:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.2	1		12/24/13 03:48	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.2	1		12/24/13 03:48	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.2	1		12/24/13 03:48	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.2	1		12/24/13 03:48	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.2	1		12/24/13 03:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.2	1		12/24/13 03:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.2	1		12/24/13 03:48	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.2	1		12/24/13 03:48	108-20-3	
Ethylbenzene	ND	ug/kg	5.2	1		12/24/13 03:48	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.2	1		12/24/13 03:48	87-68-3	
2-Hexanone	ND	ug/kg	51.5	1		12/24/13 03:48	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.2	1		12/24/13 03:48	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.2	1		12/24/13 03:48	99-87-6	
Methylene Chloride	ND	ug/kg	20.6	1		12/24/13 03:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	51.5	1		12/24/13 03:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.2	1		12/24/13 03:48	1634-04-4	
Naphthalene	ND	ug/kg	5.2	1		12/24/13 03:48	91-20-3	
n-Propylbenzene	ND	ug/kg	5.2	1		12/24/13 03:48	103-65-1	
Styrene	ND	ug/kg	5.2	1		12/24/13 03:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.2	1		12/24/13 03:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.2	1		12/24/13 03:48	79-34-5	
Tetrachloroethene	ND	ug/kg	5.2	1		12/24/13 03:48	127-18-4	
Toluene	ND	ug/kg	5.2	1		12/24/13 03:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.2	1		12/24/13 03:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.2	1		12/24/13 03:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.2	1		12/24/13 03:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.2	1		12/24/13 03:48	79-00-5	
Trichloroethene	ND	ug/kg	5.2	1		12/24/13 03:48	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.2	1		12/24/13 03:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.2	1		12/24/13 03:48	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.2	1		12/24/13 03:48	95-63-6	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-8-4 **Lab ID: 92184127001** Collected: 12/18/13 10:00 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	ND	ug/kg	5.2	1		12/24/13 03:48	108-67-8	
Vinyl acetate	ND	ug/kg	51.5	1		12/24/13 03:48	108-05-4	
Vinyl chloride	ND	ug/kg	10.3	1		12/24/13 03:48	75-01-4	
Xylene (Total)	ND	ug/kg	10.3	1		12/24/13 03:48	1330-20-7	
m&p-Xylene	ND	ug/kg	10.3	1		12/24/13 03:48	179601-23-1	
o-Xylene	ND	ug/kg	5.2	1		12/24/13 03:48	95-47-6	
Surrogates								
Toluene-d8 (S)	97	%	70-130	1		12/24/13 03:48	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130	1		12/24/13 03:48	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-132	1		12/24/13 03:48	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**12.7**	%	0.10	1		12/20/13 16:54		

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-8-3 **Lab ID: 92184127002** Collected: 12/18/13 10:25 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	83-32-9	
Acenaphthylene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	208-96-8	
Aniline	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	62-53-3	
Anthracene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	120-12-7	
Benzo(a)anthracene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	56-55-3	
Benzo(a)pyrene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	207-08-9	
Benzoic Acid	ND	ug/kg	2260	1	12/20/13 10:30	12/23/13 19:18	65-85-0	
Benzyl alcohol	ND	ug/kg	904	1	12/20/13 10:30	12/23/13 19:18	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	101-55-3	
Butylbenzylphthalate	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	904	1	12/20/13 10:30	12/23/13 19:18	59-50-7	
4-Chloroaniline	ND	ug/kg	2260	1	12/20/13 10:30	12/23/13 19:18	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	108-60-1	
2-Chloronaphthalene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	91-58-7	
2-Chlorophenol	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	7005-72-3	
Chrysene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	53-70-3	
Dibenzofuran	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2260	1	12/20/13 10:30	12/23/13 19:18	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	120-83-2	
Diethylphthalate	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	105-67-9	
Dimethylphthalate	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	131-11-3	
Di-n-butylphthalate	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	904	1	12/20/13 10:30	12/23/13 19:18	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2260	1	12/20/13 10:30	12/23/13 19:18	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	606-20-2	
Di-n-octylphthalate	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	117-81-7	
Fluoranthene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	206-44-0	
Fluorene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	87-68-3	
Hexachlorobenzene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	77-47-4	
Hexachloroethane	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-8-3 **Lab ID: 92184127002** Collected: 12/18/13 10:25 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Isophorone	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	78-59-1	
1-Methylnaphthalene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	90-12-0	
2-Methylnaphthalene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18		
Naphthalene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	91-20-3	
2-Nitroaniline	ND	ug/kg	2260	1	12/20/13 10:30	12/23/13 19:18	88-74-4	
3-Nitroaniline	ND	ug/kg	2260	1	12/20/13 10:30	12/23/13 19:18	99-09-2	
4-Nitroaniline	ND	ug/kg	904	1	12/20/13 10:30	12/23/13 19:18	100-01-6	
Nitrobenzene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	98-95-3	
2-Nitrophenol	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	88-75-5	
4-Nitrophenol	ND	ug/kg	2260	1	12/20/13 10:30	12/23/13 19:18	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	86-30-6	
Pentachlorophenol	ND	ug/kg	2260	1	12/20/13 10:30	12/23/13 19:18	87-86-5	
Phenanthrene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	85-01-8	
Phenol	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	108-95-2	
Pyrene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	452	1	12/20/13 10:30	12/23/13 19:18	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	57	%	23-110	1	12/20/13 10:30	12/23/13 19:18	4165-60-0	
2-Fluorobiphenyl (S)	53	%	30-110	1	12/20/13 10:30	12/23/13 19:18	321-60-8	
Terphenyl-d14 (S)	69	%	28-110	1	12/20/13 10:30	12/23/13 19:18	1718-51-0	
Phenol-d6 (S)	50	%	22-110	1	12/20/13 10:30	12/23/13 19:18	13127-88-3	
2-Fluorophenol (S)	49	%	13-110	1	12/20/13 10:30	12/23/13 19:18	367-12-4	
2,4,6-Tribromophenol (S)	51	%	27-110	1	12/20/13 10:30	12/23/13 19:18	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Acetone	**218**	ug/kg	107	1		12/24/13 19:14	67-64-1	A+
Benzene	ND	ug/kg	5.4	1		12/24/13 19:14	71-43-2	
Bromobenzene	ND	ug/kg	5.4	1		12/24/13 19:14	108-86-1	
Bromochloromethane	ND	ug/kg	5.4	1		12/24/13 19:14	74-97-5	
Bromodichloromethane	ND	ug/kg	5.4	1		12/24/13 19:14	75-27-4	
Bromoform	ND	ug/kg	5.4	1		12/24/13 19:14	75-25-2	
Bromomethane	ND	ug/kg	10.7	1		12/24/13 19:14	74-83-9	
2-Butanone (MEK)	ND	ug/kg	107	1		12/24/13 19:14	78-93-3	
n-Butylbenzene	ND	ug/kg	5.4	1		12/24/13 19:14	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.4	1		12/24/13 19:14	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.4	1		12/24/13 19:14	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.4	1		12/24/13 19:14	56-23-5	
Chlorobenzene	ND	ug/kg	5.4	1		12/24/13 19:14	108-90-7	
Chloroethane	ND	ug/kg	10.7	1		12/24/13 19:14	75-00-3	
Chloroform	ND	ug/kg	5.4	1		12/24/13 19:14	67-66-3	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-8-3 **Lab ID: 92184127002** Collected: 12/18/13 10:25 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Chloromethane	ND	ug/kg	10.7	1		12/24/13 19:14	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.4	1		12/24/13 19:14	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.4	1		12/24/13 19:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.4	1		12/24/13 19:14	96-12-8	
Dibromochloromethane	ND	ug/kg	5.4	1		12/24/13 19:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.4	1		12/24/13 19:14	106-93-4	
Dibromomethane	ND	ug/kg	5.4	1		12/24/13 19:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.4	1		12/24/13 19:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.4	1		12/24/13 19:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.4	1		12/24/13 19:14	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.7	1		12/24/13 19:14	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.4	1		12/24/13 19:14	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.4	1		12/24/13 19:14	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.4	1		12/24/13 19:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.4	1		12/24/13 19:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.4	1		12/24/13 19:14	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.4	1		12/24/13 19:14	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.4	1		12/24/13 19:14	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.4	1		12/24/13 19:14	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.4	1		12/24/13 19:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.4	1		12/24/13 19:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.4	1		12/24/13 19:14	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.4	1		12/24/13 19:14	108-20-3	
Ethylbenzene	ND	ug/kg	5.4	1		12/24/13 19:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.4	1		12/24/13 19:14	87-68-3	
2-Hexanone	ND	ug/kg	53.7	1		12/24/13 19:14	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.4	1		12/24/13 19:14	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.4	1		12/24/13 19:14	99-87-6	
Methylene Chloride	ND	ug/kg	21.5	1		12/24/13 19:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	53.7	1		12/24/13 19:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.4	1		12/24/13 19:14	1634-04-4	
Naphthalene	ND	ug/kg	5.4	1		12/24/13 19:14	91-20-3	
n-Propylbenzene	ND	ug/kg	5.4	1		12/24/13 19:14	103-65-1	
Styrene	ND	ug/kg	5.4	1		12/24/13 19:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.4	1		12/24/13 19:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.4	1		12/24/13 19:14	79-34-5	
Tetrachloroethene	ND	ug/kg	5.4	1		12/24/13 19:14	127-18-4	
Toluene	ND	ug/kg	5.4	1		12/24/13 19:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.4	1		12/24/13 19:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.4	1		12/24/13 19:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.4	1		12/24/13 19:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.4	1		12/24/13 19:14	79-00-5	
Trichloroethene	ND	ug/kg	5.4	1		12/24/13 19:14	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.4	1		12/24/13 19:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.4	1		12/24/13 19:14	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.4	1		12/24/13 19:14	95-63-6	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-8-3 **Lab ID: 92184127002** Collected: 12/18/13 10:25 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	ND	ug/kg	5.4	1		12/24/13 19:14	108-67-8	
Vinyl acetate	ND	ug/kg	53.7	1		12/24/13 19:14	108-05-4	
Vinyl chloride	ND	ug/kg	10.7	1		12/24/13 19:14	75-01-4	
Xylene (Total)	ND	ug/kg	10.7	1		12/24/13 19:14	1330-20-7	
m&p-Xylene	ND	ug/kg	10.7	1		12/24/13 19:14	179601-23-1	
o-Xylene	ND	ug/kg	5.4	1		12/24/13 19:14	95-47-6	
Surrogates								
Toluene-d8 (S)	96	%	70-130	1		12/24/13 19:14	2037-26-5	
4-Bromofluorobenzene (S)	92	%	70-130	1		12/24/13 19:14	460-00-4	
1,2-Dichloroethane-d4 (S)	118	%	70-132	1		12/24/13 19:14	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**27.0**	%	0.10	1		12/20/13 16:54		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-4-1 **Lab ID: 92184127003** Collected: 12/18/13 15:05 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	83-32-9	
Acenaphthylene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	208-96-8	
Aniline	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	62-53-3	
Anthracene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	120-12-7	
Benzo(a)anthracene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	56-55-3	
Benzo(a)pyrene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	207-08-9	
Benzoic Acid	ND	ug/kg	1850	1	12/20/13 10:30	12/23/13 19:50	65-85-0	
Benzyl alcohol	ND	ug/kg	739	1	12/20/13 10:30	12/23/13 19:50	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	101-55-3	
Butylbenzylphthalate	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	739	1	12/20/13 10:30	12/23/13 19:50	59-50-7	
4-Chloroaniline	ND	ug/kg	1850	1	12/20/13 10:30	12/23/13 19:50	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	108-60-1	
2-Chloronaphthalene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	91-58-7	
2-Chlorophenol	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	7005-72-3	
Chrysene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	53-70-3	
Dibenzofuran	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1850	1	12/20/13 10:30	12/23/13 19:50	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	120-83-2	
Diethylphthalate	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	105-67-9	
Dimethylphthalate	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	131-11-3	
Di-n-butylphthalate	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	739	1	12/20/13 10:30	12/23/13 19:50	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1850	1	12/20/13 10:30	12/23/13 19:50	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	606-20-2	
Di-n-octylphthalate	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	117-81-7	
Fluoranthene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	206-44-0	
Fluorene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	87-68-3	
Hexachlorobenzene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	77-47-4	
Hexachloroethane	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-4-1 **Lab ID: 92184127003** Collected: 12/18/13 15:05 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Isophorone	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	78-59-1	
1-Methylnaphthalene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	90-12-0	
2-Methylnaphthalene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50		
Naphthalene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	91-20-3	
2-Nitroaniline	ND	ug/kg	1850	1	12/20/13 10:30	12/23/13 19:50	88-74-4	
3-Nitroaniline	ND	ug/kg	1850	1	12/20/13 10:30	12/23/13 19:50	99-09-2	
4-Nitroaniline	ND	ug/kg	739	1	12/20/13 10:30	12/23/13 19:50	100-01-6	
Nitrobenzene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	98-95-3	
2-Nitrophenol	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	88-75-5	
4-Nitrophenol	ND	ug/kg	1850	1	12/20/13 10:30	12/23/13 19:50	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	86-30-6	
Pentachlorophenol	ND	ug/kg	1850	1	12/20/13 10:30	12/23/13 19:50	87-86-5	
Phenanthrene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	85-01-8	
Phenol	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	108-95-2	
Pyrene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	369	1	12/20/13 10:30	12/23/13 19:50	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	65	%	23-110	1	12/20/13 10:30	12/23/13 19:50	4165-60-0	
2-Fluorobiphenyl (S)	67	%	30-110	1	12/20/13 10:30	12/23/13 19:50	321-60-8	
Terphenyl-d14 (S)	79	%	28-110	1	12/20/13 10:30	12/23/13 19:50	1718-51-0	
Phenol-d6 (S)	51	%	22-110	1	12/20/13 10:30	12/23/13 19:50	13127-88-3	
2-Fluorophenol (S)	42	%	13-110	1	12/20/13 10:30	12/23/13 19:50	367-12-4	
2,4,6-Tribromophenol (S)	28	%	27-110	1	12/20/13 10:30	12/23/13 19:50	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	84.8	1		12/24/13 19:33	67-64-1	
Benzene	ND	ug/kg	4.2	1		12/24/13 19:33	71-43-2	
Bromobenzene	ND	ug/kg	4.2	1		12/24/13 19:33	108-86-1	
Bromochloromethane	ND	ug/kg	4.2	1		12/24/13 19:33	74-97-5	
Bromodichloromethane	ND	ug/kg	4.2	1		12/24/13 19:33	75-27-4	
Bromoform	ND	ug/kg	4.2	1		12/24/13 19:33	75-25-2	
Bromomethane	ND	ug/kg	8.5	1		12/24/13 19:33	74-83-9	
2-Butanone (MEK)	ND	ug/kg	84.8	1		12/24/13 19:33	78-93-3	
n-Butylbenzene	ND	ug/kg	4.2	1		12/24/13 19:33	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.2	1		12/24/13 19:33	135-98-8	
tert-Butylbenzene	ND	ug/kg	4.2	1		12/24/13 19:33	98-06-6	
Carbon tetrachloride	ND	ug/kg	4.2	1		12/24/13 19:33	56-23-5	
Chlorobenzene	ND	ug/kg	4.2	1		12/24/13 19:33	108-90-7	
Chloroethane	ND	ug/kg	8.5	1		12/24/13 19:33	75-00-3	
Chloroform	ND	ug/kg	4.2	1		12/24/13 19:33	67-66-3	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-4-1 **Lab ID: 92184127003** Collected: 12/18/13 15:05 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Chloromethane	ND	ug/kg	8.5	1		12/24/13 19:33	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.2	1		12/24/13 19:33	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.2	1		12/24/13 19:33	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.2	1		12/24/13 19:33	96-12-8	
Dibromochloromethane	ND	ug/kg	4.2	1		12/24/13 19:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.2	1		12/24/13 19:33	106-93-4	
Dibromomethane	ND	ug/kg	4.2	1		12/24/13 19:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.2	1		12/24/13 19:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.2	1		12/24/13 19:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.2	1		12/24/13 19:33	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	8.5	1		12/24/13 19:33	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.2	1		12/24/13 19:33	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.2	1		12/24/13 19:33	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.2	1		12/24/13 19:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.2	1		12/24/13 19:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.2	1		12/24/13 19:33	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.2	1		12/24/13 19:33	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.2	1		12/24/13 19:33	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.2	1		12/24/13 19:33	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.2	1		12/24/13 19:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.2	1		12/24/13 19:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.2	1		12/24/13 19:33	10061-02-6	
Diisopropyl ether	ND	ug/kg	4.2	1		12/24/13 19:33	108-20-3	
Ethylbenzene	ND	ug/kg	4.2	1		12/24/13 19:33	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.2	1		12/24/13 19:33	87-68-3	
2-Hexanone	ND	ug/kg	42.4	1		12/24/13 19:33	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.2	1		12/24/13 19:33	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.2	1		12/24/13 19:33	99-87-6	
Methylene Chloride	ND	ug/kg	17.0	1		12/24/13 19:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	42.4	1		12/24/13 19:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.2	1		12/24/13 19:33	1634-04-4	
Naphthalene	ND	ug/kg	4.2	1		12/24/13 19:33	91-20-3	
n-Propylbenzene	ND	ug/kg	4.2	1		12/24/13 19:33	103-65-1	
Styrene	ND	ug/kg	4.2	1		12/24/13 19:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.2	1		12/24/13 19:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.2	1		12/24/13 19:33	79-34-5	
Tetrachloroethene	ND	ug/kg	4.2	1		12/24/13 19:33	127-18-4	
Toluene	ND	ug/kg	4.2	1		12/24/13 19:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.2	1		12/24/13 19:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.2	1		12/24/13 19:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.2	1		12/24/13 19:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.2	1		12/24/13 19:33	79-00-5	
Trichloroethene	ND	ug/kg	4.2	1		12/24/13 19:33	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.2	1		12/24/13 19:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.2	1		12/24/13 19:33	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.2	1		12/24/13 19:33	95-63-6	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-4-1 **Lab ID: 92184127003** Collected: 12/18/13 15:05 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	ND	ug/kg	4.2	1		12/24/13 19:33	108-67-8	
Vinyl acetate	ND	ug/kg	42.4	1		12/24/13 19:33	108-05-4	
Vinyl chloride	ND	ug/kg	8.5	1		12/24/13 19:33	75-01-4	
Xylene (Total)	ND	ug/kg	8.5	1		12/24/13 19:33	1330-20-7	
m&p-Xylene	ND	ug/kg	8.5	1		12/24/13 19:33	179601-23-1	
o-Xylene	ND	ug/kg	4.2	1		12/24/13 19:33	95-47-6	
Surrogates								
Toluene-d8 (S)	99	%	70-130	1		12/24/13 19:33	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130	1		12/24/13 19:33	460-00-4	
1,2-Dichloroethane-d4 (S)	122	%	70-132	1		12/24/13 19:33	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**10.7**	%	0.10	1		12/20/13 16:54		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-5 **Lab ID: 92184127004** Collected: 12/18/13 15:45 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	83-32-9	
Acenaphthylene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	208-96-8	
Aniline	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	62-53-3	
Anthracene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	120-12-7	
Benzo(a)anthracene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	56-55-3	
Benzo(a)pyrene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	207-08-9	
Benzoic Acid	ND	ug/kg	1950	1	12/20/13 10:30	12/23/13 20:21	65-85-0	
Benzyl alcohol	ND	ug/kg	779	1	12/20/13 10:30	12/23/13 20:21	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	101-55-3	
Butylbenzylphthalate	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	779	1	12/20/13 10:30	12/23/13 20:21	59-50-7	
4-Chloroaniline	ND	ug/kg	1950	1	12/20/13 10:30	12/23/13 20:21	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	108-60-1	
2-Chloronaphthalene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	91-58-7	
2-Chlorophenol	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	7005-72-3	
Chrysene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	53-70-3	
Dibenzofuran	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1950	1	12/20/13 10:30	12/23/13 20:21	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	120-83-2	
Diethylphthalate	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	105-67-9	
Dimethylphthalate	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	131-11-3	
Di-n-butylphthalate	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	779	1	12/20/13 10:30	12/23/13 20:21	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1950	1	12/20/13 10:30	12/23/13 20:21	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	606-20-2	
Di-n-octylphthalate	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	117-81-7	
Fluoranthene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	206-44-0	
Fluorene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	87-68-3	
Hexachlorobenzene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	77-47-4	
Hexachloroethane	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	193-39-5	

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(704)875-9092

ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-5 **Lab ID: 92184127004** Collected: 12/18/13 15:45 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Isophorone	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	78-59-1	
1-Methylnaphthalene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	90-12-0	
2-Methylnaphthalene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21		
Naphthalene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	91-20-3	
2-Nitroaniline	ND	ug/kg	1950	1	12/20/13 10:30	12/23/13 20:21	88-74-4	
3-Nitroaniline	ND	ug/kg	1950	1	12/20/13 10:30	12/23/13 20:21	99-09-2	
4-Nitroaniline	ND	ug/kg	779	1	12/20/13 10:30	12/23/13 20:21	100-01-6	
Nitrobenzene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	98-95-3	
2-Nitrophenol	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	88-75-5	
4-Nitrophenol	ND	ug/kg	1950	1	12/20/13 10:30	12/23/13 20:21	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	86-30-6	
Pentachlorophenol	ND	ug/kg	1950	1	12/20/13 10:30	12/23/13 20:21	87-86-5	
Phenanthrene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	85-01-8	
Phenol	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	108-95-2	
Pyrene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	390	1	12/20/13 10:30	12/23/13 20:21	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	72	%	23-110	1	12/20/13 10:30	12/23/13 20:21	4165-60-0	
2-Fluorobiphenyl (S)	73	%	30-110	1	12/20/13 10:30	12/23/13 20:21	321-60-8	
Terphenyl-d14 (S)	73	%	28-110	1	12/20/13 10:30	12/23/13 20:21	1718-51-0	
Phenol-d6 (S)	67	%	22-110	1	12/20/13 10:30	12/23/13 20:21	13127-88-3	
2-Fluorophenol (S)	68	%	13-110	1	12/20/13 10:30	12/23/13 20:21	367-12-4	
2,4,6-Tribromophenol (S)	54	%	27-110	1	12/20/13 10:30	12/23/13 20:21	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	86.3	1		12/24/13 19:53	67-64-1	
Benzene	ND	ug/kg	4.3	1		12/24/13 19:53	71-43-2	
Bromobenzene	ND	ug/kg	4.3	1		12/24/13 19:53	108-86-1	
Bromochloromethane	ND	ug/kg	4.3	1		12/24/13 19:53	74-97-5	
Bromodichloromethane	ND	ug/kg	4.3	1		12/24/13 19:53	75-27-4	
Bromoform	ND	ug/kg	4.3	1		12/24/13 19:53	75-25-2	
Bromomethane	ND	ug/kg	8.6	1		12/24/13 19:53	74-83-9	
2-Butanone (MEK)	ND	ug/kg	86.3	1		12/24/13 19:53	78-93-3	
n-Butylbenzene	ND	ug/kg	4.3	1		12/24/13 19:53	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.3	1		12/24/13 19:53	135-98-8	
tert-Butylbenzene	ND	ug/kg	4.3	1		12/24/13 19:53	98-06-6	
Carbon tetrachloride	ND	ug/kg	4.3	1		12/24/13 19:53	56-23-5	
Chlorobenzene	ND	ug/kg	4.3	1		12/24/13 19:53	108-90-7	
Chloroethane	ND	ug/kg	8.6	1		12/24/13 19:53	75-00-3	
Chloroform	ND	ug/kg	4.3	1		12/24/13 19:53	67-66-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-5 **Lab ID: 92184127004** Collected: 12/18/13 15:45 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Chloromethane	ND	ug/kg	8.6	1		12/24/13 19:53	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.3	1		12/24/13 19:53	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.3	1		12/24/13 19:53	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.3	1		12/24/13 19:53	96-12-8	
Dibromochloromethane	ND	ug/kg	4.3	1		12/24/13 19:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.3	1		12/24/13 19:53	106-93-4	
Dibromomethane	ND	ug/kg	4.3	1		12/24/13 19:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.3	1		12/24/13 19:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.3	1		12/24/13 19:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.3	1		12/24/13 19:53	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	8.6	1		12/24/13 19:53	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.3	1		12/24/13 19:53	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.3	1		12/24/13 19:53	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.3	1		12/24/13 19:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.3	1		12/24/13 19:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.3	1		12/24/13 19:53	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.3	1		12/24/13 19:53	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.3	1		12/24/13 19:53	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.3	1		12/24/13 19:53	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.3	1		12/24/13 19:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.3	1		12/24/13 19:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.3	1		12/24/13 19:53	10061-02-6	
Diisopropyl ether	ND	ug/kg	4.3	1		12/24/13 19:53	108-20-3	
Ethylbenzene	ND	ug/kg	4.3	1		12/24/13 19:53	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.3	1		12/24/13 19:53	87-68-3	
2-Hexanone	ND	ug/kg	43.1	1		12/24/13 19:53	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.3	1		12/24/13 19:53	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.3	1		12/24/13 19:53	99-87-6	
Methylene Chloride	ND	ug/kg	17.3	1		12/24/13 19:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	43.1	1		12/24/13 19:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.3	1		12/24/13 19:53	1634-04-4	
Naphthalene	ND	ug/kg	4.3	1		12/24/13 19:53	91-20-3	
n-Propylbenzene	ND	ug/kg	4.3	1		12/24/13 19:53	103-65-1	
Styrene	ND	ug/kg	4.3	1		12/24/13 19:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.3	1		12/24/13 19:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.3	1		12/24/13 19:53	79-34-5	
Tetrachloroethene	ND	ug/kg	4.3	1		12/24/13 19:53	127-18-4	
Toluene	ND	ug/kg	4.3	1		12/24/13 19:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.3	1		12/24/13 19:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.3	1		12/24/13 19:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.3	1		12/24/13 19:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.3	1		12/24/13 19:53	79-00-5	
Trichloroethene	ND	ug/kg	4.3	1		12/24/13 19:53	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.3	1		12/24/13 19:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.3	1		12/24/13 19:53	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.3	1		12/24/13 19:53	95-63-6	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-5 **Lab ID: 92184127004** Collected: 12/18/13 15:45 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	ND	ug/kg	4.3	1		12/24/13 19:53	108-67-8	
Vinyl acetate	ND	ug/kg	43.1	1		12/24/13 19:53	108-05-4	
Vinyl chloride	ND	ug/kg	8.6	1		12/24/13 19:53	75-01-4	
Xylene (Total)	ND	ug/kg	8.6	1		12/24/13 19:53	1330-20-7	
m&p-Xylene	ND	ug/kg	8.6	1		12/24/13 19:53	179601-23-1	
o-Xylene	ND	ug/kg	4.3	1		12/24/13 19:53	95-47-6	
Surrogates								
Toluene-d8 (S)	100	%	70-130	1		12/24/13 19:53	2037-26-5	
4-Bromofluorobenzene (S)	96	%	70-130	1		12/24/13 19:53	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-132	1		12/24/13 19:53	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**15.3**	%	0.10	1		12/20/13 16:54		

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-6 **Lab ID: 92184127005** Collected: 12/18/13 15:55 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	83-32-9	
Acenaphthylene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	208-96-8	
Aniline	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	62-53-3	
Anthracene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	120-12-7	
Benzo(a)anthracene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	56-55-3	
Benzo(a)pyrene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	207-08-9	
Benzoic Acid	ND	ug/kg	6990	1	12/24/13 10:53	12/26/13 21:36	65-85-0	
Benzyl alcohol	ND	ug/kg	2790	1	12/24/13 10:53	12/26/13 21:36	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	101-55-3	
Butylbenzylphthalate	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	2790	1	12/24/13 10:53	12/26/13 21:36	59-50-7	
4-Chloroaniline	ND	ug/kg	6990	1	12/24/13 10:53	12/26/13 21:36	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	108-60-1	
2-Chloronaphthalene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	91-58-7	
2-Chlorophenol	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	7005-72-3	
Chrysene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	53-70-3	
Dibenzofuran	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	6990	1	12/24/13 10:53	12/26/13 21:36	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	120-83-2	
Diethylphthalate	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	105-67-9	
Dimethylphthalate	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	131-11-3	
Di-n-butylphthalate	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	2790	1	12/24/13 10:53	12/26/13 21:36	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	6990	1	12/24/13 10:53	12/26/13 21:36	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	606-20-2	
Di-n-octylphthalate	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	117-81-7	
Fluoranthene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	206-44-0	
Fluorene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	87-68-3	
Hexachlorobenzene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	77-47-4	
Hexachloroethane	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-6 **Lab ID: 92184127005** Collected: 12/18/13 15:55 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Isophorone	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	78-59-1	
1-Methylnaphthalene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	90-12-0	
2-Methylnaphthalene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36		
Naphthalene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	91-20-3	
2-Nitroaniline	ND	ug/kg	6990	1	12/24/13 10:53	12/26/13 21:36	88-74-4	
3-Nitroaniline	ND	ug/kg	6990	1	12/24/13 10:53	12/26/13 21:36	99-09-2	
4-Nitroaniline	ND	ug/kg	2790	1	12/24/13 10:53	12/26/13 21:36	100-01-6	
Nitrobenzene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	98-95-3	
2-Nitrophenol	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	88-75-5	
4-Nitrophenol	ND	ug/kg	6990	1	12/24/13 10:53	12/26/13 21:36	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	86-30-6	
Pentachlorophenol	ND	ug/kg	6990	1	12/24/13 10:53	12/26/13 21:36	87-86-5	
Phenanthrene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	85-01-8	
Phenol	**1430**	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	108-95-2	
Pyrene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	1400	1	12/24/13 10:53	12/26/13 21:36	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	4	%	23-110	1	12/24/13 10:53	12/26/13 21:36	4165-60-0	S2
2-Fluorobiphenyl (S)	0	%	30-110	1	12/24/13 10:53	12/26/13 21:36	321-60-8	S2
Terphenyl-d14 (S)	3	%	28-110	1	12/24/13 10:53	12/26/13 21:36	1718-51-0	S2
Phenol-d6 (S)	8	%	22-110	1	12/24/13 10:53	12/26/13 21:36	13127-88-3	S2
2-Fluorophenol (S)	1	%	13-110	1	12/24/13 10:53	12/26/13 21:36	367-12-4	S2
2,4,6-Tribromophenol (S)	2	%	27-110	1	12/24/13 10:53	12/26/13 21:36	118-79-6	S2
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	593	1		12/24/13 20:13	67-64-1	
Benzene	ND	ug/kg	29.6	1		12/24/13 20:13	71-43-2	
Bromobenzene	ND	ug/kg	29.6	1		12/24/13 20:13	108-86-1	
Bromochloromethane	ND	ug/kg	29.6	1		12/24/13 20:13	74-97-5	
Bromodichloromethane	ND	ug/kg	29.6	1		12/24/13 20:13	75-27-4	
Bromoform	ND	ug/kg	29.6	1		12/24/13 20:13	75-25-2	
Bromomethane	ND	ug/kg	59.3	1		12/24/13 20:13	74-83-9	
2-Butanone (MEK)	ND	ug/kg	593	1		12/24/13 20:13	78-93-3	
n-Butylbenzene	ND	ug/kg	29.6	1		12/24/13 20:13	104-51-8	
sec-Butylbenzene	ND	ug/kg	29.6	1		12/24/13 20:13	135-98-8	
tert-Butylbenzene	ND	ug/kg	29.6	1		12/24/13 20:13	98-06-6	
Carbon tetrachloride	ND	ug/kg	29.6	1		12/24/13 20:13	56-23-5	
Chlorobenzene	ND	ug/kg	29.6	1		12/24/13 20:13	108-90-7	
Chloroethane	ND	ug/kg	59.3	1		12/24/13 20:13	75-00-3	
Chloroform	ND	ug/kg	29.6	1		12/24/13 20:13	67-66-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-6 **Lab ID: 92184127005** Collected: 12/18/13 15:55 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Chloromethane	ND	ug/kg	59.3	1		12/24/13 20:13	74-87-3	
2-Chlorotoluene	ND	ug/kg	29.6	1		12/24/13 20:13	95-49-8	
4-Chlorotoluene	ND	ug/kg	29.6	1		12/24/13 20:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	29.6	1		12/24/13 20:13	96-12-8	
Dibromochloromethane	ND	ug/kg	29.6	1		12/24/13 20:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	29.6	1		12/24/13 20:13	106-93-4	
Dibromomethane	ND	ug/kg	29.6	1		12/24/13 20:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	29.6	1		12/24/13 20:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	29.6	1		12/24/13 20:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	29.6	1		12/24/13 20:13	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	59.3	1		12/24/13 20:13	75-71-8	1g
1,1-Dichloroethane	ND	ug/kg	29.6	1		12/24/13 20:13	75-34-3	
1,2-Dichloroethane	ND	ug/kg	29.6	1		12/24/13 20:13	107-06-2	
1,1-Dichloroethene	ND	ug/kg	29.6	1		12/24/13 20:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	29.6	1		12/24/13 20:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	29.6	1		12/24/13 20:13	156-60-5	
1,2-Dichloropropane	ND	ug/kg	29.6	1		12/24/13 20:13	78-87-5	
1,3-Dichloropropane	ND	ug/kg	29.6	1		12/24/13 20:13	142-28-9	
2,2-Dichloropropane	ND	ug/kg	29.6	1		12/24/13 20:13	594-20-7	
1,1-Dichloropropene	ND	ug/kg	29.6	1		12/24/13 20:13	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	29.6	1		12/24/13 20:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	29.6	1		12/24/13 20:13	10061-02-6	
Diisopropyl ether	ND	ug/kg	29.6	1		12/24/13 20:13	108-20-3	
Ethylbenzene	ND	ug/kg	29.6	1		12/24/13 20:13	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	29.6	1		12/24/13 20:13	87-68-3	
2-Hexanone	ND	ug/kg	296	1		12/24/13 20:13	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	29.6	1		12/24/13 20:13	98-82-8	
p-Isopropyltoluene	ND	ug/kg	29.6	1		12/24/13 20:13	99-87-6	
Methylene Chloride	ND	ug/kg	119	1		12/24/13 20:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	296	1		12/24/13 20:13	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	29.6	1		12/24/13 20:13	1634-04-4	
Naphthalene	ND	ug/kg	29.6	1		12/24/13 20:13	91-20-3	
n-Propylbenzene	ND	ug/kg	29.6	1		12/24/13 20:13	103-65-1	
Styrene	ND	ug/kg	29.6	1		12/24/13 20:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	29.6	1		12/24/13 20:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	29.6	1		12/24/13 20:13	79-34-5	
Tetrachloroethene	ND	ug/kg	29.6	1		12/24/13 20:13	127-18-4	
Toluene	ND	ug/kg	29.6	1		12/24/13 20:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	29.6	1		12/24/13 20:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	29.6	1		12/24/13 20:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	29.6	1		12/24/13 20:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	29.6	1		12/24/13 20:13	79-00-5	
Trichloroethene	ND	ug/kg	29.6	1		12/24/13 20:13	79-01-6	
Trichlorofluoromethane	ND	ug/kg	29.6	1		12/24/13 20:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	29.6	1		12/24/13 20:13	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	29.6	1		12/24/13 20:13	95-63-6	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-6 **Lab ID: 92184127005** Collected: 12/18/13 15:55 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	ND	ug/kg	29.6	1		12/24/13 20:13	108-67-8	
Vinyl acetate	ND	ug/kg	296	1		12/24/13 20:13	108-05-4	
Vinyl chloride	ND	ug/kg	59.3	1		12/24/13 20:13	75-01-4	
Xylene (Total)	ND	ug/kg	59.3	1		12/24/13 20:13	1330-20-7	
m&p-Xylene	ND	ug/kg	59.3	1		12/24/13 20:13	179601-23-1	
o-Xylene	ND	ug/kg	29.6	1		12/24/13 20:13	95-47-6	
Surrogates								
Toluene-d8 (S)	91	%	70-130	1		12/24/13 20:13	2037-26-5	
4-Bromofluorobenzene (S)	72	%	70-130	1		12/24/13 20:13	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-132	1		12/24/13 20:13	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**76.4**	%	0.10	1		12/20/13 16:54		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-7 **Lab ID: 92184127006** Collected: 12/18/13 16:20 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	83-32-9	
Acenaphthylene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	208-96-8	
Aniline	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	62-53-3	
Anthracene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	120-12-7	
Benzo(a)anthracene	**625**	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	56-55-3	
Benzo(a)pyrene	**673**	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	50-32-8	
Benzo(b)fluoranthene	**516**	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	191-24-2	
Benzo(k)fluoranthene	**493**	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	207-08-9	
Benzoic Acid	ND	ug/kg	2090	1	12/20/13 10:30	12/23/13 21:24	65-85-0	
Benzyl alcohol	ND	ug/kg	838	1	12/20/13 10:30	12/23/13 21:24	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	101-55-3	
Butylbenzylphthalate	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	838	1	12/20/13 10:30	12/23/13 21:24	59-50-7	
4-Chloroaniline	ND	ug/kg	2090	1	12/20/13 10:30	12/23/13 21:24	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	108-60-1	
2-Chloronaphthalene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	91-58-7	
2-Chlorophenol	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	7005-72-3	
Chrysene	**648**	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	53-70-3	
Dibenzofuran	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2090	1	12/20/13 10:30	12/23/13 21:24	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	120-83-2	
Diethylphthalate	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	105-67-9	
Dimethylphthalate	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	131-11-3	
Di-n-butylphthalate	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	838	1	12/20/13 10:30	12/23/13 21:24	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2090	1	12/20/13 10:30	12/23/13 21:24	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	606-20-2	
Di-n-octylphthalate	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	117-81-7	
Fluoranthene	**1320**	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	206-44-0	
Fluorene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	87-68-3	
Hexachlorobenzene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	77-47-4	
Hexachloroethane	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	193-39-5	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-7 **Lab ID: 92184127006** Collected: 12/18/13 16:20 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Isophorone	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	78-59-1	
1-Methylnaphthalene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	90-12-0	
2-Methylnaphthalene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24		
Naphthalene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	91-20-3	
2-Nitroaniline	ND	ug/kg	2090	1	12/20/13 10:30	12/23/13 21:24	88-74-4	
3-Nitroaniline	ND	ug/kg	2090	1	12/20/13 10:30	12/23/13 21:24	99-09-2	
4-Nitroaniline	ND	ug/kg	838	1	12/20/13 10:30	12/23/13 21:24	100-01-6	
Nitrobenzene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	98-95-3	
2-Nitrophenol	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	88-75-5	
4-Nitrophenol	ND	ug/kg	2090	1	12/20/13 10:30	12/23/13 21:24	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	86-30-6	
Pentachlorophenol	ND	ug/kg	2090	1	12/20/13 10:30	12/23/13 21:24	87-86-5	
Phenanthrene	**688**	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	85-01-8	
Phenol	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	108-95-2	
Pyrene	**981**	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	419	1	12/20/13 10:30	12/23/13 21:24	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	76	%	23-110	1	12/20/13 10:30	12/23/13 21:24	4165-60-0	
2-Fluorobiphenyl (S)	61	%	30-110	1	12/20/13 10:30	12/23/13 21:24	321-60-8	
Terphenyl-d14 (S)	57	%	28-110	1	12/20/13 10:30	12/23/13 21:24	1718-51-0	
Phenol-d6 (S)	70	%	22-110	1	12/20/13 10:30	12/23/13 21:24	13127-88-3	
2-Fluorophenol (S)	72	%	13-110	1	12/20/13 10:30	12/23/13 21:24	367-12-4	
2,4,6-Tribromophenol (S)	72	%	27-110	1	12/20/13 10:30	12/23/13 21:24	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Acetone	**119**	ug/kg	84.4	1		12/24/13 20:32	67-64-1	1g
Benzene	ND	ug/kg	4.2	1		12/24/13 20:32	71-43-2	
Bromobenzene	ND	ug/kg	4.2	1		12/24/13 20:32	108-86-1	
Bromochloromethane	ND	ug/kg	4.2	1		12/24/13 20:32	74-97-5	
Bromodichloromethane	ND	ug/kg	4.2	1		12/24/13 20:32	75-27-4	
Bromoform	ND	ug/kg	4.2	1		12/24/13 20:32	75-25-2	
Bromomethane	ND	ug/kg	8.4	1		12/24/13 20:32	74-83-9	
2-Butanone (MEK)	ND	ug/kg	84.4	1		12/24/13 20:32	78-93-3	
n-Butylbenzene	ND	ug/kg	4.2	1		12/24/13 20:32	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.2	1		12/24/13 20:32	135-98-8	
tert-Butylbenzene	ND	ug/kg	4.2	1		12/24/13 20:32	98-06-6	
Carbon tetrachloride	ND	ug/kg	4.2	1		12/24/13 20:32	56-23-5	
Chlorobenzene	ND	ug/kg	4.2	1		12/24/13 20:32	108-90-7	
Chloroethane	ND	ug/kg	8.4	1		12/24/13 20:32	75-00-3	
Chloroform	ND	ug/kg	4.2	1		12/24/13 20:32	67-66-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-7 **Lab ID: 92184127006** Collected: 12/18/13 16:20 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Chloromethane	ND	ug/kg	8.4	1		12/24/13 20:32	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.2	1		12/24/13 20:32	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.2	1		12/24/13 20:32	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.2	1		12/24/13 20:32	96-12-8	
Dibromochloromethane	ND	ug/kg	4.2	1		12/24/13 20:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.2	1		12/24/13 20:32	106-93-4	
Dibromomethane	ND	ug/kg	4.2	1		12/24/13 20:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.2	1		12/24/13 20:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.2	1		12/24/13 20:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.2	1		12/24/13 20:32	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	8.4	1		12/24/13 20:32	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.2	1		12/24/13 20:32	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.2	1		12/24/13 20:32	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.2	1		12/24/13 20:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.2	1		12/24/13 20:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.2	1		12/24/13 20:32	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.2	1		12/24/13 20:32	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.2	1		12/24/13 20:32	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.2	1		12/24/13 20:32	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.2	1		12/24/13 20:32	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.2	1		12/24/13 20:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.2	1		12/24/13 20:32	10061-02-6	
Diisopropyl ether	ND	ug/kg	4.2	1		12/24/13 20:32	108-20-3	
Ethylbenzene	ND	ug/kg	4.2	1		12/24/13 20:32	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.2	1		12/24/13 20:32	87-68-3	
2-Hexanone	ND	ug/kg	42.2	1		12/24/13 20:32	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.2	1		12/24/13 20:32	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.2	1		12/24/13 20:32	99-87-6	
Methylene Chloride	ND	ug/kg	16.9	1		12/24/13 20:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	42.2	1		12/24/13 20:32	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.2	1		12/24/13 20:32	1634-04-4	
Naphthalene	ND	ug/kg	4.2	1		12/24/13 20:32	91-20-3	
n-Propylbenzene	ND	ug/kg	4.2	1		12/24/13 20:32	103-65-1	
Styrene	ND	ug/kg	4.2	1		12/24/13 20:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.2	1		12/24/13 20:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.2	1		12/24/13 20:32	79-34-5	
Tetrachloroethene	ND	ug/kg	4.2	1		12/24/13 20:32	127-18-4	
Toluene	ND	ug/kg	4.2	1		12/24/13 20:32	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.2	1		12/24/13 20:32	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.2	1		12/24/13 20:32	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.2	1		12/24/13 20:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.2	1		12/24/13 20:32	79-00-5	
Trichloroethene	ND	ug/kg	4.2	1		12/24/13 20:32	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.2	1		12/24/13 20:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.2	1		12/24/13 20:32	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.2	1		12/24/13 20:32	95-63-6	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-7 **Lab ID: 92184127006** Collected: 12/18/13 16:20 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	ND	ug/kg	4.2	1		12/24/13 20:32	108-67-8	
Vinyl acetate	ND	ug/kg	42.2	1		12/24/13 20:32	108-05-4	
Vinyl chloride	ND	ug/kg	8.4	1		12/24/13 20:32	75-01-4	
Xylene (Total)	ND	ug/kg	8.4	1		12/24/13 20:32	1330-20-7	
m&p-Xylene	ND	ug/kg	8.4	1		12/24/13 20:32	179601-23-1	
o-Xylene	ND	ug/kg	4.2	1		12/24/13 20:32	95-47-6	
Surrogates								
Toluene-d8 (S)	96	%	70-130	1		12/24/13 20:32	2037-26-5	
4-Bromofluorobenzene (S)	89	%	70-130	1		12/24/13 20:32	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-132	1		12/24/13 20:32	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**21.2**	%	0.10	1		12/20/13 16:54		

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-9 **Lab ID: 92184127007** Collected: 12/18/13 17:00 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	83-32-9	
Acenaphthylene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	208-96-8	
Aniline	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	62-53-3	
Anthracene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	120-12-7	
Benzo(a)anthracene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	56-55-3	
Benzo(a)pyrene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	207-08-9	
Benzoic Acid	ND	ug/kg	2460	1	12/20/13 10:30	12/23/13 21:56	65-85-0	
Benzyl alcohol	ND	ug/kg	984	1	12/20/13 10:30	12/23/13 21:56	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	101-55-3	
Butylbenzylphthalate	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	984	1	12/20/13 10:30	12/23/13 21:56	59-50-7	
4-Chloroaniline	ND	ug/kg	2460	1	12/20/13 10:30	12/23/13 21:56	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	108-60-1	
2-Chloronaphthalene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	91-58-7	
2-Chlorophenol	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	7005-72-3	
Chrysene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	53-70-3	
Dibenzofuran	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2460	1	12/20/13 10:30	12/23/13 21:56	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	120-83-2	
Diethylphthalate	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	105-67-9	
Dimethylphthalate	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	131-11-3	
Di-n-butylphthalate	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	984	1	12/20/13 10:30	12/23/13 21:56	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2460	1	12/20/13 10:30	12/23/13 21:56	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	606-20-2	
Di-n-octylphthalate	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	117-81-7	
Fluoranthene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	206-44-0	
Fluorene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	87-68-3	
Hexachlorobenzene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	77-47-4	
Hexachloroethane	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	193-39-5	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-9 **Lab ID: 92184127007** Collected: 12/18/13 17:00 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Isophorone	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	78-59-1	
1-Methylnaphthalene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	90-12-0	
2-Methylnaphthalene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56		
Naphthalene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	91-20-3	
2-Nitroaniline	ND	ug/kg	2460	1	12/20/13 10:30	12/23/13 21:56	88-74-4	
3-Nitroaniline	ND	ug/kg	2460	1	12/20/13 10:30	12/23/13 21:56	99-09-2	
4-Nitroaniline	ND	ug/kg	984	1	12/20/13 10:30	12/23/13 21:56	100-01-6	
Nitrobenzene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	98-95-3	
2-Nitrophenol	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	88-75-5	
4-Nitrophenol	ND	ug/kg	2460	1	12/20/13 10:30	12/23/13 21:56	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	86-30-6	
Pentachlorophenol	ND	ug/kg	2460	1	12/20/13 10:30	12/23/13 21:56	87-86-5	
Phenanthrene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	85-01-8	
Phenol	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	108-95-2	
Pyrene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	492	1	12/20/13 10:30	12/23/13 21:56	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	38	%	23-110	1	12/20/13 10:30	12/23/13 21:56	4165-60-0	
2-Fluorobiphenyl (S)	35	%	30-110	1	12/20/13 10:30	12/23/13 21:56	321-60-8	
Terphenyl-d14 (S)	46	%	28-110	1	12/20/13 10:30	12/23/13 21:56	1718-51-0	
Phenol-d6 (S)	42	%	22-110	1	12/20/13 10:30	12/23/13 21:56	13127-88-3	
2-Fluorophenol (S)	40	%	13-110	1	12/20/13 10:30	12/23/13 21:56	367-12-4	
2,4,6-Tribromophenol (S)	34	%	27-110	1	12/20/13 10:30	12/23/13 21:56	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	122	1		12/24/13 20:52	67-64-1	
Benzene	ND	ug/kg	6.1	1		12/24/13 20:52	71-43-2	
Bromobenzene	ND	ug/kg	6.1	1		12/24/13 20:52	108-86-1	
Bromochloromethane	ND	ug/kg	6.1	1		12/24/13 20:52	74-97-5	
Bromodichloromethane	ND	ug/kg	6.1	1		12/24/13 20:52	75-27-4	
Bromoform	ND	ug/kg	6.1	1		12/24/13 20:52	75-25-2	
Bromomethane	ND	ug/kg	12.2	1		12/24/13 20:52	74-83-9	
2-Butanone (MEK)	ND	ug/kg	122	1		12/24/13 20:52	78-93-3	
n-Butylbenzene	ND	ug/kg	6.1	1		12/24/13 20:52	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.1	1		12/24/13 20:52	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.1	1		12/24/13 20:52	98-06-6	
Carbon tetrachloride	ND	ug/kg	6.1	1		12/24/13 20:52	56-23-5	
Chlorobenzene	ND	ug/kg	6.1	1		12/24/13 20:52	108-90-7	
Chloroethane	ND	ug/kg	12.2	1		12/24/13 20:52	75-00-3	
Chloroform	ND	ug/kg	6.1	1		12/24/13 20:52	67-66-3	

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-9 **Lab ID: 92184127007** Collected: 12/18/13 17:00 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
Chloromethane	ND	ug/kg	12.2	1		12/24/13 20:52	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.1	1		12/24/13 20:52	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.1	1		12/24/13 20:52	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.1	1		12/24/13 20:52	96-12-8	
Dibromochloromethane	ND	ug/kg	6.1	1		12/24/13 20:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.1	1		12/24/13 20:52	106-93-4	
Dibromomethane	ND	ug/kg	6.1	1		12/24/13 20:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.1	1		12/24/13 20:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.1	1		12/24/13 20:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.1	1		12/24/13 20:52	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.2	1		12/24/13 20:52	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.1	1		12/24/13 20:52	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.1	1		12/24/13 20:52	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.1	1		12/24/13 20:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.1	1		12/24/13 20:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.1	1		12/24/13 20:52	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.1	1		12/24/13 20:52	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.1	1		12/24/13 20:52	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.1	1		12/24/13 20:52	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.1	1		12/24/13 20:52	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.1	1		12/24/13 20:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.1	1		12/24/13 20:52	10061-02-6	
Diisopropyl ether	ND	ug/kg	6.1	1		12/24/13 20:52	108-20-3	
Ethylbenzene	ND	ug/kg	6.1	1		12/24/13 20:52	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.1	1		12/24/13 20:52	87-68-3	
2-Hexanone	ND	ug/kg	60.9	1		12/24/13 20:52	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.1	1		12/24/13 20:52	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.1	1		12/24/13 20:52	99-87-6	
Methylene Chloride	ND	ug/kg	24.4	1		12/24/13 20:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	60.9	1		12/24/13 20:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.1	1		12/24/13 20:52	1634-04-4	
Naphthalene	ND	ug/kg	6.1	1		12/24/13 20:52	91-20-3	
n-Propylbenzene	ND	ug/kg	6.1	1		12/24/13 20:52	103-65-1	
Styrene	ND	ug/kg	6.1	1		12/24/13 20:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.1	1		12/24/13 20:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.1	1		12/24/13 20:52	79-34-5	
Tetrachloroethene	ND	ug/kg	6.1	1		12/24/13 20:52	127-18-4	
Toluene	ND	ug/kg	6.1	1		12/24/13 20:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.1	1		12/24/13 20:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.1	1		12/24/13 20:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.1	1		12/24/13 20:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.1	1		12/24/13 20:52	79-00-5	
Trichloroethene	ND	ug/kg	6.1	1		12/24/13 20:52	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.1	1		12/24/13 20:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.1	1		12/24/13 20:52	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.1	1		12/24/13 20:52	95-63-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-9 **Lab ID: 92184127007** Collected: 12/18/13 17:00 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	ND	ug/kg	6.1	1		12/24/13 20:52	108-67-8	
Vinyl acetate	ND	ug/kg	60.9	1		12/24/13 20:52	108-05-4	
Vinyl chloride	ND	ug/kg	12.2	1		12/24/13 20:52	75-01-4	
Xylene (Total)	ND	ug/kg	12.2	1		12/24/13 20:52	1330-20-7	
m&p-Xylene	ND	ug/kg	12.2	1		12/24/13 20:52	179601-23-1	
o-Xylene	ND	ug/kg	6.1	1		12/24/13 20:52	95-47-6	
Surrogates								
Toluene-d8 (S)	100	%	70-130	1		12/24/13 20:52	2037-26-5	
4-Bromofluorobenzene (S)	102	%	70-130	1		12/24/13 20:52	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70-132	1		12/24/13 20:52	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**32.9**	%	0.10	1		12/20/13 16:54		

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-1 **Lab ID: 92184127008** Collected: 12/18/13 11:50 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	**10.3**	mg/kg	6.2	1	12/20/13 13:12	12/24/13 11:43	68334-30-5	
Surrogates								
n-Pentacosane (S)	88	%	41-119	1	12/20/13 13:12	12/24/13 11:43	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	**16.4**	mg/kg	5.6	1	12/30/13 14:50	12/31/13 00:16	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	104	%	70-167	1	12/30/13 14:50	12/31/13 00:16	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**19.9**	%	0.10	1		12/20/13 16:54		

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-2 **Lab ID: 92184127009** Collected: 12/18/13 12:20 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	**7.5**	mg/kg	5.8	1	12/20/13 13:12	12/24/13 11:43	68334-30-5	
Surrogates								
n-Pentacosane (S)	81	%	41-119	1	12/20/13 13:12	12/24/13 11:43	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	ND	mg/kg	5.9	1	12/30/13 14:50	12/31/13 00:39	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	105	%	70-167	1	12/30/13 14:50	12/31/13 00:39	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**14.2**	%	0.10	1		12/20/13 16:55		

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-3 **Lab ID: 92184127010** Collected: 12/18/13 12:35 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	**79.5**	mg/kg	5.9	1	12/20/13 13:12	12/24/13 12:06	68334-30-5	
Surrogates								
n-Pentacosane (S)	87	%	41-119	1	12/20/13 13:12	12/24/13 12:06	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	ND	mg/kg	5.3	1	12/30/13 14:50	12/31/13 01:03	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	104	%	70-167	1	12/30/13 14:50	12/31/13 01:03	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**15.0**	%	0.10	1		12/20/13 16:55		

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-4 **Lab ID: 92184127011** Collected: 12/18/13 15:20 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	**8.5**	mg/kg	6.1	1	12/20/13 13:12	12/24/13 12:06	68334-30-5	
Surrogates								
n-Pentacosane (S)	84	%	41-119	1	12/20/13 13:12	12/24/13 12:06	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	ND	mg/kg	5.9	1	12/30/13 14:50	12/31/13 01:26	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	105	%	70-167	1	12/30/13 14:50	12/31/13 01:26	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**18.0**	%	0.10	1		12/20/13 16:55		

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ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Sample: S-6-8 **Lab ID: 92184127012** Collected: 12/18/13 16:45 Received: 12/19/13 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	ND	mg/kg	6.3	1	12/20/13 13:12	12/24/13 12:29	68334-30-5	
Surrogates								
n-Pentacosane (S)	95	%	41-119	1	12/20/13 13:12	12/24/13 12:29	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	ND	mg/kg	5.7	1	12/30/13 14:50	12/31/13 01:49	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-167	1	12/30/13 14:50	12/31/13 01:49	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**20.5**	%	0.10	1		12/20/13 16:55		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

QC Batch: GCV/7658 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 92184127008, 92184127009, 92184127010, 92184127011, 92184127012

METHOD BLANK: 1114325 Matrix: Solid
Associated Lab Samples: 92184127008, 92184127009, 92184127010, 92184127011, 92184127012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	6.0	12/30/13 20:25	
4-Bromofluorobenzene (S)	%	103	70-167	12/30/13 20:25	

LABORATORY CONTROL SAMPLE: 1114326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	49.7	49.5	100	70-165	
4-Bromofluorobenzene (S)	%			103	70-167	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1114327 1114328

Parameter	Units	92184283001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Gasoline Range Organics	mg/kg	ND	34.7	34.7	38.2	38.4	110	111	47-187	1	
4-Bromofluorobenzene (S)	%						107	102	70-167		

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

QC Batch: MSV/25343
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92184127001

METHOD BLANK: 1111846
Matrix: Solid
Associated Lab Samples: 92184127001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	4.9	12/23/13 17:21	
1,1,1-Trichloroethane	ug/kg	ND	4.9	12/23/13 17:21	
1,1,2,2-Tetrachloroethane	ug/kg	ND	4.9	12/23/13 17:21	
1,1,2-Trichloroethane	ug/kg	ND	4.9	12/23/13 17:21	
1,1-Dichloroethane	ug/kg	ND	4.9	12/23/13 17:21	
1,1-Dichloroethene	ug/kg	ND	4.9	12/23/13 17:21	
1,1-Dichloropropene	ug/kg	ND	4.9	12/23/13 17:21	
1,2,3-Trichlorobenzene	ug/kg	ND	4.9	12/23/13 17:21	
1,2,3-Trichloropropane	ug/kg	ND	4.9	12/23/13 17:21	
1,2,4-Trichlorobenzene	ug/kg	ND	4.9	12/23/13 17:21	
1,2,4-Trimethylbenzene	ug/kg	ND	4.9	12/23/13 17:21	
1,2-Dibromo-3-chloropropane	ug/kg	ND	4.9	12/23/13 17:21	
1,2-Dibromoethane (EDB)	ug/kg	ND	4.9	12/23/13 17:21	
1,2-Dichlorobenzene	ug/kg	ND	4.9	12/23/13 17:21	
1,2-Dichloroethane	ug/kg	ND	4.9	12/23/13 17:21	
1,2-Dichloropropane	ug/kg	ND	4.9	12/23/13 17:21	
1,3,5-Trimethylbenzene	ug/kg	ND	4.9	12/23/13 17:21	
1,3-Dichlorobenzene	ug/kg	ND	4.9	12/23/13 17:21	
1,3-Dichloropropane	ug/kg	ND	4.9	12/23/13 17:21	
1,4-Dichlorobenzene	ug/kg	ND	4.9	12/23/13 17:21	
2,2-Dichloropropane	ug/kg	ND	4.9	12/23/13 17:21	
2-Butanone (MEK)	ug/kg	ND	97.8	12/23/13 17:21	
2-Chlorotoluene	ug/kg	ND	4.9	12/23/13 17:21	
2-Hexanone	ug/kg	ND	48.9	12/23/13 17:21	
4-Chlorotoluene	ug/kg	ND	4.9	12/23/13 17:21	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	48.9	12/23/13 17:21	
Acetone	ug/kg	ND	97.8	12/23/13 17:21	
Benzene	ug/kg	ND	4.9	12/23/13 17:21	
Bromobenzene	ug/kg	ND	4.9	12/23/13 17:21	
Bromochloromethane	ug/kg	ND	4.9	12/23/13 17:21	
Bromodichloromethane	ug/kg	ND	4.9	12/23/13 17:21	
Bromoform	ug/kg	ND	4.9	12/23/13 17:21	
Bromomethane	ug/kg	ND	9.8	12/23/13 17:21	
Carbon tetrachloride	ug/kg	ND	4.9	12/23/13 17:21	
Chlorobenzene	ug/kg	ND	4.9	12/23/13 17:21	
Chloroethane	ug/kg	ND	9.8	12/23/13 17:21	
Chloroform	ug/kg	ND	4.9	12/23/13 17:21	
Chloromethane	ug/kg	ND	9.8	12/23/13 17:21	
cis-1,2-Dichloroethene	ug/kg	ND	4.9	12/23/13 17:21	
cis-1,3-Dichloropropene	ug/kg	ND	4.9	12/23/13 17:21	
Dibromochloromethane	ug/kg	ND	4.9	12/23/13 17:21	
Dibromomethane	ug/kg	ND	4.9	12/23/13 17:21	
Dichlorodifluoromethane	ug/kg	ND	9.8	12/23/13 17:21	

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

METHOD BLANK: 1111846 Matrix: Solid
Associated Lab Samples: 92184127001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/kg	ND	4.9	12/23/13 17:21	
Ethylbenzene	ug/kg	ND	4.9	12/23/13 17:21	
Hexachloro-1,3-butadiene	ug/kg	ND	4.9	12/23/13 17:21	
Isopropylbenzene (Cumene)	ug/kg	ND	4.9	12/23/13 17:21	
m&p-Xylene	ug/kg	ND	9.8	12/23/13 17:21	
Methyl-tert-butyl ether	ug/kg	ND	4.9	12/23/13 17:21	
Methylene Chloride	ug/kg	ND	19.6	12/23/13 17:21	
n-Butylbenzene	ug/kg	ND	4.9	12/23/13 17:21	
n-Propylbenzene	ug/kg	ND	4.9	12/23/13 17:21	
Naphthalene	ug/kg	ND	4.9	12/23/13 17:21	
o-Xylene	ug/kg	ND	4.9	12/23/13 17:21	
p-Isopropyltoluene	ug/kg	ND	4.9	12/23/13 17:21	
sec-Butylbenzene	ug/kg	ND	4.9	12/23/13 17:21	
Styrene	ug/kg	ND	4.9	12/23/13 17:21	
tert-Butylbenzene	ug/kg	ND	4.9	12/23/13 17:21	
Tetrachloroethene	ug/kg	ND	4.9	12/23/13 17:21	
Toluene	ug/kg	ND	4.9	12/23/13 17:21	
trans-1,2-Dichloroethene	ug/kg	ND	4.9	12/23/13 17:21	
trans-1,3-Dichloropropene	ug/kg	ND	4.9	12/23/13 17:21	
Trichloroethene	ug/kg	ND	4.9	12/23/13 17:21	
Trichlorofluoromethane	ug/kg	ND	4.9	12/23/13 17:21	
Vinyl acetate	ug/kg	ND	48.9	12/23/13 17:21	
Vinyl chloride	ug/kg	ND	9.8	12/23/13 17:21	
Xylene (Total)	ug/kg	ND	9.8	12/23/13 17:21	
1,2-Dichloroethane-d4 (S)	%	122	70-132	12/23/13 17:21	
4-Bromofluorobenzene (S)	%	102	70-130	12/23/13 17:21	
Toluene-d8 (S)	%	100	70-130	12/23/13 17:21	

LABORATORY CONTROL SAMPLE: 1111847

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	50.4	53.7	107	70-131	
1,1,1-Trichloroethane	ug/kg	50.4	58.9	117	70-141	
1,1,2,2-Tetrachloroethane	ug/kg	50.4	60.8	121	70-130	
1,1,2-Trichloroethane	ug/kg	50.4	54.2	107	70-132	
1,1-Dichloroethane	ug/kg	50.4	56.1	111	70-143	
1,1-Dichloroethene	ug/kg	50.4	55.6	110	70-137	
1,1-Dichloropropene	ug/kg	50.4	57.0	113	70-135	
1,2,3-Trichlorobenzene	ug/kg	50.4	50.5	100	69-153	
1,2,3-Trichloropropane	ug/kg	50.4	62.0	123	70-130	
1,2,4-Trichlorobenzene	ug/kg	50.4	47.4	94	55-171	
1,2,4-Trimethylbenzene	ug/kg	50.4	53.5	106	70-149	
1,2-Dibromo-3-chloropropane	ug/kg	50.4	60.2	120	68-141	
1,2-Dibromoethane (EDB)	ug/kg	50.4	58.7	116	70-130	
1,2-Dichlorobenzene	ug/kg	50.4	49.7	99	70-140	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

LABORATORY CONTROL SAMPLE: 1111847

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/kg	50.4	65.5	130	70-137	
1,2-Dichloropropane	ug/kg	50.4	52.3	104	70-133	
1,3,5-Trimethylbenzene	ug/kg	50.4	52.3	104	70-143	
1,3-Dichlorobenzene	ug/kg	50.4	47.5	94	70-144	
1,3-Dichloropropane	ug/kg	50.4	60.1	119	70-132	
1,4-Dichlorobenzene	ug/kg	50.4	48.3	96	70-142	
2,2-Dichloropropane	ug/kg	50.4	56.6	112	68-152	
2-Butanone (MEK)	ug/kg	101	114	113	70-149	
2-Chlorotoluene	ug/kg	50.4	49.5	98	70-141	
2-Hexanone	ug/kg	101	114	113	70-149	
4-Chlorotoluene	ug/kg	50.4	52.0	103	70-149	
4-Methyl-2-pentanone (MIBK)	ug/kg	101	109	108	70-153	
Acetone	ug/kg	101	120	119	70-157	
Benzene	ug/kg	50.4	51.7	103	70-130	
Bromobenzene	ug/kg	50.4	54.1	107	70-141	
Bromochloromethane	ug/kg	50.4	51.9	103	70-149	
Bromodichloromethane	ug/kg	50.4	54.4	108	70-130	
Bromoform	ug/kg	50.4	53.4	106	70-131	
Bromomethane	ug/kg	50.4	65.6	130	64-136	
Carbon tetrachloride	ug/kg	50.4	52.3	104	70-154	
Chlorobenzene	ug/kg	50.4	52.9	105	70-135	
Chloroethane	ug/kg	50.4	57.1	113	68-151	
Chloroform	ug/kg	50.4	56.8	113	70-130	
Chloromethane	ug/kg	50.4	59.2	117	70-132	
cis-1,2-Dichloroethene	ug/kg	50.4	56.6	112	70-140	
cis-1,3-Dichloropropene	ug/kg	50.4	53.0	105	70-137	
Dibromochloromethane	ug/kg	50.4	56.1	111	70-130	
Dibromomethane	ug/kg	50.4	55.1	109	70-136	
Dichlorodifluoromethane	ug/kg	50.4	54.7	109	36-148	
Diisopropyl ether	ug/kg	50.4	51.4	102	70-139	
Ethylbenzene	ug/kg	50.4	52.0	103	70-137	
Hexachloro-1,3-butadiene	ug/kg	50.4	52.2	103	70-145	
Isopropylbenzene (Cumene)	ug/kg	50.4	54.3	108	70-141	
m&p-Xylene	ug/kg	101	107	106	70-140	
Methyl-tert-butyl ether	ug/kg	50.4	61.2	121	45-150	
Methylene Chloride	ug/kg	50.4	53.8	107	70-133	
n-Butylbenzene	ug/kg	50.4	50.4	100	65-155	
n-Propylbenzene	ug/kg	50.4	51.6	102	70-148	
Naphthalene	ug/kg	50.4	51.9	103	70-148	
o-Xylene	ug/kg	50.4	53.0	105	70-141	
p-Isopropyltoluene	ug/kg	50.4	50.0	99	70-148	
sec-Butylbenzene	ug/kg	50.4	52.8	105	70-145	
Styrene	ug/kg	50.4	53.2	106	70-138	
tert-Butylbenzene	ug/kg	50.4	51.2	102	70-143	
Tetrachloroethene	ug/kg	50.4	49.7	99	70-140	
Toluene	ug/kg	50.4	49.5	98	70-130	
trans-1,2-Dichloroethene	ug/kg	50.4	54.8	109	70-136	
trans-1,3-Dichloropropene	ug/kg	50.4	55.3	110	70-138	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

LABORATORY CONTROL SAMPLE: 1111847

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/kg	50.4	46.5	92	70-132	
Trichlorofluoromethane	ug/kg	50.4	65.5	130	69-134	
Vinyl acetate	ug/kg	101	106	105	24-161	
Vinyl chloride	ug/kg	50.4	55.7	110	55-140	
Xylene (Total)	ug/kg	151	160	106	70-141	
1,2-Dichloroethane-d4 (S)	%			125	70-132	
4-Bromofluorobenzene (S)	%			107	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE SAMPLE: 1112266

Parameter	Units	92184090001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/kg	ND	42.9	37.1	86	49-180	
Benzene	ug/kg	ND	42.9	37.3	87	50-166	
Chlorobenzene	ug/kg	ND	42.9	35.2	82	43-169	
Toluene	ug/kg	ND	42.9	32.4	74	52-163	
Trichloroethene	ug/kg	ND	42.9	32.3	75	49-167	
1,2-Dichloroethane-d4 (S)	%				104	70-132	
4-Bromofluorobenzene (S)	%				96	70-130	
Toluene-d8 (S)	%				99	70-130	

SAMPLE DUPLICATE: 1112265

Parameter	Units	92184006024 Result	Dup Result	RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND		
1,1,1-Trichloroethane	ug/kg	ND	ND		
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND		
1,1,2-Trichloroethane	ug/kg	ND	ND		
1,1-Dichloroethane	ug/kg	ND	ND		
1,1-Dichloroethene	ug/kg	ND	ND		
1,1-Dichloropropene	ug/kg	ND	ND		
1,2,3-Trichlorobenzene	ug/kg	ND	ND		
1,2,3-Trichloropropane	ug/kg	ND	ND		
1,2,4-Trichlorobenzene	ug/kg	ND	ND		
1,2,4-Trimethylbenzene	ug/kg	ND	ND		
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND		
1,2-Dibromoethane (EDB)	ug/kg	ND	ND		
1,2-Dichlorobenzene	ug/kg	ND	ND		
1,2-Dichloroethane	ug/kg	ND	ND		
1,2-Dichloropropane	ug/kg	ND	ND		
1,3,5-Trimethylbenzene	ug/kg	ND	ND		
1,3-Dichlorobenzene	ug/kg	ND	ND		
1,3-Dichloropropane	ug/kg	ND	ND		
1,4-Dichlorobenzene	ug/kg	ND	ND		
2,2-Dichloropropane	ug/kg	ND	ND		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

SAMPLE DUPLICATE: 1112265

Parameter	Units	92184006024 Result	Dup Result	RPD	Qualifiers
2-Butanone (MEK)	ug/kg	ND	ND		
2-Chlorotoluene	ug/kg	ND	ND		
2-Hexanone	ug/kg	ND	ND		
4-Chlorotoluene	ug/kg	ND	ND		
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND		
Acetone	ug/kg	228	96.2	81	A+,R1
Benzene	ug/kg	ND	ND		
Bromobenzene	ug/kg	ND	ND		
Bromochloromethane	ug/kg	ND	ND		
Bromodichloromethane	ug/kg	ND	ND		
Bromoform	ug/kg	ND	ND		
Bromomethane	ug/kg	ND	ND		
Carbon tetrachloride	ug/kg	ND	ND		
Chlorobenzene	ug/kg	ND	ND		
Chloroethane	ug/kg	ND	ND		
Chloroform	ug/kg	ND	ND		
Chloromethane	ug/kg	ND	ND		
cis-1,2-Dichloroethene	ug/kg	ND	ND		
cis-1,3-Dichloropropene	ug/kg	ND	ND		
Dibromochloromethane	ug/kg	ND	ND		
Dibromomethane	ug/kg	ND	ND		
Dichlorodifluoromethane	ug/kg	ND	ND		
Diisopropyl ether	ug/kg	ND	ND		
Ethylbenzene	ug/kg	ND	ND		
Hexachloro-1,3-butadiene	ug/kg	ND	ND		
Isopropylbenzene (Cumene)	ug/kg	ND	ND		
m&p-Xylene	ug/kg	ND	ND		
Methyl-tert-butyl ether	ug/kg	ND	ND		
Methylene Chloride	ug/kg	ND	ND		
n-Butylbenzene	ug/kg	ND	ND		
n-Propylbenzene	ug/kg	ND	ND		
Naphthalene	ug/kg	ND	ND		
o-Xylene	ug/kg	ND	ND		
p-Isopropyltoluene	ug/kg	ND	ND		
sec-Butylbenzene	ug/kg	ND	ND		
Styrene	ug/kg	ND	ND		
tert-Butylbenzene	ug/kg	ND	ND		
Tetrachloroethene	ug/kg	ND	ND		
Toluene	ug/kg	ND	ND		
trans-1,2-Dichloroethene	ug/kg	ND	ND		
trans-1,3-Dichloropropene	ug/kg	ND	ND		
Trichloroethene	ug/kg	ND	ND		
Trichlorofluoromethane	ug/kg	ND	ND		
Vinyl acetate	ug/kg	ND	ND		
Vinyl chloride	ug/kg	ND	ND		
Xylene (Total)	ug/kg	ND	ND		
1,2-Dichloroethane-d4 (S)	%	110	106	16	
4-Bromofluorobenzene (S)	%	87	92	8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

SAMPLE DUPLICATE: 1112265

Parameter	Units	92184006024 Result	Dup Result	RPD	Qualifiers
Toluene-d8 (S)	%	98	96	14	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

QC Batch: MSV/25355 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92184127002, 92184127003, 92184127004, 92184127005, 92184127006, 92184127007

METHOD BLANK: 1112341 Matrix: Solid
Associated Lab Samples: 92184127002, 92184127003, 92184127004, 92184127005, 92184127006, 92184127007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.6	12/24/13 11:24	
1,1,1-Trichloroethane	ug/kg	ND	5.6	12/24/13 11:24	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.6	12/24/13 11:24	
1,1,2-Trichloroethane	ug/kg	ND	5.6	12/24/13 11:24	
1,1-Dichloroethane	ug/kg	ND	5.6	12/24/13 11:24	
1,1-Dichloroethene	ug/kg	ND	5.6	12/24/13 11:24	
1,1-Dichloropropene	ug/kg	ND	5.6	12/24/13 11:24	
1,2,3-Trichlorobenzene	ug/kg	ND	5.6	12/24/13 11:24	
1,2,3-Trichloropropane	ug/kg	ND	5.6	12/24/13 11:24	
1,2,4-Trichlorobenzene	ug/kg	ND	5.6	12/24/13 11:24	
1,2,4-Trimethylbenzene	ug/kg	ND	5.6	12/24/13 11:24	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.6	12/24/13 11:24	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.6	12/24/13 11:24	
1,2-Dichlorobenzene	ug/kg	ND	5.6	12/24/13 11:24	
1,2-Dichloroethane	ug/kg	ND	5.6	12/24/13 11:24	
1,2-Dichloropropane	ug/kg	ND	5.6	12/24/13 11:24	
1,3,5-Trimethylbenzene	ug/kg	ND	5.6	12/24/13 11:24	
1,3-Dichlorobenzene	ug/kg	ND	5.6	12/24/13 11:24	
1,3-Dichloropropane	ug/kg	ND	5.6	12/24/13 11:24	
1,4-Dichlorobenzene	ug/kg	ND	5.6	12/24/13 11:24	
2,2-Dichloropropane	ug/kg	ND	5.6	12/24/13 11:24	
2-Butanone (MEK)	ug/kg	ND	112	12/24/13 11:24	
2-Chlorotoluene	ug/kg	ND	5.6	12/24/13 11:24	
2-Hexanone	ug/kg	ND	56.2	12/24/13 11:24	
4-Chlorotoluene	ug/kg	ND	5.6	12/24/13 11:24	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	56.2	12/24/13 11:24	
Acetone	ug/kg	ND	112	12/24/13 11:24	
Benzene	ug/kg	ND	5.6	12/24/13 11:24	
Bromobenzene	ug/kg	ND	5.6	12/24/13 11:24	
Bromochloromethane	ug/kg	ND	5.6	12/24/13 11:24	
Bromodichloromethane	ug/kg	ND	5.6	12/24/13 11:24	
Bromoform	ug/kg	ND	5.6	12/24/13 11:24	
Bromomethane	ug/kg	ND	11.2	12/24/13 11:24	
Carbon tetrachloride	ug/kg	ND	5.6	12/24/13 11:24	
Chlorobenzene	ug/kg	ND	5.6	12/24/13 11:24	
Chloroethane	ug/kg	ND	11.2	12/24/13 11:24	
Chloroform	ug/kg	ND	5.6	12/24/13 11:24	
Chloromethane	ug/kg	ND	11.2	12/24/13 11:24	
cis-1,2-Dichloroethene	ug/kg	ND	5.6	12/24/13 11:24	
cis-1,3-Dichloropropene	ug/kg	ND	5.6	12/24/13 11:24	
Dibromochloromethane	ug/kg	ND	5.6	12/24/13 11:24	
Dibromomethane	ug/kg	ND	5.6	12/24/13 11:24	
Dichlorodifluoromethane	ug/kg	ND	11.2	12/24/13 11:24	

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

METHOD BLANK: 1112341 Matrix: Solid
Associated Lab Samples: 92184127002, 92184127003, 92184127004, 92184127005, 92184127006, 92184127007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/kg	ND	5.6	12/24/13 11:24	
Ethylbenzene	ug/kg	ND	5.6	12/24/13 11:24	
Hexachloro-1,3-butadiene	ug/kg	ND	5.6	12/24/13 11:24	
Isopropylbenzene (Cumene)	ug/kg	ND	5.6	12/24/13 11:24	
m&p-Xylene	ug/kg	ND	11.2	12/24/13 11:24	
Methyl-tert-butyl ether	ug/kg	ND	5.6	12/24/13 11:24	
Methylene Chloride	ug/kg	ND	22.5	12/24/13 11:24	
n-Butylbenzene	ug/kg	ND	5.6	12/24/13 11:24	
n-Propylbenzene	ug/kg	ND	5.6	12/24/13 11:24	
Naphthalene	ug/kg	ND	5.6	12/24/13 11:24	
o-Xylene	ug/kg	ND	5.6	12/24/13 11:24	
p-Isopropyltoluene	ug/kg	ND	5.6	12/24/13 11:24	
sec-Butylbenzene	ug/kg	ND	5.6	12/24/13 11:24	
Styrene	ug/kg	ND	5.6	12/24/13 11:24	
tert-Butylbenzene	ug/kg	ND	5.6	12/24/13 11:24	
Tetrachloroethene	ug/kg	ND	5.6	12/24/13 11:24	
Toluene	ug/kg	ND	5.6	12/24/13 11:24	
trans-1,2-Dichloroethene	ug/kg	ND	5.6	12/24/13 11:24	
trans-1,3-Dichloropropene	ug/kg	ND	5.6	12/24/13 11:24	
Trichloroethene	ug/kg	ND	5.6	12/24/13 11:24	
Trichlorofluoromethane	ug/kg	ND	5.6	12/24/13 11:24	
Vinyl acetate	ug/kg	ND	56.2	12/24/13 11:24	
Vinyl chloride	ug/kg	ND	11.2	12/24/13 11:24	
Xylene (Total)	ug/kg	ND	11.2	12/24/13 11:24	
1,2-Dichloroethane-d4 (S)	%	110	70-132	12/24/13 11:24	
4-Bromofluorobenzene (S)	%	100	70-130	12/24/13 11:24	
Toluene-d8 (S)	%	99	70-130	12/24/13 11:24	

LABORATORY CONTROL SAMPLE: 1112342

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	51.7	55.1	107	70-131	
1,1,1-Trichloroethane	ug/kg	51.7	56.6	110	70-141	
1,1,2,2-Tetrachloroethane	ug/kg	51.7	62.7	121	70-130	
1,1,2-Trichloroethane	ug/kg	51.7	56.0	108	70-132	
1,1-Dichloroethane	ug/kg	51.7	59.7	116	70-143	
1,1-Dichloroethene	ug/kg	51.7	58.2	113	70-137	
1,1-Dichloropropene	ug/kg	51.7	61.4	119	70-135	
1,2,3-Trichlorobenzene	ug/kg	51.7	53.5	104	69-153	
1,2,3-Trichloropropane	ug/kg	51.7	63.4	123	70-130	
1,2,4-Trichlorobenzene	ug/kg	51.7	51.3	99	55-171	
1,2,4-Trimethylbenzene	ug/kg	51.7	54.7	106	70-149	
1,2-Dibromo-3-chloropropane	ug/kg	51.7	55.8	108	68-141	
1,2-Dibromoethane (EDB)	ug/kg	51.7	61.3	119	70-130	
1,2-Dichlorobenzene	ug/kg	51.7	50.5	98	70-140	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

LABORATORY CONTROL SAMPLE: 1112342

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/kg	51.7	61.2	118	70-137	
1,2-Dichloropropane	ug/kg	51.7	54.8	106	70-133	
1,3,5-Trimethylbenzene	ug/kg	51.7	53.7	104	70-143	
1,3-Dichlorobenzene	ug/kg	51.7	49.4	96	70-144	
1,3-Dichloropropane	ug/kg	51.7	63.6	123	70-132	
1,4-Dichlorobenzene	ug/kg	51.7	50.6	98	70-142	
2,2-Dichloropropane	ug/kg	51.7	57.7	112	68-152	
2-Butanone (MEK)	ug/kg	103	131	127	70-149	
2-Chlorotoluene	ug/kg	51.7	49.8	96	70-141	
2-Hexanone	ug/kg	103	123	119	70-149	
4-Chlorotoluene	ug/kg	51.7	54.3	105	70-149	
4-Methyl-2-pentanone (MIBK)	ug/kg	103	113	109	70-153	
Acetone	ug/kg	103	119	115	70-157	
Benzene	ug/kg	51.7	55.1	107	70-130	
Bromobenzene	ug/kg	51.7	55.3	107	70-141	
Bromochloromethane	ug/kg	51.7	52.4	101	70-149	
Bromodichloromethane	ug/kg	51.7	52.8	102	70-130	
Bromoform	ug/kg	51.7	53.1	103	70-131	
Bromomethane	ug/kg	51.7	55.4	107	64-136	
Carbon tetrachloride	ug/kg	51.7	49.0	95	70-154	
Chlorobenzene	ug/kg	51.7	55.4	107	70-135	
Chloroethane	ug/kg	51.7	57.6	112	68-151	
Chloroform	ug/kg	51.7	57.3	111	70-130	
Chloromethane	ug/kg	51.7	61.1	118	70-132	
cis-1,2-Dichloroethene	ug/kg	51.7	58.7	114	70-140	
cis-1,3-Dichloropropene	ug/kg	51.7	54.0	105	70-137	
Dibromochloromethane	ug/kg	51.7	57.1	111	70-130	
Dibromomethane	ug/kg	51.7	54.4	105	70-136	
Dichlorodifluoromethane	ug/kg	51.7	43.3	84	36-148	
Diisopropyl ether	ug/kg	51.7	59.0	114	70-139	
Ethylbenzene	ug/kg	51.7	54.1	105	70-137	
Hexachloro-1,3-butadiene	ug/kg	51.7	51.4	99	70-145	
Isopropylbenzene (Cumene)	ug/kg	51.7	56.5	109	70-141	
m&p-Xylene	ug/kg	103	110	106	70-140	
Methyl-tert-butyl ether	ug/kg	51.7	63.9	124	45-150	
Methylene Chloride	ug/kg	51.7	53.7	104	70-133	
n-Butylbenzene	ug/kg	51.7	54.7	106	65-155	
n-Propylbenzene	ug/kg	51.7	54.3	105	70-148	
Naphthalene	ug/kg	51.7	55.5	107	70-148	
o-Xylene	ug/kg	51.7	54.6	106	70-141	
p-Isopropyltoluene	ug/kg	51.7	51.0	99	70-148	
sec-Butylbenzene	ug/kg	51.7	54.5	106	70-145	
Styrene	ug/kg	51.7	55.3	107	70-138	
tert-Butylbenzene	ug/kg	51.7	50.9	99	70-143	
Tetrachloroethene	ug/kg	51.7	52.2	101	70-140	
Toluene	ug/kg	51.7	49.2	95	70-130	
trans-1,2-Dichloroethene	ug/kg	51.7	59.0	114	70-136	
trans-1,3-Dichloropropene	ug/kg	51.7	55.8	108	70-138	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

LABORATORY CONTROL SAMPLE: 1112342

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/kg	51.7	49.2	95	70-132	
Trichlorofluoromethane	ug/kg	51.7	60.9	118	69-134	
Vinyl acetate	ug/kg	103	140	135	24-161	
Vinyl chloride	ug/kg	51.7	54.5	105	55-140	
Xylene (Total)	ug/kg	155	164	106	70-141	
1,2-Dichloroethane-d4 (S)	%			120	70-132	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 1112885

Parameter	Units	92184377003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/kg	ND	31.7	35.8	113	49-180	
Benzene	ug/kg	ND	31.7	33.4	106	50-166	
Chlorobenzene	ug/kg	ND	31.7	30.2	95	43-169	
Toluene	ug/kg	ND	31.7	27.6	87	52-163	
Trichloroethene	ug/kg	ND	31.7	28.7	91	49-167	
1,2-Dichloroethane-d4 (S)	%				118	70-132	
4-Bromofluorobenzene (S)	%				86	70-130	
Toluene-d8 (S)	%				93	70-130	

SAMPLE DUPLICATE: 1112884

Parameter	Units	92184127002 Result	Dup Result	RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND		
1,1,1-Trichloroethane	ug/kg	ND	ND		
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND		
1,1,2-Trichloroethane	ug/kg	ND	ND		
1,1-Dichloroethane	ug/kg	ND	ND		
1,1-Dichloroethene	ug/kg	ND	ND		
1,1-Dichloropropene	ug/kg	ND	ND		
1,2,3-Trichlorobenzene	ug/kg	ND	ND		
1,2,3-Trichloropropane	ug/kg	ND	ND		
1,2,4-Trichlorobenzene	ug/kg	ND	ND		
1,2,4-Trimethylbenzene	ug/kg	ND	ND		
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND		
1,2-Dibromoethane (EDB)	ug/kg	ND	ND		
1,2-Dichlorobenzene	ug/kg	ND	ND		
1,2-Dichloroethane	ug/kg	ND	ND		
1,2-Dichloropropane	ug/kg	ND	ND		
1,3,5-Trimethylbenzene	ug/kg	ND	ND		
1,3-Dichlorobenzene	ug/kg	ND	ND		
1,3-Dichloropropane	ug/kg	ND	ND		
1,4-Dichlorobenzene	ug/kg	ND	ND		
2,2-Dichloropropane	ug/kg	ND	ND		

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

SAMPLE DUPLICATE: 1112884

Parameter	Units	92184127002 Result	Dup Result	RPD	Qualifiers
2-Butanone (MEK)	ug/kg	ND	ND		
2-Chlorotoluene	ug/kg	ND	ND		
2-Hexanone	ug/kg	ND	ND		
4-Chlorotoluene	ug/kg	ND	ND		
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND		
Acetone	ug/kg	218	170	25	A+
Benzene	ug/kg	ND	ND		
Bromobenzene	ug/kg	ND	ND		
Bromochloromethane	ug/kg	ND	ND		
Bromodichloromethane	ug/kg	ND	ND		
Bromoform	ug/kg	ND	ND		
Bromomethane	ug/kg	ND	ND		
Carbon tetrachloride	ug/kg	ND	ND		
Chlorobenzene	ug/kg	ND	ND		
Chloroethane	ug/kg	ND	ND		
Chloroform	ug/kg	ND	ND		
Chloromethane	ug/kg	ND	ND		
cis-1,2-Dichloroethene	ug/kg	ND	ND		
cis-1,3-Dichloropropene	ug/kg	ND	ND		
Dibromochloromethane	ug/kg	ND	ND		
Dibromomethane	ug/kg	ND	ND		
Dichlorodifluoromethane	ug/kg	ND	ND		IO
Diisopropyl ether	ug/kg	ND	ND		
Ethylbenzene	ug/kg	ND	ND		
Hexachloro-1,3-butadiene	ug/kg	ND	ND		
Isopropylbenzene (Cumene)	ug/kg	ND	ND		
m&p-Xylene	ug/kg	ND	ND		
Methyl-tert-butyl ether	ug/kg	ND	ND		
Methylene Chloride	ug/kg	ND	ND		
n-Butylbenzene	ug/kg	ND	ND		
n-Propylbenzene	ug/kg	ND	ND		
Naphthalene	ug/kg	ND	ND		
o-Xylene	ug/kg	ND	ND		
p-Isopropyltoluene	ug/kg	ND	ND		
sec-Butylbenzene	ug/kg	ND	ND		
Styrene	ug/kg	ND	ND		
tert-Butylbenzene	ug/kg	ND	ND		
Tetrachloroethene	ug/kg	ND	ND		
Toluene	ug/kg	ND	ND		
trans-1,2-Dichloroethene	ug/kg	ND	ND		
trans-1,3-Dichloropropene	ug/kg	ND	ND		
Trichloroethene	ug/kg	ND	ND		
Trichlorofluoromethane	ug/kg	ND	ND		
Vinyl acetate	ug/kg	ND	ND		
Vinyl chloride	ug/kg	ND	ND		
Xylene (Total)	ug/kg	ND	ND		
1,2-Dichloroethane-d4 (S)	%	118	143	21	S2
4-Bromofluorobenzene (S)	%	92	83	8	

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

SAMPLE DUPLICATE: 1112884

Parameter	Units	92184127002 Result	Dup Result	RPD	Qualifiers
Toluene-d8 (S)	%	96	92	2	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

QC Batch: OEXT/25288 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 92184127008, 92184127009, 92184127010, 92184127011, 92184127012

METHOD BLANK: 1110449 Matrix: Solid
Associated Lab Samples: 92184127008, 92184127009, 92184127010, 92184127011, 92184127012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Components	mg/kg	ND	5.0	12/24/13 10:34	
n-Pentacosane (S)	%	97	41-119	12/24/13 10:34	

LABORATORY CONTROL SAMPLE: 1110450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Components	mg/kg	66.7	52.6	79	49-113	
n-Pentacosane (S)	%			85	41-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1110451 1110452

Parameter	Units	92184127012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Diesel Components	mg/kg	ND	83.9	83.9	61.5	65.6	69	74	10-146	7	
n-Pentacosane (S)	%						81	93	41-119		

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

QC Batch: OEXT/25287 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 92184127001, 92184127002, 92184127003, 92184127004, 92184127006, 92184127007

METHOD BLANK: 1110353 Matrix: Solid
Associated Lab Samples: 92184127001, 92184127002, 92184127003, 92184127004, 92184127006, 92184127007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	330	12/23/13 17:11	
1,2-Dichlorobenzene	ug/kg	ND	330	12/23/13 17:11	
1,3-Dichlorobenzene	ug/kg	ND	330	12/23/13 17:11	
1,4-Dichlorobenzene	ug/kg	ND	330	12/23/13 17:11	
1-Methylnaphthalene	ug/kg	ND	330	12/23/13 17:11	
2,4,5-Trichlorophenol	ug/kg	ND	330	12/23/13 17:11	
2,4,6-Trichlorophenol	ug/kg	ND	330	12/23/13 17:11	
2,4-Dichlorophenol	ug/kg	ND	330	12/23/13 17:11	
2,4-Dimethylphenol	ug/kg	ND	330	12/23/13 17:11	
2,4-Dinitrophenol	ug/kg	ND	1650	12/23/13 17:11	
2,4-Dinitrotoluene	ug/kg	ND	330	12/23/13 17:11	
2,6-Dinitrotoluene	ug/kg	ND	330	12/23/13 17:11	
2-Chloronaphthalene	ug/kg	ND	330	12/23/13 17:11	
2-Chlorophenol	ug/kg	ND	330	12/23/13 17:11	
2-Methylnaphthalene	ug/kg	ND	330	12/23/13 17:11	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	12/23/13 17:11	
2-Nitroaniline	ug/kg	ND	1650	12/23/13 17:11	
2-Nitrophenol	ug/kg	ND	330	12/23/13 17:11	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	330	12/23/13 17:11	
3,3'-Dichlorobenzidine	ug/kg	ND	1650	12/23/13 17:11	
3-Nitroaniline	ug/kg	ND	1650	12/23/13 17:11	
4,6-Dinitro-2-methylphenol	ug/kg	ND	660	12/23/13 17:11	
4-Bromophenylphenyl ether	ug/kg	ND	330	12/23/13 17:11	
4-Chloro-3-methylphenol	ug/kg	ND	660	12/23/13 17:11	
4-Chloroaniline	ug/kg	ND	1650	12/23/13 17:11	
4-Chlorophenylphenyl ether	ug/kg	ND	330	12/23/13 17:11	
4-Nitroaniline	ug/kg	ND	660	12/23/13 17:11	
4-Nitrophenol	ug/kg	ND	1650	12/23/13 17:11	
Acenaphthene	ug/kg	ND	330	12/23/13 17:11	
Acenaphthylene	ug/kg	ND	330	12/23/13 17:11	
Aniline	ug/kg	ND	330	12/23/13 17:11	
Anthracene	ug/kg	ND	330	12/23/13 17:11	
Benzo(a)anthracene	ug/kg	ND	330	12/23/13 17:11	
Benzo(a)pyrene	ug/kg	ND	330	12/23/13 17:11	
Benzo(b)fluoranthene	ug/kg	ND	330	12/23/13 17:11	
Benzo(g,h,i)perylene	ug/kg	ND	330	12/23/13 17:11	
Benzo(k)fluoranthene	ug/kg	ND	330	12/23/13 17:11	
Benzoic Acid	ug/kg	ND	1650	12/23/13 17:11	
Benzyl alcohol	ug/kg	ND	660	12/23/13 17:11	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	12/23/13 17:11	
bis(2-Chloroethyl) ether	ug/kg	ND	330	12/23/13 17:11	
bis(2-Chloroisopropyl) ether	ug/kg	ND	330	12/23/13 17:11	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	12/23/13 17:11	

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

METHOD BLANK: 1110353 Matrix: Solid
Associated Lab Samples: 92184127001, 92184127002, 92184127003, 92184127004, 92184127006, 92184127007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Butylbenzylphthalate	ug/kg	ND	330	12/23/13 17:11	
Chrysene	ug/kg	ND	330	12/23/13 17:11	
Di-n-butylphthalate	ug/kg	ND	330	12/23/13 17:11	
Di-n-octylphthalate	ug/kg	ND	330	12/23/13 17:11	
Dibenz(a,h)anthracene	ug/kg	ND	330	12/23/13 17:11	
Dibenzofuran	ug/kg	ND	330	12/23/13 17:11	
Diethylphthalate	ug/kg	ND	330	12/23/13 17:11	
Dimethylphthalate	ug/kg	ND	330	12/23/13 17:11	
Fluoranthene	ug/kg	ND	330	12/23/13 17:11	
Fluorene	ug/kg	ND	330	12/23/13 17:11	
Hexachloro-1,3-butadiene	ug/kg	ND	330	12/23/13 17:11	
Hexachlorobenzene	ug/kg	ND	330	12/23/13 17:11	
Hexachlorocyclopentadiene	ug/kg	ND	330	12/23/13 17:11	
Hexachloroethane	ug/kg	ND	330	12/23/13 17:11	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	12/23/13 17:11	
Isophorone	ug/kg	ND	330	12/23/13 17:11	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	12/23/13 17:11	
N-Nitrosodimethylamine	ug/kg	ND	330	12/23/13 17:11	
N-Nitrosodiphenylamine	ug/kg	ND	330	12/23/13 17:11	
Naphthalene	ug/kg	ND	330	12/23/13 17:11	
Nitrobenzene	ug/kg	ND	330	12/23/13 17:11	
Pentachlorophenol	ug/kg	ND	1650	12/23/13 17:11	
Phenanthrene	ug/kg	ND	330	12/23/13 17:11	
Phenol	ug/kg	ND	330	12/23/13 17:11	
Pyrene	ug/kg	ND	330	12/23/13 17:11	
2,4,6-Tribromophenol (S)	%	73	27-110	12/23/13 17:11	
2-Fluorobiphenyl (S)	%	76	30-110	12/23/13 17:11	
2-Fluorophenol (S)	%	80	13-110	12/23/13 17:11	
Nitrobenzene-d5 (S)	%	74	23-110	12/23/13 17:11	
Phenol-d6 (S)	%	81	22-110	12/23/13 17:11	
Terphenyl-d14 (S)	%	88	28-110	12/23/13 17:11	

LABORATORY CONTROL SAMPLE: 1110354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1670	823	49	39-101	
1,2-Dichlorobenzene	ug/kg	1670	825	49	36-110	
1,3-Dichlorobenzene	ug/kg	1670	815	49	35-110	
1,4-Dichlorobenzene	ug/kg	1670	842	51	35-110	
1-Methylnaphthalene	ug/kg	1670	898	54	45-105	
2,4,5-Trichlorophenol	ug/kg	1670	1070	64	48-109	
2,4,6-Trichlorophenol	ug/kg	1670	901	54	45-111	
2,4-Dichlorophenol	ug/kg	1670	889	53	51-116	
2,4-Dimethylphenol	ug/kg	1670	970	58	42-103	
2,4-Dinitrophenol	ug/kg	8330	5240	63	28-103	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

LABORATORY CONTROL SAMPLE: 1110354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/kg	1670	1320	79	46-114	
2,6-Dinitrotoluene	ug/kg	1670	1260	76	48-112	
2-Chloronaphthalene	ug/kg	1670	812	49	44-105	
2-Chlorophenol	ug/kg	1670	944	57	36-110	
2-Methylnaphthalene	ug/kg	1670	951	57	39-112	
2-Methylphenol(o-Cresol)	ug/kg	1670	983	59	39-101	
2-Nitroaniline	ug/kg	3330	2490	75	44-111	
2-Nitrophenol	ug/kg	1670	939	56	41-100	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	964	58	43-103	
3,3'-Dichlorobenzidine	ug/kg	3330	2280	68	10-150	
3-Nitroaniline	ug/kg	3330	2550	77	35-110	
4,6-Dinitro-2-methylphenol	ug/kg	3330	2560	77	38-118	
4-Bromophenylphenyl ether	ug/kg	1670	1200	72	47-115	
4-Chloro-3-methylphenol	ug/kg	3330	2000	60	43-127	
4-Chloroaniline	ug/kg	3330	1910	57	34-109	
4-Chlorophenylphenyl ether	ug/kg	1670	1070	64	44-115	
4-Nitroaniline	ug/kg	3330	2580	77	37-111	
4-Nitrophenol	ug/kg	8330	6150	74	21-152	
Acenaphthene	ug/kg	1670	958	57	38-117	
Acenaphthylene	ug/kg	1670	990	59	46-107	
Aniline	ug/kg	1670	875	52	29-110	
Anthracene	ug/kg	1670	1280	77	50-110	
Benzo(a)anthracene	ug/kg	1670	1260	76	47-116	
Benzo(a)pyrene	ug/kg	1670	1410	85	47-106	
Benzo(b)fluoranthene	ug/kg	1670	1250	75	47-109	
Benzo(g,h,i)perylene	ug/kg	1670	1250	75	39-115	
Benzo(k)fluoranthene	ug/kg	1670	1300	78	45-117	
Benzoic Acid	ug/kg	8330	3560	43	16-110	
Benzyl alcohol	ug/kg	3330	1670	50	38-105	
bis(2-Chloroethoxy)methane	ug/kg	1670	886	53	39-110	
bis(2-Chloroethyl) ether	ug/kg	1670	934	56	19-119	
bis(2-Chloroisopropyl) ether	ug/kg	1670	905	54	21-110	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1230	74	35-116	
Butylbenzylphthalate	ug/kg	1670	1220	73	38-110	
Chrysene	ug/kg	1670	1300	78	49-110	
Di-n-butylphthalate	ug/kg	1670	1210	73	43-109	
Di-n-octylphthalate	ug/kg	1670	1060	63	37-109	
Dibenz(a,h)anthracene	ug/kg	1670	1320	79	43-116	
Dibenzofuran	ug/kg	1670	912	55	45-106	
Diethylphthalate	ug/kg	1670	1120	67	41-114	
Dimethylphthalate	ug/kg	1670	1080	65	43-110	
Fluoranthene	ug/kg	1670	1300	78	50-114	
Fluorene	ug/kg	1670	1100	66	46-114	
Hexachloro-1,3-butadiene	ug/kg	1670	786	47	28-111	
Hexachlorobenzene	ug/kg	1670	1090	65	46-120	
Hexachlorocyclopentadiene	ug/kg	1670	1100	66	18-119	
Hexachloroethane	ug/kg	1670	782	47	33-110	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1340	80	42-115	

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

LABORATORY CONTROL SAMPLE: 1110354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Isophorone	ug/kg	1670	969	58	44-109	
N-Nitroso-di-n-propylamine	ug/kg	1670	782	47	43-104	
N-Nitrosodimethylamine	ug/kg	1670	848	51	29-110	
N-Nitrosodiphenylamine	ug/kg	1670	1040	63	48-113	
Naphthalene	ug/kg	1670	939	56	41-110	
Nitrobenzene	ug/kg	1670	977	59	38-110	
Pentachlorophenol	ug/kg	3330	2330	70	32-128	
Phenanthrene	ug/kg	1670	1240	74	50-110	
Phenol	ug/kg	1670	946	57	28-106	
Pyrene	ug/kg	1670	1350	81	45-114	
2,4,6-Tribromophenol (S)	%			78	27-110	
2-Fluorobiphenyl (S)	%			55	30-110	
2-Fluorophenol (S)	%			59	13-110	
Nitrobenzene-d5 (S)	%			55	23-110	
Phenol-d6 (S)	%			60	22-110	
Terphenyl-d14 (S)	%			80	28-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1110355 1110356

Parameter	Units	92184127007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2,4-Trichlorobenzene	ug/kg	ND	2490	2490	1320	1400	53	56	18-119	5	
1,2-Dichlorobenzene	ug/kg	ND	2490	2490	1350	1440	54	58	50-110	7	
1,3-Dichlorobenzene	ug/kg	ND	2490	2490	1330	1430	54	57	27-110	7	
1,4-Dichlorobenzene	ug/kg	ND	2490	2490	1370	1440	55	58	28-110	5	
1-Methylnaphthalene	ug/kg	ND	2490	2490	1460	1480	59	59	24-116	1	
2,4,5-Trichlorophenol	ug/kg	ND	2490	2490	1710	1800	69	73	28-110	5	
2,4,6-Trichlorophenol	ug/kg	ND	2490	2490	1450	1550	58	62	17-117	7	
2,4-Dichlorophenol	ug/kg	ND	2490	2490	1470	1590	59	64	21-128	8	
2,4-Dimethylphenol	ug/kg	ND	2490	2490	1020	1480	41	60	10-120	37	R1
2,4-Dinitrophenol	ug/kg	ND	12400	12400	8570	8830	69	71	10-107	3	
2,4-Dinitrotoluene	ug/kg	ND	2490	2490	1920	2050	77	82	36-109	7	
2,6-Dinitrotoluene	ug/kg	ND	2490	2490	1860	1950	75	79	32-110	5	
2-Chloronaphthalene	ug/kg	ND	2490	2490	1300	1330	52	54	30-107	3	
2-Chlorophenol	ug/kg	ND	2490	2490	1570	1680	63	67	14-106	7	
2-Methylnaphthalene	ug/kg	ND	2490	2490	1530	1570	62	63	10-135	2	
2-Methylphenol(o-Cresol)	ug/kg	ND	2490	2490	1320	1530	53	62	10-124	15	
2-Nitroaniline	ug/kg	ND	4970	4970	3920	4230	79	85	26-116	8	
2-Nitrophenol	ug/kg	ND	2490	2490	1580	1660	64	67	28-103	5	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	2490	2490	1290	1520	52	61	10-109	16	
3,3'-Dichlorobenzidine	ug/kg	ND	4970	4970	1830J	3370	37	68	10-150		
3-Nitroaniline	ug/kg	ND	4970	4970	3850	4400	77	88	22-110	13	
4,6-Dinitro-2-methylphenol	ug/kg	ND	4970	4970	3660	3540	74	71	13-121	3	
4-Bromophenylphenyl ether	ug/kg	ND	2490	2490	1610	1600	65	64	31-109	0	
4-Chloro-3-methylphenol	ug/kg	ND	4970	4970	3130	3550	63	71	13-128	13	
4-Chloroaniline	ug/kg	ND	4970	4970	3060	3210	62	64	18-102	5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1110355 1110356

Parameter	Units	92184127007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
4-Chlorophenylphenyl ether	ug/kg	ND	2490	2490	1590	1670	64	67	29-112	5	
4-Nitroaniline	ug/kg	ND	4970	4970	3930	4950	79	100	16-111	23	
4-Nitrophenol	ug/kg	ND	12400	12400	9330	11300	75	91	14-135	19	
Acenaphthene	ug/kg	ND	2490	2490	1510	1560	61	63	26-114	3	
Acenaphthylene	ug/kg	ND	2490	2490	1570	1620	63	65	32-108	3	
Aniline	ug/kg	ND	2490	2490	365J	517	15	21	10-107		
Anthracene	ug/kg	ND	2490	2490	1730	1760	70	71	32-111	1	
Benzo(a)anthracene	ug/kg	ND	2490	2490	1650	1740	66	70	25-117	6	
Benzo(a)pyrene	ug/kg	ND	2490	2490	1790	1850	72	74	25-106	3	
Benzo(b)fluoranthene	ug/kg	ND	2490	2490	1530	1590	61	64	24-110	4	
Benzo(g,h,i)perylene	ug/kg	ND	2490	2490	1590	1650	64	66	19-112	4	
Benzo(k)fluoranthene	ug/kg	ND	2490	2490	1620	1650	65	66	24-114	2	
Benzoic Acid	ug/kg	ND	12400	12400	2380J	2170J	19	17	10-110		
Benzyl alcohol	ug/kg	ND	4970	4970	2930	3010	59	61	24-106	3	
bis(2-Chloroethoxy)methane	ug/kg	ND	2490	2490	1510	1550	61	62	13-119	3	
bis(2-Chloroethyl) ether	ug/kg	ND	2490	2490	1450	1450	58	58	10-134	0	
bis(2-Chloroisopropyl) ether	ug/kg	ND	2490	2490	1520	1540	61	62	10-113	1	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	2490	2490	1660	1670	67	67	10-125	1	
Butylbenzylphthalate	ug/kg	ND	2490	2490	1670	1680	67	68	18-110	1	
Chrysene	ug/kg	ND	2490	2490	1680	1780	68	72	30-110	6	
Di-n-butylphthalate	ug/kg	ND	2490	2490	1630	1670	66	67	19-112	3	
Di-n-octylphthalate	ug/kg	ND	2490	2490	1550	1630	63	65	17-105	5	
Dibenz(a,h)anthracene	ug/kg	ND	2490	2490	1670	1750	67	70	23-111	4	
Dibenzofuran	ug/kg	ND	2490	2490	1410	1450	57	58	35-103	3	
Diethylphthalate	ug/kg	ND	2490	2490	1570	1630	63	66	27-113	4	
Dimethylphthalate	ug/kg	ND	2490	2490	1550	1590	62	64	26-111	3	
Fluoranthene	ug/kg	ND	2490	2490	1810	1970	73	79	33-109	8	
Fluorene	ug/kg	ND	2490	2490	1650	1730	66	70	32-113	5	
Hexachloro-1,3-butadiene	ug/kg	ND	2490	2490	1290	1310	52	53	16-116	2	
Hexachlorobenzene	ug/kg	ND	2490	2490	1420	1400	57	57	27-120	1	
Hexachlorocyclopentadiene	ug/kg	ND	2490	2490	1750	1560	70	63	10-108	11	
Hexachloroethane	ug/kg	ND	2490	2490	1330	1370	53	55	10-117	3	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	2490	2490	1750	1770	70	71	10-122	1	
Isophorone	ug/kg	ND	2490	2490	1720	1720	69	69	28-114	0	
N-Nitroso-di-n-propylamine	ug/kg	ND	2490	2490	1330	1280	54	51	27-113	4	
N-Nitrosodimethylamine	ug/kg	ND	2490	2490	1320	1470	53	59	10-109	11	
N-Nitrosodiphenylamine	ug/kg	ND	2490	2490	1310	1380	53	55	10-128	5	
Naphthalene	ug/kg	ND	2490	2490	1530	1570	62	63	25-110	2	
Nitrobenzene	ug/kg	ND	2490	2490	1650	1660	66	67	18-114	0	
Pentachlorophenol	ug/kg	ND	4970	4970	3440	2860	69	58	10-122	18	
Phenanthrene	ug/kg	ND	2490	2490	1690	1730	68	70	30-114	3	
Phenol	ug/kg	ND	2490	2490	1340	1530	54	61	11-102	13	
Pyrene	ug/kg	ND	2490	2490	1750	1690	70	68	25-116	3	
2,4,6-Tribromophenol (S)	%						71	73	27-110		
2-Fluorobiphenyl (S)	%						58	58	30-110		
2-Fluorophenol (S)	%						61	69	13-110		
Nitrobenzene-d5 (S)	%						63	63	23-110		

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1110355 1110356

Parameter	Units	92184127007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Phenol-d6 (S)	%						60	68	22-110		
Terphenyl-d14 (S)	%						68	64	28-110		

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

QC Batch: OEXT/25329
QC Batch Method: EPA 3546
Analysis Method: EPA 8270
Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 92184127005

METHOD BLANK: 1112201
Matrix: Solid
Associated Lab Samples: 92184127005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	330	12/26/13 15:51	
1,2-Dichlorobenzene	ug/kg	ND	330	12/26/13 15:51	
1,3-Dichlorobenzene	ug/kg	ND	330	12/26/13 15:51	
1,4-Dichlorobenzene	ug/kg	ND	330	12/26/13 15:51	
1-Methylnaphthalene	ug/kg	ND	330	12/26/13 15:51	
2,4,5-Trichlorophenol	ug/kg	ND	330	12/26/13 15:51	
2,4,6-Trichlorophenol	ug/kg	ND	330	12/26/13 15:51	
2,4-Dichlorophenol	ug/kg	ND	330	12/26/13 15:51	
2,4-Dimethylphenol	ug/kg	ND	330	12/26/13 15:51	
2,4-Dinitrophenol	ug/kg	ND	1650	12/26/13 15:51	
2,4-Dinitrotoluene	ug/kg	ND	330	12/26/13 15:51	
2,6-Dinitrotoluene	ug/kg	ND	330	12/26/13 15:51	
2-Chloronaphthalene	ug/kg	ND	330	12/26/13 15:51	
2-Chlorophenol	ug/kg	ND	330	12/26/13 15:51	
2-Methylnaphthalene	ug/kg	ND	330	12/26/13 15:51	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	12/26/13 15:51	
2-Nitroaniline	ug/kg	ND	1650	12/26/13 15:51	
2-Nitrophenol	ug/kg	ND	330	12/26/13 15:51	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	330	12/26/13 15:51	
3,3'-Dichlorobenzidine	ug/kg	ND	1650	12/26/13 15:51	
3-Nitroaniline	ug/kg	ND	1650	12/26/13 15:51	
4,6-Dinitro-2-methylphenol	ug/kg	ND	660	12/26/13 15:51	
4-Bromophenylphenyl ether	ug/kg	ND	330	12/26/13 15:51	
4-Chloro-3-methylphenol	ug/kg	ND	660	12/26/13 15:51	
4-Chloroaniline	ug/kg	ND	1650	12/26/13 15:51	
4-Chlorophenylphenyl ether	ug/kg	ND	330	12/26/13 15:51	
4-Nitroaniline	ug/kg	ND	660	12/26/13 15:51	
4-Nitrophenol	ug/kg	ND	1650	12/26/13 15:51	
Acenaphthene	ug/kg	ND	330	12/26/13 15:51	
Acenaphthylene	ug/kg	ND	330	12/26/13 15:51	
Aniline	ug/kg	ND	330	12/26/13 15:51	
Anthracene	ug/kg	ND	330	12/26/13 15:51	
Benzo(a)anthracene	ug/kg	ND	330	12/26/13 15:51	
Benzo(a)pyrene	ug/kg	ND	330	12/26/13 15:51	
Benzo(b)fluoranthene	ug/kg	ND	330	12/26/13 15:51	
Benzo(g,h,i)perylene	ug/kg	ND	330	12/26/13 15:51	
Benzo(k)fluoranthene	ug/kg	ND	330	12/26/13 15:51	
Benzoic Acid	ug/kg	ND	1650	12/26/13 15:51	
Benzyl alcohol	ug/kg	ND	660	12/26/13 15:51	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	12/26/13 15:51	
bis(2-Chloroethyl) ether	ug/kg	ND	330	12/26/13 15:51	
bis(2-Chloroisopropyl) ether	ug/kg	ND	330	12/26/13 15:51	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	12/26/13 15:51	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

METHOD BLANK: 1112201 Matrix: Solid
Associated Lab Samples: 92184127005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Butylbenzylphthalate	ug/kg	ND	330	12/26/13 15:51	
Chrysene	ug/kg	ND	330	12/26/13 15:51	
Di-n-butylphthalate	ug/kg	ND	330	12/26/13 15:51	
Di-n-octylphthalate	ug/kg	ND	330	12/26/13 15:51	
Dibenz(a,h)anthracene	ug/kg	ND	330	12/26/13 15:51	
Dibenzofuran	ug/kg	ND	330	12/26/13 15:51	
Diethylphthalate	ug/kg	ND	330	12/26/13 15:51	
Dimethylphthalate	ug/kg	ND	330	12/26/13 15:51	
Fluoranthene	ug/kg	ND	330	12/26/13 15:51	
Fluorene	ug/kg	ND	330	12/26/13 15:51	
Hexachloro-1,3-butadiene	ug/kg	ND	330	12/26/13 15:51	
Hexachlorobenzene	ug/kg	ND	330	12/26/13 15:51	
Hexachlorocyclopentadiene	ug/kg	ND	330	12/26/13 15:51	
Hexachloroethane	ug/kg	ND	330	12/26/13 15:51	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	12/26/13 15:51	
Isophorone	ug/kg	ND	330	12/26/13 15:51	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	12/26/13 15:51	
N-Nitrosodimethylamine	ug/kg	ND	330	12/26/13 15:51	
N-Nitrosodiphenylamine	ug/kg	ND	330	12/26/13 15:51	
Naphthalene	ug/kg	ND	330	12/26/13 15:51	
Nitrobenzene	ug/kg	ND	330	12/26/13 15:51	
Pentachlorophenol	ug/kg	ND	1650	12/26/13 15:51	
Phenanthrene	ug/kg	ND	330	12/26/13 15:51	
Phenol	ug/kg	ND	330	12/26/13 15:51	
Pyrene	ug/kg	ND	330	12/26/13 15:51	
2,4,6-Tribromophenol (S)	%	82	27-110	12/26/13 15:51	
2-Fluorobiphenyl (S)	%	80	30-110	12/26/13 15:51	
2-Fluorophenol (S)	%	81	13-110	12/26/13 15:51	
Nitrobenzene-d5 (S)	%	76	23-110	12/26/13 15:51	
Phenol-d6 (S)	%	81	22-110	12/26/13 15:51	
Terphenyl-d14 (S)	%	85	28-110	12/26/13 15:51	

LABORATORY CONTROL SAMPLE: 1112202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1670	1270	76	39-101	
1,2-Dichlorobenzene	ug/kg	1670	1200	72	36-110	
1,3-Dichlorobenzene	ug/kg	1670	1180	71	35-110	
1,4-Dichlorobenzene	ug/kg	1670	1220	73	35-110	
1-Methylnaphthalene	ug/kg	1670	1440	86	45-105	
2,4,5-Trichlorophenol	ug/kg	1670	1580	95	48-109	
2,4,6-Trichlorophenol	ug/kg	1670	1410	84	45-111	
2,4-Dichlorophenol	ug/kg	1670	1470	88	51-116	
2,4-Dimethylphenol	ug/kg	1670	1590	95	42-103	
2,4-Dinitrophenol	ug/kg	8330	5810	70	28-103	

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

LABORATORY CONTROL SAMPLE: 1112202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/kg	1670	1630	98	46-114	
2,6-Dinitrotoluene	ug/kg	1670	1600	96	48-112	
2-Chloronaphthalene	ug/kg	1670	1260	76	44-105	
2-Chlorophenol	ug/kg	1670	1440	86	36-110	
2-Methylnaphthalene	ug/kg	1670	1530	92	39-112	
2-Methylphenol(o-Cresol)	ug/kg	1670	1490	89	39-101	
2-Nitroaniline	ug/kg	3330	3210	96	44-111	
2-Nitrophenol	ug/kg	1670	1510	91	41-100	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1470	88	43-103	
3,3'-Dichlorobenzidine	ug/kg	3330	2410	72	10-150	
3-Nitroaniline	ug/kg	3330	2780	83	35-110	
4,6-Dinitro-2-methylphenol	ug/kg	3330	2800	84	38-118	
4-Bromophenylphenyl ether	ug/kg	1670	1550	93	47-115	
4-Chloro-3-methylphenol	ug/kg	3330	3130	94	43-127	
4-Chloroaniline	ug/kg	3330	2860	86	34-109	
4-Chlorophenylphenyl ether	ug/kg	1670	1500	90	44-115	
4-Nitroaniline	ug/kg	3330	3200	96	37-111	
4-Nitrophenol	ug/kg	8330	7230	87	21-152	
Acenaphthene	ug/kg	1670	1420	85	38-117	
Acenaphthylene	ug/kg	1670	1480	89	46-107	
Aniline	ug/kg	1670	1250	75	29-110	
Anthracene	ug/kg	1670	1540	92	50-110	
Benzo(a)anthracene	ug/kg	1670	1460	87	47-116	
Benzo(a)pyrene	ug/kg	1670	1590	96	47-106	
Benzo(b)fluoranthene	ug/kg	1670	1330	80	47-109	
Benzo(g,h,i)perylene	ug/kg	1670	1400	84	39-115	
Benzo(k)fluoranthene	ug/kg	1670	1440	86	45-117	
Benzoic Acid	ug/kg	8330	5380	65	16-110	
Benzyl alcohol	ug/kg	3330	2730	82	38-105	
bis(2-Chloroethoxy)methane	ug/kg	1670	1460	88	39-110	
bis(2-Chloroethyl) ether	ug/kg	1670	1330	80	19-119	
bis(2-Chloroisopropyl) ether	ug/kg	1670	1340	80	21-110	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1430	86	35-116	
Butylbenzylphthalate	ug/kg	1670	1410	85	38-110	
Chrysene	ug/kg	1670	1490	90	49-110	
Di-n-butylphthalate	ug/kg	1670	1450	87	43-109	
Di-n-octylphthalate	ug/kg	1670	1310	79	37-109	
Dibenz(a,h)anthracene	ug/kg	1670	1490	89	43-116	
Dibenzofuran	ug/kg	1670	1290	77	45-106	
Diethylphthalate	ug/kg	1670	1380	83	41-114	
Dimethylphthalate	ug/kg	1670	1360	81	43-110	
Fluoranthene	ug/kg	1670	1580	95	50-114	
Fluorene	ug/kg	1670	1490	89	46-114	
Hexachloro-1,3-butadiene	ug/kg	1670	1270	76	28-111	
Hexachlorobenzene	ug/kg	1670	1360	82	46-120	
Hexachlorocyclopentadiene	ug/kg	1670	1540	92	18-119	
Hexachloroethane	ug/kg	1670	1190	71	33-110	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1540	92	42-115	

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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

LABORATORY CONTROL SAMPLE: 1112202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Isophorone	ug/kg	1670	1610	97	44-109	
N-Nitroso-di-n-propylamine	ug/kg	1670	1250	75	43-104	
N-Nitrosodimethylamine	ug/kg	1670	1210	72	29-110	
N-Nitrosodiphenylamine	ug/kg	1670	1280	77	48-113	
Naphthalene	ug/kg	1670	1460	87	41-110	
Nitrobenzene	ug/kg	1670	1500	90	38-110	
Pentachlorophenol	ug/kg	3330	2550	77	32-128	
Phenanthrene	ug/kg	1670	1510	90	50-110	
Phenol	ug/kg	1670	1440	86	28-106	
Pyrene	ug/kg	1670	1480	89	45-114	
2,4,6-Tribromophenol (S)	%			103	27-110	
2-Fluorobiphenyl (S)	%			86	30-110	
2-Fluorophenol (S)	%			92	13-110	
Nitrobenzene-d5 (S)	%			87	23-110	
Phenol-d6 (S)	%			93	22-110	
Terphenyl-d14 (S)	%			90	28-110	

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Huntersville, NC 28078
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QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

QC Batch: PMST/6107
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92184127001, 92184127002, 92184127003, 92184127004, 92184127005, 92184127006, 92184127007, 92184127008, 92184127009, 92184127010, 92184127011, 92184127012

SAMPLE DUPLICATE: 1110258

Parameter	Units	92184127001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	12.7	12.9	1	

SAMPLE DUPLICATE: 1110259

Parameter	Units	92184133008 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	21.4	18.4	15	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

1g	The internal standard response is below criteria. No hits associated with this internal standard. Results unaffected by high bias.
A+	The reaction of the soil preservative, sodium bisulfate, is known to react with humic acid in soils to produce ketones. Based upon method blank results, the laboratory feels the ketones in this sample are a result of that reaction.
IO	The internal standard response was outside the laboratory acceptance limits confirmed by reanalysis. The results reported are from the most QC compliant analysis.
R1	RPD value was outside control limits.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: B-4159 WBS33507.1.1
Pace Project No.: 92184127

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92184127008	**S-6-1**	EPA 3546	OEXT/25288	EPA 8015 Modified	GCSV/16318
92184127009	**S-6-2**	EPA 3546	OEXT/25288	EPA 8015 Modified	GCSV/16318
92184127010	**S-6-3**	EPA 3546	OEXT/25288	EPA 8015 Modified	GCSV/16318
92184127011	**S-6-4**	EPA 3546	OEXT/25288	EPA 8015 Modified	GCSV/16318
92184127012	**S-6-8**	EPA 3546	OEXT/25288	EPA 8015 Modified	GCSV/16318
92184127008	**S-6-1**	EPA 5035A/5030B	GCV/7658	EPA 8015 Modified	GCV/7661
92184127009	**S-6-2**	EPA 5035A/5030B	GCV/7658	EPA 8015 Modified	GCV/7661
92184127010	**S-6-3**	EPA 5035A/5030B	GCV/7658	EPA 8015 Modified	GCV/7661
92184127011	**S-6-4**	EPA 5035A/5030B	GCV/7658	EPA 8015 Modified	GCV/7661
92184127012	**S-6-8**	EPA 5035A/5030B	GCV/7658	EPA 8015 Modified	GCV/7661
92184127001	**S-8-4**	EPA 3546	OEXT/25287	EPA 8270	MSSV/8597
92184127002	**S-8-3**	EPA 3546	OEXT/25287	EPA 8270	MSSV/8597
92184127003	**S-4-1**	EPA 3546	OEXT/25287	EPA 8270	MSSV/8597
92184127004	**S-6-5**	EPA 3546	OEXT/25287	EPA 8270	MSSV/8597
92184127005	**S-6-6**	EPA 3546	OEXT/25329	EPA 8270	MSSV/8609
92184127006	**S-6-7**	EPA 3546	OEXT/25287	EPA 8270	MSSV/8597
92184127007	**S-6-9**	EPA 3546	OEXT/25287	EPA 8270	MSSV/8597
92184127001	**S-8-4**	EPA 8260	MSV/25343		
92184127002	**S-8-3**	EPA 8260	MSV/25355		
92184127003	**S-4-1**	EPA 8260	MSV/25355		
92184127004	**S-6-5**	EPA 8260	MSV/25355		
92184127005	**S-6-6**	EPA 8260	MSV/25355		
92184127006	**S-6-7**	EPA 8260	MSV/25355		
92184127007	**S-6-9**	EPA 8260	MSV/25355		
92184127001	**S-8-4**	ASTM D2974-87	PMST/6107		
92184127002	**S-8-3**	ASTM D2974-87	PMST/6107		
92184127003	**S-4-1**	ASTM D2974-87	PMST/6107		
92184127004	**S-6-5**	ASTM D2974-87	PMST/6107		
92184127005	**S-6-6**	ASTM D2974-87	PMST/6107		
92184127006	**S-6-7**	ASTM D2974-87	PMST/6107		
92184127007	**S-6-9**	ASTM D2974-87	PMST/6107		
92184127008	**S-6-1**	ASTM D2974-87	PMST/6107		
92184127009	**S-6-2**	ASTM D2974-87	PMST/6107		
92184127010	**S-6-3**	ASTM D2974-87	PMST/6107		
92184127011	**S-6-4**	ASTM D2974-87	PMST/6107		
92184127012	**S-6-8**	ASTM D2974-87	PMST/6107		

Pace Analytical www.pacelabs.com	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: June 4, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.11	Issuing Authorities: Pace Asheville Quality Office

Client Name: GEL ENG of NC

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

Courier (Circle): Fed Ex UPS USPS (Client) Commercial Pace Other

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Circle Thermometer Used: (IR Gun#3 -13026596) Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

IR Gun #2- 80344039

Temp Correction Factor: Add / Subtract 0.0 C

Corrected Cooler Temp.: 5.4 C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: RDB 12/19/13

Temp should be above freezing to 6°C

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

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution: Jackson Co.

SCURF Review: AMB Date: 12-19-13

SRF Review: AMB Date: 12-19-13

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

Place label here

OR

Handwrite project number (if no label available)

92184127

Pace Analytical
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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of 1727155

Section A Required Client Information:
Company: GEL ENG. of N.C.
Address: PO Box 14262
RTP N.C 27709
Email To: [illegible]
Phone: Fax:
Requested Due Date/TAT: Normal TAT

Section B Required Project Information:
Report To: A. Eyer
Copy To:
Purchase Order No.: [illegible]
Project Name: B-4154
Project Number: NCDOT 21413

Section C Invoice Information:
Attention: NC DOT
Company Name:
Address:
Pace Quote:
Pace Project Manager:
Pace Profile #: 5996-2

REGULATORY AGENCY: NPDES / GROUND WATER / DRINKING WATER / UST / RCRA / ✓ OTHER
Site Location STATE: NC

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Matrix Code (Drinking Water DW, Waste Water WW, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT)	MATRIX CODE	SAMPLE TYPE (G=GRAB)	COLLECTED DATE	COLLECTED TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test: GRO	DRO	VOC's	SVOC's	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	S-8-4	SL	SL	G	12/13/13	1000				5											X	X			92184127 001
3	S-6-1	SL	SL	G		1150				5									X	X					002
4	S-6-2	SL	SL	G		1220				5									X	X					003
5	S-6-3	SL	SL	G		1235				5									X	X					010
6	S-4-1	SL	SL	G		1505				5											X	X			013
7	S-6-4	SL	SL	G		1520				5									X	X					011
8	S-6-5	SL	SL	G		1545				5											X	X			004
9	S-6-6	SL	SL	G		1555				5											X	X			005
10	S-6-7	SL	SL	G		1620				5											X	X			006
11	S-6-8	SL	SL	G		1645				5									X	X					DR
12	S-6-9	SL	SL	G	↓	1700				5									X	X	X	X			VOC's + SVOC's only

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Steve Rudisill GEL	12/19/13	1400	[illegible] GEL	12/19/13	1400	

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Steve Rudisill
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/19/13

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)